The Four Phases of Electronic Data Capture

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Background

The department of Quality Measurement and Analytics (QMA) at Stony Brook University Hospital (SBUH) started submitting data to the STS Adult Cardiac Surgery Database in 2009. This database presented us with a need for and an opportunity to propel forward towards the goal of electronic data capture and extraction. Our organization was driven to deploy information technology in order to improve clinical processes and outcomes, while capturing data at the point-of-care.

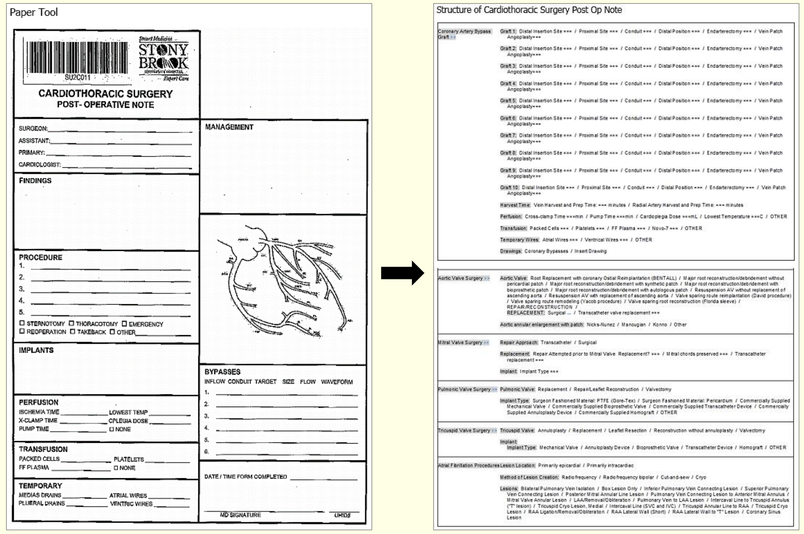
An objective of QMA is to convert existing external quality reporting from manual abstraction to electronic extraction. This facilitates the ability of our abstractors to keep up with increasing reporting requirements and volumes, and more importantly, enables a quicker turnaround time of reporting results to clinical services.

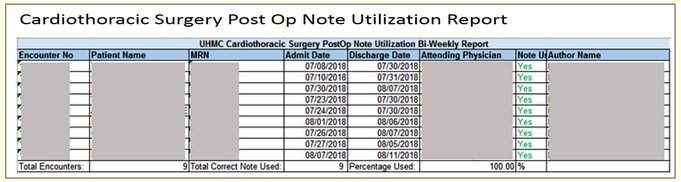
Data Driven Care = Smart Medicine

STS National Database™ Participant 2018

Goal

Deploy information technology in order to improve clinical processes and outcomes, while capturing data at the point-of-care. Maximize the number of data elements that can be captured electronically.





Methods

Our process for converting to electronic extraction consists of four phases: I. Gap analysis to identify fields to be captured is continuous and re-occurs with specifications updates. II. Structured data fields within the EHR are created. III. Data elements are extracted from our EHR via multiple enterprise reporting tools and are imported directly into the reporting database (Lumedx Apollo) using SQL Server Integration Services (SSIS). IV. Reports are developed to monitor the utilization of our electronic tools.

Results

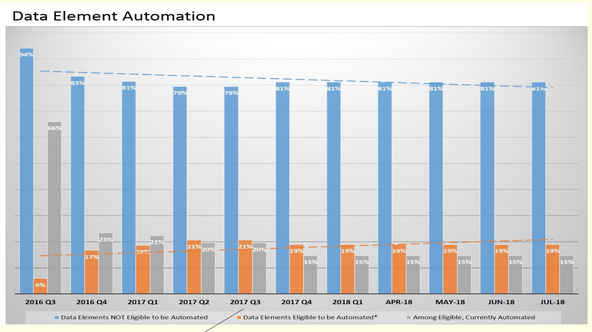
We increased the percentage of data elements captured electronically from 4% in 2015 to 17% in 2016 (135 data elements). In 2017, despite the increase in the total number of data elements from 797 to 1155, we increased to 19% of data elements captured electronically (219 data elements). Utilization of the tool increased from 0% to 100% of cases. We are collaborating closely with the cardiothoracic surgery service to increase usage.

Conclusion

Quality and clinical staff continue to strive for increased accuracy of electronic data capture. By reducing the manual abstraction burden, we are able to allocate our efforts to other areas of performance improvement. Abstraction becomes more efficient and care and outcomes improve.

Next Steps

We continue to combine manual abstraction efforts with electronic data extraction to reduce manual labor time. Ongoing buy-in from the end users is a crucial and often arduous part of the process. We continue to support and encourage the end users throughout the duration of the "electronification" process.



*No financial or regulatory disclosures

Transformation into a Data-Driven Culture

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Background

- Society of Thoracic Surgery(STS) data has played an integral part in the cardiovascular services quality improvement plans.
- System was a fragmented structure that lacked standardization with inconsistencies noted across the cardiovascular domains.
- Our goal: To use a systematic and standard approach to data collection, analysis, and dissemination.
- A team of registered nurse quality outcomes coordinators took the lead in quality assurance:
  - Abstract, analyze, and disseminate data.
  - Spearhead efforts to create and transform hospital into a data-driven culture.

Methods

Several changes were put in place to facilitate change and create consistent and robust quality committees. The changes are summarized in Table 1.

	GOAL	2016 Q4	2017 Q1	2017 Q2	2017 Q3
Cardiac Rehab Referral	100.0%	88.5%	94.6%	95.9%	100.0%
Median Contrast Use	100mL	123mL	104.5mL	84mL	70mL
Vascular Access Site Complications	1.6%	1.5%	1.4%	0.6%	1.8%
30 Day Readmission Rate	10.0%	8.9%	0.0%	13.0%	9.0%

Figure 1.Scorecard example.

Problem?	Solution
Leadership	Identify motivated physician champion
Lack of interest	Understand regulatory requirements, use team approach
Lack of direction	Develop charter
Lack of data-sharing	Quality reporting structure
What to work on?	Utilize metrics from Registry Outcomes Reports
Variation in data	Standard tools-agenda, run charts, scorecards
Timeliness of data	Set abstraction goals

Table 1. Summary of changes.

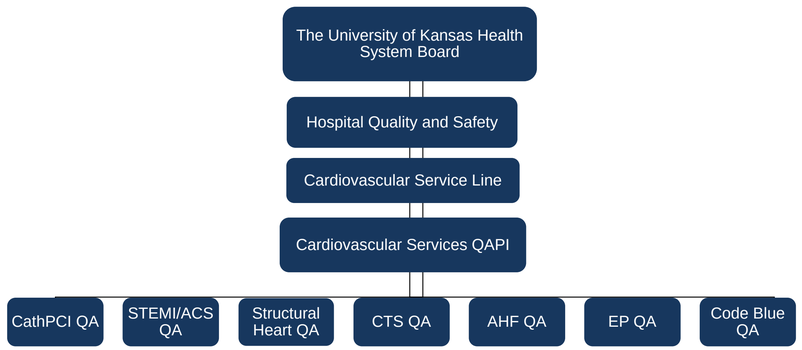

Figure 2. New quality reporting structure.

Results

- Data disseminated to highest level of organization.
- Data is shared more frequently with the care team.
- The investment of interest by a physician champion was a key to the committees' success.
- Sharing and celebrating success as a team created enhanced sense of pride and participation.
- Expanded personal professional development with the Institute for Healthcare Improvement training and certification as Certified Professional in Healthcare Quality (CPHQ).

Conclusions

- Transparency of data is held in utmost importance.
- Development of an invested team came from consistent contribution in the committee and ownership of performance improvement.
- The University Kansas Hospital was the first in the nation to achieve the Comprehensive Cardiac Certification by the Joint Commission in May of 2017.
- Next steps for growth:
  - Development of a Heart Rhythm program, instead of single committee.
  - The need for structured reporting.
  - Bi-directional flow of feedback.
- Ultimately created a functional model that will accommodate growth of the health system.

No disclosures for the authors.

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The Impact of the STS Composite Quality (Star) Rating System on Patient Choice of Provider for Elective Isolated CAB Surgery

Charla Price, RN, BS
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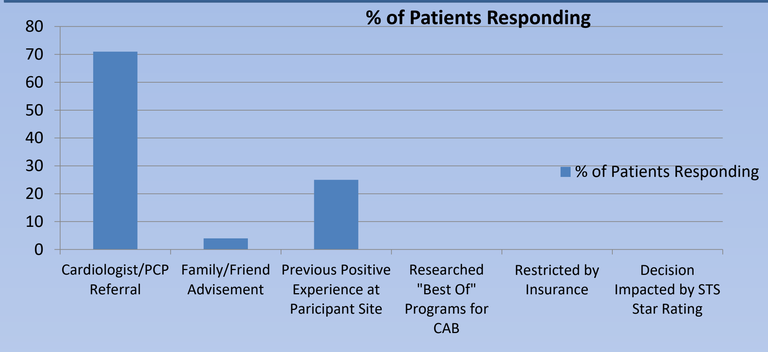
Abstract

Background: Although much emphasis has been placed on increased transparency and the role of public reporting in the current competitive healthcare climate, public reporting seems to have had little impact on patient choice of provider for care at the community level.

Study Population

The study population was comprised of all patients who had undergone isolated CAB surgery on an elective, same day admit basis in CY 2016. This consisted of 38 total patients, 2 of whom were excluded from the study due to death.

Results



Method

The patients were contacted by telephone and/or email, and given a multiple-choice survey (see below). Of the 36 patients contacted, 24 responded and consented to participate.

Would you say that the PRIMARY reason that you chose this hospital for your bypass surgery was:

A. You were referred by your cardiologist or primary care physician
B. You were advised by a friend or family member to choose this hospital
C. You had a previous positive experience at this hospital or an associated facility
D. You researched online resources for “best of” recommendations (i.e.:HealthGrades)
E. It was the only hospital where your insurance would approve having the procedure performed

In addition, prior to having your surgery, had you ever heard of the Society of Thoracic Surgery’s Composite Quality Rating (Star Rating) system for bypass surgery?
Yes
No

Results

Of the 24 respondents, 17 based their decision on referrals from their cardiologist or PCP; 1 on advice from family or friend; 6 on a previous positive experience at the participant site facility or associated facility. None had based their decision on insurance requirements nor results of online research, and none were aware of the facility’s STS Composite Quality (Star) Rating for the Isolated CAB program.

Discussion

Since the primary determinant in patient choice of provider for elective isolated CAB surgery in this population was PCP or cardiologist referral, an attempt was made to determine the amount of marketing done to local community referring physician groups emphasizing the facility’s high rankings in the public reporting sites. Unfortunately, the facility’s marketing department had undergone major staff restructuring in 2017, and no one was able to provide that information.

Conclusions

Despite an overall 3-Star Rating for CAB from the STS, a “high performing” ranking in US News and World Report, and “above average” ranking in Consumer Reports for the heart bypass program in the years prior to the study, this study supports the hypothesis that the STS Composite Quality (Star) Rating has minimal impact on patient choice when selecting a provider for elective coronary bypass surgery. The results of this study highlight an opportunity for greater effort in this area to educate patients and referring physicians on the ability to research comparable local providers when choosing a facility for an elective cardiothoracic surgical procedure.

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Disclosures

No disclosures

The Use of Python Programming Language to Generate a Dashboard for General Thoracic Surgeons From the STS GTS Database

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Abstract

Background: Using data collected by STS GTS database is difficult because of the overwhelming amount of information that is collected. Analysis using the standard report provided by STS/DCRI is difficult. This abstract describes our method of analysis using a Python computer program that creates a succinct dashboard that we use for quality improvement.

Methods: The Python program uses data from 1,680 operations performed at a single medical center in 2017. A computer program was written that reads a Microsoft Excel spreadsheet generated from vendor software that automatically creates a dashboard. The analysis was done per year and per quarter on all operations and separately on lobectomies (CPT 32480 and 32663) and esophagectomies (CPT 43107, 43112, 43117 and 43122).

Results: For the entire cohort the dashboard includes number operations per surgeon, average length of stay, % with an event, % death, % that used ICU, % unplanned return to the OR, % 30 day readmission, % Medicare or Medicaid, and median and mean length of stay. For lobectomy, the same parameters were included in addition to OR time, % of stage I cancers that had a VATS, % with major complications, and the average number of lymph nodes harvested. For esophagectomy we also included the % anastomotic leak, % with chylothorax and % with ileus.

Surgeon	n	%w/event	% Death	% ICU	% URTOR	% 30day Readmit	% Medicare/Medicaid	Median LOS	Ave LOS
A	380	27.4	2.1	8.2	4.5	8.7	33.4	4.0	8.2
B	177	23.2	2.8	11.3	1.7	14.1	35.0	4.0	7.6
C	274	26.6	0.7	8.8	2.6	5.5	36.1	3.0	6.9
D	286	24.5	1.7	4.9	2.4	5.9	34.3	4.0	7.3
E	262	21.8	1.5	6.1	2.7	9.2	43.5	2.0	5.1
F	301	26.2	2.3	9.0	5.3	8.0	36.9	3.0	5.6
Totals	1680	24.9	1.9	8.0	3.2	8.6	36.5	3.3	6.8

Conclusions: The use of a computer program written in Python greatly simplifies the analysis of STS GTS data and allows us to compare a variety of outcomes. Further automation of the data analysis should increase the utility of data collection and lead to improvements in surgical care.

Objectives

Purpose of Project:

1. **Make it easier to spot trends in the data over time**
2. **Allow quicker analysis of the data**
3. **Standardize the analysis**
4. **Let us choose specific data factors to concentrate on**

Methods

Dashboard Generation Work Flow

Data is abstracted from our electronic medical record for each operation a surgeon in the division takes part in

Data variables are entered into the vendor's software program by data abstractors

Data confirmation and quality checking is accomplished

Vendor software is used to generate an Microsoft Excel spreadsheet of the variables to be analyzed by the Python program

Python program is run that reads the Excel spreadsheet

The Python program does the analysis on each of the variables and events and constructs the dashboard

Results

- Figures 1,2 and 3 show the results of the dashboard print out from the Python program for the year 2017
- The graphs show the results by quarter for the 6 domains of length of stay, % with events, % with operative mortality, % who used the ICU, % unplanned return to the operating room, and % 30 day readmission rate.

Figure 1 – All Operations

FOR ALL OPERATIONS

Surgeon	n	Ave LOS	%w/event	% Death	% ICU	% URTOR	% 30 day Readmit	% Medicare/ Medicaid	Median LOS	min LOS	max LOS
#1	380	8.2	27.4	2.1	8.2	4.5	8.7	33.4	4.0	1	109
#2	177	7.6	23.2	2.8	11.3	1.7	14.1	35.0	4.0	1	49
#3	274	6.9	26.6	0.7	8.8	2.6	5.5	36.1	3.0	1	101
#4	286	7.3	24.5	1.7	4.9	2.4	5.9	34.3	4.0	1	62
#5	262	5.1	21.8	1.5	6.1	2.7	9.2	43.5	2.0	1	65
#6	301	5.6	26.2	2.3	9.0	5.3	8.0	36.9	3.0	1	53

Figure legend: n=number of operations, Ave LOS = Average length of stay, %w/event = percent of patients with at least one postoperative event, % Death = percent of patient with an operative mortality (not risk adjusted), % ICU = percent of patients that spent at least one day in the ICU postoperatively, % URTOR = percent of patients that had an unplanned return to the operating room, LOS = length of stay.

Figure 2 - Lobectomies

FOR LOBECTOMIES (32480-open, 32663-VATS)

Surgeon	n	Ave LOS	%w/event	% Death	% ICU	% URTOR	% 30day Readmit	% Medicare/ Medicaid	OR time	% Stage I VATS	% w/Major comps	Ave # nodes
#1	47	4.7	40.4	0.0	2.1	4.3	12.8	31.9	4:52	79.2	17.0	9.7
#2	13	7.6	53.8	0.0	23.1	0.0	15.4	38.5	5:29	0.0	15.4	16.5
#3	29	5.5	51.7	0.0	6.9	3.4	0.0	41.4	4:08	6.7	10.3	12.8
#4	32	6.9	40.6	3.1	9.4	6.3	9.4	37.5	4:20	28.6	15.6	16.7
#5	45	5.2	35.6	0.0	2.2	2.2	4.4	68.9	5:02	83.3	4.4	17.2
#6	37	3.5	24.3	0.0	2.7	0.0	16.2	40.5	4:41	95.0	10.8	14.1

Figure legend: n=# of operations, Ave LOS = Average length of stay, %w/event = percent of patients with at least one postoperative event, % Death = percent of patient with an operative mortality (not risk adjusted), % ICU = percent of patients that spent at least one day in the ICU postoperatively, % URTOR = percent of patients that had an unplanned return to the operating room, OR time = Time in operating room.

Figure 3 - Esophagectomies

FOR ESOPHAGECTOMIES (43107-THE, 43112-McKowen, 43117-Ivor or 43122-TAB)

Surgeon	n	Ave LOS	%w/event	% Death	% ICU	% URTOR	% 30day Readmit	% Med/M Care	OR Time	% w/Major comps	Ave # nodes	% Anas leak	% w/chylothorax	% w/Ileus	Median LOS	min LOS	max LOS
#1	10	17.7	90.0	0.0	30.0	10.0	10.0	50.0	8:22	20.0	18.3	0.0	0.0	20.0	15.0	7	40
#2	11	17.8	72.7	9.1	45.5	27.3	45.5	27.3	10:39	36.4	28.0	9.1	18.2	18.2	12.0	8	48
#3	24	20.2	79.2	4.2	25.0	8.3	4.2	33.3	7:26	25.0	14.0	0.0	4.2	29.2	12.0	7	101
#4	11	18.7	72.7	0.0	27.3	9.1	0.0	36.4	7:40	27.3	21.7	0.0	9.1	36.4	9.0	7	49
#5	11	11.3	54.5	0.0	18.2	0.0	27.3	45.5	6:05	18.2	12.9	9.1	0.0	18.2	7.0	6	38
#6	11	10.2	45.5	0.0	0.0	9.1	18.2	27.3	8:11	18.2	20.4	0.0	0.0	9.1	9.0	8	16

Figure legend: n=# of operations, Ave LOS = Average length of stay, %w/event = percent of patients with at least one postoperative event, % Death = percent of patient with an operative mortality (not risk adjusted), % ICU = percent of patients that spent at least one day in the ICU postoperatively, % URTOR = percent of patients that had an unplanned return to the operating room, OR time = Time in operating room, THE – transhiatal esophagectomy, Ivor – Ivor Lewis esophagogastrectomy, TAB – Thoracoabdominal esophagogastrectomy.

Results by Quarter

Figure legend: LOS – length of stay, ICU – intensive care unit, URTOR – Unplanned return to the operating room, QTR - quarter

Discussion

- Using a custom written Python program allows automatic repeatable analysis of STS General thoracic database data.
- The program can summarize the results of a large number of operations quickly and efficiently
- The analysis allows our Division to quickly identify trends or issues that need further analysis to improve the outcome for our patients
- The data is not risk adjusted, so when an outlier is identified, further investigation is necessary to be sure there is a quality issue and not just a selection issue
- We have used the dashboard to identify best outcomes among our division members and then try to use that information to improve the outcome of underperforming division members

Conclusions

- A custom, concise and repeatable dashboard can be created by using a Python program to analyze STS general thoracic database data
- The program can be run yearly or quarterly to identify trends in outcomes and make adjustments in surgeons outcomes
- Large numbers of operations are necessary to have reliable data
- The addition of risk adjustment might improve the value of the dashboard

References

1. Kubben, PL. Programming for physicians: A free online course. Surg Neurol Int. 2016 Mar 29;7:29 doi: 10.4103/2152-7806.179382 eCollection 2016
2. Kozower BD, O'Brien SM, Kosinski AS, et al The Society of Thoracic Surgeons Composite Score for Rating Program Performance for Lobectomy for Lung Cancer. Ann Thorac Surg. 2016 Apr;101(4):1379-86; discussion 1386-7. doi 10.1016/j.athoracsur.2015.10.081

The MSTCVS Regional Collaborative: What We Learned From 2.81 Audits

Jaelene Williams RN MS, David Grix CCP-Emeritus, Patty Theurer RN MSN, Melissa Clark RN MSN, Richard L. Prager, MD
Michigan Society of Thoracic and Cardiovascular Surgeons Quality Collaborative

BACKGROUND

- The Michigan Society of Thoracic and Cardiovascular Surgeons Quality Collaborative (MSTCVS-QC) has conducted STS Adult Cardiac Surgery Database (ACSD) audits of our 33 participating hospital sites for 12 years, spanning four ACSD versions.
- Each site is audited once per data version, unless poor audit scores warrant a repeat audit following further Data Manager education on the STS abstraction process and element definitions.

METHODOLOGY

- Audits of STS version 2.81 were conducted from 2015-2018 by two MSTCVS-QC Auditors: 85% were onsite audits and 15% "remote" via secure HIPPA compliant access to electronic medical records (EMR's).
- 20 hospital specific patient records were abstracted within 6 months prior to the audit to include a variation of:

Procedure type:
- CAB (10 cases)
- Valve+/- CAB (6 cases)
- Other (4 cases)

Case Status:
- Elective
- Urgent
- Emergent

Outcomes:
- Mortality (2 cases)
- Hospital Readmissions (2 cases)

- 100 v2.81 data fields were selected to include Risk Model variables, Post Operative Events, Mortality, and Readmission data points.
- Hospital audits were randomly scheduled to accommodate the Data Manager's schedule and not interfere with STS Data Harvests.
- Consideration was given to the Data Manager's level of experience. Audits were not scheduled until a Manager had >6 months experience.
- Following the audit, an Audit Report was generated and reconciled with the Data Manager to address any questions or findings prior to final scoring and notification.
- Corrections were made to errant data for future re-harvesting.

RESULTS

- Audits were scored by weighting the significance of data elements missed.
- Risk Model variables, Postoperative Events, Readmissions and Mortalities were assigned higher deduction points.
- The deductions were entered into a scoring tool, and a mean deduction point score for the 20 records was calculated and assigned a Star Rating. (Table 1.)
- Audit scores demonstrated data element # 910 "CHF within 2 weeks", as the most frequently missed data element.
- Several data elements in the Hemodynamic and Medication Sections also indicated opportunities for further education.

Table 1.

MSTCVS QC Star Rating	Star Rating: Deductions per Record	# of Sites for 2.81 Audits	Mean Site Deduction Percentage Ranges
5 Star	≤ 8.0	16	98.8% - 99.8%
4 Star	>8 - 15	13	97.3% - 98.7%
3 Star	>15 - 25	3	96.2% - 97.2%
2 Star	>25 - 40	1	94.0% - 94.8%
1 Star	>40.0	0	0

CONCLUSIONS

- Weighting of data element deductions provides a more specific picture of data abstraction accuracy.
- Using higher deduction points for significant data elements creates improved feedback, enhances accuracy, and focuses on critical areas for education and improvement.
- Inexperience with the STS ACSD was a predictor of inaccurate data abstraction as evidenced by overall audit scores.
- Audits provide 1:1 STS ACSD education to the site's data managers, are not punitive, and are a well-received educational tool.
- **Committed hospital STS abstractors with feedback loops to surgeons had higher audit scores.**

Support for the Michigan Society of Thoracic and Cardiovascular Surgeons Quality Collaborative is provided by Blue Cross and Blue Shield of Michigan and Blue Care Network as part of the BCBSM Value Partnerships program. Although Blue Cross Blue Shield of Michigan and MSTCSV Quality Collaborative work collaboratively, the opinions, beliefs and viewpoints expressed by the author do not necessarily reflect the opinions, beliefs and viewpoints of BCBSM or any of its employees.

For more information about the MSTCVS Quality Collaborative and its quality initiatives, please contact the MSTCVS Coordinating Center 734-998-6163

The New Isolated CAB Mortality Risk Model
What's IN, What's OUT and Why It Matters

Patty Theurer RN, MSN, Melissa Clark R, MSN, Chang He MS, Jaelene Williams RN, MS, David Grix CCP, Richard L. Prager MD

For the MSTCVS Quality Collaborative

OBJECTIVE

The Society of Thoracic Surgeons 2018 mortality risk model for isolated coronary artery bypass grafting includes thirty-seven new variables.

Bilirubin, INR, A1C and the 5 meter walk test are among the variables not included in the new risk model due to missing national data greater than 5%[1].

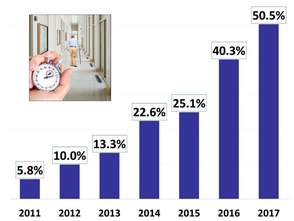
METHODS

34,233 isolated CABG procedures were performed in Michigan between July 2011 and December 2017. We were interested to learn if using a t-test or Chi-Square test of these variables individually would determine significant associations between mortality and the new variable.

RESULTS

Preoperative Variables ***NOT*** in Risk Model due to Missing Data: Michigan Mean Values for Alive and Dead Patients			
	Alive n=33574	**Dead n= 650**	**p value**
Bilirubin	**0.64 (SD ± 0.5)**	**0.68 (SD ± 0.40)**	**0.208**
INR	**1.05 (SD ± 0.20)**	**1.10 (SD ± 0.38)**	**<0.001**
A1C	**6.58 (SD ± 1.55)**	**6.80 (SD ± 1.62)**	**<0.001**
5 meter walk**	**>= 6 seconds Mortality 1.7%**	**< 6 seconds mortality 1.0%**	**0.008**

5 Meter Walk Test
Percent Capture in Michigan



RESULTS

Variables that impact Mortality in Michigan

Preoperative Variables	Mortality		Mortality	P value
Black/African American Race	3.0%	Non Black Race	1.8%	<.001
Insurance: Medicare/Medicaid	2.3%	All other insurance	1.8%	<.001
Previous TIA	3.2%	No TIA	1.8%	<.001
Carotid Stenosis	2.5%	No Stenosis	1.8%	0.010
Prior Carotid Surgery/stenting	4.1%	No Prior carotid surgery	1.8%	<.001
Alcohol Use >=8/week	1.5%	No Alcohol Use	2.3%	0.015
Home Oxygen	5.1%	No Home Oxygen	1.8%	<.001
Liver Disease	3.8%	No Liver Disease	1.8%	<.001
Unresponsive	9.2%	Unresponsive: No	1.9%	<.001
Syncope	2.3%	Syncope: No	1.9%	0.263
WBC >= 8	2.3%	WBC < 8	1.6%	<.001
Hematocrit < 30	4.5%	Hematocrit >= 30	1.7%	<.001
Previous PCI	2.2%	PCI No	1.8%	0.006
PCI When: At this facility	4.7%	PCI Not within episode	1.9%	<.001
Heart Failure Acute or Chronic	4.2%	Heart Failure No	1.3%	<.001
Atrial Fibrillation/Flutter	4.0%	No AFIB/Flutter	1.6%	<.001
Arrhythmia	4.3%	No Arrhythmia	1.6%	<.001
Glycoprotein IIb/IIIa Inhibitors	3.2%	No Glycoprotein IIb/IIIa Inhibitors	1.9%	0.006
ADP within 5 days	3.0%	No ADP within 5 days	1.8%	<.001
Days ADP Discontinued: 0 or 1	5.0%	ADP Discontinued 2-5 days		<.001
Steroids within 24 hours	4.0%	Steroids within 24 hours: No	1.8%	<.001
Left Main Disease >= 50%	2.7%	Left Main Disease : No	1.7%	<.001
Aortic Stenosis	4.0%	Aortic Stenosis: No	1.8%	<.001
Aortic Insufficiency: Yes	2.7%	Aortic Insufficiency: None	1.7%	<.001
Tricuspid Insufficiency: Severe, Moderate, Mild	3.0%	Tricuspid Insufficiency: None	1.5%	<.001
Catheter Assist Device	18.2%	Catheter Assist Device: No	1.8%	<.001
Variables that do not impact Mortality in Michigan				
Mediastinal Radiation	3.1%	No radiation	1.9%	0.090
CVA <= 2 weeks	4.2%	CVA > 2 weeks	2.8%	0.505
CVA <=30 days	4.7%	CVA > 30 days	3.9%	1.000
Platelets <200,000	2.0%	Platelets >= 200,000	1.8%	0.213
Tricuspid Insufficiency: Trivial	1.5%	Tricuspid Insufficiency: None	1.5%	0.988

CONCLUSIONS

Risk model variables are vital for robust case-mix adjustment for estimating risk adjusted outcomes, comparing results to national benchmarks, public reporting and to inform quality improvement

The STS Adult Cardiac Surgery Risk Model has thirty-seven new variables; thirty three of new variables, when tested individually influenced the risk of mortality in Michigan.

Variables that did not show a higher risk of mortality were mediastinal radiation, syncope, early CVA and preoperative platelet levels. INR, A1C and gait speed have higher values in the morality group.

STS database participants should focus efforts to increase the capture rates of important risk factors known to affect mortality such as **uncontrolled diabetes and frailty** for potential use to ***optimize future risk model development.***

REFERENCES

Shahian et al. The Society of Thoracic Surgeons 2018 Adult Cardiac Surgery Risk Models: Part 1- Background, Design, Considerations, and Model Development. Ann Thorac Surg. 2018;105:1411-8.

ACKNOWLEDGMENTS

Support for MSTCVS Quality Collaborative is provided by Blue Cross and Blue Shield of Michigan and Blue Care Network as part of the BCBSM Value Partnerships program. Although Blue Cross Blue Shield of Michigan and MSTCSV Quality Collaborative work collaboratively, the opinions, beliefs and viewpoints expressed by the author do not necessarily reflect the opinions, beliefs and viewpoints of BCBSM or any of its employees.

For more information about the MSTCVS Quality Collaborative and its quality initiatives, please contact the MSTCVS Coordinating Center:
734-998-5918

The authors of this poster have nothing to disclose

Using a Multidisciplinary Approach for the Reduction of Ventilator Hours in Coronary Artery Bypass Graft (CABG)

Sylvia M. Laudun, DNP, MBA, RN, CPHQ, Eugene Parrino, MD, Michael Bates, MD, Aditya Bansal, MD, William Smith, MD, Ahnyel Jones-Burkes, MSN, RN-BC
Ochsner Medical Center, New Orleans, LA

Introduction

A review of isolated CABG surgical patients at an academic health system from 2013-2017 revealed total median ventilator times 2.2 to 3.6 hours greater than the Society of Thoracic Surgeons (STS) data during the same period. Variation in the center's median total ventilator hours was noted, while STS revealed a consistent reduction over time.

STS Adult Cardiac Surgery Data for Isolated CABG: 2013 through 2017 Q1

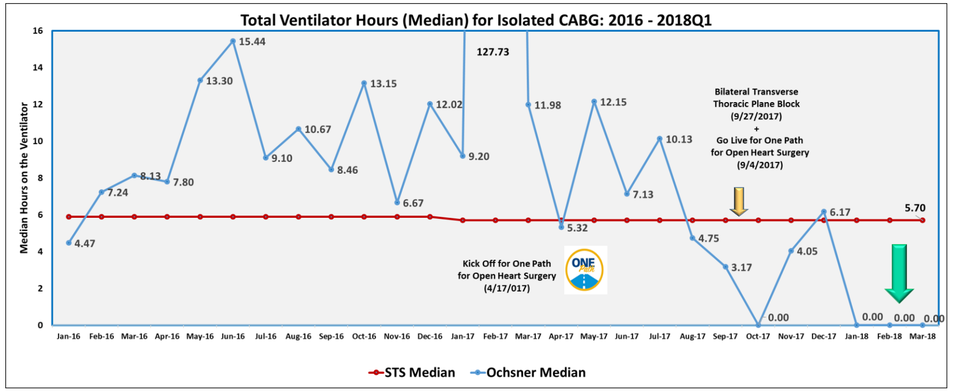
Ochsner Medical Center - New Orleans: Isolated CABG	2013	2014	2015	2016	2017 Q1
Number of cases	125	128	103	109	26
Total Ventilation Hours (Median)	8.7	9.4	9.6	8.1	9.0
STS: Total Ventilation Hours (Median)	6.4	6.1	6.0	5.9	5.8
Initial Ventilation <6 Hours	19.2%	21.4%	26.5%	32.1%	26.9%
Reintubation	0.8%	3.1%	7.8%	1.8%	3.8%

Methods

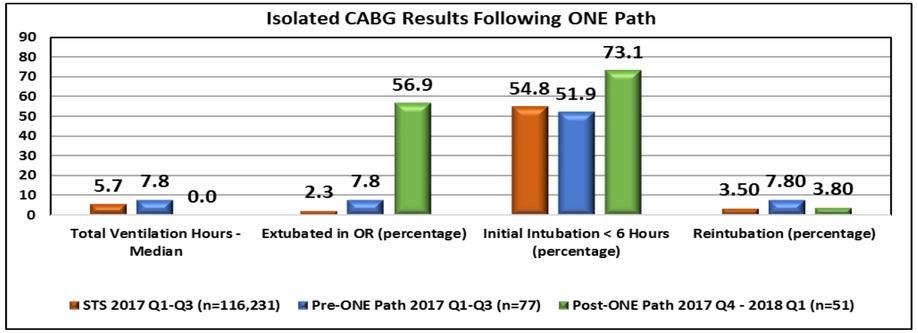
In April 2017, a multidisciplinary team formed to design the ONE Path standardized care plan for adult open heart surgical patients, with the goal of improving care coordination, and patient safety. Team meetings covered content development, electronic medical record testing, and implementation. The team reviewed retrospective data from the STS Adult Cardiac Surgery database on total ventilator hours, extubation in operating room (OR), initial intubation < 6 hours, and reintubation events from 2016-2017 Q1 for isolated CABG patients. Respiratory therapist and Intensive Care Unit (ICU) nurse content experts expressed concern for post-operative status for early extubation. Cardiac surgeons met with cardiac anesthesiologists to propose methods to fast track appropriate patients in the OR and ICU. Cardiac anesthesiologists met as a group to standardize reversal, usage of Propofol infusion, decreased intraoperative narcotic requirements, and implementation of transverse thoracic plane block. These changes allowed for patients to qualify for either intraoperative extubation or decreased total ventilator hours in ICU. September 2017, ONE Path and anesthesia practice changes were implemented.

Design: Retrospective review
Included: Isolated CABG Pre-ONE Path 2017 Q1-Q3 (n=77), and Post-ONE Path 2017 Q4-2018 Q1 (n=51)
Data Source: Society of Thoracic Surgeons Adult Cardiac database, and institution's electronic medical record
Data Collection: Total ventilator hours – median, extubation rates in operating room (OR), initial intubation <6 hours, and reintubation rates

Results



- Reduction in ventilation hours was essentially due to aggressive OR extubation, and consistent care processes for early extubation. Pre-ONE Path implementation median total ventilation time was 7.8 (n=77) versus 0.0 hours (n=51) for six-month post implementation of ONE Path and anesthesia changes.
- OR extubation rate increased from 7.8% to 56.9%
- Initial intubation rates < 6 hours increased from 51.9% to 73.1%



- Reintubation decreased from 7.8% to 3.8%; no patients were reintubation in 2018 Q1
- OR extubation and initial intubation <6 hours rates show a pattern of decreasing total ventilation hours in Pre-ONE Path phase due to delay in ICU bed availability and the Hawthorne effect.
- October 2017, 86% of patients were extubated in the OR
- November 2017, 4 of 11 patients (36%) were extubated in the OR, with 2 patients reintubated post initial extubation. One of the patients was extubated in the OR, but reintubation did not occur until Post-op day #2.
- December 2017, 38% of patients were extubated in the OR
- OR extubation rates increased for the months of January – March 2018 to 58%, 60%, and 100% respectively.
- Overall, early extubation rates in the ICU have decrease from 7 to 9 hours to 2 to 4 hours Post-ONE Path implementation.

Conclusions

- Input from all members of a multidisciplinary team can generate an exchange of information to improve care coordination and safe outcomes.
- Potential ICU cost saving for 2018 Q2-Q4, with an estimated extubation rate of 55% in OR, with a daily ventilator cost of $1,900, could be $77,900.

ICU Cost Saving from OR Extubation ($1,900/day for ventilator)

Isolated CABG	Time Frame	Number of Patients Extubated in OR	Cost Saving Associated with OR Extubation
Pre-ONE Path	2016	0	$ -
	2017 Q1-Q3	8	$ 15,200.00
Post-ONE Path	2017 Q4 - 2018 Q1	29	$ 55,100.00
	*2018 Q2-Q4 (Potential Savings)	41	$ 77,900.00

*Estimating a total isolated CABG volume for 2018 of 100 with a 55% OR extubation rate

Disclosures: No disclosures by authors for this project.

Customizing Aorta Surgery Worksheets to Suit Your Needs

Baylor Scott & White The Heart Hospital –Plano

Authors: Taylor Herrick, BA; Susan Dorval, RN; Rosha Nodine, BAAS; Kristi Verschelden, BSN, RN; Catherine Aguas, MSN, RN; Andrea Crow, MBA; Araceli Diel, BSN, RN, CNOR; Alessandro Lione, CCP, LP; Eric Shawn Wilson, CCP, LP

Background

Baylor Scott & White The Heart Hospital – Plano (BSW-THHP) relies upon outcomes generated by The Society of Thoracic Surgeons Adult Cardiac Surgery Database (STS ACSD) for internal projects focused on improving patient outcomes and research. Intraoperative data collection forms (DCFs) are used to complete case abstraction with clinician input. DCF compliance is defined as procedure specific intra-operative forms returned with all critical data elements complete. After moving abstraction from an external vendor to in-house in October 2017, an audit of October – December 2017 cases revealed that only 50% of DCFs met compliance standards. A root cause analysis identified that contributing factors included lack of feedback to clinicians, an increase in data fields with implementation of STS ACSD version 2.9 and surgeon dissatisfaction that the STS ACSD Aorta Surgery Worksheet did not meet their documentation workflows.

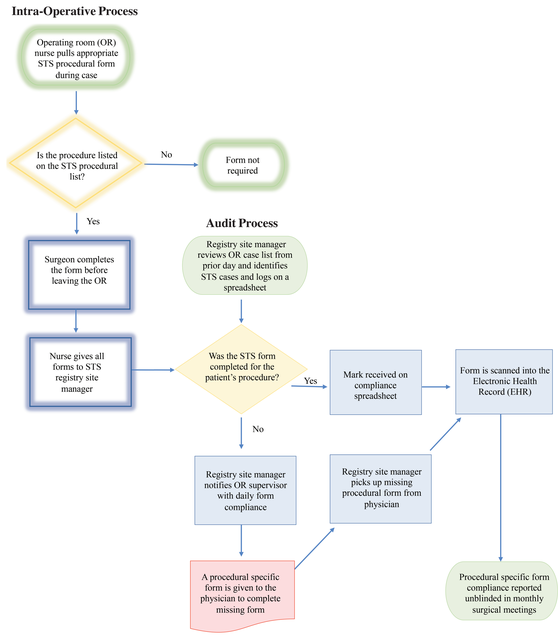
Objectives

BSW-THHP aimed to create a standardized process to achieve compliance with completeness of procedural specific forms. Compliance with form completion will improve from baseline (October-December 2017) of 50% to 95% by July 2018. Compliance will be measured by daily audits.

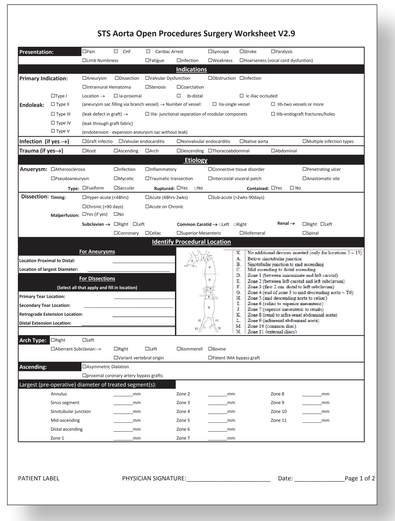
Methodology

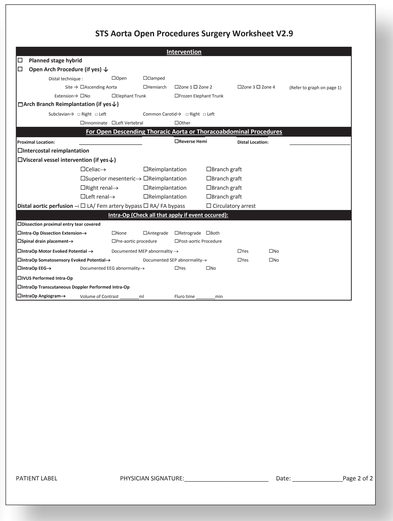
A multidisciplinary team was formed to address incompleteness of data. A new collaborative process involving both clinical and registry staff was implemented in January 2018. This process focused on the perfusionist completing the form with the input of the performing surgeons. In addition, registry staff enhanced final compliance by implementing a documentation addendum process. In March 2018, compliance plateaued. The process was reanalyzed by the team and changes were implemented in April 2018. In this phase, forms were customized to meet the workflows of surgeons as they assumed sole responsibility for completing forms. An unblinded compliance report was presented monthly during cardiovascular surgeon meetings.

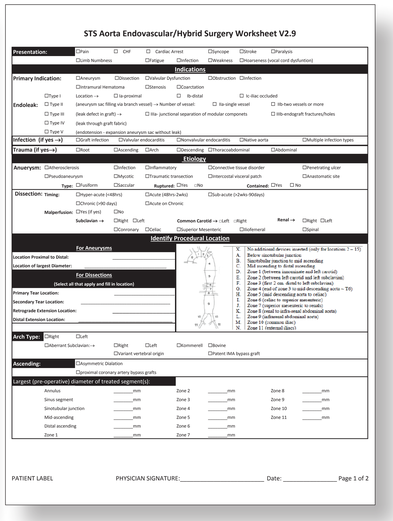
Process

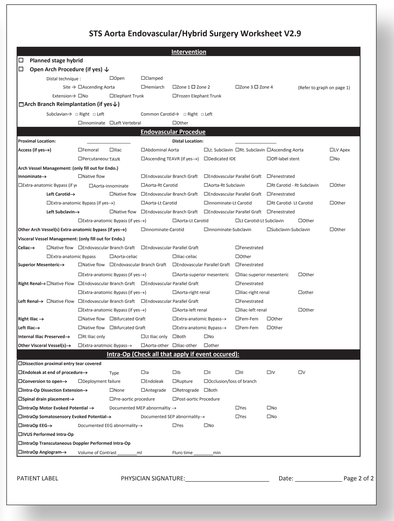


Aorta Forms

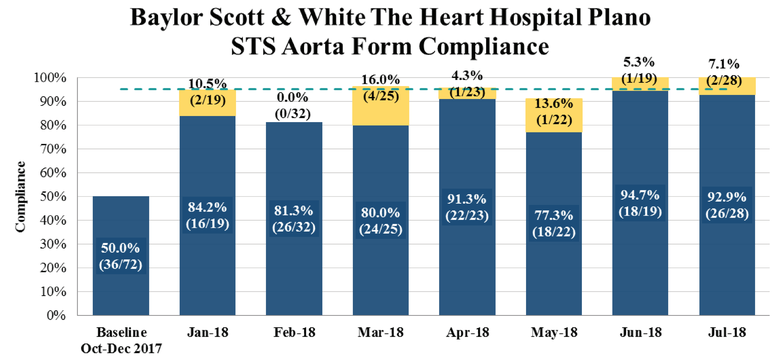








Results



Conclusions

Implementing a customized form and data collection process to fit facility specific needs enhanced documentation compliance. Furthermore, applying a process for intra-operative form collection and auditing forms provided better communication between clinical staff, surgeons, and registry site managers. Physicians became more engaged in the data collection process due to flow of the DCF and compliance reporting.

Spread

- Concurrently, The Heart Hospital implemented a similar process for our Vascular Quality Initiative (VQI) patient population.
- In October 2018, BSW-THHP plans to spread our customized forms electronically in the OR. The software solution will be built and accessed through intranet via PC, tablet, laptop, etc. The software is an application platform that lives within BSW Integrated Data Warehouse (IDW).
- DCF submitted to The Society of Thoracic Surgeons (STS) for future review to be posted on the website as an additional resource.
- Customized data collection forms will be expanded to the preoperative and postoperative areas of patient care.

Disclosures

Authors of this presentation have nothing to disclose concerning possible financial or personal relationships with commercial entities that may have a direct or indirect interest in the subject matter of this presentation.

Development of a Statewide General Thoracic Surgery Quality Collaborative

Melissa Clark RN MSN[1], Patty Theurer RN MSN[1], Andrew C. Chang MD[2], Robert Welsh MD[3], Richard L. Prager MD[1]

[1]Michigan Society of Thoracic and Cardiovascular Surgeons Quality Collaborative, Ann Arbor, MI; [2]University of Michigan, Ann Arbor, MI; [3]Beaumont Hospital, Royal Oak, MI;

BACKGROUND

The MSTCVS Cardiac Surgery Quality Collaborative (MSTCVS-QC), a statewide quality improvement initiative, uses collaborative learning as a platform for quality improvement. The MSTCVS-QC created an opportunity to pilot the feasibility of a General Thoracic Surgery (GTS) collaborative using the STS National Database in 2014.

METHODS

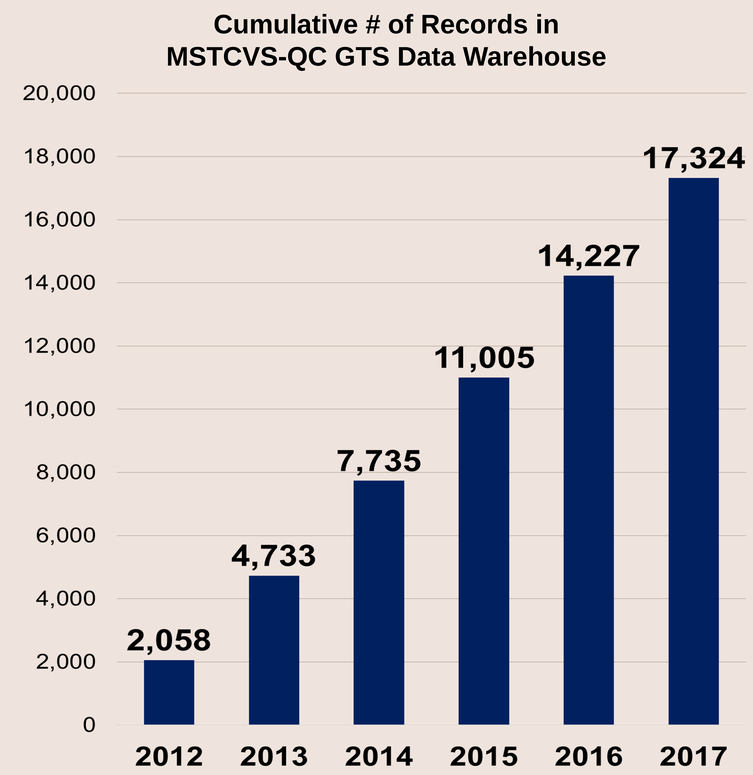
Physicians from the 33 hospitals participating in the MSTCVS-QC were surveyed for interest. Partial financial support for participation was provided by BCBSM for STS GTS registry participation and database software for the first year and a per case reimbursement for data abstraction.

RESULTS

- Eleven hospitals were initially enrolled in 2014, with four more joining since inception.
- 9 of 15 hospitals joined the STS GTS National Database (GTSD) to participate in this statewide collaborative.
- STS GTSD data from each hospital are submitted to the MSTCVS-QC data warehouse and reviewed at statewide Collaborative meetings twice per year.
- Review of unblinded participant-level data has revealed variations in patient characteristics, diagnostic and treatment approaches, and outcomes for patients undergoing lung and esophageal resection for cancer across participating hospitals.
- Opportunities for data manager education were identified during on-site data audits. In-person educational workshops are now held twice per year.

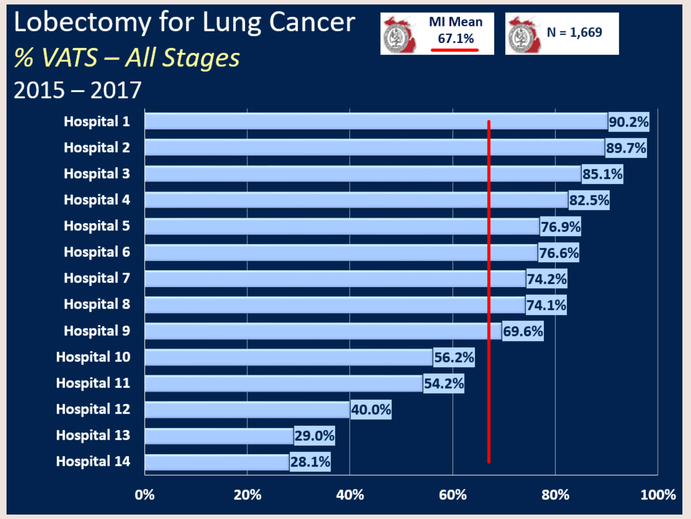
CONCLUSION

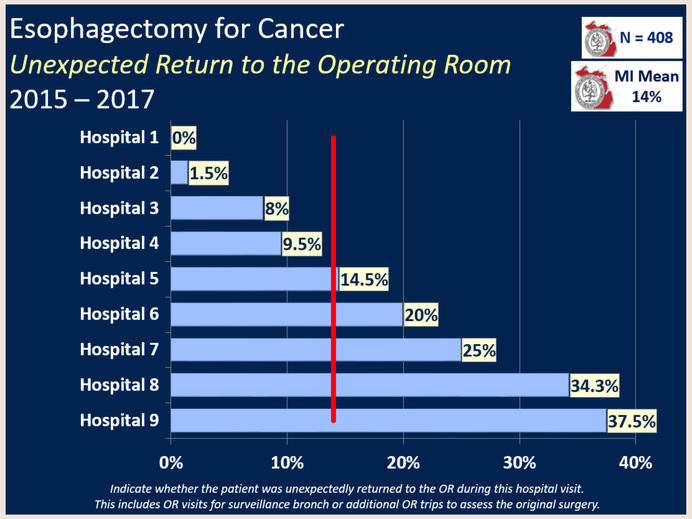
Our statewide quality collaborative provides an environment for cardiothoracic surgery teams to openly discuss outcomes and set statewide and hospital-specific improvement goals. Using this platform, the MSTCVS-QC has created an opportunity for regional collaborative learning to improve care and outcomes for patients undergoing general thoracic procedures in the state of Michigan.



Participating Hospitals

Beaumont Hospital, Royal Oak
Beaumont Hospital, Troy
Borgess Medical Center
Bronson Methodist Hospital
Henry Ford Allegiance Health
Henry Ford Hospital, Detroit
Henry Ford Macomb Hospital
McLaren Greater Lansing
Mid-Michigan Medical Center
Munson Medical Center
Spectrum Health
Ascension Macomb-Oakland Hospital
St. Joseph Mercy Ann Arbor
St. Joseph Mercy Oakland
University of Michigan





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For more information about the MSTCVS Quality Collaborative and its quality initiatives, please contact the MSTCVS Coordinating Center 734-998-5918

Building a better T.E.A.M. through Trust, Education, Accountability, and Monitoring

Leslie Wacker, BS[1]

[1] Cardiac Surgery, C.S. Mott Children's Hospital, Ann Arbor, Michigan

C.S. MOTT CHILDREN'S HOSPITAL
MICHIGAN MEDICINE

BACKGROUND

Pediatric and congenital heart surgery data is collected at nearly 120 hospitals across North America. Some of the data is risk adjusted and used for a variety of purposes including administrative, quality improvement, research, 3rd-party surveys, and voluntary public reporting of center-level outcomes. Thus, accuracy is imperative, particularly in fields used for risk adjustment; however, the best method for high-quality data capture is currently unknown.

METHODS

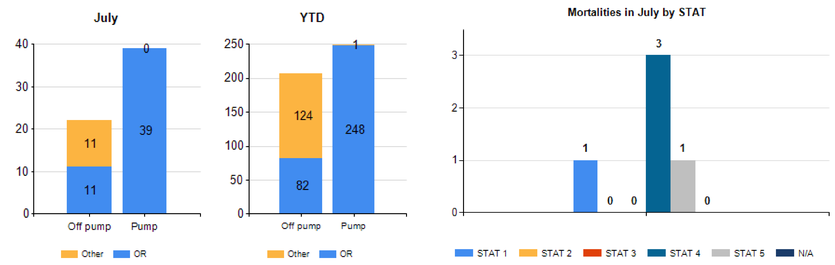
Upon review of an STS audit, several areas with low agreement rates needed improvement:

1. 30-day status (50%)
2. Complications (80%)
3. Fundamental Diagnosis (85%)

At the time, the team consisted of many people from various phases of care abstracting data to paper. A non-clinical staff member, who sat in another building, entered data while a separate team member submitted harvest, and validated, corrected, and resubmitted as necessary. This disconnected, widespread model made educating and updating the team difficult.

METHODS, CON'T.

Instead, a new team design was implemented utilizing one "lead" data abstractor with validation at the time of entry with a surgeon, perfusionist, and nurse practitioner identified as resources. Frequent communication, monthly review of data, and clinical observation was promoted.



If discrepancies were identified, they were adjudicated with the appropriate personnel and corrected.

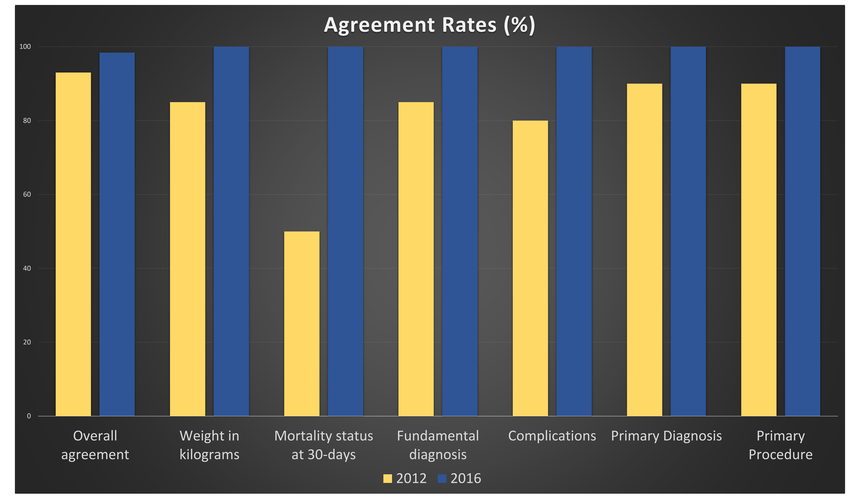
Single center agreement rates were compared from 2 STS audits pre/post a data collection process change. Rates were calculated by comparing data submitted by the site to DCRI with data abstracted by the audit staff for 20 randomly selected cases and all mortalities in two separate years (2012 & 2016).

LIMITATIONS

1. Version changes/definition updates
2. New audit company
3. Different/more fields audited
4. Sites inability to adjudicate discrepancies

RESULTS

In 6 common fields as well as overall, agreement rates increased after the team design change (see graph).



CONCLUSION

A unified team with frequent communication and clinical observation improved audit scores. Streamlining responsibilities allowed better education of congenital heart disease and data specifications resulting in fewer coding discrepancies, better understanding of data elements, and increased engagement in the database.

DISCLOSURES

The author has nothing to disclose

Four Point Check Implemented to Increase the Medication Composite Score in the Isolated CABG Patient

Robyn Holden BSN RN, Ashley Blair BSN RN
Mon Health Medical Center

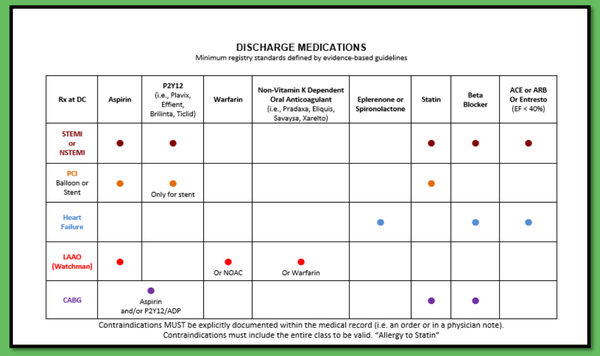
Background

In 2016, we had 15 STS medication composite misses out of 219 isolated CABG patients. This performance put us at a 2 star rating and we wished to obtain a 3 star rating.

Methods

As part of a PI project, MHMC audited every isolated CABG patient starting in March 2017 and continued for 6 months. This audit captured documentation of: anesthesia record, pre-op and discharge ordering or contraindication of beta blockade, anti-lipids, and anti-platelets. In response to these audits, we created a 4 point check system. We provided one-on-one education for CT surgery APP's and physicians on appropriate: pre-op and discharge ordering or contraindication of beta blockade, anti platelets, and anti-lipids. We also provided similar education and a pocket reference card for discharging floor staff.

In our EMR, we created a discharge education form that must be filled out by an RN prior to printing the patient's discharge paperwork. We also created a discharge medication checklist to be completed by a Clinical Manager of the discharging unit. Finally, the Cardiology Outcomes Analysts performs a final check for accuracy and auditing purposes.

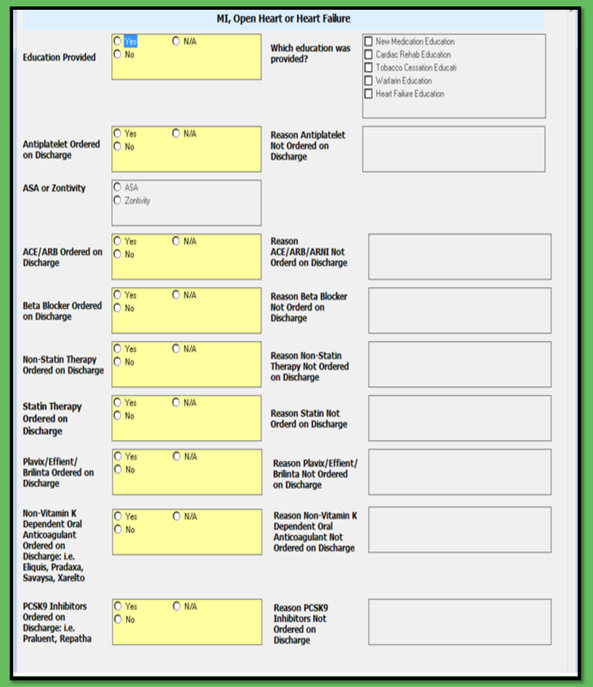


DISCHARGE MEDICATIONS

Minimum registry standards defined by evidence-based guidelines

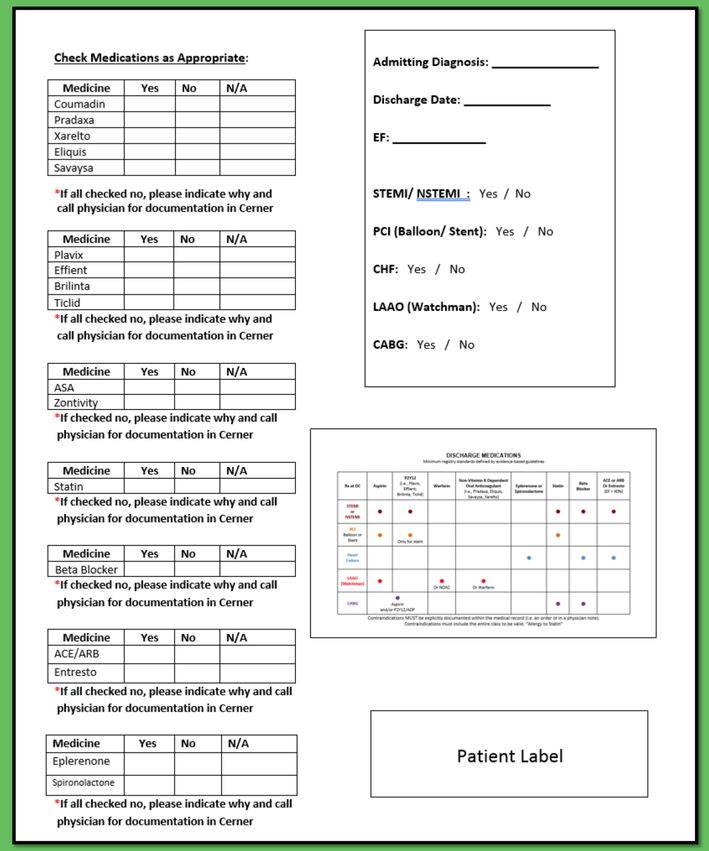
Rx at DC	Aspirin	P2Y12 (i.e., Plavix, Effient, Brilinta, Ticlid)	Warfarin	Non-Vitamin K Dependent Oral Anticoagulant (i.e., Pradaxa, Eliquis, Savaysa, Xarelto)	Eplerenone or Spironolactone	Statin	Beta Blocker	ACE or ARB Or Entresto (EF < 40%)
STEMI or NSTEMI	●	●				●	●	●
PCI Balloon or Stent	●	● Only for stent				●		
Heart Failure					●		●	●
LAAO (Watchman)	●		● Or NOAC	● Or Warfarin				
CABG		● Aspirin and/or P2Y12/ADP				●	●	

Contraindications MUST be explicitly documented within the medical record (i.e. an order or in a physician note).
Contraindications must include the entire class to be valid. "Allergy to Statin"



MI, Open Heart or Heart Failure

Education Provided	○ Yes ○ No ○ N/A	Which education was provided?	☐ New Medication Education ☐ Cardiac Rehab Education ☐ Tobacco Cessation Educati ☐ Warfarin Education ☐ Heart Failure Education
Antiplatelet Ordered on Discharge	○ Yes ○ No ○ N/A	Reason Antiplatelet Not Ordered on Discharge	
ASA or Zontivity	○ ASA ○ Zontivity		
ACE/ARB Ordered on Discharge	○ Yes ○ No ○ N/A	Reason ACE/ARB/ARNI Not Ordered on Discharge	
Beta Blocker Ordered on Discharge	○ Yes ○ No ○ N/A	Reason Beta Blocker Not Ordered on Discharge	
Non-Statin Therapy Ordered on Discharge	○ Yes ○ No ○ N/A	Reason Non-Statin Therapy Not Ordered on Discharge	
Statin Therapy Ordered on Discharge	○ Yes ○ No ○ N/A	Reason Statin Not Ordered on Discharge	
Plavix/Effient/ Brilinta Ordered on Discharge	○ Yes ○ No ○ N/A	Reason Plavix/Effient/ Brilinta Not Ordered on Discharge	
Non-Vitamin K Dependent Oral Anticoagulant Ordered on Discharge: I.e. Eliquis, Pradaxa, Savaysa, Xarelto	○ Yes ○ No ○ N/A	Reason Non-Vitamin K Dependent Oral Anticoagulant Not Ordered on Discharge	
PCSK9 Inhibitors Ordered on Discharge: I.e. Praluent, Repatha	○ Yes ○ No ○ N/A	Reason PCSK9 Inhibitors Not Ordered on Discharge	



Check Medications as Appropriate:

Medicine	Yes	No	N/A
Coumadin			
Pradaxa			
Xarelto			
Eliquis			
Savaysa			

*If all checked no, please indicate why and call physician for documentation in Cerner

Medicine	Yes	No	N/A
Plavix			
Effient			
Brilinta			
Ticlid			

*If all checked no, please indicate why and call physician for documentation in Cerner

Medicine	Yes	No	N/A
ASA			
Zontivity			

*If checked no, please indicate why and call physician for documentation in Cerner

Medicine	Yes	No	N/A
Statin			

*If checked no, please indicate why and call physician for documentation in Cerner

Medicine	Yes	No	N/A
Beta Blocker			

*If checked no, please indicate why and call physician for documentation in Cerner

Medicine	Yes	No	N/A
ACE/ARB			
Entresto			

*If all checked no, please indicate why and call physician for documentation in Cerner

Medicine	Yes	No	N/A
Eplerenone			
Spironolactone			

*If all checked no, please indicate why and call physician for documentation in Cerner

Admitting Diagnosis: _____

Discharge Date: _____

EF: _____

STEMI/ NSTEMI : Yes / No

PCI (Balloon/ Stent): Yes / No

CHF: Yes / No

LAAO (Watchman): Yes / No

CABG: Yes / No

DISCHARGE MEDICATIONS

Minimum registry standards defined by evidence-based guidelines

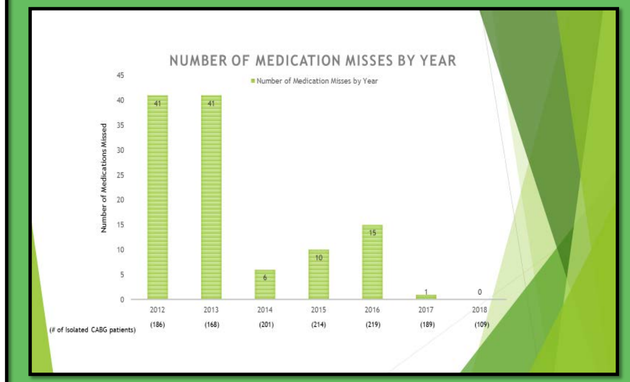
Rx at DC	Aspirin	P2Y12 (i.e., Plavix, Effient, Brilinta, Ticlid)	Warfarin	Non-Vitamin K Dependent Oral Anticoagulant (i.e., Pradaxa, Eliquis, Savaysa, Xarelto)	Eplerenone or Spironolactone	Statin	Beta Blocker	ACE or ARB Or Entresto (EF < 40%)
STEMI or NSTEMI	●	●				●	●	●
PCI Balloon or Stent	●	● Only for stent				●		
Heart Failure					●		●	●
LAAO (Watchman)	●		● Or NOAC	● Or Warfarin				
CABG		● Aspirin and/or P2Y12/ADP				●	●	

Contraindications MUST be explicitly documented within the medical record (i.e. an order or in a physician note).
Contraindications must include the entire class to be valid. "Allergy to Statin"

Patient Label

Results

In 2017, MHMC had one medication miss out of 189 isolated CABG patients, a 93% improvement. The miss occurred prior to the implementation of the PI project. Thus far in 2018, we have no medication misses.



Conclusion

In 2017, we met our goal of achieving a 3- star rating for the STS medication composite. We also recognize that concurrent abstraction status is vital to achieving success in this metric.

*The authors have no disclosures

Unique Challenges In Assessing Mitral Valve Surgery Quality

Ellie Huff, MSN, RN; Laila Mallari, MPH; Traci Watson, RN, BS; Angela Vincent, MHS-HFM; Paul Grayburn, MD; William Ryan, MD; William Hoffman, MD and Michael Mack, MD

Background

Recent studies have shown that CV surgeons with low mitral valve volume have a lower probability of utilizing a repair technique. Preliminary retrospective analysis of 2016 mitral valve surgical cases was not accurate. Reasons:

- CV surgeons were not consistently dictating key MV data elements in post-operative notes
- STS chart abstractors may have had conflicting MV information from echo reports (cardiologist) and op reports (CV surgeon) and may not pick the correct classification or etiology

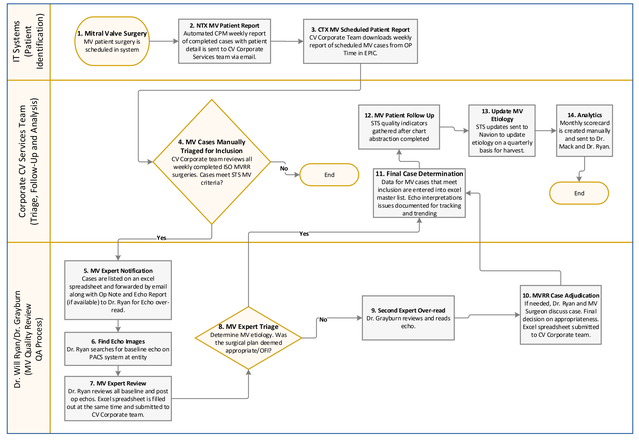
Additionally, given the recent introduction of the new STS star ratings for MV categories, we conducted a comprehensive retrospective analysis of isolated mitral valve repair/replacement (Iso MVRR) in our healthcare system to better understand the appropriateness of care.

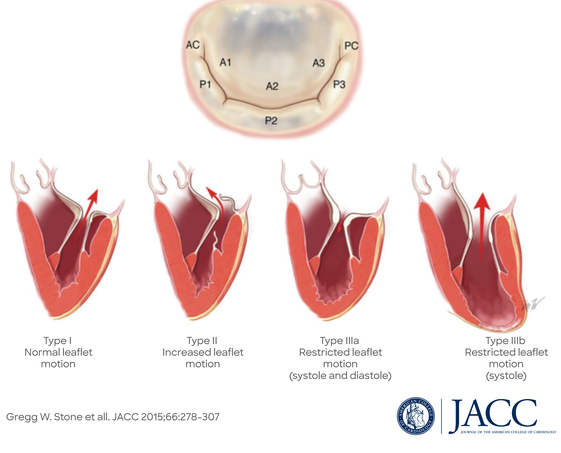
Methods

A comprehensive case review of all Iso MVRR performed from January through December 2017 was completed. This included an over-read of each pre-op and post op echocardiograms. Each case was evaluated for the following key metrics:

a. Volume Count: manually reviewed Iso MVRR cases to ensure patient meets study criteria
b. Iso MVRR Opportunities for Improvement (OFI): identified based on MV experts (CV surgeon and MV cardiologist) review
c. Iso MVRR Repair Rate
d. Iso MVRR Operative Mortality Rate

Data Collection Process Map





Gregg W. Stone et all. JACC 2015;66:278–307

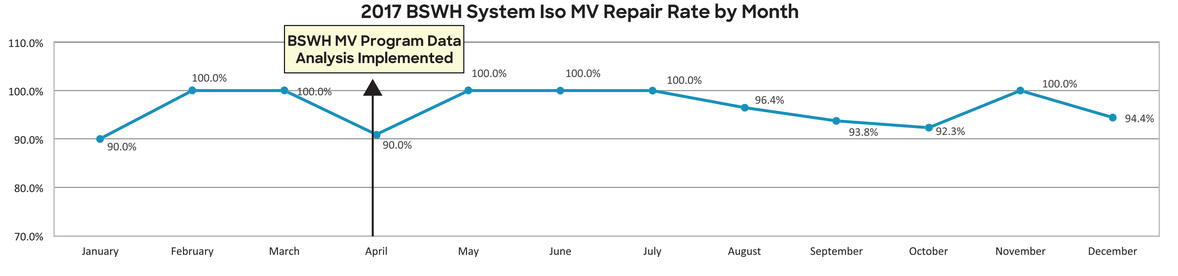
JACC JOURNAL OF THE AMERICAN COLLEGE OF CARDIOLOGY

Data Collection Elements

Patient (Demographies): MRN, Name, Gender, Date of Birth, Age	Etiology listed in OP Notes
Date of Surgery	MV Expert Carpentier Classification
Surgeon	OR Mitral Regurgitation - Residual
STS Surgery/Procedure Type	Iso MVRR Case Reviewed With OFI: Yes/No
Hospital	Issues with Echo Quality (Poor, Fair, Good)
Etiology listed in Echo	Comments

Results

2017 BSWH System	Total Iso MVRR Surgeries (excl TMVR and MitraClip)	System Iso MV Repair Surgeries (excl MitraClip)	Replace Surgeries (excl TMVR)	Iso MVRR Cases Reviewed With OFI # of Iso MVRR surgical cases with OFI based on MV Expert Review	System Iso MVRR Repair Rate Iso MV Repair Volume/(Iso MV Repair Volume+ Iso MV Replace volume that should have been repaired)	System Iso MVRR Operative Mort Count (in house + 30 day mortality)	System Iso MVRR Operative Mort Rate (in house + 30 day mortality)
YTD Totals	**315**	**203**	**112**	**8**	**96.7% (203/210)**	**6**	**1.9%**



Conclusions

Iso MVRR surgery at BSWH is high quality with a very high repair rate. Most replacements are appropriate. Mortality was mostly confined to subacute bacterial endocarditis of the mitral valve with systemic complications. Through this process, we are surfacing opportunities for improvement. Given the importance of etiology and classification in treating this disease, a routine STS database query can be insufficient to determine appropriateness of mitral valve surgery. Based on the results of our retrospective study, we strongly recommend other organizations consider a thorough audit to determine appropriate MV procedure and identify unique organizational trends.

Disclosures: P. Grayburn: Research Grant, Edwards Lifesciences, Abbott Vascular, Medtronic; M. Mack: Ownership Interest, Baylor Scott & White The Heart Hospital – Plano and The Heart Hospital Baylor Denton

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Reducing Incidence of Coronary Artery Bypass Grafting 30 Day Readmissions

STS National Database™ Participant 2018

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McLaren MACOMB

BACKGROUND

The Healthcare Gap

- Penalties have been imposed by the Centers for Medicare and Medicaid Services and other Third Party Payers for episodes of fragmented care and premature discharges to contain costs and improve quality of care.
- Developing a post discharge process bridging continuity of care was essential to reducing 30 Day Readmissions.

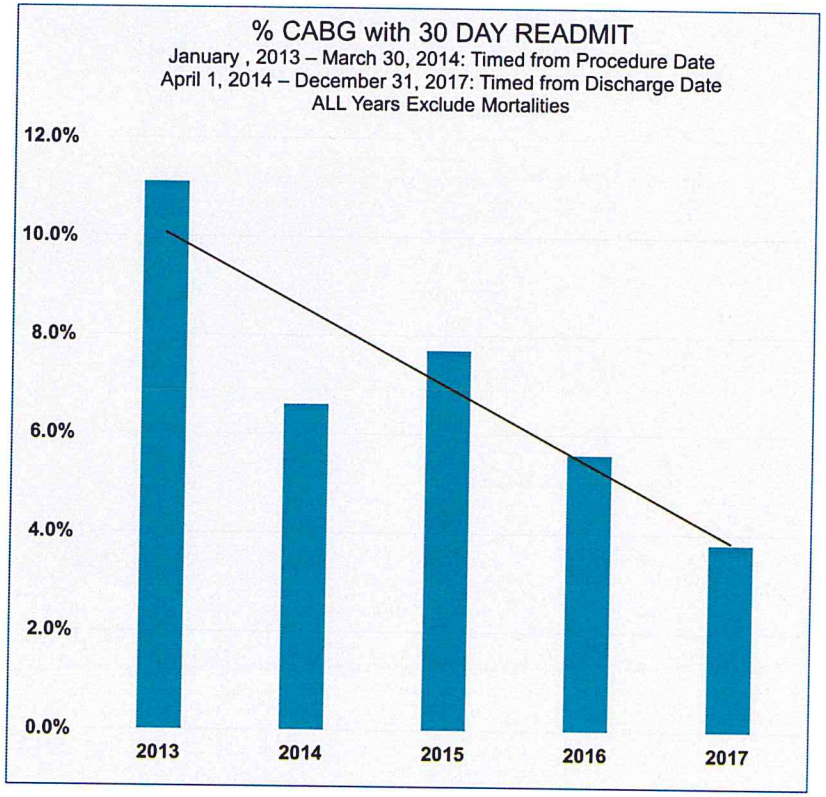
METHODS

All Postoperative Coronary Artery Bypass Grafted patients are:

- Scheduled for a post discharge appointment with the Surgeon and Cardiologist prior to discharge.
- Referred to Home Health Care services and provided with Durable Medical Equipment (for example: Life Vest for cardiac support), if needed.
- Provided with outreach phone numbers of the Surgeon and Registered Nurse First Assistants.
- Telephoned by the Registered Nurse First Assistant within 24 hours after discharge.
- Assessed for early intervention by Cardiovascular Surgeon/Physician based on the interview results (and Telemedicine data).

RESULTS

Postoperative Coronary Artery Bypass Graft readmissions within 30 days of discharge were reduced by more than half within 48 months: 11.1% to 3.8%



GAIL BELL MEMORIAL FUND

Poster sponsored by the Gail Bell Memorial Fund at the MSTCVS Quality Collaborative, Ann Arbor MI

CONCLUSIONS

Assessing Patients within 24 hours of Discharge allows for:

- Monitoring Care Plan compliance.
- Support and Education.
- Care Plan Revisions.
- Immediate physical exam PRN.

Increased Communication:

- Improved Outcomes & Quality of Care.
- Reduced readmissions and associated penalties from the Centers for Medicare and Medicaid Services and other Third Party Payers.

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