Data Mining

Hitting the Mother Load with Competing Hospitals

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Medical Director
Fort Worth, Texas
Daily Cattle Drive
Barbeque
MedStar

- EMS Established by City Ordinance
- Public Utility Model
- 15 Cities
- 421 Square Miles
- 880,000 Population
MedStar

• 100,000 EMS Calls/Year
• 52 Ambulances
  – System Status Management
  – EMT/Paramedic
• $27 million
  – No Government Subsidy
Emergency Physician’s Advisory Board

- Established by City Ordinance
- Directs Clinical Care of MedStar
- Board Composition
  - Emergency Department Directors
  - Trauma Directors
  - Medical Society Appointees
EMS in Healthcare System

- National Organizations
- Physician’s Board
- Medical Societies
- Hospital Councils
Why Do They Need Us?
EMS Data Uses

• Quality Improvement
• Staffing
• Supplies
• Hospital Issues
  – Nursing Home Transfers

allows hospitals to share information with EMS services for the purposes of quality improvement, medical audit, and competency assurance without written authorization from the patient.
Chest Pain Center

- Accrediting Body
- Certification
- EMS Involvement
- Data Sharing
- Cardiac Committee
Quality Improvement

• Transport Review
  – Emergency Call to Dispatch
  – On Scene to Electrocardiogram
  – Recognition to Activation
  – Transport Mode
Quality Improvement

- Hospital Review
  - Emergency Department Delays
    - Activation Times
    - In Department Times
  - Intervention Laboratory Times
  - Outcomes
50 year old male arrived via MedStar c/o chest pain/SOB x 2 hours. PMH HTN, smoker.

23:59 – EMS EKG STEMI recognized
(Aspirin given by EMS—no run sheet found for time)
00:02 – STEMI Alert activated by Dr. DeMoor
00:08 – Arrival to ED
00:12 – Initial EKG done in ED
00:26 – Call Team arrival
00:57 – PCI to 100% RCA

**Staff Involved:**

<table>
<thead>
<tr>
<th>ED</th>
<th>Cath Lab</th>
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<tbody>
<tr>
<td>Charlotte Towler</td>
<td>Joel Sherwood</td>
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<tr>
<td>Heather Gilliam</td>
<td>Jim Westerhoff</td>
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<td>Erinn Murrell</td>
<td>Charissa Lobb</td>
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Door to ED ECG: 4 min.
ECG signed to STEMI Alert: 3 min.
STEMI Alert to Cath Lab Arrival: 24 min.
Pt Arrival in lab to Device Deployment: 17 min.

**Total D2B: 49 min.**
100% Prox RCA Lesion
Aspiration, Balloon, and Stent x 1

Before

After
Similar Feedback

- Acute Stroke
- Trauma
- Sepsis Alert
- Interesting Cases
  - Monthly Grand Rounds
Current Data Mining

- Frequent Users
- Community Patients
- Mental Health
- Health Record Exchange
- Open Access to EHR
EMS is NOT Aviation
EMS is Only and Always about Patient Care
Thank You