A new paradigm for EMS

FROM PREHOSPITAL TO OUT-OF-HOSPITAL CARE

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Objectives

- Insult the guys from Texas
- Tasteless jokes
- Sophomoric humor
- 8-minutes or less
- 2-minutes for the actual talk
Texas Eagles 2013 Update
Rome, Italy

Choosing a new leader
...and the envelope please
Dallas, Texas

The first ego Eagle
Dallas, Texas

Recognition by the Feds
Ft. Worth, Texas

Redefining EMS → Mobile Health Care
Ft. Worth, Texas

Mobile health care or patient steer-ing?
Washington, D.C. & New Orleans

Lip-synching: Who’s behind all this?
Put a stethoscope on it

Fowler  Isaacs  Pepe
Healthcare (and EMS) in America

No country for old men (...or women, or kids)

“It’s a mess, ain’t it sheriff?
If it ain’t, it’ll do till the mess gets here”
Just the facts, ma’am

- The U.S. leads the world in healthcare costs
  - $2.6 trillion in 2010
- But lags in quality of care and health outcomes
  - Hypertension
    - 27% have adequate blood pressure control
  - High cholesterol
    - 17% with CAD meet guidelines
  - Obesity
    - 86% will be overweight or obese by 2036
  - U.S. ranked last in preventable deaths of 19 countries in the OECD

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[Organisation for Economic Co-operation and Development (OECD)]
So, what’s up?

“There are no clean getaways”

- Aging population & ↑ chronic disease
- Limited primary & preventative care
- Model for health delivery & reimbursement
- Episodic care for acute illnesses
- Revolving door effect
Well just how dangerous is it?

“Compared to the bubonic plague, it’s not so bad”

Impact on 911 EMS

- Lack of primary care
- ↑ Utilization of 911 and ERs for non-emergencies
- ER overcrowding, EMS back-up, and hospital diversion
- ↓ Availability of 911 resources
  - Time-sensitive cases or critically ill
- Inappropriate or inadequate care
- ↑ Costs all-around
  - ↓ surge capacity in the face of disasters/mass-casualty events
What else?

Well it may be worse than the bubonic plague?

Impact on hospitals and ERs

- ER visits ↑ at 2x the rate of growth of the U.S. population
  - 26% ↑ between 1997-2007

- At the same time that there’s been a ↓ in
  - Hospitals, ERs, total # beds (200k)

- Over 90% hospitals overcrowded
  - 40% on a daily basis
To add insult to injury

Frequent ER users

- Patients who go the ER ≥ 4-times/year
- < 10% of ER patients account almost 30% of all ER visits
- In contrast to popular myth
  - 60% are white
  - Average age 40
  - Most have health insurance
    - 60% with Medicare or Medicaid
  - Most have a 1°-care physician
  - Only about 15% are uninsured
...and then there are the abusers
Case study

Austin, Texas

- 9-patients
- Accounted for 2700 ED visits over a 6-year period
- Cost of providing this care was $3 million
- Reflect a confluence of socioeconomic factors
  - 8-drug abuse
  - 7-mental health
  - 3-homeless
Debunking a few stereotypes

17% of the U.S. (50 million) population uninsured

- 1 in 5 use the ER for primary care
  - Twice as often as insured patients
  - Half as often as Medicaid patients
- Less than 2% are frequent ER users
- But they’re at very high-risk
  - Don’t know they have a chronic condition
  - Less likely to control it
    - Healthy behaviors & preventative care
  - Overall 25% ↑ risk of dying compared to the insured
What we want to do

Blow it up
In other words

Change the paradigm

- Prehospital care vs. out-of-hospital care
- Prehospital care
  - What happens before you get to the hospital
- Out-of-hospital care
  - Who says you have to go in the first place?
The underlying philosophy

Not primarily about reducing costs or inappropriate use (or abuse) of the 911 system

- About getting patients to the most appropriate care
- Once size does not fit all
- Instead of shoe-horning patients into the one we have
- Build the system to fit the care
- Let quality of care and value drive resource utilization & costs, not the other way around
A new design model

Two-arms (before & after patients call 911)

- Divert non-life threatening calls to 911 for EMS
  - Triaging to non-emergency 1°-care
  - Utilizing non-emergency transport

- Pre-empt potential calls to 911
  - Bringing the care to the heavy users & recidivists
    - Outreach
    - Case-management
Diverting low-priority calls to 911

Nurse-based triage

- Identifying 108 low-priority call-types (23% call-volume)
- 911 operator transfers
- To a specially-trained nurse
- Utilizes a diagnosis-driven algorithm
- Drills down on the diagnosis and the time factor
- Schedule a non-emergent medical visit
- Arrange alternative means of transport
  - Taxi, van, ambulette, non-Metro ambulance
Bring care to the heavy users

Drill down on the 911 recidivist population

- Top 10-addresses
  - Low-income senior living facilities
    - >2000 calls to just 9 addresses (150-300 calls/year each)
  - Homeless shelter population
    - > 400 calls to just one of these

- Individuals
  - Top 10 ‘platinum preferred’
    - > 1600 calls

- Corporate & government users (UPS, GE, Metro)
Medical outreach

Launch a pre-emptive strike (before they call 911)

- Run regular clinics
- Top recidivist addresses
  - Homeless shelters
  - Low-income senior living facilities
- Who sees them?
  - Supervised nurse practitioner students
  - Community paramedics
  - Social workers
- Treat on-site or make referrals
  - Physicians offices, clinics, mobile care, labs, social services, meals
For the daily users

Medical Outreach (after they call 911)

- Enroll these individuals for special attention
- Specialized community paramedic response unit (with or without an ambulance)
- Link with medical home (single hospital)
- Develop multi-disciplinary care plan
Focus on ‘high-cost’ users

Case manage other ‘recidivists’

- Hospital re-admissions
  - Leverage fiscal disincentives
  - U.S. Affordable Care Act
    - Heart failure, pneumonia heart attack
## October 2012 - January 2013

**Triaged 1085 low-priority calls**

<table>
<thead>
<tr>
<th>Condition</th>
<th>Diagnosis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sick</td>
<td>Hemorrhage/laceration</td>
</tr>
<tr>
<td>Falls</td>
<td>Diabetic problem</td>
</tr>
<tr>
<td>Abdominal pain</td>
<td>Allergic reaction</td>
</tr>
<tr>
<td>Back pain</td>
<td>Headache</td>
</tr>
<tr>
<td>Trauma</td>
<td>Convulsions</td>
</tr>
</tbody>
</table>
October 2012 - January 2013

Dispositions

- Bounced-back to 911
  - Medical reason 53
  - Transport unavailable 40

- Non-transports
  - Lift-assist 80
  - Self-care 27
  - Home-care 3
  - Other 13

- Transports
  - Physicians’ offices 44
  - Urgent care 70
  - ER 808
October 2012 - January 2013

Means of transport

- 911 ambulance 17
- POV 48
- Ambulette 43
- Taxi 8
- Other 5
- Private ambulance 813
  - Lift-assist 80
THANK YOU!