Mission: Quality
Can Mission Lifeline Help Your Performance Improvement Program?

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Disclosures

None
The Goals of Mission Lifeline

Focus on Systems of Care
- STEMI
- Cardiac Arrest
- Stroke

- Algorithms
- Performance Improvement
- Education
The Need

- Information that describes practice
- Generalizable and actionable information
- A means to facilitate a culture of performance improvement
The Problem

- Conventional “chart review”
  - Reviewer dependent
  - Lacks consistency
  - May lack focus
  - Relies on a “chosen few”
  - Difficult to perform across agencies or platforms

- Care record “data mining”
  - Dependent upon data entry
  - Only measures defined variables
  - May lack context
  - Difficult to perform across agencies or platforms

The Evaluation Rubric

- A guide listing specific criteria for grading or scoring
- Aimed at accurate, fair, and consistent assessment

How it works

1. Identify an area of focus
The Focus...

- Clinical Presentations
  - Chest Pain/ACS
  - Stroke
  - Major Trauma
  - Mental Health/Psych
  - Refusal
  - Lift Assist
  - Pain Management
  - "Sick Kids"
  - Tachycardia Management

- Skills
  - Patella Reduction
  - Intubation
  - EKG Interpretation

- Medication Administration
  - Ketamine
  - Naloxone
  - Epinephrine 1:1,000
  - IV Fluid Administration
  - BLS Albuterol

How it works

1. Identify an area of focus
2. Determine clinical performance components to evaluate

Mission Lifeline STEMI Measures

<table>
<thead>
<tr>
<th>Measure</th>
<th>Metric</th>
</tr>
</thead>
<tbody>
<tr>
<td>12 Lead ECG Acquisition</td>
<td>% &gt;35 years with symptoms of ACS getting 12 Lead ECG</td>
</tr>
<tr>
<td>FMC to 12 Lead ECG</td>
<td>% within 10 minutes</td>
</tr>
<tr>
<td>12 Lead ECG to Notification</td>
<td>% notified within 10 minutes of STEMI ECG</td>
</tr>
<tr>
<td>FMC to PCI</td>
<td>% within 90 minutes</td>
</tr>
<tr>
<td>EMS Arrival to Lytic</td>
<td>% within 30 minutes</td>
</tr>
<tr>
<td>OOHCA ROSC 12 Lead</td>
<td>% of OOHCA with sustained ROSC with 12 Lead ECG</td>
</tr>
</tbody>
</table>
**Mission Lifeline Translation to “Care Bundles”**

### Acute Coronary Syndrome Bundle

<table>
<thead>
<tr>
<th>Metric</th>
<th>Goal</th>
</tr>
</thead>
<tbody>
<tr>
<td>At Patient to ECG Time</td>
<td>10 minutes or less</td>
</tr>
<tr>
<td>ASA 324 mg</td>
<td>At any time</td>
</tr>
<tr>
<td>Serial ECG</td>
<td>Serial 12-lead EMS ECG</td>
</tr>
</tbody>
</table>

### STEMI Bundle

<table>
<thead>
<tr>
<th>Metric</th>
<th>Goal</th>
</tr>
</thead>
<tbody>
<tr>
<td>At Patient to ECG Time</td>
<td>10 minutes or less</td>
</tr>
<tr>
<td>Prehospital Notification</td>
<td>Within 5 minutes of STEMI identification</td>
</tr>
<tr>
<td>ASA 324 mg</td>
<td>At any time</td>
</tr>
<tr>
<td>On Scene Time</td>
<td>10 minutes or less</td>
</tr>
<tr>
<td>Serial ECG</td>
<td>Serial 12-lead EMS ECGs</td>
</tr>
<tr>
<td>Defib Pads</td>
<td>Applied for bradycardia or hemodynamic instability</td>
</tr>
</tbody>
</table>

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**How it works**

1. Identify an area of focus
2. Determine clinical performance components to evaluate
3. Identify records; create and distribute rubric to auditors

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![REDCap](image.png)
How it works

1. Identify an area of focus
2. Determine clinical performance components to evaluate
3. Identify records; create and distribute rubric to auditors
4. Evaluate the results and make system change
Do you agree with ECG interpretation:  

**Provider** | **Agree?** | **Why not?**
--- | --- | ---
Bartolick | No | disagree with no ST changes. No obvious stemi at this time, but appears to have diffuse ST segment depressions with ST elevation in aVR- this could be a type 1 equivalent high LAD vs left main lesion. Agree with management initially, ASA, quick transport and not activating cath lab.
Clark | No | Agree majorily, also include STE in AvL
Cole | No | She wrote as ECG unable to be interpreted, but subsequently treated this as a non-MI despite inappropriate for the following. However, although...
Dalton | No | EKG read was NSR with LVH. I believe this is just NSR at 73 with normal intervals, axis and ST segments.
Decarlo | No | No ecg interpretation documented. Mine is sinus bradycardia with possible S-T depressions in lateral leads.
Goodness | No | NSR - 'no specific findings' is a minimal amount of information
Handy | No | LVH with secondary repolarization abnormalities
Handy | No | Anterior t waves inversions(V1-V3), lateral appears OK(I/AvL, V5/V6). would recommend repeating EKG after nitro to see if these resolve or progress.
Holevinski | No | Profound T-wave inversion relieved with SL nitro, and reappears once nitro wears off. I am concerned about Type B Wellens vs unstable Angina. Albeit the provider is correct that this is not a STEMI, this is a patient that needs to see cardiology immediately, especially given his bradycardia.
Hoskins | No | Initial 2 ekgs appear to be NSR with final EKG appearing to be a fib (difficult to see p waves but ekg reproduction is poor. There is minor ST elev in inferior leads. Significant depressions in I and aVL. The most important part of the EKG is what appears to be de Winter waves (STEMI equivalent, suggestive of high LAD lesion), which can be seen to progress, as the third EKG then has ST elev in V4 which was not present on prior. Very cool case
Kase | No | Although the EMS provider is technically correct that this is not a STEMI currently and the patient is in sinus rhythm, there is an inversion in the T-wave in avl and possibly hyperacute Twaves in inferior and lateral leads. Repeat ECG is indicated
Kuppinger | No | The changes in these ECGs are concerning for a posterior STEMI. In order to ascertain this, posterior leads could have been done, but at the very least, the incoming hospital should have been notified of this possibility and the patient must be seen immediately for posterior leads/possible cath lab activation.
Mandell | No | Baseline not interpretable in 6 leads, inadequate ECG
Menguy | No | I do not appreciate the ST segment depressions in the lateral leads noted by the provider on the first nor subsequent ECGs. I agree, however, that there is no injury pattern corresponding to any one vascular territory.

**Leveraging Mission Lifeline**

- Engages Hospitals in EMS Performance Improvement
- Common terms
- Registry staff
- Data source
- Outcome feedback
Stroke “Care Bundle”

<table>
<thead>
<tr>
<th>Metric</th>
<th>Goal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Early Identification</td>
<td>Within 5 minutes of patient contact</td>
</tr>
<tr>
<td>Cincinnati Stroke Scale</td>
<td>Obtained during initial assessment and documented</td>
</tr>
<tr>
<td>Time Last Known Well</td>
<td>Obtained and documented; green stroke sticker applied</td>
</tr>
<tr>
<td>On Scene Time</td>
<td>10 minutes or less</td>
</tr>
<tr>
<td>Prehospital Notification</td>
<td>Within 5 minutes of identification</td>
</tr>
<tr>
<td>Blood Glucose</td>
<td>Obtained and documented</td>
</tr>
<tr>
<td>Surrogate Contact Information</td>
<td>Obtained and documented; green stroke sticker applied</td>
</tr>
</tbody>
</table>

**Cincinnati Stroke Scale**

- Facial Droop
- Arm Drift
- Slurred Speech

**STEMI Feedback Report**

<table>
<thead>
<tr>
<th>Finding</th>
<th>Value</th>
<th>Goal</th>
</tr>
</thead>
<tbody>
<tr>
<td>On Scene Time</td>
<td>10 minutes</td>
<td>≤ 10 minutes</td>
</tr>
<tr>
<td>Prehospital Notification</td>
<td>5 minutes</td>
<td>≤ 5 minutes</td>
</tr>
<tr>
<td>Blood Glucose</td>
<td>Obtained and documented</td>
<td>Obtained and documented</td>
</tr>
</tbody>
</table>
Opportunities

- Framework for performance assessment
- Leveraging Mission Lifeline GWTG hospital programs
- System improvement
Going Back To The Need

- Information that describes practice
- Generalizable and actionable information
- A means to facilitate a culture of performance improvement

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