wall time collaborative

a partnership to reduce ambulance patient off-load delays

CALIFORNIA HOSPITAL ASSOCIATION

The 8th Annual Behavioral Health Care Symposium
December 9, 2013

Moderator

BJ Bartleson
Vice President, Nursing and Clinical Services
California Hospital Association

Panelists

Kimberlee Roberts, MPH
Director, Clinical Services
Scripps Memorial Hospital

Bruce Barton
Director, Emergency Medical Services Agency (EMS)
Riverside County Department of Public Health

Howard Backer, MD, MPH
Director California Emergency Medical Services Authority (EMSA)

Michael Stanish
Director, Regional Policy Analysis
California Hospital Association

Objective

- Understand what EMS patient off-load time is and the various ways it's described
- Learn the impacts of off-load delays from the perspective of the state and local EMS agencies, hospitals, patients and the community
- Understand federal/state and accreditation laws, regulations and performance standards regarding off-load delays
- Learn about the CHA EMSA Wall Time Collaborative and progress to date on development of a best practice toolkit for use in local jurisdictions
- Dialogue with panelists on specific issues relevant to stakeholders and how collaboration and cooperation can co-create successful solutions

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Ambulance Patient Off-load Delays

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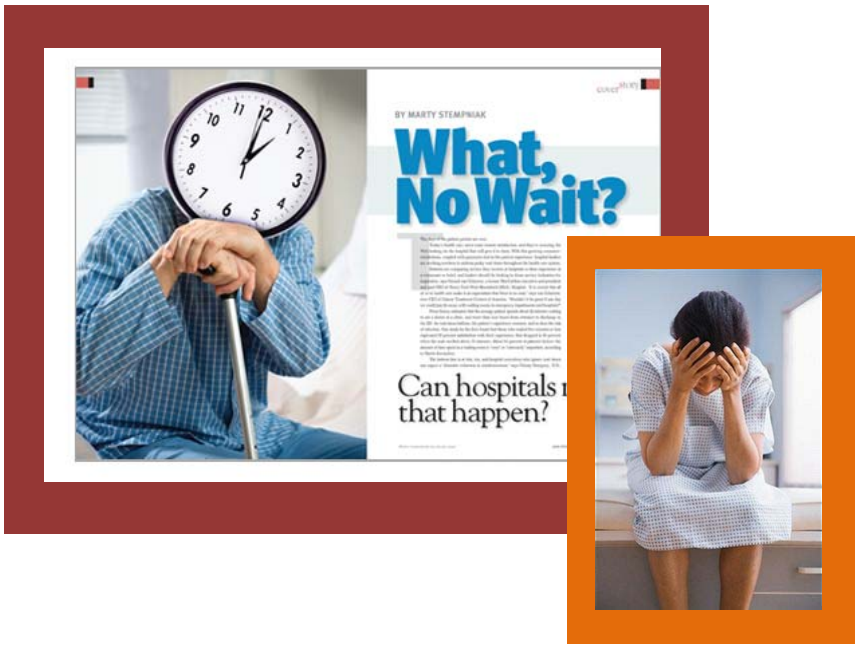

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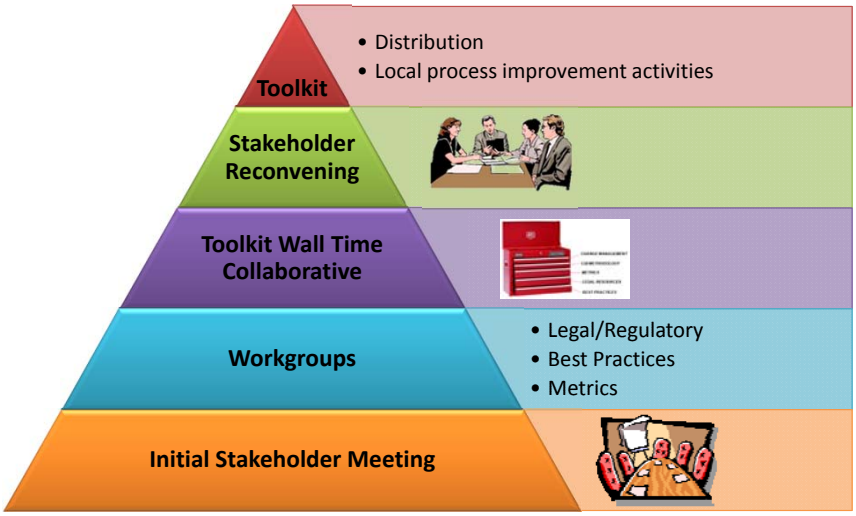
CHA-EMSA Wall Time Collaborative

Triple Aim



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EMS to ED Patient Transfer Delays

Delays: Impact and Options

Howard Backer, MD, MPH
Director, California Emergency Medical Services Authority

EMS Patient Off-load Time

AKA

- Ambulance wall time
- Ambulance wait times
- EMS patient parking
- Capture of emergency medical services
- Patient handover delays
- Patient off-load delays

The interval between arrival of an ambulance patient at the ED until the EMS and ED personnel transfer the patient to an ED stretcher and the ED staff assume the responsibility for care for the patient.

National Association of EMS Physicians position statement, 2011

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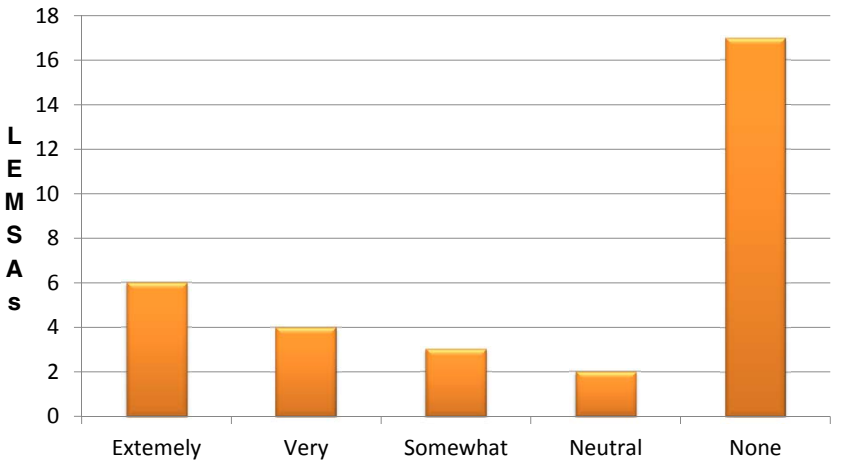
LEMSA Survey

How much of a problem is off-load delay?



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Snapshot of Impact in CA County X

Hospital A

- 17,408 hours of wall time in 2012
- $2.6 million in lost production time for crews

At time of communication

- Two- to three-hour wait for a bed to off-load the patient
- Four ambulances waiting
- Two other hospitals have ambulances that have been waiting more than 50 minutes

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EMS System Costs (2012)

- Neighboring CA counties C and D logged approximately 20,535 total delay hours accounting for $3 million in lost unit hours
- County S Metro Fire Department: 17,345 hours of delays in patient off-load time in one hospital with a $2.6 million estimated system cost for this time
  - When multiple ambulances are delayed, Metro Fire has to pull paramedic firefighters from other stations, meaning fire suppression units are unavailable to respond

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Patient Impacts of Off-load Delay

ED Overcrowding demonstrated impacts:

- Delay to definitive care
- Poor pain control
- Delayed time to antibiotics
- Prolonged hospital stay

"Ultimately, there is a reasonable concern that ambulance off-load delay will compromise patient safety."

Cooney DR, et al, National Association of EMS Physicians position statement. Prehosp Emerg Care. 2011 Oct-Dec;15(4):555-61

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EMS and Community Impacts

- Fewer units in community may result in longer response times
- Inability to meet contractual response obligations
- Costs shifted from hospital to EMS systems
- Readiness cost of paramedics and advanced life support (ALS) units absorbed by EMS system

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ACEP Clinical Policy

American College of Emergency Physicians

Boarding of Admitted and Intensive Care Patients in the Emergency Department, April 2011

- ED crowding is a direct result of diminished bed and resource capacity created by boarding
- A proxy for ED crowding is the time patients remain in the ED after the decision to admit
- Boarding of admitted patients in the ED contributes to lower quality of care and reduced patient satisfaction
- The problem is multifactorial with causes that span the entire health care delivery system

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The Joint Commission, Agency for Healthcare Research and Quality (AHRQ) and CMS have all recognized the problem of patient flow in the Emergency Department, its root cause of hospital throughput and its association with patient safety

Joint Commission

Joint Commission Accreditation Standard For ED Patient Flow (LD.04.03.11)

- Goes into effect January 2, 2014
- Nine elements of performance (EP)
- Recommended that "boarding time frames not exceed four hours in the interest of patient safety and quality of care"
- The individuals who manage patient flow processes review measurement results to determine that goals were achieved
- Leaders take action to improve patient flow processes when goals are not achieved

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Legal/Regulatory Issues

Emergency Medical Treatment and Labor Act (EMTALA)

- A hospital is responsible for the care of a patient when the patient or ambulance arrives on "hospital grounds"
- Requires initial assessment and triage of the patient without delay
- EMTALA does not specifically define the transfer of responsibility or the "formal acceptance" of the patient from EMS to ED staff

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Legal/Regulatory Issues (cont.)

Center for Medicare and Medicaid Services (CMS) S&C-06-21, July 2006

"Parking" patients in hospitals and refusing to release EMS equipment or personnel jeopardizes patient health and impacts the ability of EMS personnel to provide emergency services to the rest of the community

Delaying ambulance ED off-load may result in a violation of EMTALA and raises serious concerns for patient care and the provision of emergency services in a community; additionally, this practice may also result in violation of the Conditions of Participation for Hospitals.…

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Legal/Regulatory Issues (cont.)

Center for Medicare and Medicaid Services (CMS) S&C-07-20, April 2007

- Clarifies that S&C 06-21 does not mean that:

"a hospital will not necessarily have violated EMTALA if it does not, in every instance, immediately assume from the EMS provider all responsibility for the individual, regardless of any other circumstances in the ED … In some circumstances it could be reasonable for the hospital to ask the EMS provider to stay with the individual until such time as there were ED staff available to provide care to that individual."

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Can EMS Legally Practice in a Hospital?

CA Health and Safety Code, Division 2.5, and CCR Title 22, Chapter 4, Section 100145

- Allows paramedics to practice at the scene of an emergency, during transport *and* "while in the ED of an acute care hospital until responsibility is assumed by hospital staff"
- Does not provide for routine or extended continuation of care for patients transported by EMS personnel once the hospital is responsible for the care of the patient

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British National Health Service

- Clear definition and measurement metrics
- Delays are jointly owned, whole system issue
- Patient transfer expectation 15 minutes
- Zero tolerance for hand-over delays over 60 minutes
  - "Never event": Serious, largely-preventable patient safety incident
  - Consistently apply financial penalties
  - Quality improvement mandate

Zero Tolerance: Making Ambulance Handover Delays a thing of the past. NHS Confederation 2012

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Improving Access to Emergency Services

Hospital Emergency Department and Ambulance Effectiveness Working Group, Ontario, Canada 2005

- Ambulance off-load time – from ambulance arrival to patient on ED stretcher
  30 minutes (90th percentile)
- Emergency Department (ED) length of stay:
  - Acuity Scale Level I-III (resuscitation, emergent, urgent)
    < 6 hours (90th percentile)
  - Acuity Scale Level IV-V (non-urgent, less urgent)
    < 4 hours (90th percentile)

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Legislative Solutions

Nevada Senate Bill 458 (2005) created a standard of 30 minutes to transfer the care of patients from EMS to hospital staff

Massachusetts prohibited diversion in 2009

- No increase in wait times has been seen through 2010 (based on review by AMA)
- The legislation initially included fines if the time limit was exceeded, but these were dropped

England

- EMS agencies charge hospitals for delays in transfer of patients over 15 minutes
- Requires an ED throughput limit of 4 hours in 90% of patients

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California Collaborative

California Hospital Association
Emergency Medical Services Authority
Local Emergency Medical Services Administrators
EMS, hospitals, health systems, professional organizations

1. Develop metrics and measure uniformly
2. Develop best practices to address problem
3. Dialogue with hospitals and medical systems
4. Encourage habitual offenders to improve
5. Observe impact of new Joint Commission metrics on hospital throughput

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Additional Options

(Unpalatable to Collaborative)

6. Incorporate metrics into contracts
7. Establish fines to reimburse EMS providers
8. Escalating levels of response locally
9. File EMTALA complaint(s)
10. Legislation

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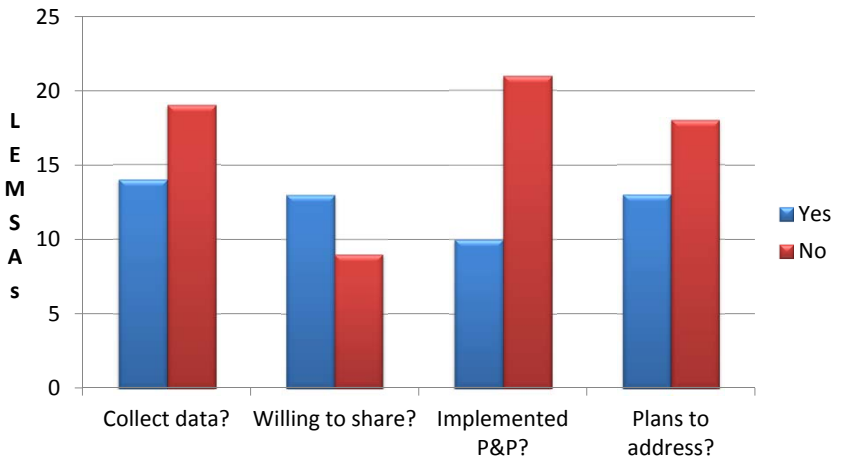
Off-load Delay LEMSA Survey



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Ambulance Patient Off-load Delays

Experience and Mitigation Efforts of a Local EMS System

Bruce Barton
EMS Agency Director
Riverside County Department of Public Health

RIVERSIDE COUNTY
Emergency Medical
Services Agency

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Riverside County

- 7,303 square miles (4th largest in the State)
- 180 miles from east and west borders
- 2.2 million population
- 29 cities
- 506,781 households
- Temperature ranges from 28 to 118 degrees
- 96 square miles of water area

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Riverside County EMS System

- 180,000 911 response annually
- 150,000 911 transports annually
- 80,000 non-emergency and inter-facility transports
- High performance ambulance contract
- Two-tiered ALS system
- 17 general acute care hospitals
- Specialty care programs for trauma, STEMI and Peds
- 600,000 ED encounters annually

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Delay / Time Interval

- The time interval between arrival of an ambulance patient in the ED until the EMS and ED personnel transfer the patient to an ED stretcher
- Riverside County patient off-load time interval standard is 30 minutes (25 minutes until April 2012)
- Delay is defined as the time interval the patient remains on the ambulance gurney in excess of the 30-minute standard
- Occurrences and cumulative hours are tracked by hospital

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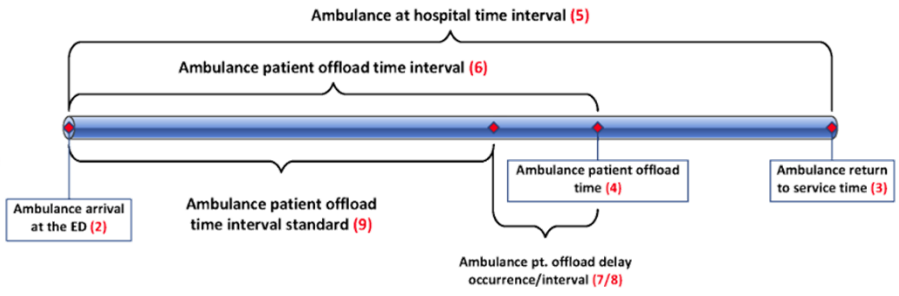

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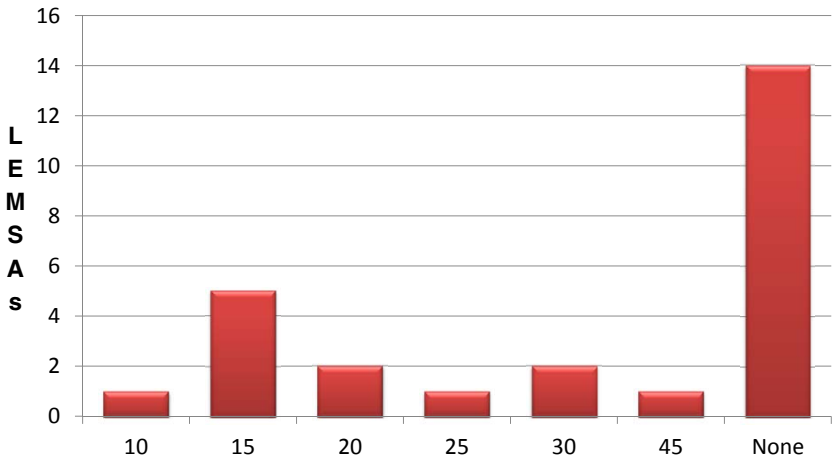
LEMSA Survey

Off-load Delay Time Interval Standard



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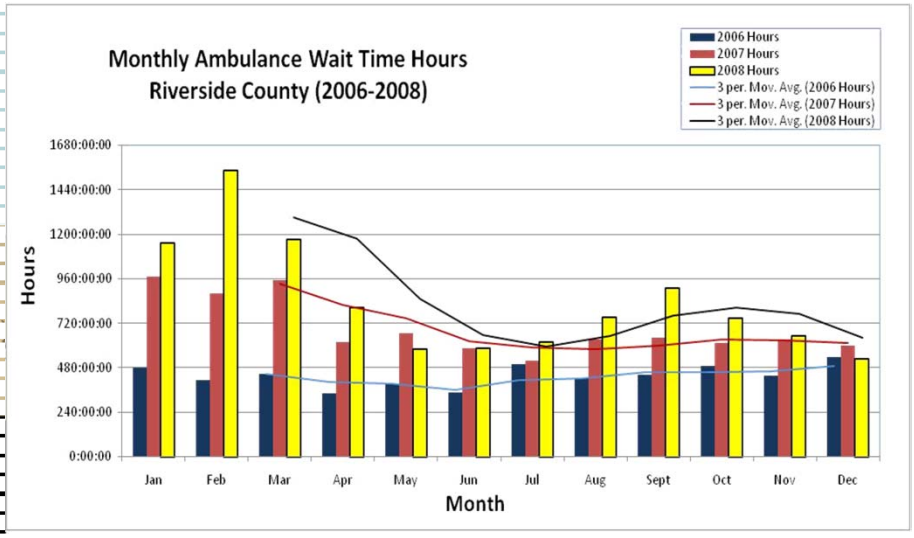
Signs We Have a Problem



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EMS System Impacts

- Ambulance resources are not available for extended periods of time
- 911 response times are effected
- First responders must remain on scene longer without a transport resource
- Delays in patient transport to definitive care
- Confusion with medical control and patient care
- Conflict between EMS and hospital personnel
- Lost unit hours $

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Mitigation Efforts

- Improve data collection, analysis and reporting
- Reports distributed to all stakeholders quarterly
- Review performance in EMS Advisory Committees
- Letters to hospitals and EMS providers
- Meeting with hospital administrators
- Involvement of HASC Regional VP

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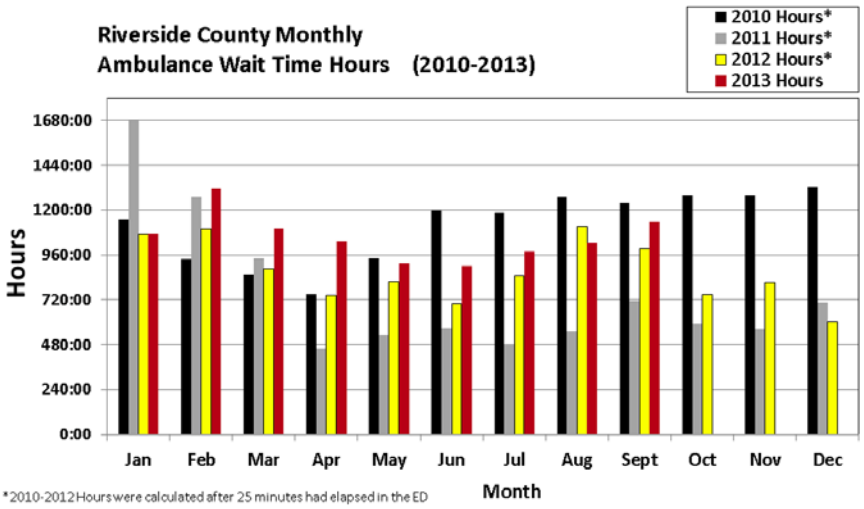
We Still Have a Problem



*2010-2012 Hours were calculated after 25 minutes had elapsed in the ED

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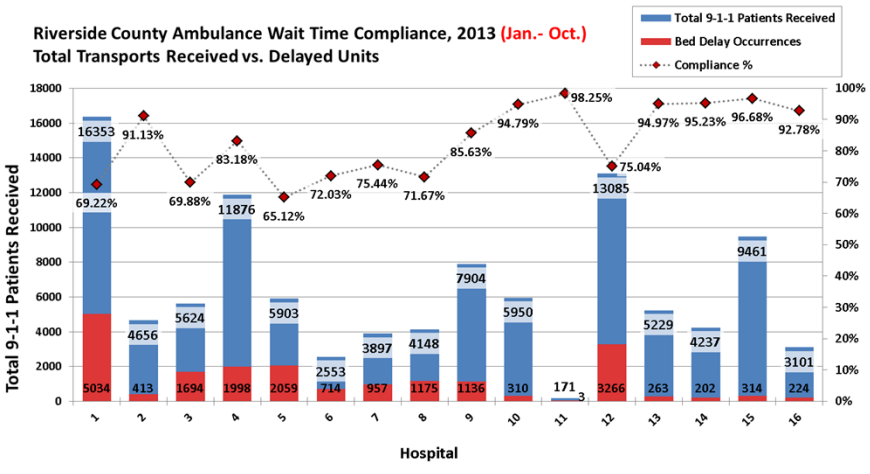

Prepared by T. Douville/P. Shepherd, REMSA

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Mitigation Efforts (cont.)

- Continue to refine data collection and reporting
- Partner with HASC and performing hospitals to communicate best practices
- Raise awareness with high ranking officials and elected officials
- Escalate the “tone” of letters
- Pre-hospital Receiving Center (PRC) policy
- Results still mixed

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What We’ve Learned

- Focus on the issue does result in improvement
- ED staff are just as frustrated as EMS providers
- Improvement strategies must be driven from the top down
- Not entirely a capacity issue
- Evidence clearly shows improving overall hospital throughput is the most impactful and lasting mitigation strategy

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Next Steps, Considerations and Controversies

- Continue to communicate best practices and work together as a system
- State coalition collaboration and deliverables
- Alternative EMS system design – alternative destinations, Emergency Medical Dispatch-based triage schemes, treat and release protocols
- Many stakeholders believe that only financial and regulatory disincentives will provide lasting change

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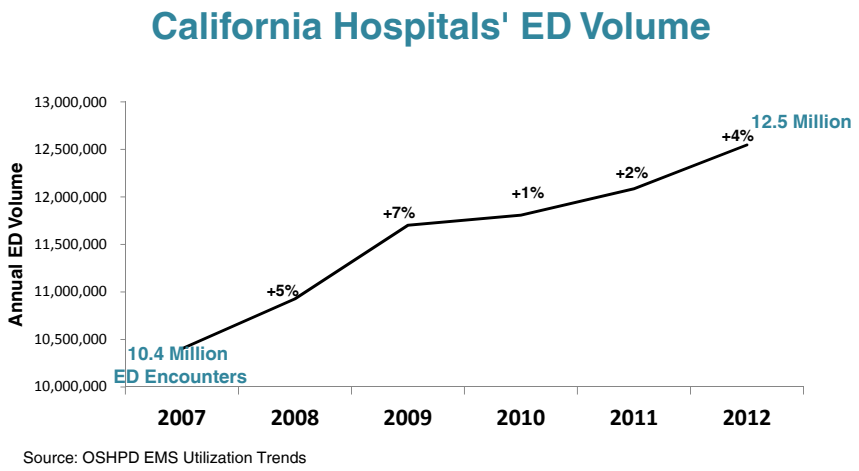
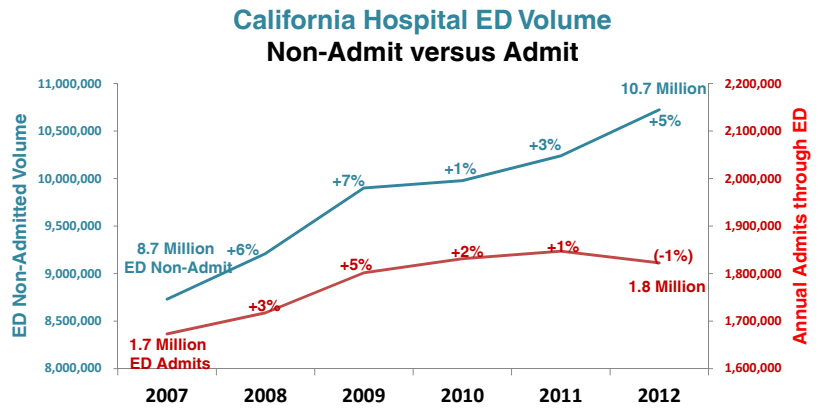
California Hospital's ED Volume Grew by 20% Over Five Years



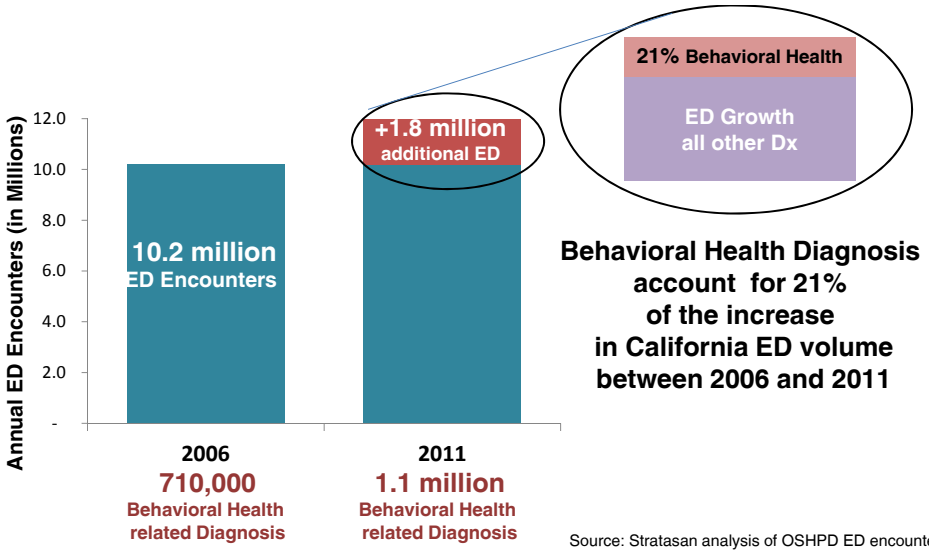
Source: OSHPD EMS Utilization Trends

Non-admit ED Drives the Volume Increase and Growing at a Rate Greater than Admit ED



Source: OSHPD EMS Utilization Trends

Behavioral Health Related Diagnosis Significant Component of ED Growth in California

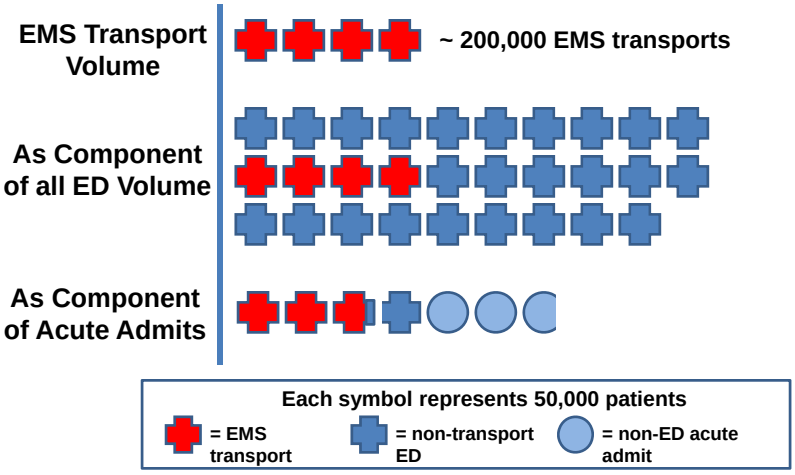


Behavioral Health Diagnosis account for 21% of the increase in California ED volume between 2006 and 2011

Source: Stratasan analysis of OSHPD ED encounte

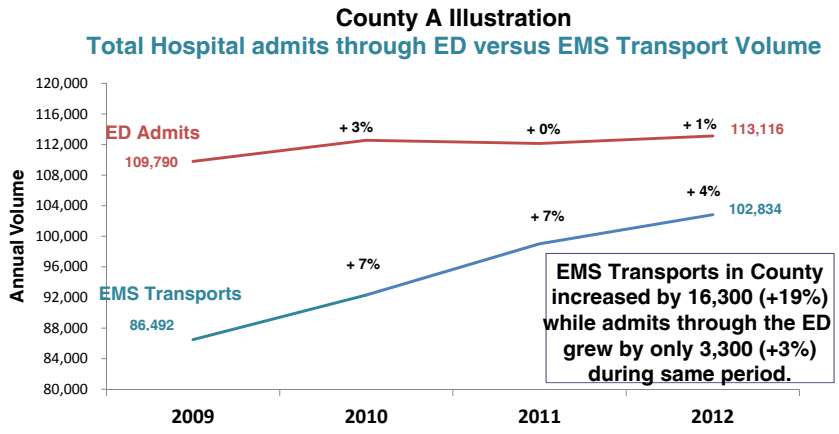
EMS Transports Represent 15% of Hospital ED volume and 40% of Acute Admits

Illustration based on volume from two contiguous counties in Southern California



Source: Based on analysis of county published transport data and OSHPD Encounters data for 2011.

Observed Growth in EMS Transports Greater Than Growth in Hospital Admits Through ED



Source: Based on analysis of county published transport data and OSHPD.

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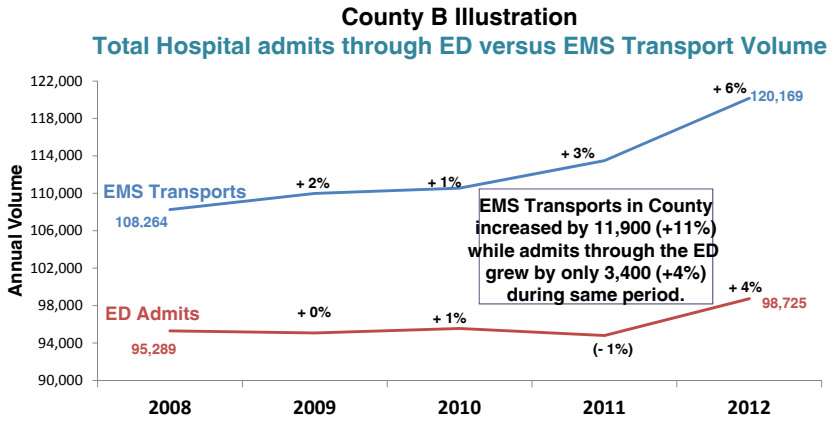
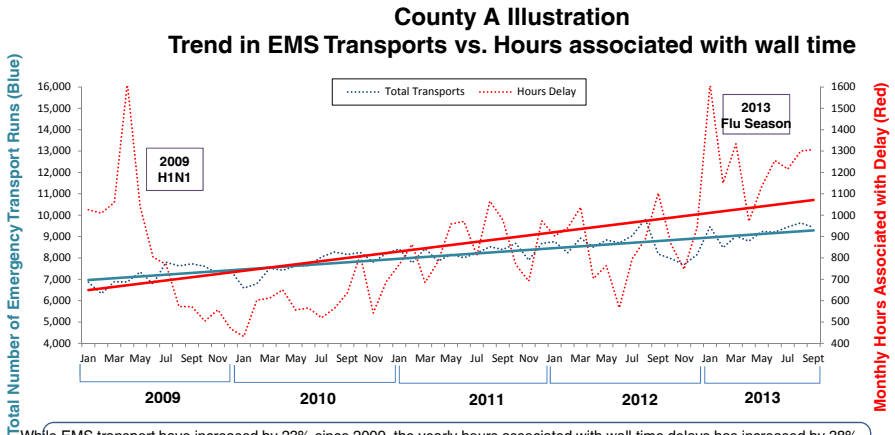


Source: Based on analysis of county published transport data and OSHPD.

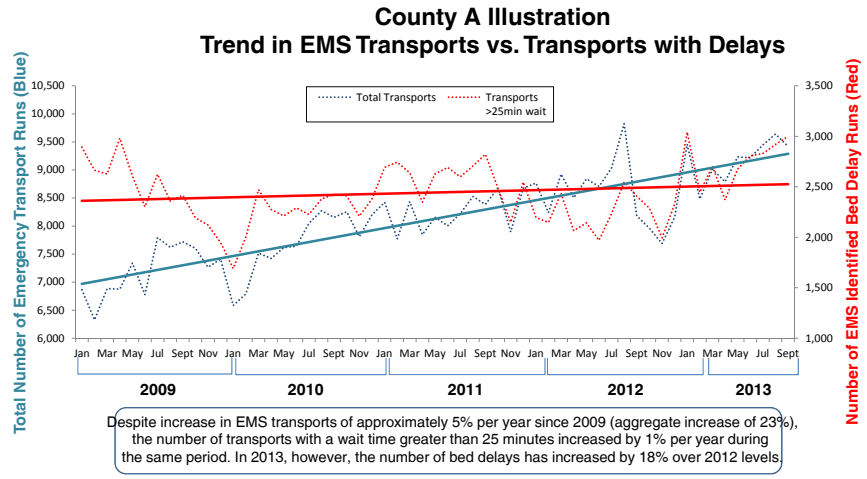
Hours Associated With Ambulance "Wall Time" Has Grown, Driven by Both Increased Transport Volume and Wait Times



While EMS transport have increased by 23% since 2009, the yearly hours associated with wall time delays has increased by 38%. This is driven by an increase in the average "delay time" from 20 minutes to 26 minutes (delays are measured as time over the initial 25 minute delay threshold).

Source: Based on data in monthly reports published by county.

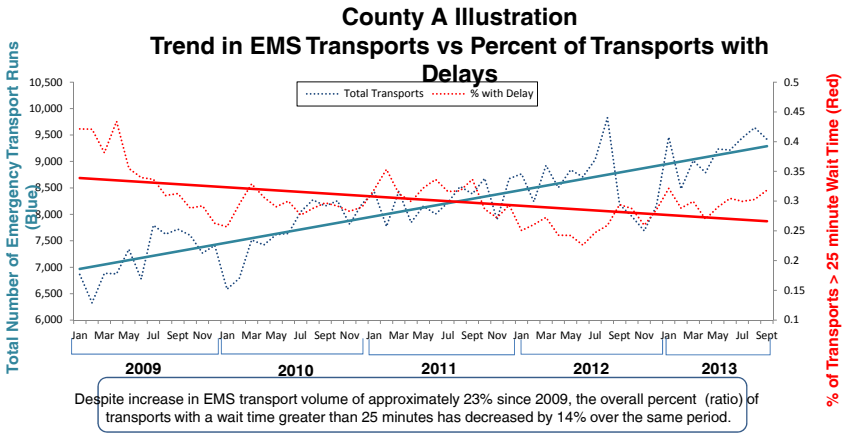
As Transports Have Increased, Hospitals Have Managed to Keep the Number Ambulance Delays From Escalating



Despite increase in EMS transports of approximately 5% per year since 2009 (aggregate increase of 23%), the number of transports with a wait time greater than 25 minutes increased by 1% per year during the same period. In 2013, however, the number of bed delays has increased by 18% over 2012 levels.

Source: Based on data in monthly reports published by county.

When Delays are Viewed as a Ratio Of Overall Transports, Delays Have Actually Improved



Despite increase in EMS transport volume of approximately 23% since 2009, the overall percent (ratio) of transports with a wait time greater than 25 minutes has decreased by 14% over the same period.

Source: Based on data in monthly reportes published by county.

Use of Emergency Services in Counties is a Multi-faceted Issue that Does Not Lend Itself to a "One Size Fits All" Solution

	County	ED Visits per 1,000 residents	% of ED Visits Medi-Cal or Uninsured	MD Licenses per 100,000 residents	FQHC per 100,000 residents < 150% FPL	EMS Stations per 100,000 residents	% of Population < 150% FPL	% of Population > age 65
High ED Rate	Imperial	**516**	57%	76	10	22	39%	11%
	Contra Costa	**398**	38%	287	3	25	18%	13%
	Kern	**381**	64%	129	9	19	38%	9%
	San Bernardino	370	50%	182	1	21	33%	10%
	Fresno	361	51%	199	6	20	42%	11%
Mid	Sacramento	359	50%	311	3	20	30%	12%
	Alameda	353	42%	305	11	22	21%	12%
	California Avg.	**333**	**45%**	**272**	**7**	**20**	**28%**	**12%**
	San Francisco	333	38%	747	9	20	23%	14%
	Riverside	323	45%	128	3	18	30%	12%
Lower ED Rate	Los Angeles	318	47%	285	6	18	31%	11%
	San Diego	293	40%	311	10	20	25%	12%
	San Mateo	**280**	28%	374	4	17	15%	14%
	Orange	**278**	31%	306	3	22	22%	12%
	Santa Clara	**261**	36%	405	7	15	18%	12%

= Unfavorable relative to characteristic driving ED volume

= Favorable relative to characteristic drving ED volume

Sources: OSHPD, California Department of Finance and US Census Bureau. All data represents 2012.

Off-load Delay Reduction Strategies

Scripps

Kimberlee Roberts, MPH
Director, Clinical Services
Scripps Memorial Hospital La Jolla

Scripps

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Scripps Health

- Four Emergency Departments
- Two Trauma Centers: Level 1 and Level 2
- Fiscal Year 2012: **184,011 Visits**
- Admissions: **38,203 Patients**

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What Was the Problem?

- January – April 2012 (La Jolla)
- 95 hours of bypass
- Lengthy delays in off-load
- County *"concerned"*

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What We Did

Scripps

- Requested monthly data on “back in service” from San Diego Fire (85% of volume)
- Director and Manager – 8-hour ride-along with busy rig
- At quarterly Base Meeting, discussed with County opportunities for improvement
- Met with pre-hospital personnel for input and suggestions
- Administrative approval required for ED bypass

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Process Changes

Scripps

April 2012 – Present

- Discontinued practice of stopping paramedics in hallway to register
- Started tracking data and began reviewing all cases that were delayed > 20 minutes
- Implemented computer screen for pre-hospital staff to identify bed
- Requested paramedics notify charge nurse at 15-minute mark; field supervisor to contact ED leadership at 20 minutes

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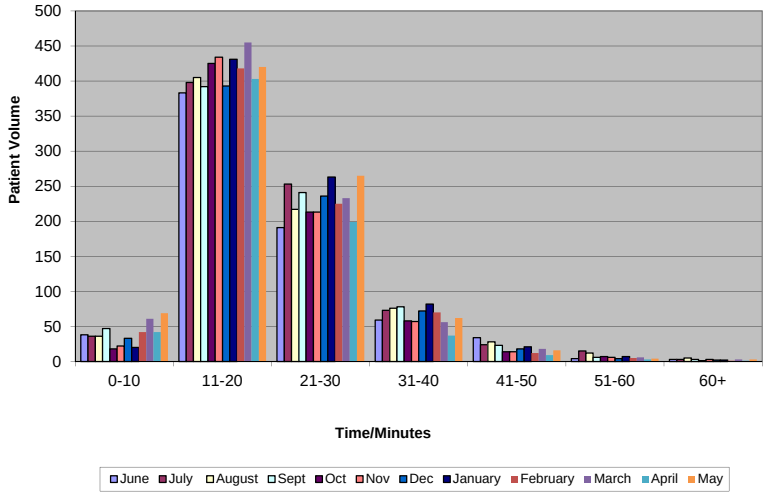
Off-load Delays La Jolla

Scripps

June 2012 – May 2013



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County Contract

Scripps

20 Minutes for Off-load

Month	% off-loaded	% off-loaded
	< 20 Min	< 30 Min
June 2012	59%	86%
July 2012	54%	86%
August 2012	57%	84%
September 2012	56%	83%
October 2012	60%	89%
November 2012	61%	89%
December 2012	56%	87%
January 2013	55%	86%
February 2013	60%	87%
March 2013	62%	90%
April 2013	64%	93%
May 2013	58%	90%

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Work in Progress

Scripps

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Questions

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Thank you

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