What Outcomes Should a Perfusionist Be Interested In?

AmSECT Quality and Outcomes

October 1, 2014
Perfusion practice impacts patient outcomes?

1. Strongly disagree
2. Disagree
3. Neutral
4. Agree
5. Strongly agree
PERFUSIONIST RELATED OUTCOMES
# Intraop outcome measures:
## Four areas of focus

### Blood Product Use
- RBC
- PLT
- FFP
- Cryo

### Anemia Management
- 1st in O.R.
- Post heparin
- 1st on CPB
- Lowest on CPB
- Lowest intraop
- Last on CPB
- Last in O.R.

### Fluid Management
- Net ECC prime volume
- Volume added on CPB
- Crystalloid cardioplegia
- Ultrafiltration volume
- Urine output on CPB
- Anesthesia volume
- Autologous blood harvest volume

### Glucose Management
- 1st in O.R.
- Highest intraop
- Last in O.R.
- Hx of D.M.
- Insulin drip
Intraop Outcome Measures Derived from Perfusion EMR systems

Perfusion Quality Improvement and the Reduction of Clinical Variability

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<table>
<thead>
<tr>
<th>% of time MAP &lt;50 mmHg</th>
<th>% of time pHa &gt;7.45 and &lt;7.35</th>
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<tbody>
<tr>
<td>% of time flow rate &lt;1.8 cardiac index</td>
<td>% of time PaCO\textsubscript{2} &lt;35 and &gt;45</td>
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<tr>
<td>% of time line pressure &gt; 300 mmHg</td>
<td>% of time PaO\textsubscript{2} &lt;150 and &gt;250</td>
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<tr>
<td>% if time arterial blood temp &gt;37°C</td>
<td>% of time hematocrit &lt;22 %</td>
</tr>
<tr>
<td>% of time VAVD &gt; - 40 mmHg</td>
<td>% of time Base Excess &lt; -2.0</td>
</tr>
<tr>
<td>NIRS percent time &lt;40%</td>
<td>% of time SVO\textsubscript{2} &lt;65 %</td>
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Postop Outcomes

- Mortality
- Stroke
- Infection
- Prolonged vent
- AKI
- Reoperation
- ICU Hours
- Postop LOS
Others are Defining Quality

Demonstrates adherence to professional standards of practice as written by the American Society of Extracorporeal Technology. Minimum sample size 10% of all cases performed. MoS: # of procedures meeting the professional standards of practice/Total number of procedures in sample. Less than 100% compliance requires corrective action plan.

Routinely monitor acid-base status, patient hemodynamics, urine output, Anticoagulation and myocardial protection. Maintain all parameters within protocol limits. Minimum sample size 10% of all cases performed. MoS: # of procedures with parameters within protocol limits/Total number of procedures in sample. Less than 100% compliance requires corrective action plan.
VARIATION IN PERFUSION PRACTICE
There is Slight Variation in Perfusion Outcomes Across the U.S.

• True
• False
Does your Perfusion Team Measure/Report “Lowest HCT on CPB”?  

- Yes  
- no
TOOL TO MEASURE PERFUSION OUTCOMES
Interested in PERForm?

To learn more about the PERForm Registry or if you would like to join, please fill out our application and someone will contact you shortly.

PERForm Registry Resources

- PERForm Registry Data Specifications
- PERForm Data Collection Form

Upcoming PERForm Registry Meetings

MSTCVS Quality Collaborative Quarterly Meeting

November 15, 2014 | Bronson Medical Center, Kalamazoo
Summary

• People are motivated to change their behavior through appeals to emotion rather than reason.