

A Statewide Quality Collaborative for Process Improvement: Internal Mammary Artery Utilization

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Background. The Michigan Society of Thoracic and Cardiovascular Surgeons (MSTCVS) Quality Collaborative is a voluntary, surgeon-directed quality initiative involving all cardiac surgery programs in Michigan. Understanding that internal mammary artery (IMA) use during coronary artery bypass grafting is an important process measure associated with improved outcomes, this analysis reviews our methodology to understand IMA use and increase appropriate IMA use statewide.

Methods. Adult cardiac Society of Thoracic Surgeons data were collected at each Michigan site and submitted quarterly to the Duke Clinical Research Institute and the MSTCVS. Seven cardiac surgery programs with IMA use less than 90% in isolated coronary artery bypass grafting were identified as *low IMA users*. An improvement plan was adopted at the state level and included quarterly monitoring of IMA use, documenting the rationale for IMA exclusion, evidence-based lectures, feedback letters to sites, and physician-led site visits if no improvement was noted.

Results. From 2005 through 2008, 29,114 patients underwent coronary artery bypass grafting in Michigan. Internal mammary artery utilization varied widely at the beginning of this investigation, ranging from 66.2% to 98.4%. Seven Michigan programs were identified as low IMA users. Using the MSTCVS Quality Collaborative's process-improvement plan, collectively the seven low IMA users increased IMA grafting from 82.0% to 92.7% ($p < 0.0001$). Michigan IMA use increased from 91.9% to 95.8% ($p < 0.0001$) and is now higher than The Society of Thoracic Surgeons' average.

Conclusions. The MSTCVS Quality Collaborative identified programs with low IMA use and created an environment to enhance IMA utilization during coronary artery bypass grafting, a significant operative process. These findings illustrate the value of a statewide surgeon-directed quality initiative in improving processes and outcomes for patients.

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The Michigan Society of Thoracic and Cardiovascular Surgeons (MSTCVS), one of the oldest regional thoracic surgical societies in the country, was founded in 1965 with Dr Cameron Haight, the head of thoracic surgery at the University of Michigan, as its first president. Early meetings focused on clinical case presentations and scientific papers. From that early start, the state society has grown to more than 121 board-certified thoracic surgeons. In the late 1990s, stimulated by discussions from purchasers in Michigan to create a publicly reported adult cardiac surgical outcomes database, the MSTCVS used its meetings to generate the formation of

a state society quality-review group. Initially, the MSTCVS established a regional data report with the Society of Thoracic Surgery (STS) and the Duke Clinical Research Institute, which included data from the Michigan adult cardiac surgery programs participating in the STS database. As additional Michigan programs voluntarily began participating in the STS database and the regional database grew, eventually every program in the state participated (Fig 1). This early experience created opportunities to share information among surgeons and institutions and developed a foundation for a statewide collaborative for process and outcome improvement. The cardiac surgeon members of the MSTCVS were a driving force in this process, assuming professional responsibility for quality in cardiac surgery.

In 2005, after discussions with Blue Cross and Blue Shield of Michigan, the dominant payer in the state of Michigan, an agreement was created to partially fund this quality initiative. These funds created payments to all hospitals for data manager support and STS database fees. This was a unique arrangement between the dominant third-party payer in the state and Michigan's car-

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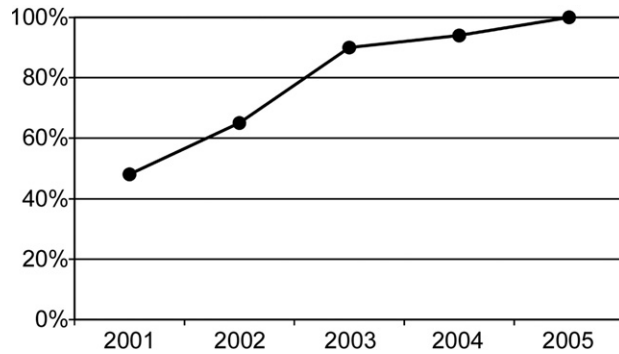


Fig 1. Cardiac surgery program enrollment in the Michigan Society of Thoracic and Cardiovascular Surgeons Quality Collaborative.

diac surgeons to improve the quality of adult cardiac surgical care on a statewide basis [1]. This model had been used earlier in the creation of the multicenter interventional cardiology database known as the Blue Cross Blue Shield of Michigan Cardiovascular Consortium or BMC2 [2].

Initial quality efforts of the collaborative were developed and focused on outcome and process measures in isolated coronary artery bypass graft (CABG) procedures and included internal mammary artery use (IMA), preoperative intraaortic balloon pump use, postoperative prolonged ventilation, postoperative atrial fibrillation, and crude as well as risk-adjusted mortality. This review focuses on the MSTCVS collaborative's plan to improve IMA usage recognizing the National Quality Forum, Physician Quality Reporting Initiative, and STS Quality Measurement Task Forces identification of IMA use during isolated CABG as an important process measure and understanding its correlation with improved survival [3-7].

Patients and Methods

Internal mammary artery use was selected for process improvement for the entire state based on the collaborative's recognition that IMA underutilization occurred at several sites. Patients undergoing isolated primary CABG in the state of Michigan from 2005 through 2008 are included in this review. The STS and additional MSTCVS data elements are collected at each hospital by trained data abstracters and submitted quarterly to the STS database at the Duke Clinical Research Institute and the MSTCVS data repository. Yearly data audits are performed to enhance reliability. The University of Michigan institutional review board did not believe this study fit the definition of human subjects research and was a quality improvement activity, thus a waiver was granted.

Internal mammary artery use rates were calculated by using only isolated, non-redo CABG cases. Percent IMA use was calculated by dividing the number of cases with at least one IMA graft by the number of primary isolated CABG cases. Bilateral IMA and single IMA graft cases were included in the numerator. Conversely, patients undergoing a single bypass using only a vein graft to a right coronary artery were not included in the numerator

but were included in the denominator. Redo cases were excluded for calculating the IMA variable. Emergency cases were included for both the IMA variable and CABG data.

To create a target goal, the MSTCVS Quality Collaborative established a statewide minimum benchmark of 90% IMA utilization for each cardiac surgery program. This benchmark was established based on known STS utilization from 2003 to 2004 and observed Michigan practice patterns. Seven programs with less than 90% IMA use in 2005 were identified. For the purposes of this report, these programs were called *low IMA users*. These seven sites varied in characteristics and included hospitals that were teaching and nonteaching, those with low, moderate, and high cardiac surgical volume, surgeons who were in private practice and hospital based, and hospitals in urban as well as rural settings.

An improvement plan was developed at the state level by the MSTCVS collaborative and was discussed and provided to all hospitals and surgeons. This plan included the following steps: step 1, identification of a

Fig 2. The Michigan Society of Thoracic and Cardiovascular Surgeons (MSTCVS) internal mammary artery (IMA) Exclusion Form. (CAB = coronary artery bypass; LAD = left anterior descending coronary artery; LIMA = left internal mammary artery.)

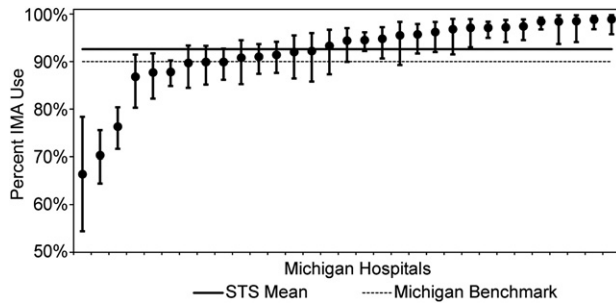


Fig 3. 2005 internal mammary artery (IMA) use for each of the 31 Michigan cardiac surgery programs.

“surgeon champion” responsible for quality initiative implementation at each site; step 2, reporting of IMA use at the quarterly MSTCVS Quality Collaborative meetings attended by surgeons and data managers, with focus placed on the low IMA users. Monthly IMA use was shown unblinded for review and discussion; step 3, creation of an IMA exclusion form for use by the low IMA user site surgeons to document the reason the IMA was not used on individual cases (Fig 2). This form was also offered to all sites in the state for self tracking if desired;

step 4, lecture presentations at the quarterly meetings with evidence-based information supporting IMA use; step 5, feedback letters to low IMA user site surgeons reviewing their utilization rates and specifically the collated results from their IMA exclusion documentation by surgeon; step 6, quarterly meetings held at low IMA user sites when possible to encourage participation by all surgeons at the site; and step 7, potential physician-led site visits to programs with no improvement in IMA use if necessary.

Clinical data reported in this investigation were obtained from the STS database at Duke Clinical Research Institute and the MSTCVS data registry. The STS data had Michigan data excluded so statistical comparisons could be made. The Michigan data includes the low IMA users. Internal mammary artery use rates for the STS, Michigan, and the low IMA users were analyzed for significant change within each category by constructing probability values based on Pearson χ^2 tests. Additional comparisons between Michigan and STS IMA use rates were done by constructing 95% confidence intervals. The preoperative clinical characteristics for data from 2005 to 2008 for low IMA users and Michigan were compared with the data from the STS for statistical differences.

Table 1. Preoperative Clinical Characteristics for Isolated Coronary Artery Bypass Grafting (2005–2008): Low Internal Mammary Artery Users and Michigan Compared With Society of Thoracic Surgeons

Variable	Low IMA Users	STS	<i>p</i> Value Low IMA Users Compared With STS ^a	Michigan	STS	<i>p</i> Value Michigan Compared With STS ^a
Median age (y)	65	65	NS	65	65	NS
Race: black (v.2.52) ^b	6.35	6.22	0.6322	8.82	6.22	<0.0001
Race: non-Caucasian (v.2.52) ^b	12.67	15.49	<0.0001	12.62	15.49	<0.0001
Female sex	28.33	27.34	0.0814	28.28	27.34	<0.0001
Diabetes	37.34	38.23	0.1450	40.21	38.23	<0.0001
Hypertension	82.05	81.93	0.8074	83.64	81.93	<0.0001
Smoker (v.2.52) ^b	64.79	61.88	<0.0001	65.90	61.88	<0.0001
Severe chronic obstructive pulmonary disease	2.48	3.33	<0.0001	2.13	3.33	<0.0001
Dialysis	1.87	1.97	0.6055	2.09	1.97	0.337
Peripheral vascular disease	15.40	14.82	0.1985	16.70	14.82	<0.0001
Previous percutaneous coronary intervention	23.82	21.96	0.0004	23.16	21.96	<0.0001
Previous myocardial infarction	47.38	44.96	0.0001	47.04	44.96	<0.0001
Congestive heart failure	12.08	14.03	<0.0001	14.09	14.03	0.087
Unstable angina	36.19	39.66	<0.0001	32.17	39.66	<0.0001
Cardiogenic shock	1.45	2.01	0.0014	1.88	2.01	0.007
Left main disease	31.84	30.78	0.0677	32.98	30.78	<0.0001
Three-vessel disease	75.85	75.91	0.9102	76.42	75.91	0.135
Ejection fraction <0.50	42.41	49.87	<0.0001	50.34	49.87	<0.0001
Elective status	42.09	46.82	<0.0001	36.50	46.82	<0.0001
Urgent status	54.05	48.16	<0.0001	58.79	48.16	<0.0001
Emergent status	3.67	4.75	<0.0001	4.48	4.75	0.001

^a Probability values are based on χ^2 tests for all categorical row variables. because of definition change in version 2.61.

^b Society of Thoracic Surgery adult cardiac database version 2.52 reported

Results

This review includes 29,114 patients undergoing primary isolated CABG in Michigan from 2005 through 2008. In 2005, there were 31 existing cardiac surgery programs, and they reported a range of IMA utilization from 66.2% to 98.4%. The IMA use for Michigan in 2005 was 92.1%, whereas IMA use for the STS was 92.7%. Figure 3 details IMA use rates for the 31 Michigan programs in 2005. Seventeen Michigan programs performed at the STS mean or higher. Nine programs had IMA utilization less than 90%; however, two sites had already initiated process improvement plans. Therefore, the remaining seven sites were identified as low IMA users and were targeted for the MSTCVS improvement plan. During the study period no other programs had IMA use less than 90% for two consecutive 6-month periods; therefore, no additional programs were designated as low IMA users.

Michigan patients had a median age of 65 years, 28% (8,241) were women, and 87% (25,464) were white. Previous percutaneous coronary intervention occurred in 23% (6,786), left main coronary artery disease was present in 33% (9,534), and three-vessel coronary artery disease was present in 76% (22,224) of patients. Univariate analysis identified some differences when the low IMA users and Michigan were compared with STS values for the 4-year period and are noted in Table 1.

Internal mammary artery use data for STS, Michigan, and the low IMA users are illustrated in Figure 4. In 2005, the low IMA users had an IMA utilization rate of 82.1%, and this increased significantly during the 4-year study period to 92.9% ($p < 0.0001$). The state of Michigan overall also increased from 92.1% to 95.9% ($p < 0.0001$). The rate of STS IMA use was also found to increase significantly during the investigation ($p < 0.0001$). Michigan overall and STS IMA use during the 4-year study period is depicted in Figure 5 with 95% confidence intervals. Initial Michigan IMA utilization was slightly less than that of STS but fell within the depicted confidence intervals. At the end of the review in 2008, Michigan's IMA use was higher than that of STS, and this difference was significant.

Using the IMA exclusion criteria form filled out by the operating surgeon, the seven Michigan programs designated as low IMA users provided feedback for IMA

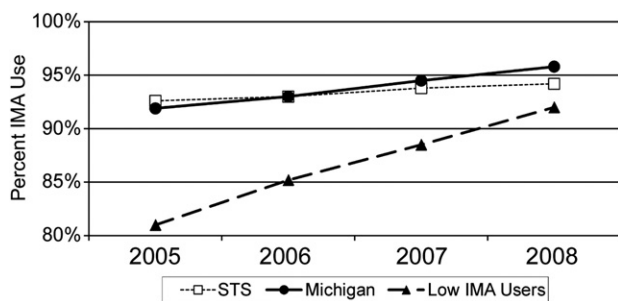


Fig 4. Internal mammary artery (IMA) use from 2005 to 2008 for the Society of Thoracic Surgeons database (STS), Michigan, and the low internal mammary artery users.

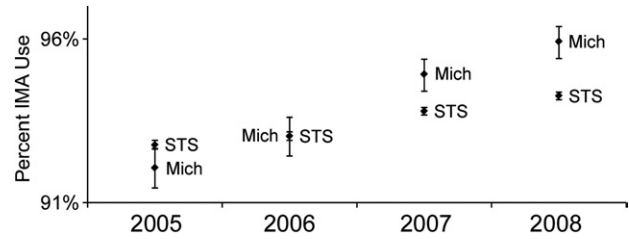


Fig 5. Internal mammary artery (IMA) use from 2005 to 2008 for Michigan (Mich) and the Society of Thoracic Surgeons database (STS) with 95% confidence intervals.

exclusion starting in July 2006. Two hundred forty-two exclusion forms, representing 72.5% of those monitored programs for IMA exclusions, were submitted. One program with rapidly increasing IMA utilization ceased submitting forms in 2007. The reasons for IMA exclusion are given in Table 2. The leading reasons were the left anterior descending coronary artery was not suitable for IMA grafting, competitive flow concerns, and an emergent or unstable case.

Further analysis of IMA use for the low IMA users is shown in Table 3 for six preoperative variables, including advanced age (>75 years), sex, race, ejection fraction less than 0.50, left main coronary artery disease, and emergent status for the 4 years. As shown for each variable reviewed, IMA use started at less than 90% and increased during the 4-year period. The discrepancy in IMA use is further apparent when IMA use is examined by STS predicted mortality risk group. This analysis is shown in Figure 6, in which the low IMA users (Fig 6A) are compared with STS (Fig 6B). The low IMA users had lower usage rates than STS in every risk category; however, the difference was more pronounced in the high-risk cases. When the preoperative STS risk predicted mortality risk was greater than 5%, the low IMA users had an IMA use rate of 56% in 2005. In each subsequent year, the low IMA users had an increase in IMA use in each risk group, but the utilization rates were still less than 90% for any patient with a predicted risk of more

Table 2. Results of Internal Mammary Artery Exclusion Forms Submitted

Indication for IMA Exclusion	Number of Responses	Percent
LAD inadequate	56	23.14
Left main/competitive flow	45	18.60
Emergent/unstable	36	14.88
IMA not usable	27	11.16
Chest wall issues	25	10.33
Severe comorbidity	23	9.50
No LAD disease	16	6.61
Subclavian stenosis	10	4.13
Age	4	1.65
Total	242	100%

IMA = internal mammary artery; LAD = left anterior descending artery.

Table 3. Percent Internal Mammary Artery Use Per Year for Low Internal Mammary Artery Users in Six Preoperative Clinical Characteristics

Clinical Characteristics	2005	2006	2007	2008
Age > 75 y	74.53	77.60	83.33	87.50
Female sex	75.43	76.92	83.14	89.96
Race: nonwhite	84.29	90.48	89.53	94.54
Ejection fraction ^a <0.50	80.63	84.81	88.91	91.65
Left main CAD disease	76.39	82.81	86.97	91.54
Emergent status	55.68	66.13	50.00	80.43

^a Ejection fraction <0.10 excluded.

CAD = coronary artery disease.

than 2% to 5%, and 80% for patients with a predicted risk of greater than 5% in 2008.

Mortality outcomes are shown in Table 4. There were no significant differences in unadjusted operative mortality for isolated CABG during the 4 years for the low IMA users or Michigan when compared with STS. Furthermore, no unintended consequences (increased complications) occurred at the low IMA user sites when compared with the state of Michigan regarding postoperative bleeding, prolonged ventilation, sternal wound infections, or other complications.

Comment

Internal Mammary Artery Use as a Process Measure

The benefits of IMA utilization in isolated CABG procedures have been well documented in multiple studies. Single institutional studies and multicenter reviews reveal both improved short-term and long-term survival after CABG using the IMA [5-8]. The benefits of IMA grafting appear to be present even in the advanced age and high-risk groups. Overall mortality reduction seems to be consistently present in the highest risk cases [7, 8].

The MSTCVS selected IMA usage for statewide process improvement based on underutilization at several hospitals and the clear support of data for significant positive impact on survival. The National Quality Forum selected this as a quality measure in their initial cardiac surgery performance measures, and it is also a reported quality measure for the Physician Quality Reporting

Initiative. The STS quality task force selected IMA use as the only intraoperative process measure. These identifications make IMA use in isolated CABG ideal for benchmarking and quality improvement programs, especially recognizing that IMA utilization is a unique variable because its use is solely the responsibility of the operating surgeon [3, 4].

With this responsibility as a reality, the MSTCVS believed that as a quality collaborative, our ability to have a significant effect on surgeons themselves would actually be part of the observational lessons from this type of approach. Interestingly, improved IMA utilization has been documented before by other quality initiatives, including the Northern New England Cardiovascular Disease Study Group and the Alabama CABG Study Group [9, 10]. Both of these groups identified IMA use as a process of care suitable for quality improvement. Our findings in Michigan parallel these and demonstrate, as Tabata and coworkers [11] recently showed, significant variability in IMA use among programs.

Reasons for Internal Mammary Artery Exclusion

The IMA exclusion forms used a simple documentation format that provided insight into purported rationale for IMA exclusion. With sharing of practice patterns and the appropriateness of IMA utilization, subsequent IMA use during the 3 years increased. Initial rationale for exclusion of the IMA dissipated during the time of the review as surgeons became more comfortable with IMA utilization. Although observations reveal improved utilization at the seven low IMA user sites, current utilization rates in higher operative risk groups remain less than 90%, providing opportunity for continued discussion and potential ongoing improvement activities. These findings strongly suggest that a possible reason for decreased IMA use may be related to overall operative risk rather than specific clinical variables such as age, sex, and race. Although our investigation initially did not monitor IMA use by specific surgeon, this cannot be overlooked and warrants further study.

The Michigan Society of Thoracic and Cardiovascular Surgeons Quality Collaborative

The MSTCVS Quality Collaborative has created a framework to influence surgical operative decision making in a

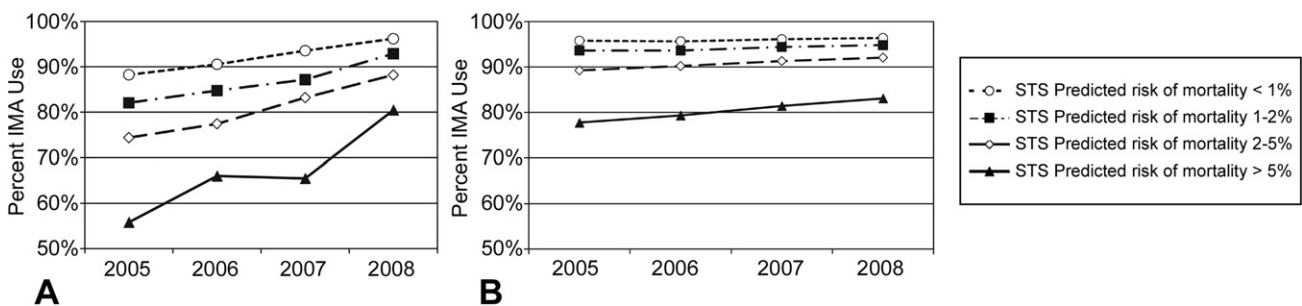


Fig 6. Variation in internal mammary artery (IMA) use by the Society of Thoracic Surgery (STS) predicted risk of mortality. Low IMA users in Michigan (A) and national utilization in the STS database (B).

Table 4. Comparison of Crude Operative Mortality (2005–2008): Low Internal Mammary Artery Users Compared With Society of Thoracic Surgery and Michigan Compared With Society of Thoracic Surgery

Variable	Low IMA Users	STS	<i>p</i> Value Low IMA Users Compared With STS	Michigan	STS	<i>p</i> Value Michigan Compared With STS
Operative mortality	1.95	1.98	0.8962	2.00	1.98	0.803
In-hospital mortality	1.54	1.72	0.2903	1.71	1.72	0.912
Predicted operative mortality	1.79	1.98		1.98	1.98	

IMA = internal mammary artery; STS = Society of Thoracic Surgery.

statewide format and has actually improved the quality of cardiac surgical approaches in the state of Michigan. By identifying programs with low IMA utilization and providing the architecture and peer culture for these programs to self-evaluate and improve with time, we have provided support for surgeon-led quality initiatives, creating regional process and outcome improvements [12–15]. It is worth noting that with this approach, IMA utilization increased and no site visits were necessary. This process provides support for the conceptual role of the surgeon as the leader in quality initiatives using outcome data to drive process and outcome improvements. As a result, IMA utilization increased for the designated low IMA users and for the entire state of Michigan. The STS rate of IMA utilization increased during this time as well, and this could clearly have influenced IMA utilization in the state. Our findings indicate that the collaborative itself had an additional effect on IMA utilization, above and beyond STS trends. As noted, by 2008, Michigan had an IMA use percentage that was significantly higher than the STS percentage.

Recognizing the value of reviewing one's own data as well as comparing these data to the region and to the nation has inherent worth, and creates a more intense, energized, and practical approach to improvement by offering an enhanced opportunity for process and outcomes advances. Powerful incentives occurred with the repetitive presentation of site-specific unblinded data that were peer reviewed in an open fashion and created a culture of discussion as well as opportunity. The value of open collaborative approaches cannot be underestimated as a vehicle and method for multiple hospital improvement initiatives [16–18].

The MSTCVS Quality Collaborative provides Michigan surgeons a powerful mechanism to direct quality improvement in their hospitals. These early results from the MSTCVS Quality Collaborative are encouraging and provide a platform to use this approach in other clinical areas including mortality review, valvular heart surgery, prolonged ventilation, postoperative atrial fibrillation, statewide blood conservation, readmission rates, venous thromboembolism prevention, and general thoracic surgery procedures, among others. Furthermore, the evolution of a collegial environment has fostered opportunity for expanded participation in the MSTCVS collaborative membership and now includes perfusionists, anesthesiologists, physician assistants, and cardiovascular administrators as associate members.

Recognizing that the MSTCVS Quality Collaborative represents one approach to creating process and outcome improvements, it is clear that it allows cardiac surgeons the opportunity to be responsible owners in the quality movement. This participation creates the future potential for outcome improvements, resource utilization analysis, and sharing of approaches and processes that lead to improved quality for an entire state.

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DISCUSSION

DR MICHAEL MACK (Dallas, TX): I had the opportunity to see this program up and close personally this summer while I visited your meeting, and I was wholeheartedly impressed by this effort and I came away saying, why doesn't every state do this? I am going to talk about this tomorrow in the presidential address. I think that every state should be doing statewide quality outcomes. What are the biggest obstacles that you found getting a statewide initiative together? What are three key take-aways that you can give surgeons to begin initiatives in their state? And then please talk briefly about the partnership with the major payer in the state, Blue Cross-Blue Shield.

DR ROBERT J. CERFOLIO (Birmingham, AL): And fourthly, since I had a chance to go as well, tell us about the family-oriented nature and the time of the meeting and where you have it.

DR JOHNSON: I will pick up that last question first; that is a softball. We do have statewide quarterly meetings, they involve all the cardiac surgery programs and include surgeon champions and data managers. We do have an annual summer meeting, and that is a very family-oriented event, usually held in northern Michigan, and we invite distinguished guest lecturers like Dr Cerfolio, Dr Mack, and others to come talk to us about what is happening on the national scene.

In terms of the obstacles to overcome to get the collaborative initiated, I am going to defer to Dr Prager, I know he is sitting in the crowd, because I think his experience in talking about this will be better, and I want Rich to stand up and answer this question, because my perspective, having been in Michigan for three and a half years, is a little different than Rich's is and I would like him to comment.

DR PRAGER: Very briefly, the obstacles are us! What broke down the obstacles, frankly, was that we also were supported by enough cardiac surgeons at major-player hospitals geographically located on this Google earth map. So we got big players east, west, north, south and gradually everyone else played. At the same time there was pressure in southeast Michigan when the autos were still the Big Three to create their own database by a health organization; a private healthcare group in southeast Michigan wanted to acquire cardiac surgery data and publish it, and with that as an incentive in the late 1990s, the MSTCVS (Michigan Society of Thoracic and Cardiovascular Surgeons) started playing this role. The Blues, and I will take that part, too, because I negotiated with the Blues. Blue Cross/Blue Shield of Michigan is the largest insurer in the state and they originally worked with a group of interventional cardiologists at eight sites in Michigan, a small number of sites, to improve quality through collaboration—for example, deciding when to use nonionic contrast, how to reduce blood transfusions—and they started saving money.

They came to our organization on multiple occasions saying we will help fund your initiative, we think you are on the right path. The bottom line is they did. They paid the STS fee at each site and the data manager fee at each site. We now have a coordinating center and multiple initiatives underway. So they have invested in us and we would like to believe we are continuing to improve our processes and outcomes and they have helped foster this approach.

DR FREDERICK GROVER (Denver, CO): I agree with Dr Mack's comments. This is a great effort and a model I think for how the STS database should be used. We are fairly good, I think, at using the data reports in our own hospitals, to see where we have some areas that we can improve on. But what you have done is carry it to a different level, at the state level, and have used the database to identify areas where there are variations to focus on for improvement, identifying important processes of care that are associated with greater short-term and long-term survival. You then got the group together and broke down the barriers by getting your surgeons to share their data, which is not easy to do.

I hope you can carry this process forward during your STS presidency promoting activity at the state level, because I think as we get more into public reporting and in order to continue to improve quality, analyzing data at the state level and meeting together will become very important. Again, congratulations to the authors. My one question is, what is your next project?

DR JOHNSON: Well, we have a lot of plans to tackle additional projects; we have already moved into valvular heart surgery, and we are looking at other processes, including blood utilization. So we are basically launching our kind of second front on other process measures, and we are going to continue with that.

DR MACK: I would add, I think one of the areas you are beginning to assess is mitral valve repair, and one of the other keys to the success is you are having different surgeons that have particular areas of interest lead the effort. For instance, Dan Drake is going to tackle mitral valve repair, and I think that that just creates further buy-in.

DR JOHNSON: And one of the mechanisms that Dr Prager has utilized in this collaborative is he has allowed different Michigan surgeons to develop an area of expertise, mine was IMA utilization and Dr Drake is going to develop mitral valve disease and other surgeons have picked up the ball and run with other specific areas as well.

DR MACK: So the answer to Dr Grover, we are having Dr Prager visit us in December to hopefully get us going in Texas, but his dance card is open I understand for 2010. So you can everyone please fill up Rich's dance card with their state.