



Making sense of congenital heart surgery data: A guide for patients, families, and practitioners

Appendix – STS Congenital Heart Surgery Database Public Reporting Information

Introduction: In the sections and table below, we display information about the hospitals currently sharing their data on the STS public reporting website. This appendix and the table will be updated once a year when the information on the STS website is updated.

Time period: January 2013 – December 2016

Total number of hospitals submitting data to the STS Congenital Heart Surgery Database: 116

Of the 116 hospitals that submitted data to the STS Database, 18 were 1 star, 74 were 2 star, 11 were 3 star; 13 did not receive a star rating due to incomplete data.

Total number of hospitals participating in STS public reporting: 69/116 (59%)

Star ratings for the 69 hospitals participating in public reporting:

<u>Number of Hospitals (%)</u>	<u>Star Rating</u>
10 (14%)	3 star
53 (77%)	2 star
6 (9%)	1 star

Information on hospitals currently reporting:

Several pieces of information about the hospitals currently reporting their data are summarized in the Table below. The following sections provide additional detail about this information, and in the Table you can find notes about where to find each piece of information on the STS website.

Volume: The table includes information about the number or “volume” of surgeries performed among the hospitals who currently share their data. We display this hospital volume information for all congenital heart surgeries and for high complexity surgeries, or those in STAT categories 4 and 5. This will give you an idea of how many of these more complex types of surgeries a hospital performs, which helps you to understand the hospital’s “case mix” (or the type and complexity of patients they treat).

Observed to expected ratio (O/E ratio): The table also includes information about the O/E ratios among hospitals currently reporting their information on the STS website. You will remember from the guide that the O/E ratio tells us how the number of deaths at a hospital compares to what would be expected for the type and complexity of patients that they treat.



There are a few important things to keep in mind as described further in the guide:

- Remember that lower O/E ratios are better, but also that small differences in the O/E ratios themselves may not be important. It can be difficult to determine what the exact O/E ratio is, so confidence intervals are reported on the STS website with each O/E ratio, which tell you the range of values where that hospital's O/E ratio is most likely to fall. These are very important to consider, and just as important as the actual O/E ratio itself.
- O/E ratios and other data can't necessarily be directly compared between 2 hospitals without knowing more about their case mix (or the type and complexity of patients that they treat). See detailed information on this in the guide.

The information in the table is only from the hospitals who currently share their data: It is important to note that the information in the table only applies to hospitals who currently share their data with the public on the STS website. The information cannot be presented for all hospitals who currently perform congenital heart surgery, because their data are not available for us to analyze.

Categories: For some of the information displayed in the table, we have divided the hospitals into different groups – low, middle, high, and very high based on the distribution of the data. Below the table there is more information about how we came up with these groups. Again, it is important to note that these groups only apply to the hospitals that currently report their information on the STS website and in many cases there is no standard or accepted way to define these groups. The groups might look different if we were able to include the information from all hospitals.

Information on hospitals currently reporting on the STS website (2013-2016)*	
Overall surgical volume	
--A hospital's overall number of surgeries performed during the 4-year period --You can look up this number for each hospital on the STS public reporting site by looking under "Eligible" and "Overall" **see additional information about STS standards below	
Range across reporting hospitals (minimum and maximum)	130 to 3782 cases
Lowest volume	< 407 cases
Middle volume	407 – 1292 cases
Highest volume	> 1292 cases
Very high volume	> 1670 cases



<p>Volume of STAT 5 cases</p> <p>--A hospital's number of surgeries in STAT category 5 (highest complexity surgeries) performed during the 4-year period --You can look up this number for each hospital on the STS public reporting site by looking under "Eligible" and "STAT 5"</p>	
Range across reporting hospitals (minimum and maximum)	0 to 171 cases
Lowest volume	< 15 cases
Middle volume	15 – 63 cases
Highest volume	> 63 cases
Very high volume	> 80 cases
<p>Volume of STAT 4 or 5 cases</p> <p>--A hospital's number of surgeries in STAT category 4 or 5 (the 2 highest complexity surgery categories) performed during the 4-year period --You can look up this number for each hospital on the STS public reporting site by looking under "Eligible" and adding up the numbers under "STAT 4" and "STAT 5"</p>	
Range across reporting hospitals (minimum and maximum)	21 to 980 cases
Lowest volume	< 94 cases
Middle volume	94 – 338 cases
Highest volume	> 338 cases
Very high volume	> 494 cases
<p>O/E ratio for STAT category 5</p> <p>--A hospital's O/E ratio for their surgeries in STAT category 5 (the highest complexity surgeries) --You can look up this number for each hospital on the STS public reporting site by looking under "O/E" and "STAT 5" --You must also look at the confidence interval (see more description above), small differences in the O/E ratios may not be important.</p>	
Range across reporting hospitals (minimum and maximum) (with at least ten STAT 5 cases during the reporting period)	0.12 to 2.67
<p>O/E ratio for STAT category 4</p> <p>--A hospital's O/E ratio for their surgeries in STAT category 4 (the second highest complexity category) --You can look up this number for each hospital on the STS public reporting site by looking under "O/E" and "STAT 4" --You must also look at the confidence interval (see more description above), small differences in the O/E ratios may not be important.</p>	
Range across reporting hospitals (minimum and maximum)	0 to 4.15



*Data are displayed for the current reporting period and classified into categories:

Lowest (<25th percentile)
Middle (25th-75th percentile)
Highest (>75th percentile)
Very High (>90th percentile)

**For reference, the standard STS annual volume categories and corresponding 4-year volumes are:

STS volume categories	
Volume category (based on annual volume)	Corresponding volume over 4-year period
Low (≤ 100 cases/year)	<400 cases
Middle (101-250 cases/year)	400 – 1,000 cases
High (>250 cases/year)	>1,000 cases