Scoring Methodology for the Expanded Skilled Nursing Facility Value-Based Purchasing Program

Summary Report on the Technical Expert Panel's Feedback

September 2022

Division of Value, Incentives, and Quality Reporting Program Support Contract
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Executive Summary

The Division of Value, Incentives, and Quality Reporting Program Support (DPS) team presented a technical expert panel (TEP) with the results of the default scoring methodology, along with variations on that methodology, for the expanded Skilled Nursing Facility Value-Based Purchasing (SNF VBP) Program. The DPS team solicited feedback on the pros and cons of the default methodology and variations on that methodology, for consideration in the expanded SNF VBP Program. Table ES.1 summarizes the TEP's feedback.

Table ES.1. TEP's scoring methodology feedback and suggestions

Topic	Feedback	Suggestions
Approach to scoring methodology	• Emphasized the importance of equity as a principle of the design	• Use state inspection reviews to test the validity of the results
Default methodology	• Stressed the importance of mitigating unintended consequences of measures in the Program	• Conduct analyses to assess the extent to which a SNF would need to improve on the measures to see a meaningful change in its payment adjustment
Scaling variants	• Emphasized concerns about providing incentives to low-performing SNFs • Described the benefits and drawbacks of using a simplified approach versus a more complex *z*-score approach	• Use another set of metrics for SNFs that are consistently in the bottom half of the performance distribution to give them incentives to improve • Use state- or area-specific benchmarks to address differences in SNF pressures at the state and area level • Use measure-specific benchmarks set at an objective quality standard
Minimum case threshold variants	• Mentioned the benefit of linking the minimum case threshold to public reporting standards • Described trade-offs between greater inclusion in the Program versus more reliable measure results	• Review payment adjustment results for the SNFs excluded from the Program • Test minimum case thresholds that align with the Nursing Home Five Star rating system • Expand the data period to two full years and keep the 25-case minimum • Expand the data period to two full years and increase the minimum case threshold, but also consider the usability of the measure results, given the delay in SNFs receiving their performance results after the end of the performance period

Topic	Feedback	Suggestions
Minimum measure policy variants	• Had concerns about measuring SNF performance on one measure and on different combinations of measures • Raised concerns about the potential for SNFs to game the measure results used by the Program	• Review the results of multiple variations of the methodology applied at once, mixing and matching to understand the total accumulation of these different thresholds • Compare the most- and least-restrictive variation (across each component) and look at the excluded SNFs' differences in performance by SNF characteristics • Evaluate policies that lead to the inclusion of the largest number of SNFs • Strive for a balance between the number of measures SNFs are scored on and the number of SNFs excluded from the Program
Weighting variants	• Expressed surprise that weighting variations did not have a big impact on payment adjustments	• Prioritize the Total Nurse Staffing measure over the other measures • Review the costs a SNF would need to incur to improve in the Program • Test domain-based weighting once more measures are added
Payment variants	• Asked about the Program's intent for treating low performers • Supported increasing the payment percentage to the maximum allowed (70 percent)	• Gather SNFs' perspectives on maximizing the possible size of the incentive payments versus more SNFs receiving a smaller share of the incentive payment pool
Social risk variants	• Discussed the role of social risk variants and the challenges of avoiding different standards of care for different populations, while acknowledging that these systematic inequities exist • Emphasized that if we do not adjust for these differences, we will be taking more money away from the SNFs that need it most	• Review the results stratified by age and census-deprivation characteristics as an alternative proxy for social risk

SNF = skilled nursing facility.

Overview

The Centers for Medicare & Medicaid Services (CMS) contracted with Mathematica and RTI International to develop a scoring methodology for use in the expanded Skilled Nursing Facility Value-Based Purchasing (SNF VBP) Program. The methodology will be designed to tie SNF payments to the quality of care provided across several domains of care. The contract name is the Division of Value, Incentives, and Quality Reporting Program Support (DPS) contract (Contract No. 75FCMC18D0032, Task Order 75FCMC19F0005).

On May 18 and 19, 2022, the DPS team convened a diverse group of stakeholders and experts to contribute thoughtful input on the scoring methodology for the expanded SNF VBP Program, with the goal of enabling the addition of more measures to the current single-measure Program. This work is in response to Section 111 of the Consolidated Appropriations Act, 2021, which allowed the secretary of the U.S. Department of Health and Human Services to apply up to nine additional measures to the SNF VBP Program for payments for services furnished on or after October 1, 2023 (fiscal year [FY] 2024).

This summary report first describes the technical expert panel's (TEP's) objectives, followed by background information on the SNF VBP Program and a synopsis of the TEP orientation and meeting. The report includes the following:

The TEP meeting materials and resources are available in the appendices of this report, which include the following:

A. TEP objectives

As part of its scoring methodology testing, the DPS team requested input from a broad group of SNF stakeholders to evaluate and provide guidance on the results of the scoring methodology updates. Stakeholders included clinical experts in SNF quality and safety improvement, statistical and methodological experts, SNF quality measure experts, health care disparity experts, SNF stakeholder representatives, and SNF patient or family (caregiver) representatives. Patient or family (caregiver) representatives and facility representatives can provide unique and essential input on scoring methodology based on their own experience and perspective. A well-balanced representation of stakeholders on the TEP enabled the DPS team to consider key perspectives in the development and selection process of the scoring methodology.

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I. SNF VBP Background

Through the SNF VBP Program, CMS awards incentive payments to SNFs for the quality of care they provide to Medicare beneficiaries, currently measured by SNFs' performance on a single measure of all-cause hospital readmissions.[1] Section 215 of the Protecting Access to Medicare Act of 2014 (PAMA) added sections 1888(g) and (h) to the Social Security Act, which required the secretary of the U.S. Department of Health and Human Services to establish the SNF VBP Program.

All SNFs paid under Medicare's SNF Prospective Payment System (PPS) are included in the SNF VBP Program. Incentive payments are applied prospectively to all Medicare fee-for-service (FFS) Part A claims paid under the SNF.

As required by statute, CMS withholds 2 percent of SNFs' Medicare FFS Part A payments to fund the Program. This 2 percent is referred to as the "withhold." CMS is required to redistribute 50 to 70 percent of the withhold to SNFs as incentive payments; it currently redistributes 60 percent of the withhold, as stated in the FY 2018 SNF PPS final rule (pages 36619–36621). CMS retains the remaining 40 percent as savings in the Medicare Trust Fund.

PAMA specifies the following requirements for the SNF VBP Program:

- SNFs must be evaluated by their performance on a hospital readmission measure.
- SNFs must be scored on both improvement and achievement based on performance standards; the performance score is the higher of these two scores.
- SNFs must earn incentive payments based on their performance.
- CMS must redistribute 50 to 70 percent of withheld funds to SNFs as incentive payments.
- CMS must publish performance standards in the SNF PPS final rule at least 60 days before the start of the pertinent measure's performance period.
- SNFs must receive quarterly confidential feedback reports that describe their performance.
- SNFs with the highest rankings must receive the highest value-based incentive payments.
- SNFs with the lowest rankings must receive the lowest value-based incentive payments.
- SNFs in the lowest 40 percent of the ranking must receive a lower payment rate than would otherwise apply.

Section 111 of the Consolidated Appropriations Act, 2021, amended Section 1888(h) of the Social Security Act to allow the secretary of the U.S. Department of Health and Human Services to apply up to nine additional measures to the SNF VBP Program for payments for services furnished on or after October 1, 2023 (FY 2024).

In response, CMS engaged the DPS team to support the expanded SNF VBP Program by testing various scoring methodologies to allow for the addition of up to nine measures to the Program. The DPS team conducted a literature review to identify evidence-based approaches to scoring that could be

[1] For a detailed description of the Program's current scoring methodology, see the SNF VBP Program: FY 2021 Incentive Payment Multiplier Calculation infographic. SNFs' performance in the Program is currently based on their results on the SNF 30-Day All-Cause Readmission Measure (SNFRM).

applied to the expanded SNF VBP Program scoring design; the literature review informed the methodological variations tested.

The purpose of the TEP is to provide the DPS team with input on the scoring methodology for the expanded SNF VBP Program. The next section describes the current scoring methodology, which serves as the template for the scoring methodology components described in the section titled Expansion of the SNF VBP Program scoring methodology.

A. Overview of the current scoring methodology

The SNF VBP Program assesses SNFs' performance on the Skilled Nursing Facility 30-Day All-Cause Readmission Measure (SNFRM; NQF #2510). The SNFRM measures the rate of all-cause, unplanned hospital readmissions for SNF residents within 30 days of discharge from a prior hospital stay. This measure is risk adjusted for stay-level factors, including clinical and demographic characteristics. Each SNF receives a SNFRM result for a baseline period and a performance period. This result is known as a risk-standardized readmission rate (RSRR). CMS inverts the RSRRs for the baseline and performance periods by subtracting the RSRR from 1 so that higher results indicate better performance.

CMS calculates two performance standards for each Program year: (1) the achievement threshold[2] and (2) the benchmark.[3]

CMS determines the performance scores for all SNFs by comparing SNFs' inverted RSRRs in the performance period with the performance standards and the following two metrics:

1. SNFs' own past performance during the baseline period, for the improvement score (scores range from 0 to 90)
2. All SNFs' performance during the baseline period, for the achievement score (scores range from 0 to 100)

Next, CMS compares each SNF's achievement and improvement scores; whichever score is higher becomes the SNF's performance score.

CMS transforms the calculated performance scores for all SNFs using a logistic exchange function, also referred to as an S-shaped curve (with values from 0 to 1).

Finally, CMS calculates each SNF's incentive payment adjustment and incentive payment multiplier (IPM), such that 60 percent of the withhold is redistributed to SNFs as incentive payments. CMS applies this multiplier to each SNF's adjusted federal per diem rate by multiplying the adjusted federal per diem rate by the IPM.

For SNFs with fewer than 25 eligible stays in the performance period, payments are not affected by the SNF VBP Program.

For a detailed description of the Program's current scoring methodology, see the SNF VBP Program: FY 2021 Incentive Payment Multiplier Calculation infographic.

[2] The achievement threshold is the 25th percentile of all SNFs' performance on the SNFRM during the baseline period.

[3] The benchmark is the mean of the top decile of all SNFs' performance on the SNFRM during the baseline period.

B. Expansion of the SNF VBP Program scoring methodology

In the FY 2023 SNF PPS proposed rule, CMS proposed adding three more measures to the SNF VBP Program (Table I.1).

Table I.1. Quality measures proposed for the expanded SNF VBP Program

NQF	Quality measure	Description
3481	Discharge to Community (DTC) Measure-Post Acute Care for SNFs	This measure estimates the risk-adjusted rate of successful discharge to the community from a SNF, with "successful discharge to the community" including no unplanned rehospitalizations and no death in the 31 days following SNF discharge. The measure is calculated using the following formula: (risk-adjusted numerator/risk-adjusted denominator) * national observed rate of successful discharges to the community. The measure is calculated using two years of Medicare FFS claims data.
Not NQF endorsed	Skilled Nursing Facility Healthcare-Associated Infections (HAIs) Requiring Hospitalization	This measure estimates the risk-adjusted rate of HAIs that are acquired during SNF care and result in hospitalizations. The measure is risk adjusted to enable users to compare the performance of SNFs based on residents with similar characteristics. The one-year measure is calculated using Medicare FFS claims data and the following formula: (risk-adjusted numerator/risk-adjusted denominator) * national observed rate of HAIs. It is important to recognize that HAIs in SNFs are not considered "never-events." The goal of this risk-adjusted measure is to identify SNFs that have notably higher rates of HAIs compared with their peers.
Not NQF endorsed	Nurse Staffing Hours per Resident Day (Total Nurse Staffing): Total Nurse Staffing (Including Registered Nurse [RN], Licensed Practical Nurse [LPN], and Nurse Aide) Hours per Resident per Day	Total nursing hours (RN + LPN + nurse aide hours) per resident day. The source for total nursing hours is CMS' Payroll-Based Journal (PBJ) system. The denominator for the measure is a count of daily resident census derived from Minimum Data Set (MDS) resident assessments. The measure is case-mix adjusted based on the distribution of MDS assessments by Resource Utilization Groups, Version IV.

FFS = fee-for-service; NQF = National Quality Forum; SNF = skilled nursing facility.

C. Overview of the scoring methodology analyses

The DPS team selected components of the scoring methodology analyses based on the following scoring design objectives and guiding principles. The scoring design objectives were to develop a methodology that meets four criteria:

1. Easy for facilities to understand, so they can implement changes to improve care in response to the Program's incentives
2. Equitable, so no single type of facility (for example, rural facilities) is disproportionately penalized
3. Reliable, so changes in quality of care translate into changes in the performance score
4. Valid, so the SNF VBP Program rewards high performers and penalizes poor performers[4]

[4] DPS has not yet performed validity testing.

In developing the methodology, we followed three principles:

1. To default to the existing SNF VBP Program scoring methodology (or, if not applicable, to the simpler methodology), where possible
2. To develop flexible approaches that readily accommodate the addition of measures in future Program years
3. To align with other CMS programs, where possible, and to be mindful of the Medicare Payment Advisory Commission's (MedPAC's) recommendations

To integrate multiple measures into the expanded SNF VBP Program, we tested the methodology components described in Table I.2. In the TEP meeting, we discussed the considerations for selecting the default and other variations of the methodology components, and we solicited feedback on the pros and cons of each variation. We also sought feedback on other variations that we should consider.

Table I.2. Scoring methodology components tested

Component	Default	Other variations tested
Scaling	Modified range score bounded by the 25th percentile (achievement threshold) and mean of the top decile (benchmark)	• Modified range score bounded by the 50th percentile (achievement threshold) and mean of the top decile (benchmark)
Weighting	Equal weights	• Reliability weights: each measure is weighted proportionally to its reliability, as identified in measure testing; the Total Nurse Staffing measure receives a nominal weight (0.1 of 1.0 total weight) • Policy weights reflecting hypothetical CMS priorities: one set of weights de-emphasizes SNFRM, and another set of weights emphasizes HAI
Minimum case threshold	• Aligned with the minimum case thresholds for other programs using the same measures (such as the SNF Quality Reporting Program): – 25-case minimum for all measures except for the Total Nurse Staffing measure – At least 25 residents, on average, for the Total Nurse Staffing measure	• Public reporting standards: – 25-case minimum for DTC, HAI, SNFRM – At least one quarter of the Total Nurse Staffing measure data • Higher reliability: – 50-case minimum for DTC, HAI, and SNFRM – At least two quarters of the Total Nurse Staffing measure data
Measure minimum	At least three of four measures must satisfy the minimum case threshold during the performance period; SNFs that do not meet these criteria are excluded from the Program	• At least one of four measures must satisfy the minimum case threshold during the performance period • SNFs must meet the minimum case threshold for at least one claims-based measure during the performance period
Program exchange function	Logistic	• Linear • Variations on logistic

Component	Default	Other variations tested
Social risk	No adjustment	• All variations group SNFs into peer groups based on their proportion of dually eligible beneficiaries – Adjust performance standards based on social risk of beneficiaries – Adjust total performance score based on social risk of beneficiaries – Adjust IPMs based on social risk of beneficiaries
Percentage of withhold to pay back	60 percent	• 65 percent • 70 percent

CMS = Centers for Medicare & Medicaid Services; DTC = Discharge to Community measure; HAI = Healthcare-Associated Infections measure; IPM = incentive payment multiplier; SNF = skilled nursing facility; SNFRM = Skilled Nursing Facility Readmission measure; TPS = total performance score.

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II. Meeting Overview

This section summarizes the TEP orientation and subsequent TEP meeting. The DPS team convened an hour-long virtual meeting for the TEP orientation on May 18, 2022, and a four-hour virtual TEP meeting on May 19, 2022.

The TEP consisted of 12 stakeholders and experts with differing areas of expertise and perspectives, including clinical experts in SNF quality and safety improvement, statistical and methodological experts, SNF quality measure experts, health care disparity experts, SNF stakeholder representatives, and SNF patient or family (caregiver) representatives. See Appendix B for the TEP member list. See Appendix C for the TEP meeting materials, which include the SNF VBP Program background materials, the TEP orientation and meeting slide decks.

A. Meeting structure

The TEP orientation introduced panelists to the current scoring methodology used in the SNF VBP Program and the scoring analyses conducted to allow for the use of additional measures in the current single-measure Program. The one-hour orientation included three topic-driven sessions (Table II.1). It helped panelists understand the project goals and analyses conducted and answered their questions to better facilitate feedback during the subsequent TEP meeting.

Table II.1. Orientation meeting agenda

Topic
Welcome and introductions
Logistics
TEP charter
Project overview
TEP objectives
Overview of the SNF VBP Program
Current SNF VBP Program methodology
Overview of the scoring methodology analyses
TEP schedule preview

SNF VBP = Skilled Nursing Facility Value-Based Purchasing; TEP = technical expert panel.

During the subsequent TEP meeting, we presented the results of our scoring methodology analyses using the default methodology and variations on that methodology's components (Table II.2). In each portion of the meeting, we presented the testing approach, results, and solicited panelist feedback.

Table II.2. TEP meeting agenda

Item
Approach to scoring methodology testing
Testing results: Default methodology
Testing results: Scaling variants
Break

III. TEP Meeting Feedback and Discussion

This chapter references the TEP meeting slides (Appendix C) and summarizes the feedback from the TEP. Please note that this report does not include any panelist feedback outside the scope of this TEP's charter.

A. Approach to scoring methodology testing

In this part of the meeting, we reviewed the approach to our scoring analyses, described on slides 4 and 5. We discussed the design objectives, guiding principles, and steps we took to transform individual measure performance into an overall total performance score (TPS) and IPM, described on slide 6. We reviewed the default methodology tested for a four-measure SNF VBP Program, as described on slide 7, and panelists provided feedback.

1. TEP meeting discussion

a. Are there other guiding principles or methodology objectives that should be considered?

- One panelist said SNFs find the current SNF VBP Program methodology to be difficult to understand and suggested not using the current methodology as a standard or justification for the future methodology.
- Two panelists noted the importance of equity as a principle of the design.

b. Are there independent measures of quality we should use for validity testing?

- One panelist brought up the Nursing Home Five Star rating system results but suggested instead using results from state inspection reviews to validate the results.

2. Key findings

Overall, panelists discussed the importance of equity as a principle of the design and suggested we use state inspection reviews to test the validity of results.

B. Test results: Default methodology

In this part of the meeting, we reviewed the results of the default scoring methodology, described on slides 10 through 14, and panelists provided feedback on the results.

1. TEP meeting discussion

a. Are there additional outcomes or metrics we should examine when assessing variations of the methodology?

- One panelist asked how sensitive the results are to changes in performance and suggested conducting analyses on the sensitivity and specificity of the measures in the Program. The goal would be to assess the extent to which a SNF would need to improve on the measures to see a meaningful change in its payment adjustment.

- Panelists and presenters agreed that it can be difficult to disentangle the line between consistency and improvement in results.
- Another panelist said results are different for swing-bed and small SNFs and asked if SNFs with these characteristics should be scored separately or within their own Program.
- A panelist suggested we take unintended consequences of measure performance into consideration through weighting and focus on measure importance as it relates to the quality of patient care. The panelist described an experience in which a patient's care suffered as a result of a facility's actions to avoid hospital readmissions. The panelist said these actions were being rewarded, even though the patient received worse care.

2. Key findings

Overall, panelists discussed the importance of assessing the intended and unintended consequences of each measure in the Program, and they suggested analyzing the extent to which a SNF would need to improve on the measures to see a meaningful change in its payment adjustment.

C. Test results: Scaling variants

In this part of the meeting, we reviewed the test results of the scoring methodology under the alternative scaling variants, described on slides 17 through 20, and panelists provided feedback on the results.

1. TEP meeting discussion

a. As the SNF VBP Program adds more measures, are there other scaling variants that we should consider testing?

- One panelist expressed concern about equity for SNFs that are more likely to serve minority communities and consistently fall into the bottom half of the performance range among all SNFs. Taking money away from these low performers makes it harder for them to improve, the panelist said. They suggested using other metrics for these facilities to give them incentives to improve.
- Another panelist suggested using the current approach to scaling and expressed concern about a more complex approach, such as *z*-scores. The panelist stressed the importance of the methodology being easy for SNFs to understand so they can change their behavior and improve performance. The panelist said scaling approaches could be done within states or by social risk characteristics, emphasizing that we should look at the scaling approach from a SNF perspective. The panelist also said a *z*-score approach might address variation in SNFs by social risk factors or across states.

b. Should we consider different scaling approaches for different types of measures (for example, claims-based versus facility-reported Payroll Based Journal staffing data)?

- One panelist compared SNF scaling approaches to the objective quality standards set in the airline industry. The panelist suggested using a predetermined number as a benchmark or threshold that represents an objective quality standard.
- Another panelist suggested we use different measure-specific benchmarks. The panelist acknowledged the approach would be more complex and recommended consulting with clinicians to determine the best benchmark for each measure.

c. As the SNF VBP Program adds more measures, are there other metrics we should assess when evaluating scaling variants?

- One panelist suggested looking at regional differences and emphasized the importance of measuring SNFs on outcomes within their control.
- Another panelist disagreed with holding states to different standards and suggested using *z*-scores to account for factors related to state variation outside of SNF control.
- One panelist mentioned differing state legislation that mandates staffing levels and ratios, along with neighborhood deprivation indexes, which affect successful discharges to a community. The panelist suggested using a simplified approach focused on the pressures on SNFs, such as state legislation and regional characteristics.

2. Key findings

Overall, panelists expressed concern about providing incentives to low-performing SNFs, and they discussed the benefits and drawbacks of maintaining a simplified approach versus a more complex *z*-score approach.

Panelists made the following suggestions: use separate metrics for SNFs that tend to be in the bottom half of the performance distribution to motivate them to improve, use state- or area-specific benchmarks to address differences in SNF pressures at the state and regional level, and use measure-specific benchmarks based on an objective quality standard.

D. Test results: Minimum case threshold variants

In this part of the meeting, we reviewed the results of the scoring methodology under the alternative minimum case threshold variants, described on slides 24 through 26. Panelists provided feedback on the results.

1. TEP meeting discussion

a. As the SNF VBP Program adds more measures, are there other minimum case threshold variants that should be considered?

- Two panelists suggested looking at the payment adjustment results for the excluded SNFs.
- One panelist favored excluding more SNFs because the quality measure results for SNFs with fewer cases might have low reliability. The panelist also suggested that the Total Nurse Staffing measure use the number of Medicare stays instead of the number of overall residents.
- Another panelist said minimum case thresholds linked to quality reporting could alternatively be the same minimum case thresholds used in the Nursing Home Five Star rating system, noting the following advantages:
  - Minimum case thresholds in the Nursing Home Five Star rating system differ for short-stay (20 cases) versus long-stay (30 cases) measures, which could provide other minimums for the DPS team's testing.
  - Studies show SNFs are responsive to incentives in the public quality report card, and so it makes sense to have two systems in which incentives are aligned via coordinated quality measures calculated the same way.

- Another panelist suggested expanding the data period to two full years while keeping the 25-case threshold the same. The panelist also recommended changing the one-year measures to two-year measures to enable more SNFs to meet the minimum case threshold and have a higher reliability.

b. As the SNF VBP Program adds more measures, what are the important considerations for assessing trade-offs between alternative thresholds?

- Two panelists suggested erring on the **side of reliability**, understanding that doing so will exclude some SNFs. One of the panelists believed that most SNFs would want a more reliable standard. The other panelists voiced support for ways to increase reliability to get closer to a generally accepted standard, such as extending the data period to two years and increasing the case threshold.
- Four panelists suggested erring on the **side of greater inclusion**, so more SNFs are more motivated to improve their quality of care and receive an incentive payment. Panelists made the following comments in support of this approach:
  - This approach would align with the intent and goals of the SNF VBP Program.
  - Because the higher reliability threshold excludes 34 percent of SNFs, that discourages SNFs from improving their quality of care, just based on the number of people they care for. Excluding one-third of SNFs is too much.
  - Small SNFs tend to have better quality of care, but because small SNFs tend to have fewer cases, they are more likely to be excluded from the Program under the higher reliability threshold.
  - Program staff should revisit the minimum case threshold variant results as more measures are added.
- One panelist said if we change the performance period to two years, SNFs would be accountable for two sets (performance periods) of measure results. The panelist suggested that we consider the usability of the measure outcomes to drive quality improvement, given the delay in sharing results with SNFs.

2. Key findings

Overall, panelists emphasized the benefits of linking the minimum case threshold to the existing public reporting standards, along with the trade-offs between greater inclusion in the Program versus more reliable results. Their opinions were mixed in terms of preferring greater measure reliability versus greater inclusion.

Panelists made the following suggestions: review payment adjustment results for the SNFs excluded from the Program; test minimum case thresholds that align with the Nursing Home Five Star rating system; expand the data period to two full years and keep the 25-case minimum; expand the data period to two full years and increase the minimum case threshold, but also consider the usability of the measure outcomes, given the reporting delay after the performance period ends.

E. Test results: Minimum measure policy variants

In this part of the meeting, we reviewed the test results of the scoring methodology under the alternative minimum measure policy variants, described on slides 29 and 30, and panelists provided feedback on the results.

1. TEP meeting discussion

a. As the SNF VBP Program adds more measures, are there other minimum measure variants we should consider testing (for example, domain based), and are there other metrics we should assess when evaluating minimum measure policies?

- One panelist asked how the TPS is calculated when a facility has results for only one measure, not all four measure results. The DPS team said the result from the one measure becomes the TPS, and there is no imputation; all measures remaining after applying the case minimums are equally weighted. The team does not differentiate performance scores based on the number of measures included in the TPS. The panelist said this could be an advantage for certain SNFs, depending on the measures omitted and included.
- Another panelist asked if we could examine the result variations applied to multiple components of the scoring methodology at once, mixing and matching to understand the total accumulation of these different thresholds. The DPS team said it could do this, but it is most manageable to look at one variation at a time, given the number of combinations.
  - Three panelists supported this analysis. They suggested comparing the most- and least-restrictive variations (across each component) and examining the characteristics of the excluded SNFs' and how they would have performed if they were included.
  - One panelist expressed concern about SNFs scored on the Total Nurse Staffing measure alone and about the accuracy of sources of facility-reported measure data, such as the Payroll Based Journal and the Minimum Data Set. Another panelist suggested that we require a SNF to have participated in Medicare to be scored on the Total Nurse Staffing measure.
  - One panelist was concerned about excluding SNFs based on their number of measures with scores and calculating SNF performance based on these different numbers of measures. The panelist suggested we strive for a balance between the number of measures SNFs are scored on and the number of SNFs excluded from the Program.
  - One panelist suggested evaluating policies that lead to the inclusion of the largest number of SNFs.
- A panelist asked how much latitude a SNF has in terms of reporting the measures. DPS said three of the measures (Discharge to Community, SNFRM, and HAI) are claims based, and the other measure (Total Nurse Staffing) is sourced from the Payroll Based Journal, which is facility-reported, but SNFs face a penalty for not reporting these auditable data.
- Another panelist said SNFs have ways of gaming the system via their clinical decision making—what types of patients to admit and whether to send a patient to a hospital.

2. Key findings

Overall, panelists discussed concerns about measuring SNF performance based on one measure and on different combinations of measures. They also raised concerns about the potential for SNFs to game the measure results used by the Program.

Panelists made the following suggestions:

- Look at the results of all methodology component variations applied at once, mixing and matching to understand the total accumulation of these different thresholds.
- Compare the most- and least-restrictive variations (across each component) and look at the excluded SNFs' differences in performance by SNF characteristics.
- Evaluate policies that lead to the inclusion of the most SNFs.
- Strive for a balance between the number of measures SNFs are scored on and the number of SNFs excluded from the Program.

F. Test results: Weighting variants

In this part of the meeting, we reviewed the test results of the scoring methodology under the weighting variants, described on slides 33 and 34, and panelists provided feedback on the results.

1. TEP meeting discussion

a. As the SNF VBP Program adds more measures, are there other weighting variants that we should consider testing?

b. As the SNF VBP Program adds more measures, are there reasons we would consider non-equal weights?

- One panelist asked whether the payment adjustments for individual facilities differ by weighting approach, despite the limited impact of the weights on payment adjustments. The DPS team has not yet looked into this.
- Two panelists were interested in the results of weighting Total Nurse Staffing at 70 percent and the other measures at 10 percent. They suggested prioritizing the staffing measure over the other measures because staffing is within SNFs' direct control.
- One panelist suggested weighting Total Nurse Staffing at 75 percent and HAI at 25 percent because the SNFRM and DTC measure are too muddled to motivate a change in SNF performance. The DPS team said it would likely need a minimum, nominal weight for each of the four measures.
- One panelist suggested looking at the costs a SNF would need to incur to improve in the Program. The panelist was aware we do not have this information but has seen research on costs of improving in the home health setting. They recommended asking SNF clinicians or nursing administrators what costs they would estimate are required to increase staffing, for example, so we know where SNFs will invest based on the cost of the investment and the size of the incentive. The panelist suggested conducting a survey to do this and using the results to determine the relative weighting and ultimately incentive payments. The survey result would show the efficiency of the incentive rather than just the size of the incentive, according to the panelist. The

panelist also said the cost of improvement across the quality measures will differ; SNFs would not just base their investments on incentives but also on how much it costs to achieve measure-specific improvement.

- Another panelist agreed with the importance of understanding the costs needed to observe a significant change in performance. The panelist said the cost of improvement should be factored into the methodology and emphasized that the improvement SNFs are striving for needs to be attainable.
- One panelist said there are pros and cons for each measure, given they were not specifically built for VBP programs. Going beyond equal weighting takes us into territory we do not fully understand, the panelist said. They added that unequal weighting is harder for providers, patients, and families to understand and suggested that measures should be those that are most important to the patient.
- One panelist said we should take into account the unintended consequences of using the Total Nurse Staffing measure. The panelist said SNFs that are more efficient with their staff and do well on other measures should no longer be scored on Total Nurse Staffing because we would be discouraging their efficiency gains. This panelist also suggested the possibility of a gateway measure and bonus rewards.
- One panelist recommended testing domain-based weighting after more measures are added. The panelist suggested two domains: hospitalization and adverse events. The domains could be structured to assess complete SNF quality of care, with substantial weights on the most important aspects of quality.

2. Key findings

Overall, panelists were surprised that weighting variations did not have a big impact on payment adjustments. They suggested the following: prioritizing the Total Nurse Staffing measure over the other measures, reviewing the costs a SNF would need to incur to improve in the Program, and testing domain-based weighting after more measures are added.

G. Test results: Payment variants

In this part of the meeting, we reviewed the test results of the scoring methodology under the payment variants, described on slides 38 through 41, and panelists provided feedback on the results.

1. TEP meeting discussion

a. What criteria should we use to assess alternative exchange functions?

b. Are there other functional forms we should consider?

c. How should we assess the trade-offs between criteria (for example, more positive IPMs and a lower maximum IPM versus fewer positive IPMs and a higher maximum IPM)?

- One panelist asked how the SNF VBP Program wants to treat low-performing SNFs. The panelist added that low-performing SNFs typically treat a higher percentage of racial and ethnic minority groups than high-performing SNFs.

- Another panelist suggested that the trade-offs between criteria should be addressed based on findings by behavioral economists.
- Three panelists favored increasing the percentage of money redistributed to SNFs to the maximum allowed by PAMA (70 percent). They said the poorest-performing SNFs need the money the most to improve care in their facilities.
- Two panelists suggested asking a random sample of SNFs or a research think tank for behavioral science data about whether the Program should maximize the possible size of incentive payments or send smaller payments to more SNFs. The panelists worried that our (the TEP's and CMS') predictions about what SNFs would prefer might be wrong.
- Another panelist favored smaller payments to more SNFs.

2. Key findings

Overall, panelists asked thoughtful questions about the Program's intent for treating low performers. They suggested increasing the payment percentage to the maximum allowed (70 percent) and gathering SNFs' perspectives on maximizing the possible size of the incentive payments versus having more SNFs receive a smaller share of the payment pool.

H. Test results: Social risk variants

In this part of the meeting, we reviewed the test results of the scoring methodology under the social risk variants, described on slides 44 through 50, and panelists provided feedback on the results.

1. TEP meeting discussion

- Two panelists suggested measuring SNFs' performance separately (for example, using peer groups) or stratifying results by SNF characteristics (for example, for-profit status, rural/urban, and so on). One panelist had concerns that, without accounting for the characteristics of beneficiaries the SNF cares for, the results might be inequitable, unreliable, or invalid. Another panelist was concerned that not accounting for SNF characteristics might discourage low-performing SNFs that treat more individuals from racial and ethnic minority groups from improving their quality of care.
    - Another panelist agreed that peer grouping raises an important philosophical issue: whether measures or quality programs should be adjusting for differences in the characteristics of nursing homes. The panelist questioned whether it's philosophically correct to adjust for SNF characteristics, given the evidence that racial and ethnic minority groups are more often treated by low-quality SNFs than by high-quality SNFs. But they cautioned about building systematic differences into the programs because this would enable these differences to persist. They suggested that payers find ways to fund programs that address the systematic differences in health care and referred to an NQF project about using individual patient-level risk adjustment for social determinants of health (SDOHs) (https://www.qualityforum.org/Risk_Adjustment_Guidance.aspx). The panelist recommended that the Program use the same standard of quality across all SNFs. They also suggested that the Program's intent to encourage high-quality care should not lower the quality standard for SNFs that systematically provide low-quality care, based on patients' health outcomes, for patients with higher-risk SDOHs.

- Another panelist stressed that the purpose of risk adjustment is not to forgive or excuse these differences, but to take into account these factors when providing incentives for SNFs to improve their care. The panelist suggested we consider whether the facility is part of a life care community as a potential characteristic for risk adjustment.
- Another panelist emphasized the importance of avoiding unintended consequences and said if we do not adjust for social risk, we could be creating an incentive for providers to not treat more socially at-risk beneficiaries.

a. Which of the social risk approaches would you recommend, given the empirical results and conceptual considerations?

- One panelist was philosophically opposed to implementing different standards of care for different populations; some of the methods involve this and some do not. The panelist supported any method that did not include different standards of care for different SNFs, adding that the TPS adjustment approach is less obvious and has the largest effect on SNFs.
- Another panelist added that different standards of care have already been set through systematic inequities, and not taking these into account when comparing SNFs takes resources away from SNFs most in need. Conversely, accounting for these differences would give SNFs that serve more socially at-risk beneficiaries more opportunities to reach benchmarks and move into higher-performing peer groups. The panelist emphasized the need to address systematic inequities and preventable health care disparities.
  - Another panelist agreed and talked about it in the context of patients waiting in a hospital to go to a SNF. She said SNFs already cherry-pick the patients they will admit, and this could be exacerbated if we don't take into account social risk; the sicker patients might have an even harder time being admitted to a SNF. The panelist saw the social risk approaches as a way of preventing disparities, even though she shared the concern about embedding different standards of care.
- One panelist was intrigued by the analysis of the highest IPMs by various approaches. They found scaling-only adjustment appealing because it keeps the average IPMs the same across the groups but has a higher maximum IPM, which gives SNFs more incentive to improve. The panelist said other approaches offer little incentive to get more than the 2 percent withhold back.
- Another panelist was not optimistic that the social risk approaches would improve quality of care but supported addressing social risk in general. The panelist did not think SNFs would want CMS to adjust for social risk.

b. Are there are other metrics we should use to assess the social risk approaches?

- One panelist asked how SNF patient deaths are captured. The DPS team said it does not have a mortality measure, and the panelist suggested taking mortality into account as an outcome that is heavily affected by race, as seen in the COVID-19 outcomes data. The panelist emphasized the difference between the methodology calculated expected performance and performance for which palliative care is better aligned with the patient and clinician's goal of care. The panelist asked that we think about how to account for these different care objectives that end up in the measure outcome data impacting performance in the scoring methodology.

c. Are there other social risk approaches we should consider?

- One panelist suggested stratifying by age, referencing their prior experience working with a lower-resource and younger population of residents.
- One panelist suggested looking at census-based or neighborhood deprivation characteristics.

d. Are there other proxies of social risk besides the proportion of dually eligible beneficiaries that we should consider?

- One panelist reiterated their objection to having different standards of quality in the scoring methodology. The panelist was against stratifying by profit status and urban/rural area because everyone deserves the same standard of care—but they suggested looking at the results for informational knowledge.
- Another panelist suggested using census data for other risk factors and expressed concerns about using dual standards of care, while acknowledging that dual standards exist, and there is a need to account for SDOHs, which make up 60 percent of the cost of care for complex conditions. The panelist favored whichever approach transfers the most money to SNFs that care for the most vulnerable patients.

2. Key findings

Overall, panelists discussed the role of social risk variants and the challenge of avoiding different standards of care for different populations, while acknowledging that systematic inequities exist. Panelists said if we do not adjust for these differences, we will be taking more money away from the SNFs that need it most.

Panelists suggested reviewing the results stratified by age and looking at census deprivation characteristics and data as an alternative proxy for social risk.

IV. Next Steps

The DPS team will continue to work with CMS to refine the SNF VBP Program scoring methodology to allow for the use of additional measures in the current single-measure Program. We appreciate the feedback and time of the panelists, and we will be conducting another wave of testing and analyses on alternative variations of the methodology after reviewing the feedback. We may also reconvene the TEP in 2023 to solicit feedback on these alternative variations, pending reviews of the results.

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Appendix A: TEP Charter

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Technical Expert Panel Charter

Project Title: Technical Expert Panel (TEP) for the Scoring Methodology for the Expansion of the Skilled Nursing Facility Value-Based Purchasing (SNF VBP) Program

TEP Expected Time Commitment and Dates:

The TEP is a standing panel of experts who advise the DPS contract over the course of the scoring methodology updates. Selected nominees will be expected to attend one four-hour TEP meeting (maximum length) in early May 2022 (specific date to be determined based on availability of selected members) as well as potential follow-up TEP meetings in the summer and fall of 2022. All meetings will be held virtually.

Project Overview:

The Centers for Medicare & Medicaid Services (CMS) has contracted with Mathematica and RTI International to develop a Skilled Nursing Facility Value-Based Purchasing (SNF VBP) Program scoring methodology that ties SNF payments to the quality of care provided across several domains of care. The contract name is the Division of Value, Incentives, and Quality Reporting (DVIQR) Program Support (DPS) contract. The contract number is 75FCMC18D0032, task order 75FCMC19F0005.

As the organizer of this TEP, Mathematica convenes groups of stakeholders and experts who contribute direction and thoughtful input on the scoring methodology for the expansion of the SNF VBP Program. This work is in response to Section 111 of the Consolidated Appropriations Act, 2021, which allowed the Secretary of the Department of Health and Human Services to apply up to nine additional measures to the SNF VBP Program for payment for services furnished on or after October 1, 2023 (fiscal year [FY] 2024). The purpose of this TEP is to solicit stakeholder input on updates to the SNF VBP Program scoring methodology to allow for applying additional measures to the current single-measure Program.

Project Objectives:

The primary objective of this project is to solicit stakeholder input on updates to the SNF VBP Program scoring methodology to allow for applying additional measures to the current single-measure Program.

Technical Expert Panel (TEP) Objectives:

As part of its scoring methodology testing process, the DPS contractor requests input from a broad group of SNF stakeholders to evaluate and provide guidance on the results of the scoring methodology updates. Stakeholders include, but are not limited to, clinical expertise around SNF quality/safety improvement, statistical/methodological experts, SNF quality measure experts, healthcare disparity experts, SNF stakeholder representatives, and SNF patient or family (caregivers) representatives. Patient or family (caregivers) and facility representatives can provide unique and essential input on scoring methodology based on their own experience and perspective. A well-balanced representation of stakeholders on the TEP will help to ensure the consideration of key perspectives in the scoring methodology development and selection processes.

TEP Requirements:

A TEP of approximately 8 to 15 individuals will provide input on updates to the SNF VBP Program scoring methodology to allow for applying additional measures to the current single-measure Program. The TEP will be composed of individuals with differing areas of expertise and perspectives, including but not limited to:

- Clinical expertise around SNF quality/safety improvement
- Statistical/methodological expertise
- SNF quality measure expertise
- Healthcare disparities expertise
- SNF stakeholder perspective
- SNF patient or family (caregivers) perspective

Scope of Responsibilities:

The TEP will provide input to the DPS contractor on updates to the SNF VBP Program scoring methodology to allow for applying additional measures to the current single-measure Program. The TEP's specific duties include the following:

- Review supporting materials provided by the DPS contractor prior to the TEP meeting
- Attend and actively participate in a TEP meeting and potential follow-up TEP meetings
- Provide input on the scoring methodology testing; input on the initial measures for potential implementation into the expanded SNF VBP Program was previously collected through an RFI in the FY 2022 SNF PPS proposed rule.
- Review the TEP summary report and provide input prior to any possible public release

Guiding Principles:

Participation as a TEP member is voluntary and the DPS contractor records the participant's input in the meeting minutes, which the DPS contractor will summarize in a report that they may disclose to the public. If a participant has chosen to disclose private, personal data, then related material and communications are not covered by patient-provider confidentiality. Patient/caregiver participants may elect to keep their names confidential in public documents. TEP organizers will answer any questions about confidentiality.

All potential TEP members must disclose any significant financial interest or other relationships that may influence their perceptions or judgment. It is unethical to conceal (or fail to disclose) conflicts of interest. However, there is no intent for the disclosure requirement to prevent individuals with particular perspectives or strong points of view from serving on the TEP. The intent of full disclosure is to inform the DPS contractor, other TEP members, and CMS about the source of TEP members' perspectives and how that might affect discussions or recommendations.

The TEP will provide input on updates to the SNF VBP Program scoring methodology to allow for applying additional measures to the current single-measure Program. The DPS contractor will consider the TEP's recommendations and will convey those recommendations to CMS; however, the DPS contractor and CMS will ultimately make decisions about scoring methodology development and selection. The DPS contractor will write and share summary reports of TEP proceedings following meetings to highlight discussions and document decisions.

The DPS contractor will ensure confidentiality in TEP reports by summarizing discussion topics and removing the names of TEP members who make specific comments during the meetings.

Estimated Number and Frequency of Meetings:

There will be one four-hour TEP meeting (maximum length) in early May 2022 (specific date to be determined based on availability of selected members) as well as potential follow-up TEP meetings in the summer and fall of 2022.

Date Approved by TEP:

TBD

TEP Membership:

TBD

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Appendix B: TEP Member List

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Table B.1. TEP members in attendance (May 19th, 2022)

Name	Credentials	Affiliation	Location	Perspective or expertise				Profession
				Patient/ family/ caregiver	Clinical or method-logical	Quality measures	Health care disparities	
Dana Mukamel	PhD	University of California, Irvine	Irvine, CA	---	X	X	X	Health Economist/Researcher
Dixie Flynn	MA, BSN, RN	Self-employed	Atchison, KS	X	X	X	X	Registered Nurse
Jessie McGill	RN, RAC-MT, RAC-MTA	American Association of Post-Acute Care Nursing	Watertown, SD	---	X	X	X	Registered Nurse
Katharine H. Bradley	Patient representative	Our Mother's Voice	Lugoff, SC	X	---	---	---	Caregiver and Advocate, Founder and Chief Executive Officer
Kiran Sreenivas	MS	American Health Care Association	Washington, DC	---	X	X	---	Senior Director of Research
Michael Wasserman	MD, CMD	Retired	Newbury Park, CA	---	X	X	X	Geriatrician and Quality Expert
Rebekah Gardner	MD	Healthcentric Advisors—CMS Quality Improvement Organization; Alpert Medical School of Brown University	Providence, RI	---	X	X	---	Physician, Senior Medical Scientist
Sheila Roman	MD, MPH	Independent Healthcare Consultant affiliated with Johns Hopkins Medical institutions	Monkton, MD	X	X	---	---	Physician and Quality Measure Expert
Sheria Robinson-Lane	PhD	University of Michigan	Livonia, MI	---	X	---	X	Assistant Professor and Registered Nurse
Steven Littlehale	MS, RN, GGNS - BC	Zimmet Healthcare Services Group	Manalapan, NJ	---	X	X	---	Chief Innovation Officer
Terrence O'Malley	MD	Retired	Winchester, MA	---	X	X	---	Geriatric Physician
Tonya Roberts	PhD, RN	University of Wisconsin, Madison	Madison, WI	X	X	X	---	Associate Professor in Nursing

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Appendix C: TEP Meeting Materials

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Background Document

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Memo

To:	Scoring Methodology for the Expansion of the Skilled Nursing Facility Value-Based Purchasing (SNF VBP) Program Technical Expert Panel (TEP) Participants
From:	The Division of Value, Incentives, and Quality Reporting Program Support (DPS) contract's SNF VBP Program team
Date:	5/11/2022
Subject:	Technical Expert Panel for the Scoring Methodology for the Expansion of the Skilled Nursing Facility Value-Based Purchasing Program
Attachments:	Attachment A. SNF VBP Program: FY 2021 Incentive Payment Multiplier Calculation infographic

OVERVIEW

The Centers for Medicare & Medicaid Services (CMS) contracted with Mathematica and RTI International to develop a scoring methodology for use in the expanded Skilled Nursing Facility Value-Based Purchasing (SNF VBP) Program that ties SNF payments to the quality of care provided across several domains of care. The contract name is the Division of Value, Incentives, and Quality Reporting (DVIQR) Program Support (DPS) contract.

On May 19, 2022, the DPS team will convene a diverse group of stakeholders and experts to contribute direction and thoughtful input on the scoring methodology for the expansion of the SNF VBP Program to allow for the application of additional measures to the current single-measure SNF VBP Program. This work is in response to Section 111 of the Consolidated Appropriations Act, 2021, which allowed the Secretary of the Department of Health and Human Services to apply up to nine additional measures to the SNF VBP Program for payment for services furnished on or after October 1, 2023 (fiscal year [FY] 2024). This memo contains background information for the SNF VBP Program to provide Technical Expert Panel (TEP) members with the SNF VBP Program context prior to providing feedback on considerations for the expansion of the SNF VBP Program.

SNF VBP Background

Through the SNF VBP Program, CMS awards incentive payments to SNFs for the quality of care they provide to Medicare beneficiaries, currently measured by SNFs' performance on a single

measure of all-cause hospital readmissions.[1] Section 215 of the Protecting Access to Medicare Act of 2014 (PAMA) added sections 1888(g) and (h) to the Social Security Act, which required the Secretary of the Department of Health and Human Services to establish the SNF VBP Program.

All SNFs paid under Medicare's SNF Prospective Payment System (PPS) are included in the SNF VBP Program. Incentive payments are applied prospectively to all Medicare fee-for-service (FFS) Part A claims paid under the SNF.

As required by statute, CMS withholds 2 percent of SNFs' Medicare FFS Part A payments to fund the Program. This 2 percent is referred to as the "withhold." CMS is required to redistribute 50 to 70 percent of the withhold to SNFs as incentive payments. CMS currently redistributes 60 percent of the withhold to SNFs as incentive payments, as finalized in the FY 2018 SNF PPS final rule (pages 36619–36621). CMS retains the remaining 40 percent as savings in the Medicare Trust Fund.

PAMA specifies the following requirements of the SNF VBP Program:

- SNFs are evaluated by their performance on a hospital readmission measure.
- SNFs are scored on both improvement and achievement based on performance standards; the performance score is the higher of these two scores.
- SNFs earn incentive payments based on their performance.
- CMS must redistribute 50 to 70 percent of withheld funds to SNFs as incentive payments.
- CMS must publish performance standards in the SNF PPS final rule at least 60 days prior to the start of the pertinent measure's performance period.
- SNFs receive quarterly confidential feedback reports containing information about their performance.
- SNFs with the highest rankings receive the highest value-based incentive payments.
- SNFs with the lowest rankings receive the lowest value-based incentive payments.
- SNFs in the lowest 40 percent of the ranking receive a lower payment rate than would otherwise apply.

Section 111 of the Consolidated Appropriations Act, 2021, amended Section 1888(h) of the Social Security Act to allow the Secretary of the Department of Health and Human Services to apply up to nine additional measures to the SNF VBP Program for payments for services furnished on or after October 1, 2023 (FY 2024).

In response, CMS contracted with the DPS team to support the expanded SNF VBP Program by testing various scoring methodologies to allow for the addition of up to nine

[1] For a detailed description on the Program's current scoring methodology, see the Attachment A. SNF VBP Program: FY 2021 Incentive Payment Multiplier Calculation infographic. SNFs' performance in the Program is currently based on their results on the SNF 30-Day All-Cause Readmission Measure (SNFRM), a quality measure endorsed by the National Quality Forum (NQF #2510).

measures to the Program. The DPS contractor conducted a literature review to identify evidence-based approaches to scoring that could be applied to the expanded SNF VBP Program design; the literature review informed the methodological variations tested. **This TEP's focus will be to provide input to the DPS contractor on the scoring methodology for the expansion of the SNF VBP Program.** The next section describes the current scoring methodology, which serves as the template for the scoring methodology components described in the Expansion of the SNF VBP Program Scoring Methodology section.

Overview of the current scoring methodology

The SNF VBP Program currently assesses SNFs' performance on one measure, the Skilled Nursing Facility 30-Day All-Cause Readmission Measure (SNFRM, National Quality Forum [NQF] #2510). The SNFRM measures the rate of all-cause, unplanned hospital readmissions for SNF residents within 30 days of discharge from a prior hospital stay. The SNFRM is risk-adjusted for stay-level factors including clinical and demographic characteristics. Each SNF receives a SNFRM result for a baseline period and a performance period. This result is known as a risk-standardized readmission rate (RSRR). CMS inverts the RSRRs for the baseline and performance periods by subtracting the RSRR from 1 so that higher results indicate better performance.

CMS calculates two performance standards for each Program year: (1) the achievement threshold,[2] and (2) the benchmark.[3]

CMS determines the performance scores for all SNFs by comparing SNFs' inverted RSRRs in the performance period with the performance standards and the following two metrics:

- An improvement score based on SNFs' own past performance during the baseline period (scores range from 0 to 90)
- An achievement score based on all SNFs' performance during the baseline period (scores range from 0 to 100)

CMS compares a SNF's achievement and improvement scores; whichever score is higher becomes the SNF's performance score.

CMS transforms the calculated performance scores for all SNFs using a logistic exchange function, also referred to as an S-shaped curve (with values ranging from 0 to 1).

CMS then calculates each SNF's incentive payment adjustment and IPM, such that 60 percent of the withhold is redistributed to SNFs as incentive payments. CMS applies this multiplier to each SNF's adjusted federal per diem rate by multiplying the adjusted federal per diem rate by the IPM.

[2] The achievement threshold is the 25th percentile of all SNFs' performance on the SNFRM during the baseline period.

[3] The benchmark is the mean of the top decile of all SNFs' performance on the SNFRM during the baseline period.

For those SNFs with fewer than 25 eligible stays in the performance period, payments are not affected by the SNF VBP Program.

For a detailed description of the Program's current scoring methodology, see the Attachment A. SNF VBP Program: FY 2021 Incentive Payment Multiplier Calculation infographic.

Expansion of the SNF VBP Program Scoring Methodology

In the FY 2023 SNF PPS proposed rule, CMS proposed three additional measures for use in the SNF VBP Program. These measures are listed in Table 1 below.

Table 1. Quality Measures Proposed for the Expansion of the SNF VBP Program

NQF	Quality Measure	Description
3481	Discharge to Community (DTC) Measure-Post Acute Care for SNFs	This measure estimates the risk-adjusted rate of successful discharge to community from a SNF, with successful discharge to community including no unplanned rehospitalizations and no death in the 31 days following SNF discharge. The measure is calculated using the following formula: (risk-adjusted numerator/risk-adjusted denominator) * national observed rate of successful discharges to the community. The measure is calculated using two years of Medicare FFS claims data.
N/A	Skilled Nursing Facility Healthcare-Associated Infections (HAI) Requiring Hospitalization	This measure estimates the risk-adjusted rate of healthcare-associated infections (HAIs) that are acquired during SNF care and result in hospitalizations. The measure is risk adjusted to allow comparison of performance based on residents with similar characteristics between SNFs. The one-year measure is calculated using Medicare FFS claims data and the following formula: (risk-adjusted numerator/risk-adjusted denominator) * national observed rate of HAIs. It is important to recognize that HAIs in SNFs are not considered "never-events." The goal of this risk-adjusted measure is to identify SNFs that have notably higher rates of HAIs when compared to their peers.
N/A	Nurse Staffing Hours per Resident Day (Total Nurse Staffing): Total Nurse Staffing (Including Registered Nurse [RN], Licensed Practical Nurse [LPN], and Nurse Aide) Hours per Resident per Day	Total nursing hours (RN + LPN + nurse aide hours) per resident day. The source for total nursing hours is CMS's Payroll-based Journal (PBJ) system. The denominator for the measure is a count of daily resident census derived from Minimum Data Set (MDS) resident assessments. The measure is case-mix adjusted based on the distribution of MDS assessments by Resource Utilization Groups, version IV (RUG-IV groups).

Overview of the Scoring Methodology Analyses

The DPS contractor selected components of the scoring methodology based on the scoring design objectives and guiding principles. The scoring design objectives were to develop a methodology that meets the following criteria:

1. Easy for facilities to understand, so they can implement changes to improve care in response to the Program's incentives

2. Equitable, so no single type of facility (for example, rural facilities) is disproportionately penalized
3. Reliable, so changes in quality of care translate into changes in the performance score
4. Valid, so the SNF VBP Program rewards high performers and penalizes poor performers[4]

The methodology had three guiding principles:

1. To default to the existing SNF VBP Program scoring methodology (or, if not applicable, the simpler methodology), where possible
2. To develop flexible approaches that readily accommodate the addition of measures in future Program years
3. To align with other CMS programs where possible, and to be mindful of MedPAC recommendations

To integrate multiple measures into the expanded SNF VBP Program we tested the methodology components described in Table 2. In the TEP meeting we will discuss the considerations for selecting the default and other variations and solicit feedback on the pros and cons of each methodology component variation, as well as other variations that we should consider.

Table 2. Scoring Methodology Components Tested

Component	Default Variation	Other Variations Tested
Scaling	Modified range score bounded by the 25th percentile (achievement threshold) and mean of the top decile (benchmark)	Modified range score bounded by the 50th percentile (achievement threshold) and mean of the top decile (benchmark)
Weighting	Equal weights	• Reliability weights: each measure is weighted proportionally to its reliability, as identified in measure testing; the Total Nurse Staffing measure, receives a nominal weight (0.1 of 1.0 total weight) • Policy weights reflecting CMS priorities: one set of weights de-emphasizes SNFRM, and another set of weights emphasizes HAI
Minimum case threshold	• Aligned with the minimum case thresholds for other programs using the same measures (e.g., SNF Quality Reporting Program): –25-case minimum for all measures except for the Total Nurse Staffing measure –At least 25 residents, on average, for the Total Nurse Staffing measure	• Public reporting standards: – 25-case minimum for DTC, HAI, SNFRM – At least one quarter of the Total Nurse Staffing measure data • Higher reliability: – 50-case minimum for DTC, HAI, and SNFRM – At least two quarters of the Total Nurse Staffing measure data
Measure minimum	At least three of four measures must satisfy the minimum case threshold during the performance period. SNFs that do not meet these criteria are excluded from the Program.	• At least one of four measures must satisfy the minimum case threshold during the performance period • SNFs must meet the minimum case threshold for at least one claims-based measure during the performance period

[4] DPS has not performed validity testing at this time.

Program exchange function	Logistic	• Linear • Variations on logistic
Social risk	No adjustment	• All variations group SNFs into peer groups based on their proportion of dually eligible beneficiaries –Adjust performance standards for social risk of beneficiaries –Adjust total performance score for social risk of beneficiaries –Adjust IPMs for social risk of beneficiaries
Percentage of withhold to pay back	60 percent	• 65 percent • 70 percent

CMS = Centers for Medicare & Medicaid Services; HAI = Healthcare-Associated Infections measure; IPM = incentive payment multiplier; SNF = skilled nursing facility; SNFRM = Skilled Nursing Facility Readmission measure; TPS = total performance score.

Orientation Meeting Materials

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Technical Expert Panel **Orientation**

Scoring Methodology for the Expansion of the Skilled Nursing Facility Value-Based Purchasing Program

Wednesday, May 18, 2022

3-4pm EST

Roadmap to the Orientation

1. **Welcome and introductions**
2. **Logistics**
3. **Technical expert panel (TEP) charter**
   A. Project overview
   B. TEP objectives
4. **Overview of the Skilled Nursing Facility Value-Based Purchasing (SNF VBP) Program**
5. **Current SNF VBP Program methodology**
6. **Overview of the scoring methodology analyses**
7. **TEP schedule preview**

Welcome and Introductions

Welcome and introductions

CMS	DPS		MITRE	Acumen	Observers
Shequila Purnell-Saunders	Daniella Sehgal	Anne Deutsch	Michael Lee	Cheng Lin	Ledia Tabor (MedPAC)
Mary Pratt	Wil Lim	Micah Segelman	David Tycz	Ellen Strunk	Tara McMullen (VHA)
Gregory Stark	Lauren Forrow	Ye Pogue	Sara Rudow	Stephen McKean	
Angela Kohlhepp	Alexander	Sabina Gandhi		Sam Wands	
Alexandre Laberge	Bohn	Mel Ingber		Serena Master	
Alan Levitt	Megan Caruso				
Rebekah Natanov					
Robin Price					
Marci O'Reilly					

CMS = Centers for Medicare & Medicaid Services; DPS = Division of Value, Incentives, and Quality Reporting Program Support; MedPAC= Medicare Payment Advisory Commission; VHA = Veterans Health Administration.

TEP member introductions

Name
Dana Mukamel (TEP Chair)
Dixie Flynn
Jessie McGill
Katharine H. Bradley
Kiran Sreenivas
Michael Wasserman
Natalie Leland
Rebekah Gardner
Sheila Roman
Sheria Robinson-Lane
Steven Littlehale
Terrence O'Malley
Tonya Roberts

Your name, professional role or title, and organizational affiliation, as applicable

TEP = technical expert panel.

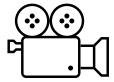
Logistics

Meeting logistics

One four-hour webinar meeting

- May 19, 2022, 1-5pm EST
- TBD follow-up meeting, if necessary

- Meeting materials and information will be sent before the meeting



- This TEP meeting will be recorded for internal reference

- Please mute your microphones when not speaking

- Please use the “raise hand” feature to provide your feedback or ask questions

- A summary report of the TEP meeting will be posted on the CMS website

TEP = technical expert panel.

Confidentiality agreement

/ TEP members' opinions and experiences

- Public summary reports will omit names
- We will not link names to comments or opinions
- Patients' information should be considered protected health information

/ Nondisclosure

- Details pertaining to the discussions and analyses should remain confidential

TEP = technical expert panel.

TEP Charter

Project overview

- **CMS contracted with Mathematica and RTI International to develop a scoring methodology for use in the expanded SNF VBP Program that ties SNF payments to the quality of care provided across several domains of care**
  - The contract name is the Division of Value, Incentives, and Quality Reporting (DVIQR) Program Support (DPS) contract

CMS = Centers for Medicare & Medicaid Services; SNF = skilled nursing facility; SNF VBP = Skilled Nursing Facility Value-Based Purchasing.

TEP objectives

- **The primary objective of this TEP is to solicit stakeholder input on updates to the SNF VBP Program's scoring methodology to allow for the application of additional measures to the current single-measure Program**

SNF VBP = Skilled Nursing Facility Value-Based Purchasing; TEP = technical expert panel.

Overview of the SNF VBP Program

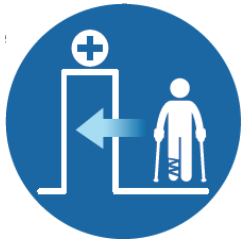
SNF VBP Program

The current SNF VBP Program:

- is a CMS program that awards incentive payments to skilled nursing facilities (SNFs) based on their performance on a single measure of all-cause hospital readmissions
- encourages SNFs to improve the quality of care they provide to Medicare beneficiaries by reducing unplanned hospital readmissions

Current Program measure:

- the SNF 30-Day All-Cause Readmission Measure (SNFRM; NQF #2510), which evaluates the risk-standardized readmission rate (RSRR) of unplanned, all-cause hospital readmissions



CMS = Centers for Medicare & Medicaid Services; NQF = National Quality Forum; SNF = skilled nursing facility; SNF VBP = Skilled Nursing Facility Value-Based Purchasing.

Program statutory requirements (1)

- **Section 215 of the Protecting Access to Medicare Act of 2014 (PAMA) added sections 1888(g) and (h) to the Social Security Act, which required the secretary of the Department of Health and Human Services to establish a SNF VBP Program**
- **PAMA specifies that under the SNF VBP Program, SNFs:**
  - Are evaluated by their performance on a hospital readmission measure
  - Are assessed on both improvement and achievement, and scored on the higher of the two
  - Earn incentive payments based on their performance
  - Are subject to a 2 percent payment withhold, of which between 50 and 70 percent is paid back
  - Receive quarterly confidential feedback reports containing information about their performance
- **All SNFs paid under Medicare's SNF Prospective Payment System (PPS) are included in the SNF VBP Program**

SNF = skilled nursing facility; SNF VBP = Skilled Nursing Facility Value-Based Purchasing.

Program statutory requirements (2)

- **Section 111 of the Consolidated Appropriations Act, 2021, amended Section 1888(h) of the Social Security Act to allow the secretary of the Department of Health and Human Services to apply up to nine additional measures determined appropriate by the secretary to the SNF VBP Program for payments for services furnished on or after October 1, 2023 (FY 2024)**

FY = fiscal year; SNF VBP = Skilled Nursing Facility Value-Based Purchasing.

Rulemaking

In the FY 2023 SNF PPS proposed rule, CMS proposed three additional measures for use in the SNF VBP Program

Quality Measure
Discharge to Community (DTC) Measure—Post-Acute Care for SNFs
Skilled Nursing Facility Healthcare-Associated Infections (HAI) Requiring Hospitalization
Nurse Staffing Hours per Resident Day (Total Nurse Staffing): Total Nurse Staffing (Including Registered Nurse [RN], Licensed Practical Nurse [LPN], and Nurse Aide) Hours per Resident per Day

CMS = Centers for Medicare & Medicaid Services; FY = fiscal year; SNF = skilled nursing facility; SNF VBP = Skilled Nursing Facility Value-Based Purchasing; PPS = Prospective Payment System.

Expansion of the SNF VBP Program

- **CMS requested that the DPS team support the expanded SNF VBP Program by testing various scoring methodologies to allow for the addition of up to nine measures to the Program**
  - The DPS team conducted a literature review to identify evidence-based approaches to scoring that could be applied to the expanded SNF VBP Program design; the literature review informed the methodological variations we tested

CMS = Centers for Medicare & Medicaid Services; DPS = Division of Value, Incentives, and Quality Reporting Program Support; SNF VBP = Skilled Nursing Facility Value-Based Purchasing.

Current SNF VBP Program Methodology

Current SNF VBP Program: Effect on SNF payments

- CMS withholds 2% of SNFs' Medicare fee-for-service Part A payments to fund the Program. CMS redistributes 60% of the withhold to SNFs as incentive payments.

- For each SNF, CMS calculates an incentive payment multiplier that accounts for both the 2% payment withhold used to fund the Program and any incentive payments earned through performance on the SNFRM.

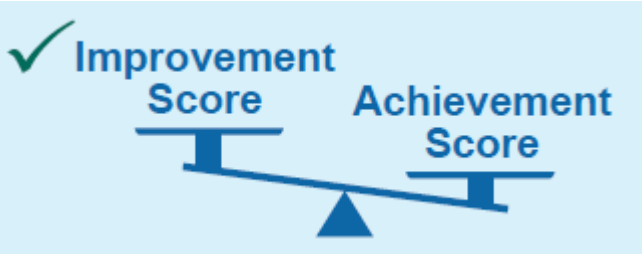
- This incentive payment multiplier is applied to each SNF's adjusted federal per diem rate for services provided during the applicable SNF VBP Program year.

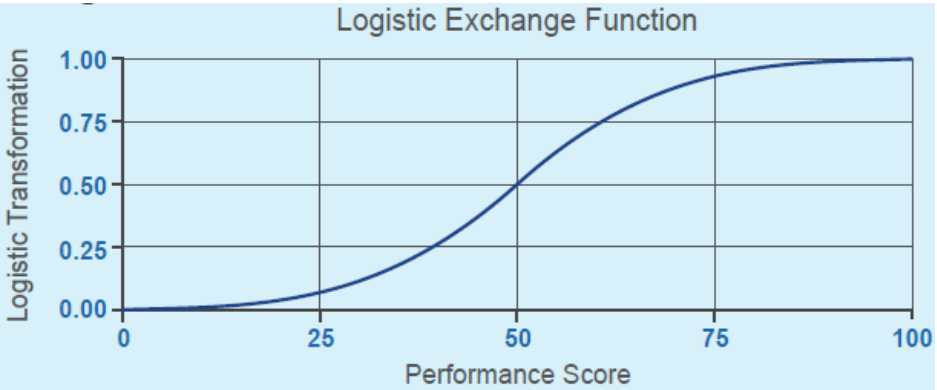
CMS = Centers for Medicare & Medicaid Services; SNF = skilled nursing facility; SNF VBP = Skilled Nursing Facility Value-Based Purchasing; SNFRM = Skilled Nursing Facility Readmission measure.

Current SNF VBP Program: performance score calculation

- **Step 1: CMS calculates each SNF's RSRR for both the baseline and performance period; CMS inverts the RSRRs for the baseline and performance periods by subtracting the RSRR from 1 so that higher results indicate better performance**
- **Step 2: Based on each SNF's inverted RSRR, CMS computes an improvement score and an achievement score; CMS uses the higher of the two to determine the performance score**
- **Step 3: CMS transforms performance scores for all SNFs using the logistic exchange function (from 0-100 to 0-1)**

$$\left(\frac{\text{Predicted \# of readmissions}}{\text{Expected \# of readmissions}}\right) \times \text{National unadjusted readmission rate} = \text{RSRR}$$





CMS = Centers for Medicare & Medicaid Services; RSSR = risk-standardized readmission rate; SNF = skilled nursing facility; SNF VBP = Skilled Nursing Facility Value-Based Purchasing.

Overview of the Scoring Methodology Analyses

PAMA Requirements

Methodological variations tested followed the statutory requirements for the Program except for one variation

- **SNFs are assessed on both improvement and achievement based on performance standards, and scored on the higher of the two**
- **SNFs earn incentive payments based on their performance**
- **CMS must redistribute between 50% and 70% of the withheld funds to SNFs as incentive payments**
- **CMS must publish performance standards in the SNF Prospective Payment System final rule at least 60 days before the start of the pertinent measures' performance periods**
- **SNFs with the highest rankings receive the highest value-based incentive payments**
- **SNFs with the lowest rankings receive the lowest value-based incentive payments**
- **SNFs in the lowest 40 percent of the ranking receive a lower payment rate than would otherwise apply**

CMS = Centers for Medicare & Medicaid Services; PAMA = Protecting Access to Medicare Act of 2014; SNF = skilled nursing facility.

Scoring design objectives

1. Easy for facilities to understand, so they can implement changes to improve care in response to the Program's incentives
2. Equitable, so no single type of facility (for example, rural facilities) is disproportionately penalized
3. Reliable, so changes in the quality of care translate into changes in the performance score
4. Valid, so the SNF VBP Program rewards high performers and penalizes poor performers[a]

[a] DPS has not performed validity testing at this time.

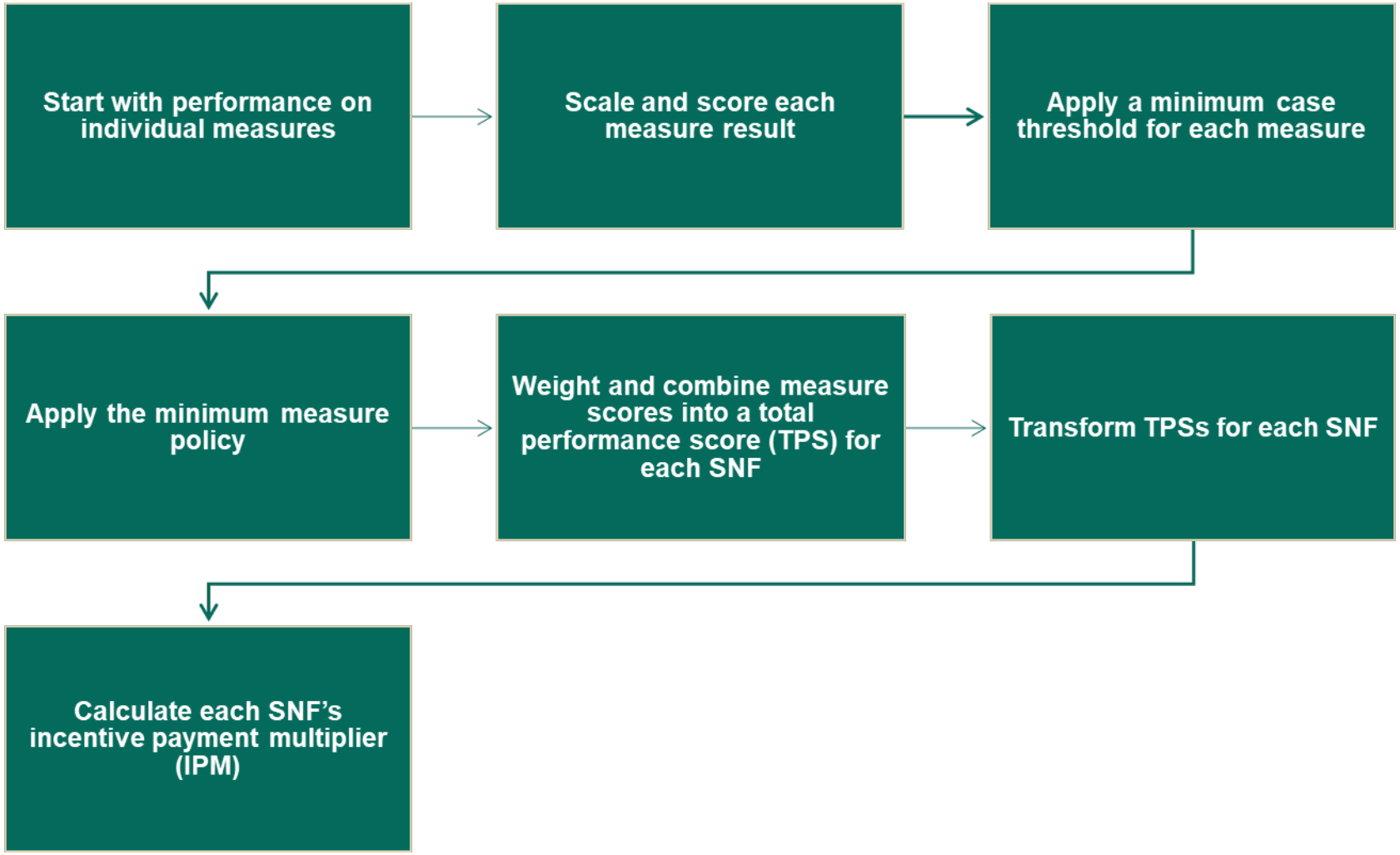
DPS = Division of Value, Incentives, and Quality Reporting Program Support; SNF VBP = Skilled Nursing Facility Value-Based Purchasing.

Scoring design guiding principles

1. To default to the existing SNF VBP Program scoring methodology (or, if not applicable, the simpler methodology), where possible
2. To develop flexible approaches that readily accommodate the addition of measures in future Program years
3. To align with other CMS programs, where possible, and to be mindful of MedPAC recommendations

CMS = Centers for Medicare & Medicaid Services; MedPAC= Medicare Payment Advisory Commission; SNF VBP = Skilled Nursing Facility Value-Based Purchasing.

Transforming individual measure performance into an overall incentive payment



SNF = skilled nursing facility.

Scoring Methodology Components Tested

Component	Default Variation	Other Variations Tested
Scaling	Modified range score bounded by the 25th percentile (achievement threshold) and mean of the top decile (benchmark)	Modified range score bounded by the 50th percentile (achievement threshold) and mean of the top decile (benchmark)
Weighting	Equal weights	• Reliability weights: each measure is weighted proportionally to its reliability, as identified in measure testing; the Total Nurse Staffing measure, receives a nominal weight (0.1 of 1.0 total weight) • Policy weights reflecting CMS priorities: one set of weights de-emphasizes SNFRM, and another set of weights emphasizes HAI
Minimum case threshold	• Aligned with the minimum case thresholds for other programs using the same measures (e.g., SNF Quality Reporting Program): –25-case minimum for all measures except for the Total Nurse Staffing measure –At least 25 residents, on average, for the Total Nurse Staffing measure	• Public reporting standards: - 25-case minimum for DTC, HAI, SNFRM - At least one quarter of the Total Nurse Staffing measure data • Higher reliability: - 50-case minimum for DTC, HAI, and SNFRM - At least two quarters of the Total Nurse Staffing measure data
Measure minimum	At least three of four measures must satisfy the minimum case threshold during the performance period. SNFs that do not meet these criteria are excluded from the Program.	• At least one of four measures must satisfy the minimum case threshold during the performance period • SNFs must meet the minimum case threshold for at least one claims-based measure during the performance period
Program exchange function	Logistic	• Linear • Variations on logistic
Social risk	No adjustment	• All variations group SNFs into peer groups based on their proportion of dually eligible beneficiaries –Adjust performance standards for social risk of beneficiaries –Adjust total performance score for social risk of beneficiaries –Adjust IPMs for social risk of beneficiaries
Percentage of withhold to pay back	60 percent	• 65 percent • 70 percent

CMS = Centers for Medicare & Medicaid Services; HAI = Healthcare-Associated Infections measure; IPM = incentive payment multiplier; SNF = skilled nursing facility; SNFRM = Skilled Nursing Facility Readmission measure; TPS = total performance score.

Guiding questions

/ Based on the testing results and other considerations…

- What are the pros and cons of each methodology component variation compared to the default?
- Are there other methodology component variations we should consider?
  - If so, what are the pros/cons of the other variations?

Topics the TEP will not consider

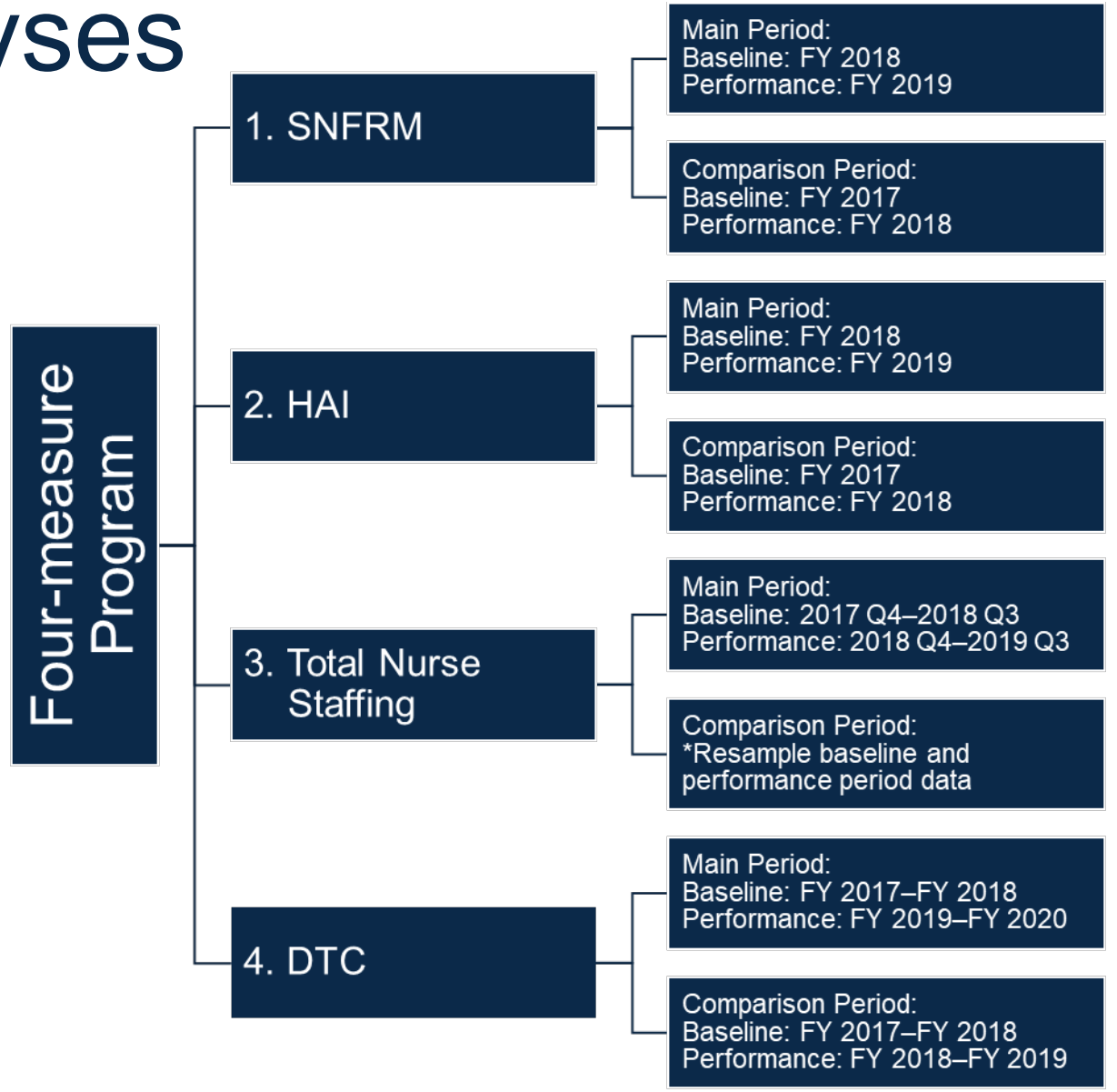
- **The measures included in the SNF VBP Program (current or future)**
- **Adjustments to the scoring methodology proposed in the FY 2023 SNF PPS proposed rule currently available for public comment**
  - This includes the scaling, weighting, minimum case threshold, and measure minimum components of the scoring methodology
  - *DPS will still seek input from the TEP on these components for possible future changes to the methodology (e.g., to accommodate a future increase in the number of measures included)*
- **Aspects of the methodology specified by the Protecting Access to Medicare Act of 2014 (PAMA), in which SNFs:**
  - Are assessed on both improvement and achievement, and scored on the higher of the two
  - Earn incentive payments based on their performance
  - Are subject to a 2 percent payment withhold, of which between 50 and 70 percent is paid back

FY = fiscal year; SNF = skilled nursing facility; SNF VBP = Skilled Nursing Facility Value-Based Purchasing; PPS = Prospective Payment System.; TEP = technical expert panel.

Data used for analyses

We tested a four-measure set

- Each measure contained two sets of Program-year data periods to assess consistency over time
- Data period caveats to be mindful of:
  - There are no gaps between the baseline and performance periods
  - DTC uses FY 2020 data
  - Main and comparison data periods for DTC overlap
  - The Total Nurse Staffing measure comparison period is resampled (bootstrapped) from the main period



DTC = discharge to community; FY = fiscal year; HAI = healthcare-associated infections; SNFRM = Skilled Nursing Facility Readmission measure.

TEP Schedule Preview

TEP schedule preview

Item	Start Time	End Time	Duration
Approach to Scoring Methodology Testing	1:00	1:20	20 minutes
Testing Results: Default Methodology	1:20	1:50	30 minutes
Testing Results: Scaling Variants	1:50	2:10	20 minutes
Break	2:10	2:20	10 minutes
Testing Results: Minimum Case Threshold Variants	2:20	2:50	30 minutes
Testing Results: Minimum Measure Policy Variants	2:50	3:20	30 minutes
Testing Results: Weighting Variants	3:20	3:40	20 minutes
Break	3:40	3:50	10 minutes
Testing Results: Payment Variants	3:50	4:20	30 minutes
Testing Results: Social Risk Variants	4:20	4:50	30 minutes
Conclusion	4:50	5:00	10 minutes

TEP meeting, May 19, 2022, 1-5pm EST

Thank You!

Please send any questions to SNFVBPTEP@mathematica-mpr.com

TEP Meeting Materials

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Technical Expert Panel for the Scoring Methodology for the Expansion of the Skilled Nursing Facility Value-Based Purchasing Program

Thursday, May 19, 2022

1-5pm EST

Objective and schedule

/ Objective

- The purpose of this technical expert panel (TEP) is to solicit stakeholder input on updates to the SNF VBP Program scoring methodology to allow for the application of additional measures to the current single-measure Program

/ Schedule

Item	Start Time	End Time	Duration
Approach to Scoring Methodology Testing	1:00	1:20	20 minutes
Testing Results: Default Methodology	1:20	1:50	30 minutes
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Break	3:40	3:50	10 minutes
Testing Results: Payment Variants	3:50	4:20	30 minutes
Testing Results: Social Risk Variants	4:20	4:50	30 minutes
Conclusion	4:50	5:00	10 minutes

Approach to Scoring Methodology Testing

Overview of the scoring methodology analyses

1. Use existing and proposed measures as they are currently specified
2. Consider only methodologies allowed under the Protecting Access to Medicare Act of 2014 (PAMA) and Consolidated Appropriations Act, 2021
3. Default to the existing SNF VBP Program scoring methodology (or, if not applicable, a simpler methodology), where possible
4. Develop flexible approaches that readily accommodate the addition of measures in future Program years
5. Align with other Centers for Medicare & Medicaid Services (CMS) programs where possible, and be mindful of MedPAC recommendations

MedPAC= Medicare Payment Advisory Commission; SNF VBP = Skilled Nursing Facility Value-Based Purchasing.

Scoring design objectives

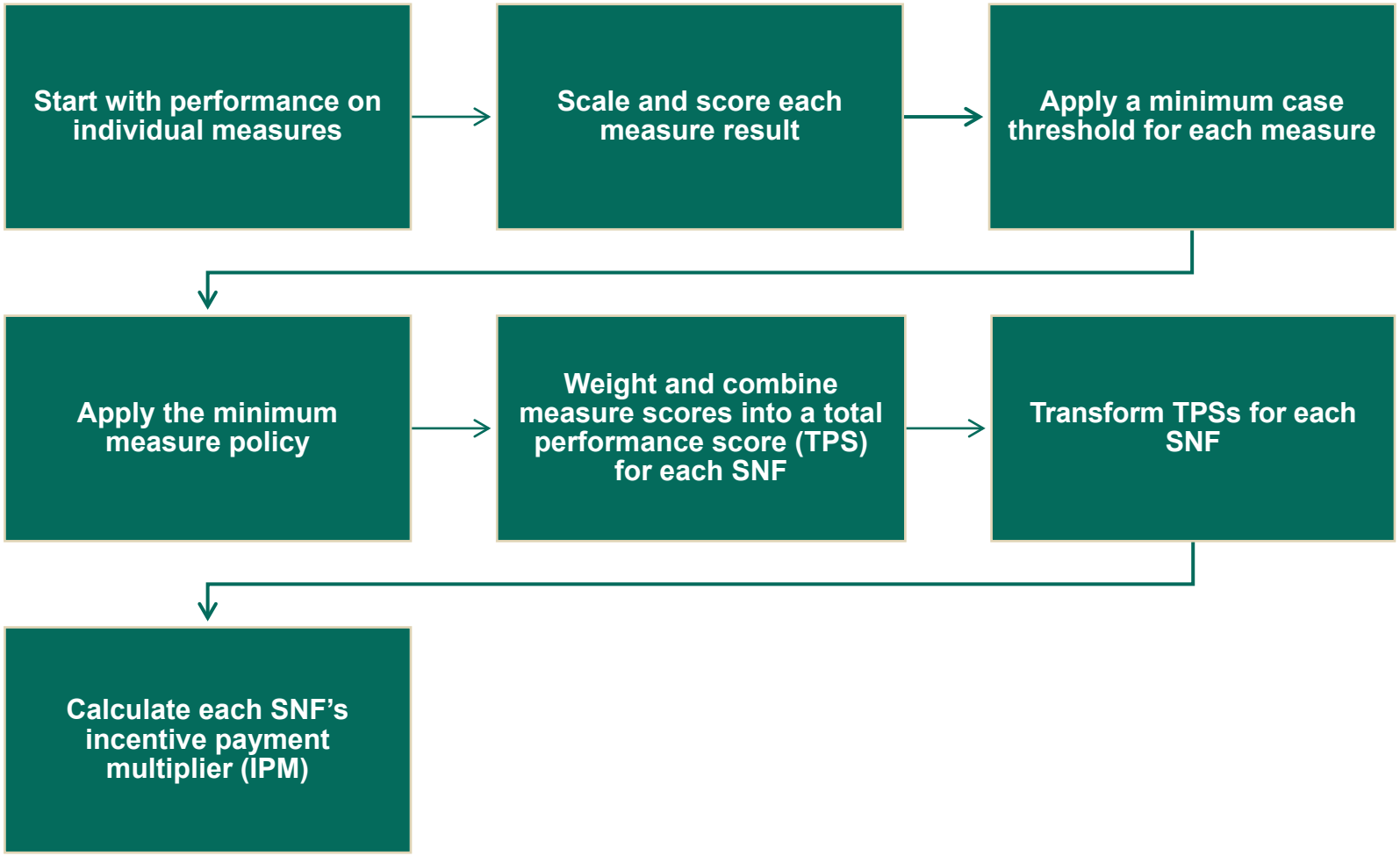
DPS seeks to develop a methodology that is:

1. Easy for facilities to understand, so they can implement changes to improve care in response to the Program's incentives
2. Equitable, so no single type of facility (for example, rural facilities) is disproportionately penalized
3. Reliable, so changes in quality of care translate into changes in performance score
4. Valid, so the SNF VBP Program rewards high performers and penalizes poor performers [a]

[a] DPS has not performed validity testing at this point

DPS = Division of Value, Incentives, and Quality Reporting Program Support; SNF VBP = Skilled Nursing Facility Value-Based Purchasing.

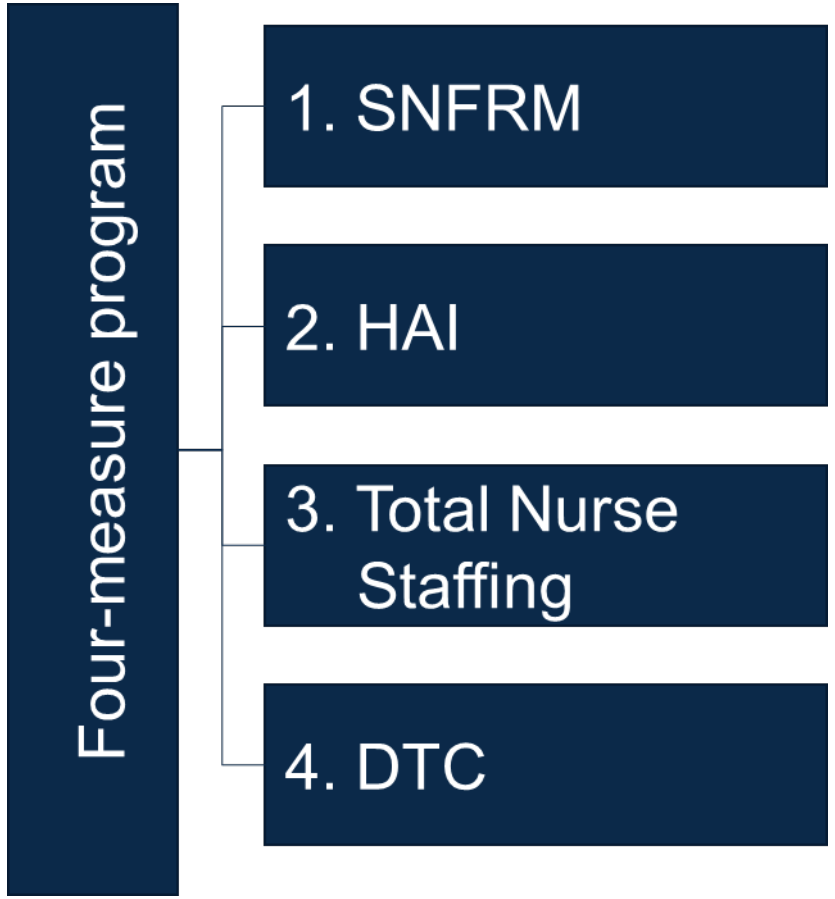
Transforming individual measure performance into an overall incentive payment



SNF = skilled nursing facility.

Default methodology for a four-measure SNF VBP Program

- **Scaling: Improvement and achievement based on existing performance standards (25th percentile [achievement threshold] and mean of top decile [benchmark])**
- **Minimum case threshold: Aligned with minimum case thresholds for other programs using the same measures (e.g., SNF Quality Reporting Program):**
  - Minimum of 25 eligible stays for all measures except the Total Nurse Staffing measure
  - For the Total Nurse Staffing measure, at least 25 census-based residents, on average, across available quarters of data
- **Measure minimum: At least three of four measures must satisfy the minimum case threshold; SNFs that do not meet these criteria are excluded from the Program**
- **Weighting: Each measure has equal weight in TPS**
- **Program exchange function: Logistic**
- **Percentage of withhold to pay back: 60 percent**
- **Social risk: No adjustment**



See the Orientation slides for the data periods used for the analyses.

DTC = Discharge to Community measure; HAI = Healthcare-Associated Infections measure; SNFRM = Skilled Nursing Facility Readmission measure; SNF VBP = Skilled Nursing Facility Value-Based Purchasing.

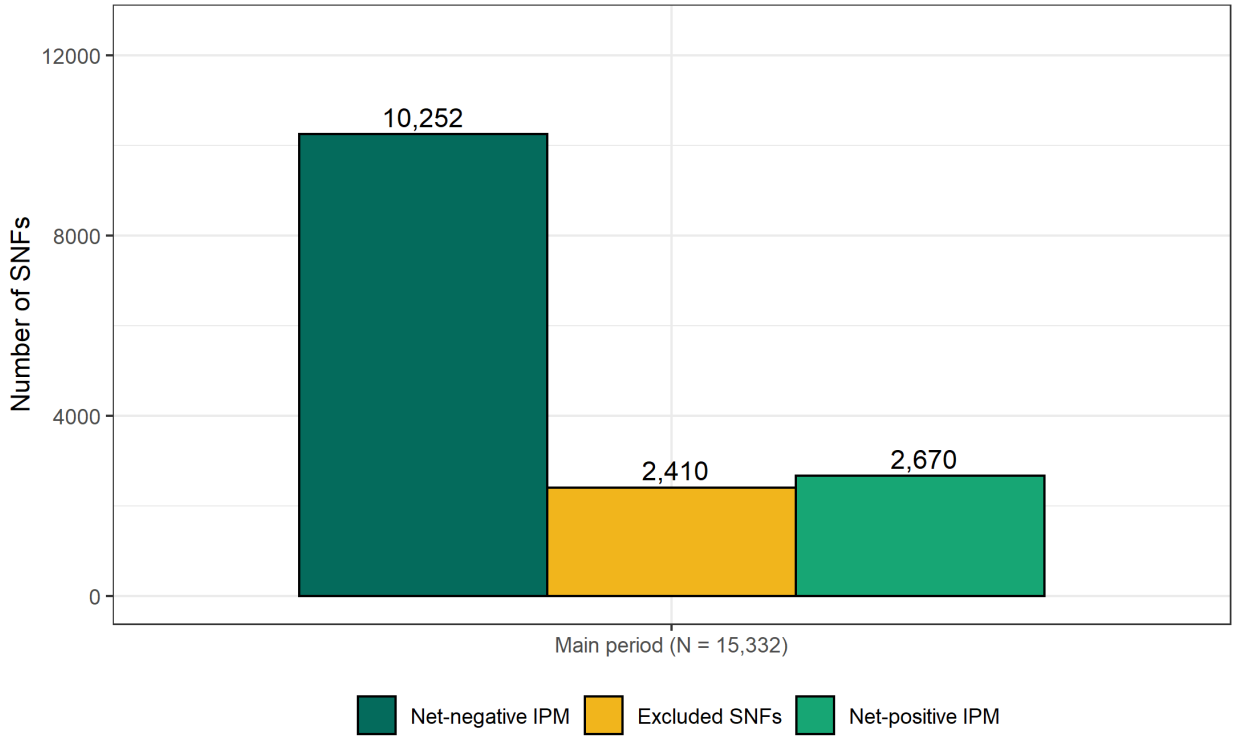
Panelist questions

- **Are there other guiding principles or methodology objectives that should be considered?**
- **Are there independent measures of quality we should use for validity testing?**

Testing Results: Default Methodology

Payment adjustments under default methodology

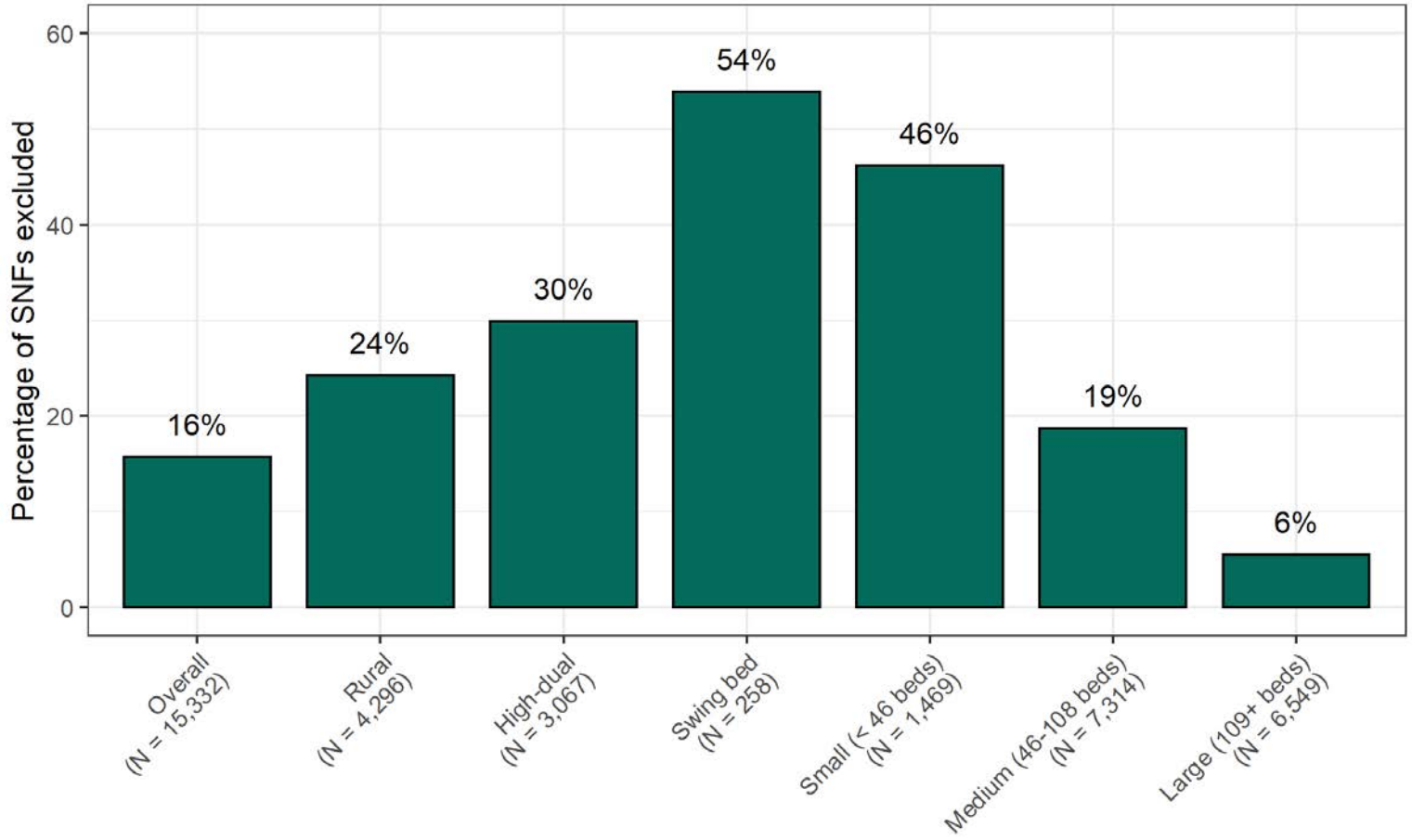
- **Most SNFs (67%) receive a net-negative IPM**
  - This is consistent with the current Program, where 62% to 72% of SNFs have received net-negative IPMs in the FY 2019–FY 2021 Program years
- **A modest proportion of SNFs (16%) are excluded from the Program**
  - This result is consistent with the current Program, where 16% to 17% in the FY 2020 and FY 2021 Program years were subject to the low-volume adjustment policy



Interpreting Payment Adjustments	
IPM < 1	SNF receives less than the 2% withhold back **(net negative)**
SNFs excluded from the Program	The SNF VBP Program has no impact on this SNF's payment
IPM > 1	SNF receives more than the 2% withhold back **(net positive)**

FY = fiscal year; IPM = incentive payment multiplier; SNF = skilled nursing facility.

The proportion of SNFs that do not meet the minimum measure policy varies by facility type

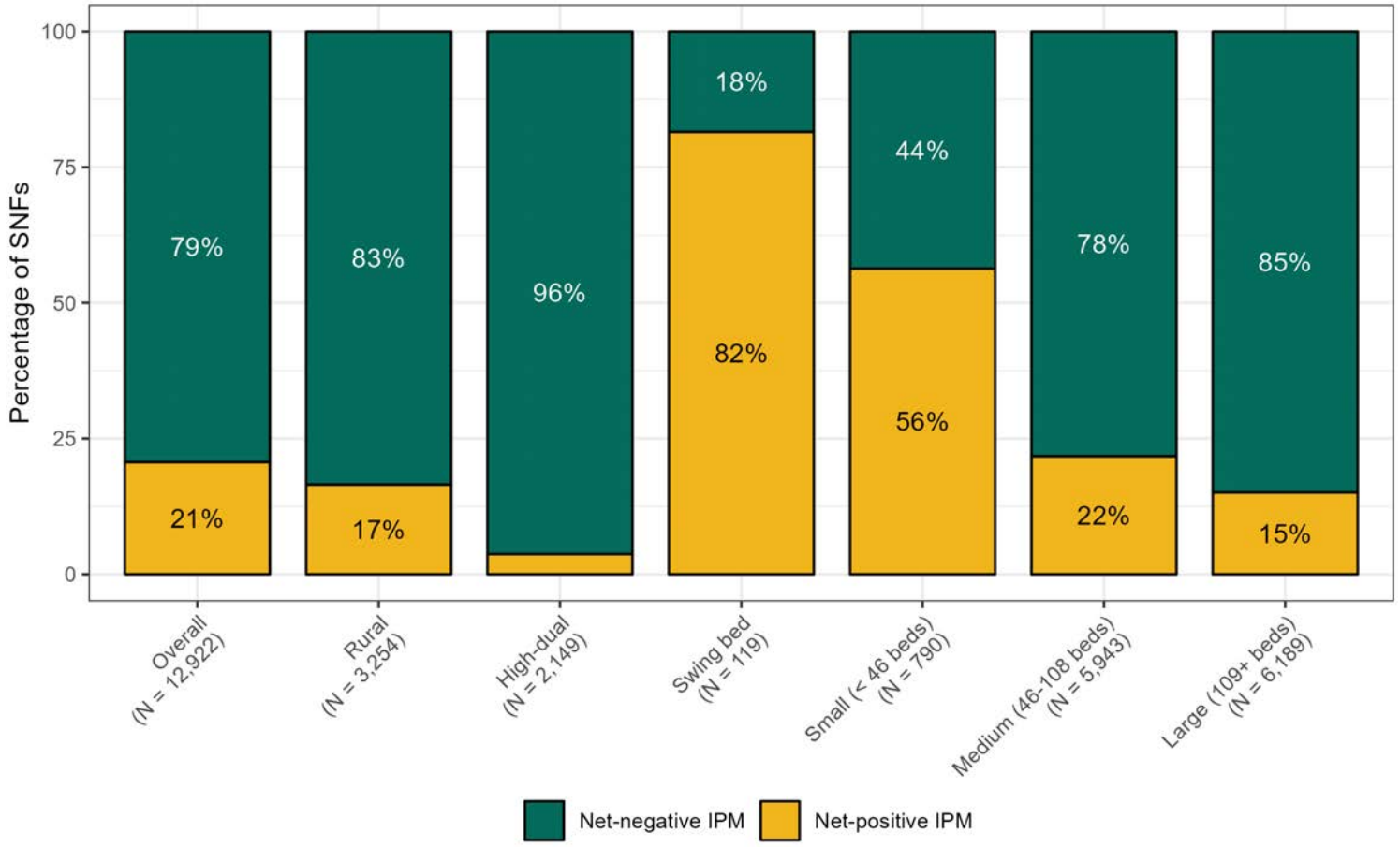


Note: In this figure, the total N for each facility type includes SNFs that do not meet the minimum measure policy. These SNFs are excluded from the SNF VBP Program, so in other figures the total N excludes SNFs that do not meet the minimum measure policy. “High-dual” SNFs refer to the SNFs in the top quintile of dually eligible beneficiaries.

SNF = skilled nursing facility; SNF VBP = Skilled Nursing Facility Value-Based Purchasing.

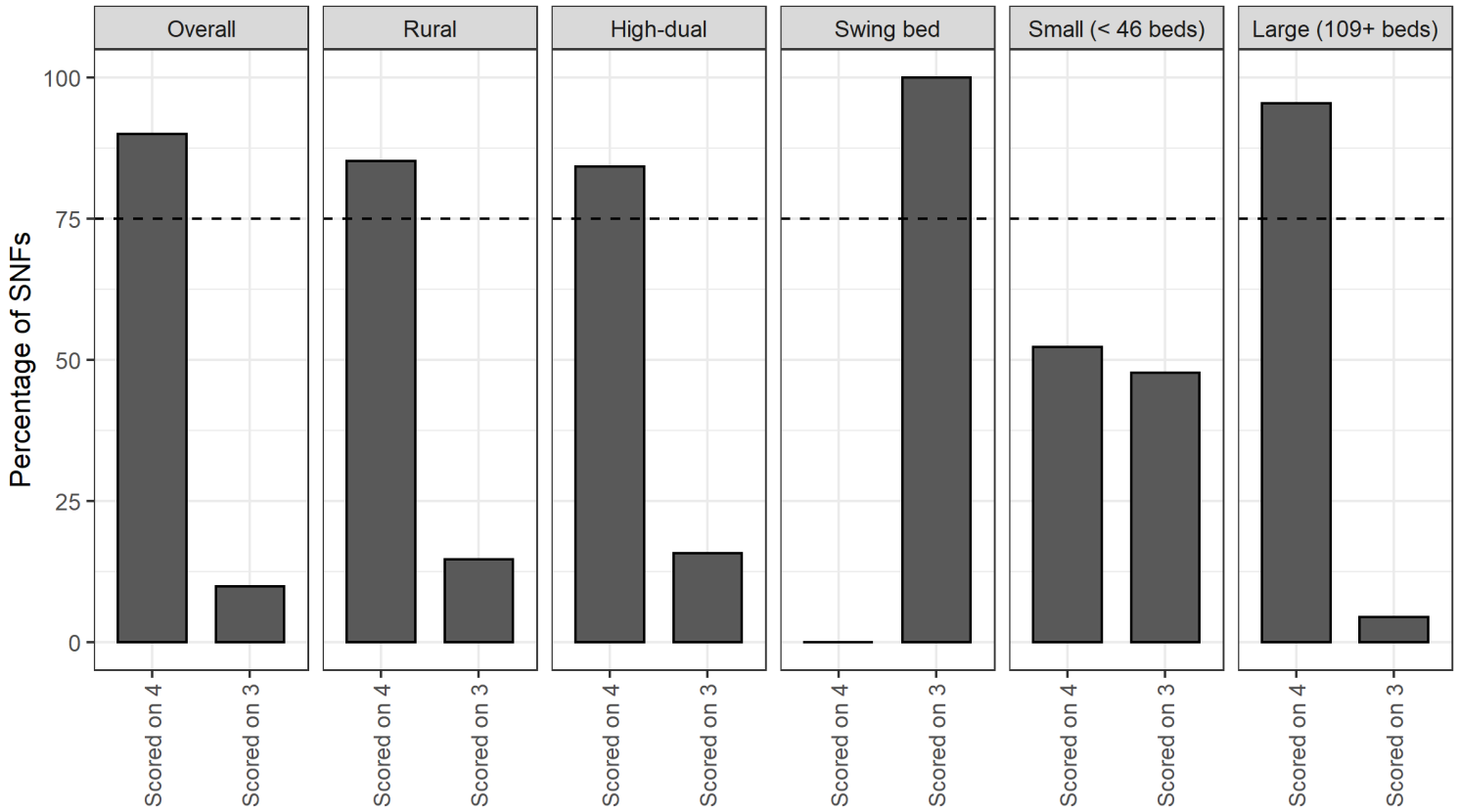
Variation in payment adjustments by facility type, default methodology

- **These results include only SNFs that meet the minimum measure policy**
- **The proportion of net-negative payment adjustments varies across facility types**
  - Rural and medium SNFs perform similarly to the overall distribution
  - SNFs in the top quintile of dually eligible beneficiaries and large SNFs are more likely to receive net-negative payment adjustments than the overall distribution
  - Swing beds and small SNFs are more likely to receive net-positive payment adjustments than the overall distribution
- **Variation is consistent with that of previous Program years**



Note: "High-dual" SNFs refer to the SNFs in the top quintile of dually eligible beneficiaries.
IPM = incentive payment multiplier; SNF = skilled nursing facility.

Number of measures contributing to TPS by facility type, default methodology



SNF = skilled nursing facility; TPS = total performance score.

Overall, over 90% of SNFs are scored on all measures

- Among rural SNFs and SNFs in the top quintile of dually eligible beneficiaries, roughly 85% are scored on all measures
- Almost all large SNFs are scored on all measures

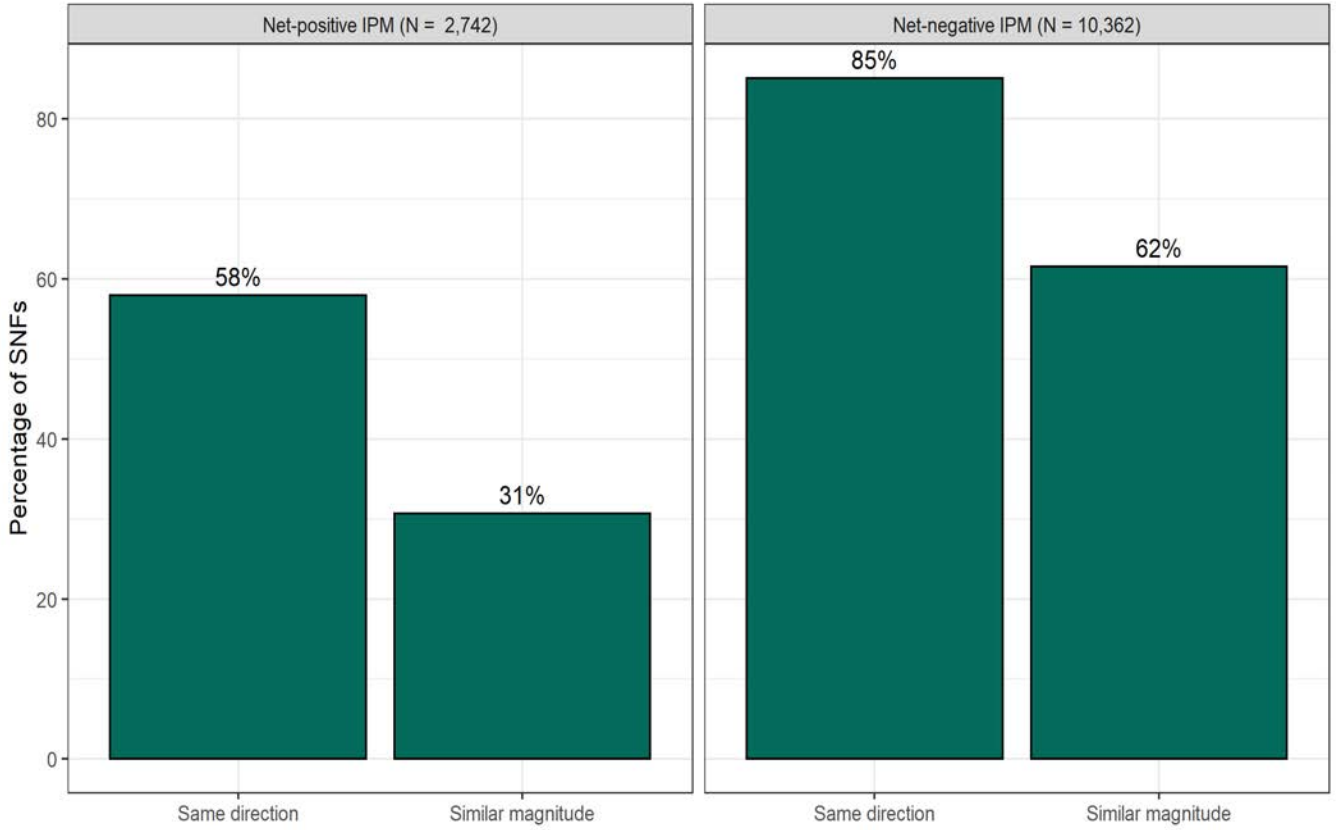
TPS composition is very different for swing beds

- At most, swing beds can be scored on three measures because they do not report the Total Nurse Staffing measure
- Thus, all swing beds that satisfy the minimum measure policy (46% of all swing beds are eligible for the SNF VBP Program) are scored on three measures only

Consistency over time as a measure of reliability, default methodology

The default methodology produces consistent results between the years examined

- Most SNFs' payment adjustments are consistent in sign (e.g., net-negative IPM, net-positive IPM) from one year to the next
  - 58% of SNFs with net-positive IPMs in FY 2018 have net-positive IPMs in FY 2019
  - 85% of SNFs with net-negative IPMs in FY 2018 have net-negative IPMs in FY 2019
- A reasonable proportion of facilities (31% of net-positive and 62% of net-negative facilities) also have IPMs of similar magnitude in both Program years



"Similar magnitude" means the facility's IPMs in FY 2018 and FY 2019 fell into the same category. For net-negative IPMs, the categories were <0.99, 0.99-0.995, 0.995-1.0; for net-positive IPMs, the categories were 1.0-1.005, 1.005-1.01, >1.01.

FY = fiscal year; IPM = incentive payment multiplier; SNF = skilled nursing facility.

Questions for the TEP

- **Are there additional outcomes or metrics we should examine when assessing variations of the methodology?**

TEP = technical expert panel.

Testing Results: Scaling Variants

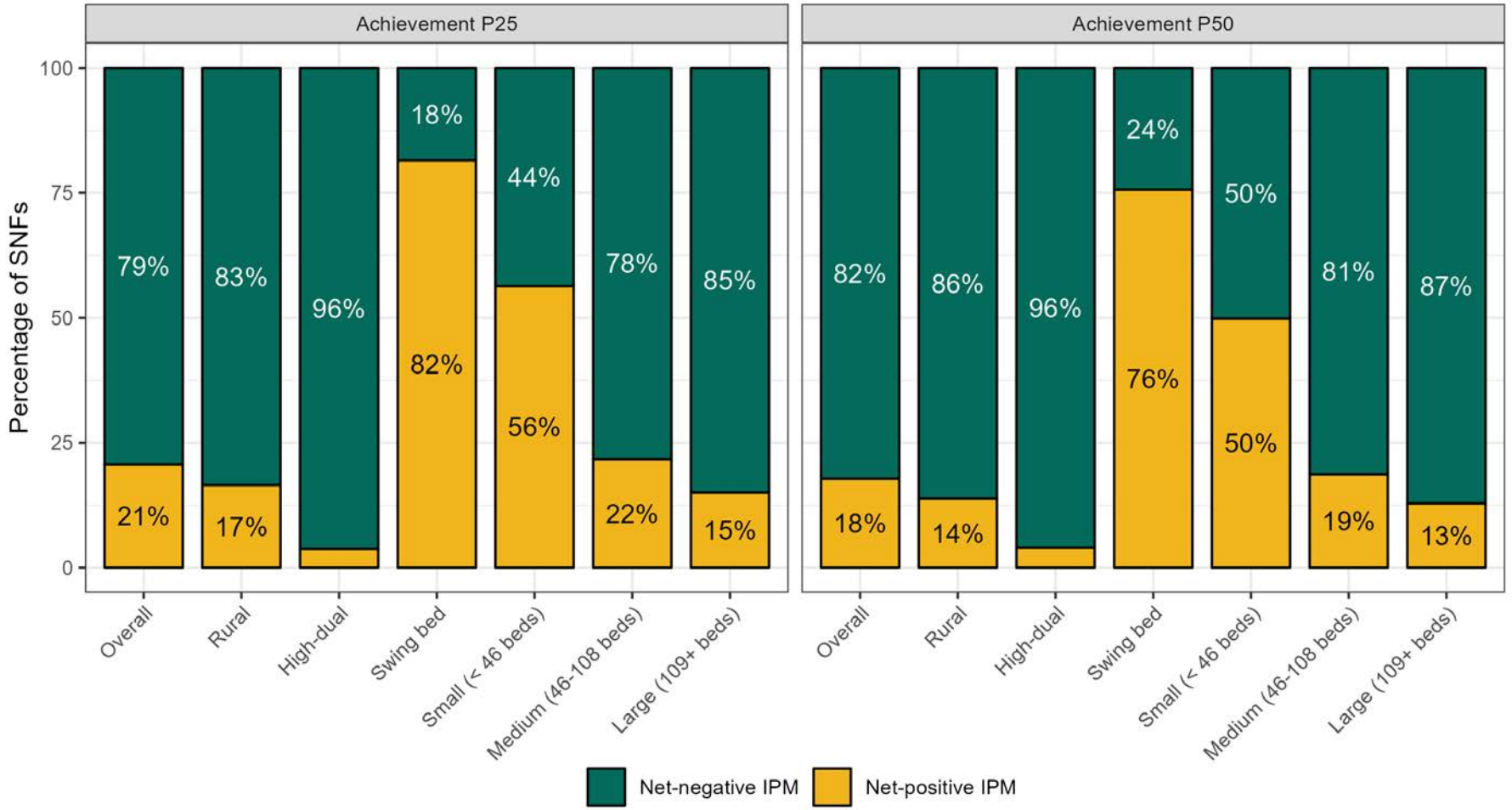
Scaling variants tested

/ Achievement thresholds:

- **Current default:** 25th percentile for all measures
  - Consistent with the current SNF VBP Program
- **Option tested:** 50th percentile for all measures
  - Consistent with the HHVBP and HVBP programs

HHVBP = Home Health Value-Based Purchasing; HVBP = Hospital Value-Based Purchasing; SNF VBP = Skilled Nursing Facility Value-Based Purchasing.

Scaling options have little effect on proportion of net-negative and net-positive payment adjustments

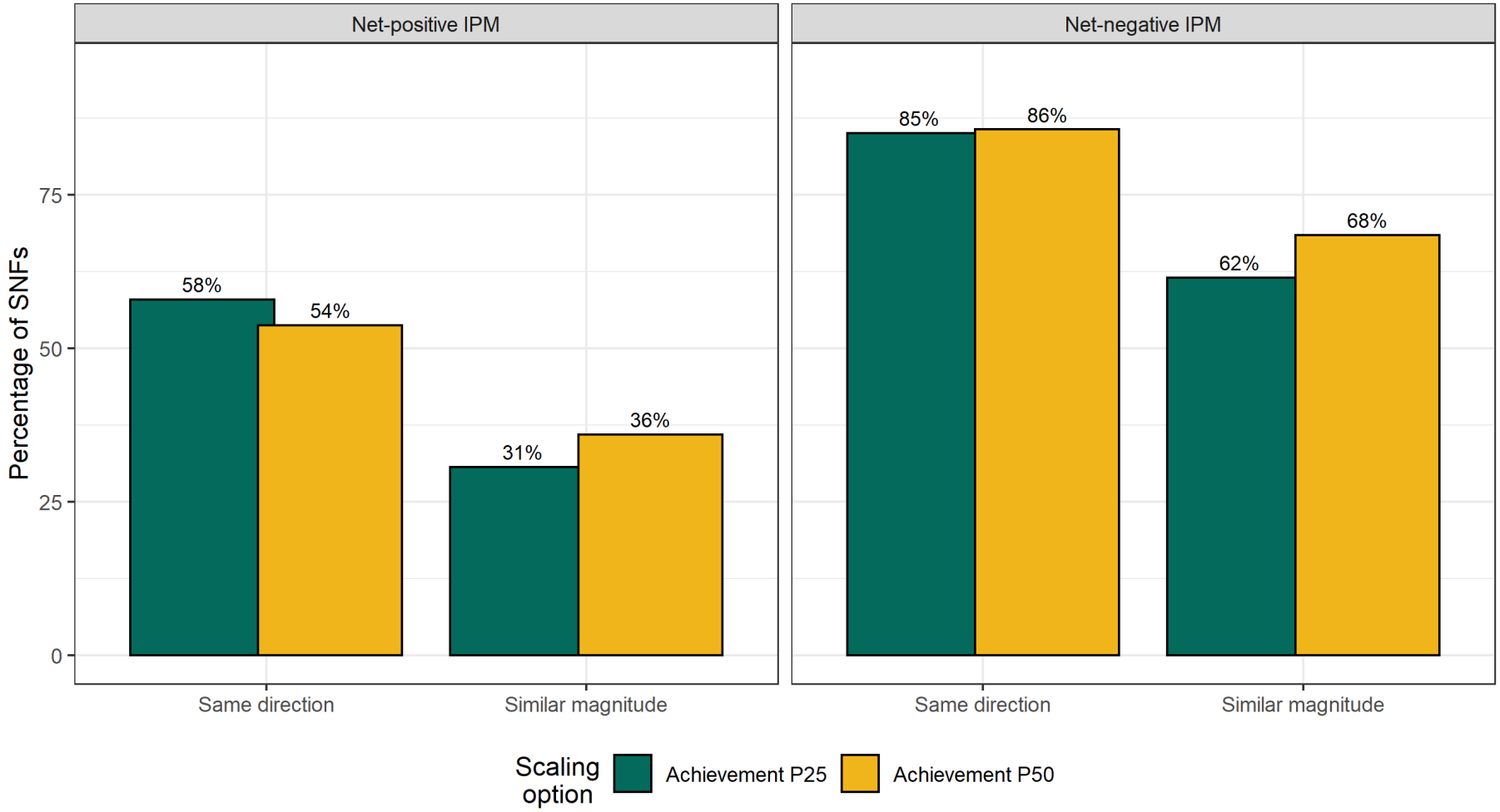


Note: "High-dual" SNFs refer to the SNFs in the top quintile of dually eligible beneficiaries.
IPM = incentive payment multiplier; SNF = skilled nursing facility.

A higher achievement threshold slightly increases the magnitude of the largest payment adjustments

Option	Incentive Payment Multipliers							
	Minimum	*10th percentile*	*25th percentile*	*Median*	*Mean*	*75th percentile*	*90th percentile*	*Maximum*
Achievement P25	0.9803	0.9809	0.9822	0.9862	0.9907	0.9970	1.009	1.018
Achievement P50	0.9804	0.9806	0.9813	0.9837	0.9902	0.9925	1.013	1.038

Consistency over time is stable across achievement thresholds



IPM = incentive payment multiplier; SNF = skilled nursing facility.

Questions for the TEP

- **As the SNF VBP Program adds more measures, are there other scaling variants that we should consider testing?**
- **Should we consider different scaling approaches for different types of measures (e.g., claims-based versus reported)?**
- **As the SNF VBP Program adds more measures, are there other metrics we should assess when evaluating scaling variants?**

TEP = technical expert panel.

Break

Testing Results: Minimum Case Threshold Variants

Minimum case threshold variants tested

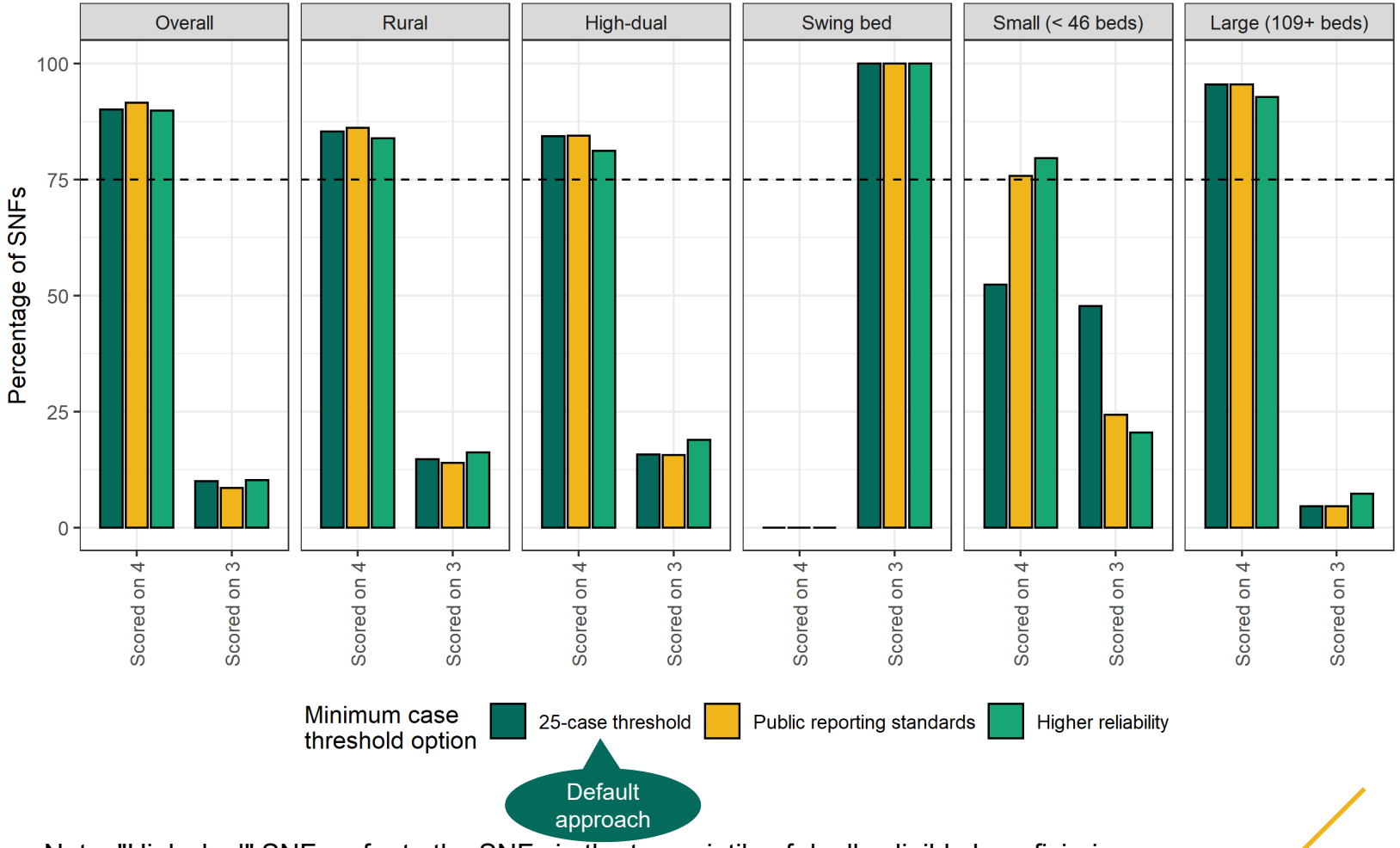
Compared two new options to the current default:

- **Current default:** Aligned with the minimum case thresholds for other programs using the same measures (e.g., SNF Quality Reporting Program):
  - 25-case minimum for DTC, HAI, and SNFRM
  - At least 25 residents, on average, for the Total Nurse Staffing measure
- **Options tested:**
  - Public reporting standards
    - 25-case minimum for DTC, HAI, and SNFRM
    - At least one quarter of the Total Nurse Staffing measure data
  - Higher reliability
    - 50-case minimum for DTC, HAI, and SNFRM
    - At least two quarters of the Total Nurse Staffing measure data

DTC = Discharge to Community measure; HAI = Healthcare-Associated Infections measure; SNFRM = Skilled Nursing Facility Readmission measure.

Effect of minimum case threshold on the number of measures contributing to TPS

- **Among SNFs that meet the higher-reliability minimum case threshold, similar proportions are scored on four and three measures as in the default approach**
  - Increasing the minimum case threshold increases the percentage of excluded SNFs, from 16% to 34% overall
  - More than 50% of SNFs in the top quintile of dually eligible beneficiaries, swing bed, and small SNFs are excluded under the higher-reliability threshold
  - Among small SNFs that meet the higher-reliability threshold for at least three measures, more are scored on four measures than under the default threshold, likely because the small SNFs that pass this more stringent criterion are considerably larger than those excluded

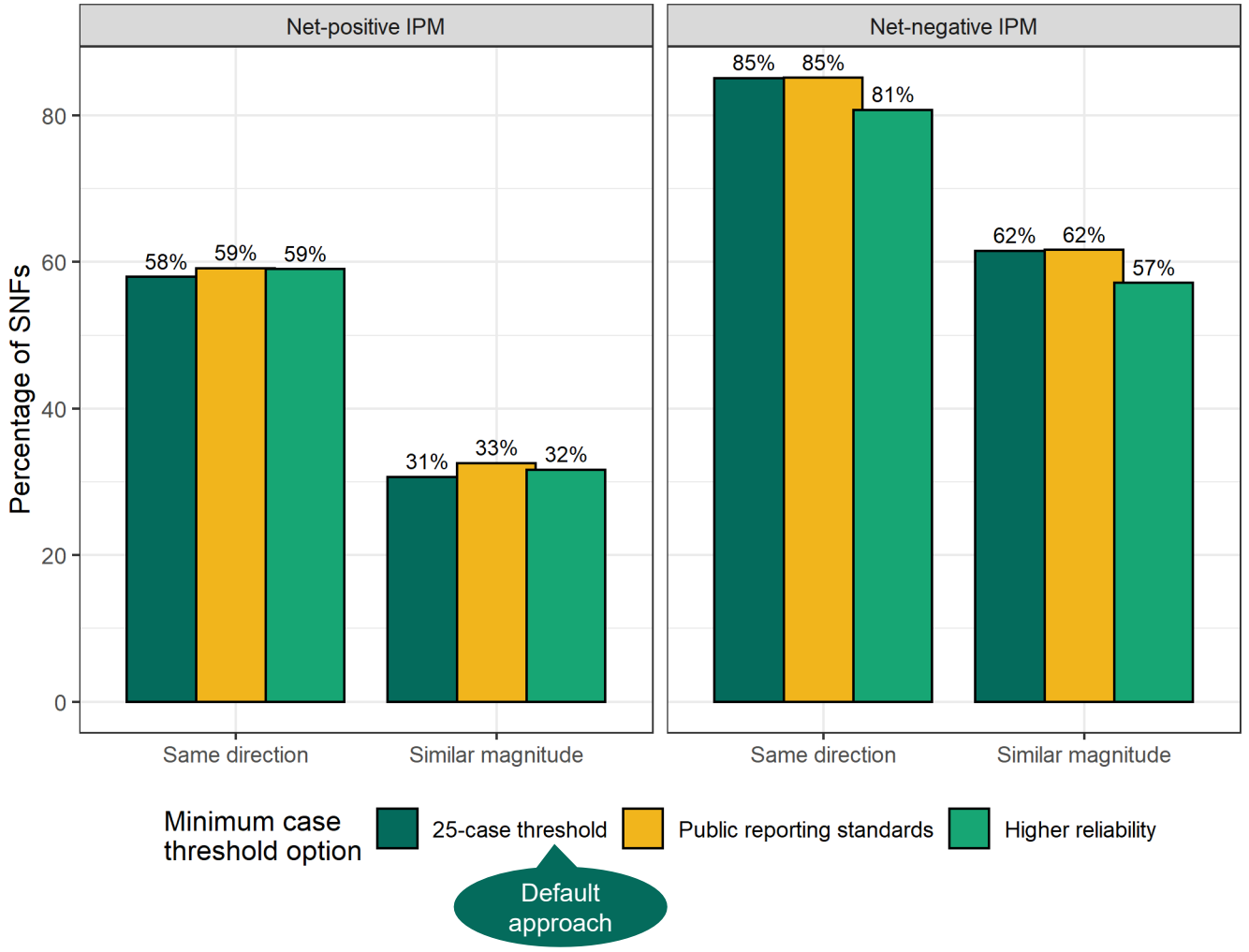


Note: "High-dual" SNFs refer to the SNFs in the top quintile of dually eligible beneficiaries.
SNF = skilled nursing facility; TPS = total performance score.

Consistency over time by minimum case threshold

Relative to the default, a higher minimum case threshold does not substantially improve consistency over time

- Consistency over time is higher for SNFs with net-positive payment adjustments, but slightly lower for SNFs with net-negative adjustments (the majority)
- Differences are small and any gains for SNFs with net-positive adjustments might not outweigh the disadvantages of a higher case threshold, such as scoring more facilities on fewer measures or holding more facilities harmless



"Similar magnitude" means the facility's IPMs in FY 2018 and FY 2019 fell into the same category. For net-negative IPMs, the categories were <0.99, 0.99-0.995, 0.995-1.0; for net-positive IPMs, the categories were 1.0-1.005, 1.005-1.01, >1.01.

FY = fiscal year; IPM = incentive payment multiplier; SNF = skilled nursing facility.

Questions for the TEP

- **As the SNF VBP Program adds additional measures, are there other minimum case threshold variants that should be considered?**
- **As the SNF VBP Program adds additional measures, what are the important considerations for assessing tradeoffs between alternative thresholds?**

SNF = skilled nursing facility; TEP = technical expert panel.

Testing Results: Minimum Measure Policy Variants

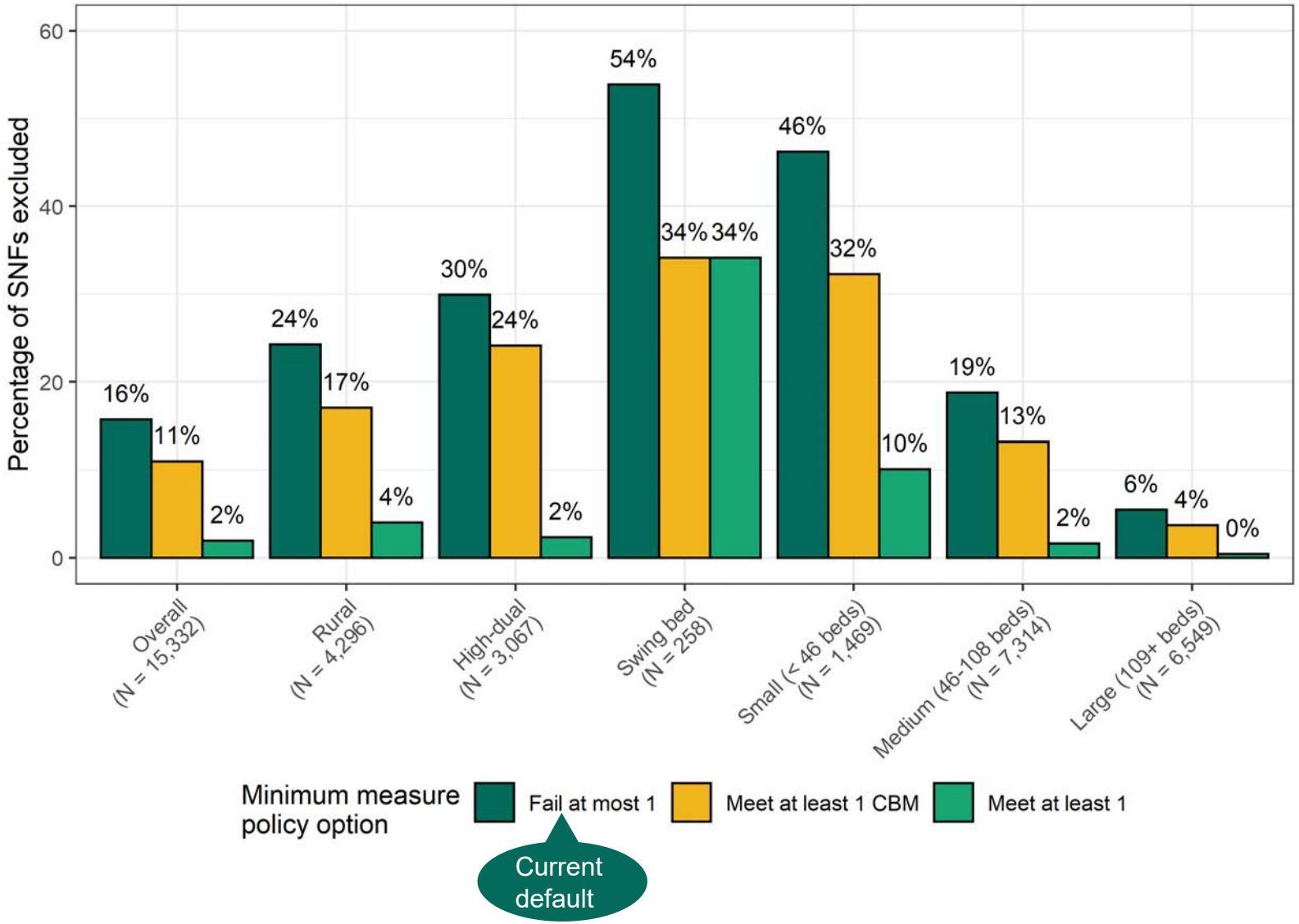
Minimum measure policy variant tested

/ Compared two new options to our current default:

- **Current default**
  - Meet at least three measures: require SNFs to meet the minimum case threshold for at least three measures
- **Options tested**
  - Meet at least one claims-based measure (CBM): require SNFs to meet the minimum case threshold for at least one CBM
  - Meet at least one measure: require SNFs to meet the minimum case threshold for at least one measure

SNF = skilled nursing facility.

Requiring SNFs to meet case minimum for at least one CBM reduces number of excluded SNFs



Note: "High-dual" SNFs refer to the SNFs in the top quintile of dually eligible beneficiaries.
CBM = claims-based measure; SNF = skilled nursing facility.

Questions for the TEP

- **As the SNF VBP Program adds more measures, are there other minimum measure variants we should consider testing (e.g., domain-based)?**
- **As the SNF VBP Program adds more measures, are there other metrics we should assess when evaluating minimum measure policies?**

TEP = technical expert panel.

Testing Results: Weighting Variants

Weighting variants tested

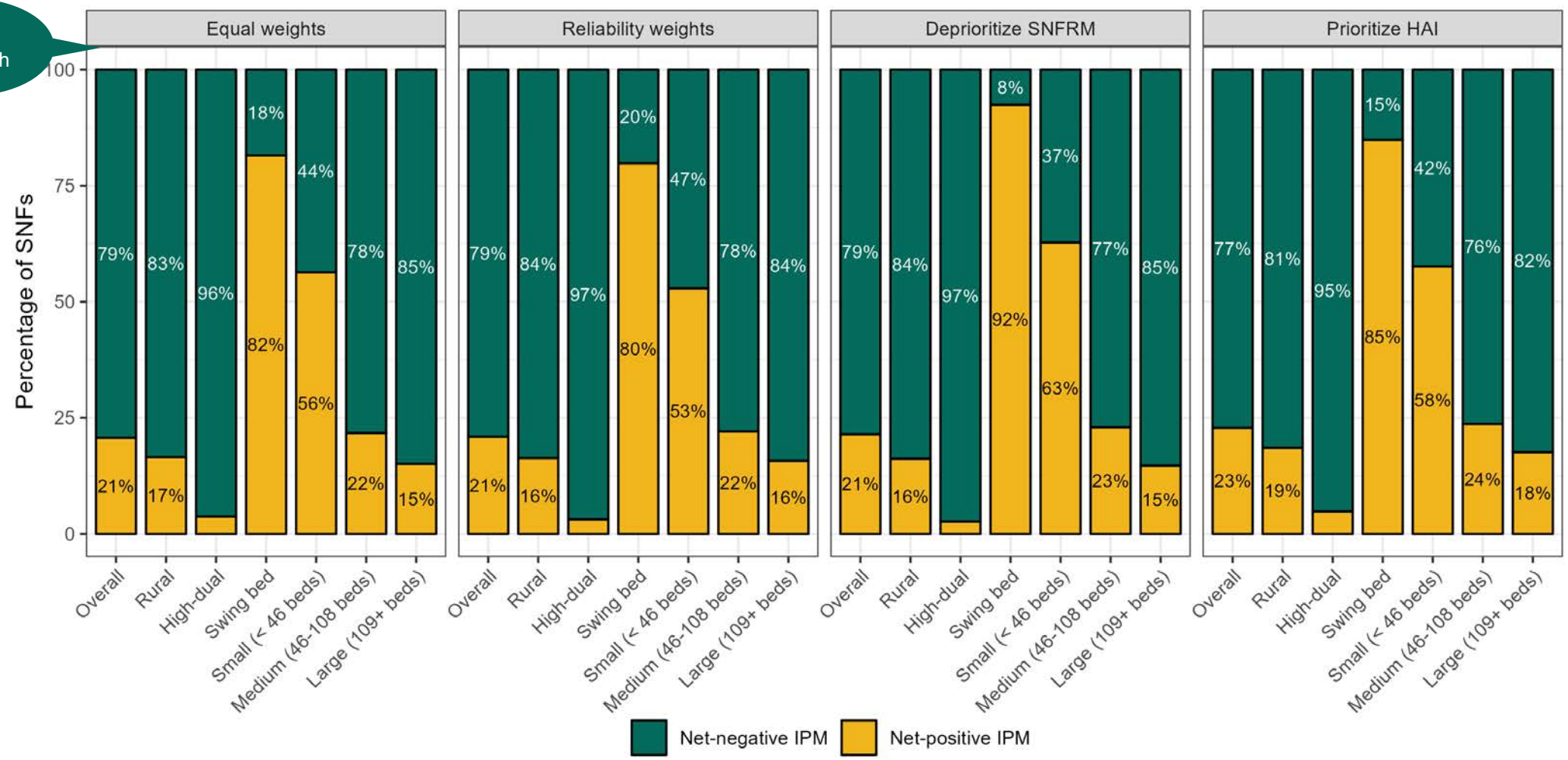
/ Compared two new options to the current default

- **Current default:** Equal weights
- **Options tested:**
  - Reliability weights: each measure is weighted proportionally to its reliability, as identified in measure testing; the Total Nurse Staffing measure, receives a nominal weight (0.1 out of 1.0 total weight)
  - Weights reflecting hypothetical policy priorities to test sensitivity: one set of weights de-emphasizes SNFRM, and another set of weights emphasizes HAI

HAI = Healthcare-Associated Infections measure; SNFRM = Skilled Nursing Facility Readmission measure

Weighting has little effect on the distribution of payment adjustments across SNFs

Default approach



Note: “High-dual” refers to SNFs in the top quintile of dually eligible beneficiaries
HAI = Healthcare-Associated Infections measure; IPM = incentive payment multiplier; SNFRM = Skilled Nursing Facility Readmission measure.

Questions for the TEP

- **As the SNF VBP Program adds more measures, are there other weighting variants that we should consider testing?**
- **As the SNF VBP Program adds more measures, are there reasons we would consider non-equal weights?**

TEP = technical expert panel.

Break

Testing Results: Payment Variants

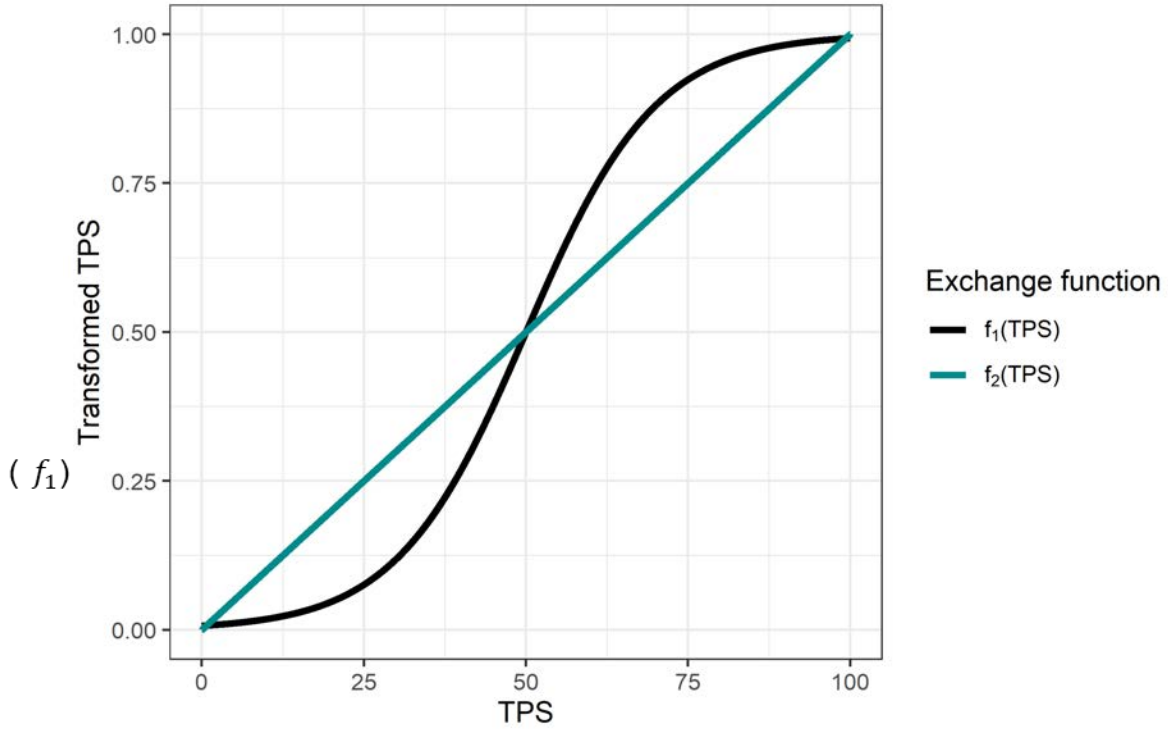
Payment variants tested

Percent payback

- 60% (default)
- 65%
- 70%

Exchange function

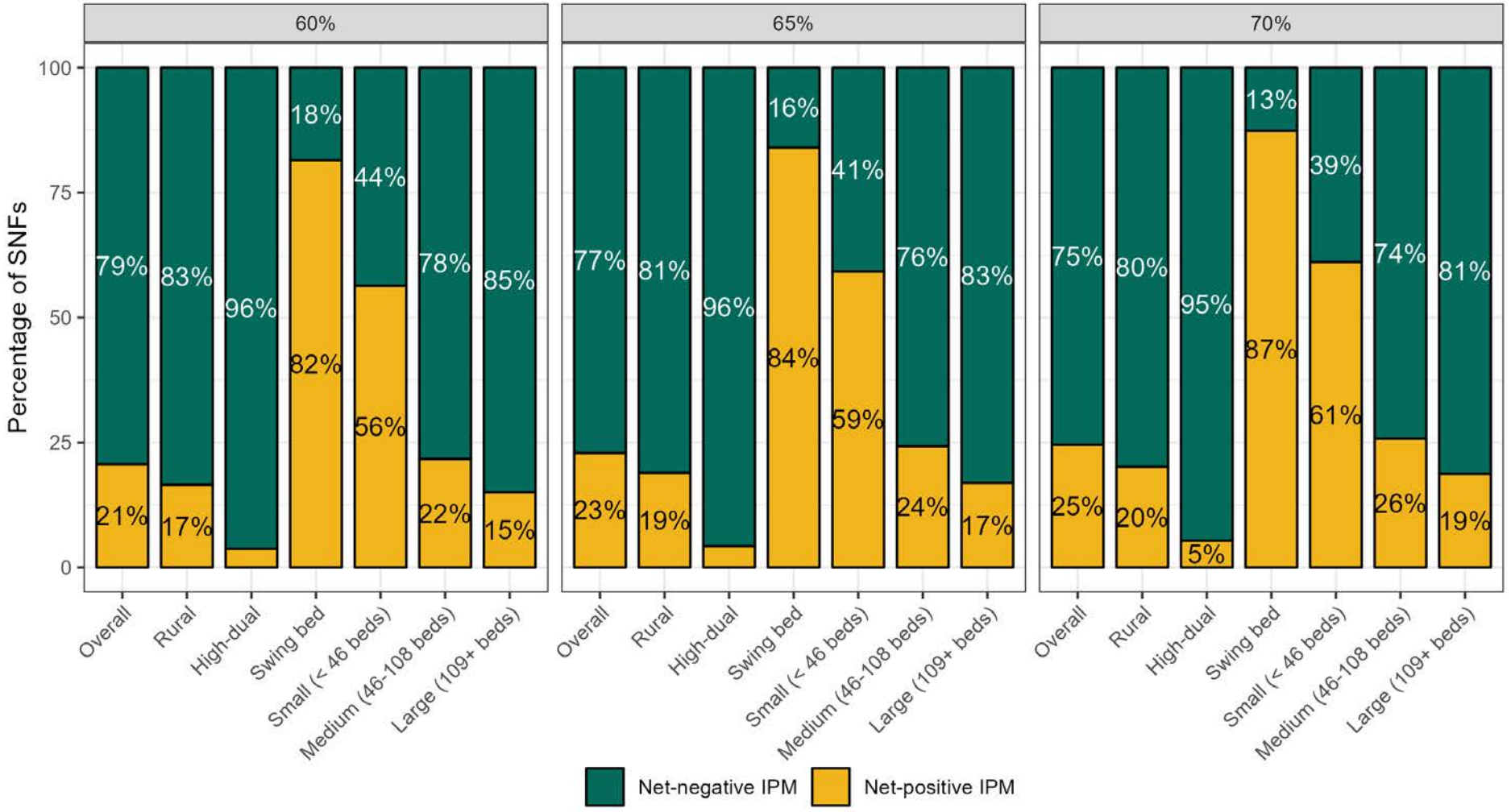
- Current logistic
- Linear
- Alternative logistic functions
  - Goals are to increase percentage of SNFs with net-positive IPMs and to heighten Program incentives
  - Tested functional forms that shift scores upward



Exchange Function	Equation
Current methodology (f_1)	$f_1(TPS) = [1 + \exp\{-0.1 * (TPS - 50)\}]^{-1}$
Linear option (f_2)	$f_2(TPS) = TPS/100$

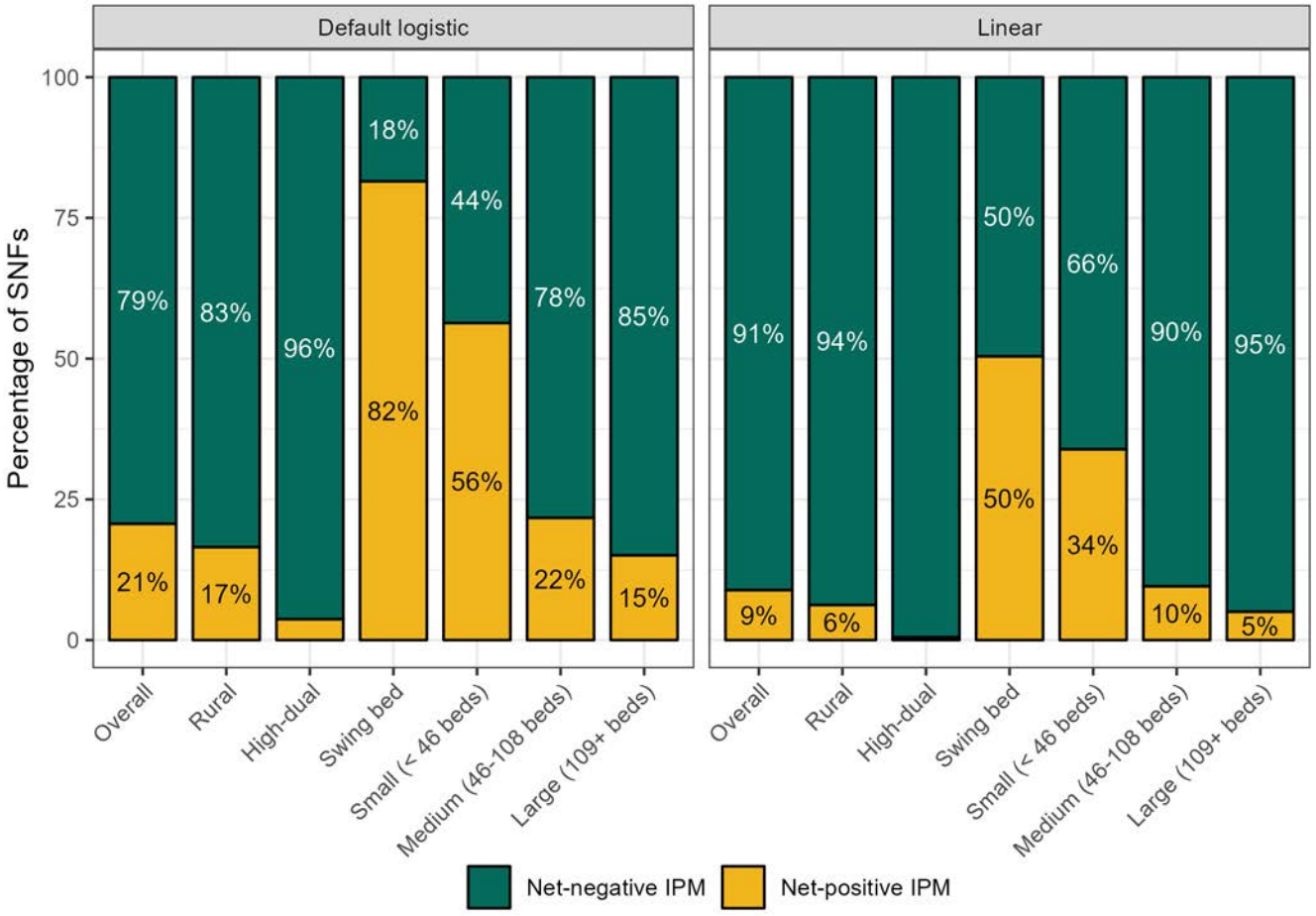
IPM = incentive payment multiplier; SNF = skilled nursing facility; TPS = total performance score.

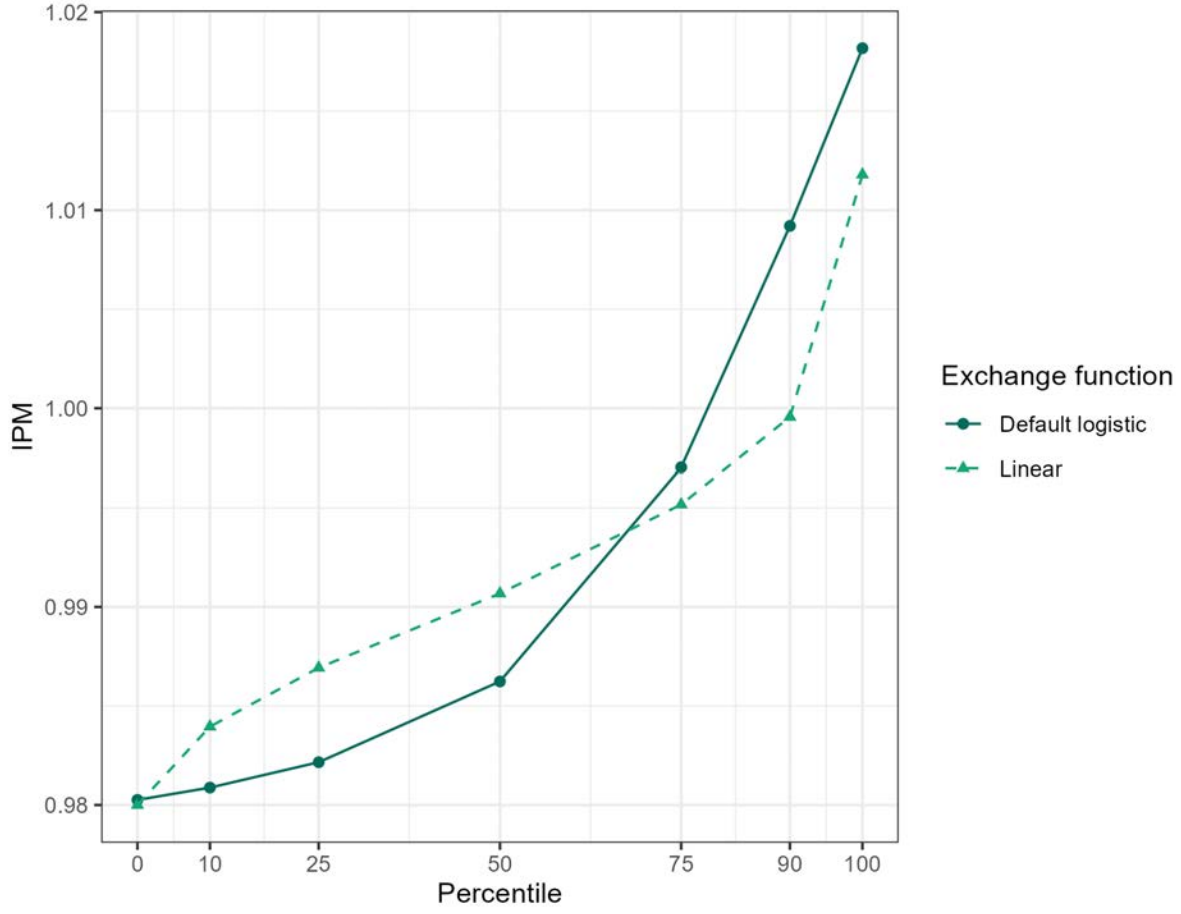
Increasing percent payback slightly increases percentage of SNFs with net-positive payment adjustment



Note: "High-dual" SNFs refer to the SNFs in the top quintile of dually eligible beneficiaries.
IPM = incentive payment multiplier; SNF = skilled nursing facility.

The linear exchange function greatly reduces the proportion of net-positive payment adjustments





Note: "High-dual" SNFs refer to the SNFs in the top quintile of dually eligible beneficiaries.
IPM = incentive payment multiplier; SNF = skilled nursing facility.

Alternative logistic exchange functions could increase share of SNFs with net-positive payment adjustment

DPS simulated IPMs under different logistic exchange functions

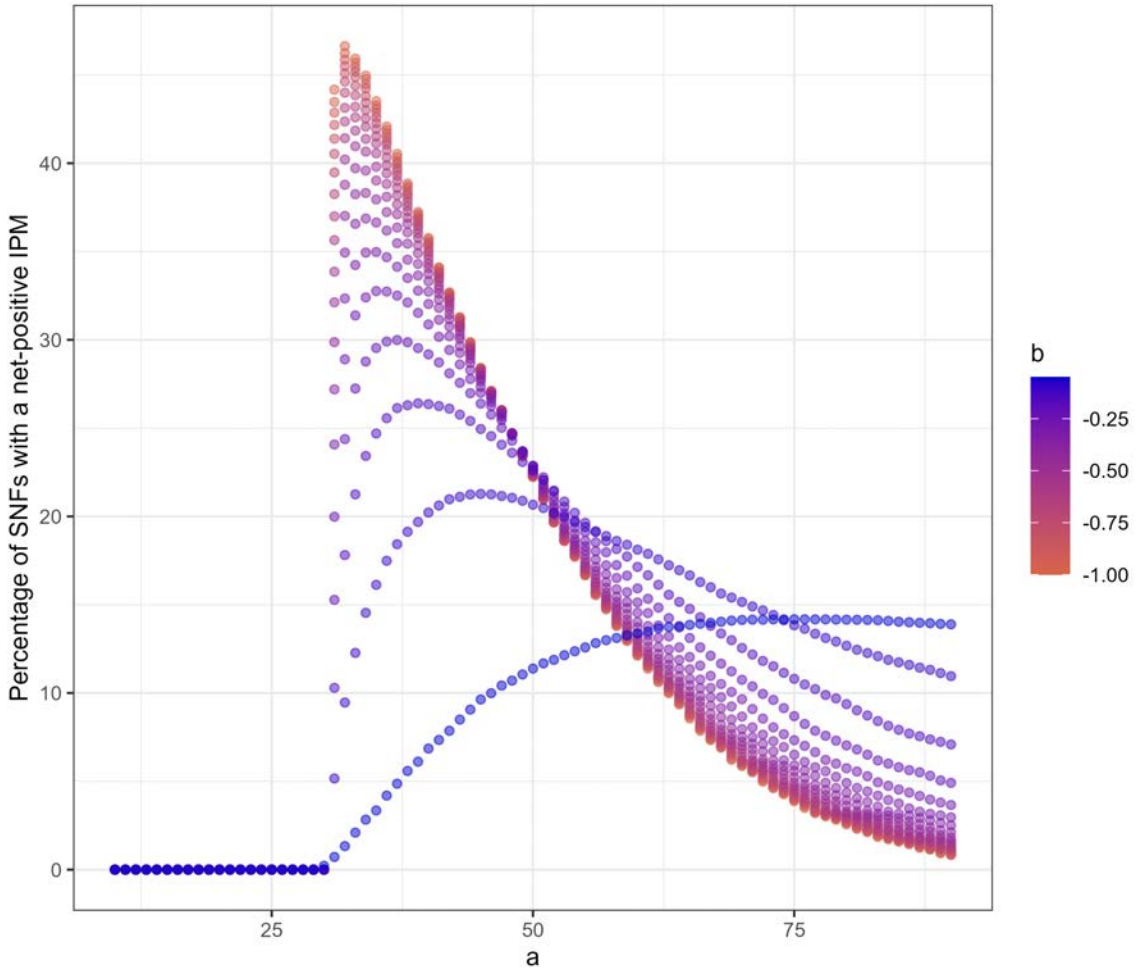
- Exchange function options vary between a and b

$$f(TPS) = [1 + \exp\{b^*(TPS - a)\}]^{-1}$$

  - a = TPS value corresponding to transformed TPS of 50
  - b = Slope of linear segment of logistic curve
- DPS simulated IPMs under the default methodology for combinations of:
  - Values of a between 10 and 90
  - Values of b between -1 and -0.05

Results suggest that the proportion of net-positive IPMs could range from 0% to roughly 50%

- Can set a and b to achieve desired net-positive range
- Can also consider other features, such as value of maximum IPM



DPS = Division of Value, Incentives, and Quality Reporting Program Support; IPM = incentive payment multiplier; SNF = skilled nursing facility; TPS = total performance score.

Questions for the TEP

- **What criteria should we use to assess alternative exchange functions?**
- **How should we assess the trade-offs between criteria (e.g., more positive IPMs and a lower maximum IPM versus fewer positive IPMs and a higher maximum IPM)?**
- **Are there other functional forms we should consider?**

IPM = incentive payment multiplier; TEP = technical expert panel.

Testing Results: Social Risk Variants

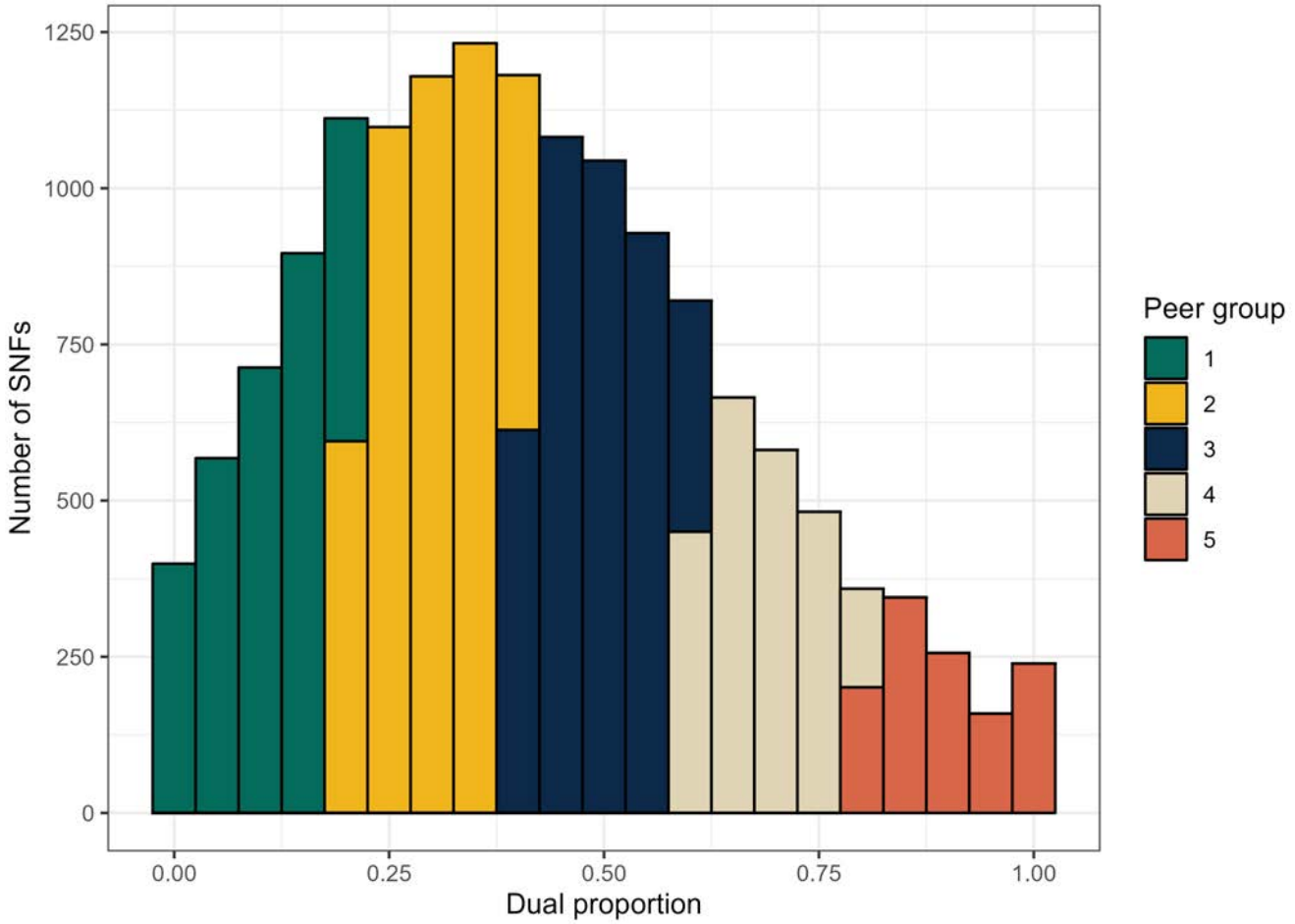
The importance of social risk

- **Underserved populations might suffer from increased medical complexity due to social risk factors**
- **As a result, the SNFs that serve these populations have historically faced additional challenges in achieving good outcomes**
- **It is important to account for these challenges when assessing SNF performance**
- **We use the SNF's proportion of dually eligible beneficiaries as a metric to assess social risk in the methodology**

Note: Dually eligible beneficiaries are enrolled in both Medicare and Medicaid.
SNF = skilled nursing facility.

Social risk variants tested

- **We constructed peer groups (or cohorts) based on the proportion of dually eligible beneficiaries**
- **We assessed SNF performance relative to the performance of SNFs in the same peer group**
- **Our primary approach used quintiles of the dual proportion for peer grouping**
  - We also explored peer grouping by the proportion of dually eligible beneficiaries using ventiles (20 equally sized groups) and clusters (7 groups)



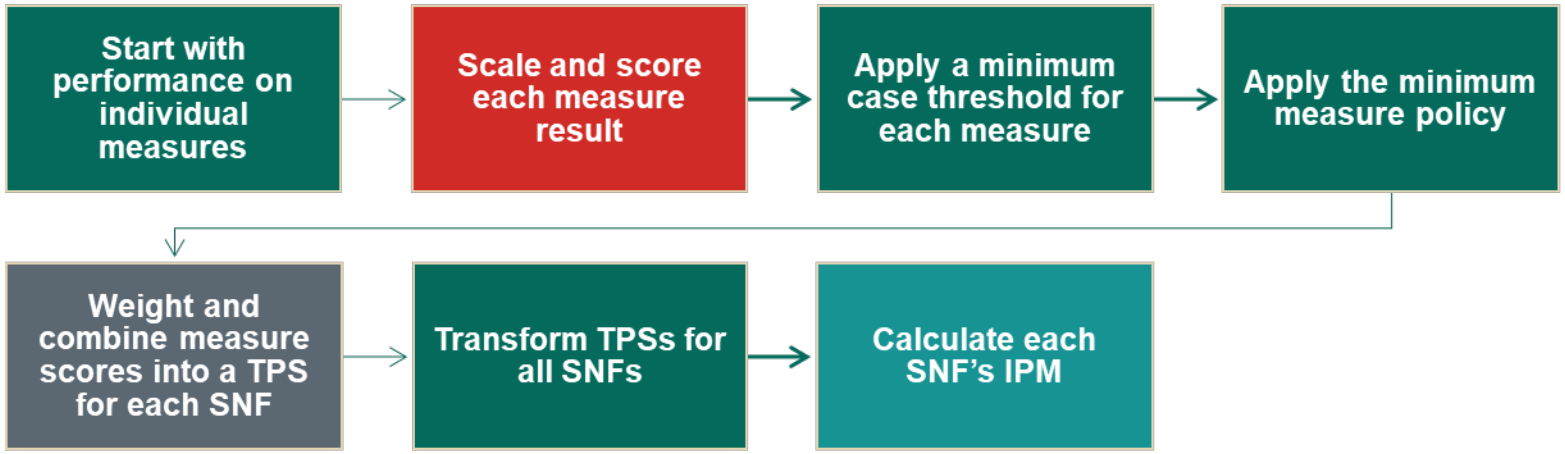
Note: "High-dual" SNFs refer to the SNFs in the top quintile of dually eligible beneficiaries.
SNF = skilled nursing facility.

Social risk approaches tested

Reminder: We assessed SNF performance relative to the performance of SNFs **within the same peer group**.

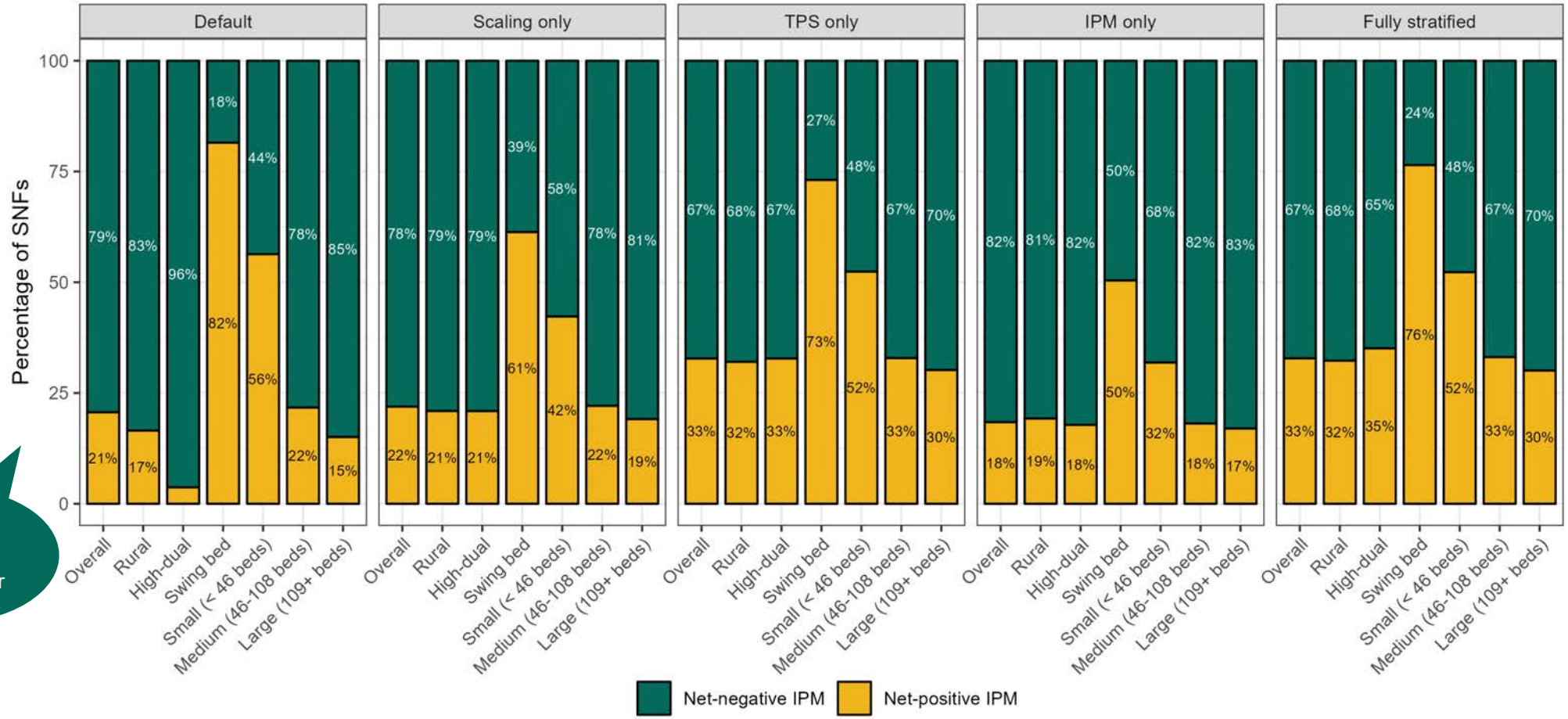
Compared four new options to the current default

- **Current default:** No adjustment to account for social risk
- **Options tested:**
  - **Scaling**: Calculate SNFs' measure scores relative to peer group-specific performance standards (red)
  - **TPS calculation**: Adjust TPSs to reflect performance within peer group (grey)
  - **IPM calculation**: Calculate incentive payment pool and IPM separately within each peer group (teal)
  - **Fully stratified**: Incorporate peer group into scaling, TPS calculation, and IPM calculation (red, grey, and teal)



IPM = incentive payment multiplier; SNF = skilled nursing facility; TPS = total performance score.

Each social risk approach tested equalizes share of SNFs with positive payment adjustments between high-dual SNFs and all SNFs in Program



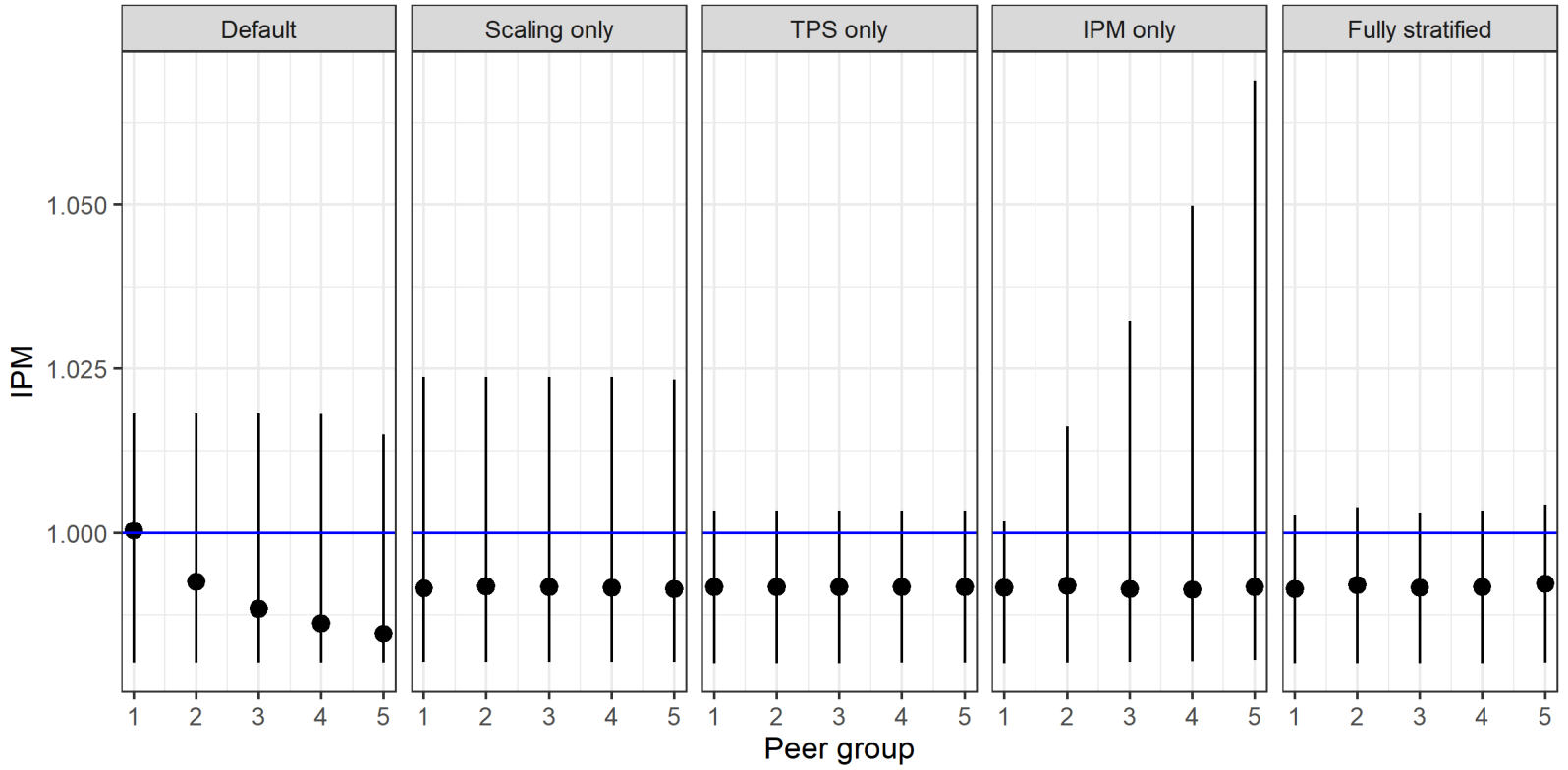
Results shown are based on quintile peer groups

Note: "High-dual" SNFs refer to the SNFs in the top quintile of dually eligible beneficiaries.
IPM = incentive payment multiplier; SNF = skilled nursing facility; TPS = total performance score.

Each social risk approach tested equalizes the mean payment adjustment, but maximums vary

- **Mean IPMs (points) are similar across peer groups under all social risk methodologies**
  - Under the default methodology, mean IPM decreases as dual proportion increases
  - Under all alternative methodologies, mean IPMs are consistent across peer groups

- **IPM maximums (top of black lines) vary considerably across methodologies**
  - Scaling adjustment is associated with higher maximum IPMs
  - TPS adjustment is associated with lower maximum IPMs
  - Adjusting the IPM only leads to large variation in IPM ranges across peer groups, with larger ranges for peer groups with larger proportions of dually eligible beneficiaries



Note: Quintile peer groups are numbered from smallest proportion of dually eligible beneficiaries (1) to largest (5).

IPM = incentive payment multiplier; TPS = total performance score.

More SNFs with low dual proportions move from net-positive to net-negative, and vice versa for SNFs with high-dual proportions

Table columns show the payment adjustment category under each social risk adjustment approach

Each cell shows the number and percentage of SNFs moving from the row category to the column category

Table rows show the payment adjustment category under the default methodology

Results shown are based on quintile peer groups

		Scaling only		TPS only		IPM only		Fully stratified	
		Net-negative	*Net-positive*	*Net-negative*	*Net-positive*	*Net-negative*	*Net-positive*	*Net-negative*	*Net-positive*
		Peer Group 1 (lowest quintile of dual proportion)							
No social risk adjustment	*Net-negative*	1,283 (47.7%)	**0 (0%)**	1,283 (47.7%)	**0 (0%)**	1,283 (47.7%)	**0 (0%)**	1,283 (47.7%)	**0 (0%)**
	Net-positive	829 (30.8%)	580 (21.5%)	526 (19.5%)	883 (32.8%)	1,074 (39.9%)	335 (12.4%)	577 (21.4%)	832 (30.9%)
		Peer Group 5 (highest quintile of dual proportion)							
	Net-negative	1,699 (79.1%)	370 (17.2%)	1,444 (67.2%)	625 (29.1%)	1,766 (82.2%)	303 (14.1%)	1,395 (64.9%)	674 (31.4%)
	Net-positive	**0 (0%)**	80 (3.7%)	**0 (0%)**	80 (3.7%)	**0 (0%)**	80 (3.7%)	**0 (0%)**	80 (3.7%)

"Better off": changed from net-negative to net-positive payment adjustment after social risk adjustment

"Worse off": changed from net-positive to net-negative payment adjustment after social risk adjustment

Note: "High-dual" refers to SNFs in the top quintile of dually eligible beneficiaries. Bold text denotes zero SNFs in category.
IPM = incentive payment multiplier; SNF = skilled nursing facility; TPS = total performance score.

Across each of the social risk approaches tested, "better off" are more likely than "worse off" to be rural SNFs or large SNFs, and are less likely to be swing beds

SNF Characteristic	Scaling only		TPS only		IPM only		Fully stratified	
	Better off (N=1,062)	Worse off (N=900)	Better off (N=2,096)	Worse off (N=526)	Better off (N=843)	Worse off (N=1,130)	Better off (N=2,151)	Worse off (N=577)
Rural	273 (25.7%)	129 (14.3%)	572 (27.3%)	67 (12.7%)	229 (27.2%)	140 (12.4%)	584 (27.2%)	71 (12.3%)
Swing bed	4 (0.4%)	28 (3.1%)	8 (0.4%)	18 (3.4%)	2 (0.2%)	39 (3.5%)	7 (0.3%)	13 (2.3%)
High-dual	370 (34.8%)	0 (0.0%)	625 (29.8%)	0 (0.0%)	303 (35.9%)	0 (0.0%)	674 (31.3%)	0 (0.0%)
Small (1-45 beds)	39 (3.7%)	150 (16.7%)	56 (2.7%)	87 (16.5%)	32 (3.8%)	225 (19.9%)	63 (2.9%)	95 (16.5%)
Medium (46-108 beds)	497 (46.8%)	475 (52.8%)	938 (44.8%)	274 (52.1%)	380 (45.1%)	594 (52.6%)	986 (45.8%)	309 (53.6%)
Large (109+ beds)	526 (49.5%)	275 (30.6%)	1102 (52.6%)	165 (31.4%)	431 (51.1%)	311 (27.5%)	1102 (51.2%)	173 (30.0%)

Note: "High-dual" refers to SNFs in the top quintile of dually eligible beneficiaries
IPM = incentive payment multiplier; SNF = skilled nursing facility; TPS = total performance score.

Questions for the TEP

- **Which of the social risk approaches would you recommend, given the empirical results and conceptual considerations?**
- **Are there are other metrics we should use to assess the social risk approaches?**
- **Are there other social risk approaches we should consider?**
- **Are there other proxies of social risk besides the proportion of dually eligible beneficiaries that we should consider?**

TEP = technical expert panel.

Conclusion

Limitations

- **Data used for testing is almost entirely pre-COVID-19, whereas the expanded SNF VBP Program will use data after the public health emergency**
  - If SNF performance on the measures drastically changes, we won't be able to capture that before implementation
- **We have not assessed validity of payment adjustments**
  - For the SNF VBP Program, we would interpret validity as the extent to which payment adjustments reflect resident outcomes; however, doing so would require additional analyses outside the specifications of initial testing
    - Potentially compare SNF VBP Program payment adjustments to five-star ratings from Nursing Home Compare
    - Potentially assess relationship between SNF VBP Program payment adjustments and resident outcomes such as readmissions or mortality
- **Results were reviewed in the aggregate and for relevant subgroups**
  - Current analysis does not investigate whether particular methodologies lead to unexpected results for individual SNFs
  - Looking at attributes for individual high performers and low performers in a future wave could reveal potential issues

SNF = skilled nursing facility; SNF VBP = Skilled Nursing Facility Value-Based Purchasing.

Questions for the TEP

- **Are there other tweaks to the methodology that we should consider?**
- **Are there other independent measures of quality we should use for validity testing?**
- **Are there other metrics we should look at to assess the methodology?**
- **Is there any other feedback?**

TEP = technical expert panel.

Thank You!

Please send any additional feedback to SNFVBPTEP@mathematica-mpr.com

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