The risk-adjusted rate is the estimate of how a hospital would perform on an indicator for an average case mix of patients, rather than its own case mix. This rate can be found in the provider-level reports from the Windows or SAS QI programs. See the other B tools for more information (B1 explains what the rates mean; B2a and B2b show how to use the software with your data and obtain these rates).

The confidence interval of the risk-adjusted rate is identified in the SAS output as the lower CL (lower confidence limit) and upper CL (upper confidence limit). When creating provider-level reports using the Windows QI software, the user must specify that the confidence levels be included in the report.

The national average is the rate used here as a comparison point. You may choose your State's rate, the national rate, or any other rate that you may wish to use as a comparison. See Tool B5 for more information about comparators. Please note that AHRQ does not currently provide national averages using ICD-10 data.

*Note: Risk-adjusted rates are not available in the most up-to-date version of the ICD-10 software. Future versions of the QI software will allow for risk adjustment and calculation of risk-adjusted and smoothed rates.

	Indicator	Enter your data here.				These calculate automatically.				
		Risk-Adjusted Rate	Risk-Adjusted (Lower Confidence Interval Bound)	Risk-Adjusted (Upper Confidence Interval Bound)	National Average	Percent Difference in Rates	Percent Difference in Rates (Lower Bound)	Percent Difference in Rates (Upper Bound)	Chart Label	How does your hospital compare to the national average?
NQI 01	Neonatal Iatrogenic Pneumothorax Rate									
NQI 02	Neonatal Mortality Rate	0	0	0.00052261	0.00247	-100	-100	-78.8417	NQI 02	Statistically Lower
NQI 03	Neonatal Blood Stream Infection Rate	0.0403736	0.0262083	0.054539	0.03773	7.00662603	-30.537238	44.5507554	NQI 03	No Statistically Significant Difference
PDI 01	Accidental Puncture or Laceration Rate	0.0002971	0	0.0010748	0.00057	-47.877193	-100	88.5614035	PDI 01	No Statistically Significant Difference
PDI 02	Pressure Ulcer Rate									
PDI 03	Retained Surgical Item or Unretrieved Device									
PDI 05	Iatrogenic Pneumothorax Rate	0	0	0.0004096	0.00015	-100	-100	173.066667	PDI 05	No Statistically Significant Difference
PDI 06	RACHS-1 Pediatric Heart Surgery Mortality Rate	0	0	0.176267	0.04091	-100	-100	330.865314	PDI 06	No Statistically Significant Difference
PDI 07	RACHS-1 Pediatric Heart Surgery Volume									
PDI 08	Perioperative Hemorrhage or Hematoma Rate				0.00248					
PDI 09	Postoperative Respiratory Failure Rate				0.01132					
PDI 10	Postoperative Sepsis Rate	0	0	0.0432385	0.01989	-100	-100	117.388135	PDI 10	No Statistically Significant Difference
PDI 11	Postoperative Wound Dehiscence Rate	0	0	0.0075716	0.00097	-100	-100	680.57732	PDI 11	No Statistically Significant Difference
PDI 12	Central Venous Catheter-Related Blood Stream Infection Rate	0.0003802	0	0.0010654	0.001	-61.98	-100	6.54	PDI 12	No Statistically Significant Difference
PDI 13	Transfusion Reaction Count									

Your Hospital's Performance Relative to National average
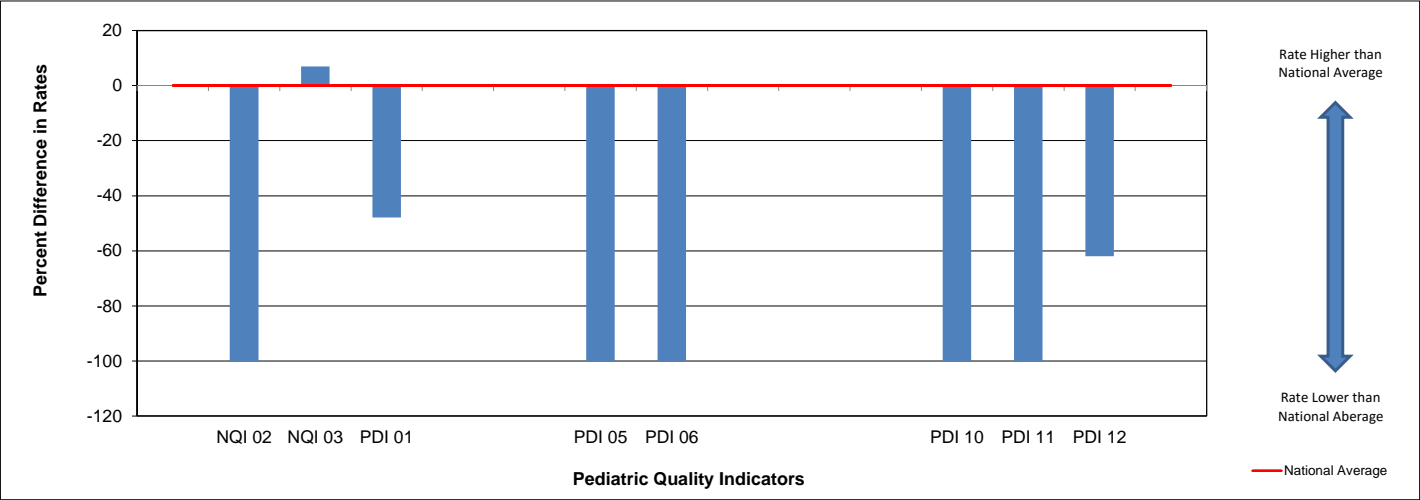
| Enter Your Data Here		
Year	Observed Rate	Observed Count
2006		
2007		
2008	0.048711	17
2009	0.046154	15
2010	0.055	22
2011	0.042042	14
2012	0.0375	12
2013	0.029851	10
2014		
2015		
2016		

*Note: Use caution comparing rates before and after 2014. Rates before the 4th quarter of 2014 are calculated using ICD-9; rates calculated during the 4th quarter of 2014 and later use ICD-10. The rates should be similar but may not yield a perfect comparison between years.

The **observed rate** is the actual rate at which events measured by the indicator occurred in your hospital. This can be acquired from the SAS output, or the Windows QI output from the Quick Report. If another organization provides these data for you, you may also obtain it from them.

See the other B tools for more information (B1 explains what the rates mean; B2a and B2b show how to use the software with your data and obtain these rates).

Examining Observed Rates of Neonatal Blood Stream Infection Rate (NQI 03)

Directions: Add your data into the yellow cells beside the relevant year. Remove the "Neonatal Blood Stream Infection Rate" part of the title and revise it to reflect your PDI of interest.

Examining Observed Count of Neonatal Blood Stream Infection Rate (NQI 03)
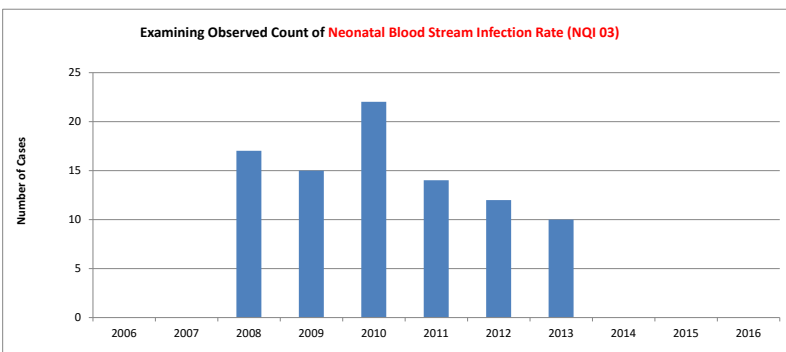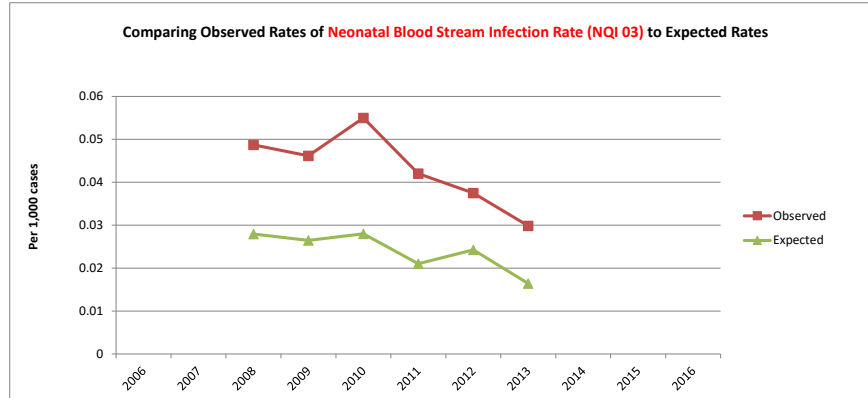
The **observed rate** is the actual rate at which events measured by the indicator occurred in your hospital. This can be acquired from the SAS output, or the Windows QI output from the Quick Report. If another organization provides these data for you, you may also obtain it from them.

The **expected rate** is the rate a hospital would have if it had average performance on a QI, as calculated in a reference population but accounting for the hospital's actual case mix. This can be acquired from the SAS output or the Windows QI output from the Provider Report.

See the other B tools for more information (B1 explains what the rates mean; B2a and B2b show how to use the software with your data and

obtain these rates).

	Enter Your Data Here	
Year	**Observed**	**Expected**
2006		
2007		
2008	0.048711	0.0279432
2009	0.046154	0.026476
2010	0.055	0.028
2011	0.042042	0.021021
2012	0.0375	0.02425
2013	0.029851	0.016418
2014		
2015		
2016		

*Note: Expected rates are not available in the most up-to-date version of the ICD-10 software. Future versions of the QI software will allow for risk adjustment and calculation of expected rates.

Comparing Observed Rates of Neonatal Blood Stream Infection Rate (NQI 03) to Expected Rates

Directions: Add your data into the yellow cells beside the relevant year. Remove the "Neonatal Blood Stream Infection Rate" part of the title and revise it to reflect your PDI of interest.

The **risk-adjusted** rate is the estimate of how a hospital would perform on an indicator for an average case mix of patients, rather than its own case mix. This rate can be found in the provider-level reports from the Windows or SAS QI programs.

The **confidence interval of the risk-adjusted rate** is identified in the SAS output as the lower CL (lower confidence limit) and upper CL (upper confidence limit). When creating provider-level reports using the Windows QI software, the user must specify that the confidence levels be included in the report.

The **smoothed rate** is a weighted average of the hospital's risk-adjusted rate and the reference population rate, where the weight reflects the reliability of the hospital's risk-adjusted rate. This can be found in the SAS output or the Windows QI Provider Report.

See the other B tools for more information (B1 explains what the rates mean; B2a and B2b show how to use the software with your data and obtain these rates).

	Enter Your Data Here			
Year	Risk-Adjusted Rate	Risk-Adjusted (Lower Confidence Interval Bound)	Risk-Adjusted (Upper Confidence Interval Bound)	Smoothed
2006				
2007				
2008	0.040374	0.031628	0.04912	0.037492
2009	0.038308	0.028083	0.048533	0.036529
2010	0.04675	0.034694	0.058806	0.044434
2011	0.036997	0.030539	0.043454	0.034819
2012	0.03	0.021993	0.038007	0.028607
2013	0.023881	0.017507	0.03004	0.022698
2014				
2015				
2016				

*Note: Risk-adjusted and smoothed rates are not available in the most up-to-date version of the ICD-10 software. Future versions of the QI software will allow for risk adjustment and calculation of risk-adjusted and smoothed rates.

Risk-Adjusted and Smoothed Rates of Neonatal Blood Stream Infection Rate (NQI 03)
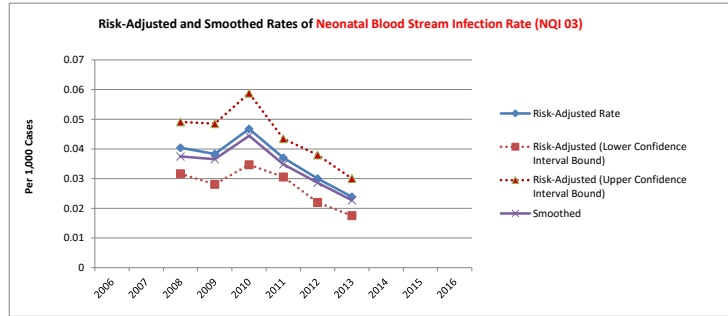
Directions: Add your data into the yellow cells beside the relevant year. Remove the "Neonatal Blood Stream Infection Rate" part of the title and revise it to reflect your PDI of interest.
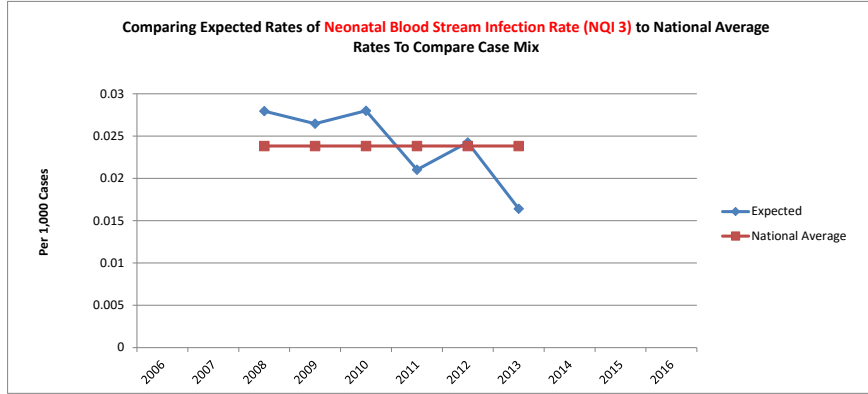
The **expected rate** is the rate a hospital would have if it had average performance on a QI, as calculated in a reference population but accounting for the hospital's actual case mix. This can be acquired from the SAS output or the Windows QI output from the Provider Report.

The **national average** is the rate used here as a comparison point. You may choose your State's rate, the national rate, or any other rate that you may wish to use as a comparison.

See the other B tools for more information (B1 explains what the rates mean; B2a and B2b show how to use the software with your data and obtain these rates; B5 explains how to use comparators).

Year	Expected	National Average
Enter Your Data Here		
2006		
2007		
2008	0.0279432	0.02383
2009	0.026476	0.02383
2010	0.028	0.02383
2011	0.021021	0.02383
2012	0.02425	0.02383
2013	0.016418	0.02383
2014		
2015		
2016		

*Note: Expected rates are not available in the most up-to-date version of the ICD-10 software. Future versions of the QI software will allow for risk adjustment and calculation of expected rates.

Comparing Expected Rates of Neonatal Blood Stream Infection Rate (NQI 3) to National Average Rates To Compare Case Mix

Directions: Add your data into the yellow cells beside the relevant year. Remove the

"Neonatal Blood Stream Infection Rate" part of the title and revise it to reflect your PDI of interest.

The **risk-adjusted** rate is the estimate of how a hospital would perform on an indicator for an average case mix of patients, rather than its own case mix. This rate can be found in the provider-level reports from the Windows or SAS QI programs.
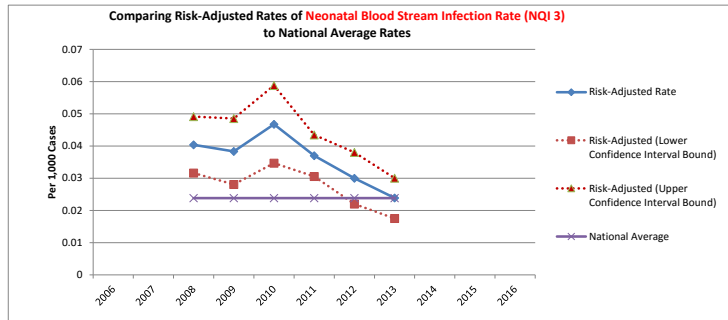
The **confidence interval of the risk-adjusted rate** is identified in the SAS output as the lower CL (lower confidence limit) and upper CL (upper confidence limit). When creating provider-level reports using the Windows QI software, the user must specify that the confidence levels be included in the report.

The **national average** is the rate used here as a comparison point. You may choose your State's rate, the national rate, or any other rate that you may wish to use as a comparison.

See the other B tools for more information (B1 explains what the rates mean; B2a and B2b show how to use the software with your data and obtain these rates; B5 explains how to use comparators).

	Enter Your Data Here			
Year	Risk-Adjusted Rate	Risk-Adjusted (Lower Confidence Interval Bound)	Risk-Adjusted (Upper Confidence Interval Bound)	National Average
2006				
2007				
2008	0.040374	0.031628	0.04912	0.02383
2009	0.038308	0.028083	0.048533	0.02383
2010	0.04675	0.034694	0.058806	0.02383
2011	0.036997	0.030539	0.043454	0.02383
2012	0.03	0.021993	0.038007	0.02383
2013	0.023881	0.017507	0.03004	0.02383
2014				
2015				
2016				

*Note: Risk-adjusted rates are not available in the most up-to-date version of the ICD-10 software. Future versions of the QI software will allow for risk adjustment and calculation of risk-adjusted rates.

Comparing Risk-Adjusted Rates of Neonatal Blood Stream Infection Rate (NQI 3) to National Average Rates

Directions: Add your data into the yellow cells beside the relevant year. Remove the "Neonatal Blood Stream Infection Rate" part of the title and revise it to reflect your PDI of interest.