Contra Costa County EMS Modernization Project

Consultant Report
Fitch & Associates, LLC
April 2014
PROJECT RATIONALE

- Study undertaken NOT due to crisis
- System design is more than a decade old
- Redefine EMS System in preparation of upcoming procurement
- Recognize trends that impact EMS System and participants
- Update clinical care focus based on patient benefit
- Ensure best value of System activities
IMPORTANT TRENDS

- Increasing System Activity
- Fiscal Challenges
- Changes in Healthcare
**System Activity**

- Incident volume and transports increasing an average of 3.5% per year since 2009
- From 2011-2012 volume increased 5.1%
- 10.4% increase in transports from 2009 to 2012
- Upward trend likely to continue
INCREASING ACTIVITY

Contra Costa County Emergency Ambulance Responses and Transports

Calendar Year

All Ambulance Dispatches

Transports

Quantity

90,000
80,000
70,000
60,000
50,000
40,000
30,000
2009
2010
2011
2012

58,292
77,872
78,850
79,833
86,134
60,000
59,538
61,390
64,530

April 2014
**Distribution of Incidents**

- Based on road infrastructure, industry locations, and where people are
- Patterns vary by time-of-day and day-of-week and time-of-year
EMS Demand

2CCC Incident Density Combined Data - AMR MOR SRV

April 2014
CALL DENSITY

- Used to deploy ambulances
- Allows for realistic definition of response time performance requirements
CALL DENSITY
FISCAL TRENDS

- EMS Agency revenue is not growing appreciably and will decline with reductions in federal and state grants
- First responders have fiscal challenges
- Ambulance providers are experiencing decreased revenue per transport and higher costs
Total Contra Costa EMS System Program Estimated Costs Including Support for Fire

Fire First Responder Support, $2,571,741

*Costs displayed are limited to EMS program staff salaries, technology and/or services purchased to support and sustain program funding. One time purchases for EMS system not included.

Contra Costa EMS Oct 2013
FIRST RESPONDERS

- Fire station closures
- Limited funds for needed dispatch improvements
- Tight budgets
- Costly training
AMBULANCE SERVICE FISCAL ISSUES

- Decreasing revenue per transport
- Payer mix changes
- Limited return on price increases
- Increased costs
- Unknown impact of ACA
Average Patient Charges and Net Cash Received per Transport

- **Average patient charge**
- **Net cash per trip**

![Graph showing the average patient charges and net cash received per transport from 2005 to 2013.](image)

- **Dollar Amount**
  - $1,123.50
  - $1,130.25
  - $1,152.01
  - $1,323.58
  - $1,544.43
  - $1,658.17
  - $1,872.72
  - $1,928.95
  - $1,971.27

- **Net Cash per Trip**
  - $621.95
  - $611.67
  - $540.88
  - $536.70
  - $580.36
  - $569.45
  - $606.98
  - $583.70
  - $573.27

- **Years**
  - 2005
  - 2006
  - 2007
  - 2008
  - 2009
  - 2010
  - 2011
  - 2012
  - 2013

*April 2014*
Contra Costa 911 for Contracted EOA
Increase in Government Coverage

- Medicare
- MediCal
- Private Insurance

Yearly Percentages:
- Medicare: 26%, 27%, 38%, 44%, 42%, 41%, 40%, 40%, 43%
- MediCal: 16%, 15%, 14%, 15%, 16%, 18%, 20%, 22%, 22%
- Private Insurance: 8%, 8%, 8%, 7%, 8%, 7%, 7%, 6%, 6%
Reimbursement from Payers for ALS Base Rate

- **Insurance High**: $1,640
- **Insurance Low**: $1,457
- **Medicare Allowable**: $499
- **Medicare Payment**: $399
- **Medi-Cal Payment**: $118
- **CCHP Payment**: $35
Marginal Collection Rate

Year | Rate
---|---
2006 | 20.20%
2007 | 19.34%
2008 | 18.50%
2009 | 18.92%
2010 | 18.17%
2011 | 18.30%
2012 | 16.95%
HEALTHCARE CHANGES

- Trend to Accountable Care Organizations changes incentives
- Value Based Purchasing – Medicare to require extensive data collection and submission
- Expansion of EMS System roles and responsibilities
- Potential realignment of payment incentives
IMPACT OF HEALTH REFORM

- New roles, responsibilities & funding sources
- Collaboration opportunities with healthcare systems
- Changes will evolve over next decade
- System and participants must be innovative and agile to respond to opportunities/challenges
IMPROVED PATIENT OUTCOME

• Focus on continuum of care and systems approach
  o Trauma
  o STEMI
  o Stroke
  o Burns
  o Resuscitation
CARDIAC ARREST

• Recognition of event
• Bystander CPR
• Rapid defibrillation
  • Public access defibrillation, first responder
• Resuscitation center
PARADIGM SHIFT IN EMS

- Less emphasis on response times
  - Focus is on total time to care
  - Response times < 4 minutes improves patient outcome
  - Response times > 14 minutes negatively impact patient outcome
Paradigm Shift In EMS

- Less emphasis on response times
  - 1/3 of time ambulance arrives prior to first responder (Richmond/ConFire)
  - @ 90th percentile AMR arrives within 68 seconds of ConFire’s arrival & 100 seconds before Richmond
PARADIGM SHIFT IN EMS

- Efficacy of ALS first response
  - ALS is beneficial to patient outcome only in limited situations
  - Little time for ALS interventions to be performed when arrival of ALS on ambulance is within 2-3 minutes
**OBJECTIVES OF MODERNIZATION**

- Focus on proven benefits to patients and community
- Reduce costs (avoid increases) to all providers
- Capture new funding and reallocate revenue to activities providing greatest benefit
- Establish flexibility within system to respond to changes
Actions to Modernize
**RECOMMENDATIONS**

- Continue and expand prevention efforts
- Focus on systems approaches to care
- Match patient needs with appropriate resources
RECOMMENDATIONS

- Establish / acquire consolidated and quality medical dispatch
- Implement standardized continuous electronic patient care record delivered real time to facilities
- Invest in sophisticated information systems to facilitate data collection and analysis
ENHANCE ACCOUNTABILITY & INTEGRATION

- Create incentives to innovate and eliminate obstacles
- Establish formal collaborations for on-going work for integrating healthcare and addressing specific issues (i.e. 5150)
ENSURE VALUE

- Dispatch first responders only when beneficial to patient
- Extend ambulance response times by 60 seconds
- Standardize performance requirements in EOA
- Eliminate QRV and STAR cars
- Increase ambulance fees and allow treat and no transport charges
SUMMARY

- Trends reveal that the status quo is unsustainable long-term
  - Decreasing EMS Agency revenue
  - Decreasing reimbursement
  - Fiscal pressures on first responder agencies
  - Increasing call volume
  - Increasing costs
SUMMARY

- Potential system savings identified in this project exceed $3 million annually (not including potential first responder savings)
Summary

- Additional funding has been identified but not quantified from:
  - Increasing ambulance rates
  - Allowing treat and no transport fees
  - Enacting new ordinance with inspection and permitting fees
  - Encouraging providers and County to seek funding for expanded role opportunities
  - Consider Measure “H” increase
IN CLOSING:

We have unequivocally kept the patients of Contra Costa County foremost throughout this consultation, and at the center of our recommendations.