This Data Quality Report provides information about your most recent data file. See the date listed above.

- Review each section to ensure that your data are accurately represented. Use the report as a guide for making any necessary changes to your database. Suggestions on how to handle issues are provided.
- If you have any questions, please contact your Data Submission Coordinator:
  
  Name:
  Phone:
  E-mail:

What to do:
If you are not absolutely satisfied with this Data Quality Report, make any data corrections and resubmit your data file as often as time allows. Once you are satisfied with the quality of your data, there are no additional steps needed to complete your harvest. Any data that has been submitted and accepted at the time of the Database Lock will be used in the current analysis unless you notify your Data Submission Coordinator that you do not want your data included in the analysis. The Database Lock date is the last day of each harvest.

If you DO NOT want your data included in the analysis, you must email your Data Submission Coordinator BY THE END OF THE HARVEST, December 4, 2017 and indicate that you want to “OPT OUT” of the current analysis period.
If you choose to Opt Out, all data submitted during this submission window will be dropped and you will NOT receive a report for that harvest. In addition, you will need to resubmit all data for that period during the next submission window.

How to navigate this document:
This Data Quality Report contains links for ease of navigation when viewing it on a computer. Blue underlined text throughout the report represents a link to another portion of the report that contains relevant information. For instance, the entire Table of Contents on the next page is made up of links to each of the sections of the report. By following the link you will be taken directly to that section of the report. Throughout the report there are also links back to the Table of Contents (TOC).

‘Clicking’ on the links:
How you can use your mouse and/or keyboard to follow the links depends upon your computer’s settings in Microsoft Word™:

  Click - One option is to use the mouse to place the cursor over the link and then click the left mouse button once to follow the link.

  Ctrl + Click - A different option is to first push and hold the ‘Ctrl’ key on your keyboard while simultaneously clicking the left mouse button to follow the link.

To check/change this hyperlink setting go to Tools>Options>Edit tab in Microsoft Word™.
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</thead>
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<td>MVR/MVP Mortality Missing Itemized</td>
<td>27</td>
</tr>
<tr>
<td>MVR+CABG/MVP+CABG Mortality Missing Itemized</td>
<td>27</td>
</tr>
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<td>Records not accepted into the Database</td>
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<td>29</td>
</tr>
</tbody>
</table>
Section 1: NQF: <TOC>

DISCLAIMER: The DQR is meant to estimate what your percent missing calculation will be for key fields when the analytics team applies the required exclusion criteria. You should ensure you are well below the target thresholds to ensure you meet all inclusion/exclusion criteria.

What to do:
Review the results and percent missing values and relevant thresholds. Correct, complete and resubmit data as necessary to meet the thresholds.

<table>
<thead>
<tr>
<th>Field</th>
<th>Start Date</th>
<th>End Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Report Period</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CABG Date Range</td>
<td></td>
<td></td>
</tr>
<tr>
<td>AVR Date Range</td>
<td></td>
<td></td>
</tr>
<tr>
<td>AVR + CAB Date Range</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MVR/MVP Date Range</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MVR+CABG/MVP+CABG Date Range</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1. Procedure: CABG <TOC>

If you are near the missing data threshold for any of the CABG procedure requirements, you are at risk for being excluded from receiving all CABG star ratings. Your data will be removed from the benchmark calculation of the star ratings and thus you will not receive any of the CABG star ratings.

Time period: 1 year rolling
Mortality fields: mortality is counted as missing for a record if any of the fields below are missing. A value of unknown counts as missing.

   a. MtDCStat (Sequence# 5010, Vrsn. 2.81); DischMortStat (Sequence# 7005, Vrsn. 2.9)
   b. Mt30Stat (Sequence# 5015, Vrsn. 2.81; Sequence# 7001, Vrsn. 2.9)
   c. MtOpD (Sequence# 5025, Vrsn. 2.81; Sequence# 7124, Vrsn. 2.9)

Isolated CABG percent of records with missing mortality fields

<table>
<thead>
<tr>
<th>Field</th>
<th>Year</th>
<th>Percent Missing</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

If the percent missing is higher than 10% for year 2015 you are at risk of not receiving a star rating for all isolated CABG measures.
If the percent missing is higher than 5% for year 2016 you are at risk of not receiving a star rating for all isolated CABG measures.
If the percent missing is higher than 2% for year 2017 you are at risk of not receiving a star rating for all isolated CABG measures.
Please see the Appendix (pg. 26).for a list of record IDs with missing/unknown mortality fields.

For isolated CABG procedures, the additional fields listed below are required in order to receive a star rating. These fields cannot have more than 5% missing data. If any of these fields are near 5% missing, you are at risk for not receiving any of the isolated CABG star ratings. This threshold has been in effect since the CABG composite was developed. Other star rating components

   a. Preoperative beta blockers (Shortname: MedBeta)
b. Discharge Antiplatelets (Shortnames: DCASA, DCP2Y12, DCADP, DCOthAntiplat) (has to be missing ALL to be considered missing)
c. Discharge Beta Blockers: (Shortname: DCBeta)
d. Discharge Lipids: (Shortname: DCLipLowStat)
e. IMA Use: (Shortname: IMAArtUs, Vrsn. 2.81; IMAUsed, Vrsn. 2.9)

<table>
<thead>
<tr>
<th>Field</th>
<th>Year</th>
<th>Percent Missing</th>
</tr>
</thead>
</table>

If the percent missing is higher than **5%** you are at risk for not receiving a star rating for all isolated CABG measures. Please see the **Appendix** (pg. 26) for a list of record IDs with missing components. Additionally, if a participant has less than 10 eligible CABG patients, the participant will not receive a star rating.

To be considered an eligible patient, a patient must have (1) **gender** and (2) **date of birth or age** entered in the record. If a patient has more than one record with surgery dates less than 30 days apart, the second record (or potentially third/fourth/fifth etc.) will be excluded from all analysis.

2. Procedure: AVR

If you are near the missing data threshold for any of the AVR procedure requirements, you are at risk for being excluded from receiving all AVR star ratings. Your data will be removed from the benchmark calculation of the star ratings and thus you will not receive any of the AVR star ratings.

Time period: 3 year rolling
Mortality fields: mortality is counted as missing for a record if any of the fields below are missing. A value of unknown counts as missing.

a. MtDCStat (Sequence# 5010, Vrsn. 2.81); DischMortStat (Sequence# 7005, Vrsn. 2.9)
   b. Mt30Stat (Sequence# 5015, Vrsn. 2.81; Sequence# 7001, Vrsn. 2.9)
   c. MtOpD (Sequence# 5025, Vrsn. 2.81; Sequence# 7124, Vrsn. 2.9)

<table>
<thead>
<tr>
<th>Field</th>
<th>Year</th>
<th>Percent Missing</th>
</tr>
</thead>
</table>

If the percent missing is higher than **10%** for year 2015 you are at risk of not receiving a star rating for the AVR composite measures.
If the percent missing is higher than **5%** for year 2016 you are at risk of not receiving a star rating for the AVR composite measures.
If the percent missing is higher than **2%** for year 2017 you are at risk of not receiving a star rating for the AVR composite measures.

Please see the **Appendix** (pg. 26) for a list of record IDs with missing/unknown mortality fields. Additionally, if a participant has less than 10 eligible AVR patients, the participant will not receive a star rating.

To be considered an eligible patient, a patient must have (1) **gender** and (2) **date of birth or age** entered in the record. If a patient has more than one record with surgery dates less than 30 days apart, the second record (or potentially third/fourth/fifth etc.) will be excluded from all analysis.

3. Procedure: AVR + CABG

If you are near the missing data threshold for any of the AVR + CABG procedure requirements, you are at risk for being excluded from receiving all AVR + CABG star ratings. Your data will be removed from the benchmark calculation of the star ratings and thus you will not receive any of the AVR + CABG star ratings.

Time period: 3 year rolling
Mortality fields: mortality is counted as missing for a record if any of the fields below are missing. A value of unknown counts as missing.
a. MtDCStat (Sequence# 5010, Vrsn. 2.81); DischMortStat (Sequence# 7005, Vrsn. 2.9)
b. Mt30Stat (Sequence# 5015, Vrsn. 2.81; Sequence# 7001, Vrsn. 2.9)
c. MtOpD (Sequence# 5025, Vrsn. 2.81; Sequence# 7124, Vrsn. 2.9)

<table>
<thead>
<tr>
<th>Field</th>
<th>Year</th>
<th>Percent Missing</th>
</tr>
</thead>
</table>

If the percent missing is higher than 10% for year 2015 you are at risk of not receiving a star rating for the AVR+CABG composite measures.
If the percent missing is higher than 5% for year 2016 you are at risk of not receiving a star rating for the AVR+CABG composite measures.
If the percent missing is higher than 2% for year 2017 you are at risk of not receiving a star rating for the AVR+CABG composite measures.
Please see the Appendix (pg. 26) for a list of record IDs with missing/unknown mortality fields.
Additionally, if a participant has less than 10 eligible AVR + CABG patients, the participant will not receive a star rating.

To be considered an eligible patient, a patient must have (1) gender and (2) date of birth or age entered in the record. If a patient has more than one record with surgery dates less than 30 days apart, the second record (or potentially third/fourth/fifth etc.) will be excluded from all analysis.

4. Procedure: MVR/MVP

If you are near the missing data threshold for any of the MVR/MVP procedure requirements, you are at risk for being excluded from receiving all MVR/MVP star ratings. Your data will be removed from the benchmark calculation of the star ratings and thus you will not receive any of the MVR/MVP star ratings.

Time period: 3 year rolling
Mortality fields: mortality is counted as missing for a record if any of the fields below are missing. A value of unknown counts as missing.

<table>
<thead>
<tr>
<th>Field</th>
<th>Year</th>
<th>Percent Missing</th>
</tr>
</thead>
</table>

If the percent missing is higher than 10% for year 2015 you are at risk of not receiving a star rating for the MVR/MVP composite measures.
If the percent missing is higher than 5% for year 2016 you are at risk of not receiving a star rating for the MVR/MVP composite measures.
If the percent missing is higher than 2% for year 2017 you are at risk of not receiving a star rating for the MVR/MVP composite measures.
Please see the Appendix (pg. 27) for a list of record IDs with missing/unknown mortality fields.
Additionally, if a participant has less than 10 eligible MVR/MVP patients, the participant will not receive a star rating.

To be considered an eligible patient, a patient must have (1) gender and (2) date of birth or age entered in the record. If a patient has more than one record with surgery dates less than 30 days apart, the second record (or potentially third/fourth/fifth etc.) will be excluded from all analysis.

5. Procedure: MVR+CABG/MVP+CABG

If you are near the missing data threshold for any of the MVR+CABG/MVP+CABG procedure requirements, you are at risk for being excluded from receiving all MVR+CABG/MVP+CABG star ratings. Your data will be removed from the benchmark calculation of the star ratings and thus you will not receive any of the MVR+CABG/MVP+CABG star ratings.
Time period: 3 year rolling
Mortality fields: mortality is counted as missing for a record if any of the fields below are missing. A value of unknown counts as missing.
   a. MtDCStat (Sequence# 5010, Vrsn. 2.81); DischMortStat (Sequence# 7005, Vrsn. 2.9)
   b. Mt30Stat   (Sequence# 5015, Vrsn. 2.81; Sequence# 7001, Vrsn. 2.9)
   c. MtOpD      (Sequence# 5025, Vrsn. 2.81; Sequence# 7124, Vrsn. 2.9)

<table>
<thead>
<tr>
<th>Field</th>
<th>Year</th>
<th>Percent Missing</th>
</tr>
</thead>
</table>

If the percent missing is higher than 10% for year 2015 you are at risk of not receiving a star rating for the MVR+CABG/MVP+CABG composite measures.
If the percent missing is higher than 5% for year 2016 you are at risk of not receiving a star rating for the MVR+CABG/MVP+CABG composite measures.
If the percent missing is higher than 2% for year 2017 you are at risk of not receiving a star rating for the MVR+CABG/MVP+CABG composite measures.
Please see the Appendix (pg. 27) for a list of record IDs with missing/unknown mortality fields.
Additionally, if a participant has less than 10 eligible MVR+CABG/MVP+CABG patients, the participant will not receive a star rating.
To be considered an eligible patient, a patient must have (1) gender and (2) date of birth or age entered in the record. If a patient has more than one record with surgery dates less than 30 days apart, the second record (or potentially third/fourth/fifth etc.) will be excluded from all analysis.
Section 2: Harvest Summary: <TOC>
This section contains a general summary of the most recent data file submitted.

What to do:
Review record counts and dates to confirm this is what you intended to submit. If there are any discrepancies, these should be corrected and your data file resubmitted.

1. Raw Data File Characteristics: <TOC>
The earliest and latest surgery dates in your data file are shown below along with the total number of procedures. Please note that this does not necessarily represent the actual data accepted into the Database (see below). Please review this section of the Data Quality Report carefully since a mismatch between the dates in the Raw Data File and the dates on the Harvest Verification Form could result in the unanticipated exclusion of cases from the STS Data Warehouse.

<table>
<thead>
<tr>
<th>Raw Data File</th>
<th>Harvest Verification Form</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>Earliest Surgery Date</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Latest Surgery Date</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Record Count</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

2. Data Accepted into the Database:
Records are accepted into the Database if they contain a valid surgery date, admit date, or discharge date and if they are within the dates you specified on the Harvest Verification Form.

<table>
<thead>
<tr>
<th>Specified Minimum Date</th>
<th>Specified Maximum Date</th>
<th>Record Count</th>
</tr>
</thead>
</table>

a. Reason(s) data were not accepted:
See the Itemized Observations Appendix (pg. 27).

<table>
<thead>
<tr>
<th>Reason</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;None&gt;</td>
<td></td>
</tr>
</tbody>
</table>

3. Data Eligible for Analysis: <TOC>
Count of records that are eligible for analysis and inclusion in the National Reports. A record is eligible if it has a valid surgery date, a valid age, and the patient age is >= 18 years, and is not a canceled case or a transcatheter valve procedure.

<table>
<thead>
<tr>
<th>Record Count</th>
</tr>
</thead>
</table>

a. Reason(s) data were not eligible:
See the Itemized Observations Appendix (pg. 27).

<table>
<thead>
<tr>
<th>Reason</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;None&gt;</td>
<td></td>
</tr>
</tbody>
</table>
4. **Months with no historic or current data.**

There are currently no observations with surgery dates in the following months in the STS Data Warehouse.

**What to do:**
Review your database and the specified dates (see Data Accepted into the Database (pg. 8)) to ensure that your data file submission was complete. If discrepancies are found, correct and resubmit your data file.

<table>
<thead>
<tr>
<th>Year</th>
<th>Month</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;None&gt;</td>
<td></td>
</tr>
</tbody>
</table>
Section 3: Issues with submission: <TOC>

Items in this section typically relate to systematic issues with your software and should be addressed and/or corrected by your vendor.

1. General File Issues/Notes: <TOC>
   Please note the following issues found in your data file. These may be observational comments, or identify specific issues that do not fit within the other categories of the Data Quality Report.

   **What to do:**
   Review each note. Determine if any action is needed on your part.

<table>
<thead>
<tr>
<th>Topic</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;None&gt;</td>
<td></td>
</tr>
</tbody>
</table>

2. Incorrect File Name. <TOC>
   Incorrect file names require manual intervention and delay data processing as well as reporting to your site.

<table>
<thead>
<tr>
<th>Submitted Name</th>
<th>Correct Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>N/A</td>
<td></td>
</tr>
</tbody>
</table>

3. Core Fields Not Included: <TOC>
   Even if you do not collect data for the core fields, they should still be included in your software and data file.

   **Bracketed numbers after the FieldName ex. [ 1 2 3 4] indicate:**
   1 = a variable used in the STS National Report
   2 = a variable used in risk adjustment models
   3 = a variable used in the calculation of National Quality Forum (NQF) quality measures
   4 = a variable used in determining the ProcID (which can affect all of the above)

   **What to do:**
   Contact your vendor to ensure that all core fields are included in your software export and harvest transmissions.

<table>
<thead>
<tr>
<th>Short Name</th>
<th>Data Version</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;None&gt;</td>
<td></td>
</tr>
</tbody>
</table>

4. Potential Duplicate Records: <TOC>
   Records are considered potential duplicates if they have identical values in each of the following six fields: Age, Race, Gender, Admit Date, Surgery Date, and Discharge Date. The Match ID is a temporary number created during data processing that identifies groups of potential duplicate records. Except in the case of same day reoperation, the STS Data Warehouse considers it unlikely that a site would admit, perform surgery, and discharge such similar patients the same day.

   **What to do:**
   Review and research this list of Record IDs. If the information is duplicated in your database, please delete the invalid observations as they are uncovered and resubmit your data file.

<table>
<thead>
<tr>
<th>Match ID</th>
<th>Record ID</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;None&gt;</td>
<td></td>
</tr>
</tbody>
</table>
Section 4: Summary of data accepted: <TOC>
This section summarizes the observations that were accepted into the Database. Records that were not accepted due to missing or incorrect information (see Harvest Summary) are not included in these counts. Counts by surgery year and data version are provided to assist you in assessing your data quality status and targeting your data cleanup effort.

What to do:
- Review this information to ensure that it accurately represents what you intended to submit. If there are any discrepancies that impact the quality or limit the extent of your harvested data file, these should be corrected and your data file resubmitted.
- For issues potentially related to your software, contact your vendor for assistance.

1. Observations per Surgery Year: <TOC>
This section displays the number of observations for each year of surgery.

<table>
<thead>
<tr>
<th>Year</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;None&gt;</td>
<td></td>
</tr>
</tbody>
</table>

2. Operative Mortalities per Surgery Year: <TOC>
Please note that operative mortality data are critical to reporting and analysis. See the Itemized Observations Appendix (pg. 27) for a list of each observation with operative mortality. The Operative Mortality count shown below is determined solely by your response to (MtOpD) being coded as Yes.

NOTE: Operative Mortality as reported in the National Report, includes both (1) all deaths occurring during the acute episode of care in which the operation was performed (this includes patients transferred to other acute care facilities), even if after 30 days, and (2) those deaths occurring after discharge from the hospital but within 30 days of the procedure. Operative Mortality is calculated using the following variables: Mortality Operative Death (MtOpD), Mortality Status at 30 days (Mt30Stat), Mortality Date (MtDate), and Mortality Discharge Status (MtDCStat, Vrsn. 2.81; DischMortStat, Vrsn. 2.9). As a result, the Operative Mortality count shown here may differ from what will be reported in the National Report.

What to do:
Compare these counts to your database to ensure that your data for this important field are accurately represented. Review discrepancies and correct any errors in your data, then resubmit your data file.

<table>
<thead>
<tr>
<th>Year</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;None&gt;</td>
<td></td>
</tr>
</tbody>
</table>

3. Observations per Data Version per surgery year: <TOC>
"Raw Data Version value" shows what was contained in the data version field in your data file and "Interpreted Data Version value" shows the version recognized by the STS Data Warehouse.

What to do:
If any non-matching interpretations are indicated below, contact your vendor to ensure that the data version field is correctly populated for each observation. Observations with a missing or invalid Data Version value will not be accepted into the Database. If there are any discrepancies that impact the quality or limit the extent of your harvested data file, they should be corrected and your data file resubmitted.

<table>
<thead>
<tr>
<th>Year</th>
<th>Raw Data Version Value</th>
<th>Interpreted Data Version Value</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;None&gt;</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
4. **Observations per Procedure Group per surgery year:**
   This is a count by surgery year for the nine procedures reported in the National Report. The procedures are grouped separately to allow you to compare the totals of all procedures to your database totals. If there are any discrepancies that impact the quality or limit the extent of your harvested data file, they should be corrected and your data file resubmitted.

<table>
<thead>
<tr>
<th>Year</th>
<th>Procedure</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;None&gt;</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

5. **Observations per Surgeon Name (Data version 2.52 or earlier):**
   This indicates the number of different surgeon names found in your data file. Note that a surgeon may appear to be multiple surgeons due to misspellings or variations on a name. For example, “Bob Jones”, “Robert Jones” and “R. Jones” would be reported as three different entries. Ideally there should be a drop down box in your software to prevent the need for manual data entry in this field. Your software vendor can assist you with these issues.

   **What to do:**
   Compare these counts to your records to ensure that the STS Data Warehouse data indicate the correct number of individual surgeons. Variations of names and misspellings should be corrected and you should resubmit your data file.

<table>
<thead>
<tr>
<th>Surgeon Name</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;None&gt;</td>
<td></td>
</tr>
</tbody>
</table>

6. **Observations per Surgeon NPI (Data version 2.61 or later):**
   This list contains all of the Surgeon Name/Surgeon NPI combinations found in your data file. Note that a surgeon may show up on this list more than once due to misspellings or variations on a name, or due to multiple surgeon NPI values (It is our understanding that each surgeon can only have one Surgeon NPI). For example, “Bob Jones”, “Robert Jones” and “R. Jones” would be reported as three different entries. Ideally there should be a drop down box in your software to prevent the need for manual data entry in this field. Your software vendor can assist you with these issues. This list also shows the Surgeon Name affiliated with each SurgNPI as recorded in the STS administrative contact database. If there is a value of <No Match> under the Surgeon Name affiliated with SurgNPI this indicates that the SurgNPI submitted on the data record during data harvest is not a SurgNPI that the STS has on file.

   **What to do:**
   Compare these counts to your records to ensure that the STS Data Warehouse data indicate the correct number of individual surgeons and the correct SurgNPI value for each one.

<table>
<thead>
<tr>
<th>Surgeon Name affiliated with SurgNPI (STS contact database)</th>
<th>Surgeon Name on Data Record</th>
<th>SurgNPI on Data Record</th>
<th>SurgNPI Format *</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;None&gt;</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

   * The valid format for SurgNPI is 10 numeric characters.

7. **Hospital Name and Hospital NPI# at STS:**
   Please note: Beginning with the start of continuous harvesting in January 2017 for the Adult Cardiac Surgery Database, if any Hospital name or Hospital NPI # submitted in the data file does not match the information on file with the STS, **the file will be rejected.**

<table>
<thead>
<tr>
<th>Hospital NPI</th>
<th>STS Hospital Name</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

   **What to do:**
   a. Confirm Hospital NPI # at STS.
      (1) If **NPI # is incorrect**, please contact Elizabeth Watkins at ewatkins@sts.org to make this change.
b. Is the STS Hospital Name correct?
   
   (1) If NO: Contact Elizabeth Watkins at ewatkins@sts.org to change the hospital name on file for your site(s).
   
   *Please identify the reason why the hospital name is different – such as new ownership, rebranding, or typo.

   Ideally there should be a drop down box provided in your software to prevent the need for manual data entry in this field. Your software vendor can assist you with these issues.

8. Hospital information in the Data Warehouse: <TOC>

   The table below lists the Hospital NPI(s) and Hospital Name(s) for all data in the current report period, which may include data from your current data file and historic data previously submitted.

<table>
<thead>
<tr>
<th>Source</th>
<th>HospNPI</th>
<th>Hospital Name in Data Warehouse</th>
<th>Min SurgDt</th>
<th>Max SurgDt</th>
<th>Count</th>
<th>Match?</th>
</tr>
</thead>
</table>

   What to do:
   
   a. Confirm NPI # in Data Warehouse.
   
   b. Make sure the Hospital Name in YOUR database AND Hospital Name in the Data Warehouse matches the STS Hospital Name. If the data does not match, you must correct the hospital name in your data to EXACTLY match the STS name and resubmit your data for that entire period. It is the name in the data warehouse that will be used in any analysis reporting. If necessary, please contact your software vendor for assistance.
   
   c. If all information is accurate and matches, then you should not need to change anything, but keep in mind that if you do change something in the future, your file could be automatically rejected.

   It is important that the Hospital Name in YOUR DATABASE matches the Hospital Name and Hospital NPI # on file with the STS and DCRI EXACTLY. This includes punctuation, spelling, abbreviations etc. If the two names do NOT match exactly, your file will be rejected.

9. STS Risk Model Match for records with Data Version = 2.81: <TOC>

   This section is provided to ensure your predicted mortality values are being calculated correctly on records with a data version of 2.81. The table indicates the percent of records where the submitted risk model values match the values calculated by the STS Data Warehouse. For the percent matches reported below, zero percent matches may be due to the fact that risk score values were not submitted for any records in your raw data file or that your data file contained no records with Data Version equal to 2.81. Additionally, low or zero percent matches may be due to the fact that consistency edits performed by the STS Data Warehouse (described later, if applicable) altered the predicted mortality values.

   For a detailed breakdown of which Record IDs did or did not match the Risk Score calculated by the Data Warehouse, see the Risk Score Match report which was included with this report. Contact your Data Submission Coordinator if you have any questions.

   What to do:
   
   Determine with your vendor what updates are specifically needed for your software and procedures. After the modifications are made to your software, if you wish to use the data internally, you should recalculate the risk score values for all existing data in your database. Please consult your vendor documentation for instructions.

<table>
<thead>
<tr>
<th>2.81 Model</th>
<th>Percent Match</th>
</tr>
</thead>
</table>

   2.81 Model | Percent Match |
## 10. STS Risk Model Match for records with Data Version = 2.9: <TOC>

This section is provided to ensure your predicted mortality values are being calculated correctly on records with a data version of 2.9. The table indicates the percent of records where the submitted risk model values match the values calculated by the STS Data Warehouse. For the percent matches reported below, zero percent matches may be due to the fact that risk score values were not submitted for any records in your raw data file or that your data file contained no records with Data Version equal to 2.9. Additionally, low or zero percent matches may be due to the fact that consistency edits performed by the STS Data Warehouse (described later, if applicable) altered the predicted mortality values.

For a detailed breakdown of which Record IDs did or did not match the Risk Score calculated by the Data Warehouse, see the Risk Score Match report which was included with this report. Contact your Data Submission Coordinator if you have any questions.

**What to do:**
Determine with your vendor what updates are specifically needed for your software and procedures. After the modifications are made to your software, if you wish to use the data internally, you should recalculate the risk score values for all existing data in your database. Please consult your vendor documentation for instructions.

<table>
<thead>
<tr>
<th>2.81 Model</th>
<th>Percent Match</th>
</tr>
</thead>
<tbody>
<tr>
<td>N/A</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>2.9 Model</th>
<th>Percent Match</th>
</tr>
</thead>
<tbody>
<tr>
<td>N/A</td>
<td></td>
</tr>
</tbody>
</table>
Section 5: Edits made on your data: <TOC>

The Data Warehouse performs certain edits on harvested data based on established rules that increase the consistency
and analyzability of the data. This information is provided to you so that you are aware that changes have been made
and that the Data Warehouse data will be different from your site database.

What to do:
Review these edits for accuracy and, as needed, make the appropriate changes in your database. PLEASE NOTE! If
edits performed by the STS Data Warehouse impact the accuracy of your data, corrections should be made in your
database and the file should be resubmitted.

1. Data Consistency Edits: <TOC>
Consistency edits are modifications to field values to make them consistent with other field values in the data
record. Consistency edits are performed on a field after comparison between the field and related fields. For
example, if Myocardial Infarction is blank, but Status is Urgent and Urgent Reason is AMI, Myocardial Infarction is
changed to Yes. A full listing of the consistency edit checks can be found on the STS Web site at www.sts.org.
See the Itemized Observations Appendix (pg. 28) for a list of each observation affected by consistency edits.

Bracketed numbers after the FieldName ex. [ 1 2 3 4] indicate:
1 = a variable used in the STS National Report
2 = a variable used in risk adjustment models
3 = a variable used in the calculation of National Quality Forum (NQF) quality measures
4 = a variable used in determining the ProcID (which can affect all of the above)

What to do:
Make the same edits in your database to synchronize your database with the Data Warehouse. Be aware that
changes to fields at the STS Data Warehouse may affect predicted mortality matches compared to your
database.

<table>
<thead>
<tr>
<th>Data Version</th>
<th>Surgery Year</th>
<th>Short Name</th>
<th>Field Name</th>
<th>Description</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;None&gt;</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

2. Parent/Child Edits: <TOC>
Parent/child edits are modifications to field values that are required as a result of a parent/child relationship with
other fields on the data record.

   a. For records with a Data Version of 2.35 or 2.41: If the parent is No or missing and the child field has a
      value recorded, the parent field is changed to Yes. For example, if Diabetes (a parent field) is blank or "No"
      but Diabetes Control (a child field) is Diet, Oral or Insulin, Diabetes is changed to Yes at the STS Data
      Warehouse.

   b. For records with a Data Version of 2.52, 2.61, 2.73, 2.81 or 2.9: If the parent field is "No" and the child field
      has a value recorded, then the child field is changed to Null at the STS Data Warehouse. For example, if
      Diabetes (parent field) is "No" but Diabetes Control (child field) is Diet, Oral, or Insulin, Diabetes Control is
      changed to "Null" at the STS Data Warehouse.

See the Itemized Observations Appendix (pg. 28) for a list of each observation affected by an edit.

Bracketed numbers after the FieldName ex. [ 1 2 3 4] indicate:
1 = a variable used in the STS National Report
2 = a variable used in risk adjustment models
3 = a variable used in the calculation of National Quality Forum (NQF) quality measures
4 = a variable used in determining the ProcID (which can affect all of the above)
**What to do:**
Contact your vendor to have the Parent/Child dependency relationships reviewed and have your data corrected.

<table>
<thead>
<tr>
<th>Data Version</th>
<th>Surgery Year</th>
<th>Short Name</th>
<th>Field Name</th>
<th>Description</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;None&gt;</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Section 6: Data Information and Completeness Issues:  

This section identifies important field-specific data quality issues that affect the completeness of your harvest and may impact analysis and reporting of your data in the National Report. The data version, surgery year, short name and field name are shown for each issue to help you target and prioritize your data review and clean-up activity. Information on missing data is only reported for variables used in reports or risk-adjustment models.

1. The following variables used in reports or risk-adjustment models had greater than 0% missing in your data file.  
   The percentage of missing data for the following fields warrants further review. The information provided in the ‘N’ column to the far right = the number of records with this item missing / the number of records for which a value is expected. PLEASE NOTE that missing data for those variables involved in the calculation of NQF quality measures could result in all or some of your records being excluded from the calculation of these measures and could result in the STS Composite Quality Rating not being calculated for your site.

   Bracketed numbers after the FieldName ex. [ 1 2 3 4] indicate:
   1 = a variable used in the STS National Report
   2 = a variable used in risk adjustment models
   3 = a variable used in the calculation of National Quality Forum (NQF) quality measures
   4 = a variable used in determining the ProcID (which can affect all of the above)

   For a detailed document listing Records IDs with missing data, see the Itemized Percent Missing report which was included with this report. Contact your Data Submission Coordinator if you have any questions.

<table>
<thead>
<tr>
<th>Data Version</th>
<th>Surgery Year</th>
<th>Short Name</th>
<th>Field Name</th>
<th>% Missing</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;None&gt;</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

2. Values not interpreted.  
   Any values unable to be interpreted are set to missing. See the Itemized Observations Appendix (pg. 29) for a list of each observation affected by the edit.

   Bracketed numbers after the FieldName ex. [ 1 2 3 4] indicate:
   1 = a variable used in the STS National Report
   2 = a variable used in risk adjustment models
   3 = a variable used in the calculation of National Quality Forum (NQF) quality measures
   4 = a variable used in determining the ProcID (which can affect all of the above)

   What to do:
   Review these fields for nonstandard values. Note that you may need to consult your software vendor to correct the manner in which your data are collected or harvested. Discrepancies that impact the quality or limit the extent of your harvested data file should be corrected and your data file resubmitted.

<table>
<thead>
<tr>
<th>Data Version</th>
<th>Surgery Year</th>
<th>Short Name</th>
<th>Field Name</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;None&gt;</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

3. Data inconsistencies.  

The Data Warehouse reviews data for certain inconsistencies, such as dates out of chronological order (e.g., a Discharge Date that is earlier than the Admit Date). See the Itemized Observations Appendix (pg. 29) for a list of each observation with data inconsistencies.

**What to do:**
Review and correct these inconsistencies and resubmit your data file.

<table>
<thead>
<tr>
<th>Data Version</th>
<th>Surgery Year</th>
<th>Inconsistency</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;None&gt;</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
1. Your Surgeons Participating in MIPS: <TOC>
The table below list your surgeons who are participating in MIPS for the current reporting year, according to the STS Contacts Database.

What to do:
Review the list below. Be sure the appropriate data is being submitted for all participating surgeons.

<table>
<thead>
<tr>
<th>Surgery Year</th>
<th>Surgeon Name</th>
<th>Surgeon NPI</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;None&gt;</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

This section of the DQR (Section 6) contains information about data from the Adult Cardiac Surgery database. This section represents results for all available data for the current MIPS reporting year (2017) and therefore may include data submitted in earlier harvests.

2. TIN/NPI Details: <TOC>
MIPS reporting takes place at the TIN/NPI level (surgeon name is not used). In order to be eligible for submission to CMS, a record must have valid TIN and Surgeon NPI values. Missing or invalid TIN or NPI information will result in data not being transmitted to CMS through this program. The following table summarizes the TIN/NPI combinations currently present in your data.

What to do:
Review the list below and correct the harvest data to ensure that all cases for each TIN/NPI combination are accurately accounted for. TIN must be properly formatted AND be on file with the STS to be valid.

PLEASE NOTE: A surgeon participating in MIPS for whom we cannot identify any cases for submission to CMS based on the Surgeon NPI in the submitted data will NOT SHOW UP in the table:

<table>
<thead>
<tr>
<th>Surgery Year</th>
<th>Count</th>
<th>TIN on Data Record</th>
<th>TIN Status*</th>
<th>SurgNPI on Data Record</th>
<th>Surgeon Name on Data Record</th>
<th>Surgeon Name affiliated with SurgNPI (STS contact database)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*The valid format for TIN is 9 numeric digits. TIN values should be those that are used to submit Medicare Part B claims. This might be a surgeon TIN or a hospital TIN if the operating surgeon is employed by a hospital. The TIN on the data record must match the TIN(s) on file for the surgeon with the STS.

3. Missing Data – Variables used in MIPS: <TOC>
The following variables used for MIPS analysis contain missing values. Please note that while many of these variables are not recognizable as being directly related to the 14 MIPS measures being submitted by the STS, they are necessary to identify the cases eligible for MIPS. If there are missing data for these variables, the MIPS
information that the STS transmits to the Centers for Medicare and Medicaid Services (CMS) for participating surgeons could be incorrect. Only records in the current MIPS reporting period (2017) from surgeons participating in MIPS are evaluated for this table.

<table>
<thead>
<tr>
<th>Data Version</th>
<th>Surgery Year</th>
<th>Short Name</th>
<th>Field Name</th>
<th>% Missing</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Section 8: Atrial Fibrillation Module:  

Items in this section are intended for those database participants collecting data in the Afib Module. For more information about the STS Afib Module please visit the STS website.

Data collected for your participant in the Afib Module are linked with your participant’s Adult Cardiac Surgery Database data for your participant during each data harvest. An Afib Module record is expected for every Adult Cardiac Surgery record for which Afib Correction Surgery was performed (Version 2.73, Seq. No. #5465, OCarAfibAproc) or (Version 2.81, Seq# 2145, AFibProc and Seq# 4070, OCarAFibEpLes and Seq# 4105, OCarAFibIntraLes). In order to ensure that your participant’s Afib Module and Adult Cardiac Surgery data are both accurate for the entire reporting period, this section of the DQR represents results for all available data for the upcoming reporting time period – a rolling 3-year time window. For this reason, this section may refer to Adult Cardiac Surgery Data submitted during a previous harvest. To ensure the incorporation into the STS data warehouse of all changes you make to your data, please submit a data file that covers at least the entire Adult Cardiac Surgery Databse reporting year (rolling three years).

1. Accepted Afib Module Records.  

Records in the STS Afib module BASELINE record that can be linked to the Adult data warehouse records are counted. Records must meet the following criteria:

a. Match on RecordID and SurgDt  
b. AfibModule Status = Complete  
c. For Version 2.73: OCarAfibAProc (Version 2.73) is not missing in the Adult Harvest data  
d. For Version 2.81 AFibProc = Yes **AND** (OCarAFibEpLes = Yes **OR** OCarAFibIntraLes = Yes) in the Adult Harvest data.  
e. The Afib Module RecordID is not entered in duplicate.

These records will be included in any Afib Module reporting.  

**What to do:**  
Review the results for accuracy and completeness.

<table>
<thead>
<tr>
<th>SurgYear</th>
<th>Count Of Records</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;None&gt;</td>
<td></td>
</tr>
</tbody>
</table>

2. Excluded Afib Module Records:  

The following Afib Module records have a matching Record ID in the Adult Harvest Data, but the records are excluded. Reasons for exclusion include:

- **Incomplete:** The Afib Module record has been started but has not been saved as complete in the Afib Module.  
- **SurgDt Mismatch:** The RecodID on the Afib Module record matches a RecordID in the Adult Harvest Data, but the SurgDt does not match.  
- **Missing OCarAFibAProc (Version 2.73):** The Atrial Fibrillation Ablation Procedure is missing in the corresponding Adult Data Harvest record.  
- **AFibProc = No/Missing and OCarAFibEpLes = No/Missing and OCarAFibIntraLes = No/Missing (Version 2.81):** The Atrial Fibrillation Ablation Procedure is not indicated in the corresponding Adult Data Harvest record.
• **Duplicate:** The Record ID has been entered twice in the Afib Module. It may have been entered in both lower case and upper case.

• **RecordID Not Found:** The Afib Module RecordID does not match any Adult Harvest Record ID in the current or historical data..

**What to do:**
Review each entry in the Afib Module and/or your Adult Harvest data. A ‘Y’ in any of the five Exclusion columns indicates an identified issue for that record. Determine if any action is needed on your part.

<table>
<thead>
<tr>
<th>Record ID</th>
<th>SurgDt</th>
<th>SurgDt</th>
<th>Incomplete</th>
<th>SurgDt</th>
<th>Is Not Afib</th>
<th>Duplicate</th>
<th>Record ID Not Found</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;None&gt;</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

3. **Missing Afib Module Records:** <TOC>
The following Adult Cardiac Surgery records indicate that Afib Correction Surgery was performed but no corresponding record has been entered into the Afib Module. The following are the fields in your Adult Cardiac Surgery records that indicate a Afib Correction Surgery was performed:

**Version 2.73**
Seq# 5465, OCarAfibAproc = Yes

**Version 2.81**
Seq# 2145, AFibProc = Yes **AND**
Seq# 4070, OCarAFibEpLes = Yes **OR** Seq# 4105, OCarAFibIntraLes = Yes

Records must match on both RecordID and SurgDt. An Afib Module record must be created for each Adult Cardiac Surgery record for which Afib Correction Surgery was performed. We encourage you to enter the Afib Module records early enough to allow for review of these records in this DQR.

**What to do:**
Review each record. Determine if any action is needed on your part.

<table>
<thead>
<tr>
<th>SurgDt</th>
<th>Record ID</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;None&gt;</td>
<td></td>
</tr>
</tbody>
</table>
Section 9: Adult Cardiac Anesthesia Module: <TOC>

Items in this section are intended for those database participants collecting data in the Adult Cardiac Anesthesia Module. For more information about the STS Adult Cardiac Anesthesia Module please visit the STS website.

Data collected for your participant in the Adult Cardiac Anesthesia Module are linked with your participant’s Adult Cardiac Surgery Database data for your participant during each data harvest.

Beginning July 1, 2013, an Anesthesia Module record should be created in the module for each Adult Cardiac Surgery Database record. Note: If a case is cancelled prior to induction (Seq# 2055 for Version 2.81, and Seq# 2425 for Version 2.73), no anesthesia record should be entered for that case. However, if the case is cancelled after induction or after incision, there SHOULD be an anesthesia record entered for that case.

In order to ensure that your participant’s Adult Cardiac Anesthesia Module and Adult Cardiac Surgery data are both accurate for the entire reporting period, this section of the DQR represents results for all available data for the upcoming reporting time period – a rolling 3-year time window. For this reason, this section may refer to Adult Cardiac Surgery Data submitted during a previous harvest. To ensure the incorporation into the STS data warehouse of all changes you make to your data, please submit a data file that covers at least the entire Adult Cardiac Surgery Database reporting year (rolling three years).

OF NOTE:

Module Patient Records:
Each patient record in the module corresponds to a record in the STS Adult Cardiac Surgery Database. There should be one patient record for each hospital admission.

Module Anesthesia Cases:
For each module patient record there can be multiple anesthesia cases entered into the module. There should be one anesthesia case for each procedure requiring anesthesia.

1. Total Number Anesthesia Cases per Anesthesiologist: <TOC>

Ensure that all anesthesiologists for whom you have submitted data are listed on your anesthesia module participation agreement with the STS. The module should not contain records for anesthesia cases for which the anesthesiologist does not participate in the module. The far right column of the table below indicates whether or not the anesthesiologist is on file. If your data contain ANY records with an anesthesiologist NOT on file with the STS, none of your institution’s data in the module will be used for analysis/report creation.

<table>
<thead>
<tr>
<th>Surgery Year</th>
<th>Number of Anesthesia Cases</th>
<th>Number of Accepted Anesthesia Cases</th>
<th>Anesthesiologist</th>
<th>Surgeon NPI</th>
<th>Listed on Agreement with STS?</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;None&gt;</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

2. Accepted Module Anesthesia Cases: <TOC>

Records in the STS Anesthesia module that can be linked to the Adult data warehouse records are counted. Records must meet the following criteria:

   a. Match on RecordID and SurgDt
b. Anesthesia Module Status = Complete

c. The Anesthesia Module RecordID is not entered in duplicate.

d. The Anesthesia Module record is designated to an Anesthesiologist who has completed a STS Anesthesiologist contract

These records will be included in any Anesthesia Module reporting.

**What to do:**
Review the results for accuracy and completeness.

<table>
<thead>
<tr>
<th>SurgYear</th>
<th>Count Of Cases</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;None&gt;</td>
<td></td>
</tr>
</tbody>
</table>

3. **Excluded Module Anesthesia Cases:**

The following Anesthesia Module records could not be linked to a record in the Adult Harvest Data and are excluded. Reasons for the exclusion include:

- **Incomplete**: The Module Anesthesia case has been started but has not been saved as complete in the Anesthesia Module.
- **SurgDt Mismatch**: The RecordID on the Anesthesia Module record matches a RecordID in the Adult Harvest Data, but the SurgDt does not match.
- **Duplicate**: The Record ID appears twice in the Adult Harvest Database. Please contact your software vendor for assistance.
- **RecordID Not Found**: The Anesthesia Module RecordID does not match any Adult Harvest Record ID in the current or historical data.

**What to do:**
Review each entry in the Anesthesia Module and/or your Adult Harvest data. A ‘Y’ in any of the five Exclusion columns indicates an identified issue for that record. Determine if any action is needed on your part.

<table>
<thead>
<tr>
<th>Record ID</th>
<th>SurgDt Anesthesia Module</th>
<th>SurgDt Harvest Data</th>
<th>Incomplete</th>
<th>SurgDt Mismatch</th>
<th>Duplicate</th>
<th>Record ID Not Found</th>
<th>Anesthesiologist Not on STS Agreement</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;None&gt;</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

4. **Missing Module Anesthesia Cases:**

The following Adult Cardiac Surgery records do not have a corresponding record in the Anesthesia Module.

Records must match on both RecordID and SurgDt. An Anesthesia Module record must be created for each Adult Cardiac Surgery that was performed (except for cases cancelled prior to induction, Seq# 2055 for Version 2.81, and Seq# 2425 for Version 2.73). We encourage you to enter the Anesthesia Module records early enough to allow for review of these records in this DQR.

**What to do:**
Review each record. Determine if any action is needed on your part.

<table>
<thead>
<tr>
<th>Record ID</th>
<th>Surg Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;None&gt;</td>
<td></td>
</tr>
<tr>
<td>Record ID</td>
<td>Surg Date</td>
</tr>
<tr>
<td>-----------</td>
<td>-----------</td>
</tr>
<tr>
<td>&lt;None&gt;</td>
<td></td>
</tr>
</tbody>
</table>
Appendix: Itemized Observations

This section is designed to help participants identify the specific records with data quality issues as previously described in this report. Use this list to identify problems that need to be corrected in your database. The Record ID may be used to locate the specific record in your database. If you are unable to locate the Record ID field in your database, contact your vendor for assistance.

1. **NQF: Procedure: CABG**

   Mortality fields: mortality is counted as missing for a record if any of the fields below are missing. A value of unknown counts as missing.
   
   a. MtDCStat (Sequence# 5010, Vrsn. 2.81); DischMortStat (Sequence# 7005, Vrsn. 2.9)
   b. Mt30Stat (Sequence# 5015, Vrsn. 2.81; Sequence# 7001, Vrsn. 2.9)
   c. MtOpD (Sequence# 5025, Vrsn. 2.81; Sequence# 7124, Vrsn. 2.9)

   CABG Mortality Itemized:

<table>
<thead>
<tr>
<th>Data Source</th>
<th>SurgYear</th>
<th>Data Version</th>
<th>RecordID</th>
<th>MtDCStat</th>
<th>Mt30Stat</th>
<th>MtOpD</th>
<th>DischMortStat</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;None&gt;</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

   This threshold has been in effect since the CABG composite was developed. Other star rating components
   
   a. Preoperative beta blockers (Shortname: MedBeta)
   b. Discharge Antiplatelets (Shortnames: DCASA, DCP2Y12, DCADP, DCOthAntiplat) (has to be missing ALL to be considered missing)
   c. Discharge Beta Blockers: (Shortname: DCBeta)
   d. Discharge Lipids: (Shortname: DCLipLowStat)
   e. IMA Use: (Shortname: IMAArtUs, Vrsn. 2.81; IMAUsed, Vrsn. 2.9)

<table>
<thead>
<tr>
<th>Data Source</th>
<th>SurgYear</th>
<th>Data Version</th>
<th>RecordID</th>
<th>Field</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;None&gt;</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

   **Procedure: AVR**

   Mortality fields: mortality is counted as missing for a record if any of the fields below are missing. A value of unknown counts as missing.
   
   a. MtDCStat (Sequence# 5010, Vrsn. 2.81); DischMortStat (Sequence# 7005, Vrsn. 2.9)
   b. Mt30Stat (Sequence# 5015, Vrsn. 2.81; Sequence# 7001, Vrsn. 2.9)
   c. MtOpD (Sequence# 5025, Vrsn. 2.81; Sequence# 7124, Vrsn. 2.9)

   AVR Mortality Itemized:

<table>
<thead>
<tr>
<th>Data Source</th>
<th>SurgYear</th>
<th>Data Version</th>
<th>RecordID</th>
<th>MtDCStat</th>
<th>Mt30Stat</th>
<th>MtOpD</th>
<th>DischMortStat</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;None&gt;</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

   **Procedure: AVR + CABG**

   Mortality fields: mortality is counted as missing for a record if any of the fields below are missing. A value of unknown counts as missing.
a. MtDCStat (Sequence# 5010, Vrsn. 2.81); DischMortStat (Sequence# 7005, Vrsn. 2.9)
b. Mt30Stat (Sequence# 5015, Vrsn. 2.81; Sequence# 7001, Vrsn. 2.9)
c. MtOpD (Sequence# 5025, Vrsn. 2.81; Sequence# 7124, Vrsn. 2.9)

AVR + CABG Mortality Itemized:

<table>
<thead>
<tr>
<th>Data Source</th>
<th>SurgYear</th>
<th>Data Version</th>
<th>RecordID</th>
<th>MtDCStat</th>
<th>Mt30Stat</th>
<th>MtOpD</th>
<th>DischMortStat</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;None&gt;</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Procedure: MVR/MVP <Summary> <TOC>

Mortality fields: mortality is counted as missing for a record if any of the fields below are missing. A value of unknown counts as missing.

a. MtDCStat (Sequence# 5010, Vrsn. 2.81); DischMortStat (Sequence# 7005, Vrsn. 2.9)
b. Mt30Stat (Sequence# 5015, Vrsn. 2.81; Sequence# 7001, Vrsn. 2.9)
c. MtOpD (Sequence# 5025, Vrsn. 2.81; Sequence# 7124, Vrsn. 2.9)

MVR/MVP Mortality Itemized:

<table>
<thead>
<tr>
<th>Data Source</th>
<th>SurgYear</th>
<th>Data Version</th>
<th>RecordID</th>
<th>MtDCStat</th>
<th>Mt30Stat</th>
<th>MtOpD</th>
<th>DischMortStat</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;None&gt;</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

Procedure: MVR+CABG/MVP+CABG <Summary> <TOC>

Mortality fields: mortality is counted as missing for a record if any of the fields below are missing. A value of unknown counts as missing.

a. MtDCStat (Sequence# 5010, Vrsn. 2.81); DischMortStat (Sequence# 7005, Vrsn. 2.9)
b. Mt30Stat (Sequence# 5015, Vrsn. 2.81; Sequence# 7001, Vrsn. 2.9)
c. MtOpD (Sequence# 5025, Vrsn. 2.81; Sequence# 7124, Vrsn. 2.9)

MVR+CABG/MVP+CABG Mortality Itemized:

<table>
<thead>
<tr>
<th>Data Source</th>
<th>SurgYear</th>
<th>Data Version</th>
<th>RecordID</th>
<th>MtDCStat</th>
<th>Mt30Stat</th>
<th>MtOpD</th>
<th>DischMortStat</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;None&gt;</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

2. Records not accepted into the Database: <Summary> <TOC>
The following records were not accepted into the Database due to the indicated reason.

<table>
<thead>
<tr>
<th>Reason not Accepted into the Database</th>
<th>Record ID</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;None&gt;</td>
<td></td>
</tr>
</tbody>
</table>

3. Records not eligible for analysis: <Summary> <TOC>
The following records were not eligible for analysis due to the indicated reason.

<table>
<thead>
<tr>
<th>Reason not Eligible for Analysis</th>
<th>Record ID</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;None&gt;</td>
<td></td>
</tr>
</tbody>
</table>

4. Operative Mortalities: <Summary> <TOC>
The following records will be counted as Operative Mortalities by the Data Warehouse analysts based upon values submitted for the variables: MtOpD (Operative Death), MtDCStat (Sequence# 5010, Vrsn. 2.81); DischMortStat (Sequence# 7005, Vrsn. 2.9), MtDate (Mortality Date), SurgDT (Surgery Date), DischDT (Discharge Date), Mt30Stat (30 Day Mortality Status):

If MtOpD = ‘Yes’, the record is an Operative Mortality.

If MtOpD = ‘No’ or is left blank but MtDCStat (Sequence# 5010, Vrsn. 2.81); DischMortStat (Sequence# 7005, Vrsn. 2.9) = ‘Dead’, the record is an Operative Mortality.

If the MtDate is before the DischDt, the record is an Operative Mortality.

If MtOpD is left blank and Mt30Stat = ‘Dead’, the record is an Operative Mortality.

If MtOpD is left blank and MtDate is within 30 days of SurgDT, the record is an Operative Mortality.

5. Data Consistency Edits: The following field values were modified to make them consistent with other field values on the data record. <Summary> <TOC>

Consistency edits are performed on a field after comparison between the field and related fields. A full listing of the consistency edit checks can be found on the STS Web site at www.sts.org. The table indicates each observation with a consistency edit, where the Submitted Value was changed per the edit description.

Bracketed numbers after the FieldName ex. [ 1 2 3 4] indicate:
1 = a variable used in the STS National Report
2 = a variable used in 2. adjustment models
3 = a variable used in the calculation of National Quality Forum (NQF) quality measures
4 = a variable used in determining the ProcID (which can affect all of the above)

What to do:
If these consistency edits were incorrectly made at the STS Data Warehouse due to data entry errors in other fields, changes need to be made to the affected records in your database and your data file resubmitted. If the edits were correctly made, make the same edits in your database to synchronize your database with the STS Data Warehouse. Be aware that changes to fields at the STS Data Warehouse may affect predicted mortality.

6. Itemized Parent/Child Edits – The following field values were modified as a result of a parent/child relationship with other fields on the data record. <Summary> <TOC>

a. For data version 2.35 and 2.41 data records, parent/child edits are performed on a parent field if a related childfield has a value indicating that the parent should be Yes.

b. For data version 2.52, 2.61, 2.73, 2.81 or 2.9 data records, parent/child edits are performed on a child field if the related parent field indicates that the child should be blank.

A full listing of the parent/child relationships can be found on the STS Web site at www.sts.org. This table indicates each observation with a parent/child edit.

Bracketed numbers after the FieldName ex. [ 1 2 3 4] indicate:
1 = a variable used in the STS National Report
2 = a variable used in risk adjustment models
3 = a variable used in the calculation of National Quality Forum (NQF) quality measures
4 = a variable used in determining the ProcID (which can affect all of the above)
**What to do:**
If these parent/child edits were incorrectly made at the Data Warehouse due to data entry errors in other fields, changes need to be made to the affected records in your database and your data file resubmitted. If these edits were correctly made, make the same edits in your database to synchronize your database with the STS Data Warehouse. Be aware that changes to fields in your database may affect predicted mortality matches with the STS Data Warehouse Database.

<table>
<thead>
<tr>
<th>Data Version</th>
<th>Surgery Year</th>
<th>Short Name</th>
<th>Field Name</th>
<th>Description</th>
<th>Record ID</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;None&gt;</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

7. **Values not interpreted.** <Summary> <TOC>
Any values unable to be interpreted are set to missing.

Bracketed numbers after the FieldName ex. [ 1 2 3 4] indicate:
1 = a variable used in the STS National Report
2 = a variable used in risk adjustment models
3 = a variable used in the calculation of National Quality Forum (NQF) quality measures
4 = a variable used in determining the ProcID (which can affect all of the above)

**What to do:**
Review these fields for nonstandard values. Note that you may need to consult your software vendor to correct the manner in which your data are collected or harvested. Discrepancies that impact the quality or limit the extent of your harvested data file should be corrected and your data file resubmitted.

<table>
<thead>
<tr>
<th>Data Version</th>
<th>Surgery Year</th>
<th>Short Name</th>
<th>Field Name</th>
<th>Record ID</th>
<th>Submitted Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;None&gt;</td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

8. **Data Inconsistencies:*** <Summary> <TOC>
The following records contain the indicated inconsistencies, such as dates out of chronological order (e.g., a Discharge Date that is earlier than the Admit Date).

**What to do:**
Review and correct these inconsistencies and resubmit your data file.

<table>
<thead>
<tr>
<th>Inconsistency</th>
<th>Data Version</th>
<th>Surgery Year</th>
<th>Record ID</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;None&gt;</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>