Prove It: The Art of Showing You are Doing a Good Job (or You’re Not and Fixing It !)

Paul A. Bishop, MPA, NREMT-P
Introduction

Father of three active kids

Paramedic since 1995

Southeast Quadrant Mobile Critical Care Unit

16 years as manager in EMS operations and education

Senior Associate at Center for Governmental Research
After Lunch Laugh
Outline

- What Exists? Why Measure?
- Financial Picture
- Operational Measures
- Patient Care
- Celebrate Successes, Identify Challenges
- Sharing the News
- Moving Forward
Key Points

- Identify your key constituents and what is important to them
- Identify the key measures for the constituents
- Measure the activities of your organization
- Define your measures, be specific
- Create a “dashboard” to track your status
Who cares about EMS?

- Press
- Public
- Peers
- Politicians
- Physicians
- Payers
- Patients
- Providers
Financial Picture

- Sources of Revenue
  - Property Taxes
  - Donations
  - Endowment
  - Service contracts
  - Grants
  - Charges for service
    - What is your Average Patient Charge?
    - What is your initial collection rate?
    - How about your final collection rate?
    - What is your payer mix?
Direct Expenses for EMS Care

- The people in the rig or on duty
  - What is the value of a volunteer?
- Don’t forget benefits and incentives
- Vehicle operation costs
- Medical supplies
- ALS Cost for ALS intercept
Indirect Costs for an EMS Agency

- Administrative Staff
  - Can you quantify volunteer time?
- Building costs (mortgage, rent, utilities)
- Insurance
- Legal and Audit costs
- Telephone and IT
  - IT contracts related to ePCR may fall into direct
- Training and Conferences
- Uniforms
- Recruitment and Retention
- Reserve Funds
What matters?

- Work with an accountant who knows your business
- Understand your financial statements from the billing folks and the accountant
- Have some key points ready
  - Average Patient Charge
  - Direct cost per call
  - Total cost per call
  - Annual revenue and expenses
    - What do you do with the excess revenue?
  - What is the value of the volunteer?
  - What is the cost of comparable service?
Gratuitous Trauma Scene
Operational Measures

- Community Demographics
  - Population, Households, Age, Income Level
  - Concentrations of population

- Requests for service
  - Distribution – Temporal and Geographic
  - Frequency
  - Type of Calls

- Call coverage
  - Primary units, Back Up Units, Mutual Aid, Automatic Aid

- Response times
- Unit Hours (scheduled and ad hoc)
- Number of medics, drivers, dispatchers
Community Demographics

- **Sources**
  - Town or Village Clerk
  - County GIS Service
  - Census.gov
  - Wikipedia
  - Chamber of Commerce

- **Variability**

- **Why?**
  - Cost per capita
  - Calls per capita
  - Variation w/ Population
What is a request for service?

- Any time your agency is asked to respond to an emergency?
- What about stand by events?
- If you send a flycar, is it a separate request?
- What data do you gather about your requests for service?
  - Times
  - Location
  - Nature
  - Units responding
  - Crew
How do you define Response Times?

- Are all responses created equal?
- Do you measure from the patient perspective?
- What are the intervals?
  - Dispatch processing
  - Chute Time
    - Crew mustering
    - Crew preparation
  - Driving Time
  - Patient Access Time
- Do you count mutual aid calls?
- What about “exceptions”?
What is the response time “standard”? 

- There is no standard, period.
- Hypoxia needs to treated within 4 to 6 minutes.
- The NFPA has published standards, but not used universally and may be impossible to meet.
- No state law, policy or regulation.
- Refer to the list of p’s earlier.
Average vs. Fractile Time

- In an average, half of the calls are better, half the calls are worse
- Fractile is more precise measurement
- Set a goal for your agency:
  - 90 percent of life threatening dispatches will be responded to in 540 seconds or less (9 minutes)
  - 90 percent of non-life threatening dispatches will be responded to in 1080 seconds or less (18 minutes)
- Track your progress
Operational Measures

- **Drop Times**
  - Time to leave a patient at the hospital

- **Length of Calls**
  - Dispatch to In Service time

- **Unit Hours**
  - Number of hours a staffed ambulance is ready to respond, or did respond

- **Unit Hour Utilization**
  - Staffed hours per week, day or month
  - Number of requests for same period
  - Divide requests by Unit hours to get a ratio
Clinical Measurements

- Develop in consideration with REMAC and Medical Director
- Consider both agency and call based measurements
- Agency Measurements
  - Epi-Pen
  - Glucometer
  - Albuterol
  - Tourniquets
  - Lifting Procedures
  - Safety Operations
  - Narcan
  - CPAP
Call Based Measurements, Part I

- **Trauma Calls**
  - Time on Scene
  - Proper triage to trauma center
  - Proper use of spinal immobilization

- **Cardiac Arrest Calls**
  - Bystander CPR
  - Time of AED use
  - Evidence of focused CPR
  - Proper interventions

- **Chest Pain Calls**
  - Use of Aspirin
  - ALS called
Call Based Measurements, Part II

- Stroke Calls
  - Use of Assessment Tool
  - Was a glucometer used?
  - Transport to a Stroke Center
- Altered Mental Status
  - Was a glucometer used?
  - Appropriate assessments performed
- Suspected Narcotic Overdose
  - Appropriate use of naloxone
Clinical Measures, Part III

- Respiratory Distress
  - Use of oxygen and/or albuterol
  - Lung sound assessment
  - Pulse oximetry
  - Use of CPAP
- Pediatric Patients
  - Proper assessment/care of ALTE
- Syncopal Episodes
  - Proper assessment and treatment (ALS and 12 Lead)
- Refusal of Transport
  - Proper documentation of assessment
  - Proper refusal paperwork completed
# Create a Dashboard

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<th>Requests Received</th>
<th>492</th>
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<tr>
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<td>Echo</td>
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<td>Delta</td>
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<td>Charlie</td>
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<td>Bravo</td>
<td>22</td>
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<td>Alpha</td>
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<tr>
<td>Total</td>
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| 14%               | 25%  | 38%  | 24%  |
## Dashboard Design

### Response Times

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<th>2 to 5 min</th>
<th>6 to 9 min</th>
<th>10 to 12 min</th>
<th>13 to 15 min</th>
<th>16 to 18 min</th>
<th>&gt; 18 min</th>
<th>Mutual Aid</th>
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Sharing the News

- Talk to your stakeholders
- Back to the list of P’s
- Meetings
- Press Release
- Annual Report
Moving Forward

- Sustain the practice of data analysis
- Periodically review the dashboard contents
- Make a big deal of the successes
- Be realistic about the shortfalls
Key Points

- Identify your key constituents and what is important to them
- Identify the key measures for the constituents
- Measure the activities of your organization
- Define your measures, be specific
- Create a “dashboard” to track your status
Sources

- Using CPIs

- California Metrics
  - http://www.emsa.ca.gov/ems_core_quality_measures_project

- NAEMSP on Response Times

- Evidence-Based Performance Measures for Emergency Medical Services Systems: A Model for Expanded EMS Benchmarking
  - A Statement Developed by the 2007 Consortium U.S. Metropolitan Municipalities' EMS Medical Directors (Appendix)
THANK YOU
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