



## **PEPPER Sessions Chapter 4 Percents Percentiles SNF**

In this session, I'm going to review how we calculate the target area statistics in the PEPPER. I'll review percents and percentiles, and I'll also talk about how percentiles are used to identify outliers in the PEPPER.

The skilled nursing facility data are summarized by target area and by time period in three basic ways. We count the RUG days, or the episodes of care, that meet the target for the numerator definition and the denominator definition for each target area and for each time period. The numerator and denominator counts are used to calculate the target area percent, which is an important statistic in the PEPPER. We also summarize payment information to provide the average payment and the sum of payment for target area episodes of care. For the SNF report, payment statistics are only available for the 90 plus day episode of care target area. This is because the SNF claims that we analyze include the total SNF payments per claim, which can include any number of RUGs.

RUG-specific information is not available on the skilled nursing facility claim. So therefore, the average and sum of payments are only available for the 90 plus day episodes of care targeting. The PEPPER also includes the average length of stay for the numerator and denominator, which represents the average number of days billed for the numerator RUGs for the episodes of care with those RUGs billed. Neither the average length of stay, nor the payment statistics, are applicable for the change of therapy assessment target area, and so therefore, the average length of stay data are not available for the change of therapy assessment target area.

As I just mentioned, the numerator and denominator counts are used to calculate the target area percents. Target area percents are then used to calculate percentiles. Percents and percentiles are at the heart of the PEPPER. However, it is easy to confuse these terms because they sound alike, and a lot of people don't have a clear understanding of what percentiles means. So I'm going to clarify the definitions of percent and percentile, and then I'll talk about how they relate to each other in the PEPPER.

Let's start with the calculation of a target area percent. In the SNF report, to calculate a target area percent, we need a numerator and denominator. In the PEPPER, the numerator is the count of RUG days, or episodes of care, that meet the numerator definition. The denominator is the number of RUG days, or episodes of care, that meet the denominator definition. Remember that due to the data restrictions, the numerator and denominator will not display if they are less than 11. And similarly, the rest of the statistics would not be calculated either.

The target area percents are calculated by dividing the numerator count by the denominator count for the target area and time period, and then multiplying by 100. Let's use, as an example, the 90 plus day episode of care target area. Here the numerator is the number of episodes of care that end in the fiscal year of the skilled nursing facilities that have a length of stay of 90 or more days. In this example, we have 13 episodes with 90 plus days. The denominator is the number of episodes at the SNF that end in the fiscal year, which in this example is 25. So here we are comparing the number of beneficiaries that have 90 or more day episodes to a larger comparison group that includes all of the episodes at the skilled nursing facility. So 13 divided by 25, multiplied by 100, results in the target area percent 52. So

that tells us that of all the episodes at the skilled nursing facility that ended in that fiscal year, 52% had a length of stay of 90 or more days.

But when we sit back and think about it, what does it really mean that 52% of the episodes had a length of stay of 90 or more days? Is that high? Is that low? Should we be concerned? Standing alone, we have no way to gauge whether that's something that we should be worried about or not. We need some context to help figure that out. And that's where the percentile value can be very helpful. The percentile provides the context so that we can see the big picture, and where we stand. The percentile tells us the percentage of all skilled nursing facilities in a comparison group below which a given skilled nursing facility percent ranks. So, the percentile gives us a point of reference-- a way to think about how our target area percent compares to the target area percent of others skilled nursing facilities.

To calculate percentiles for all SNFs in a comparison group, which could be all skilled nursing facilities in the nation, could be all skilled nursing facilities in the jurisdiction in a state, the target area percents for all the skilled nursing facilities in the group are sorted from highest to lowest for each time period. And then the percentiles are calculated. A percentile is a number that relates to the percentage of SNFs that have a lower target area percent. So, for example, if 40% of a SNF's target area percent were lower than Skilled Nursing Facility A, then Skilled Nursing Facility A would be at the 40th percentile.

Let's take a look at a simple picture to help us understand the concept. Here we have a ladder. And in our example, each rung of the ladder represents a SNF target area percent for one target area and one time period. You can see the percent in the box to the right of each rung. Note that the target area percents are sorted from highest to lowest. Keep in mind that this is a very simple example. We only have 10 providers in this group. Because 80% of the skilled nursing facilities in this comparison group are below the target area percent of 52, 52% is at the 80th percentile. And any target area percent at, or above 52% would be above the 80th percentile, and would be identified as high outliers in the PEPPER, or at higher risk for improper payments.

Now, similarly, the 20th percentile is the target area percent of 24. So, any target area percent of 24% or less are at or below the 20th percentile. And those would be considered low outliers, with low outliers being applicable for the two target areas in the skilled nursing facility report that are at potential risk for under coding.

Now it's time for us to put all of these concepts together to understand how risk for improper Medicare payments is identified in the PEPPER. The target area percent for all skilled nursing facilities in each of the three comparison groups are sorted from highest to lowest, just as we did with the ladder example. Then, we calculate percentiles for each comparison group. We identify the target area percent that is at the 80th percentile for each comparison group, for all of the target areas, and for all the time periods. And for the target areas that are at risk for under coding, we also identify the target area percent. It's at the 20th percentile. If a skilled nursing facility target area percent is at, or above, the national 80th percentile for any of the target areas, or if it's at, or below, the national 20th percentile for either of the target areas that are related to coding, then the skilled nursing facility is identified as at risk for improper Medicare payments.

While skilled nursing facilities are compared to all three comparison groups, in the PEPPER, the outlier status is determined using the national comparison group. And how will know if you are at risk? In the compare and the target area reports in your PEPPER, the target area percent will be printed in red, bold print if it's at, or above, the national 80th percentile, and in green italics if it's at, or below, the national 20th percentile.