

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

Database Component	Date Established	Participants
Adult Cardiac Surgery Database (ACSD)	1989	1,015
Congenital Heart Surgery Database (CHSD)	2002	119
General Thoracic Surgery Database (GTSD)	2002	279
Intermacs/Pedimacs*	2005	221
STS/ACC TVT Registry	2012	830

* 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

