Quality Assurance?
What is it in EMS?

Donald Locasto, MD
Director, UC Division of EMS
Medical Director
Cincinnati Fire Department
Colerain Township Fire Department
Sharonville Fire Department
QUALITY terminology!!

- Quality Assurance
- Quality Improvement
- Quality Measures
- Key performance indicators
- Benchmarking
- Measuring Outcome data
- Compliance measurements
What is the best descriptor?

- Continuous Quality Improvement (CQI)

**Continuous** measurement of **Quality** performance for the **Improvement** of services
Why do Quality Improvement?

• **NFPA 1710** states in section 5.3.4.1
  • “The fire department shall institute a quality management program to insure that the service has response times as required in 4.1.2.1 for all medical responses.”

• **The Academy of Medicine of Cincinnati** Protocol and Procedures for Paramedic Services states:
  • that each emergency medical service shall have a medical director responsible for continuous quality review.

• **Ohio Revised Code**, Amended House Bill #138, section 4765.12 (B) states:
  • that the EMS agency shall implement a quality assurance program to improve the availability and quality of the emergency medical services it provides.
CQI Excuses:

- It will piss my guys off.
- Takes too much time.
- It’s difficult to get done.
- It’s not in the budget.
- Do you know how hard it is to review all of those paper charts?

- Collecting too much information will open us up to a lawsuit!!
Ohio Revised Code 4765.12

- Information generated solely for use in a peer review or quality assurance program conducted on behalf of an emergency medical service organization is **not a public record** under section 149.43 of the Revised Code.

- Such information, and any discussion conducted in the course of a peer review or quality assurance program conducted on behalf of an emergency medical service organization, is **not subject to discovery** in a civil action and shall **not be introduced into evidence** in a civil action against the emergency medical service organization on whose behalf the information was generated or the discussion occurred.
CQI – no simple task

• Collection of data
  – What data to collect.
  – How to analyze that data.
  – How to apply findings.

• It is a review of the performance of the:
  – Individual or the System

• Findings in CQI should not be PUNATIVE!!
Key Performance Indicators

- Response times
- Time to Shock
- Time on scene
- Patient Satisfaction
- Procedure Success
- Treatment Compliance
- Utstein Data
- Documentation

Treatment Compliance

Utstein Data

Documentation

Patient Satisfaction

Time on scene

Time to Shock

Response times
Key Performance Indicators

- Response times
- Time to Shock
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- Documentation
- Treatment Compliance
- Procedure Success

Utstein Data

Patient Satisfaction

Time on scene

Time to Shock

Response times

Treatment Compliance

Procedure Success

Documentation
Are there Benchmarks?

**Columbus, Ohio**

<table>
<thead>
<tr>
<th>Category</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Estimated number of ventricular fibrillation victims</td>
<td>142</td>
</tr>
<tr>
<td>Survival rate of ventricular fibrillation — sudden cardiac arrest — victims</td>
<td>22% arrive at hospital with pulse</td>
</tr>
<tr>
<td>First Responders Response Time</td>
<td>5.25 average</td>
</tr>
<tr>
<td>Advanced Life Support Response Time</td>
<td>5.25 average</td>
</tr>
<tr>
<td>Time to shock</td>
<td>7:49 average</td>
</tr>
<tr>
<td>Percent cardiac arrests where citizens performed CPR</td>
<td>Data not available</td>
</tr>
<tr>
<td>Population</td>
<td>711,470</td>
</tr>
<tr>
<td>Number of Paramedics per 100,000 population</td>
<td>98</td>
</tr>
<tr>
<td>Number of people trained in CPR or AED use</td>
<td>33,799</td>
</tr>
<tr>
<td>Percent of Population Trained in CPR or AED use</td>
<td>5%</td>
</tr>
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</table>
Are there REAL Benchmarks
“Eagles Measures”

<table>
<thead>
<tr>
<th>Clinical Area</th>
<th>Elements in Model</th>
</tr>
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<tbody>
<tr>
<td>ST-Elevation Myocardial Infarction (STEMI).</td>
<td>Aspirin (ASA), if not allergic</td>
</tr>
<tr>
<td></td>
<td>12-Lead electrocardiograph (ECG) with prearrival activation of interventional cardiology team as indicated</td>
</tr>
<tr>
<td></td>
<td>Direct transport to percutaneous coronary intervention (PCI)</td>
</tr>
<tr>
<td></td>
<td>capable facility for ECG to PCI time &lt; 90 minutes</td>
</tr>
<tr>
<td>Pulmonary edema</td>
<td>Nitroglycerin (NTG) in absence of contraindications</td>
</tr>
<tr>
<td></td>
<td>Noninvasive Positive Pressure Ventilation (NIPPV) preferred as first-line therapy over endotracheal intubation</td>
</tr>
<tr>
<td>Asthma</td>
<td>Administration of beta-agonist</td>
</tr>
<tr>
<td>Seizure</td>
<td>Blood glucose measurement</td>
</tr>
<tr>
<td></td>
<td>Benzodiazepine for status epilepticus</td>
</tr>
<tr>
<td>Trauma</td>
<td>Limit non-entrapment time to &lt; 10 minutes</td>
</tr>
<tr>
<td></td>
<td>Direct transport to trauma center for those meeting criteria, particularly those over 65 (with time consistent caveats for air medical transport situations)</td>
</tr>
<tr>
<td>Cardiac arrest</td>
<td>Response interval &lt; 5 minutes for basic CPR and automated external defibrillators (AEDs)</td>
</tr>
</tbody>
</table>
CQI “System”

- Needs Investment
  - Personnel
    - EMS Officer
    - Shift officers
    - Dedicated CQI personnel
    - Medical Director
  - Equipment
    - Fax?
    - Scanners?
    - Computers
    - ePCR Systems
<table>
<thead>
<tr>
<th>R</th>
<th>Dispatched</th>
<th>Incident</th>
<th>Unit</th>
<th>Shift</th>
<th>PT Name</th>
<th>Incident Type</th>
<th>Location</th>
<th>Disposition</th>
<th>Destination</th>
<th>QA Status</th>
<th>Source</th>
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<tbody>
<tr>
<td>1</td>
<td>01/09/2013 05:53 pm</td>
<td>130109000150</td>
<td>Ladder 32</td>
<td>Unit 3</td>
<td>PT 1</td>
<td>ABDOMINAL PAIN</td>
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<td>TRANS TO MEDIC, EVAL</td>
<td>University Hospital</td>
<td>New - Not Reviewed</td>
<td>CAD</td>
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<tr>
<td>1</td>
<td>01/09/2013 05:52 pm</td>
<td>130109000149</td>
<td>Medic 29</td>
<td>Unit 3</td>
<td>PT 2</td>
<td>SICK PERSON-NOT ALERT</td>
<td></td>
<td>DISREGARD BY DEPTCH</td>
<td></td>
<td>New - Not Reviewed</td>
<td>CAD</td>
</tr>
<tr>
<td>1</td>
<td>01/09/2013 05:45 pm</td>
<td>130109000147</td>
<td>Engine 32</td>
<td>Unit 3</td>
<td>PT 3</td>
<td>AUTO ACCIDENT INJURIES</td>
<td></td>
<td>PT REFUSED EVAL-TX</td>
<td></td>
<td>New - Not Reviewed</td>
<td>CAD</td>
</tr>
<tr>
<td>1</td>
<td>01/09/2013 05:45 pm</td>
<td>130109000148</td>
<td>Ladder 03</td>
<td>Unit 3</td>
<td>PT 4</td>
<td>FAINTING-NOT ALERT</td>
<td></td>
<td>TRANS TO MEDIC, EVAL</td>
<td>University Hospital</td>
<td>New - Not Reviewed</td>
<td>CAD</td>
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<tr>
<td>1</td>
<td>01/09/2013 05:43 pm</td>
<td>130109000145</td>
<td>Engine 17</td>
<td>Unit 3</td>
<td>PT 5</td>
<td>ASSAULT W/INJURY</td>
<td></td>
<td>TRANS TO MEDIC, EVAL-TX</td>
<td></td>
<td>New - Not Reviewed</td>
<td>CAD</td>
</tr>
<tr>
<td>1</td>
<td>01/09/2013 05:41 pm</td>
<td>130109000144</td>
<td>Engine 50</td>
<td>Unit 3</td>
<td>PT 6</td>
<td>HEMORRHAGE/LACERATION DANGEROUS HEMORRHAGE</td>
<td></td>
<td>TRANS TO MEDIC, EVAL-TX</td>
<td></td>
<td>New - Not Reviewed</td>
<td>CAD</td>
</tr>
<tr>
<td>1</td>
<td>01/09/2013 05:10 pm</td>
<td>130109000140</td>
<td>Ladder 03</td>
<td>Unit 3</td>
<td>PT 7</td>
<td>MEDICAL EMERGENCY</td>
<td></td>
<td>DISREGARD BY DEPTCH</td>
<td></td>
<td>New - Not Reviewed</td>
<td>CAD</td>
</tr>
<tr>
<td>1</td>
<td>01/09/2013 04:50 pm</td>
<td>130109000137</td>
<td>Medic 19</td>
<td>Unit 3</td>
<td>PT 8</td>
<td>FALLS-UNKNOWN STATUS</td>
<td></td>
<td>TREATED, TRANSPORTED</td>
<td>Good Samaritan Hospital</td>
<td>New - Not Reviewed</td>
<td>CAD</td>
</tr>
</tbody>
</table>

Initial View
Case Flow Panel

Case Flow

Issues
- Protocol: Outstanding Clinical Skills
- Aggressive Care

Tasks
- Action: Review Notes
- Status: Acknowledge
- Task: John
- Author: John
- Assigned To: Randy
- Date: 11/19/2012

Discussion
- General Notes
  - John [redacted] 12:10:11 am:
  - Aggressive care!! Protocol appropriate and good documentation.

Incident
- Case #: (CE366812-1502-4783-9991-7BA0F911056C)
- Incident #: 121119000112
- Incident Type: 10C4 - CHEST PAIN-BREATHING NORMALLY >35
- Case Status: 
- Urgency To Scn: LIGHTS AND SIRENS

Patient
- Name (First/M/Last): *** ***
- Gender: M
- DOB/Age: ***
- Race/Lang: African American /
- Address:
- City, St. Zip: *** ***

Dates/Times
- Dispatched: 11/19/2012 01:31:54
- Evacuate: 11/19/2012 01:33:17
- At Scene: 11/19/2012 01:39:11
- At Patient: 11/19/2012 01:53
- Departed Scene: 11/19/2012 02:02:11
- At Destination: 11/19/2012 02:16
- In Service: 11/19/2012 02:46:11
Reconcile Module has moved! Find it under the new CAD Module (CAD Module permission required).

You have 2 case flow tasks that need your attention.

PCR Manager

Search for cases by selecting the checkbox for dispatched in This Week and adding conditions for incident number and unit.

Search results include:
- Disposition and Destination
- QA Status and Source

Example entries:
- 11/24/2012 11:03 am, 121124000072, Medic 29, Unit 1, DISREGARD BY DSPTCH
- 11/24/2012 10:41 am, 121124000068, Ladder 17, Unit 2, DOA
- 11/24/2012 10:33 am, 121124000057, Medic 17, Unit 2, TREATED, TRANSPORTED
- 11/24/2012 10:25 am, 121124000066, Engine 12, Unit 2, TRANSPORTED TO HOSPITAL
CaseFlow - STEMI

Discussion

Administrative Notes

Enter case note...

Add Admin Note

General Notes

John 4/2012 09:27 am:
Eric – Good catch. Many paramedics would not have obtained a 12-lead if the patient was not complaining of chest pain or cardiac related symptoms. The documentation in the narrative is also well written.

Lindsey 5/2012 11:34 am:
The monitor report indicates there were two transmit failures to Hospital, but there is no documentation to indicate if a follow up notification call was made to the hospital. It appears to be a very short transport time, in the middle of the day, but a call is still warranted if possible.

[User] 6/2012 08:46 pm:
The transmit was done by the other medic on the scene and was believed to have been successful. When in route after interventions were done, a call wasn't placed because of proximity to hospital (pulling into lot) but a call was considered.

Donald Locasto 12/10/2012 11:02 am:
Agreed. We do understand that there will be technical issues from time to time therefore it is important for a phone follow up. A short transport time may make this a problem. Is there a way for the paramedic to know if the transmission was successful?

John 10/2012 11:35 am:
The Life Pak prints the transmission result for each attempt, but it may go unnoticed.

Enter case note...
ACKNOWLEDGE and FINISH Buttons

**Issues**
- **Category**: Protocol
- **Issue Type**: Outstanding Clinical Skills
- **Comment**: Aggressive Care
- **By**: John
- **Date**: 11/19/2012

**Tasks**
- **Action/Status**: Acknowledge
- **Task**: Review Notes
- **Author**: John
- **Assigned To**: Randy
- **Date**: 11/19/2012

**Discussion**
- John 2012 10:11 am:
  - Aggressive care!! Protocol appropriate and good documentation.

**General Notes**
- Enter case note...
CQI can be accomplished……

…….it takes INVESTMENT

Why would you want to invest?
What is the real reason you will want to have a CQI program in place?

The Year 2018

Looking Ahead
Emergency ambulance transportation
You can get emergency ambulance transportation after you’ve had a sudden medical emergency, when your health is in serious danger, and when every second counts to prevent your health from getting worse.

The following are some examples of when Medicare might cover emergency ambulance transportation:
- You’re in severe pain, bleeding, in shock, or unconscious.
- You need skilled medical treatment during transportation.

These are only examples. Medicare coverage depends on the seriousness of your medical condition and whether you could have been safely transported by other means.
CMMS Reimbursement Cuts

Currently For Hospitals:

• CMS is holding back money (1% FY 2013 up to 2% FY 2017) that will be redistributed to hospitals based on their "quality scores".
How much funding does your Department get from:

• Medicare?
• Medicaid?
• Medicare funding for EMS
  • 50 to 65% of EMS funding
Money....Money...Money!!!

<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Collection</td>
<td>$1,000,000</td>
<td>$4,000,000</td>
<td>$4,000,000</td>
</tr>
<tr>
<td>%MC</td>
<td>50%</td>
<td>50%</td>
<td>65%</td>
</tr>
<tr>
<td>MC funding</td>
<td>$500,000</td>
<td>$2,000,000</td>
<td>$2,600,000</td>
</tr>
<tr>
<td>2% withhold</td>
<td>2%</td>
<td>2%</td>
<td>2%</td>
</tr>
<tr>
<td>totals</td>
<td>$10,000</td>
<td>$40,000</td>
<td>$52,000</td>
</tr>
</tbody>
</table>
Individual patient cost saving measures

• Treat a 68yo male with c/o chest pain
  – Treatment: 12-lead, ASA, IV, NTG & O2
    • You get paid $1260
  – Forget the ASA (don’t document)
    • You only get paid $760
Summary

• If you do not do CQI, get started – NOW!!

• Do it for your patients!

• Do it for your service!
Questions?