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## 2007 Advances in Quality and Outcomes Conference

# CALL FOR ABSTRACTS

The Society of Thoracic Surgeons is now accepting abstract submissions for its Advances in Quality & Outcomes (AQO) Conference, to be held November 1-3, 2007, in Minneapolis, Minnesota. This premier gathering of STS National Database participants is the perfect forum to share valuable research and important clinical findings with hundreds of database professionals, and is the ideal opportunity to report best practice ideas and lessons learned.

This year's themes for abstract presentations include (but are not limited to):

### **Utilizing the STS National Database core fields and participating sites' custom fields for data collection/data management and the use of evidence-based practice to improve outcomes**

- Clinical Example: Decreased Incidence of Postoperative Atrial Fibrillation/Flutter
- Functional Status Example: Impact of Cardiac/Congenital/General Thoracic Surgery on Quality of Life

### **Strategies to reduce costs**

- Example: Resource Utilization, Decreased Length of Stay

### **Use of advanced surgical technologies to improve cardiac outcomes**

- Example: Robotics/Anastomotic Connectors/SVR Procedures

### **Patient safety and risk management initiatives**

- Example: New Procedures/Processes to Reduce Near Misses/Adverse Events

Abstract submissions, to be presented as oral presentations or posters, will be accepted until **June 22, 2007, 11:59 p.m., CDT**. Abstracts received after this date will not be accepted for inclusion in this year's program unless prior authorization is obtained. As in previous years, abstracts are to be submitted electronically using the Abstract Submission Form. To submit an abstract, visit [www.sts.org/cfapps/absbasic/](http://www.sts.org/cfapps/absbasic/). Your input can make an important contribution in helping to improve the STS National Databases.

If you have questions, please contact Linda Breen, STS Senior Manager of Quality and Patient Safety at [lbreen@sts.org](mailto:lbreen@sts.org) or (312) 202-5842.



## Minneapolis Hosts AQO Conference

The Advances in Quality & Outcomes (AQO) Conference provides data managers with the latest information on improving the quality of data collection and patient care. This year, it's also a great time to visit Minneapolis—recently named by Frommer's, the travel guide experts, as a "Top Travel Spot for 2007."

In the past two years, more than \$500 million in museum, theater and arts infrastructure has been invested in the city, making Minneapolis one of the top destinations for cultural getaways. Last year, the Guthrie opened its new theater center which includes three stages. With more theater seats per capita than any U.S. city outside of New York, Minneapolis is home to nearly 100 theater groups and more than 30 performance venues. The museum scene is also dynamic, with recent expansions at the Minneapolis Institute of Arts, the Walker Art Center and the Weisman Art Museum.

As for shopping in downtown Minneapolis, popular merchants are within steps of hotels and restaurants, particularly near Nicollet Mall, the pedestrian friendly thoroughfare where Mary Tyler Moore tossed her cap. And of course there's Mall of America, the country's largest shopping and entertainment complex, home to more than 520 stores.

Combine business with pleasure and make plans now to attend the AQO Conference, to be held November 1-3, 2007, at the Marriott Minneapolis City Center. Registration information for the AQO Conference can be found on the STS National Databases section of the STS Web site, [www.sts.org](http://www.sts.org).

## General Thoracic Surgery Database Update

The merits of participation in the STS General Thoracic Surgery Database are discussed in an editorial written by Cameron D. Wright, MD, Chair of the STS General Thoracic Surgery Database Task Force and Fred H. Edwards, MD, Chair of the STS Workforce on National Databases, and published in *The Annals of Thoracic Surgery*, Volume 83, pages 893-894, March 2007. Along with encouraging Database involvement, the editorial also discusses successful use of the STS Adult Cardiac Surgery Database risk-adjusted data. It goes on to describe the Database's acceptance by other specialties, government and consumer groups, as well as third party payors, as a gold standard clinical data analysis registry.

According to the authors, the General Thoracic Surgery Database needs more participants to gain the same advantages that the Adult Cardiac Surgery Database currently provides. It is the inclusion of more than three million patient records in the Adult Cardiac Surgery Database that enabled the joint STS/American Association for Thoracic Surgery (AATS) Workforce on Nomenclature and Coding to present actual data to the Relative Value Update Committee (RUC). The impressive documentation on cardiac operations allowed accurate valuation of previously undervalued Current Procedural Terminology (CPT) codes. And because of data provided by the STS/AATS Workforce, the RUC recommended substantial increases in the relative value units of adult cardiac codes, which should lead to reimbursement that more accurately represents the work performed by cardiac surgeons for their patients.

"The most important reason to participate in the STS General Thoracic Surgery Database is for the ongoing quality improvement efforts to improve patient outcomes," said Drs. Wright and Edwards in *The Annals* editorial. "Surgeons are increasingly measured by a variety of administrative and payor-based databases, and participating in a high-quality clinical database allows thoracic surgeons to be proactive in addressing issues of quality, cost and pay for performance."

It is hoped that participation in the General Thoracic Surgery Database will grow, thus enhancing the scope and robustness of the data and allowing for the development of more risk-adjusted models for quality improvement in patient care. Data managers should encourage participation in the General Thoracic Surgery Database at their site. To learn more about how to participate in the General Thoracic Surgery Database, please contact Gerry Tarafa, STS Operations Administrator, STS National Database and Quality Initiatives Administrator at [gtarafa@sts.org](mailto:gtarafa@sts.org) or (312) 202-5858.

## PLEASE REMEMBER TO CHECK THE FAQs!

The Frequently Asked Questions (FAQ) documents on the STS Web site for all STS National Databases are being updated regularly. ([click here](#))

STS National Database News is published by The Society of Thoracic Surgeons. Comments concerning content may be referred to STS Headquarters, 633 N. Saint Clair St., Suite 2320, Chicago, IL, 60611-3658; Phone (312) 202-5800; Fax (312) 202-5801; E-mail: [sts@sts.org](mailto:sts@sts.org); Web site: [www.sts.org](http://www.sts.org)

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# Composite Quality Measure: Quality Measurement in Adult Cardiac Surgery

Quality measurement and provider accountability have become recurring and increasingly dominant themes in American health care. Recognizing that the keystone of accountability is the objective assessment of quality, and drawing on the vast resources of the STS National Adult Cardiac Surgery Database, The Society of Thoracic Surgeons, under the auspices of its Quality Measurement Task Force chaired by David M. Shahian, MD, has developed a composite quality scoring methodology for coronary artery bypass grafting procedures. This methodology provides a quality rating system for Adult Cardiac Surgery Database participants.

## Quality indicators were selected using the following principles:

1. Quality assessment should be at the level of the program or hospital rather than the individual surgeon.
2. Initial quality reports should focus on CABG surgery.
3. Quality measures should be chosen from among those endorsed by the National Quality Forum.
4. Quality measure selection should be consistent with the principles and criteria recommended in the 2006 Institute of Medicine report, *Performance Measurement: Accelerating Improvement*.
5. Quality measures should be available as data elements within The Society of Thoracic Surgeons' National Adult Cardiac Surgery Database.
6. Quality scores should consider structure, process, and outcomes.
7. Quality scores should assess three temporal domains—preoperative, operative, and postoperative.
8. Quality scores should satisfy multiple criteria for validity.
9. Quality scores should be interpretable and actionable by providers.

## Eleven individual measures of CABG quality within the following four domains were selected:

1. *Perioperative Medical Care* (a process bundle of four medications including preoperative blockade and discharge aspirin, blockade, and lipid-lowering agents);
2. *Operative Care*, (a single process measure – use of at least one internal mammary artery);
3. *Risk-Adjusted Operative Mortality*; and
4. *Postoperative Risk-Adjusted Major Morbidity* (defined as the risk-adjusted occurrence of any of the following: renal failure, deep sternal wound infection, re-exploration, stroke, or prolonged ventilation/intubation).

Implementation of the provider-rating system is tentatively planned for later in 2007, when all participants in the Adult Cardiac Surgery Database will receive a rating. Watch for future blast e-mails and updates on [www.sts.org](http://www.sts.org).

This groundbreaking new methodology was published as a stand-alone supplement to the April 2007 issue of *The Annals of Thoracic Surgery*. Please make time to review this important supplement!

For any questions, contact Cynthia Shewan, PhD, STS Director of Quality, Research and Patient Safety at [cshewan@sts.org](mailto:cshewan@sts.org) or at (312) 202-5812.

## The Physician Quality Reporting Initiative

There's good news for cardiothoracic surgeons. By reporting on a few basic performance measures, physicians will be eligible for an additional 1.5 percent bonus payment on all of their Medicare claims from July 1 through December 31, 2007, through the Physician Quality Reporting Initiative (PQRI), formerly known as the Physician Voluntary Reporting Program (PVRP), a voluntary reporting initiative authorized by the Tax Relief and Health Care Act of 2006.

Two of the performance measures for adult cardiac surgeons apply specifically to CABG surgery (use of internal mammary artery and pre-op beta-blocker) and one is a perioperative measure that applies to all cardiac procedures (discontinuation of antibiotic prophylaxis within 48 hours). General thoracic and other surgeons can report on several perioperative measures, including antibiotic timing, antibiotic selection, and antibiotic duration. Physicians will receive the additional 1.5 percent payment for all of their Medicare claims if they select three of these measures and report on each measure for at least 80 percent of the cases for which the measure is reportable. The CPT II codes for these measures can be found at [www.cms.hhs.gov](http://www.cms.hhs.gov). These codes must be reported on the same claim which contains the procedure being billed for the 2007 PQRI.

The current 2.52.1 version of the Adult Cardiac Surgery Database accommodates two of the performance measures but does not yet collect the measure “discontinuation of antibiotic prophylaxis within 48 hours.” None of the perioperative measures that general thoracic surgeons can report is included in the current 2.07 version of the General Thoracic Surgery Database. However, all these measures will be added to the Database specification upgrades now underway. Importantly, STS is working with the government to designate as reportable several additional measures that are captured in the Databases, including four general thoracic surgery measures and a measure that could apply specifically to STS member participants—“participation in a national database.”

Finally, STS is working with CMS to allow cardiothoracic surgeons to submit data on all these measures in 2008 simply by entering their data into the STS National Databases. With such a system in place, additional work necessary to be eligible for the bonus payments would be minimized for STS Database participants.

If you have any questions about PQRI, please contact Ellen Clough, STS Manager of Evidence Based Surgery, at [eclough@sts.org](mailto:eclough@sts.org) or (312) 202-5832.

# Adult Cardiac Surgery Database: A Regional Group Report—Michigan

By Jaelene Williams, RN, MS – Michigan STS Data Manager

The Michigan STS data managers' regional effort utilizes a variety of educational endeavors to create consistent understanding of STS definitions and coding. Since its inception in 2001, our state network has grown to capture information on all 31 Michigan cardiac surgery sites, including a site data manager and surgeon representing each cardiac surgery facility in Michigan. Our meetings continue to reinforce the importance of data manager collaboration for educational purposes for our 45 data manager members. A six-member group of experienced STS data managers comprise the Michigan STS Data Manager Advisory Group that directs state data manager activities under the supervision of our advisor, Richard L. Prager, MD. Our current educational activities are described below:

Twice-yearly data manager meetings are structured to focus on data manager abstraction issues; and these meetings usually coincide with our quarterly Michigan Society of Thoracic and Cardiovascular Surgeons quality collaborative meetings. The four collaborative meetings include time for working directly with our STS surgeons and for discussion and review of our quarterly STS Michigan report. Blinded regional data are reviewed for benchmarking purposes, to improve methods for consistent data abstraction, and to develop methods to advance patient outcomes across all sites.

In 2006, the Michigan Society of Thoracic and Cardiovascular Surgeons, which oversees the Michigan STS data manager group, joined with Blue Cross and Blue Shield of Michigan to create a funded audit system and establish a collaborative quality initiative project to review cardiac surgery outcomes and create processes for improvement. This quality improvement (QI) effort has increased the data managers' and surgeons' collaborative meetings to four times a year and has increased opportunities to create methods that will demonstrate improved data abstraction, develop clinical practice guidelines, and ultimately improve patient outcomes.

In addition to any national audit that may occur, two Michigan RN auditors employed by the QI project review each Michigan site twice yearly for accurate and consistent data abstraction. Discrepant data interpretation or abstraction issues are used as future educational tools at subsequent data manager meetings.

The QI project audits from 2006 demonstrated a need for increased review of STS data abstraction fundamentals. To address this need, Michigan held its first "STS Data Abstraction Workshop from A – Z" in November of 2006 and repeated the course in March of 2007. The purpose of these workshops was to provide a review of the basics of STS data abstraction, as well as an overview of the regional and national functions that support the STS Adult Cardiac Surgery Database. Review of each STS data element and the corresponding definition was provided, along with information on abstraction practice for those new or inexperienced STS data managers who did not have a mentor at their site. Meeting evaluations have demonstrated that this is an ongoing need in Michigan due to data personnel changes. The programs also provide an educational foundation for abstraction personnel who were not necessarily the primary STS data contact, but "work behind the scenes" doing STS data abstraction.

Data manager networking and the dialogue among data managers and surgeons at the project meetings have created a culture of collaborative interdependence that is an invaluable educational tool. Working together, data managers and surgeons have constructed an ongoing framework that institutes ways to improve data abstraction and subsequent outcome reporting.

Michigan data managers' meetings continue to use the online analysis tool "Survey Monkey" to check inter-rater reliability of STS data abstraction among sites. Imaginary patient scenarios are e-mailed to site data managers prior to all upcoming meetings for anonymous answer submission and analysis review. Inconsistent results have demonstrated that STS data definition interpretation for abstraction is a difficult process requiring continuous and diligent educational efforts. Survey Monkey has proven to be a superb educational tool.

Michigan is proud of its accomplishments over the past six years and continues to be very active as a statewide database. Michigan has a dedicated group of data managers and feels fortunate to have such strong leadership from our physicians. Problem-solving data manager issues, frequent networking among colleagues and our recently funded quality initiative project—all continue to enhance our activities and growth. A regional database is a true asset to STS data management and we encourage you to start or join one in your area!

## Congenital Heart Surgery Database Audits To Begin in June

Accurate data are critical to the success of any database, including the STS Congenital Heart Surgery Database (CHSD). Patients and their families, third party payors and other providers, physicians and researchers, all expect verification of the data's completeness and accuracy and government agencies may also soon require it. While internal data analysis can and does identify missing elements and inconsistencies, it cannot verify the accuracy of the data.

For that reason, in 2006, the Society's Board of Directors approved a proposal for CHSD audits. The audits will begin this June, following the annual spring CHSD data harvest. The upcoming CHSD audits will be conducted by the Iowa Foundation for Medical Care (IFMC), the quality improvement organization for Iowa and Illinois. (STS also has contracted with IFMC to conduct the Adult Cardiac Surgery Database audits since 2006.) A congenital heart surgeon will be part of the audit team and participate in all audit site visits.

Audited sites will be randomly selected, and each site will be notified no less than six weeks before an audit is scheduled. The on-site audit will consist of pre- and post-audit meetings with the site data manager and surgeon leadership, hospital case log comparison, and data abstraction from 20 randomly selected surgical procedures. Additionally, mortality cases will also be reviewed. Twenty-one data elements will be audited. Each site will receive an individual audit report within 30 days of the audit's conclusion.

It should be emphasized that these audits are being conducted primarily to identify and help solve problems related to data collection and submission, so as to ultimately improve the data's integrity and the quality of the STS Congenital Heart Surgery Database. Sites selected should consider the audit process as an educational opportunity to assist in improving the quality of data.

## PARTICIPATION IN THE STS NATIONAL DATABASE CONTINUES TO GROW!

*As of June 4, 2007*

Database	Number of Active Participants
Adult Cardiac Surgery Database	826
Congenital Heart Surgery	63
General Thoracic Surgery	63

## Become an Associate Member of STS

Data managers are now able to apply for Associate Membership in The Society of Thoracic Surgeons. The Associate Membership category has been expanded, and now includes research scientists at the doctorate level, physician assistants, perfusionists, nurses, nurse practitioners, practice administrators, data managers, and other non-physician allied health care professionals who support and work directly with cardiothoracic surgeons.

Associate membership is one way data managers can become more involved in the Society and receive the benefits of membership, including updates and publications. An application for Associate Membership is available on the STS Web site or use the following link: <http://www.sts.org/sections/membership/becomeamember/>. For any questions regarding membership, contact Sonia Armendariz, Manager of Member Services, at [sarmendariz@sts.org](mailto:sarmendariz@sts.org) or (312) 202-5843.

## SAVE THE DATE

2007 Advances in Quality Outcomes Conference  
(formerly known as the STS Data Managers Meeting)

**November 1-3, 2007**  
**Marriott Minneapolis City Center**  
**Minneapolis, Minnesota**



# From DCRI: Submitting Data Through the DCRI Secure Website

The STS Data Warehouse at Duke Clinical Research Institute (DCRI) is pleased to provide a secure Web site for submission of data files during each harvest (Adult Cardiac Surgery, Congenital Heart Surgery, and General Thoracic Surgery). The Web site is located at the following address:

<https://stsdatawarehouse.dcri.duke.edu>

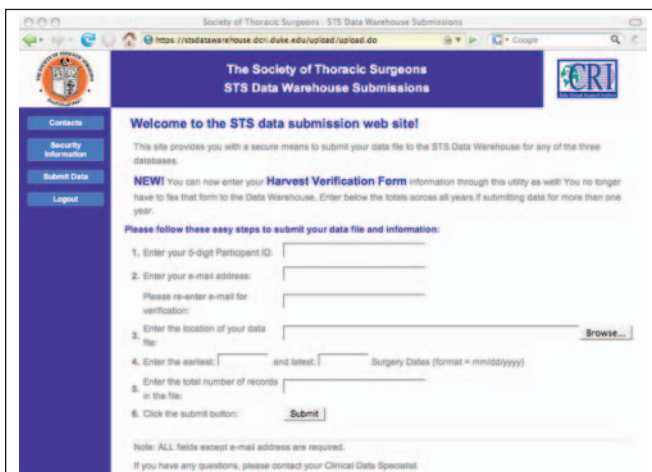
This Web site has been available since the fall 2005 harvest and the majority of sites are currently taking advantage of it. This is the preferred method for data submission because of its convenience and the high level of data security it provides. NOTE: When using the secure Web site, it is not necessary to zip or password protect your file for submission, and it is not necessary to fax a Harvest Verification Form to the DCRI.

When you arrive at the Web site, you will see the screen below:



The username and password are the same for everyone to get into the system and are always included in the harvest instructions posted on the STS Web site ([www.sts.org](http://www.sts.org)) at the beginning of each harvest. Username: [estsdata](#), Password: [harvest](#)

After successfully logging in, you will be asked for your 5-digit Participant ID, e-mail address, and the location of your data file (click on the "Browse" button to help locate your file). As an added bonus, you now enter your Harvest Verification Form information as part of this submission process. The earliest and latest surgery dates should be based on the procedure dates as they appear in the data file being submitted. The total number of records is for the entire time period being submitted. It is no longer necessary to break these numbers out by year. Please see the screen below.



Enter this information and click on the submit button. That's it! You should see a message that your submission has been successfully downloaded. All of the encryption and authentication will be done for you behind the scenes and your data file will be securely sent to the Data Warehouse.

When the file is received at the Data Warehouse, an automatic e-mail message will be sent to the sender of the data file as well as to the Primary Data and File Contact listed for the site. If that message does not arrive within 24 hours, please contact your respective Clinical Data Specialist at the DCRI for assistance.

PLEASE submit these forms only when you have completed all data submissions and have no intention of resubmitting another data file to the Data Warehouse during the current harvest.

The Hospital Name Clarification Report: Please be sure to circle Change or No Change associated with each hospital name listed. Do not use any names in all CAPS. All names should appear in upper and lower case letters.

The Analysis Sign-Off Form: When completing this form, please note "Date of File Submission" indicated at the top of the page. The Data Warehouse cannot accept forms associated with previous submissions. This form must be submitted from the Data Quality Report associated with the very last data file submitted during the harvest. PLEASE check "Yes" or "No" to determine if your data will be included in the analysis. If no selection is made, the Data Warehouse staff will contact you for clarification. The Data Warehouse will contact the Primary Data and File Contact to resolve any open issues.

The Clinical Data Specialist staff is available to assist you with questions regarding your Data Quality Report. Please make use of their services. When contacting them, please provide your Participant ID number and the page number referencing your questions.

The Data Quality Report provides information about each data file submission and is sent to everyone listed for your site as a Data Quality Report Recipient. If you have additional staff to be added to the list of recipients, you will need to complete the STS Participant Contact Form that can be downloaded from the STS Web site ([www.sts.org](http://www.sts.org)). Click "Contact Us" in the right navigation bar in the STS National Database section.

# DCRI: Navigating Through the Revised Data Quality Report

Beginning in 2007, the DCRI Data Quality Reports you receive will contain important revisions, many of which were made on the basis of suggestions from data managers. As always, you should review each section of the report to ensure that particular data are accurately represented. The report should also be used as a guide for making any necessary changes to your database. Suggestions on how to handle various issues are provided. If you have any questions concerning items represented in the report, you can contact your Clinical Data Specialist at the Duke Clinical Research Institute.

The Data Quality Report now contains hyperlinks for ease of navigation. Blue underlined text in the report represents a link to another portion of the report. The Table of Contents is made up of links to each of the sections of the report. By following the link, you will be taken directly to the identified section of the report. There are also links back to the Table of Contents.

## Clicking on the links:

The use of your mouse and/or keyboard to follow the links depends upon your computer's setting 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 the 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™.

The Data Quality Report includes the following sections:

- Section 1: Harvest Summary
- Section 2: Issues with Submission
- Section 3: Summary of Data Accepted
- Section 4: Edits Made on Your Data
- Section 5: Data Information and Completeness Issues
- Appendix: Itemized Observations
- Hospital Name Clarification Report
- Analysis Sign-Off Form

The **Harvest Summary** section contains a general summary of the data file submitted. Review record counts and surgery dates to ensure this is what you intended to submit. If there are any discrepancies, these should be corrected and the data file resubmitted.

The **Issues with Submission** section typically contains items that relate to systematic issues with your software and should, under most circumstances, be addressed and/or corrected by your software vendor.

The **Summary of Data Accepted** section summarizes the records that were accepted into the Database. Records that were not accepted are not included in these counts. 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 the data harvested, these should be corrected and your data file resubmitted.

In the Adult Cardiac Surgery Database only, this section contains information related to the STS Risk Model Match for records with Data Version 2.52. This table indicates the percentage of records where the submitted risk model values from your software match the values calculated by the STS Data Warehouse. Ideally, these values should all be at 100 percent. Please note that the Data Warehouse does not make its calculations until necessary edits have been made on your data as indicated in the Data Quality Report. These edits may be one reason why values do not match. **For a detailed breakdown of which records did or did not match the Risk Score calculated by the Data Warehouse, contact your DCRI Clinical Data Specialist for assistance.**

The **Edits Made on Your Data** section provides information on data consistency and parent/child edits made on the harvested data. These edits are based on established rules to increase the consistency and facilitate analysis of the data. This information is provided to inform you that changes have been made to the data file, and the Data Warehouse data will be different from your site data. Review these edits to ensure that the appropriate changes were made. If they in fact are correct, make the same edits in your database to synchronize your database with the Data Warehouse. If edits made at the Data Warehouse impact the accuracy of your data, corrections should be made in your database and the data file should be resubmitted.

The **Data Information and Completeness Issues** 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. We have provided several pieces of information per record for each issue shown to assist you in targeting and prioritizing your data review and clean-up activity.

Information on missing data is now only reported for variables used in reports or risk-adjustment models. Any items appearing here had a greater than 0 percent missing in your data file. **For the Adult Cardiac Surgery Database, please note that missing data for those variables involved in the calculation of National Quality Forum (NQF) quality measures could result in all or some of your records being excluded for the calculation of these measures.** For a detailed listing of the records with missing data, contact your designated DCRI Clinical Data Specialist for assistance.

The **Appendix: Itemized Observations** section is designed to help participants identify the specific records with data quality issues that were identified in the Data Quality Report. The **Record ID** or **Operation ID** (depending on which Database you are in) section should be used to assist you in identifying the particular record in question. If you have any difficulty in locating either of these fields in your database, you should contact your vendor for assistance.

**Forms Required to Complete Harvest** section appear as the last two pages in the Data Quality Report.