How is the Risk-Adjusted Rate calculated?

\[
\left( \frac{\text{Actual Rehospitalization}}{\text{Expected Rehospitalization}} \right) \times \text{National Average} = \text{Risk Adjusted Rate}
\]

- **National average** is the national percentage of all SNF admissions from a hospital that were readmitted to a hospital within 30 days during their SNF stay.
- **Actual rehospitalizations** is the actual percentage of admissions from a hospital to your SNF who are sent back to the hospital for readmission within 30 days.
- **Expected rehospitalizations** is an estimated rehospitalization rate of each person admitted to a SNF averaged across all admissions. AHCA uses logistic regression with 33 clinical and demographic variables. Each variable has an associated risk of rehospitalization (called a beta-coefficient) that are added together with statistics in the logistic regression model — to give that person an estimated risk of readmission. Each person’s risk is added together and averaged to give you the average percentage of your patients admitted from the hospital that could be expected to be re-admitted to the hospital within 30 days. Please review the help document to learn more.

How was it calculated before?

For CY 2011 Q4 to 2013 Q3, the formula was exactly the same as outlined above. However, during that time we consistently used the national average from CY 2011 to calculate the risk adjusted rate for all subsequent time periods. We also used the same statistical values from 2011 Q4 in the logistic regression model to calculate the expected rates for all subsequent time periods. This approach makes sense when national trends are not changing significantly, and it also allows providers to compare their risk adjusted rates over time to a fixed baseline.

However, we made the decision in CY 2013 Q4 to update the national average rate used in the formula because it had dropped significantly. Since national rates were changing over time, AHCA continued to update the national average used in the calculations for each subsequent quarter. When the update was made in 2013 Q4, it resulted in a large drop between 2013 Q3 and 2013 Q4 rates. This caused everyone’s rates to drop by about 1.5% in 2014 (see figure 1 below). However, we did NOT update the statistical values used in the logistic regression model.

What is the change and how does this affect my center/organization’s rate?

Many members who were using the Point Right system noticed a difference of about 1.5% in their risk-adjusted rates when compared with the rates reported in the LTC Trend Tracker system — even though their actual rates were identical. This caused us to investigate the reasons for this discrepancy. We determined that the differences occurred because AHCA had updated the national rates used in calculating the measure, while Point Right did not.

AHCA and Point Right have been working together to determine the best method to update the formula going forward. We believe the best statistical approach is to regularly update both the national average AND the statistical values used in the logistic regression model, instead of keeping them locked at 2011 values. This will prevent large changes in rates if we updated the information less frequently as we did in the past.

When the model is updated using this new approach, there is an average increase of approximately 1.5% for every SNF’s risk adjusted rate reported in LTC Trend tracker. This results in an increase in the average rate for all SNFs (See last data point in Figure 1 below). Therefore, members will see an increase in their 2014 risk-adjusted...
Background: Updating the PointRight® Pro 30™ Rehospitalization Measure Risk-Adjustment Formula

We are recalculating all of the rates from 2013 Q4 forward and uploading the new rates in order to allow SNFs to compare their trends over time based on a consistent approach to calculating the measure.

Figure 1. Trend in risk adjusted average rates for all AHCA members.