Data Manager Panel Discussion: How to Utilize Reports at Your Center

Rebecca Harap, BSN, RN-BC, Sylvia Laudun, DNP, MBA, RN, CPHQ, Keesha Medley, MSN, RN, Mel Runyan, MSN, RN-BC, CCRN

October 23, 2019
• Rebecca Harap, BSN, RN-BC
  • Nothing to Disclose
• Sylvia Laudun, DNP, MBA, RN, CPHQ
  • Nothing to Disclose
• Keesha Medley, MSN, RN
  • Nothing to Disclose
• Mel Runyan, MSN, RN-BC, CCRN
  • Nothing to Disclose
Objectives

• Identify the various abstracters who contribute to the STS Intermacs
• Identify how often data is distributed at STS Intermacs centers
• Discuss the role of STS Intermacs in the Performance Improvement process
• Discuss the use of STS Intermacs data for Quality and Research projects
Polling Question:

• Who enters the data at your facility?
  • A. VAD coordinator
  • B. Research coordinator
  • C. Quality Department
  • D. Internal abstractor (other role)
  • E. Outsourced abstractor (vendor)
Poll: Who enters the data at your facility?
Primary Role

• VAD coordinator – person managing the registry and directly involved with VAD patient care.

• Research coordinator – person responsible for both research and managing registries; possibly data and statistical analysis responsibilities.

• Quality Department – inhouse abstractor within the Quality Department.

• Internal abstractor (other) – Centralized Registry Department that supports registries for a department service or system.

• Outsourced abstractor (vendor) – abstraction services paid to an outside company
Polling Question:

• How often do you share Intermacs data with the physicians and care team?
  • A. Monthly
  • B. Quarterly – before the Intermacs reports are released
  • C. Quarterly – after the Intermacs reports are released
  • D. Not routinely or Never shared
Poll: How often do you share Intermacs data with the physicians and care team?
• Monthly – Dashboards/Joint Commission metrics

• Quarterly – Quality/Outcomes meetings with VAD team (surgeons, cardiologists, VAD and Transplant coordinators, social workers, pharmacy, regulatory, administration, nursing, Infection Control, etc.)

• Quarterly, patient-level information provided before the reports are released
Polling Question:

• Does your center have an official Process Improvement plan in place using the STS Intermacs data and reports?

• A. No
• B. Yes
Poll: Does your center have an official Process Improvement plan in place using the STS Intermacs data and reports?
Examples of Data Utilization
### Intermacs Dashboard Quarterly Report 2019 Q1

#### Implant and Event Dates
January 2018 - March 31, 2019

<table>
<thead>
<tr>
<th>EARLY</th>
<th>LATE</th>
<th>EARLY</th>
<th>LATE</th>
<th>EARLY</th>
<th>LATE</th>
<th>EARLY</th>
<th>LATE</th>
<th>EARLY</th>
<th>LATE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Adverse Events Exhibit 23c

<table>
<thead>
<tr>
<th>Event Type</th>
<th>2018 Q2</th>
<th>2018 Q3</th>
<th>2018 Q4</th>
<th>2019 Q1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hemorrhage</td>
<td>x 0.69</td>
<td>x 0.69</td>
<td>x 0.47</td>
<td>x 1.35</td>
</tr>
<tr>
<td>Device Malfunction/Pump Thrombosis</td>
<td>1.12</td>
<td>0.92</td>
<td>0.93</td>
<td>0.84</td>
</tr>
<tr>
<td>Infection</td>
<td>x 0.71</td>
<td>x 0.68</td>
<td>x 0.82</td>
<td>x 0.93</td>
</tr>
<tr>
<td>Neuro Dysfunction</td>
<td>1.12</td>
<td>0.69</td>
<td>0.47</td>
<td>1.02</td>
</tr>
<tr>
<td>Respiratory Failure</td>
<td>6.73</td>
<td>5.52</td>
<td>5.03</td>
<td>0.34</td>
</tr>
<tr>
<td>Device Malfunction/Pump Thrombosis</td>
<td>0.84</td>
<td>1.02</td>
<td>0.82</td>
<td>0.82</td>
</tr>
</tbody>
</table>
| Infections by Location Exhibit 23d
<table>
<thead>
<tr>
<th>Location</th>
<th>2018 Q2</th>
<th>2018 Q3</th>
<th>2018 Q4</th>
<th>2019 Q1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Positive Blood Cultures</td>
<td>x 0.84</td>
<td>x 0.82</td>
<td>x 0.82</td>
<td>x 0.82</td>
</tr>
<tr>
<td>Pulmonary</td>
<td>x 0.84</td>
<td>x 0.82</td>
<td>x 0.82</td>
<td>x 0.82</td>
</tr>
<tr>
<td>Pump Related-Drive Line</td>
<td>x 0.69</td>
<td>x 0.71</td>
<td>x 0.71</td>
<td>x 0.71</td>
</tr>
</tbody>
</table>

#### Bleeding Rates BY Source Exhibit 23e

<table>
<thead>
<tr>
<th>Source</th>
<th>2018 Q2</th>
<th>2018 Q3</th>
<th>2018 Q4</th>
<th>2019 Q1</th>
</tr>
</thead>
<tbody>
<tr>
<td>GI Lower</td>
<td>0.93</td>
<td>1.2</td>
<td>0.48</td>
<td>0.74</td>
</tr>
<tr>
<td>GI Upper</td>
<td>2.05</td>
<td>1.0</td>
<td>3.18</td>
<td>1.0</td>
</tr>
<tr>
<td>GI Unknown</td>
<td>2.24</td>
<td>2.07</td>
<td>2.76</td>
<td>1.4</td>
</tr>
</tbody>
</table>

#### Hospital Days for Discharged Patients Exhibit 25

<table>
<thead>
<tr>
<th>Discharge Type</th>
<th>2018 Q2</th>
<th>2018 Q3</th>
<th>2018 Q4</th>
<th>2019 Q1</th>
</tr>
</thead>
<tbody>
<tr>
<td>LVAD Median</td>
<td>12</td>
<td>12</td>
<td>12</td>
<td>12</td>
</tr>
</tbody>
</table>

#### Post Implant Survival - Primary LVAD'S Exhibit 36

<table>
<thead>
<tr>
<th>Time Period</th>
<th>2018 Q2</th>
<th>2018 Q3</th>
<th>2018 Q4</th>
<th>2019 Q1</th>
</tr>
</thead>
<tbody>
<tr>
<td>One month after device implant</td>
<td>93.2</td>
<td>96.6</td>
<td>94.2</td>
<td>94.2</td>
</tr>
<tr>
<td>Three months after device implant</td>
<td>85.3</td>
<td>96.6</td>
<td>90.3</td>
<td>90.3</td>
</tr>
<tr>
<td>Six months after device implant</td>
<td>x 87.4</td>
<td>x 87.4</td>
<td>x 87.4</td>
<td>x 87.4</td>
</tr>
</tbody>
</table>

#### Post Implant Survival-listed for Transplant Exhibit 42

<table>
<thead>
<tr>
<th>Time Period</th>
<th>2018 Q2</th>
<th>2018 Q3</th>
<th>2018 Q4</th>
<th>2019 Q1</th>
</tr>
</thead>
<tbody>
<tr>
<td>One month after device implant</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>95.1</td>
</tr>
<tr>
<td>Three months after device implant</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>92.6</td>
</tr>
<tr>
<td>Six months after device implant</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>91.3</td>
</tr>
<tr>
<td>Twelve months after device implant</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>89.1</td>
</tr>
</tbody>
</table>

#### Right Heart Failure Evaluation Exhibit 49f

<table>
<thead>
<tr>
<th>Time Period</th>
<th>No RHF</th>
<th>MILD RHF</th>
<th>NOTROPIC SUPPORT</th>
<th>RVAD SUPPORT</th>
</tr>
</thead>
<tbody>
<tr>
<td>One month post implant</td>
<td>67.58</td>
<td>4.6</td>
<td>26.77</td>
<td>1.05</td>
</tr>
<tr>
<td>Three months post implant</td>
<td>88.96</td>
<td>4.85</td>
<td>5.99</td>
<td>0.2</td>
</tr>
<tr>
<td>Six months post implant</td>
<td>91.13</td>
<td>4.95</td>
<td>3.52</td>
<td>0</td>
</tr>
<tr>
<td>One year post implant</td>
<td>92.31</td>
<td>2.93</td>
<td>4.76</td>
<td>0</td>
</tr>
</tbody>
</table>

---

**Intermacs Benchmarks:**

- RED - Below
- GREEN – At or Above

- Populated from Quarterly Reports
- Shared with Quality and Care Teams
- Used to monitor progress:
  - Joint Commission Metrics
  - Process Improvements
- INTERMACS score is updated each quarter and coloring is based on current benchmarks. Historic coloring does not change
Data from STS Intermacs

Heart Transplantation by 12-Month Follow-up

- Underweight
- Normal Weight
- Overweight
- Obese Class I
- Obese Class 2
- Obese Class 3
### Data from STS Adult Cardiac

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Underweight</th>
<th>Normal Weight</th>
<th>Overweight</th>
<th>Obese Class I</th>
<th>Obese Class 2</th>
<th>Obese Class 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>n</td>
<td>2</td>
<td>51</td>
<td>67</td>
<td>45</td>
<td>15</td>
<td>2</td>
</tr>
<tr>
<td>Initial Intubation Days, median</td>
<td>6.3</td>
<td>2.8</td>
<td>1.9</td>
<td>3</td>
<td>1.3</td>
<td>6.7</td>
</tr>
<tr>
<td>Total ICU Days, median</td>
<td>26</td>
<td>11</td>
<td>9</td>
<td>9</td>
<td>6</td>
<td>16</td>
</tr>
<tr>
<td>Total LOS</td>
<td>30</td>
<td>26</td>
<td>22</td>
<td>21</td>
<td>17</td>
<td>37</td>
</tr>
<tr>
<td>Renal Failure*</td>
<td>1 (50%)</td>
<td>13 (25%)</td>
<td>11 (16%)</td>
<td>8 (18%)</td>
<td>2 (15%)</td>
<td>1 (50%)</td>
</tr>
<tr>
<td>Re-Operation for Bleeding</td>
<td>1 (50%)</td>
<td>13 (25%)</td>
<td>15 (22%)</td>
<td>8 (18%)</td>
<td>1 (7%)</td>
<td>0 (0%)</td>
</tr>
<tr>
<td>Timing: Acute**</td>
<td>1 (50%)</td>
<td>6 (12%)</td>
<td>6 (9%)</td>
<td>3 (7%)</td>
<td>0 (0%)</td>
<td>0 (0%)</td>
</tr>
</tbody>
</table>

ICU = Intensive Care Unit; LOS = Length of Stay; *Renal failure requiring dialysis or CRRT as inpatient; **Re-Operation for bleeding within 24 hours of the end of the case.
2014 - BTT vs DT

Survival Rate vs Months

- BTT
- DT

Excel Spreadsheet
Polling Question

• Does your site download STS Intermacs site research datasets to Statistical Analysis System (SAS) for data analytics?
  
  • A. Yes
  
  • B. No

  • C. No, but would like more information on site research datasets
Poll: Does your site download STS Intermacs site research datasets to Statistical Analysis System (SAS) for data analytics?
How do you download Site Research Datasets?

**Data Quality Report**  
Available 
Click the link above to access your site's Data Quality Report. The Data Quality Report provides each hospital an up-to-date snapshot of key data they have entered into Intermacs. The Data Quality Report provides lists of inconsistencies and improbable values that occur in the data. The Data Quality reports are used as an auditing tool and are distributed quarterly through the file delivery system. This feature is only available to Site Administrators.

**Quality Assurance Report**  
Available 
Click the link above to access your site’s Quality Assurance Report. The Quality Assurance Report contains information from your site compared to the overall Intermacs experience. To facilitate this comparison only primary prospective patients are analyzed. The Quality Assurance Report facilitates the refinement of patient selection to maximize outcomes with current and new device options. The Quality Assurance Report is distributed quarterly through the file delivery system. This feature is only available to Site Administrators.

**Live Data Download**  
Available 
Click the link above to download live data you have entered into the Web-Based Data Entry System by form. Each form is available in Excel format. Forms available include: Screening Log Enrolled, Screening Log Excluded, Demographics, Pre-Implant, Implant, Implant Discharge, Rehospitalization, Major Infection, Major Bleeding, Neurological Dysfunction, Device Malfunction, Adverse Events, Death, One Year Post Recovery, Transfer, Withdraw Consent. This feature is available to all users.

**Site Research Datasets (SAS)**  
Available 
Click the link above to access your site's SAS datasets. The SAS datasets link all forms into 4 research datasets that contain derived intervals and indicators, integrity checks, recodes, and completed validated forms. The SAS datasets are for research purposes and are distributed quarterly through the file delivery system. This feature is only available to Site Administrators.

**Customized Cohort Report**  
Not Available 
Click the link above to select a single cohort subgroup within your site, or comparison against an equivalent Intermacs cohort. Each report can be generated in PDF format with frequencies and bar charts. The customized cohort reports allow you to explore patient characteristics. This feature is only available to Site Administrators at sites who have signed a licensing agreement.

**Outcome Analytics**  
Not Available 
Click the above link to generate Kaplan-Meier curves, competing outcomes, adverse event rates, or other outcome analytics on your selected cohort. This feature is only available to Site Administrators at sites who have signed a licensing agreement.
What are Site Research Datasets?

- All the data you have entered into INTERMACs
  - The data is broken down by each patient
How Can You Use Your Site Research Datasets?

• Speak with your IRB to approve all uses of the data

• Pull specific cohorts to look at data
  • i.e. Search for female patients with history post-partum cardiomyopathy

• Combine data from multiple databases
  • STS Adult Cardiac Surgery and STS Intermacs
Discussion

This Photo by Unknown Author is licensed under CC BY-NC-ND