Executive Viewpoints for a New Generation of Clinical Registries: The Good, the Bad, and the Ugly

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Disclosures

• None
# STS National Database Overview

Participants in US, Canada, Brazil, India, Italy, Saudi Arabia, and UAE

<table>
<thead>
<tr>
<th>Database Component</th>
<th>Date Established</th>
<th>Participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adult Cardiac Surgery Database (ACSD)</td>
<td>1989</td>
<td>1,015</td>
</tr>
<tr>
<td>Congenital Heart Surgery Database (CHSD)</td>
<td>2002</td>
<td>119</td>
</tr>
<tr>
<td>General Thoracic Surgery Database (GTSD)</td>
<td>2002</td>
<td>279</td>
</tr>
<tr>
<td>Intermacs/Pedimacs*</td>
<td>2005</td>
<td>221</td>
</tr>
<tr>
<td>STS/ACC TVT Registry</td>
<td>2012</td>
<td>830</td>
</tr>
</tbody>
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* Acquired in 2018 by STS
Database Overview Cont.

• STS Database contains > 7.5 million thoracic surgery procedure records

• Registry participants provided reports in cloud-based platform for benchmarking & QI

• 10% of the Database is externally audited annually to ensure accuracy, consistency, and completeness

• Data Collection
  • CRFs are granular/standardized; data elements developed by clinicians
  • Largely manual data abstraction
  • Submission of all procedures required, not a sample
Successes

• Validated improvement in outcomes over time
• 95% participant penetration for ACSD and CHSD, making STS a true national benchmark
• Leading edge in developing risk models/calculators and composite quality measures for major procedures
• Engagement with CMS and other payors on value-based programs
• STS public reporting program recognized by *US News & World Report*
• Established linkages to CMS and NDI datasets for longitudinal research
• Substantial growth in research and industry engagements
Challenges

• Data collection burden, automated data abstraction
• Registry operations expense; external vendor management
• Continually demonstrating/reinventing the registry value proposition
• Potential competitors providing administrative data aggregation and benchmarking
• Developing in-house data analytics team; war for talent
Key Future Strategies

• Increase research capacity leveraging in-house analytics
• Longitudinal research
• Incorporating patient-reported outcomes into the STS Database
• Reduce data collection burden; leverage AI, NLP, ML for data extraction
• Continue engagement with industry; leverage real world evidence and work with regulators
• Develop pragmatic clinical trials