

# Physician Compare Benchmark and Star Ratings Fact Sheet

## Overview

In late 2017, [Physician Compare](#) will be publicly reporting measure-level star ratings for the first time. The Centers for Medicare & Medicaid Services (CMS) finalized an item-level benchmark as the basis for the Physician Compare star ratings in the 2016 Physician Fee Schedule (PFS) final rule ([80 FR 71128 through 71129](#)).

Since this is the first time star ratings will be publicly reported on Physician Compare, CMS is restarting its phased approach to public reporting. When Physician Compare first introduced measures on profile pages, just a subset of group-level measures were made public. Later this year, Physician Compare will be taking the same approach when introducing star ratings – only a subset of group-level measures will be added to Physician Compare profile pages as star ratings.

Star ratings will only be publicly reported if the measure data meet the Physician Compare statistical public reporting criteria and resonate with users. In ongoing efforts, CMS is conducting statistical analyses to ensure that a statistically robust benchmark is established at the measure/reporting mechanism level, and that there are robust and reliable star rating cut-offs that reliably categorize groups into each star rating. This fact sheet provides technical information about the star rating system, including the benchmark methodology and the star attribution methodology.

We look forward to continuing what has been an ongoing conversation on the introduction of star ratings to Physician Compare. To engage in these discussions and offer feedback for star ratings and Physician Compare, the support team can be reached at [PhysicianCompare@Westat.com](mailto:PhysicianCompare@Westat.com)

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## Why a benchmark?

Benchmarks are important for ensuring that users accurately interpret and understand the performance information on Physician Compare. They allow users to best understand the performance information on Physician Compare by setting a point of comparison and providing context.

*Benchmarks help us **interpret and understand** the quality data on Physician Compare by setting a point of comparison.*

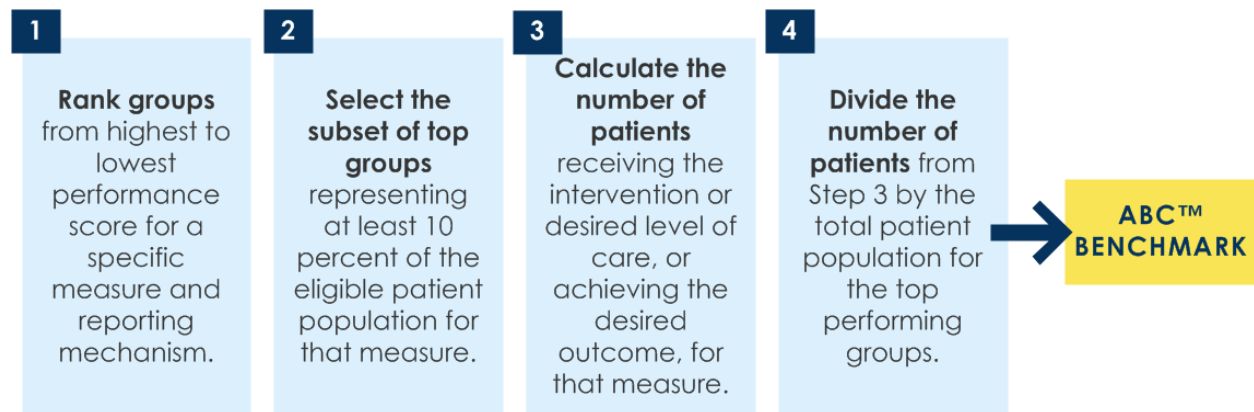
## The ABC™ methodology

Physician Compare will use the Achievable Benchmark of Care (ABC™) methodology to develop the benchmark that will anchor the Physician Compare star rating. The benchmark was finalized in the CY 2016 Physician Fee Schedule (PFS) final rule ([80 FR 71128 through 71129](#)). ABC™ is a well-tested, data-driven methodology. It represents quality while being realistic and achievable. It also encourages continuous quality improvement and is shown to lead to improved quality of care<sup>123</sup>.

## How will the benchmark be calculated?

ABC™ starts with the pared-mean. This is the average of the best performers on a measure for at least 10 percent of the patient population – not the population of groups reporting on the measure. This is then the top 10% of all patients measured who got the best care on the specific measure. See Figure 1 for a step-by-step breakdown of how the benchmark is calculated.

Figure 1. Benchmark Calculation



<sup>1</sup> Kiefe CI, Weissman NW, Allison JJ, Farmer R, Weaver M, Williams OD. Identifying achievable benchmarks of care: Concepts and methodology. *International Journal of Quality Health Care*. 1998 Oct; 10(5):443–7.

<sup>2</sup> Kiefe CI, Allison JJ, Williams O, Person SD, Weaver MT, Weissman NW. Improving Quality Improvement Using Achievable Benchmarks for Physician Feedback: A Randomized Controlled Trial. *JAMA*. 2001; 285(22):2871–2879.

<sup>3</sup> Wessell AM, Liszka HA, Nietert PJ, Jenkins RG, Nemeth LS, Ornstein S. Achievable benchmarks of care for primary care quality indicators in a practice-based research network. *American Journal of Medical Quality* 2008 Jan–Feb; 23(1):39–46.

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We first rank-order groups from highest to lowest performance score. Then, we create a subset of the groups by selecting the best performers until we have selected enough groups to represent at least 10 percent of all patients relevant for that measure.

We calculate the benchmark by dividing this high-scoring subset of patients by the total number of patients measured by the top performing subset of groups. This produces a benchmark that represents the best care provided to the top 10 percent of patients.

To account for low denominators, ABC™ includes a calculation of a beta binomial model adjustment. This ensures that very small sample sizes do not over-influence the benchmark but still allows all data to be included in the benchmark calculation.

For a benchmark to be calculated, the measures must meet our public reporting standards. Each measure must prove to be statistically accurate, valid, and reliable. And, the measure must prove to resonate with patients and caregivers via testing. If these criteria are met, then we calculate the benchmark. The benchmark itself, must also meet our statistical reporting standards.

## What about star ratings?

One of the next steps in our phased approach to public reporting is to implement star ratings based on the ABC™ measure-level benchmark. Physician Compare is committed to moving to star ratings because this is a user-friendly way to share complex information.

Star ratings give users more context to best understand the performance scores published on Physician Compare. For example, on some measures, a clinician's raw score of 80% is considered very good relative to other clinicians' performance on that measure at this moment in time. However, without star ratings users may not realize this and assume 80% is just average performance. Star ratings help users accurately evaluate performance scores because these ratings provides a point of comparison.

After we determine the benchmark for a given measure, groups that meet or exceed the benchmark will be assigned 5 stars. The next step in moving to star ratings was to decide on a method for assigning 1 to 4 stars. For Physician Compare, we focused on a method that met the following requirements, as requested by stakeholders and encouraged by the many experts consulted:

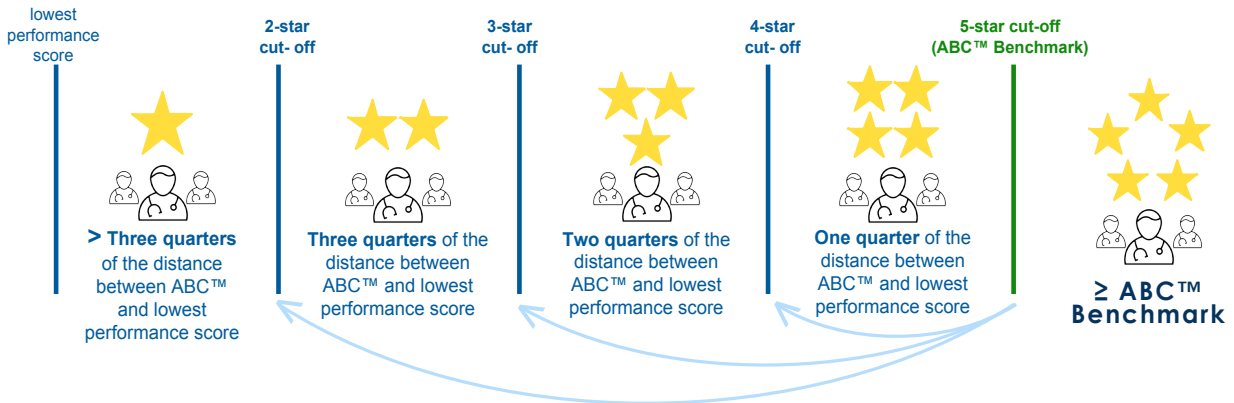
1. Avoids forcing a star-rating distribution;
2. Doesn't make it hard to achieve a moderate to good rating; and,
3. Reliably assigns groups into a star rating.

As discussed in the CY 2018 Quality Payment Program final rule (82 FR 53827 through 53829), we conducted extensive statistical analysis, sought the Physician Compare Technical Expert Panel's (TEP) and CMS measure expert input, and reached out to stakeholders including specialty societies and professional groups to help determine the best possible method for assigning 1 to 4 stars. This work led to a decision to use the equal ranges method to assign star ratings for the subset of group-level 2016 performance scores targeted for public reporting on group profile pages later this year.

## Equal ranges method

The equal ranges method is based on the difference between the ABC™ benchmark and the lowest performance score for a given measure. The method uses that range to assign 1 to 4 stars. Groups that meet or exceed the established ABC™ benchmark for a measure will be assigned 5 stars.

**Figure 2.** Equal Ranges Method



To determine the 4-star cut-off, we subtract the minimum performance score from the ABC™ benchmark to get the range of performance scores for that measure, and then divide by 4 to give us quarters. The 4-star cut-off is one quarter of the distance between the ABC™ benchmark and the lowest performance score. Groups that score at or above the 4-star cut-off, but below the benchmark will be assigned 4-stars.

We use the same idea to determine the 3-star cut-off. The 3-star cut-off is two quarters of the distance between the ABC™ benchmark and lowest performance score. Groups that have scores at or above the 3-star cut-off but below the 4-star cut-off are assigned 3-stars.

We follow the same method to get the 2-star cut-off, which is 3 quarters of the distance between the ABC™ benchmark and lowest performance score.

Finally, any scores that are greater than three quarters of the distance between the ABC™ benchmark and the lowest performance score are assigned one star.

## More ways to learn

To learn more about Physician Compare, including more about star ratings and the future of public reporting, visit the [Physician Compare Initiative page](#). Also, sign up for the [Physician Compare eNews](#) to receive updates and latest information about all things Physician Compare.

If you have questions, please contact the Physician Compare support team at [PhysicianCompare@Westat.com](mailto:PhysicianCompare@Westat.com).