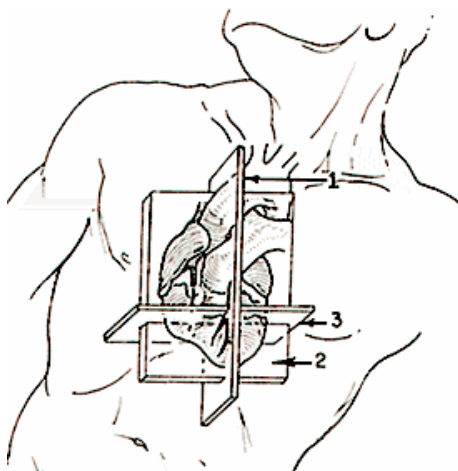


# STS Database by Medical Dynamics



*Organized, Efficient STS Registry Recording*



## **Tested and Certified by the STS:**

The Medical Dynamics STS Software has been fully tested and certified by the STS. Medical Dynamics was one of the first STS Certified Vendors.

## **Report Cardiac Surgical Outcomes:**

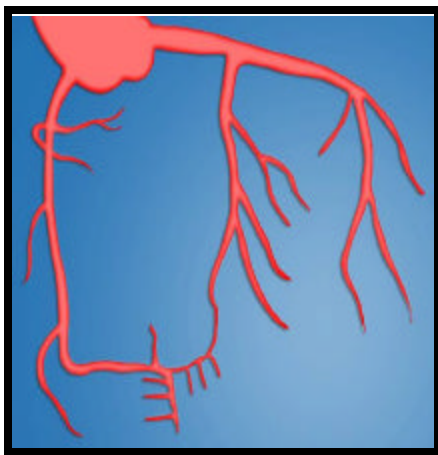
Continuous Quality Improvement, Cardiac Surgical Outcomes Reporting and rigorous Quality Assurance Programs are more effective when based on the STS Core Data Elements. With over 1.5 million patients, the STS database provides unmatched outcomes comparisons.

## **Outcomes based on Clinical Risk Factors:**

Hospital claims based outcome reporting often does not consider crucial Clinical Risk Factors. The STS Database predicts Risk Stratified operative mortality and Length of Stay by taking meaningful clinical Risk Factors into account. This provides a true picture of Clinical Outcomes Results. For benchmarking, hospitals receive reports contrasting their results with the local Geographic Region as well as the Nation at Large. Medical Dynamics STS software enables a comprehensive suite of internal reports that yield historical and up to the minute information for monitoring and reporting purposes.

## **Data Harvest to the Duke Clinical Research Institute DCRI:**

Two times a year, the Medical Dynamics STS Database data is forwarded to the Duke Clinical Research Institute based in Durham. There the data is placed in the STS Data Warehouse. The DCRI then develops institution-specific reports providing feedback on data quality and analysis of the Hospitals cardiothoracic surgery outcomes in comparison to national and regional averages. Before being sent to Duke Clinical Research Institute, the data is extensively checked and cross-checked by the Medical Dynamics STS Export software to assure correct data.



## Benefits using Medical Dynamics STS Software and STS Participation:

- National and Regional benchmark comparisons .
- Medical Dynamics keeps you current. All STS changes are rapidly put in place.
- Medical Dynamics is COST effective.
- Your STS can be a simple standalone to a multi-user multi-hospital system.
- Your data can be harvested from other sources (Cath Lab, Information Systems, etc.).
- Your data can be sent to other sources using Medical Dynamics Proprietary Data Distributor.
- HL7 Hospital IS connections available.
- Over 250 User Defined fields add a custom touch to your STS
- Unlimited reporting system.
- Uses Microsoft standard products (SQL, Access, Word, Excel, etc.).
- Can work with Oracle and Microsoft SQL data warehouses.
- Encrypted databases available.
- Email support from within programs.
- Onsite STS specialist.
- Medical Dynamics focuses on STS and ACC.
- Analyze the care continuum of cardiac surgical patients.
- Your Hospital is identified with a national quality improvement program.
- Quality improvement effort results are documented.
- Demonstrate quality of care to Third Parties.
- Immediate and accurate response to request for outcome data .
- Potential areas for improvement are identified.
- Practice patterns are documented.
- Cross-match and rationalize cost containment data with clinical outcome data.
- Medical Dynamics STS permits “real-time” analysis of outcomes without waiting for Harvest Reports.

## Effortless Data Entry:

Organized along the lines of the form recommended by the STS, each field is easy to understand and provides a clear presentation of what is required.

## Reports

Using common products like Microsoft Access, Crystal Reports or a visit to Medical Dynamics Advanced Report Generation classes will provide you with virtually unlimited reporting capability. We realize many prefer using the comprehensive set of canned reports furnished with the standard offering. Some of the reports available are:

### Some Reports

1. Operative Mortality
2. Mean Age
3. Gender
4. Weight Distribution
5. Diabetes Presentation
6. Pre-Op Cardiac Status
7. Chronic Lung Disease Presentation
8. Peripheral Vascular Disease presentation
9. Cerebrovascular Disease Presentation
10. Cerebrovascular Accident
11. Renal Failure
12. Previous Cardiac Interventions
13. Procedure Status (Emergent or Salvage)
14. Pre-Op Cardiac Status MI
15. Pre-Op Cardiac Status MI 0-7 Days Prior
16. Pre-Op IABP Usage
17. Triple Vessel Disease from Cath Data
18. > 50% Stenosis in Left Main
19. Ejection Fraction < 40%
20. Cross Clamp Time
21. Perfusion Time
22. IMA Used
23. Mortality by Age
24. Mortality by Gender
25. Mortality presentation status
26. Mortality by Incidence
27. Complications, any major
28. Reoperations

## Menu Selections for frequently used items:

Data entry for frequently used selections is made easy by pull down menus. Each of these can be edited at anytime adding a great deal of flexibility and control.

- Referring Cardiologist
- Referring Physician
- Payer
- Hospital
- Operative Surgeon

<b>Hospital:</b>	ST. FRANCIS, B
<b>Payor:</b>	Hospital Name
<b>Day Elective Admit</b>	Duke University Medical Center
<b>Date of Admission:</b>	Grand Strand Medical Center
	Richland Memorial Hospital

## Medical Dynamics STS Software can report on all STS Data Elements:

Every single field in the STS core data elements can be reported on, compared against or analyzed using reporting tools contained in the STS Software application. If the large number of furnished reports does not fully cover your exact needs, the data can be fully analyzed using custom reports in Microsoft Access or Crystal Reports. Some of our larger Hospital groups bring together STS core data elements from several of their member Hospitals and analyze outcomes within the group. The Medical Dynamics STS Database provides unlimited flexibility in outcomes reporting.

## Extended or "Custom" Fields:

For local outcomes, the Medical Dynamics STS Database provides up to 255 user defined custom fields. Each patient encounter can have a complete set of custom data points collected. These can then be reported along with the STS Core data elements. These extra fields are standard, not optional, with the Medical Dynamics STS Database.

29. Permanent Stroke
30. Prolonged vent
31. Deep Sternal Infection
32. Renal Failure during stay
33. Total length of stay
34. Total length of stay by MD
35. Post procedure length of stay
36. Length of stay under 6 days
37. Length of stay over 2 weeks
38. Same day elective admissions
39. BSA presentations
40. Morbid obesity
41. Hypertension
42. Hypercholesterolemia
43. History of CAD
44. Smoking history
45. Chronic Lung disease
46. Congestive Heart failure
47. NYHA Classification breakdown
48. Peripheral Vascular Disease
49. Cerebrovascular disease
50. CVA
51. Renal Failure
52. Immunosuppressive Treatment
53. Previous Cardiac Surgery
54. Previous PTCA/Athrectomy
55. Surgery Status
56. MI
57. Thrombolysis
58. Cardiogenic Shock
59. IABP
60. Resuscitation
61. Angina
62. Arrhythmia
63. Meds: Aspirin
64. Meds: Anti-Coagulant
65. Meds: Digitalis
66. Meds: Beta Blockers
67. Meds: Nitrates
68. Meds: Diuretics
69. Meds: Intropics
70. Meds: Steroids
71. Number of Diseased Vessels
72. Left Main Disease
73. Ejection Fraction
74. Pulmonary Hypertension
75. Aortic Stenosis
76. Mitral Insufficiency
77. Internal Mamary Artery utilization
78. Cross Clamp Time breakdown
79. Perfusion time

## Interfacing:

Medical Dynamics has long been a leader in interfacing to clinical instruments and Hospital systems. A most valuable interface is to the Hospital HL7 ADT (used for Admission date, demographics, discharge date, social security number and other information). Medical Dynamics also has standard interfaces to instruments used to collect STS and ACC core data elements. These interfaces are in the instrument vendor format eliminating custom programming cost by equipment vendors and IS staff. Some of the standard interfaces are with GE, Witt Biomedical, Mennen Instruments, Camtronics, Quinton Instruments, Midas and Siemens as well as many others. The Medical Dynamics interfaces are unique in that they account for multiple patient procedures during the same hospital stay. This is crucial in preventing duplicate admission counts on outcomes reports.

## Data Migration Tools:

Tools currently exist for moving legacy STS data into the proper STS Core Data Element fields and interpreting the proper format for the data. This would be of interest to Hospitals and Surgeons that used the Summit Medical System STS database a few years back.

## Training:

Training can be arranged either on-site or at our training facility in Charleston, South Carolina. The Charleston training is held regularly and covers the basic STS data management as well as extensive custom reporting and query making. This historic and very popular port city has proven to be an excellent environment for acquiring basic and advanced data management skills.

## Implementation:

Software performs best when properly implemented. Medical Dynamics offers on-site specialist to assist in setting up and maintaining a successful data collection and data entry program. This service is available at anytime.

## Support:

For over 16 years Medical Dynamics has been known for their quality support. Standard support hours are 8:00 am to 6:00 pm Eastern time. Support 24 hours a day and 7 days a week including holidays is available if needed. Support is normally by telephone or Email. Every site is provided with program enhancements that enable remote dial in assistance and upgrade services. This remote dial-in access sets up a "one on one" support environment for your users. Often, basic training can be furnished or enhanced by the dial-in facility. On-site support is arranged as needed.

80. Ventilation Hours
81. Blood Product Usage
82. In-Hospital Mortality
83. Operative Mortality
84. Overall Complications
85. Reoperative Complications
86. Operative Complications
87. Infection Complications
88. Neurological Complications
89. Pulmonary Complications
90. Renal Failure Complications
91. Vascular Complications
92. Other Complications
93. Short Stay < 6 days
94. Long Stay > 6 days
95. Off Pump Procedure
96. Operative Mortality by Pump Status

## Easy to Buy:

The base STS system can be operational in one day. Checks and cross checks assure quality data goes in from day one. Medical Dynamics has a number of different purchase plans available. Plans are available that provide a fully certified STS system for no initial software cost. The purchase of the system can be integrated into a long term support plan. Everything considered, there isn't a better STS package available.

## How does it work?

Several methods for data collection and input are used. The most common is direct key entry into a dedicated computer of all the STS data points. Another very popular method is having the Hospital IS department send demographic and discharge information by network to the STS database. This would include demographics, complications during Hospital stay, discharge date and mortality information. Also, a number of STS data collection points are common to ACC (American College of Cardiology) data points. This information can be "Cross-Loaded" using the Medical Dynamics "Data Distributor". On the same topic, data points can also be populated directly from Cath Lab hemodynamic monitors. Medical Dynamics makes it easy to create and use a well rounded STS data collection system. A lot of the effort is handled automatically.

c. Medical Dynamics, 2003

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