Dispatch Review Project

Public Safety Commission

March 2, 2015

Role of First Response

- If there is uncertainty about the patient's condition resources are assigned to prevent delayed care
- Goal of response to a medical emergency is to get ANY trained resource to the call quickly to provide time sensitive treatments
- There are more AFD units than EMS so there is greater probability that a fire unit is closer than EMS
- Time critical treatments have been made available to AFD to assure the rapid delivery of these therapies

Dispatch Process

- EMS call-taker uses MPDS scripted questions to identify one of 33 different conditions and create a call determinant
- Call determinant is linked to a Priority (1-5)
  - P1-3 Fire and EMS
  - P4-5 EMS only
- Algorithm to the point of the determinant is proprietary and cannot be modified but resource assignment is determined locally

Response in Other Systems

- Survey conducted in 2013
- Many estimated the rates of assignment of fire unit first response
- Significant variability in assignments
- No consistent rationale or process to decide when to assign a fire first responder

First Response Assignment

- Alameda County 100%
- Albuquerque 100%
  - P1-2 get 2 FD units
  - P3-5 get 1
- Atlanta no % given
  - All P1-P2; Some P3-P4
- Cleveland *50%*
  - All P1-P2; Some P3
  - Extended EMS response
- Washington DC
  - 18% of P4-P5
  - 97% P1-P3
- Dallas 17% (APCO)
  - Major MVC, heart attack, stroke, unconscious
  - Extended amb response
- New Orleans *32%*
  - P1 most P2
  - Extended response
- NYC *20%*
  - Home grown process
- Portland 90% (APCO)
- San Diego (88%)
- St Louis (45%)
  - All P1-P2

Lights and Sirens Response

Albuquerque	76%
Atlanta	100%
Chicago	100%
Dallas	100%
Dayton	90%
Denver	72%
Honolulu	100%
London	72%
Louisville	80%
Memphis	76%
Miami	100%
Minneapolis	75%
Naples	80%
Nashville	80%
New Orleans	95%
New York City	80%
Oklahoma City/Tulsa	100%
Orlando	65%
Portland	85%
San Antonio	100%
San Diego	63%
San Franscisco	70%
St Louis	80%
St Paul	100%
Tucson	20%
Washington DC	100%

The Project

- Began in 2012 as systematic stepwise review
  - A priori risk and data parameters
  - Determinants linked to care delivered
- Identified call determinants with low probability of acuity and interventions
- Reduced assignment of AFD on some call-types without an impact on patient safety

Goal of Ongoing Review Process

- Provide the right resource, to the right patient, in the right amount of time
- Continue accumulation of data points
  - Improve accuracy and predictive value
  - Expand analysis to new determinants
- Make response modifications more dynamic within the limitations of the current technology

Project Timeline

- Phase 1
  - Design a stepwise review process
  - Build a data collection process
  - Identify low priority call types for initial modification
  - Implement first modifications and evaluate
- Phase 2
  - Designed Near-Unit Dispatch Modifier process
  - Implement on selected P3 call types for feasibility trial
- Phase 3 (Next Steps)
  - Expand reductions in response to P2-P3
  - Expand Near Unit Dispatch Modifier

Near-Unit Modifier

- Goal of first-response is someone there quickly
  - If EMS to arrive quickly first-response not needed
- EMS CAD used to identify response <5 min to eliminate AFD response request
- Feasibility Trial (April 2014)
  - Limited to some P3 call types
  - Assessed CAD logic and requests for assistance

Preliminary Results

- Priority 3 reduced response (Nov 2012)
  - 2,718 calls not assigned to AFD
- Priority 3 Near Unit Dispatch (April 2014)
  - AFD not dispatched: 495 incidents
  - AFD dispatched prior to EMS Arrival: 177
  - AFD dispatched after EMS Arrival: 18
    - AFD requested for patient movement: 10
    - AFD requested for support medical care: 8
- Changes saved 3,213 initial AFD dispatches

Expansion of Reduced Assignment

- Increased tolerance of acuity up to 5%
- Reviewed call determinants for additional opportunities to reduce AFD response
  - Sufficient data (n>500)
  - Acuity <5%
- Move to P4 response to eliminate RA to AFD

Expansion of Near Unit

- Uses existing P2/P3 call logic to create automated exception process
- Identified call types with intervention <15%
  - < 15% moved to P3 to make eligible for exception
  - ≥ 15% moved to P2 without exception
- Provides additional opportunities to reduce AFD response without risk to patients

Impact of Changes

- If applied to the current database
- 9,858 eliminated in No Response modification
- 40,897 responses eligible for Near-Unit elimination of AFD response
- Determinants nearing threshold for evaluation will result in an additional 1,300 call reduction

Next Steps (2015)

- Ongoing review of increasing data points
- Evaluate effectiveness and safety of change
  - Expand reductions in low acuity response
  - Expand Near Unit Dispatch Modifier
- Stakeholder discussion (FD, EMS, OMD)
  - Other opportunities for efficiency
  - Reduce code 3 response
  - Discuss changes to dispatch evaluation
- Goal remains sending right resources to right patients in right amount of time

Limitations and Ongoing Challenges

- AFD and EMS on separate CAD
  - Unable to visualize all first response and transport resources in the same CAD platform
  - Unable to use comparative processing for unit recommendation
  - May limit opportunities for additional efficiencies

- Call types with low volumes

Questions?