National EMS Projects of Significance

Lessons Learned

Specialty Systems of Care – An Analysis of Statewide Practices Related to Time Sensitive Systems of Care
2018: What is an emerging system of care?
Challenges in Our Assessment

Reaching the state “systems” manager when not located within OEMS

Definition variances
- Designate
- Certify
- License
- Protocols

Reader interpretation of questions
Why Is Regionalization So Complicated?

Relatively Easy

• Understanding of “time sensitive”
  • Life threat
  • Limb threat
• EBGs to guide clinical treatment
• Published benchmarks

Harder

• Regulatory authority
• Patient needs
• Population access
• Availability of resources
• Systems finance
• Market based competition
“Golden Hour” Concept

- Injured patient has 60 minutes from time of injury to receive definitive care
- After which morbidity and mortality significantly increase
- However, there is little evidence to directly support this relationship
One Definition of "time sensitive"

• Appendix V – Interpretive Guidelines – Responsibilities of Medicare Participating Hospitals in Emergency Cases

• The maximum number of minutes that may elapse between receipt of a request and the physician’s appearance for what constitutes a reasonable response time
Published Benchmarks

EMS
- keep total ischemic time within 120 minutes

Door-to-balloon
- PCI Within 90 Minutes

Door-to-needle
- within 30 minutes
A Dose of Reality

This surgeon wants to offer cheap MRIs. A state law is getting in his way.

Dr. Gajendra Singh is suing to overturn North Carolina’s “certificate of need” law.
By Dylan Scott | @dylanscott | dylan.scott@vox.com | Jul 31, 2018, 8:30am EDT

Legal & Regulatory Issues
Kentucky Hospital Association asks to join lawsuit defending certificate of need law
By Alia Paavola - Wednesday, February 5th, 2020

FEDERAL COURT CONSIDERS CHALLENGE TO IOWA’S CERTIFICATE OF NEED LAWS
By Christopher Tajo

FLORIDA POLITICS / THE BUZZ
Miami-Dade hospital sues Florida to challenge trauma center law
By Anjalee Khemlani
November 19, 2015 12:16 pm

11 hospital systems sue state over OMNIA approval

Virtua Sues New Jersey to Block New EMS Law
By John George | Philadelphia Business Journal - Published July 28, 2015 - Updated on July 28, 2015 at 9:45 pm
SSoC Committee: Important "system of care" components

1. Epidemiology (high incidence) of condition within the state
2. Condition is frequently encountered/transported by EMS
3. Model clinical guidelines are used to improve statewide consistency of EMS care
4. Standards of care are available through an accreditation process or national organization
5. Facility inspections are conducted for compliance to standards
6. Focused data collection or state registry of specified condition
Our Assessment Findings...

- Efforts to improve cardiovascular care is occurring in all 50 states and DC at varying levels
- Formal systems of care coordination is occurring in 82% of all states
- Not all systems of care coordination is directed by the state lead agency for EMS
Most Common for State Level Coordination

STROKE

STEMI
Less Common: State Level Coordination

- BURNS
- CRITICAL CARE
- SEPSIS
- PERINATAL
- PEDIATRICS
- FREE-STANDING EDS
- REIMPLANTATION
Our Assessment Findings...

- Disparity in authorizing legislation available to support stroke over STEMI
- When authorizing legislation is enacted, overall efforts to coordinate and improve systems of care are enhanced
# Accreditation Standards - Stroke

<table>
<thead>
<tr>
<th>Accreditation Program</th>
<th>%*</th>
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<tbody>
<tr>
<td>AMERICAN HEART ASSOCIATION/AMERICAN STROKE ASSOCIATION</td>
<td>48%</td>
<td>19</td>
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<tr>
<td>HEALTHCARE FACILITIES ACCREDITATION PROGRAM (HFAP)</td>
<td>33%</td>
<td>13</td>
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<tr>
<td>THE JOINT COMMISSION</td>
<td>83%</td>
<td>33</td>
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<tr>
<td>DET NORSKE VERITAS (DNV)</td>
<td>43%</td>
<td>17</td>
</tr>
<tr>
<td>STATE-DEVELOPED CRITERIA</td>
<td>13%</td>
<td>5</td>
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* Reflects % all respondents
Levels of Stroke Centers Recognized in States

Most Common

- Comprehensive SC
- Primary SC
- Acute Stroke Ready Hospitals
- Thrombectomy Capable
- Stroke Centers

“Other” Levels

- Emergent Stroke Ready Hospital
- Non-emergent Stroke Ready Hospital
- Primary Stroke Center with Endovascular Capability, but not certified by an external body
- Stroke Bypass Hospitals
- Stroke Referral Center
- Stroke Support Hospital
- Certification of Stroke Rehabilitation
- Levels I-IV
State Designation Criteria and National Accreditation - Stroke
# Stroke Registries

<table>
<thead>
<tr>
<th>Stroke Registry</th>
<th>% of Respondents</th>
<th>n</th>
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<tbody>
<tr>
<td>GWTG - Stroke</td>
<td>56%</td>
<td>15</td>
</tr>
<tr>
<td>Coverdell</td>
<td>30%</td>
<td>8</td>
</tr>
<tr>
<td>State Developed</td>
<td>44%</td>
<td>12</td>
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# Stroke Assessment Tools

<table>
<thead>
<tr>
<th>Assessment Tool</th>
<th>%*</th>
<th>n</th>
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<tbody>
<tr>
<td><strong>BOSTON STROKE SCALE</strong> (also known as the Massachusetts stroke scale)</td>
<td>0%</td>
<td>0</td>
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<tr>
<td><strong>CINCINNATI STROKE TRIAGE ASSESSMENT TOOL (C-STAT)</strong></td>
<td>73%</td>
<td>29</td>
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<tr>
<td><strong>LOS ANGELES MOTOR SCORE (LAMS)</strong></td>
<td>28%</td>
<td>11</td>
</tr>
<tr>
<td><strong>MIAMI EMERGENCY NEUROLOGIC DEFICIT (MEND) CHECKLIST</strong></td>
<td>20%</td>
<td>8</td>
</tr>
<tr>
<td><strong>FACE ARM SPEECH TIME (F.A.S.T.)</strong></td>
<td>73%</td>
<td>29</td>
</tr>
<tr>
<td><strong>NIH STROKE SCALE</strong></td>
<td>5%</td>
<td>2</td>
</tr>
<tr>
<td><strong>PREHOSPITAL ACUTE STROKE SEVERITY (PASS)</strong></td>
<td>10%</td>
<td>4</td>
</tr>
<tr>
<td><strong>RAPID ARTERIAL OCCLUSION EVALUATION (RACE)</strong></td>
<td>20%</td>
<td>8</td>
</tr>
<tr>
<td><strong>VISION-APHASIA-NEGLECT (VAN)</strong></td>
<td>10%</td>
<td>4</td>
</tr>
<tr>
<td><strong>OTHER</strong></td>
<td>25%</td>
<td>10</td>
</tr>
</tbody>
</table>

- Reflects % all respondents
- x Indicates use in NEMSIS
Let’s Talk About…

![ECG waves](image-url)
14 Different Titles to Describe

- Chest Pain Center
- Chest Pain Center w/Primary PCI
- Chest Pain Center w/Primary PCI & Resuscitation
- Cardiac Ready Communities
- Cardiac Receiving and Cardiac Referral Centers
- EKG Transmission Capable
- Level I Emergency Cardiac Care Center
- STEMI Levels I and II
- STEMI Receiving Center
- STEMI Referring Center
- STEMI Receiving Center
- STEMI Referring Hospital
- Heart Attack Receiving Center; Heart Attack Referring Center
# Accreditation Standards - Cardiac

<table>
<thead>
<tr>
<th>Organization</th>
<th>%</th>
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<tbody>
<tr>
<td>American College of Cardiology</td>
<td>36%</td>
<td>8</td>
</tr>
<tr>
<td>American Heart Association</td>
<td>55%</td>
<td>12</td>
</tr>
<tr>
<td>Det Norske Veritas (DNV)</td>
<td>14%</td>
<td>3</td>
</tr>
<tr>
<td>The Joint Commission</td>
<td>45%</td>
<td>10</td>
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<tr>
<td>The Society for Cardiovascular Patient Care (formerly known as the Society of Chest Pain Centers)</td>
<td>27%</td>
<td>6</td>
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<tr>
<td>State-Created Standards/Criteria for Cardiac Care Recognition</td>
<td>36%</td>
<td>8</td>
</tr>
<tr>
<td>Other</td>
<td>5%</td>
<td>1</td>
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</tbody>
</table>

*Reflects % all respondents*
# Cardiac Registries

<table>
<thead>
<tr>
<th>Registry</th>
<th>%*</th>
<th>n</th>
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</thead>
<tbody>
<tr>
<td><strong>CARDIAC ARREST REGISTRY TO ENHANCE SURVIVAL (CARES)</strong></td>
<td>50%</td>
<td>6</td>
</tr>
<tr>
<td><strong>GET WITH THE GUIDELINES (RESUSCITATION, A-FIB, CAD, OR HEART FAILURE)</strong></td>
<td>8%</td>
<td>3</td>
</tr>
<tr>
<td><strong>NATIONAL CARDIOVASCULAR DATA REGISTRY (NCDR)</strong></td>
<td>25%</td>
<td>1</td>
</tr>
<tr>
<td><strong>SOCIETY OF THORACIC SURGERY (STS)</strong></td>
<td>0%</td>
<td>0</td>
</tr>
<tr>
<td><strong>STATE-DEVELOPED</strong></td>
<td>42%</td>
<td>5</td>
</tr>
<tr>
<td><strong>OTHER</strong></td>
<td>0%</td>
<td>0</td>
</tr>
</tbody>
</table>

* Reflects % all respondents
Data Sharing

- Plethora of registries
- Multiple agencies involved
- Challenges may exist with establishing and maintaining accurate data registries that include EMS encounters
System Resources

- Stroke and STEMI identified in EM literature as “time sensitive” conditions
- Yet program coordination located in Chronic Disease Prevention
- General lack of funding/resources to EMS programs to improve care
Thank you!

For more info, please contact Kathy Robinson: robinson@nasemso.org