STS National Database:

ACSD Monthly Webinar

February 7, 2024
Agenda

Welcome and Introductions

STS Updates

Frailty Project
STS Updates

- February Training Manual Posted
- Beta Blocker Data Collection
- H 4 Reports Released
- H1 Closes on February 23, 2024
Important Dates

7 Feb. 2024
ACSD Monthly Webinar @ 2pmCT

13 Feb. 2024
ACSD Webinar – Preparing for Harvest Close

23 Feb. 2024
Harvest 1 Close (OR Dates through December 31, 2023)

6 Mar. 2024
ACSD Monthly Webinar @ 2pmCT

Updates to the ACSD Executive Dashboard for the missingness to be released

ACSD STS DB Quality Improvement Series/Beta Blocker @ 2pmCT

Harvest 1 Opt-out Ends

10 Feb. 2024
21 Feb. 2024
27 Feb. 2024
<table>
<thead>
<tr>
<th>Term</th>
<th>Harvest Submission Window Close</th>
<th>Opt-Out Date</th>
<th>Includes Procedures Performed Through:</th>
<th>Report Posting</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Harvest 1</td>
<td>2/23/2024</td>
<td>02/27/2024</td>
<td>12/31/2023</td>
<td>Spring 2024</td>
<td>Star Rating</td>
</tr>
<tr>
<td>Harvest 2</td>
<td>5/24/2024</td>
<td>05/28/2024</td>
<td>3/31/2024</td>
<td>Summer 2024</td>
<td></td>
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<td>Harvest 3</td>
<td>8/23/2024</td>
<td>8/27/2024</td>
<td>6/30/2024</td>
<td>Fall 2024</td>
<td>Star Rating</td>
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<tr>
<td>Harvest 4</td>
<td>11/22/2024</td>
<td>11/26/2024</td>
<td>9/30/2024</td>
<td>Winter 2024</td>
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</tbody>
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*Data Submission Open is continuous for all harvest terms. Submission Close occurs at 11:59 p.m. Eastern on the date listed.*
Collection of Frailty Data in the STS National Databases: What's Coming

Moritz C. Wyler von Ballmoos, MD, PhD, MPH, FACC, FAHA
System Chair, Cardiovascular & Thoracic Surgery
Physician Executive Lead, Heart & Vascular Service Line
Texas Health Resources

#STS2024
Disclosures

Consultant/Proctor: Medtronic, Boston Scientific
Summary:

1. Why frailty is so important
2. What metric & data collection were chosen & why
3. Technical aspects of frailty data collection
4. Timeline for implementing frailty assessment into ND
5. Questions
Important Aspects: Frailty Assessment

• Elderly & frail is fastest growing demographic in North America

• Frailty is common among cardiac & thoracic surgery patients

• Frailty is more common in elderly, but is a condition independent of biological age and therefore an independent risk

• Frailty associated with prolonged hospitalization, morbidity & mortality
Medicare-Linked STS ACSD Dataset

Isolated CABG, isolated AVR, AVR/CABG; n= 294,672 (Segal et. al CBFi)

### Risk increase after STS PROM adjustment: 30-day outcomes

<table>
<thead>
<tr>
<th></th>
<th>Death</th>
<th>Prolonged Ventilation</th>
<th>Stroke</th>
<th>Renal failure</th>
<th>None-home discharge</th>
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</thead>
<tbody>
<tr>
<td><strong>x 2.0</strong></td>
<td>x 4.0</td>
<td>x 2.3</td>
<td>x 3.1</td>
<td></td>
<td>x 4.8</td>
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</table>

### Risk increase after STS PROM adjustment: 1-year outcomes

<table>
<thead>
<tr>
<th></th>
<th>Death</th>
<th>Readmission</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>x 2.8</strong></td>
<td>x 1.9</td>
<td></td>
</tr>
</tbody>
</table>
The Problem of Not Adjusting for Frailty

5 years of CABG Data ACSD:

"Fitness"

Vulnerability

STS Risk Model Calibration across Frailty Groups
The Problem of Not Knowing Frailty In Our Patients

No standardized frailty assessment of all patients

= 

1. Shared decision-making is based on incomplete information

= 

2. Risk models & risk-adjusted performance metrics are incorrect
Requirements: STS Frailty Test/Measures

- Low effort & high yield
- Robustly validated
- Agnostic to diagnosis/procedures

Clinical Frailty Scale
- inpatient/outpatient
- patients in wheelchair/bed
- by proxy
- etc.

Timed chair rises
Frailty Data to Be Collected in STS ND

- Clinical Frailty Scale: ADL, IADL, general health, stamina, activity
- Timed chair rises (stand up from sitting position 5 times without using arms; <15s; >15s; unable to complete exercise)
- Data collection completed by a clinician (RN/APP/MD) with the patient preoperatively
Data Collection Form

The Society of Thoracic Surgeons
Adult Cardiac Surgery Database
Frailty Supplement
Data Collection Form
For all STS-ACSD cases starting with
OR dates of April 1, 2024

In a typical week, how often does your patient feel that everything they do is an effort?
☐ Never/Rarely (Not more than one day a week)
☐ Sometimes/Occasionally (1-4 days)
☐ All the time (5-7 days)

In a typical week, how often does your patient engage in moderate to strenuous sports or recreational activities:
☐ Never
☐ Sometimes/Occasionally (1-4 days a week)
☐ Frequently (5-7 days a week)

Indicate how long it takes your patient to perform the timed chair rise from the sitting to standing upright position without using their hands or arms for support:
☐ <15 seconds
☐ 15-30 seconds
☐ Unable to finish exercise
☐ Unable to assess (e.g., Patient is intubated)

Patient Information
Participant ID: ____________________

Record ID: ____________________

Frailty Assessment
Indicate the following activities your patient needs any help with from another person: (select all that apply)

☐ Getting dressed
☐ Taking a bath or shower
☐ Eating/Drinking
☐ Walking Around
☐ Getting in/out of bed
☐ Patient does not need help with any of these

Indicate the following activities your patient needs any help with from another person: (select all that apply)

☐ Doing shopping for groceries or clothes
☐ Preparing their own meals (including planning and cooking full meals)
☐ Doing housework (including heavy housework)
☐ Taking their own medication (including preparing and taking the right dose at the right time)
☐ Handling their own money (including writing checks and paying bills)
☐ Patient does not need help with any of these

Does your patient have problems with logical reasoning or memory (cognition)?
☐ No
☐ Mild impairment (forgetful of recent events; repetitive questioning; more socially withdrawn than used to be)
☐ Moderate or severe impairment (more than mild impairment)

In general, would you say your patient’s health is:
☐ Excellent
☐ Very good/Good
☐ Fair/Poor

#STS2024 @DrMoritzWvB
5 Timed Chair Rises
Frailty Data Collection

• Will be using RedCap until the next version upgrade of the databases
• Collaboration with vendors to facilitate data entry
Frailty Data Collection Process

CLINICIANS

Questionnaire & chair rises → EHR documentation

DM

Vendor interface / RedCap Form

STS RAC

Risk-models & Performance Metrics
1. **Company Data**: Starbucks itself suggests that the average time to complete an order falls within the range of **3 to 5 minutes** [1]. This includes the time it takes to prepare the drink and serve the customer.

2. **QSR Study**: A study conducted by a Quick Service Restaurant (QSR) found that the typical wait time at Starbucks is approximately **4 minutes and 44 seconds** [1].
Roll-Out Process

• ACSD first (GTSD in 2\textsuperscript{nd} stage)

• All cases (not only PROM cases); elective, urgent & emergent cases $\Rightarrow$ every patient going to OR...

• Go live: 4/1/24
• Mandatory: 1/1/25
Implementation Timeline

AQO 2023

DM webinar

STS 2024

Q1 2024

01APR2024

Go live!

01JAN2025

Mandatory Reporting!

Frailty adjusted risk-models & performance metrics

EDUCATION (MEETINGS & WEBINARS, MEMO)
Supporting Materials for DM & Participants

1. User manual (clinicians)
2. Training manual (DM)
3. DCF
4. Instructional videos
Y'all be good out there. If you can’t be good, be careful.

THANK YOU FOR YOUR ATTENTION!

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@DrMoritzWvB
Frailty Data Collect

- Begins April 1, 2024
- Mandatory January 1, 2025
- All Cardiac Surgeries, analyzed and non-analyzed cases entered into the ACSD
- Data Entry into REDCap Form; will also work with willing vendors
Resources

- STS National Database Webpage
- **STSDB_Helpdesk@sts.org** (Uploader, DQR, Missing Variable, Dashboard, Password and Login)
- STS National Database Feedback Form
- Resource Documents
  - Contact Information
  - Webinar Information
  - FAQ Document
  - Go-Live Checklist
  - Tiered-level Support Document
  - *Training Videos*
  - *Link to IQVIA*
  - ckrhoen@sts.org
Open Discussion

Please use the raise-hand function.

Please use the Q&A Function.

We will answer as many questions as possible.

We encourage your feedback and want to hear from you!
Clinical Frailty Scale: used in CathPCI Element:

<table>
<thead>
<tr>
<th>Code System Name</th>
<th>Code</th>
<th>Selection Text</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACC NCDR</td>
<td>1000142382</td>
<td>1: Very Fit</td>
<td>CHSA Clinical Frailty Scale: 1 Very Fit: People who are robust, active, energetic and motivated. These people commonly exercise regularly. They are among the fittest for their age.</td>
</tr>
<tr>
<td>ACC NCDR</td>
<td>1000142383</td>
<td>2: Well</td>
<td>CHSA Clinical Frailty Scale: 2 Well: People who have no active disease symptoms but are less fit than category 1. Often, they exercise or are very active occasionally, e.g. seasonally.</td>
</tr>
<tr>
<td>ACC NCDR</td>
<td>1000142384</td>
<td>3: Managing Well</td>
<td>CHSA Clinical Frailty Scale: 3 Managing Well: People whose medical problems are well controlled, but are not regularly active beyond routine walking.</td>
</tr>
<tr>
<td>ACC NCDR</td>
<td>1000142385</td>
<td>4: Vulnerable</td>
<td>CHSA Clinical Frailty Scale: 4 Vulnerable: While not dependent on others for daily help, often symptoms limit activities. A common complaint is being “stayed up” and/or being tired during the day.</td>
</tr>
<tr>
<td>ACC NCDR</td>
<td>1000142386</td>
<td>5: Mildly Frail</td>
<td>CHSA Clinical Frailty Scale: 5 Mildly Frail: These people often have more evident slowing, and need help in high order IADLs (finances, transportation, heavy housework, medications). Typically, mild frailty progressively impairs shopping and walking outside.</td>
</tr>
<tr>
<td>ACC NCDR</td>
<td>1000142387</td>
<td>6: Moderately Frail</td>
<td>CHSA Clinical Frailty Scale: 6 Moderately Frail: People need help with all outside activities and with keeping house. Inside, they often have problems with stairs and need help with bathing and might need minimal assistance (cuing, standby) with dressing.</td>
</tr>
<tr>
<td>ACC NCDR</td>
<td>1000142388</td>
<td>7: Severely Frail</td>
<td>CHSA Clinical Frailty Scale: 7 Severely Frail: Completely dependent for personal care, from whatever cause (physical or cognitive). Even so, they seem stable and not at high risk of dying (within ~ 6 months).</td>
</tr>
<tr>
<td>ACC NCDR</td>
<td>1000142389</td>
<td>8: Very Severely Frail</td>
<td>CHSA Clinical Frailty Scale: 8 Very Severely Frail: Completely dependent, approaching the end of life. Typically, they could not recover even from a minor illness.</td>
</tr>
<tr>
<td>ACC NCDR</td>
<td>1000142390</td>
<td>9: Terminally Ill</td>
<td>CHSA Clinical Frailty Scale: 9 Terminally Ill: Approaching the end of life. This category applies to people with a life expectancy &lt;6 months, who are not otherwise evidently frail.</td>
</tr>
</tbody>
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@DrMoritzWvB
Why Not Just Use Grip Strength?

Goodhart’s Law & Misclassification