Mobile Integrated Healthcare 360 Arizona:

How Fire-Based and Private Sector Community Paramedicine is Shifting the EMS Paradigm

Thursday, February 2, 2017

Promoting Innovation in EMS

James Dunford, MD, FACEP, City of San Diego EMS Medical Director, Professor Emeritus (Emergency Medicine), UC, San Diego Health System

Goals

- Relate the NHTSA Promoting Innovations in EMS (PIE) project to my world view

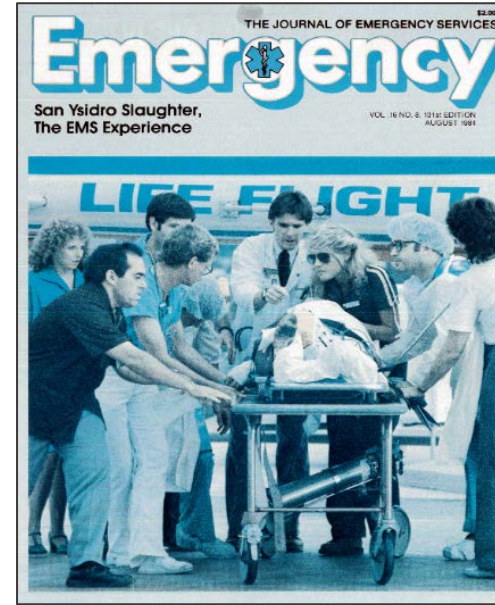$$EMS = mc^2$$

City of San Diego EMS

- 1.3 million population
- 8th largest U.S. city
- 160,000 EMS responses
- Since 1980
  - 6 City ALS provider agencies
  - 7 Mayors
  - 6 Fire Chiefs
  - 5 County EMS Medical Directors
  - 1 City EMS Medical Director

UCSD Department of Emergency Medicine

Life Flight 1980-1986

Promoting Innovation in EMS (PIE)

- Principal Investigators
  - Kevin G. Munjal MD, MPH
    - *Asst. Professor of Emergency Medicine*
    - *Associate Medical Director of Prehospital Care, Mount Sinai Health System*
  - James Dunford, MD
    - *Professor Emeritus (Emergency Medicine), UC San Diego School of Medicine;*
    - *EMS Medical Director, City of San Diego*
- http://emsinnovations.org

Objectives

- Engage a national dialogue re: challenges to local EMS innovation

- Create a national framework document to overcome barriers

- Clear a sustainable path for innovation

National Steering Committee

- American Ambulance Association
- American College of Emergency Physicians
- Emergency Nurses Association
- International Assoc. of Fire Chiefs
- International Assoc. of Firefighters
- Natl. Assoc. County & City Health Officials
- Natl. Assoc. of EMS Physicians
- Natl. Assoc. of EMTs
- Natl. Assoc. of State EMS Officials
- Natl. Volunteer Fire Council
- Visiting Nurse Assoc. of America

7 innovation themes

- Financial
- Regional coordination
- Legal reform
- Medical direction
- Stakeholder collaboration
- Education
- Data & telecommunications

Legal

- Create more flexible legislative and regulatory environments

- Support more favorable reimbursement

- Enable portability of licensure

- Relax certificate of need policies

Financial

- Decouple payment from transportation
- Expand business & technical expertise
- Improve EMS grant opportunities
- Harness reimbursement via telemedicine
- Eliminate fraud & abuse

Educational

- Hold EMS professionals to higher educational standards
- Enhance education methods and technology

Regional coordination

- Regionalize care for time-critical conditions
- Share & utilize data more effectively
- Emphasize patient/provider safety

Interdisciplinary participation

- Enhance communication with key stakeholders
- Forge a common vision

Data & telecommunication

- Support the adoption of health information technology (HIT)

- Incentivize meaningful use of EMS data

- Champion the use of EMS data for population health

- Encourage social-health data exchange

- Improve public safety IT

City of San Diego EMS

- 1979 SDPD
  - EMT ambulances

- 1980 - 1984 Medevac Ambulance
  - 1st paramedic provider

City of San Diego EMS

- ## 1984 – 1992 Hartsons Ambulance
  - Paramedics threatened to strike
  - City required to augment subsidy

- ## 1992-1996 American Medical Services
  - Paramedics threatened strike
  - Provider sued city
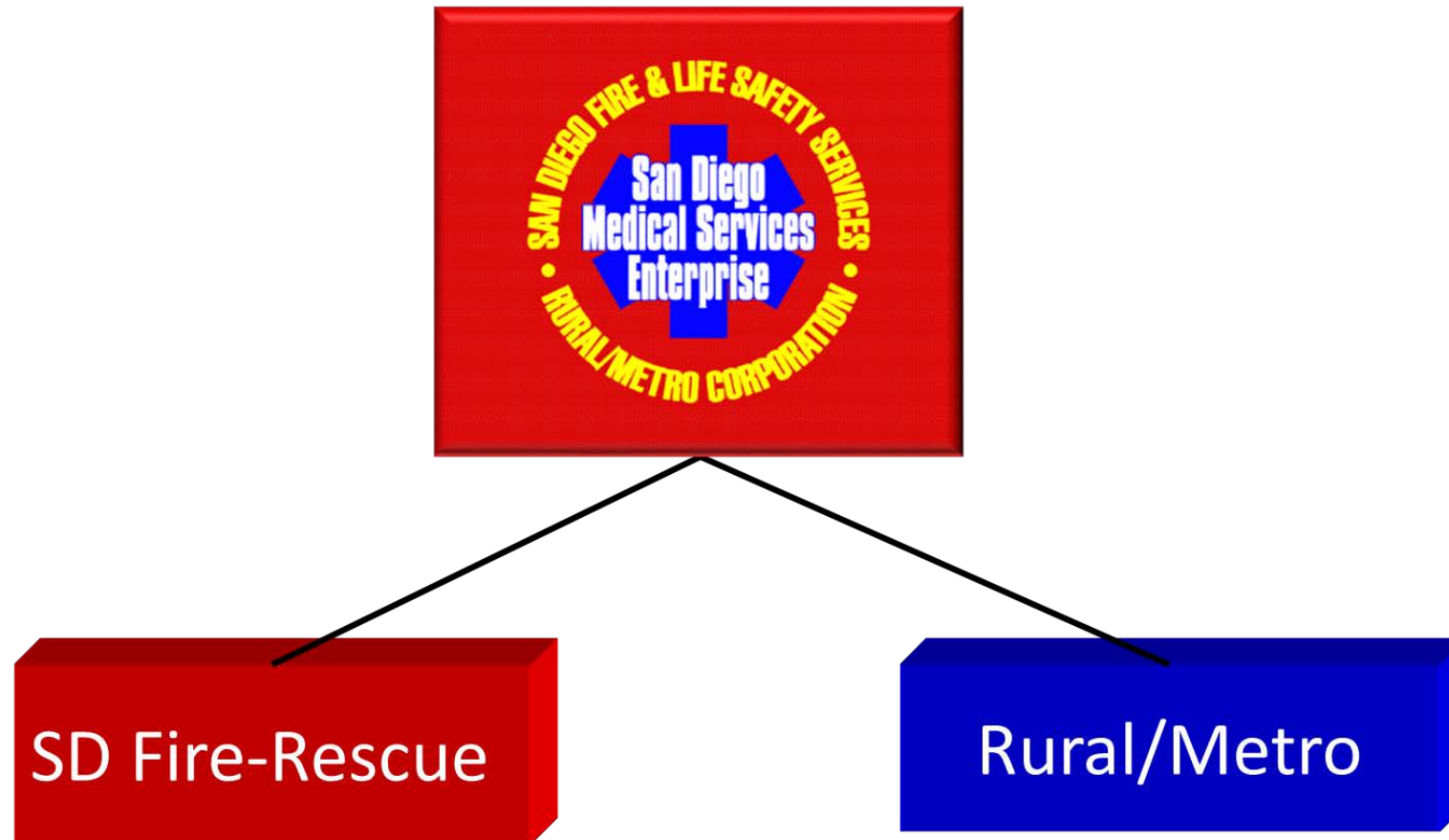 - City sued provider
  - Provider sued paramedics

March 1995

- "San Diego's paramedic system
  is a ticking time bomb!"
  - Robert Ross, MD
    - County Director of Health Services

Blue Ribbon Panel RFP recommendations

- SPEED - when it matters
- ACCURATE RESOURCE ASSIGNMENT
- FLEXIBILITY
- NIMBLE FISCAL MANAGEMENT
- QUALITY/BENCHMARKING
- COMPASSION
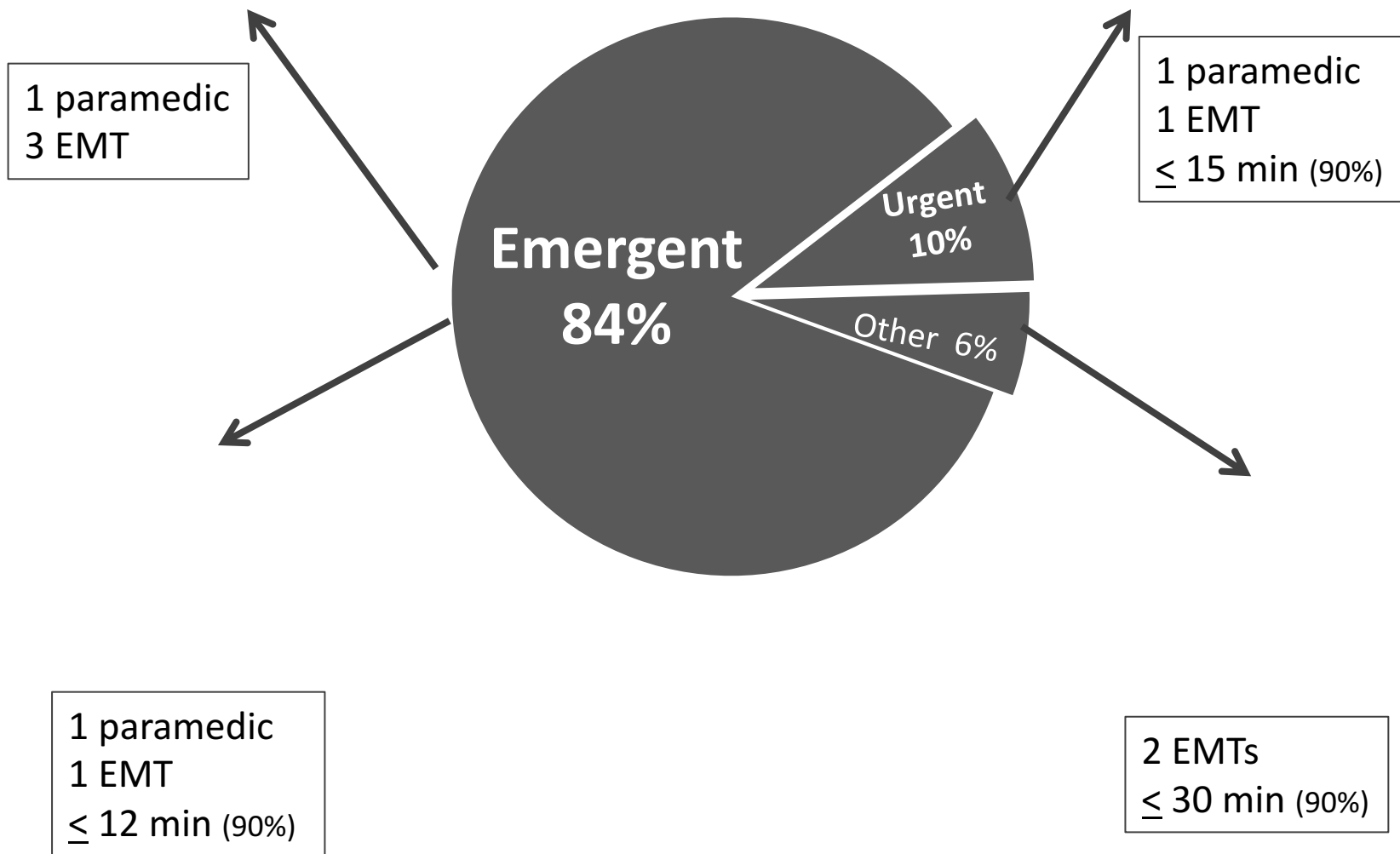
1997 – San Diego Medical Services Enterprise, LLC
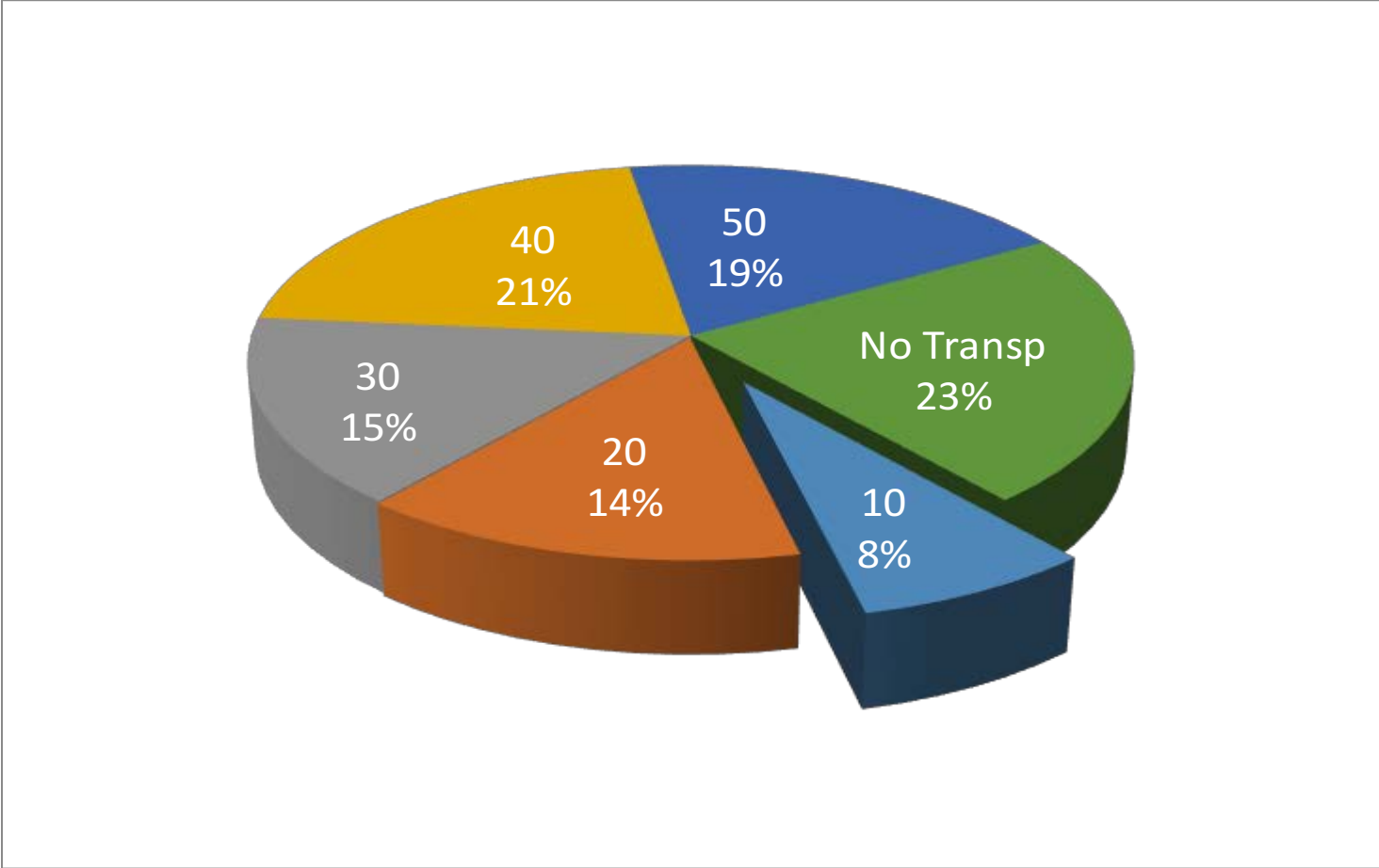
Cultural integration

San Diego Fire-Rescue
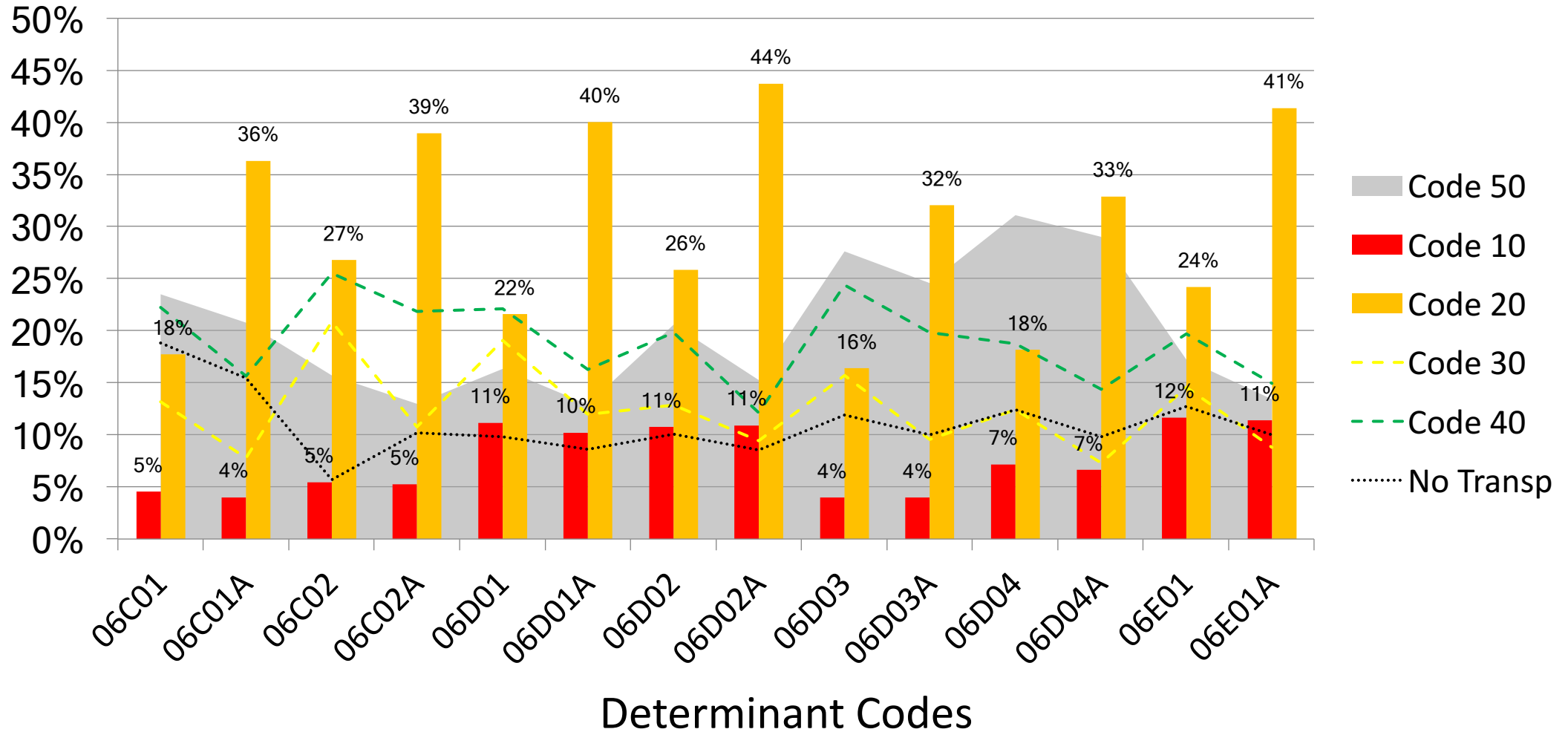
Rural/Metro Ambulance

1 paramedic
3 EMT

1 paramedic
1 EMT
$\leq$ 15 min (90%)

Urgent
10%

Emergent
84%

Other 6%

1 paramedic
1 EMT
$\leq$ 12 min (90%)

2 EMTs
$\leq$ 30 min (90%)

23

Transport (acuity) codes

Pie chart:
- 50 — 19%
- No Transp — 23%
- 10 — 8%
- 20 — 14%
- 30 — 15%
- 40 — 21%
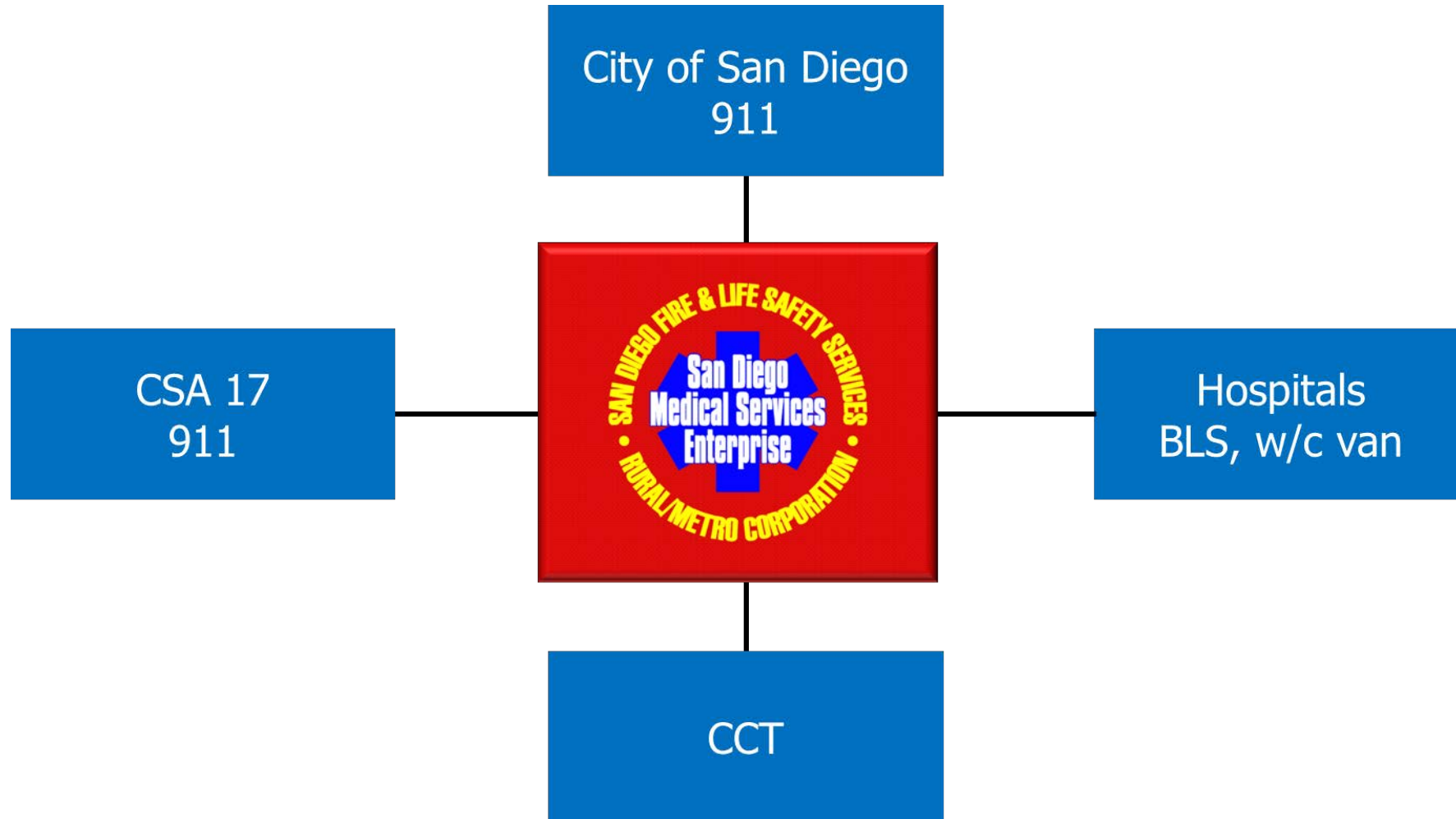
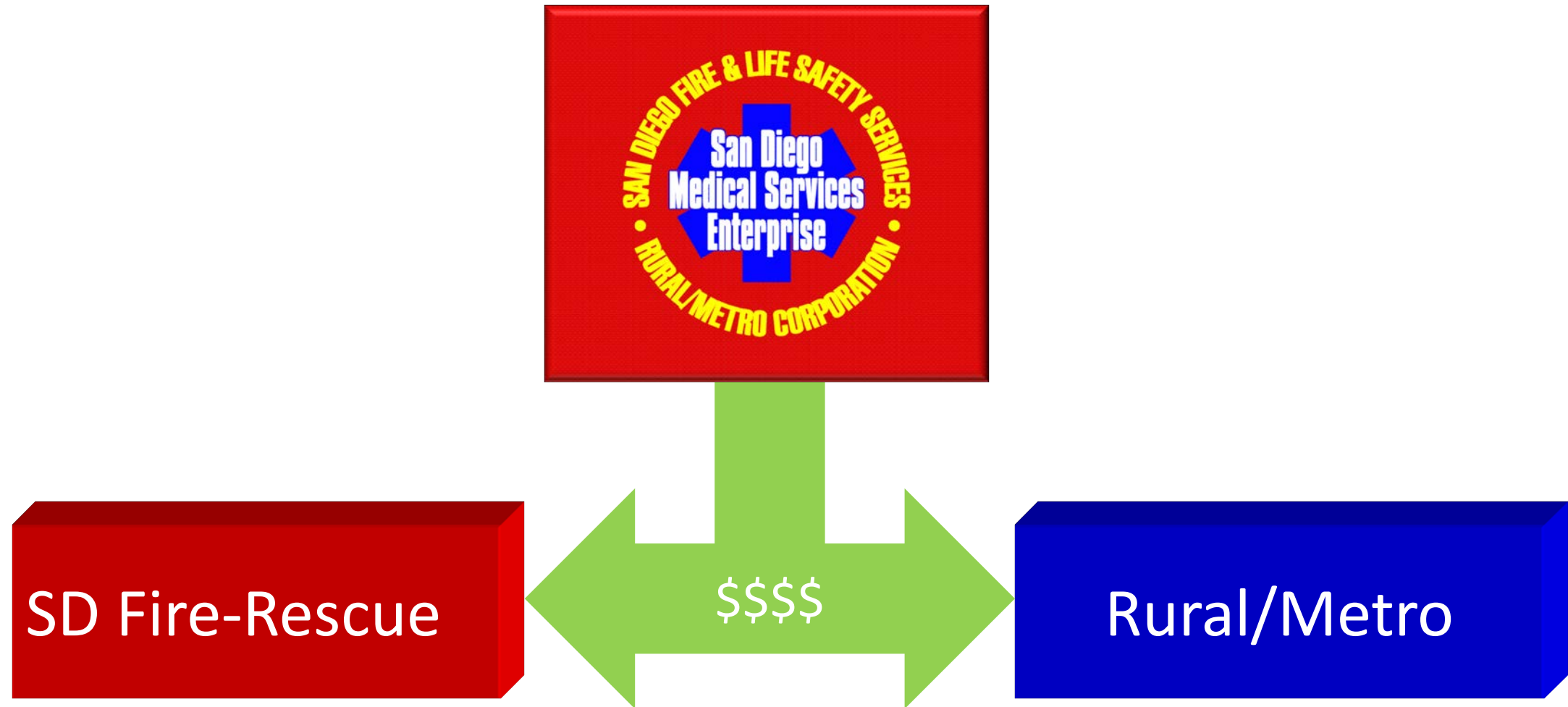10 – Acute status
20 – ALS care
30 – monitoring
40 – BLS care
50 – transport only

MPDS 6 - Breathing Problem: transport code profiles
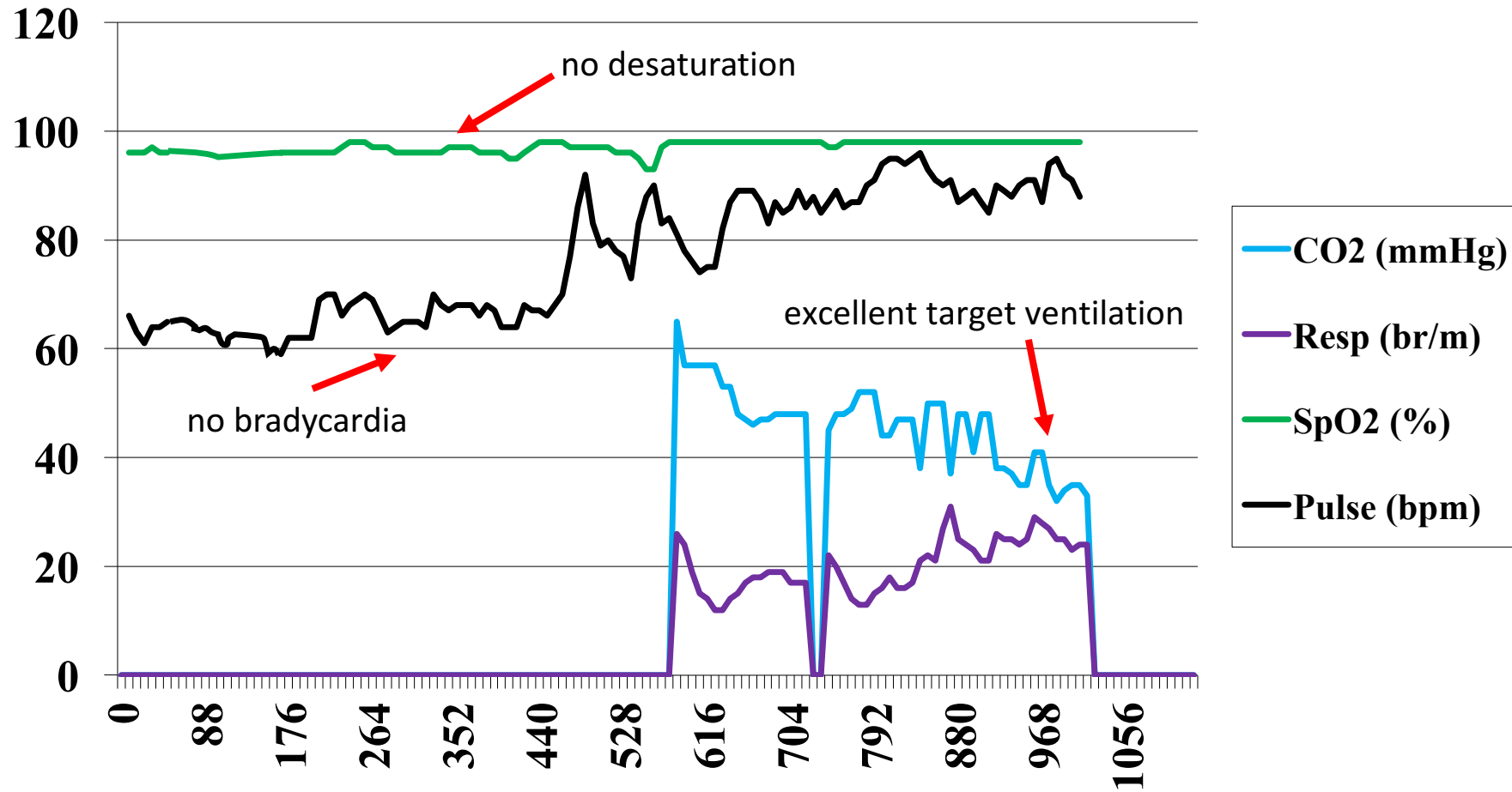
SDMSE revenue sources

SDMSE revenue distribution

SD Fire-Rescue ← $$$$ → Rural/Metro

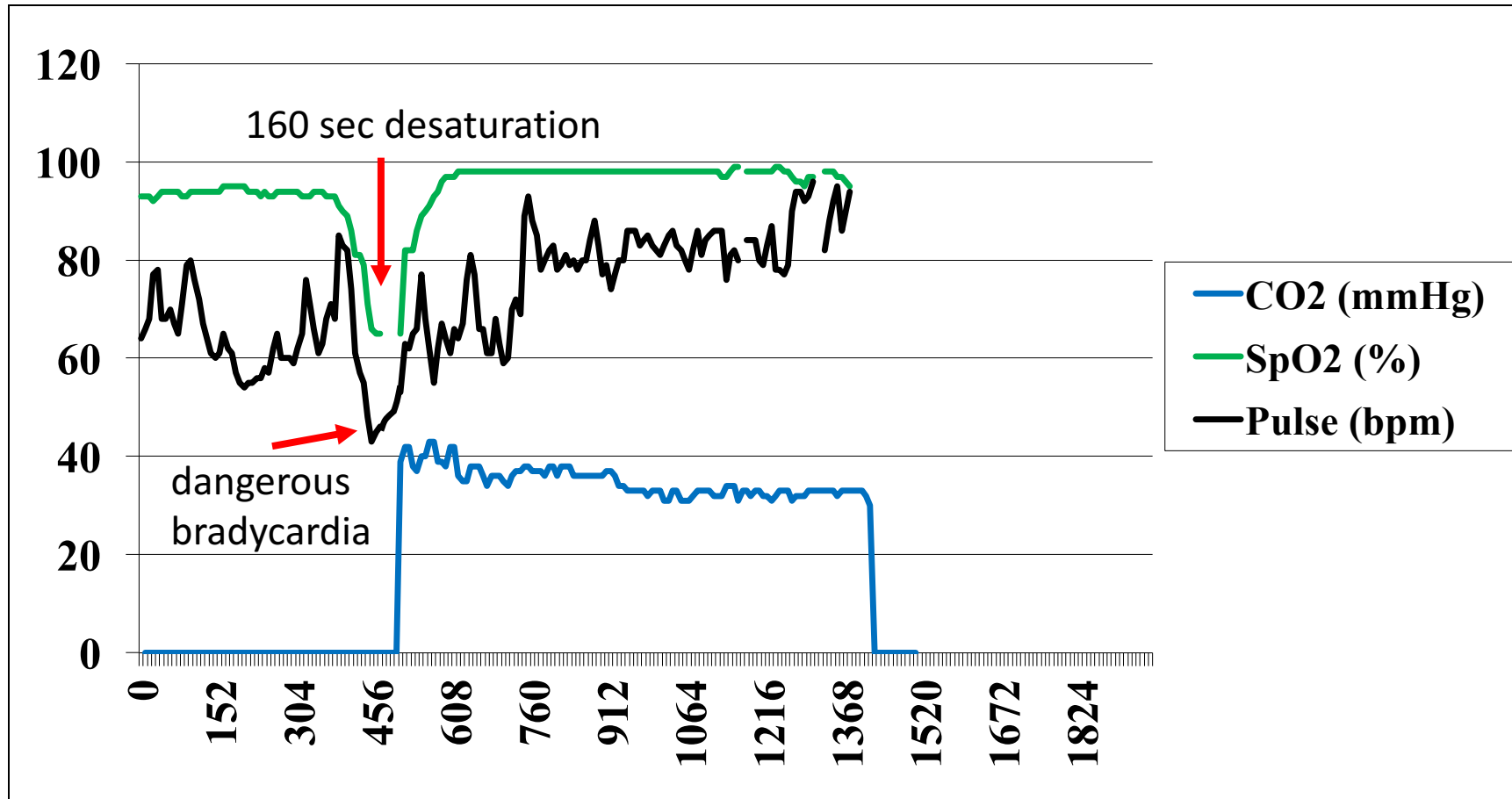# Medical Director discretionary fund: $50K/year

"Safe" intubation

Dunford JV, Davis D, Ochs M, Doney M, Hoyt D. Incidence of transient hypoxia and heart rate reactivity during paramedic rapid sequence intubation.
*Ann Emerg Med.*2003;42(6):721-728.

29

"Unsafe" intubation

160 sec desaturation

dangerous bradycardia

- CO2 (mmHg)
- SpO2 (%)
- Pulse (bpm)

Dunford JV, Davis D, Ochs M, Doney M, Hoyt D. Incidence of transient hypoxia and heart rate reactivity during paramedic rapid sequence intubation. *Ann Emerg Med.*2003;42(6):721-728.
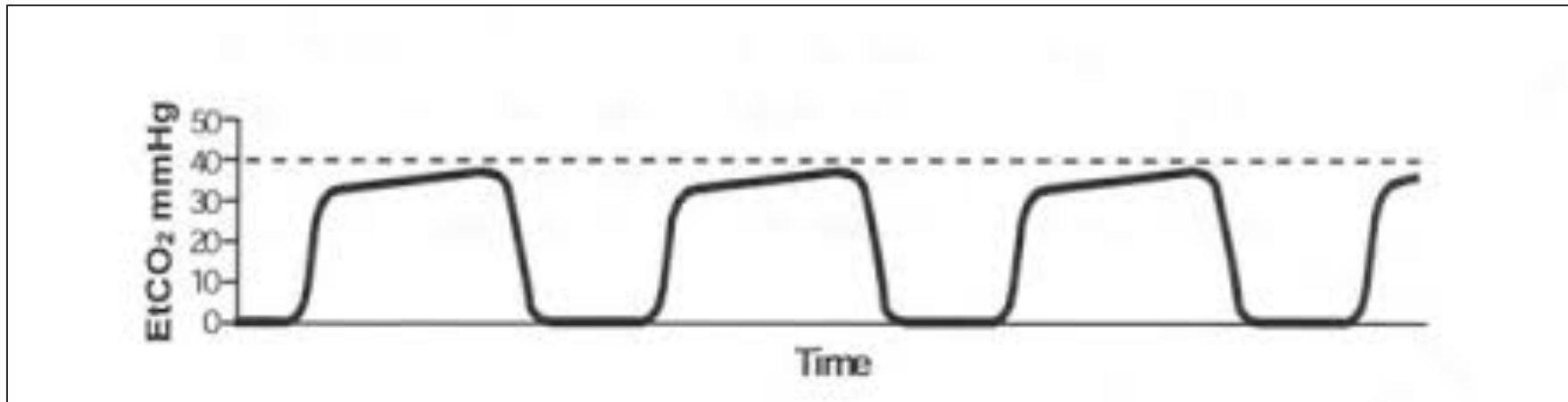
Advanced airway policy

Paramedics <u>must</u> verify ETCO2 before and after device placement

San Diego RSI Trial

- 209 patients
- 627 matched controls
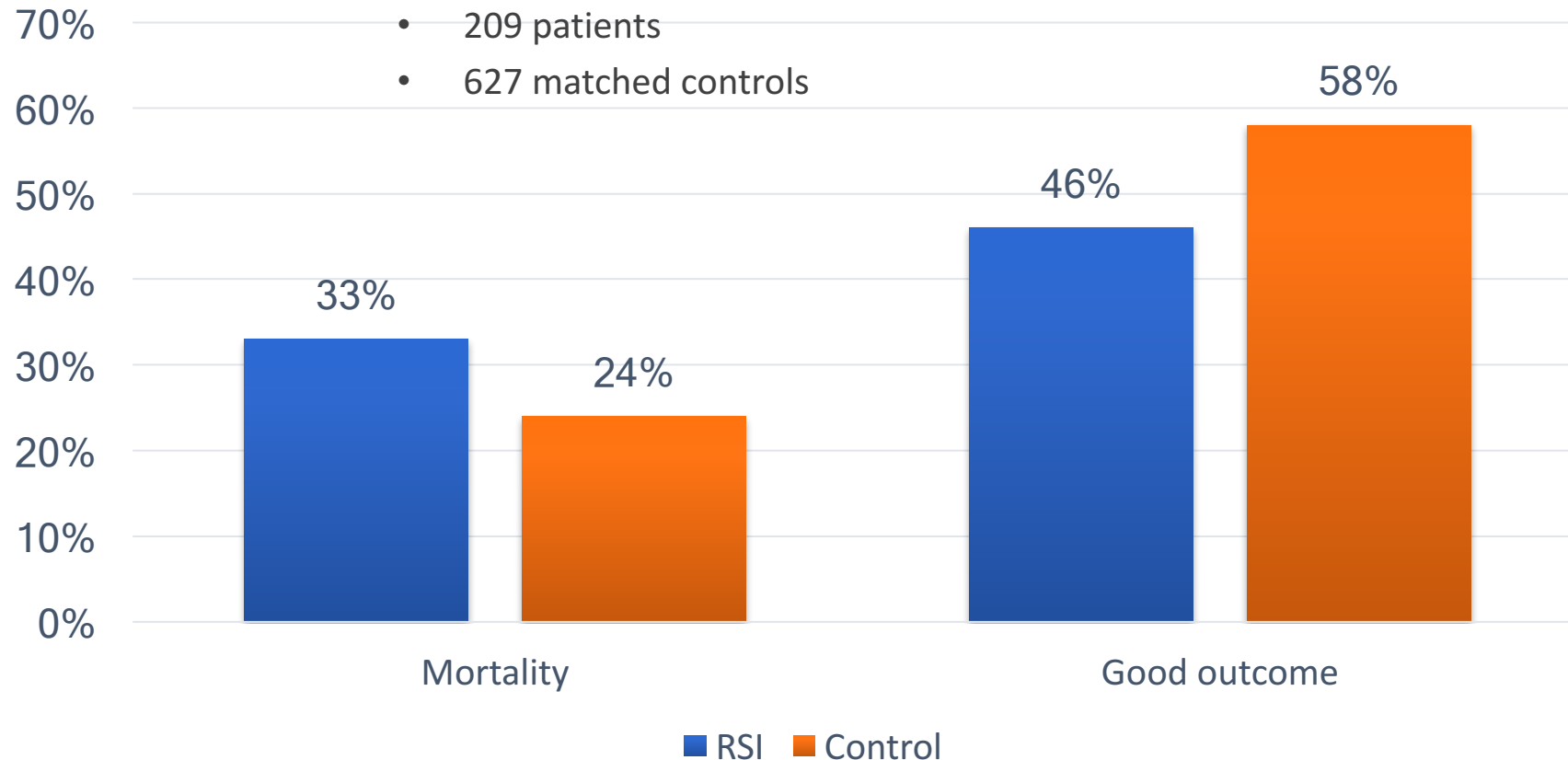
Davis DP, Hoyt DB, Ochs M, Fortlage D, Holbrook T, Marshall LK, Rosen P. The effect of paramedic rapid sequence intubation on outcome in patients with severe traumatic brain injury. J Trauma. 2003 Mar;54(3):444-53.

Electronic medical record

TapCharts

- Developed by SDFD FF-Paramedics
  - John Pringle
  - Greg George
- Improved billing
- 300,000 patient database
- International awards
  - 2005 Mobile Enterprise Alliance
    - Best Mobile office solution
  - 2008 Computerworld
    - International healthcare finalist
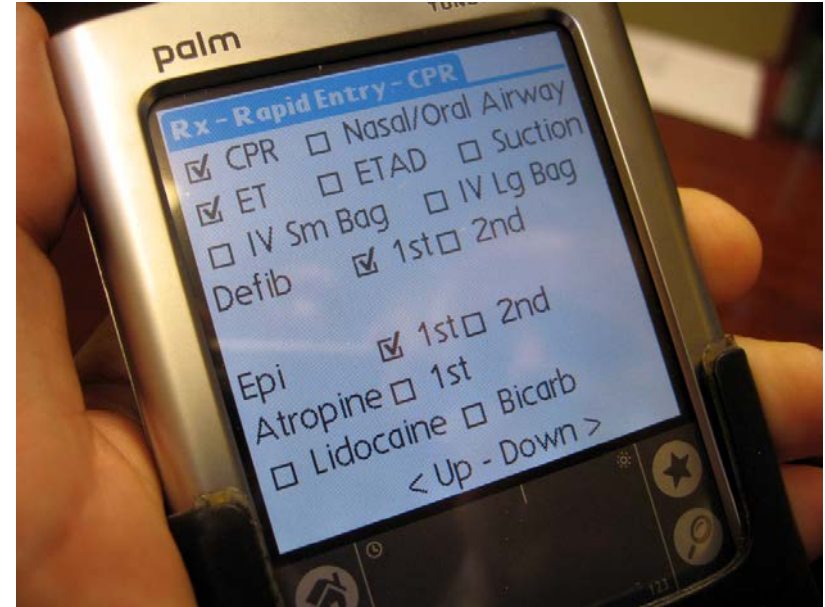
SDMSE ruled illegal by City Attorney

City of San Diego

$10.6M

Rural Metro

AMR

Deja vu

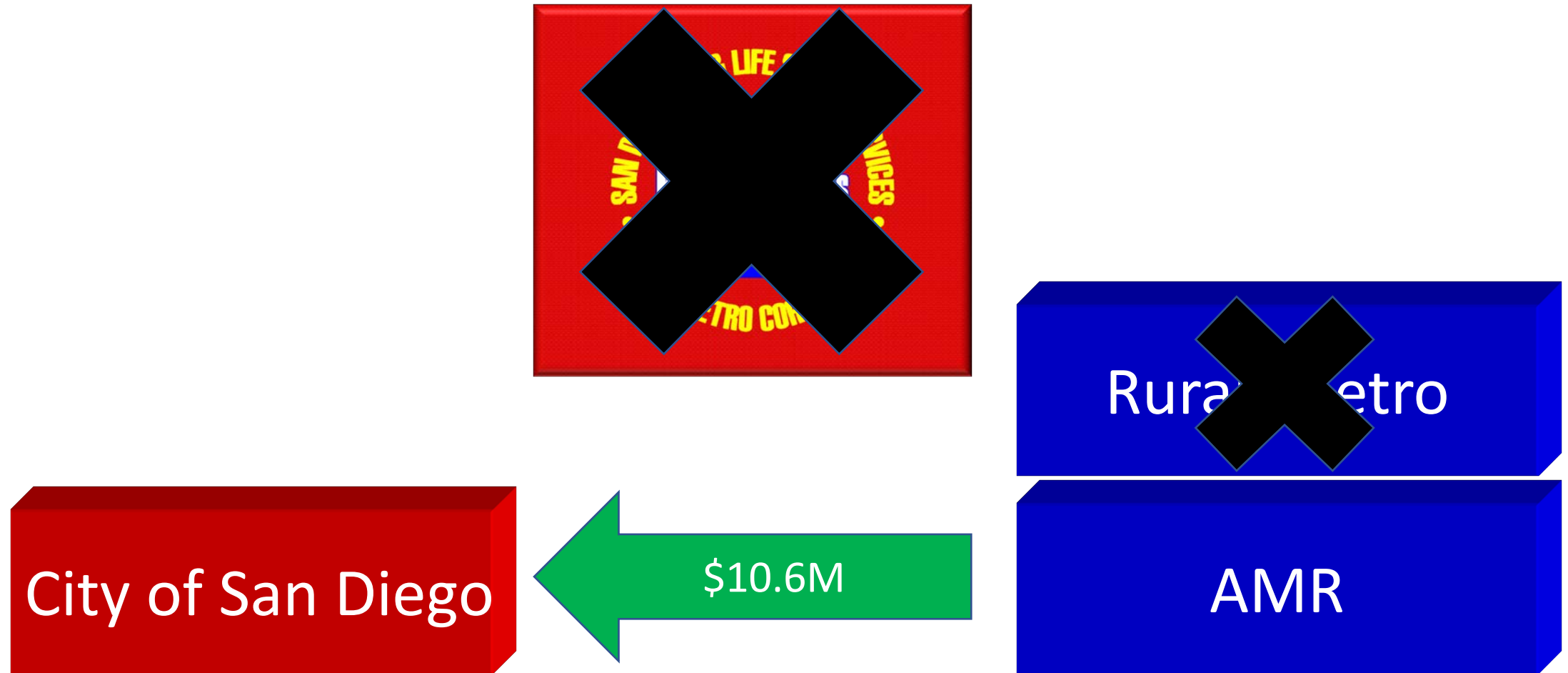AMR contract compliance
(July – Sept 2016)

City Response Zones
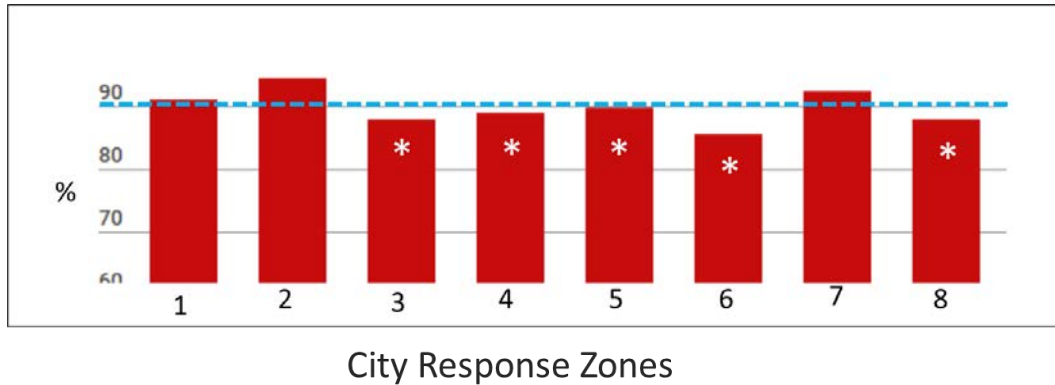
Rural Metro Ambulance Company Fined For Missing Response Time Requirements In San Diego

Rural Metro must pay $291K in penalties for late response times

By JW August

NEWSLETTERS
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TRENDING STORIES

1 Election Day Deals in San Diego

2 Another Charger Lost For Season

Preventable deaths: San Diego 1979

n = 177 autopsies

89%   11%

■ preventable
■ not preventable
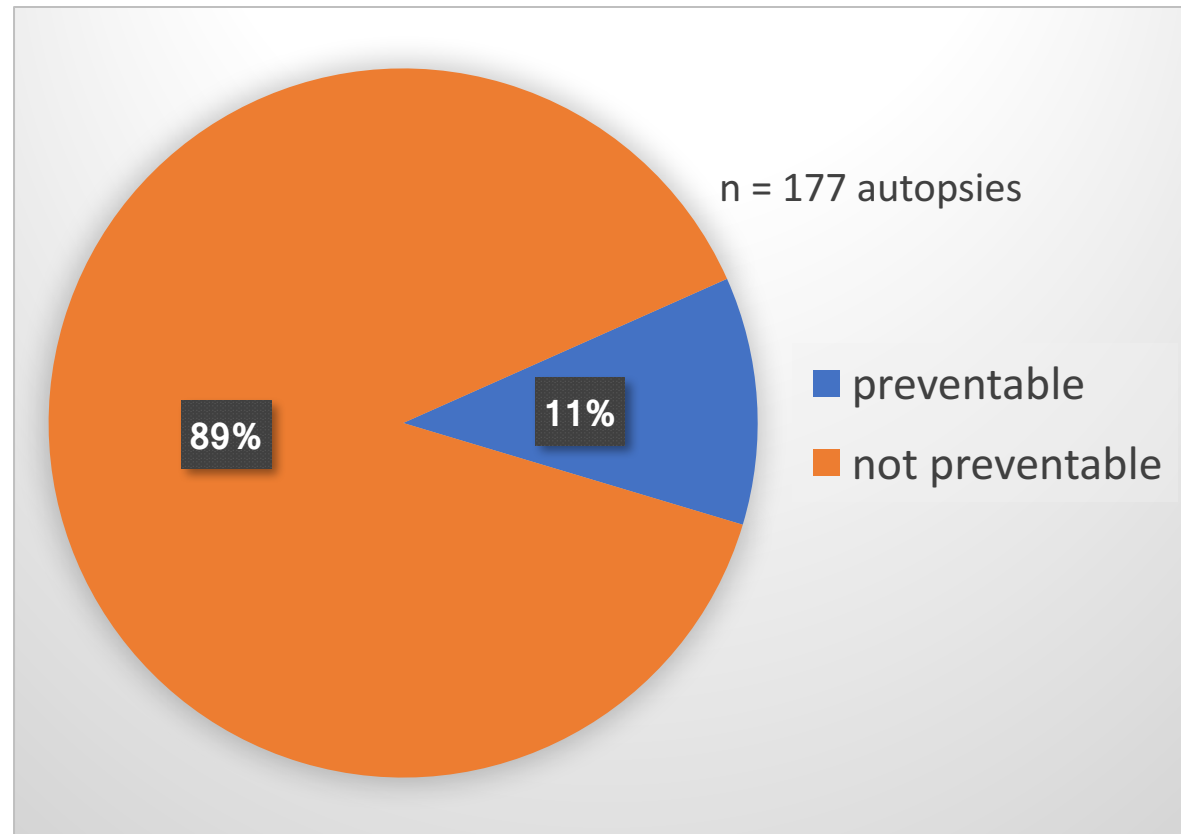
Neuman TS, Bockman MA, Moody P, Dunford JV, Griffith LD, Guber SL, Guss DA, Baxt WG. An autopsy study of traumatic deaths: San Diego County - 1979. *Am J Surg*. 1982;144:722-727

1984 – San Diego trauma system

San Diego County Trauma, Base and Emergency Department (ED) Hospitals and Trauma Catchment Areas
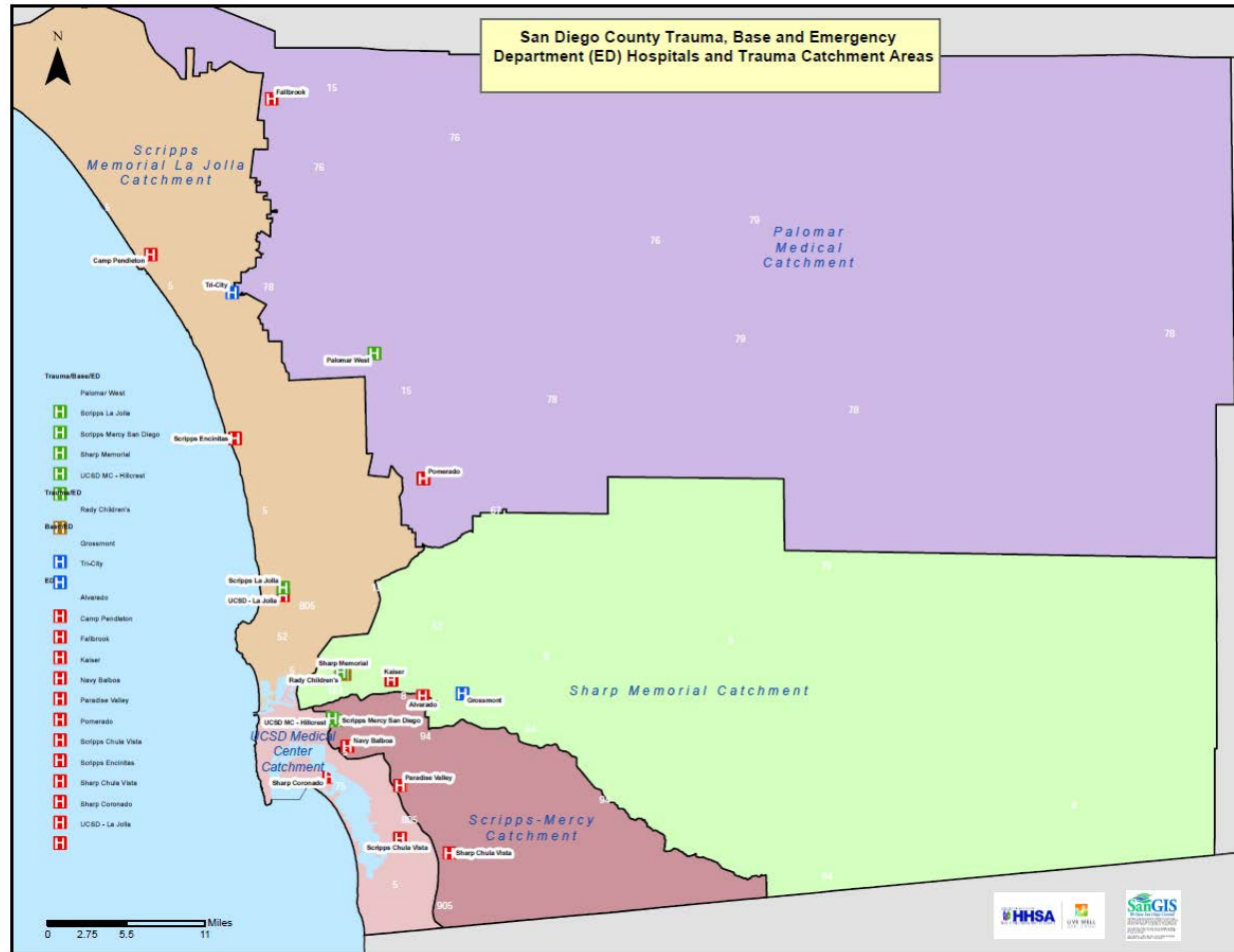
The effect of trauma regionalization on care
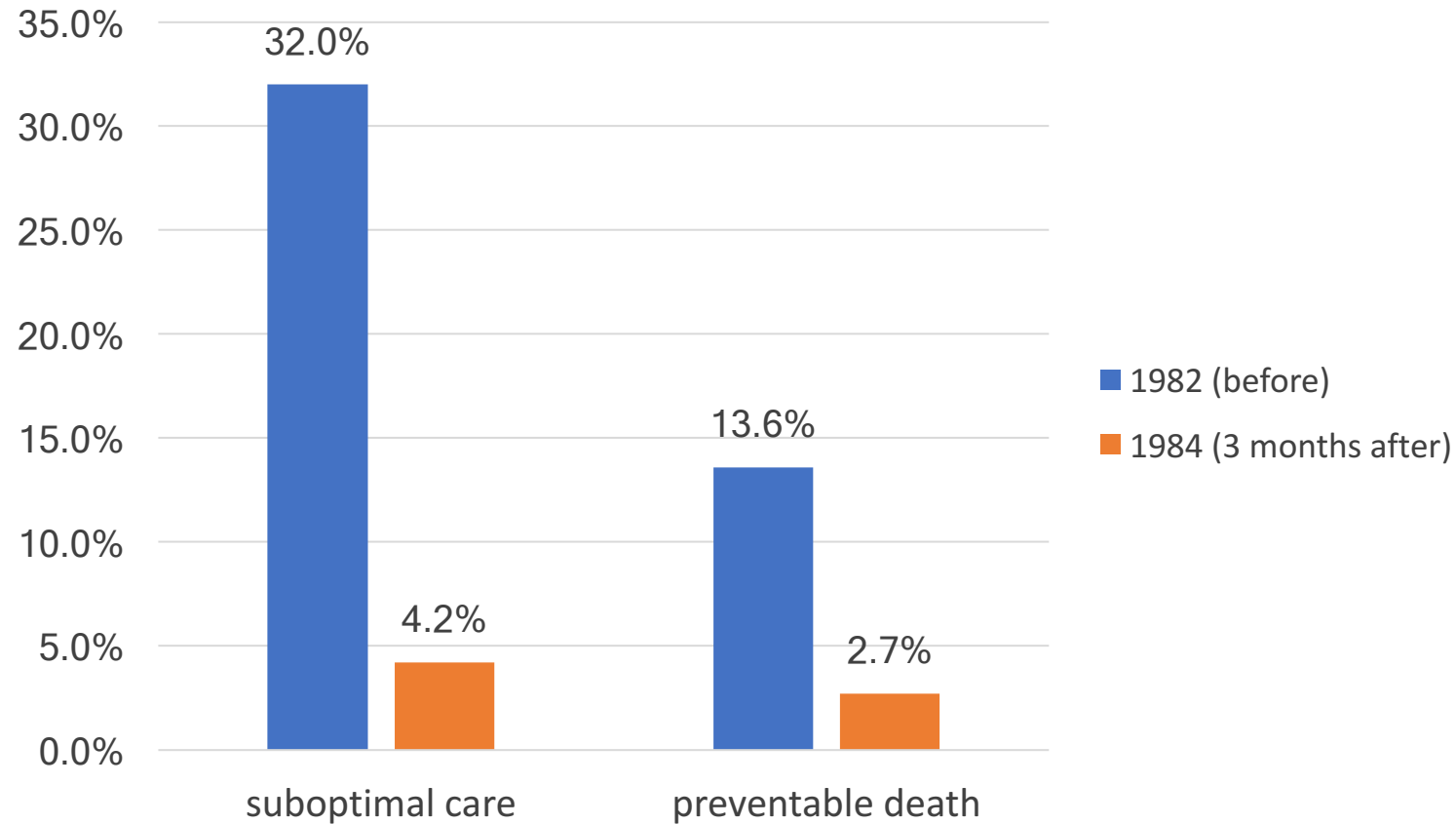
Shackford SR, Hollingworth-Fridlund P, Cooper GF, Eastman AB. The effect of regionalization upon the quality of trauma care as assessed by concurrent audit before and after institution of a trauma system: a preliminary report. J Trauma. 1986;26(9):812-20.

Confidential oversight
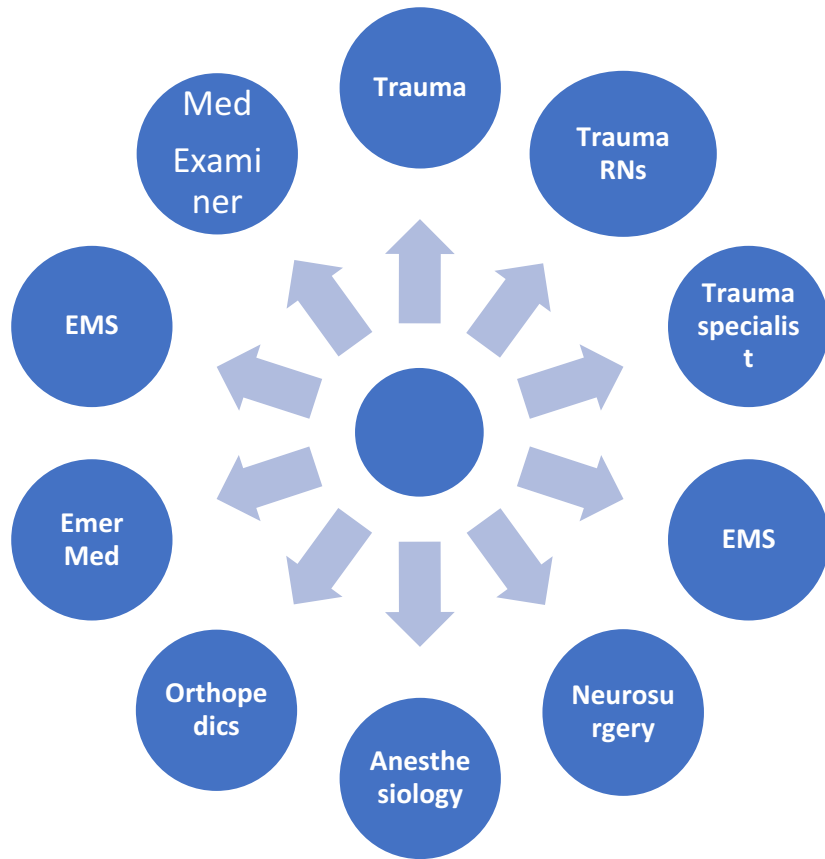
San Diego County: preventable trauma deaths
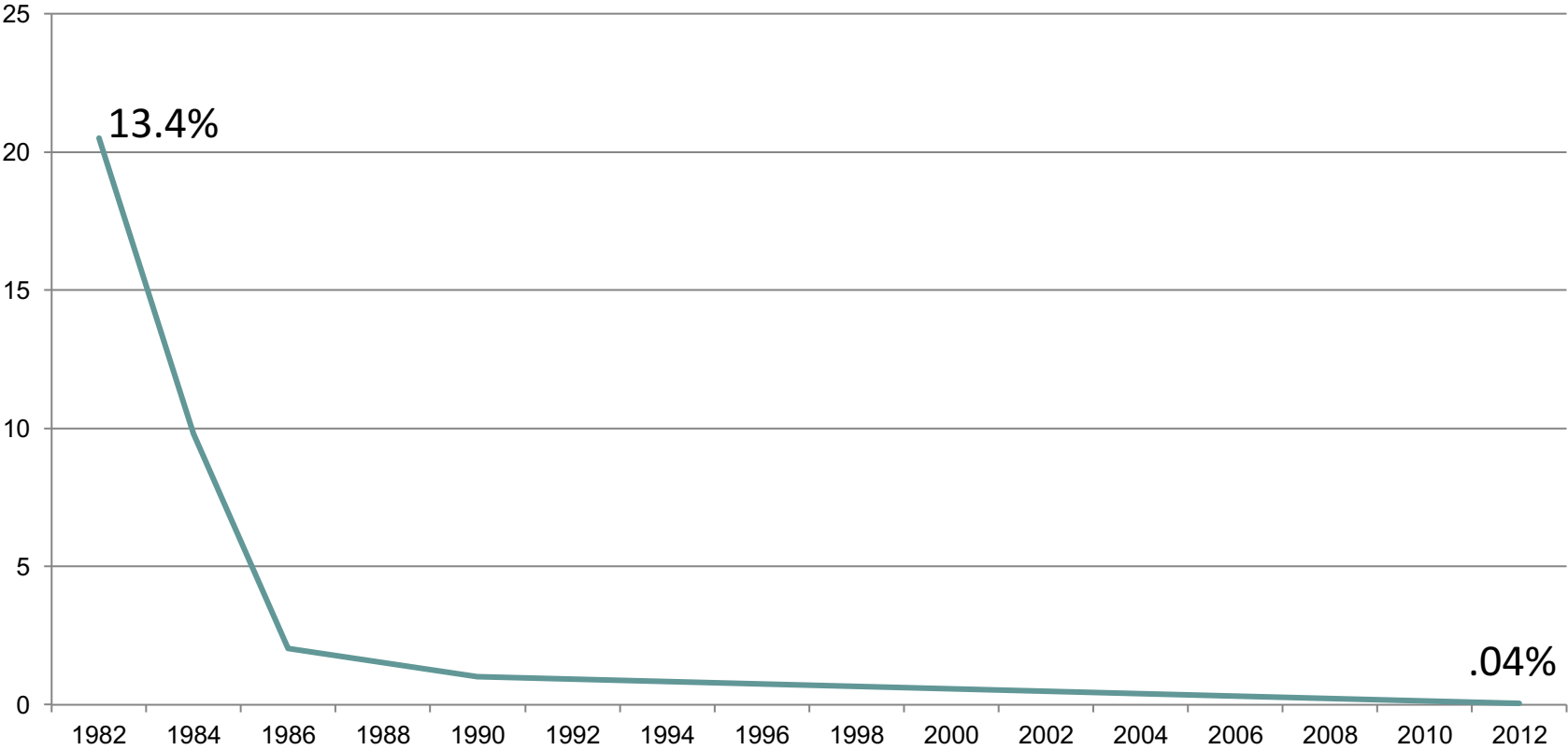
Ambulance scene time - Gunshot/Stab Wounds
City of San Diego
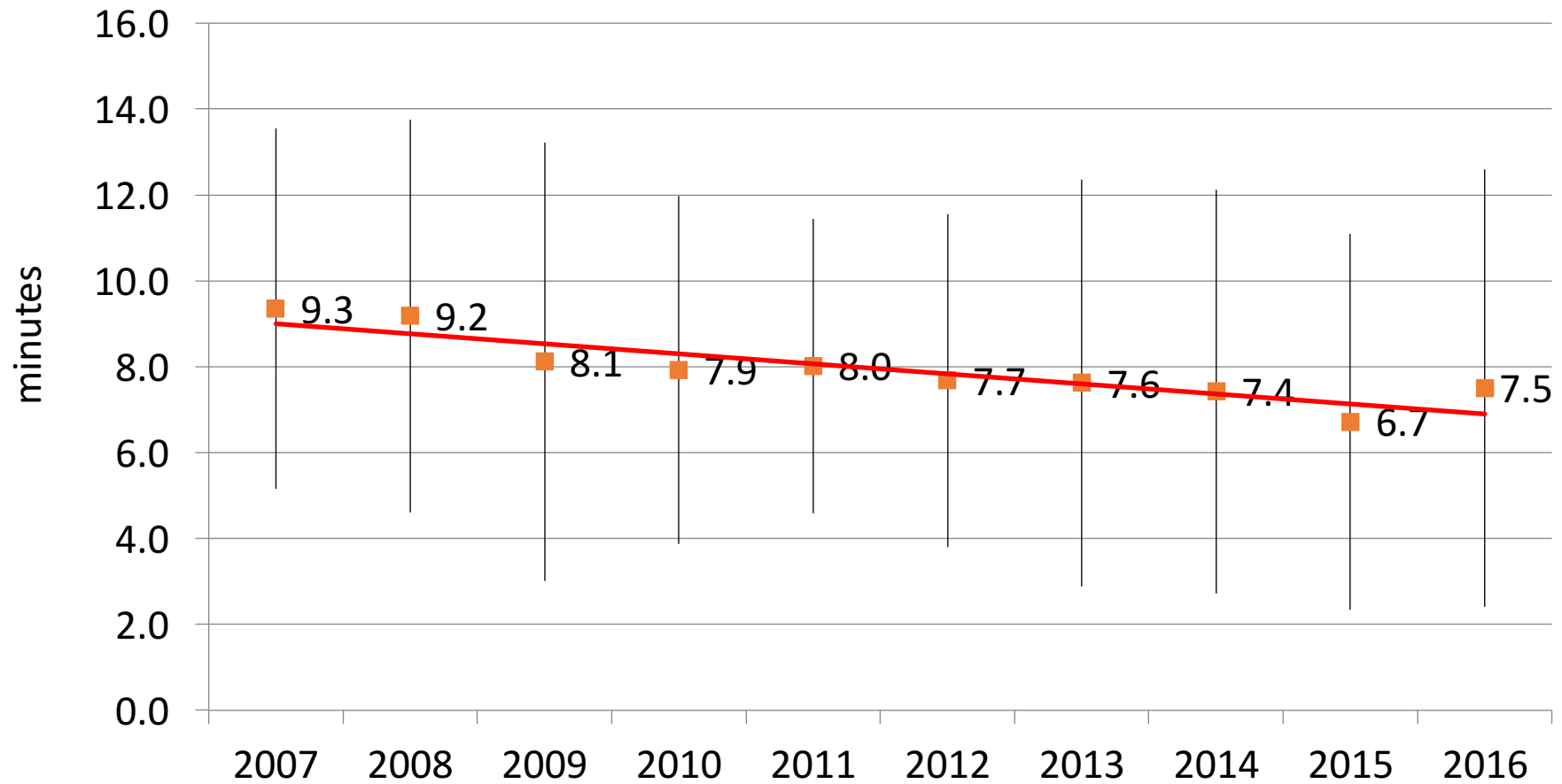
4th highest homeless population in U.S.

Source of tremendous frustration

1998

15 homeless inebriates

18 months

417 ED visits

$1,476,000

Dunford J. Report to SDPD Chief Lansdowne. unpublished

SD Homeless Outreach Team

SDPD

HHSA   PERT
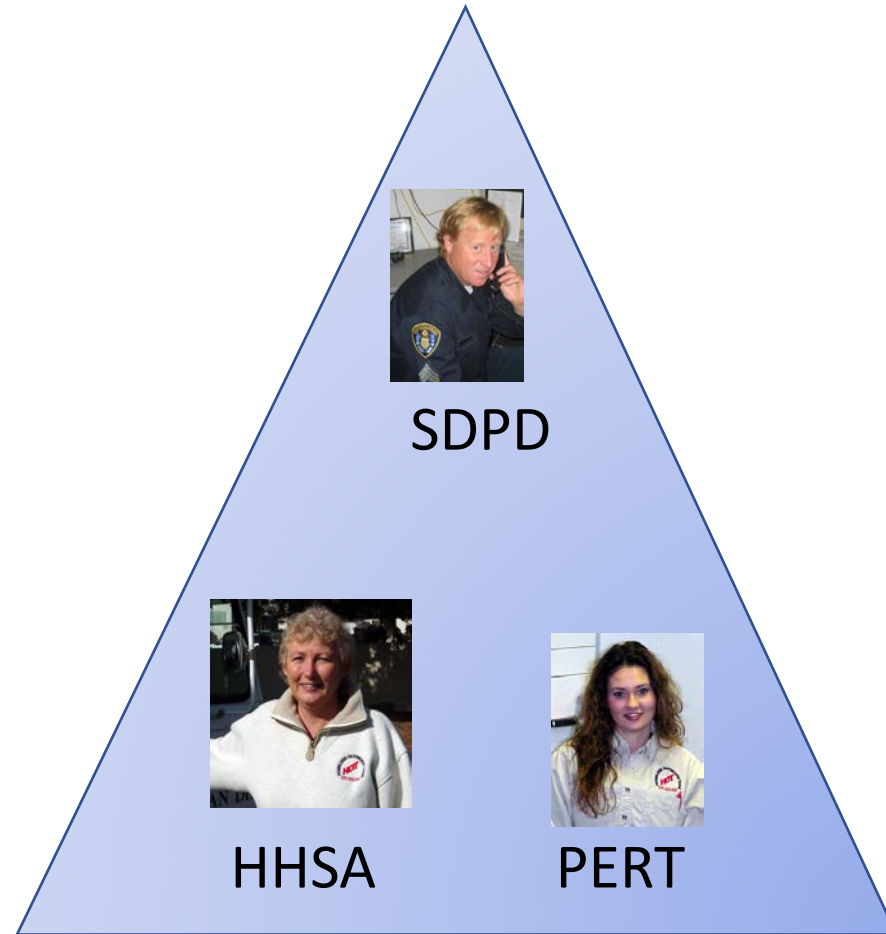
Serial Inebriate Program (SIP)

Goals

- Stop or slow the revolving door
- Provide treatment
- Increase quality of life

SIP partners

San Diego Police Department

San Diego EMS

Mental Health Systems, Inc.

San Diego Sheriff's Department

County Alcohol and Drug Services

San Diego City Attorney

Office of the Public Defender

Superior Courts

St. Vincent de Paul Village

Collaborators in the Serial Inebriate Program, Dr. James Dunford, Police Chief William Lansdowne, Dr. Margaret McCahill and Officer John Liccione, after an outreach

Sobering Center

ED   Street

Jail

Arraignment

Conviction

Assessment

Treatment or Jail

Serial Inebriate Program (SIP)

All Clients
(529)

Treatment offered
280 (53%)

Not offered
249 (47%)

Accepted
155 (55%)

Dunford JV, Castillo E, Chan TC, Vilke G, Jenson P, Lindsay S. Impact of the San Diego Serial Inebriate Program (SIP) on use of emergency medical resources. *Ann Emerg Med*. 2006;47(4):328-336
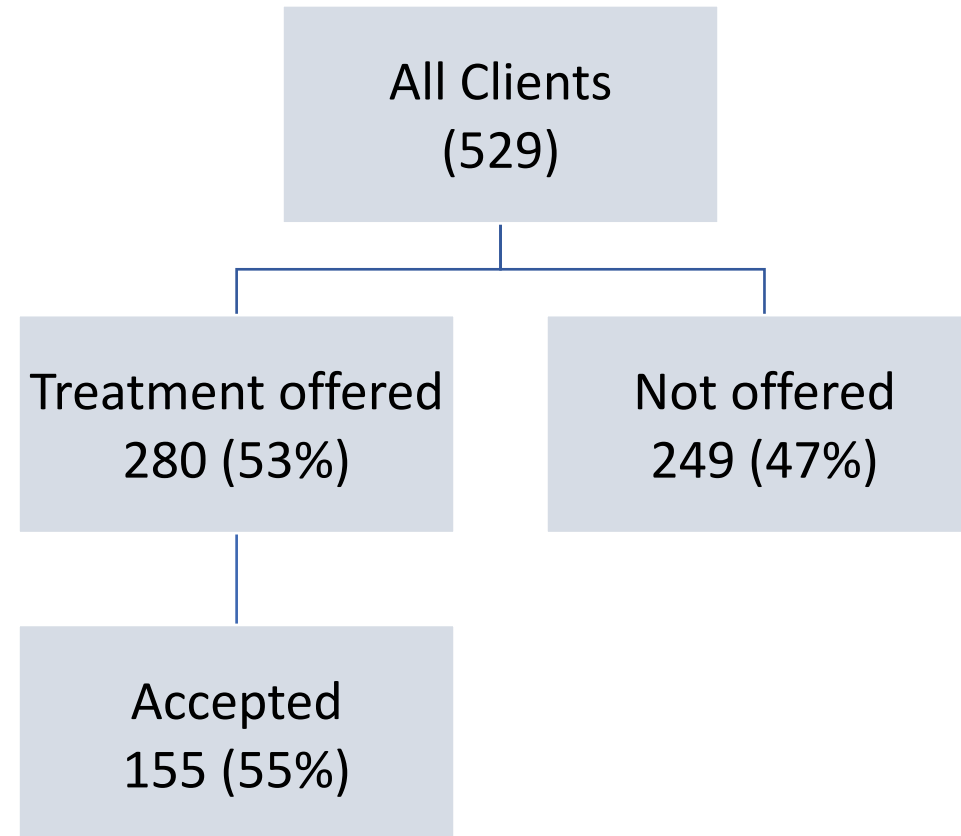
SIP acceptance v. length of sentence

Bar chart showing acceptance percentage versus sentence length in days:
- 0-30: 20%
- 31-60: 38%
- 61-90: 40%
- 91-120: 50%
- 121-150: 55%
- 151-180: 60%

Y-axis: acceptance (0% to 70%)
X-axis: Sentence (days)

Dunford JV, Castillo E, Chan TC, Vilke G, Jenson P, Lindsay S. Impact of the San Diego Serial Inebriate Program (SIP) on use of emergency medical resources. *Ann Emerg Med*. 2006;47(4):328-336
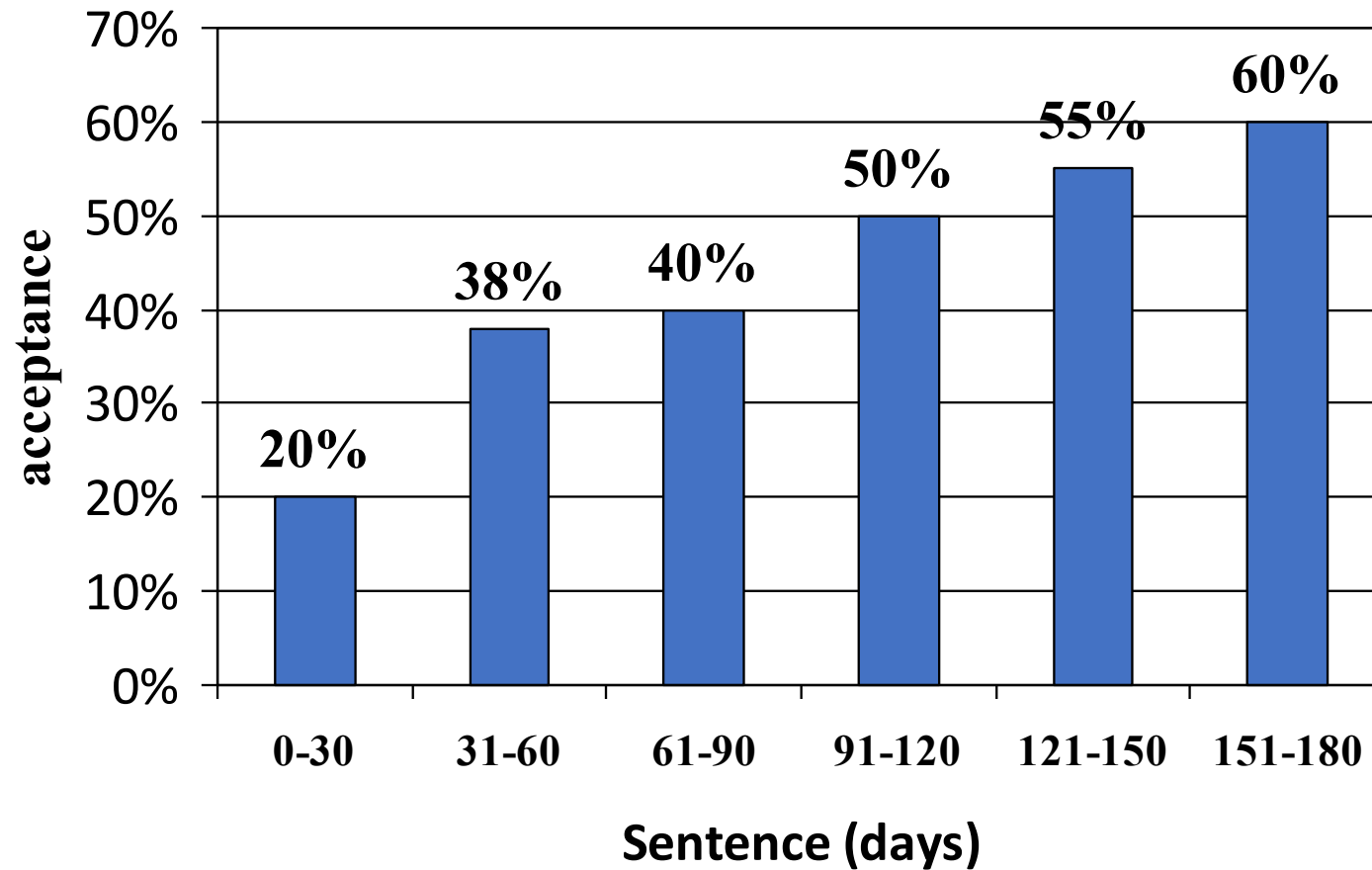
Benefit: $73,552 less/month for clients who accepted SIP
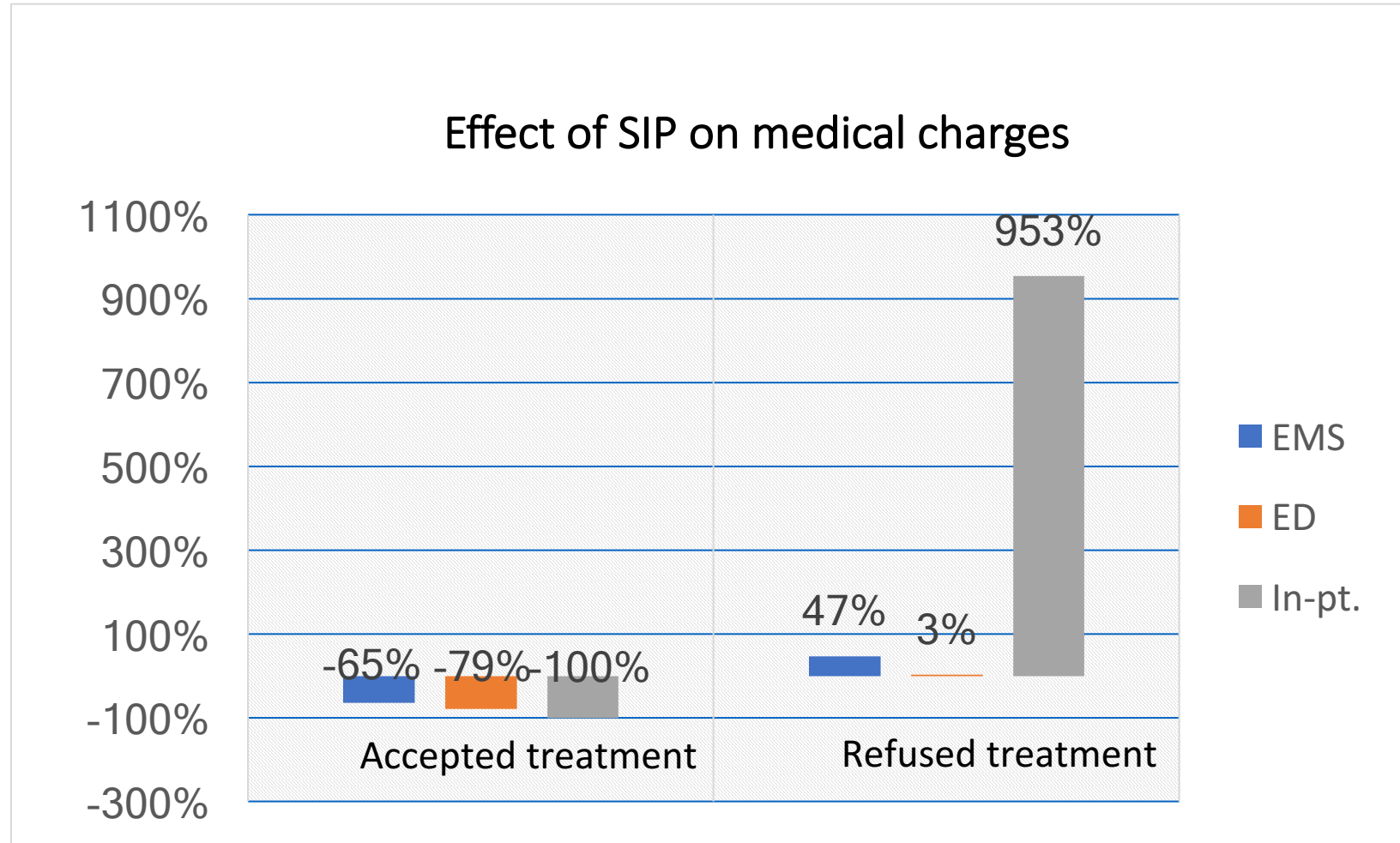
Effect of SIP on medical charges

Legend: EMS (blue), ED (orange), In-pt. (gray)

Accepted treatment: EMS −65%, ED −79%, In-pt. −100%

Refused treatment: EMS 47%, ED 3%, In-pt. 953%

Dunford JV, Castillo E, Chan TC, Vilke G, Jenson P, Lindsay S. Impact of the San Diego Serial Inebriate Program (SIP) on use of emergency medical resources. *Ann Emerg Med*. 2006;47(4):328-336

The People v Thomas Kellogg (2004)

119 Cal. App. 4th 593, 14 Cal. Rptr. 3d, 507 (Petition for review denied, September 22, 2004)

- The state has a legitimate need to control public drunkenness when such behavior creates a safety hazard
- The state does not punish the mere condition of being a homeless, chronic alcoholic ... rather the associated conduct that poses safety risk

2007 Pursuit of Solutions Research Award

Philip Mangano, Executive Director
U.S. Interagency Council on Homelessness

San Diego Project Heartbeat

- SD Fire-Rescue Department
- Rural/Metro Ambulance
- SD Local 145
- AHA
- City Councilman Jim Madaffer
- Survivor
- Vendor

http://sdprojectheartbeat.com/

San Diego Project Heartbeat

- >8500 AEDs distributed
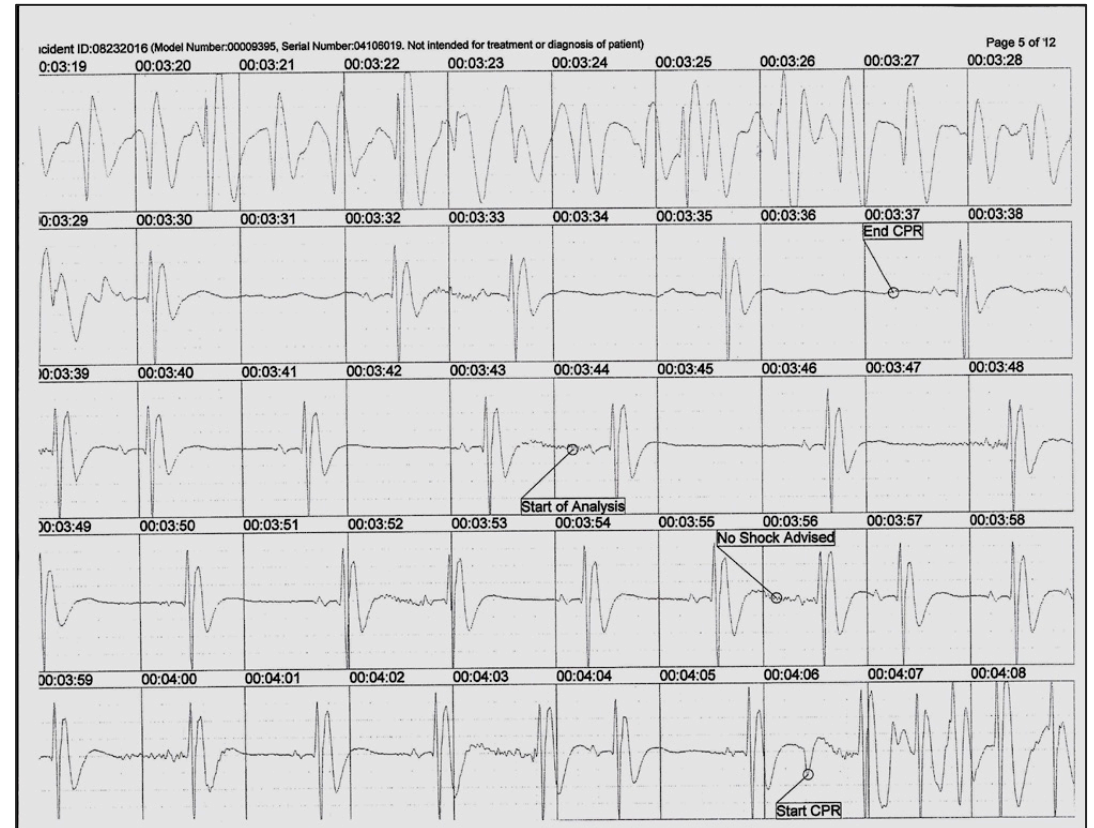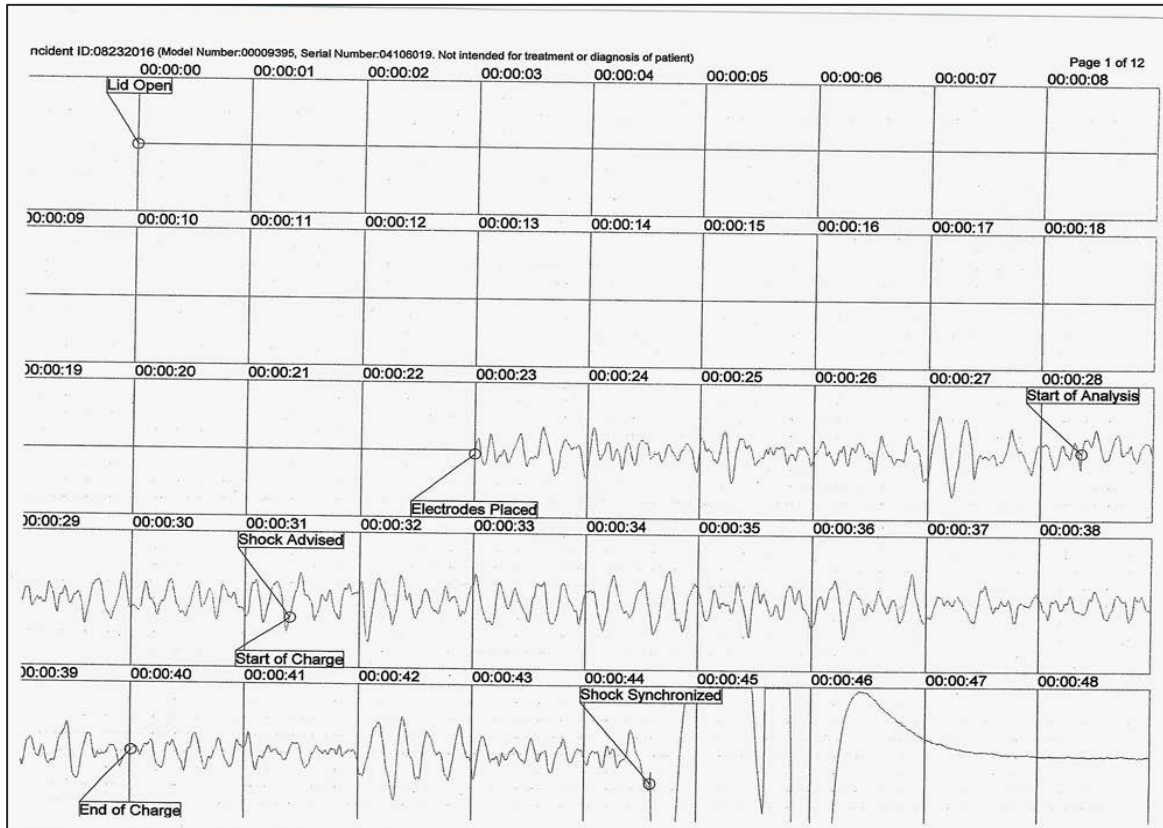- Largest U.S. PAD program
- 153 lives saved

15M with syncope

- 15M collapsed on campus
- CPR; AED deployed
- Transported as possible seizure

"Syncope"

Legislative reform

San Diego Municipal Code   Chapter 14: General Regulations
(1-2013)

Article 5: Building Regulations

Division 39: Automated External Defibrillators
(Added 12-16-2008 by O-19820 N.S; effective 2-14-2009.)

§145.3901   **Purpose**

The purpose of this Division is to promote public health, safety, and welfare by improving emergency care response times to those suffering from sudden cardiac arrest, thereby improving chances of survival. The requirements of this Division are intended to provide for faster emergency response in large buildings, multi-story buildings, and/or buildings with large numbers of occupants where first responder access may be impeded due to building use, occupancy, location, layout, construction, or other reasons. This Division is not intended to create a new standard of care.

(Added 12-16-2008 by O-19820 N.S; effective 2-14-2009.)

Senate Bill No. 287

CHAPTER 449

An act to add Chapter 3 (commencing with Section 19300) to Part 3 of Division 13 of the Health and Safety Code, relating to automated external defibrillators.

[Approved by Governor October 2, 2015. Filed with
Secretary of State October 2, 2015.]

LEGISLATIVE COUNSEL'S DIGEST

SB 287, Hueso. Automated external defibrillators (AEDs).

Existing law requires any person or entity that supplies an AED, which means an automated or automatic external defibrillator (AED), to notify an agent of the local emergency medical services agency of the existence, location, and type of AED acquired and to provide the acquirer of the AED with all information governing the use, installation, operation, training, and maintenance of the AED. Existing law provides that any person or entity that acquires an AED is not liable for civil damages resulting from any acts or omissions in the rendering of emergency care, except as provided, if

High risk neighborhoods - low bystander CPR
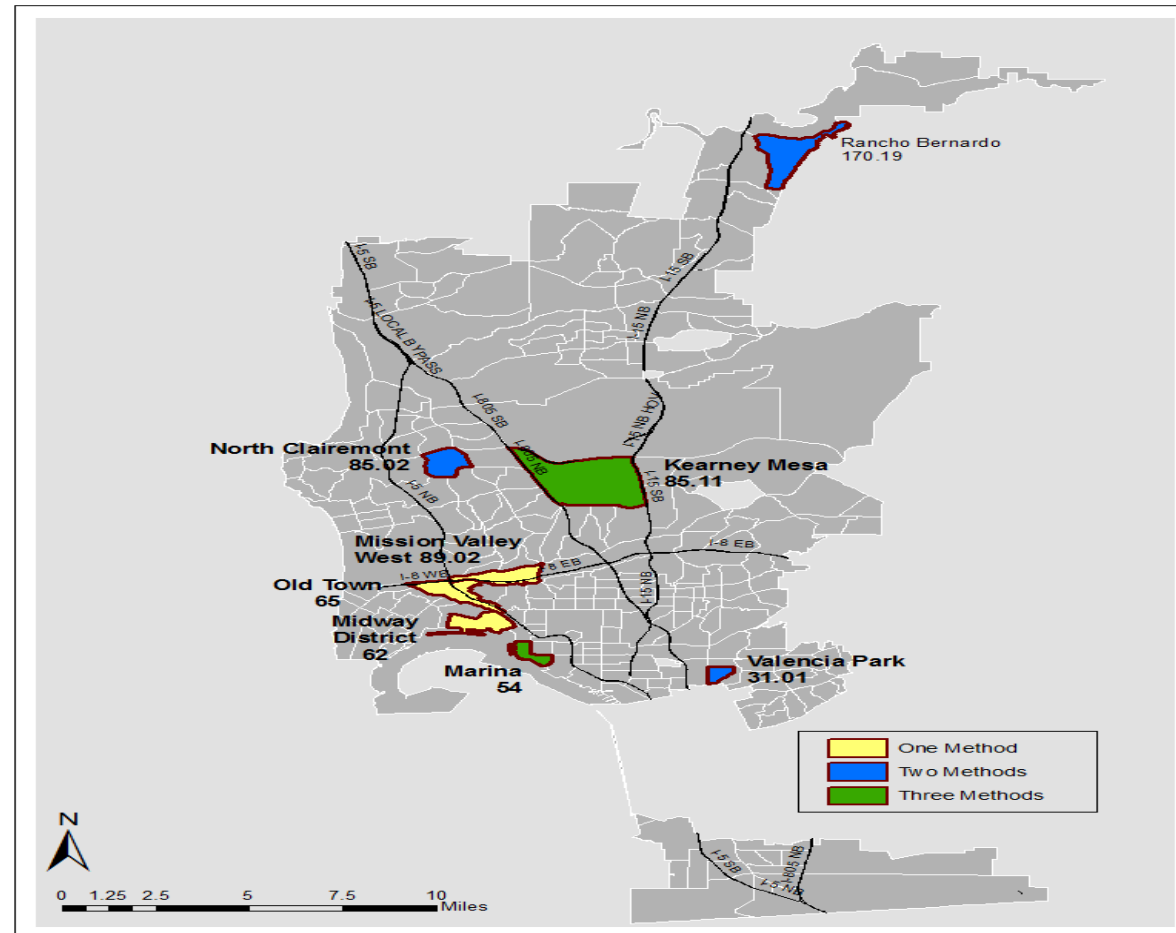
Serra J, Sasson C, Dunford J. unpublished

National Institutes of Health (NIH)
Resuscitation Outcomes Consortium (ROC)
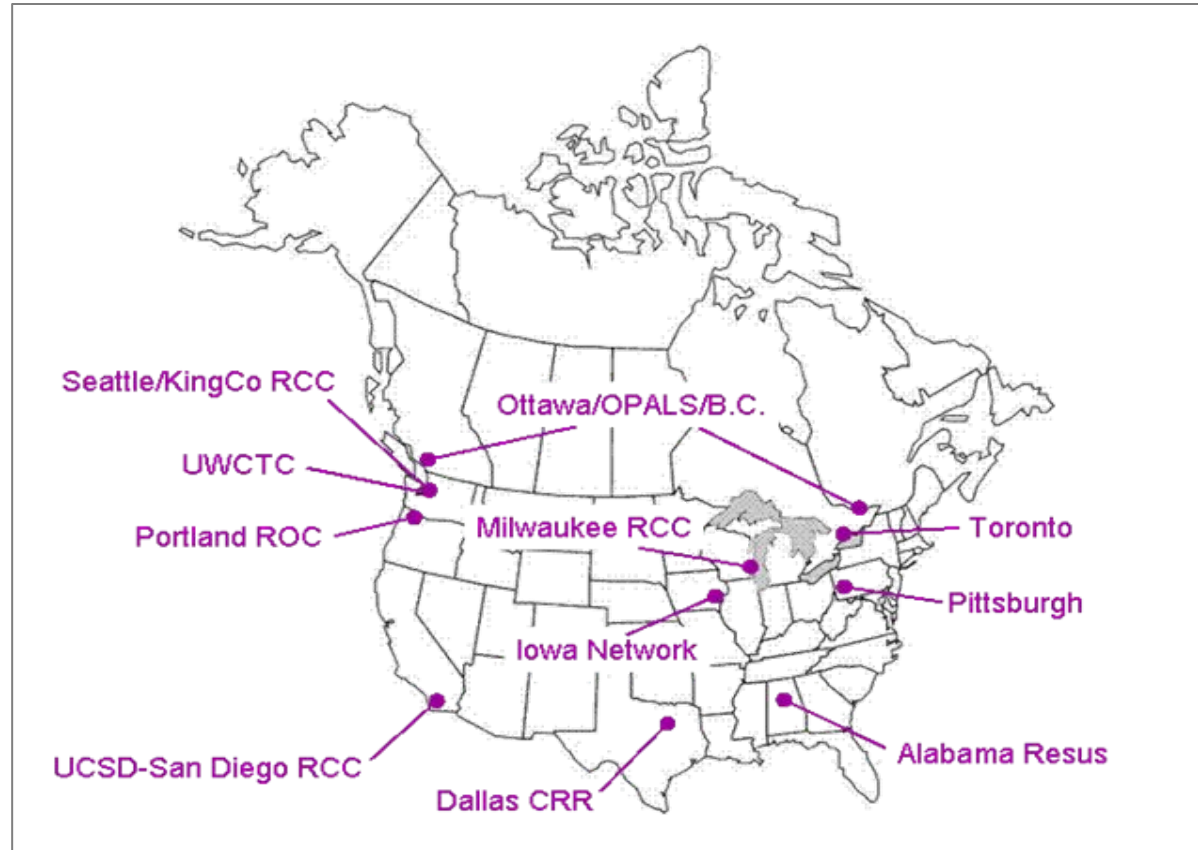
High performance CPR

- Continuous compression
- Interposed ventilations
- 100% audio recording
- 100% crew feedback

Effect of ETT intubation on compression force

05:15 ET attempt begins

12:15 ETT placed

65
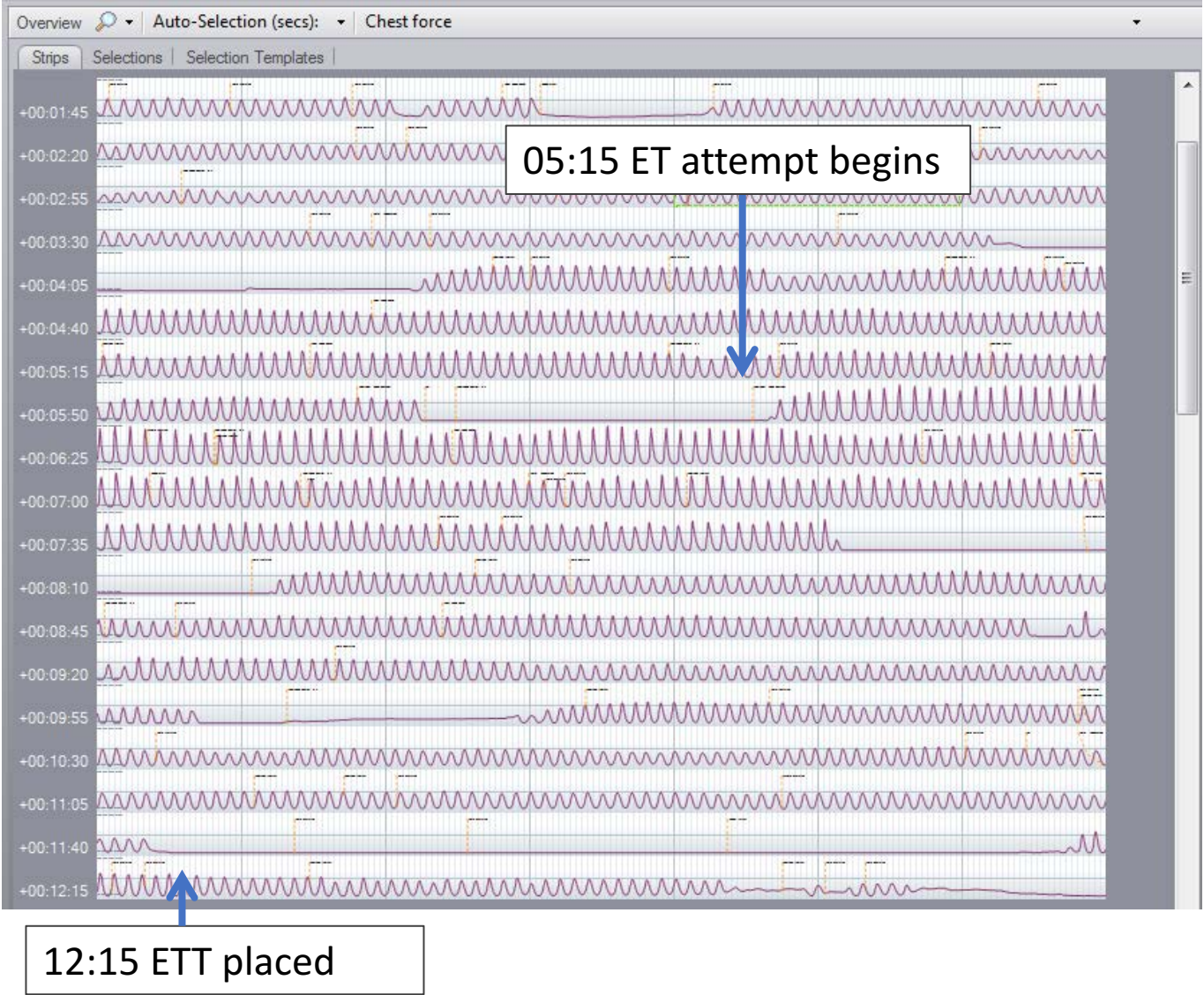
Effect of gurney move on compression

Depart site of arrest on gurney
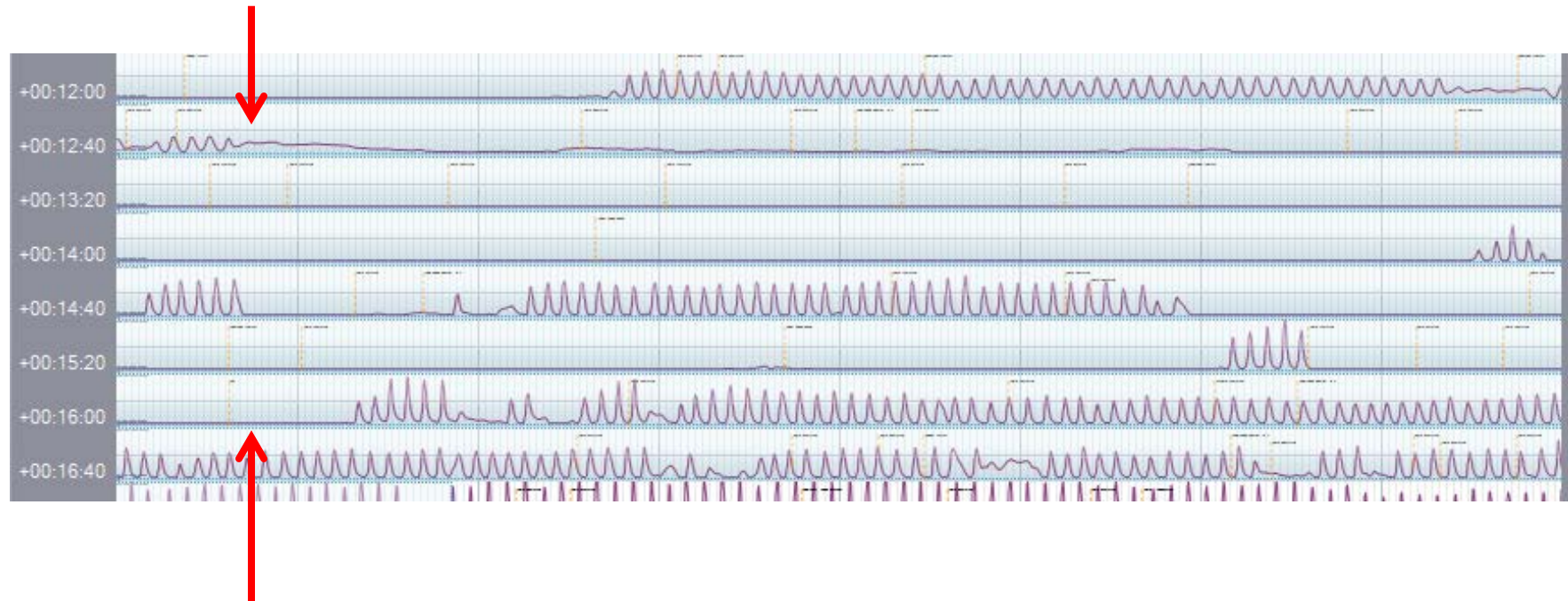
Depart scene in ambulance

Inadequate compressions x 4 minutes

STEMI system: began 2007

San Diego Stroke System
July 1, 2009

U·T

SAVE THIS   EMAIL THIS   PRINT THIS   MOST POPULAR

San Diego needs regional system to combat strokes

By James Dunford and Thomas J. Chippendale
June 23, 2005

Every 45 seconds someone in the United States suffers a stroke and every three minutes a death results. Stroke is this country's third-leading cause of death and the number one cause of permanent disability. Lest anyone believe stroke is a disease of the elderly, consider there are over 1,000 members of the San Diego Young Enthusiastic Stroke Survivors (YESS).

The American Heart Association reminds us that when you or someone you love is having a stroke, every minute counts. If you're having any of

Thrombectomy for large vessel occlusion (LVO)

On-line adult education

Team-based simulation

Hyper-realism

2017: SDFD paramedic academy

1163 frequent callers FY2013
> 6 ambulance calls/year

683 (59%)
Psychiatric
issue

411 (35%)
Geriatric

383 (33%)
Homeless

4%

Serial
Inebriate

$15,394,082.68

http://centerforhealthreporting.org/project/health-care-911
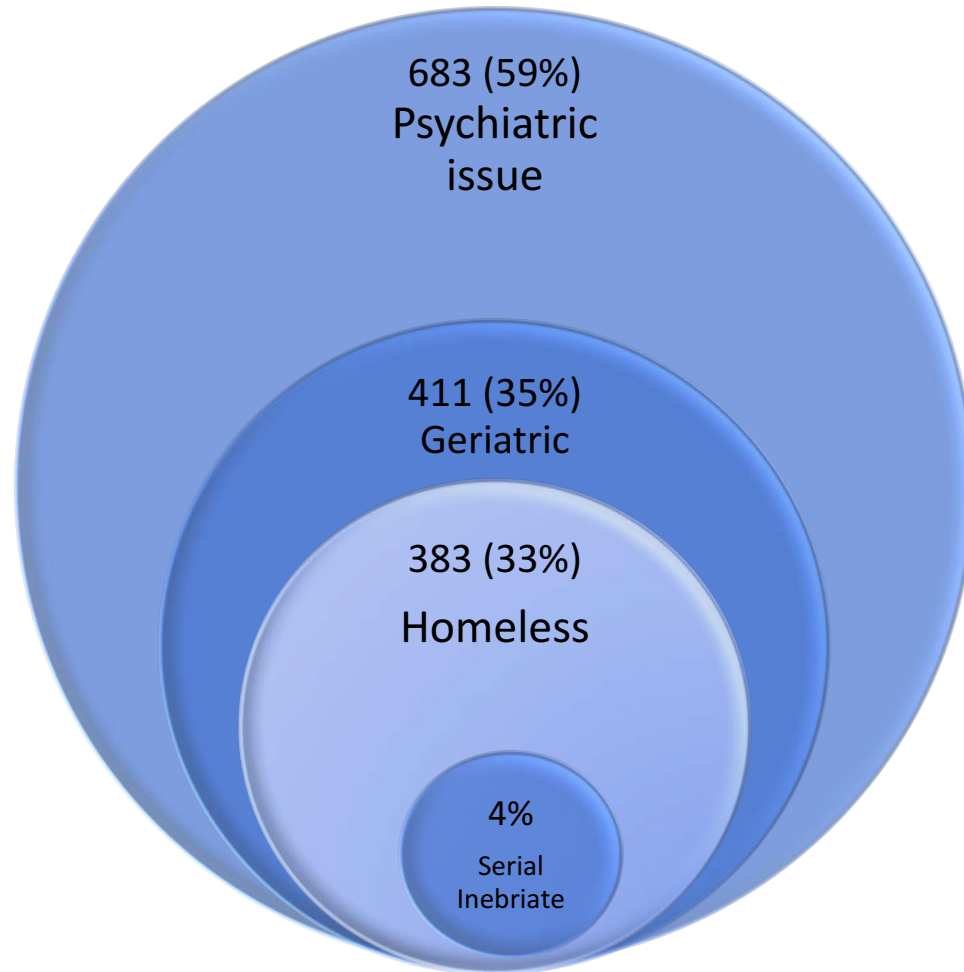
San Diego Union-Tribune April 2012

http://centerforhealthreporting.org/project/health-care-911

Beacon Community: San Diego Health Connect (HIE)

Device/Envirn Cloud Services

Clinical Cloud Services

EMS Cloud Services

Public Health Cloud Services
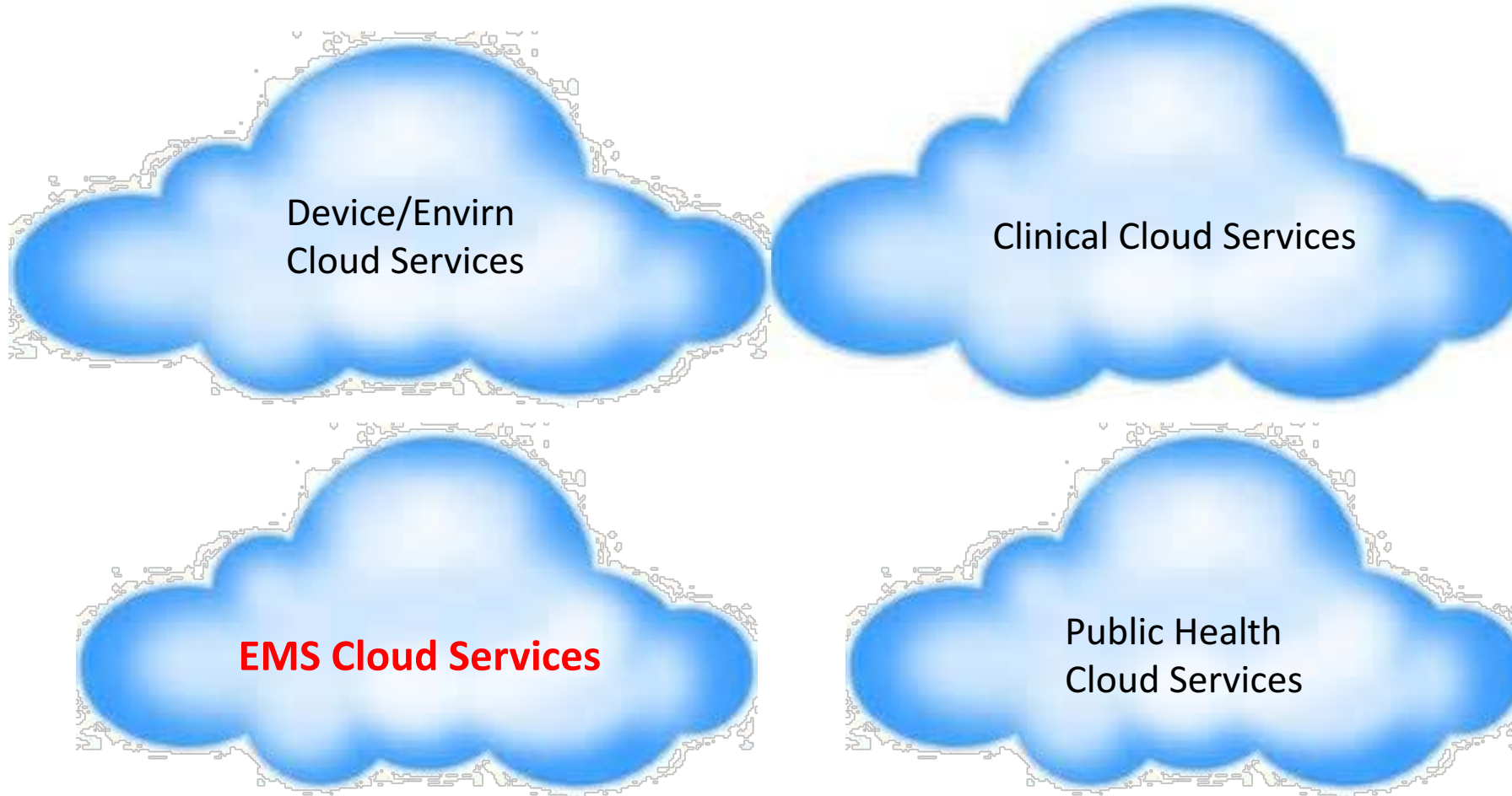
Health Information Exchange
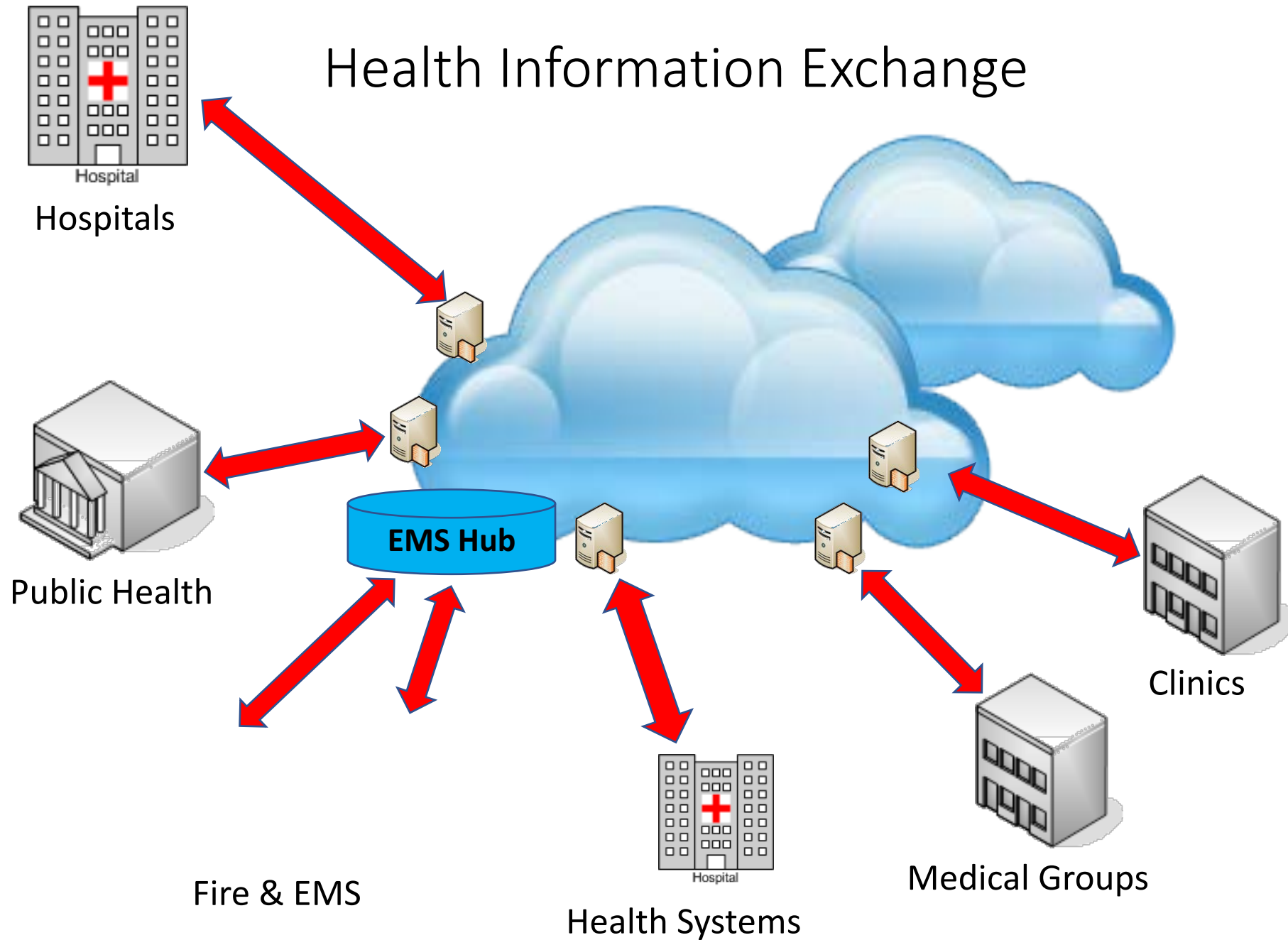
Resource Access Program (RAP)

Anne Jensen, PM
RAP Coordinator

SDPD
HOT

HHSA   PERT

211 San Diego

AIS

Rachel's Women's Center

Clean and Safe

San Diego Fire-Rescue

HOT

Catholic Charities

SIP

HHS Behavioral Health

IHOME

Alpha Project

Project 25

Episcopal Services

Hospital Case Managers

St. Vincent de Paul

Jail Case workers

Salvation Army

PATH Connections

Volunteers of America

Rescue Mission

Veterans Village

Social Workers

Rural/Metro Ambulance

Neil Goode Day Center

PERT

CIE

81

Resource Access Program (RAP)
Community Paramedicine

RESOURCE ACCESS PROGRAM (RAP)
2015 Paramedicine Pilot Project

RAP alerting

EMS Hub

StreetSense

client registry

- Verizon 3G   9:10 PM   62%
- Inbox   **5 of 14**
- From: onscene@infotechsm.com ❯   Hide
- To: Anne Jensen ❯

onScene Social Alert
January 9, 2013 6:51 PM   Mark

onScene Social Alert
911 Dependency

Incident Number: FS99991
Acuity: Moderate
Age:
Sex: Female
Chief Complaint: Back Pain

View full ePCR Report
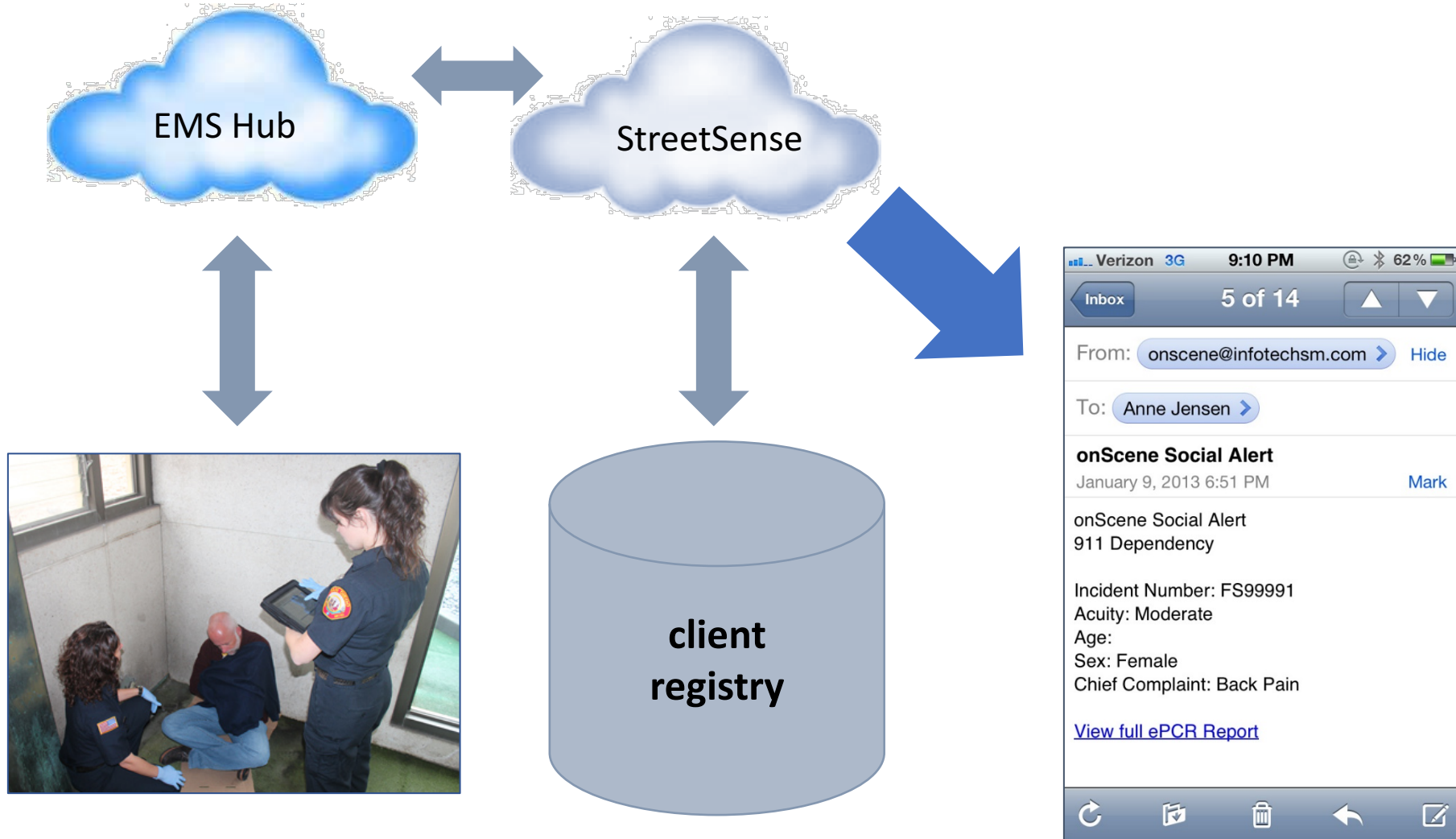
Verizon LTE 12:48 PM Not Charging

secure.infotechsm.com/StreetSense/user/default.aspx

Search

× Dashboard +

INFOTECH SYSTEMS MANAGEMENT **STREET SENSE**

Protected View
Welcome Anne! [Log Out]

| Admin |
| Dashboard |
| CAD |
| Patient Search |
| Address Search |
| Managed |
| Algorithms |
| Action Items |
| Alerts |
| My Incidents |
| My Profile |

Case Management Dashboard

Frequent Callers

Return top: 30 ▾   ✓ Include Records on Watchlist

Last Week	Last 2 Weeks	Last Month	Last 6 Months	Last Year
(8)	(8)	(11)	(50)	(77)
(5)	(7)	(10)	(47)	(71)
(4)	(5)	(9)	(47)	(69)
(4)	(5)	(8)	(37)	(57)
(4)	(5)	(8)	(36)	(53)
(3)	(5)	(8)	(30)	(50)
(3)	(4)	(8)	(28)	(50)
(3)	(4)	(8)	(28)	(46)
(3)	(4)	(7)	(27)	(46)
(3)	(4)	(7)	(26)	(46)
(3)	(4)	(7)	(25)	(42)
(2)	(4)	(6)	(25)	(41)
(2)	(4)	(6)	(24)	(40)
(2)	(4)	(6)	(24)	(39)
(2)	(4)	(6)	(23)	(39)
(2)	(4)	(6)	(22)	(37)
(2)	(4)	(6)	(21)	(37)
(2)	(4)	(5)	(21)	(37)
(2)	(3)	(5)	(20)	(37)

pid: AGEDSH

85
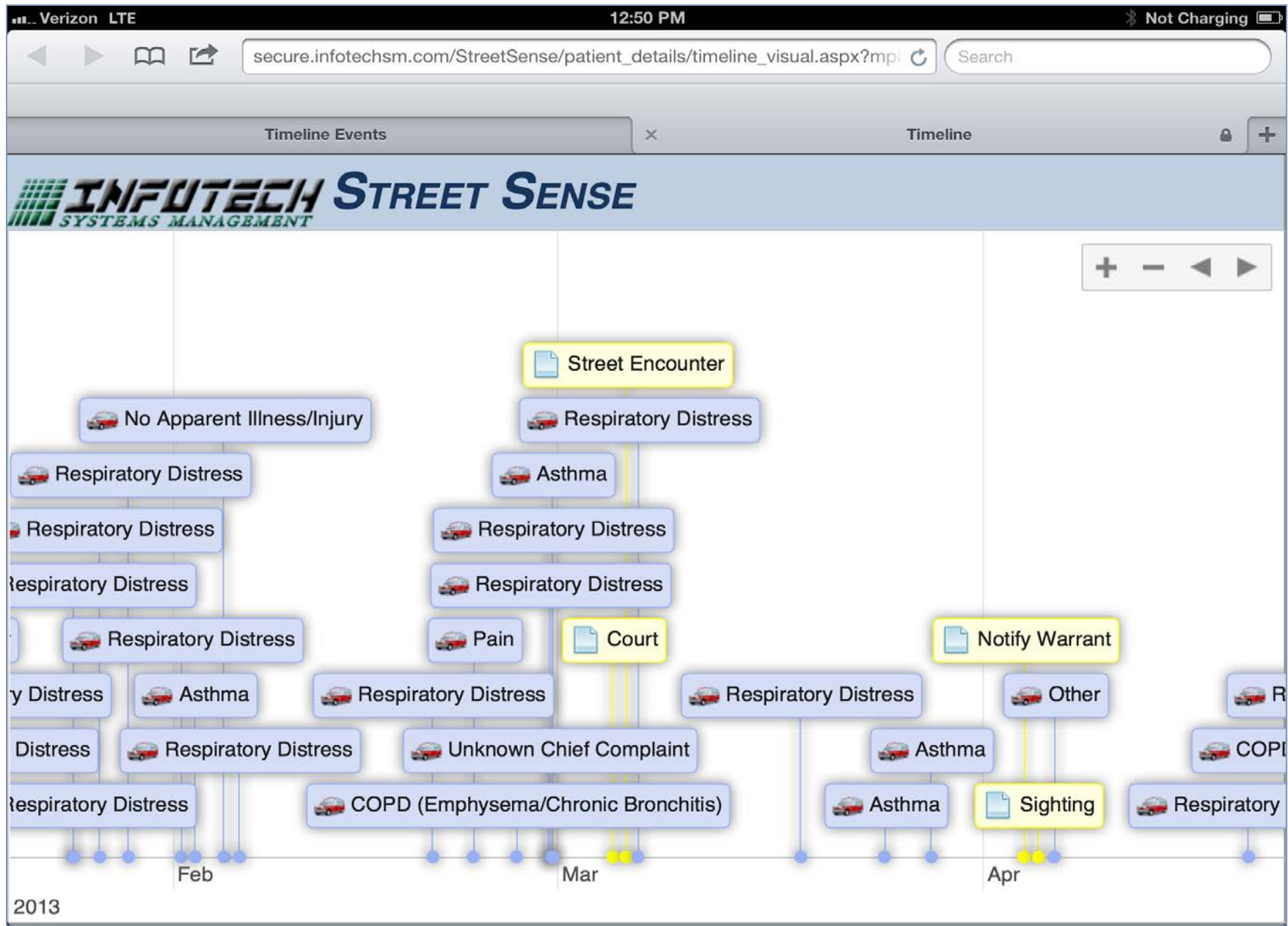
Financial tracking

Unit Type	Count	Time Spent (Hours)		Estimated Cost
		Total	Average	
AMBULANCE	70	58:25	00:50	$ 102,871.75
ENGINE	57	15:15	00:16	$ 4,925.75
TRUCK	4	00:52	00:13	$ 294.67
Totals	**131**	**75:32**	**00:34**	**$ 108,092.17**

Effect on RAP : 51 clients, Dec 2006 - June 2009

Tadros AS, Castillo EM, Chan TC, Patel E, Watts K, Jensen AM, Dunford JV. Effects of an emergency medical services-based resource access program (RAP) on frequent users of health services *Prehosp Emerg Care* 2012 Oct;16(4):541-547
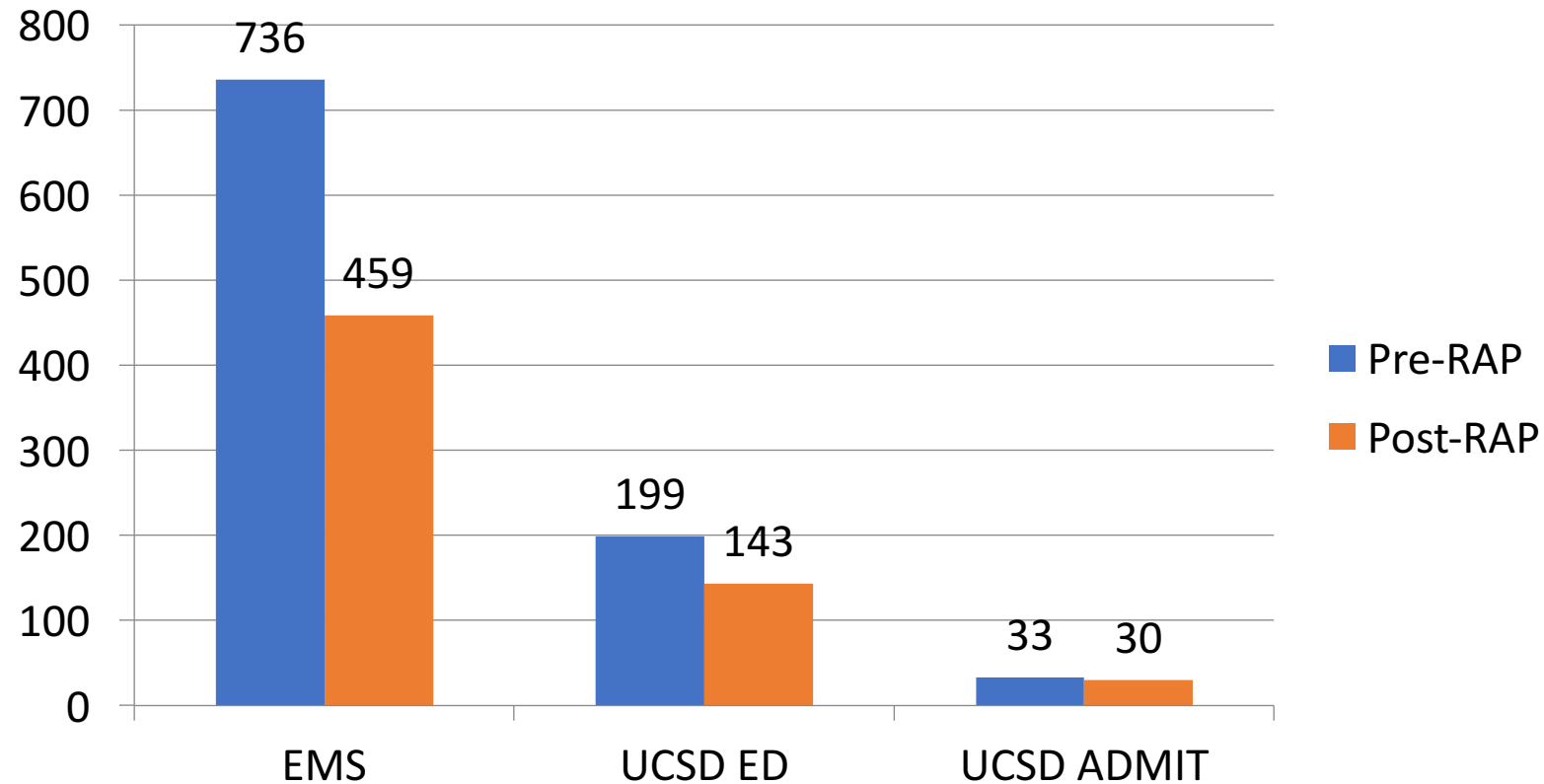
Effect of RAP on EMS resources: 51 clients
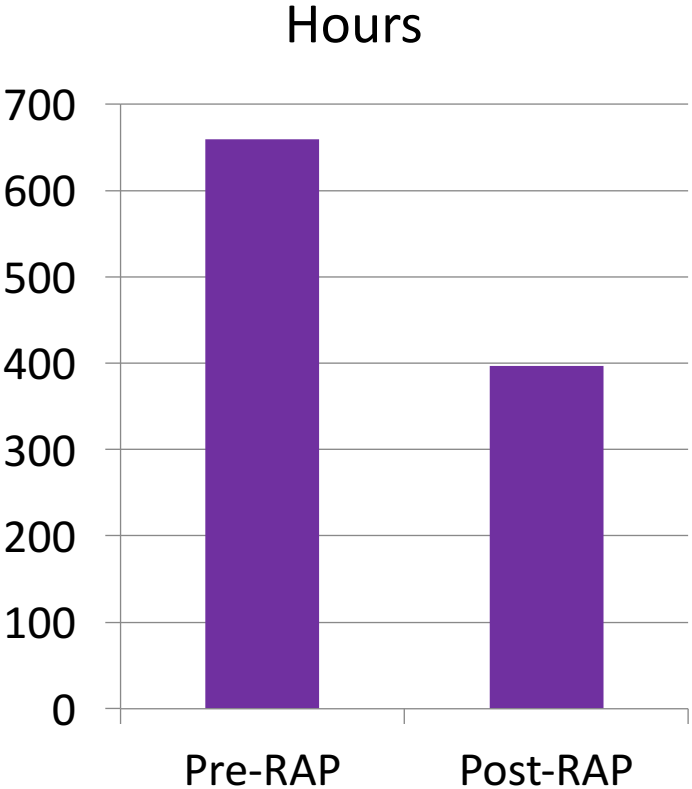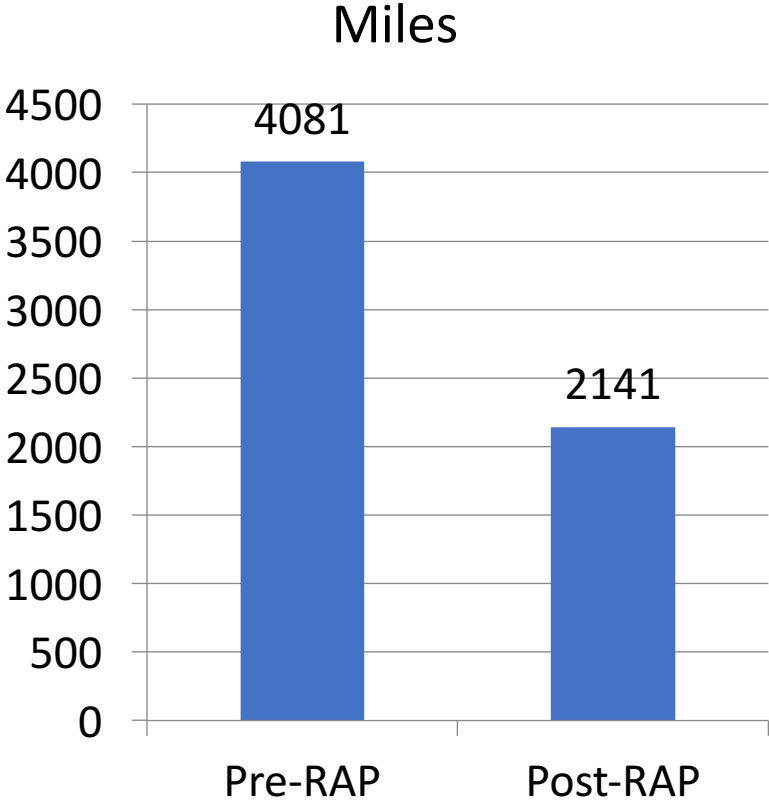
Miles

4081	Pre-RAP
2141	Post-RAP

Hours

(chart with Pre-RAP and Post-RAP values)

Tadros AS, Castillo EM, Chan TC, Patel E, Watts K, Jensen AM, Dunford JV. Effects of an emergency medical services-based resource access program (RAP) on frequent users of health services *Prehosp Emerg Care* 2012 Oct;16(4):541-547

Effect of RAP on healthcare charges

Bar chart comparing PreRAP and PostRAP healthcare charges. PreRAP: $689,743. PostRAP: $468,394. Δ = -$221,394.

Tadros AS, Castillo EM, Chan TC, Patel E, Watts K, Jensen AM, Dunford JV. Effects of an emergency medical services-based resource access program (RAP) on frequent users of health services *Prehosp Emerg Care* 2012 Oct;16(4):541-547

The <u>most</u> impactful

Jail

Medi-Cal

Homeless

Mental health
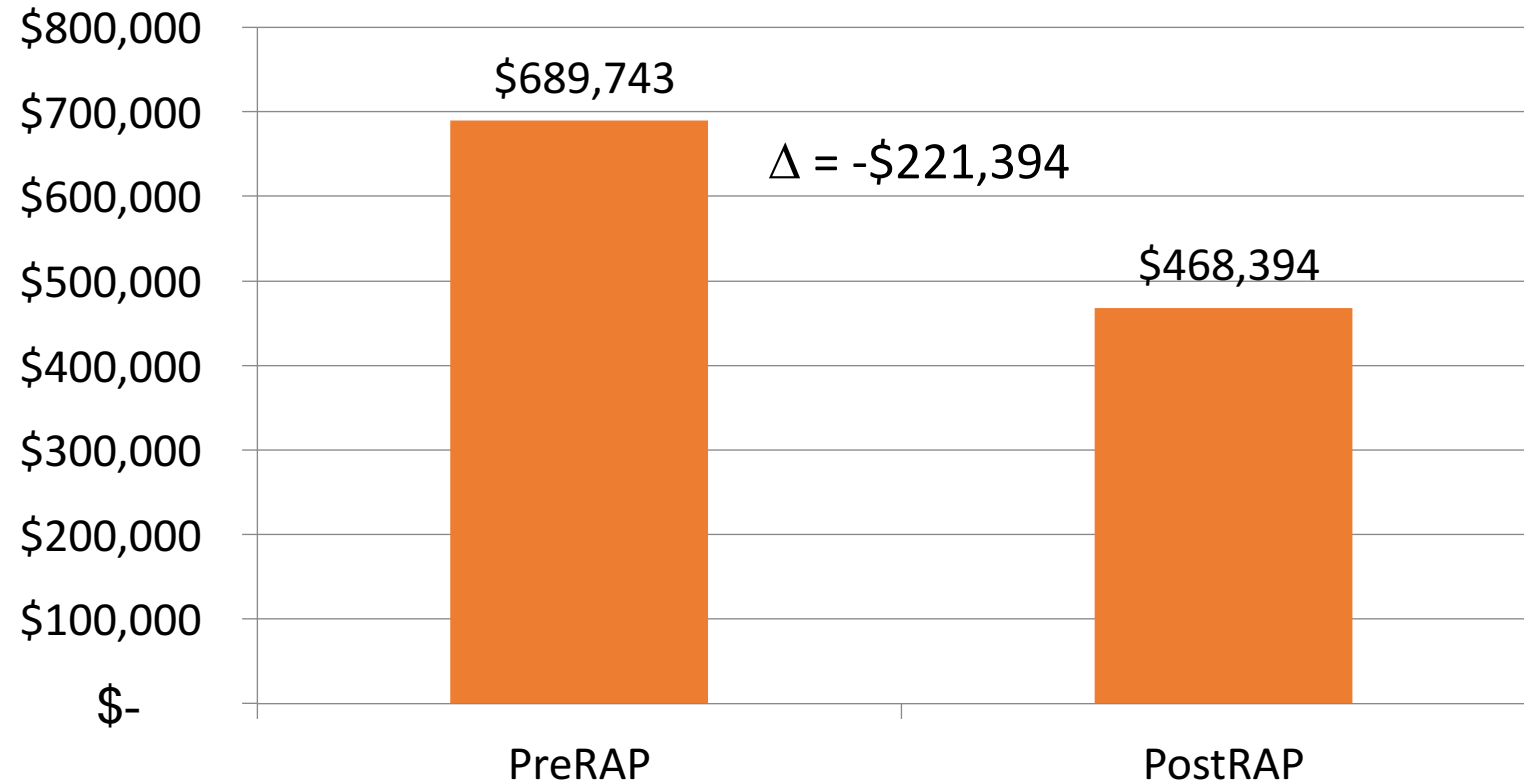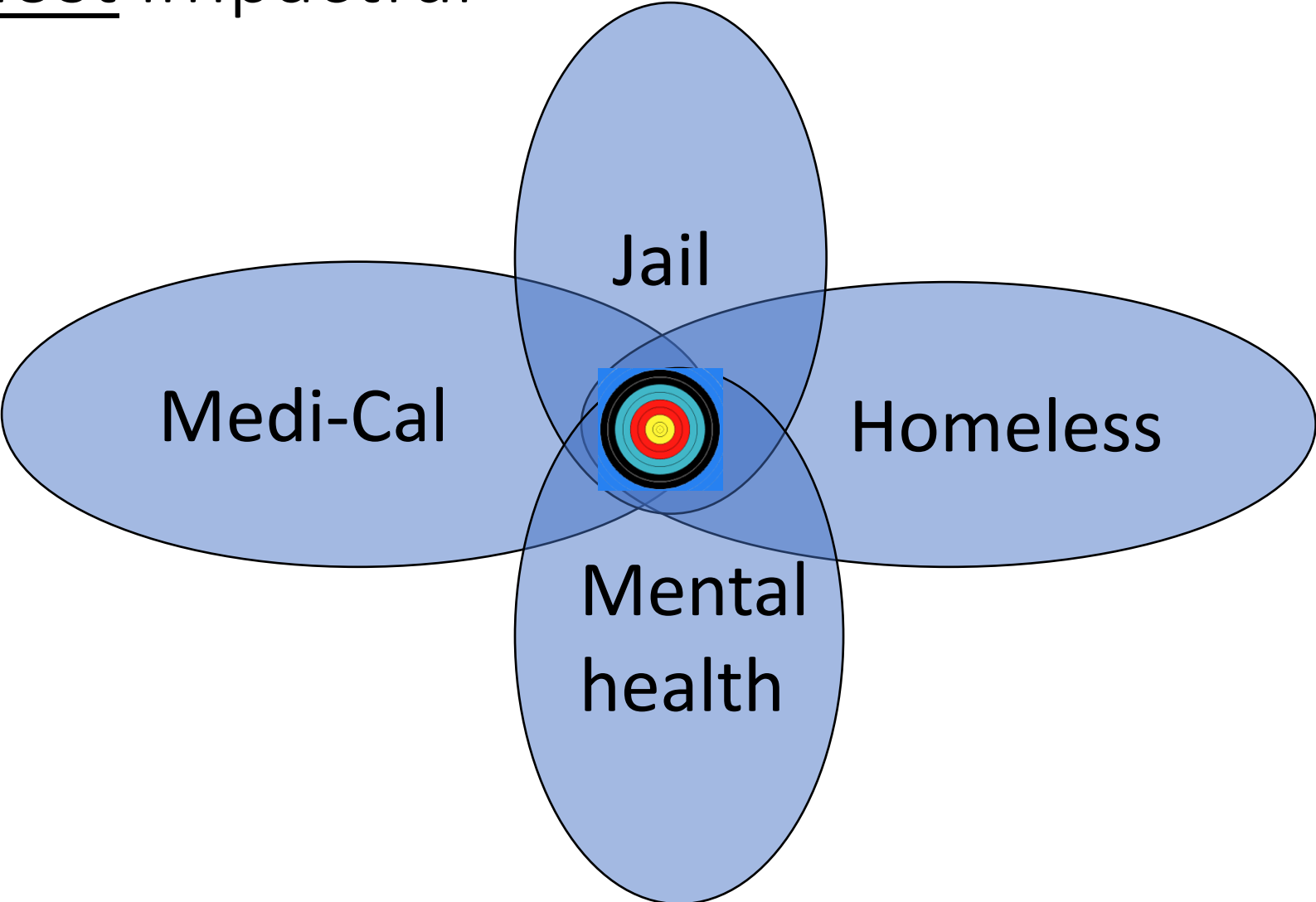
Project 25
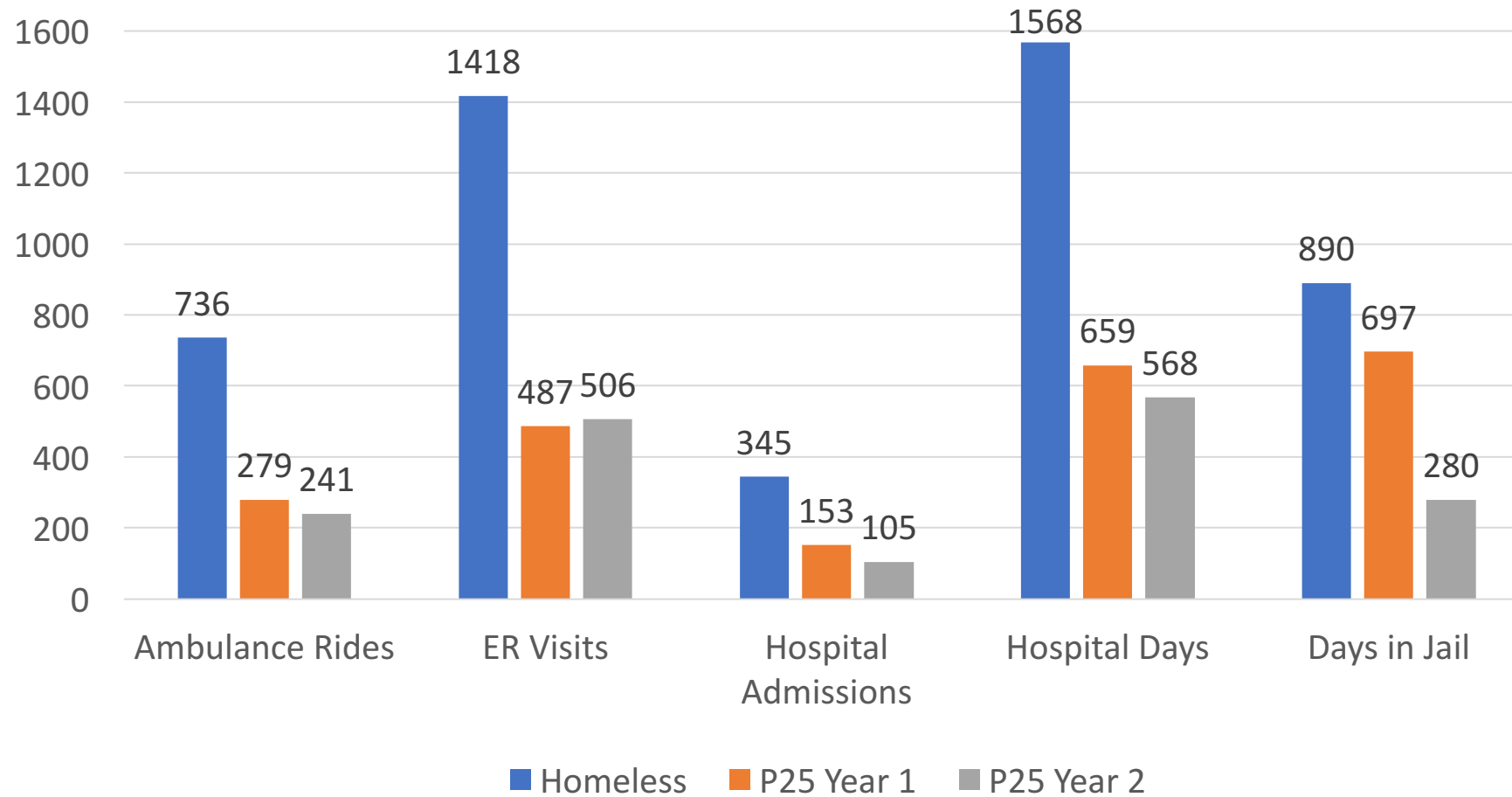
Project 25

Project 25: public cost savings

Public costs 2010 (Homeless)

$4,229,429

Legend:
- Ambulance Rides
- ER Visits
- Hospital Days
- Law Enforcement
- Other
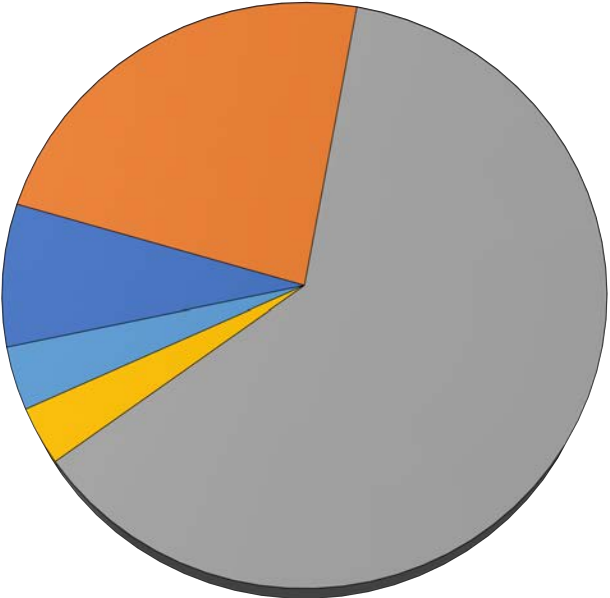
Public costs (P25 Year 2)
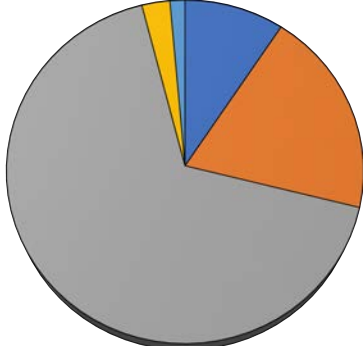
$1,574,839

Reverse 9-1-1: 211 EMS referrals

Community Information Exchange (CIE) San Diego:
Incorporating the social determinants of health
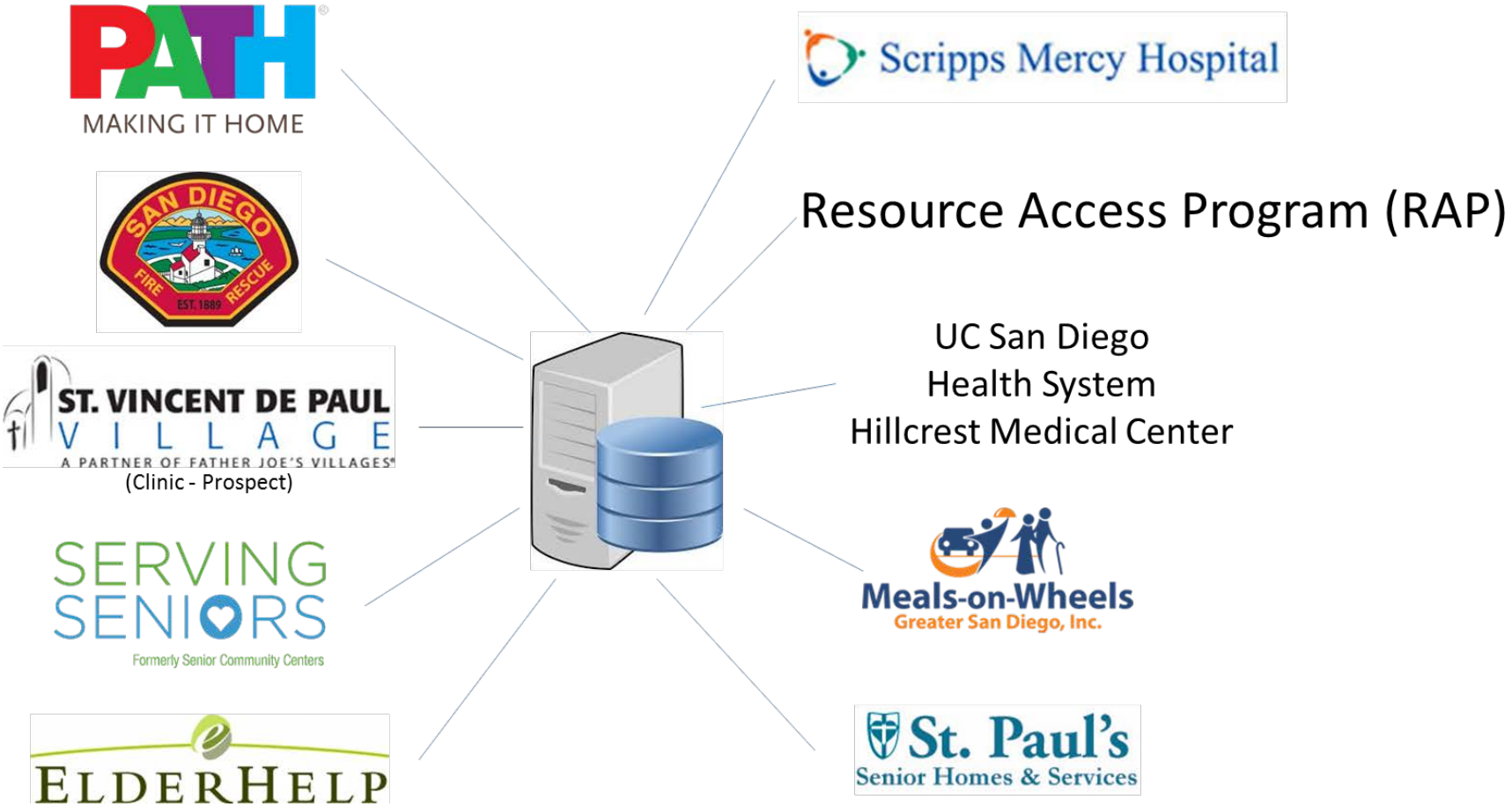
CIE is embedded in EHR and case management systems

User experience:
- User selects a client WITHIN their native case management or HMIS system
- Presses CIE icon
- Views client record in CIE

Technology:
- Real-time API integration
- Single sign-on
- Auto-quick search
- Validate view rights by user role

Risk Factors Associated with EMS use by at-risk Senior Center Clients

Characteristic	Unadjusted OR (95% CI)	Adjusted OR (95% CI)
Homeless or history of	2.004** (1.410, 2.847)	1.370 (0.926, 2.028)
Working with other social service programs	2.623** (1.529, 4.502)	2.155* (1.184, 3.921)
Lack of self-reported primary care	0.781˜ (0.582, 1.049)	0.923 (0.660, 1.291)
Lack of self-reported insurance	0.706* (0.527, 0.947)	---
High Nutritional Risk Score	2.076** (1.509, 2.856)	1.511* (1.062, 2.149)
Self-reported high-risk medical conditions	1.404˜ (0.942, 2.093)	---
Self-reported psychiatric or substance abuse	1.521* (1.013, 2.284)	---

Regional vision: integrated IT

Regional alerting

EMS

Notify →

RAP clients

AED locations

Ventilator patients

LVAD patients

Narcotic OD

Hypoglycemia, seizures

Hypertension

Elderly falls

30-day readmission risk
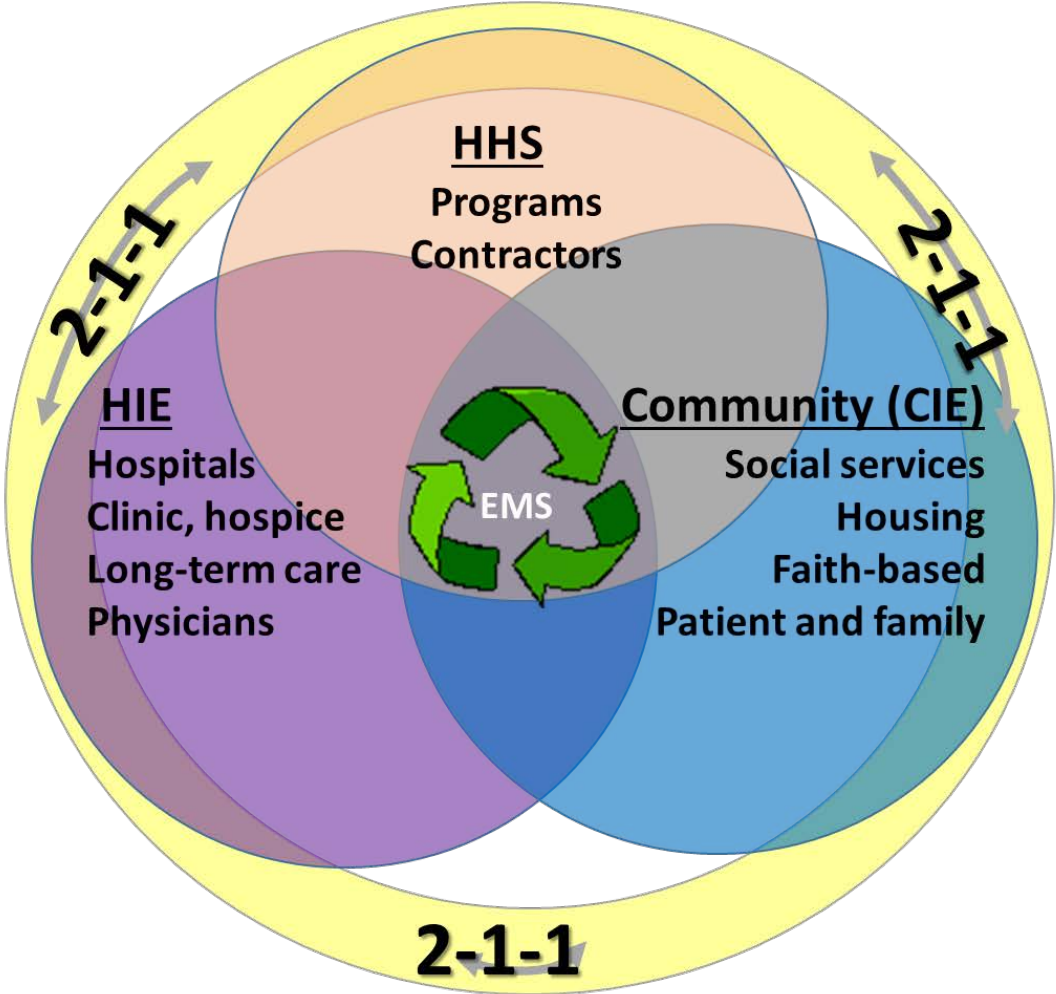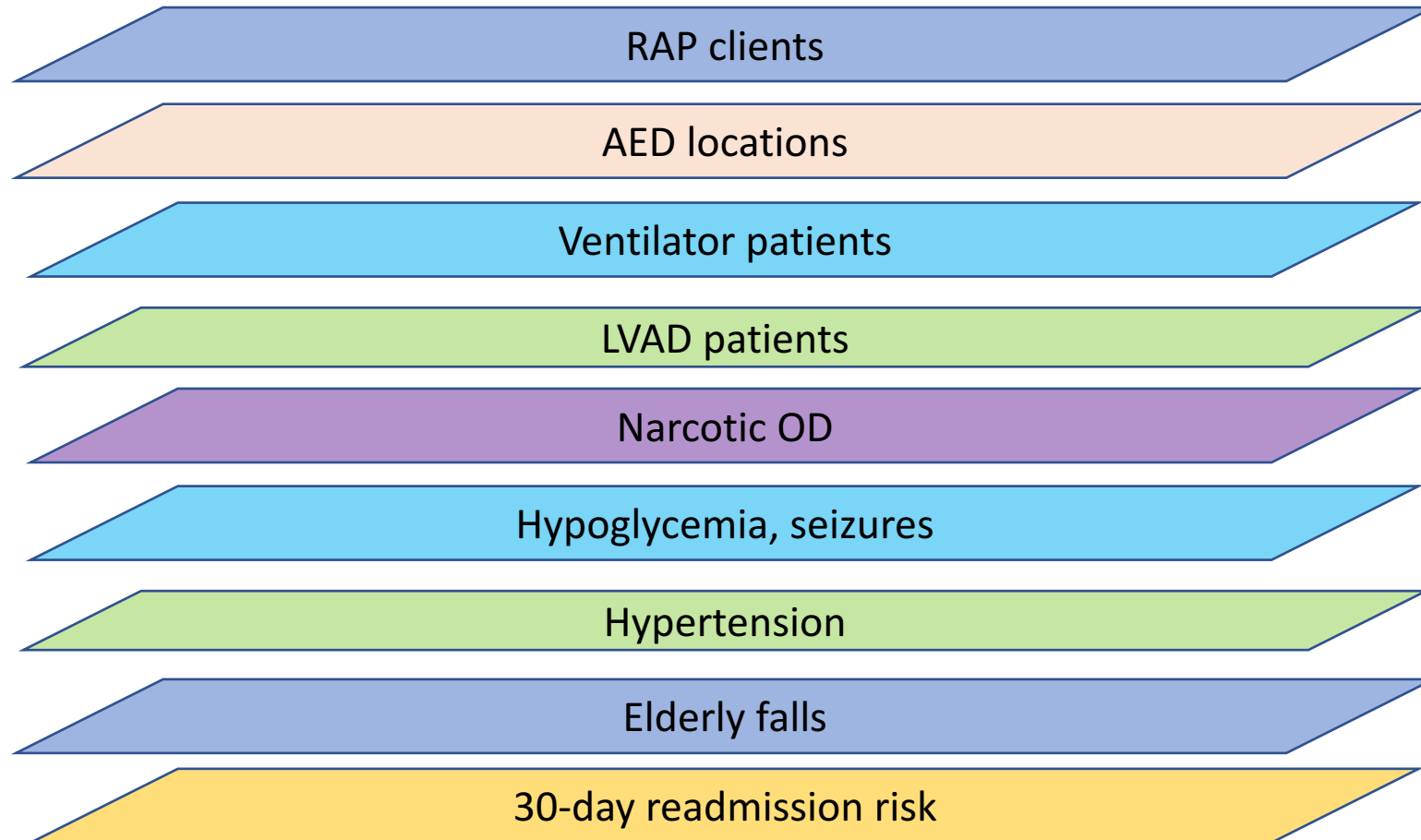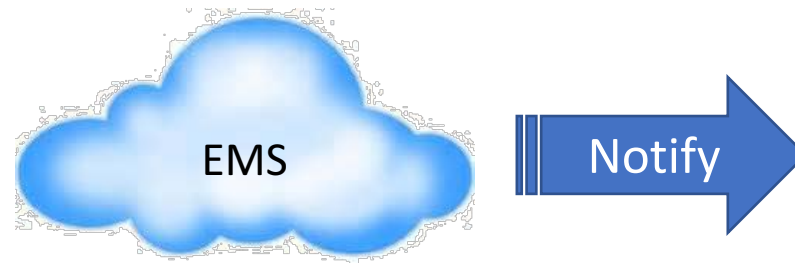
CDC Vision for Public Health Surveillance in the 21ˢᵗ Century
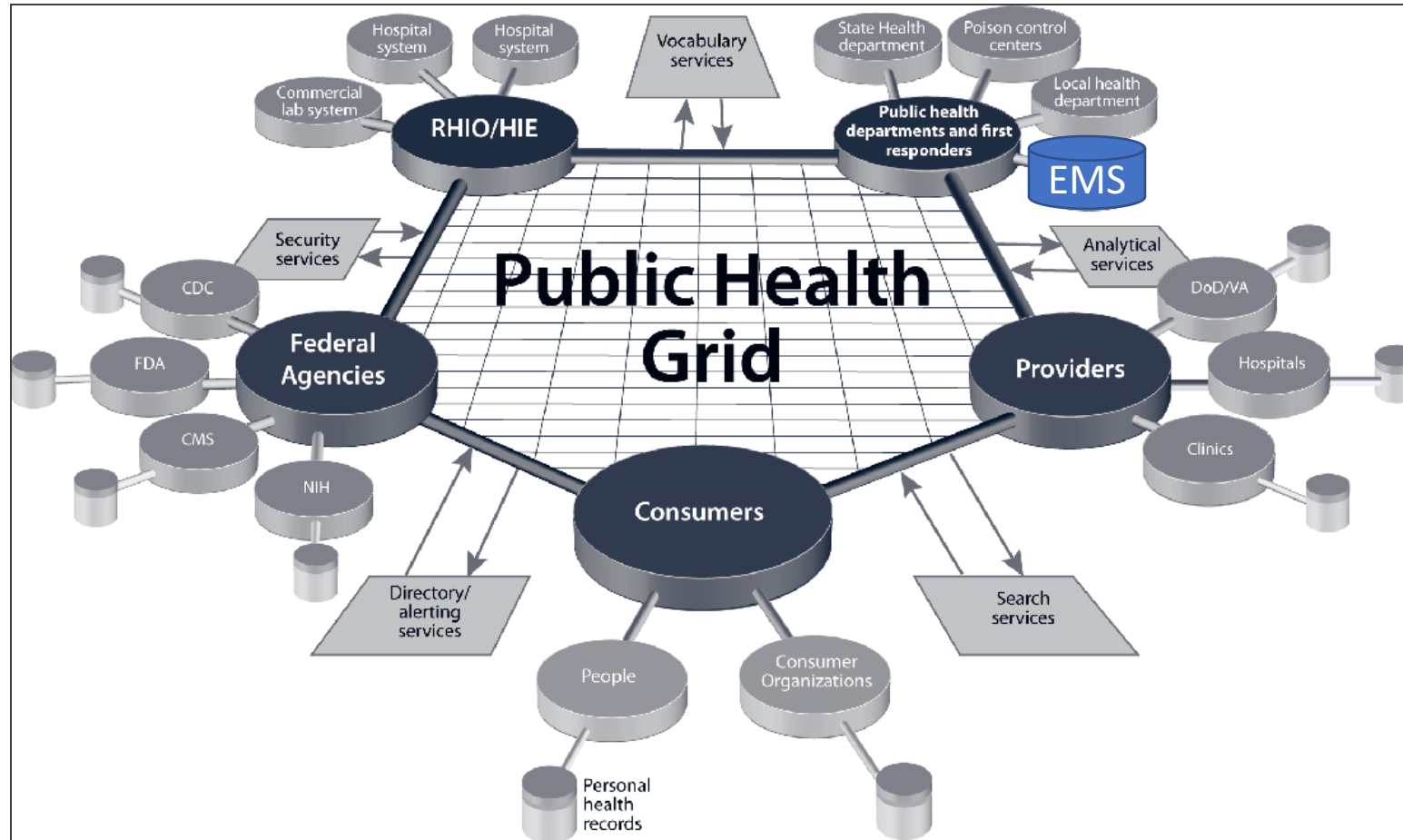
2016 EMS grants - CA EMS Authority

- +EMS
  - January 2016
  - 1st EMS grant from Office of the National Coordinator for Health Information Technology (ONC)
  - Demonstrate SAFR functionality

- ePOLST Registry
  - June 2016
  - $350K awarded Alameda County, San Diego Health Connect and vendor Vynca to develop a cloud-based POLST registry

+EMS Grant SAFR Functionality: SEARCH

- Past history
- Allergies
- Medications
- **POLST (Physician's Order for Life-sustaining Treatment)**

Health Information Exchange

Hospitals

Public Health

Fire & EMS

Health Systems

Medical Groups

Clinics

EMS Hub

+EMS Grant SAFR Functionality: ALERT

Health Information Exchange

Hospitals

Public Health

Fire & EMS

Health Systems

Medical Groups

Clinics

EMS Hub
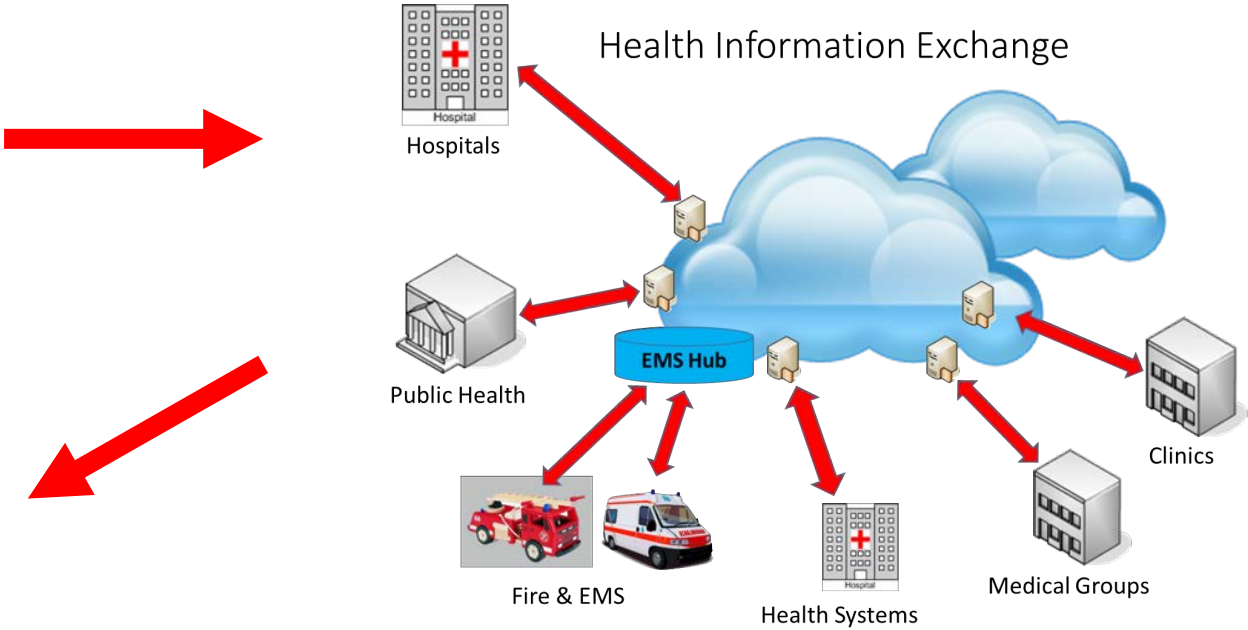
CC
HX
VS
12-lead
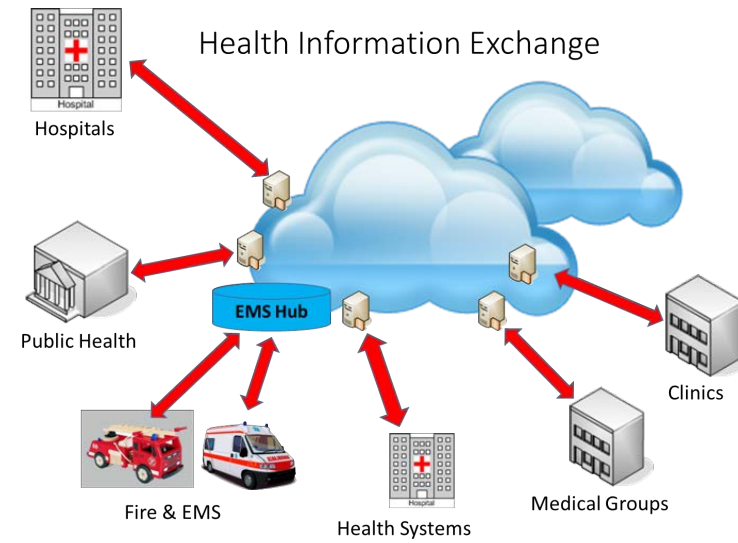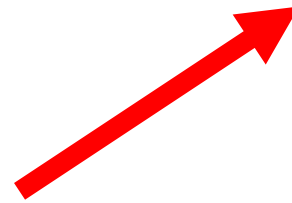
CC
HX
VS
12-lead

+EMS Grant SAFR Functionality: FILE

Health Information Exchange

Hospitals

Public Health

EMS Hub

Fire & EMS

Health Systems

Clinics

Medical Groups
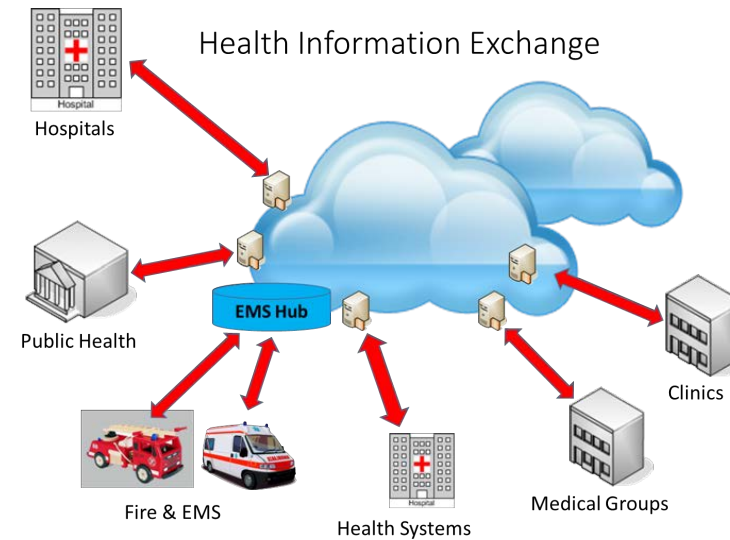
EMS
EMR

+EMS Grant SAFR Functionality: RECONCILE
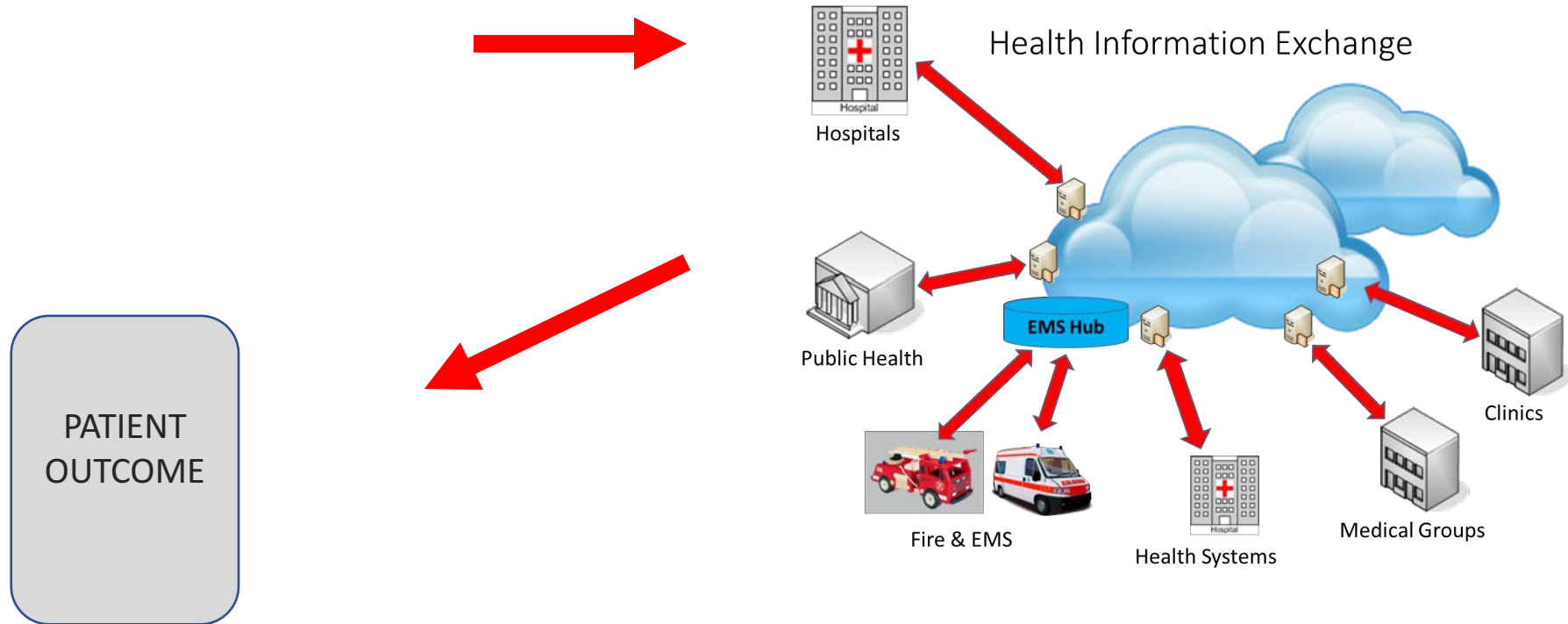
CA EMSA Core Quality Measures Project

- Trauma
- Acute coronary syndrome/AMI
- Cardiac Arrest
- Stroke
- Respiratory
- Pain intervention
- Pediatric
- Skill performance by EMS providers

AB 503 (September 2015)

- Authorizes health facilities to release patient-identifiable medical information to a defined EMS provider, a local EMS agency, and the authority "... to the extent specific data elements are requested for quality assessment and improvement purposes".

AB 1129 (January 2016)

- Requires that local EMSA use the most current version of NEMSIS and that they submit data to the CA EMS Information System

Use of EMS data to identify/address Spice outbreak

Spice encounters
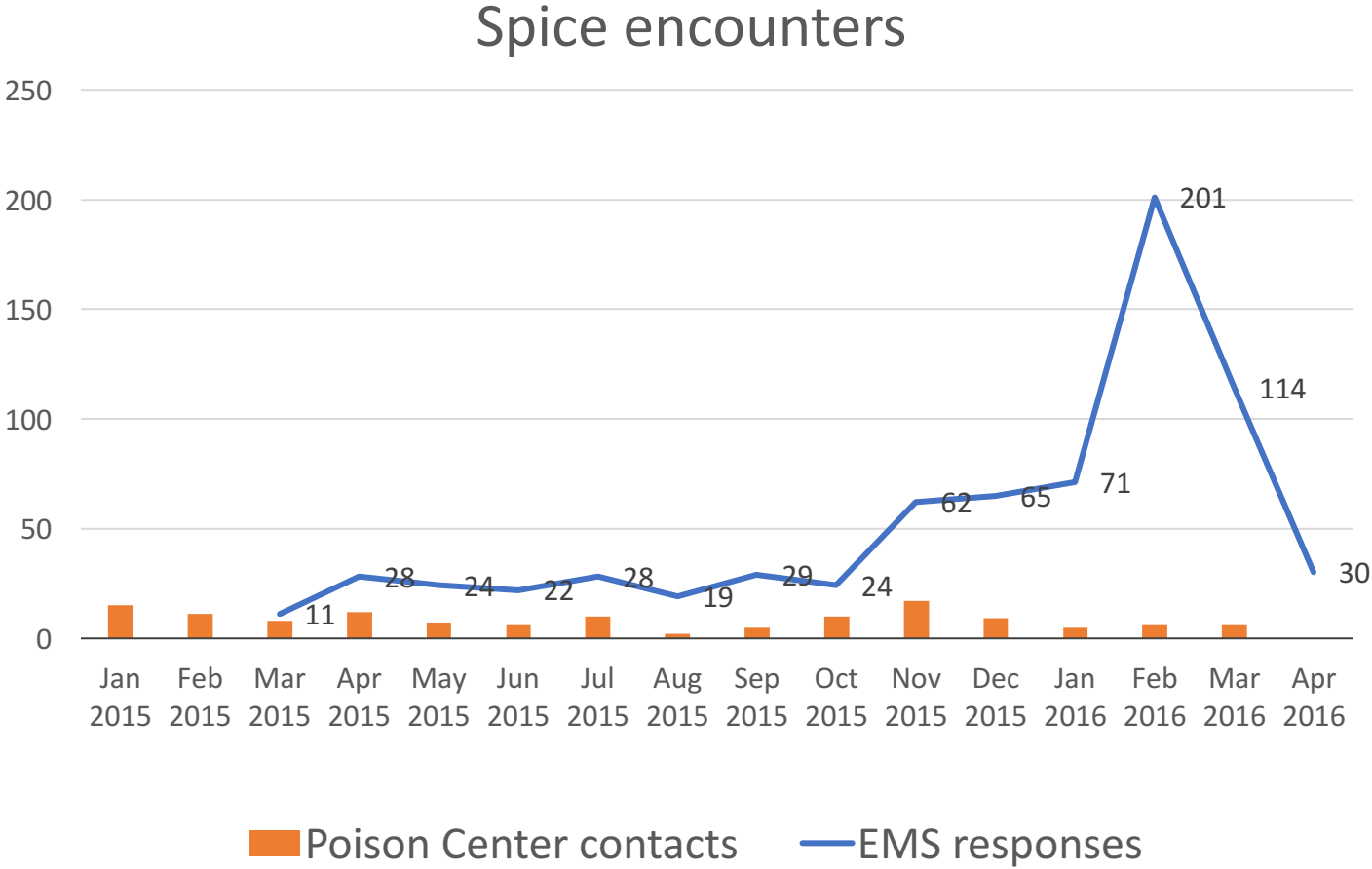
Whole Person Care Program

- California's Section 1115 Medicaid waiver
  - *Medi-Cal 2020*
- $3 billion pilot program
- Support
  - CA State Association of Counties
  - County Behavioral Health Directors Assn.
  - County Health Executives Assn. of CA
  - County Welfare Directors Assn.
  - Local Health Plans of CA
  - SEIU California
  - Corp. for Supportive Housing

Jail

Medi-Cal

Homeless

Mental health

n = 1000
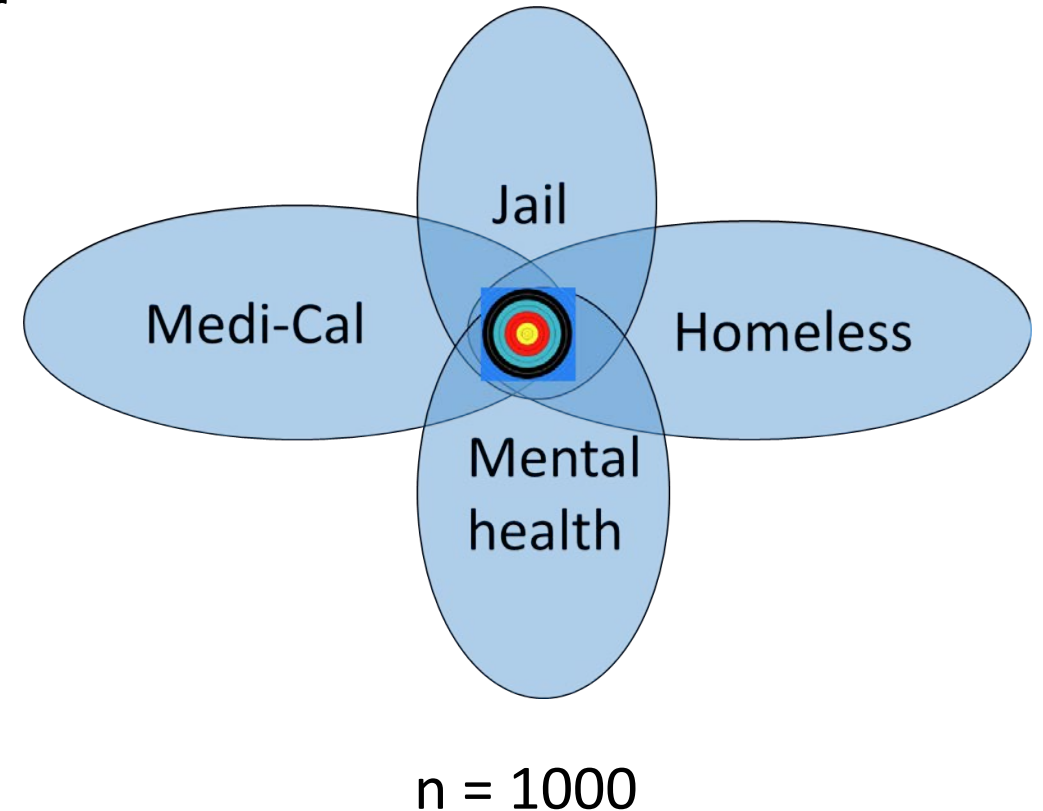
Next: remote expert medical control

MIH Viewpoints and New Initiatives Panel

- Kim Moore, EMS Chief, Verde Valley Ambulance

- Paul Luizzi, Fire Chief, Goodyear Fire Dept.

- Amanda Aguirre, President & CEO, Regional Center for Border Health

- Moderated by: Melanie Mitros, PhD, Director, Strategic Community Partnerships, Vitalyst Health Foundation

Yuma County Community-Based Paramedic Program
San Luis Walk-In Clinic, Inc.
City of Somerton-Cocopah Fire Department

City of Somerton's Community Integrated Paramedic and Preventive Care Coordination Project

Amanda Aguirre
President & CEO

February 2, 2017
Phoenix, Arizona

COLLEGE OF HEALTH CAREERS
YUMA, AZ - EST. 2007
Regional Center for Border Health, Inc.

WAHEC

Serving the Areas of Yuma, La Paz and Mohave Counties
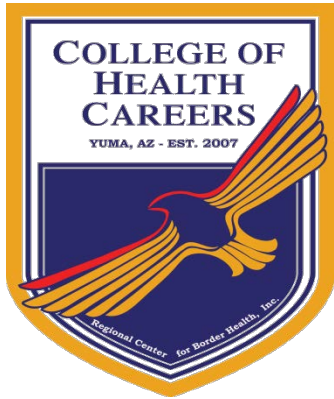
"Committed to improving the quality of life of the residents along the U.S.-Mexico Border by increasing accessibility to quality training and affordable healthcare"

Affiliated to

ARIZONA HEALTH SCIENCES CENTER

Mohave

Lake Havasu

La Paz

Parker

San Luis

Yuma

Somerton

Yuma

Somerton

Somerton Cocopah Fire Department

- **Partnership: San Luis Walk-In Clinic, Inc. and Somerton Cocopah Fire Department**
  - Collaborate in providing coordinated community paramedic integrated and preventive care

- **Somerton Cocopah Fire Department Mission:**
  - "Caring and striving above all, to protect life and property, is the greatest way to demonstrate our strong belief in the department".

SLWIC Patient-Centered Medical Home

- (1) Better Care;

- (2) Better Health and

- (3) Lower Cost through a
Comprehensive Continuous Delivery of Healthcare

Community-Based Patient Integrated Centered Patient Care Model
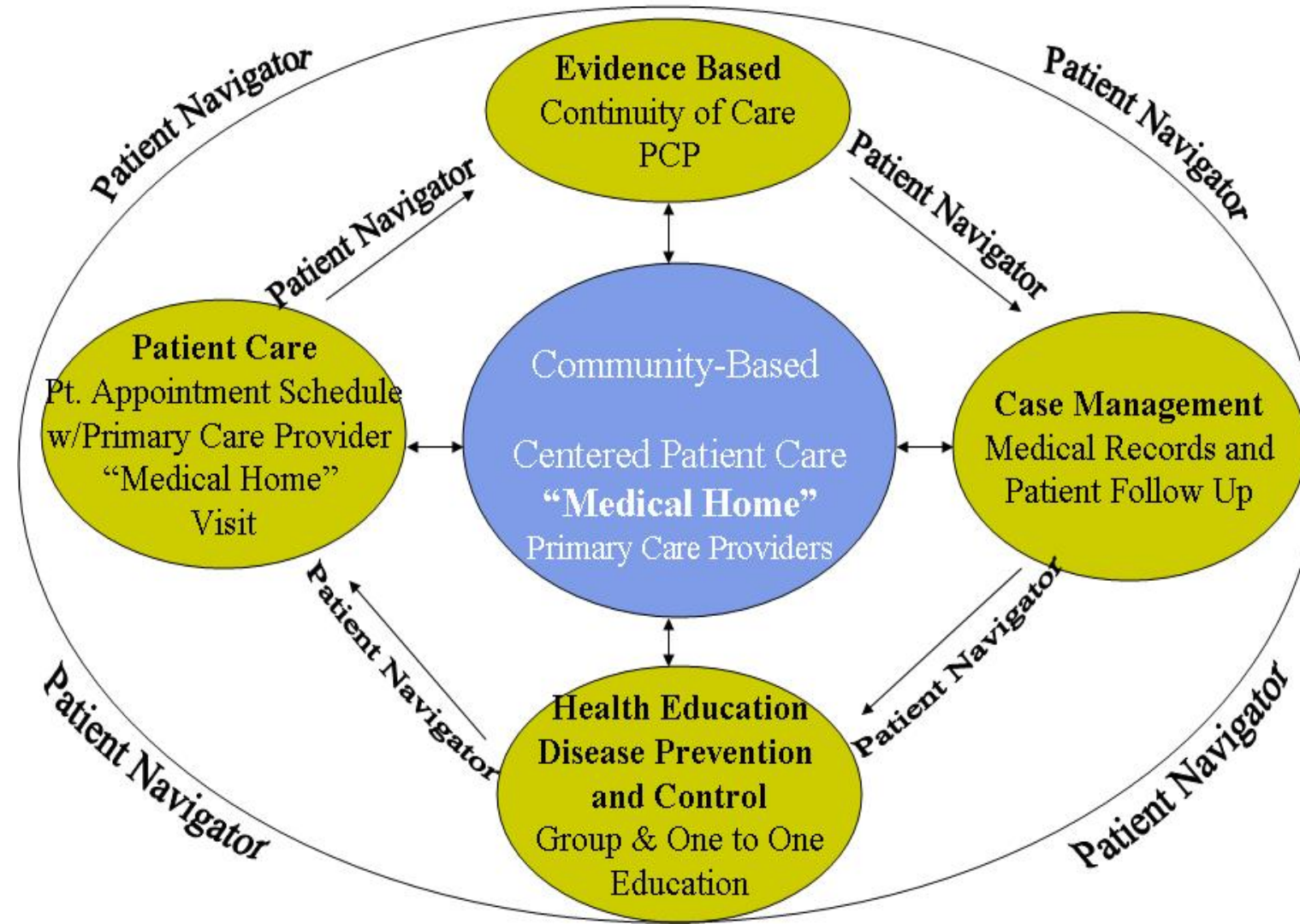
Community Integrated Paramedic and Preventive Care Coordination

Project Goals

- Reduce utilization of EMS for non-emergency situations.

- Improve access to primary care and behavioral health services

- Reduce ED utilization to Reduce Hospital Re-admissions

- Reduce Healthcare Cost

Community Integrated Paramedic and Preventive Care Coordination

Project Objectives

- **Objective 1:** SLWIC and SCFD will implement a coordinated response designed to increase direct efforts to provide preventive care to patients of the SLWIC with chronic illness.

- **Objective 2:** SLWIC and SCFD will report and document referrals and home site visits (Attachment 1 and 2). SLWIC will measure patient outcomes through population health reporting and provide case management and follow up for all project participants.

- **Objective 3:** SLWIC will monitor ICD10 CTP codes used to provide intervention and/or education to project participants by the SCFD as well as, ER visits and hospital re-admissions to evaluate healthcare cost and savings.

An Inter-Professional Approach to Community Based Paramedic Project

- The *Family Care Coordinator (FCC)* provides the support needed by the program participants such as but not limited to;

- Educating patients and their families on the importance of behavioral health lifestyle changes, medication adherence and compliance

- Assisting patients to navigate the healthcare and social systems, through referrals and enrollment on the different social programs such as, SNAP, AHCCCS, Marketplace, Food Bank, WIC, BHS, etc.

- Provide cultural sensitive health promotion/disease prevention education.

Participant Criteria

- Chronic illness co-morbidity/multiple morbidities
    - Diabetes
    - Hypertension
    - COPD
    - Asthma

- High Utilization of ER

- Activation of 911 non-emergent reasons

- Ability to engage with FCC and Paramedics in a home-based needs assessment

- Behavioral Health Issues

SLWIC Clinical Case #1

Patient enrolled in the Paramedic Program: 5/13/16

- **<u>Medical History:</u> A 72 year old Hispanic female with Type 2 Diabetes, hypertension, and glaucoma. Established patient as of May 2015.**

- <u>Initial medications prescribed:</u>
  - Metformin 500mg tablet 1 tablet 2x a day for 30 days (K. Cruz, PA-C) 9/28/15
  - Lantus 100 unit/mL inject everyday at bedtime for 30 days (G. Botello, FNP-C) 3/11/16
  - Metformin 850mg tablet 1 tablet 2x a day for 30 days (R. McNair, NP) 1/10/17

- Enrolled patient in Chronic Care Management Program: 11/4/16

SLWIC Office Visit
Clinical Case #1

- On 3/11/16 patient was scheduled for a PCP Diabetes Mellitus follow up visit. During the evaluation the patient was prescribed 10 units of Lantus 100unit/mL to be administered daily at bedtime.

- Family Care Coordinator provided education on Diabetes, Nutrition and Active Lifestyle. Patient was instructed to return to clinic for a 6 month HbA1c follow up lab.

- Referrals initiated for:
  - Group Nutrition Counseling with Registered Dietitian and Paramedic Program

- During the visit the Paramedics identified patient had been taking medication from Mexico that was causing her blurry vision and discomfort in her eyes. The paramedics collaborated with PCP and instructed the patient to discontinue medication, at the following Paramedic Home Visit the patient reported that her vision had improved.

- Vitals:
  - Pulse: 55/min
  - BP: 152/84mmHg
  - Respirations: 16/min
  - SPO2:99%
  - Lung sounds: clear
  - FBS: 118mg/dL

Continued…….

- Patient walks 1 hour 7 days a week and is eating well.
- Paramedics provided 3 smoke detectors and installed them in the home.
- Patient reported taking:
  - Lisinopril 5mg (37 pills)
  - Aspirin 81mg (90 pills)
  - Metformin 500mg (92 pills)
  - Lantus 100units/mL
- Family Care Coordinators performed a PHQ-9 screening and due to score referred patient to Behavioral Health Services.

SLWIC PCP Visit
Clinical Case #1

Goals:

(1) HbA1c <7% and BMI of <25

(2) Paramedics to continue with monthly home visits

(3) Monitor BP and glucose levels

(4) Family Care Coordinator follow up with patient through monthly telephone calls as part of the CCM care plan

- On 11/1/2016 patient was seen by provider: Russell McNair, F-NP
  - Blood pressure under control 120/80 mmHg
  - Preventive labs were ordered and a follow up visit was scheduled for 11/4/2016.
- A 12 month plan was established to help the patient reach her health goals.
- The patient has been seen twice during the month January 2017 by her PCP for routine preventative care.
- Patient will return to clinic on 03/10/2017.

Cost

Medicare (13 pts.), Medicaid (14 pts.), Private (3 pts.), No insurance (2 pts.)

CPT Code	Description	Cost
97802 (11 visits)	Initial assessment and intervention, individual, face-to-face, 15 min. (Nutrition Assessment)	$30.24
97803 (12 visits)	Re-assessment and intervention, individual, face-to-face, 15 min. (Nutrition Assessment)	$25.94
99341 (29 visits)	Low-severity problem, 20 min. (new)	$43.19
99342 (7 visits)	Moderate severity problem, 30 min. (new)	$62.79
99343 (1 visit)	Moderate to high severity problem, 45 min (new)	$102.26
99344 (2 visit)	High severity problem, 60 min. (new)	$143.51
99347 (1 visit)	Self limited or minor problem, 15 min. (established)	$43.75
99348 (47 visits)	Low-moderate problem, 25 min. (established)	$66.15
99349 (16 visits)	Moderate to high problem, 40 min. (established)	$100.92
	TOTAL OF 32 PATIENTS	**$7,492.76**

Thank You!

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Somerton/Cocopah Fire Department
928.722.7405
pauldeanda@somertonaz.gov

www.rcfbh.org
www.slwic.org
collegeofhealthcareers.rcbh.edu

Panelists

- **Kim Moore**, EMS Chief, Verde Valley Ambulance

- **Paul Luizzi**, Fire Chief, Goodyear Fire Dept.

- **Amanda Aguirre**, President & CEO, Regional Center for Border Health

- Moderated by: **Melanie Mitros**, PhD, Director, Strategic Community Partnerships, Vitalyst Health Foundation

Questions:
Text
(657) 4MIH360

Or Submit a Question Card

Light Refreshments Available in Saguaro Dining Room

Ask an Expert:
Text (657) 4MIH360
Submit a Question Card
or Visit the Table in the Lobby

How Data Drives Care Coordination

Barb Averyt, BSHA, Executive Director, Care Coordination, Health Services Advisory Group

How Data Drives Care Coordination

Barb Averyt, BSHA
Executive Director
Health Services Advisory Group (HSAG)

About Data

"Numbers have an important story to tell. They rely on you to give them a clear and convincing voice."

—Stephen Few
Consultant, Perceptual Edge

HSAG HEALTH SERVICES ADVISORY GROUP

- Which community has had the most dramatic change—community A or B?

Chart A

Chart B
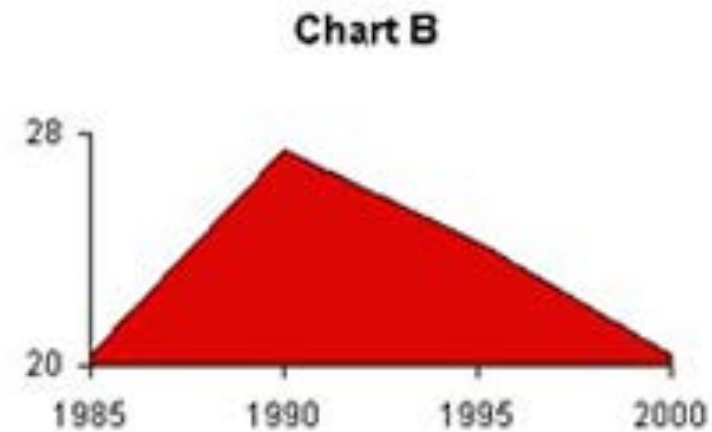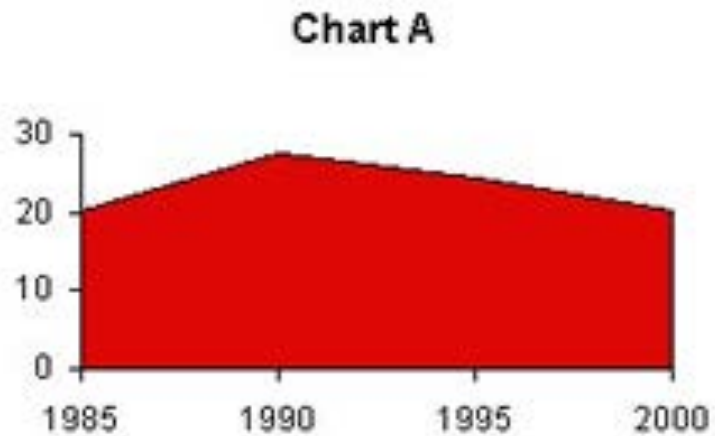
Objectives

- To provide an overview of the Centers for Medicare & Medicaid Services (CMS) goals as they relate to hospital readmissions and medication safety.

- To share the most recent data specific to readmissions, medication safety, and population health.

- Profile current interventions, resources, and partnering opportunities for community paramedicine.

HSAG HEALTH SERVICES ADVISORY GROUP

What is a QIO and who is HSAG?

- A Quality Improvement Organization (QIO) is a group of health quality experts and clinicians, working to improve the quality of care delivered to people with Medicare.
- QIOs were mandated by Congress in 1972 following the passage of the Medicare and Medicaid programs in 1965.
- QIOs work on strategic initiatives and projects assigned by CMS. HSAG was founded in 1979 by Arizona doctors and nurses.
  - Private, for-profit
  - 200+ Arizona employees and over 500 employees nationally
  - Also the Medicare QIN-QIO for California, Florida, Ohio, and the U.S. Virgin Islands
  - Represents nearly 1 out of every 4 Medicare beneficiaries

Nearly 25 percent of the nation's Medicare beneficiaries

California

Arizona

Ohio

Florida
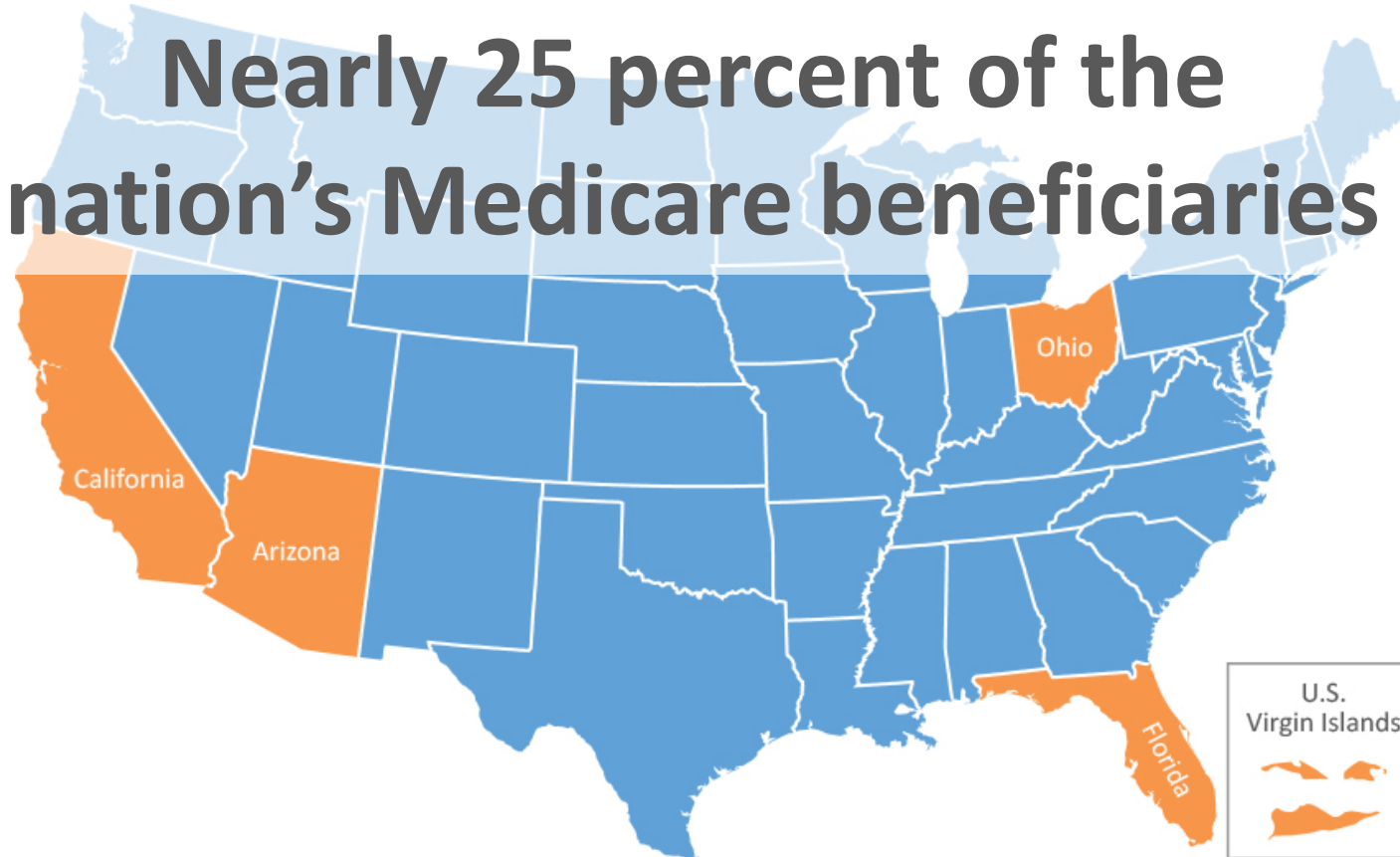
U.S. Virgin Islands

HSAG is the Medicare QIN-QIO for Florida, California, Ohio, Arizona, and the U.S. Virgin Islands.

CMS Desired Outcomes for Readmissions and Care Coordination (2014–2019)

- Impact no less than 40% of Arizona's beneficiaries

- Reduce hospital 30-day readmission rates by 20% by improving care coordination

- Reduce medication errors and adverse drug events related to high-risk medications
  - Anticoagulants
  - Diabetic agents
  - Opioids

Arizona's Demographics
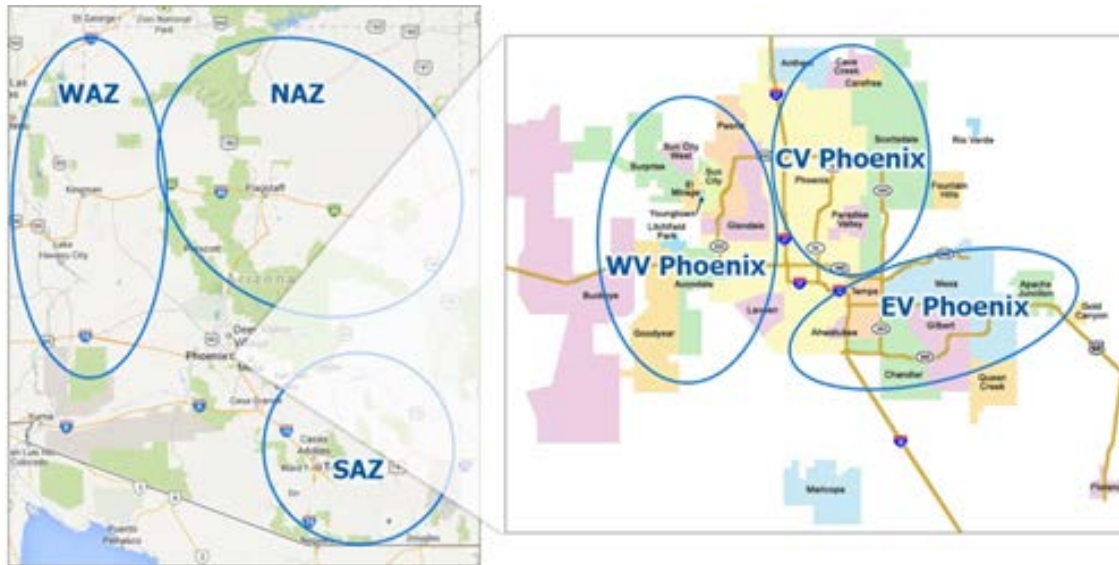
WAZ: Western Arizona
NAZ: Northern Arizona
SAZ: Southern Arizona

WV: Western Valley, Phoenix
CV: Central Valley, Phoenix
EV: East Valley, Phoenix

- 6.8 million residents
- 61% of the people live in Maricopa County (Phoenix market)
- 659,042 Medicare Fee-For-Service (FFS) beneficiaries in the state
- Approximately 60% of FFS beneficiaries live in the Phoenix metropolitan area
- Currently, HSAG has developed community coalitions that impact 43% of the state's beneficiaries.

Arizona Medicare Beneficiaries by Payer Type

All Arizona
Beneficiaries
1,145,136

62%
Fee-For-Service
708,310

38%
Medicare Advantage
436,826

16%
Dual Eligible
187,316

Source: HSAG Calendar Year 2014 Medicare Fee-For-Service claims data.

HSAG HEALTH SERVICES ADVISORY GROUP
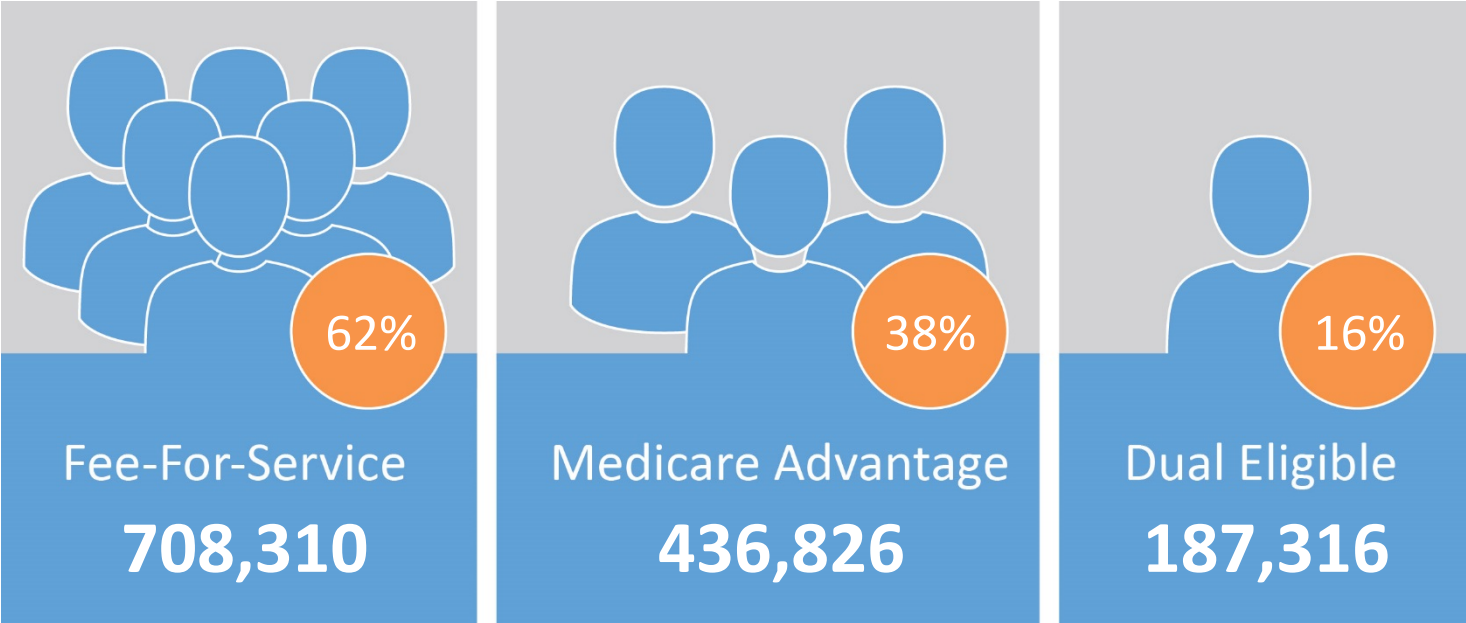
Hospital Readmissions Reduction Program (HRRP) Conditions and Maximum Penalties

FY*	Condition	Notes	Max. Penalty
2013	AMI, HF, and PNE	Penalties begin	1%
2014	AMI, HF, and PNE	New algorithm excludes planned readmissions from penalties	2%
2015	AMI, HF, PNE, COPD, Elective THA/TKA	COPD and Elective THA/TKA added	3%
2016	AMI, HF, PNE, COPD, Elective THA/TKA	PNE expanded: aspiration pneumonia and sepsis with pneumonia present on admission codes added	3%
2017	AMI, HF, PNE, COPD, Elective THA/TKA, CABG	CABG added	3%

*Fiscal Year (FY) which starts in October of the prior year (FY 2013 started in October 2012)

AMI—acute myocardial infarction
CABG—coronary artery bypass graft
COPD—chronic obstructive pulmonary disease

HF—heart failure
PNE—pneumonia
THA/TKA—Total Hip/Knee Arthroplasty

POA-Present on Admission
FY-Fiscal Year, July 1–June 30

HSAG HEALTH SERVICES ADVISORY GROUP

National 30-Day Readmission Rates
July 1, 2012–June 30, 2015

Performance Period: 2012–2015
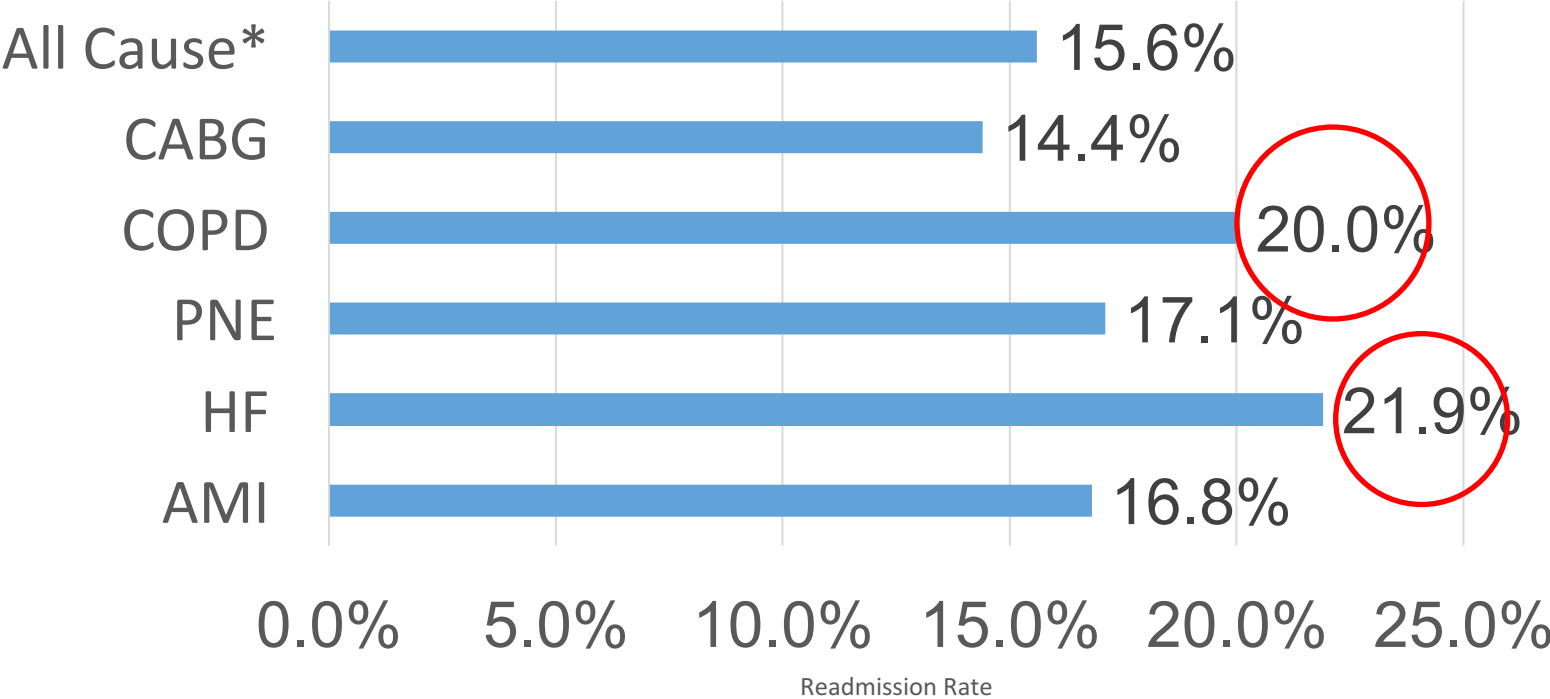
Category	Rate
All Cause*	15.6%
CABG	14.4%
COPD	20.0%
PNE	17.1%
HF	21.9%
AMI	16.8%

Readmission Rate

AMI—acute myocardial infarction
CABG—coronary artery bypass graft
COPD—chronic obstructive pulmonary disease
HF—heart failure
PNE—pneumonia
THA/TKA—Total Hip/Knee Arthroplasty

Source: data.Medicare.gov
*All-Cause readmission rates are not included in the assessment of penalties.
Penalties each year are based on a rolling three-year performance period.

HSAG HEALTH SERVICES ADVISORY GROUP

National and Arizona Picture: Penalties and Reduction in Payments on the Rise

FY	Hospitals Receiving Penalty (%)	Arizona Average Penalty	Estimated Arizona Reduction in Payments	National Average Penalty	Estimated National Reduction in Payments
2016	80%	0.48%	$4.5[1] million	0.61%	$420 million
2017	80%	0.57%	(25.7% national increase) $5.6[2] million	0.73%	(25.7% increase from FY16) $528[3] million

[1] The Advisory Board Data and Analysis Group: https://dag.advisory.com/2013_G_DAG_Gmap/Home/MapView?mapname=readmissions_penalty
[2] Calculated using the estimated percentage of increase in the national reduction in payments for FY17 to Arizona's FY17 impact from Kaiser Health News.
[3] Kaiser Health News and the Centers for Medicare & Medicaid Services.

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Arizona's Average Penalties Trending Up

Arizona: Average Readmission Penalty by Fiscal Year

50 of 63 Eligible Hospitals in Arizona Were Penalized This Year
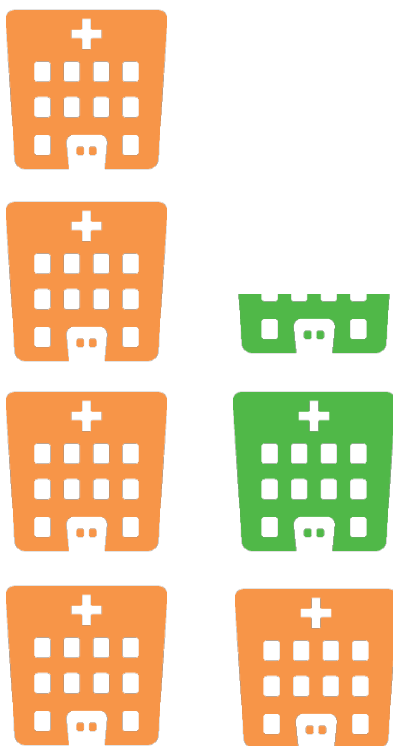
Penalty	Count of Eligible Hospitals	Percent of Eligible Hospitals
No Penalty	13	21%
0.01–0.25	19	30%
0.26–0.49	11	18%
0.50–0.99	12	19%
1.00–1.99	6	9%
2.00–3.00	2	3%
Total	63	100%

HSAG HEALTH SERVICES ADVISORY GROUP

FY 2017: Arizona's Average Readmission Penalties by Region

Regional Readmission Penalties		
1	NAZ	0.7%
2	SAZ	0.3%
3	WAZ	1.5%
4	WV	0.4%
5	CV	0.4%
6	EV	0.6%

NAZ—Northern AZ
SAZ—Southern Arizona
WAZ—Western Arizona
WV—West Valley of Phoenix
CV—Central Valley of Phoenix
EV—East Valley of Phoenix

Source: Centers for Medicare & Medicaid Services: Medicare Claims Data

HSAG HEALTH SERVICES ADVISORY GROUP
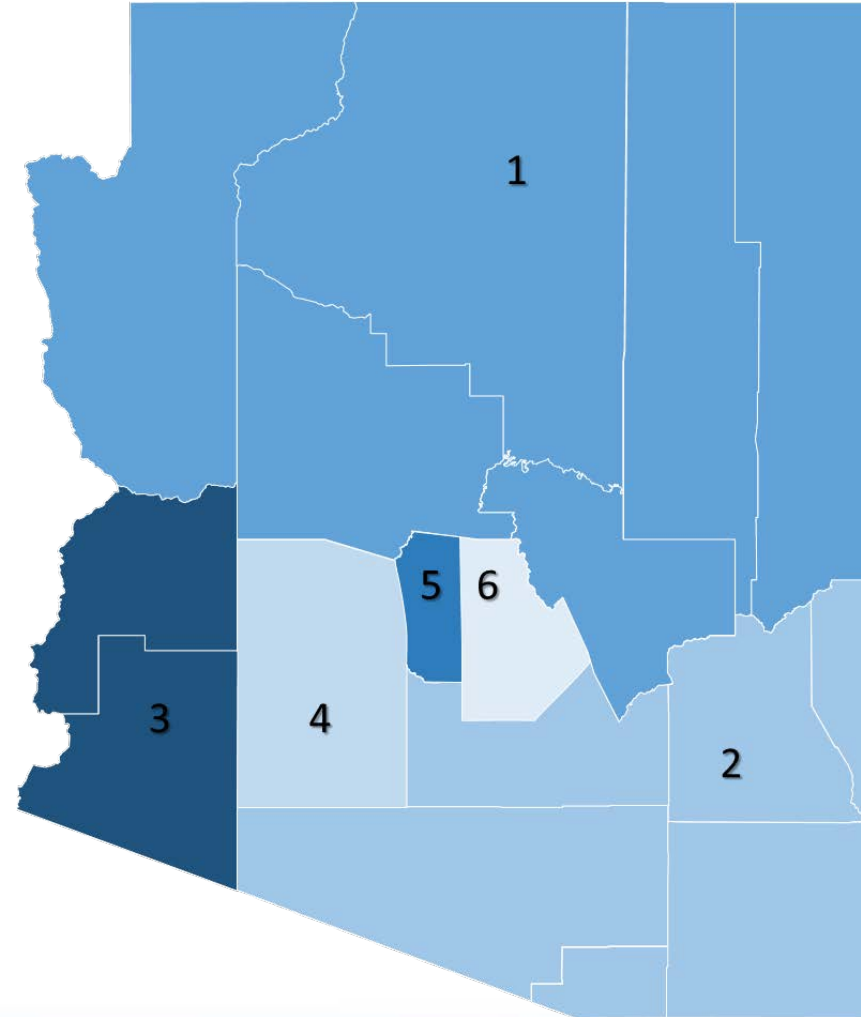
FY 2017: Average Readmission Penalty Within and Outside of Maricopa County

Average of Penalties

0.49% 0.66%

Outside Maricopa

Maricopa County

Source: Kaiser Health News and the U.S. Centers for Medicare & Medicaid Services
Medicare Readmission Penalties By Hospital, Year 5, published August 2, 2016

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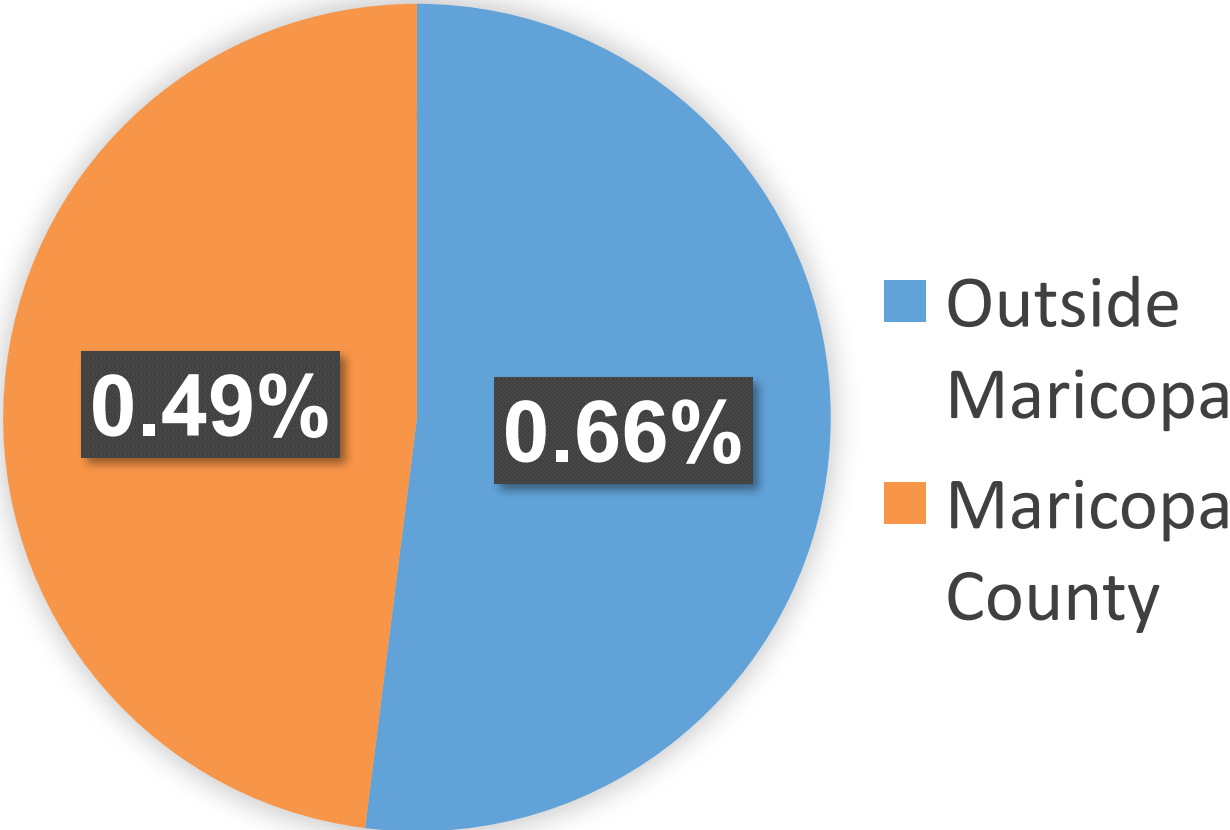
Arizona's Readmission Rate by Region, Quarter by Quarter

	Q1, 2015 – Q4, 2015	Q2, 2015–Q1, 2016	Q3, 2015 – Q2, 2016
WAZ	17.6%	17.1%	16.4%
NAZ	13.0%	12.7%	12.9%
SAZ	15.3%	15.5%	15.7%
WV	16.0%	15.9%	15.8%
CV	16.3%	16.4%	16.0%
EV	16.6%	16.8%	16.7%
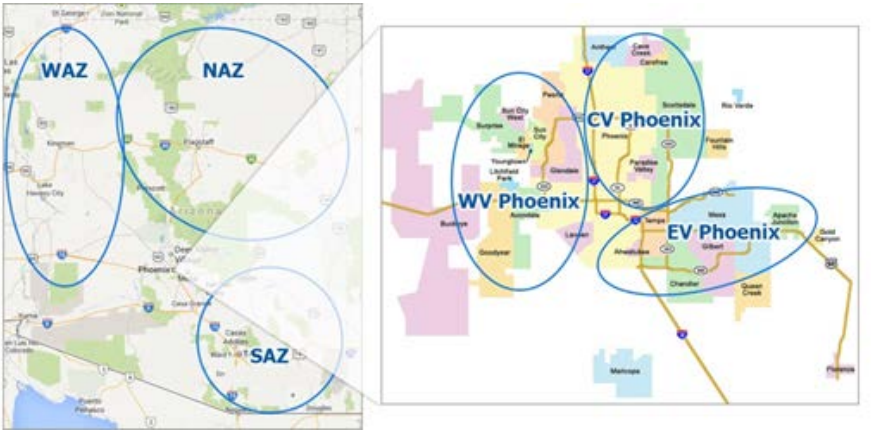
Maricopa County and Readmissions

West Valley Care Coordination Coalition	**(WVCCC)**
Central Valley Care Coordination Coalition	**(CVCCC)**
East Valley Care Coordination Coalition	**(EVCCC)**

331 had 5+ admissions

458 had 5+ ED visits

2,440 were readmitted within 30 days

17%

14,292 were discharged from hospital admissions

15%

93,832 reside in the **West Valley Care Coordination Coalition**

1	2	3	4	5	6	7
577 in days 1–3 🏠 319 🛏 98 👩‍⚕ 99 ♡ 4 Other: 57*			**684 in days 4–7** 🏠 423 🛏 92 👩‍⚕ 116 ♡ 3 Other: 50*			36% within week one
8	9	10	11	12	13	14
		903 in days 8–14 🏠 503 🛏 183 👩‍⚕ 149 ♡ 9 Other: 59*				25% within week two
15	16	17	18	19	20	21
		677 in days 15–21 🏠 403 🛏 142 👩‍⚕ 82 ♡ 2 Other: 48*				19% within week three
22	23	24	25	26	27	28
		710 in days 22–30 🏠 405 🛏 151 👩‍⚕ 96 ♡ 5 Other: 53*				20% within week four
29	30					

*Other are from the following settings: LTAC, Rehab facilities, Psych facilities, CAHs, Left AMA

🏠 = Home   🛏 = Skilled Nursing Facility   👩‍⚕ = Home Health Agency   ♡ = Hospice

29% of all admissions

34% of all ED visits

2,126
3+ admissions

2,302
had 3+ ED visits

4,925 readmissions
within 30 days

17.40%

28,243 discharges
from hospital admissions

127,559 reside in the
Central Valley Care Coordination Coalition

159

*Source: HSAG Calendar Year 2014 Medicare Fee-For-Service (FFS) claims data.

CVCCC 2014 Data: 30-Day All-Cause Readmissions
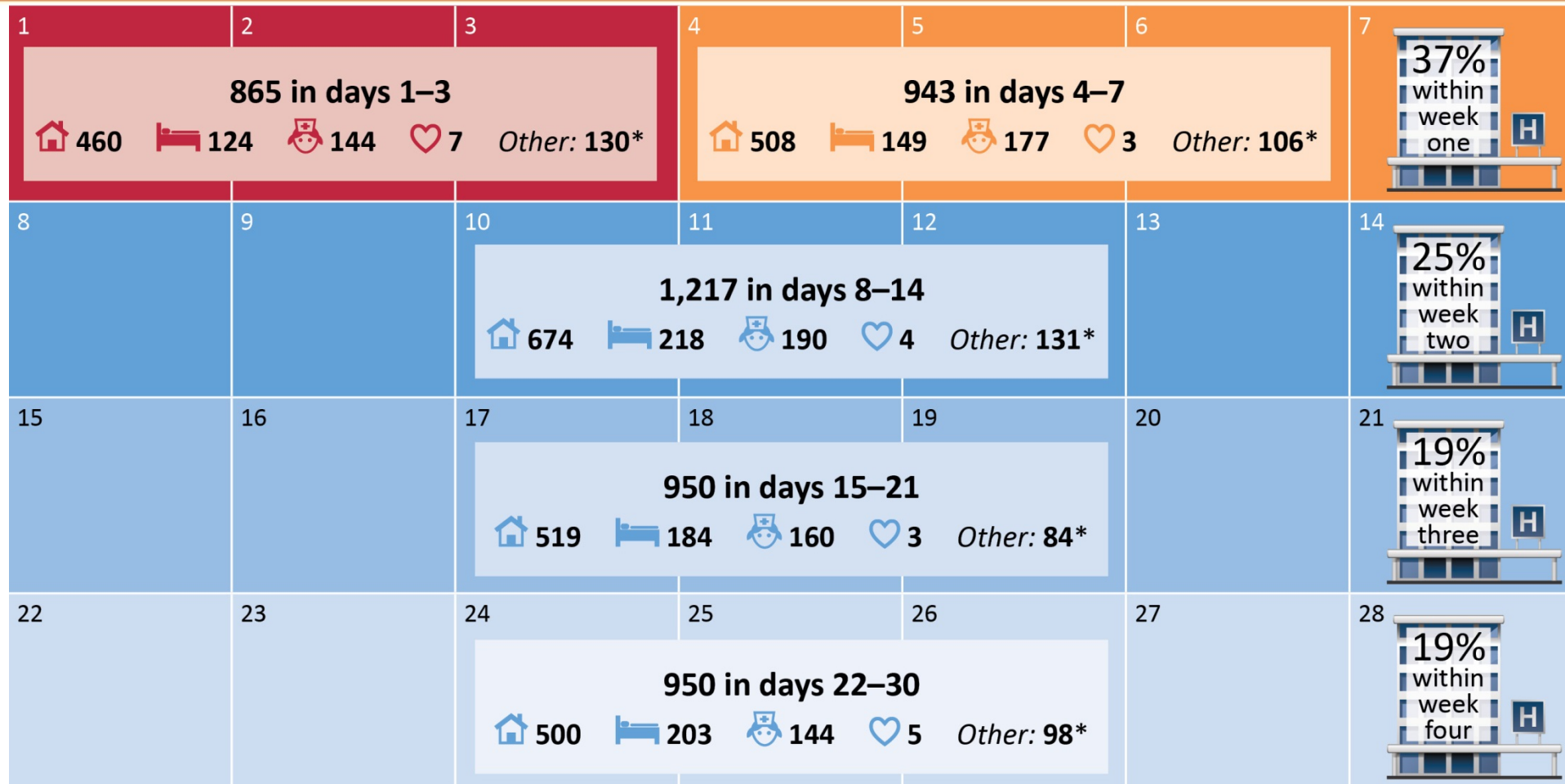
1	2	3	4	5	6	7
865 in days 1–3 🏠 460 🛏 124 👩‍⚕️ 144 ♡ 7 *Other:* **130***			**943 in days 4–7** 🏠 508 🛏 149 👩‍⚕️ 177 ♡ 3 *Other:* **106***			**37%** within week one 🏥

8	9	10	11	12	13	14
		1,217 in days 8–14 🏠 674 🛏 218 👩‍⚕️ 190 ♡ 4 *Other:* **131***				**25%** within week two 🏥

15	16	17	18	19	20	21
		950 in days 15–21 🏠 519 🛏 184 👩‍⚕️ 160 ♡ 3 *Other:* **84***				**19%** within week three 🏥

22	23	24	25	26	27	28
		950 in days 22–30 🏠 500 🛏 203 👩‍⚕️ 144 ♡ 5 *Other:* **98***				**19%** within week four 🏥

29	30					

*Other are from the following settings: LTAC, Rehab facilities, Psych facilities, CAHs, Left AMA

🏠 = Home   🛏 = Skilled Nursing Facility   👩‍⚕️ = Home Health Agency   ♡ = Hospice

Source: HSAG Calendar Year 2014 Medicare Fee-For-Service claims data.

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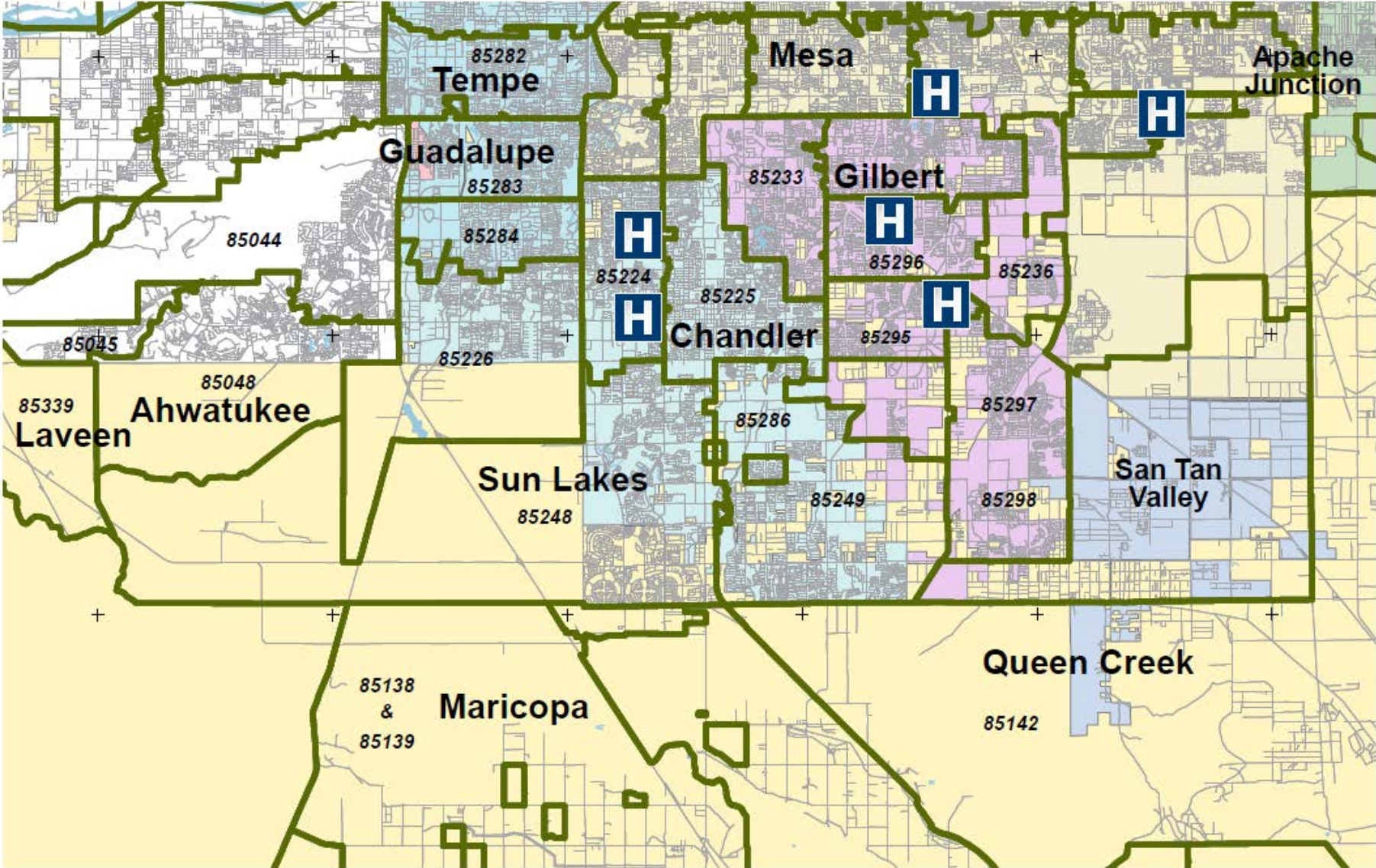
EVCCC 2014 Data: Medicare FFS Beneficiary Activity
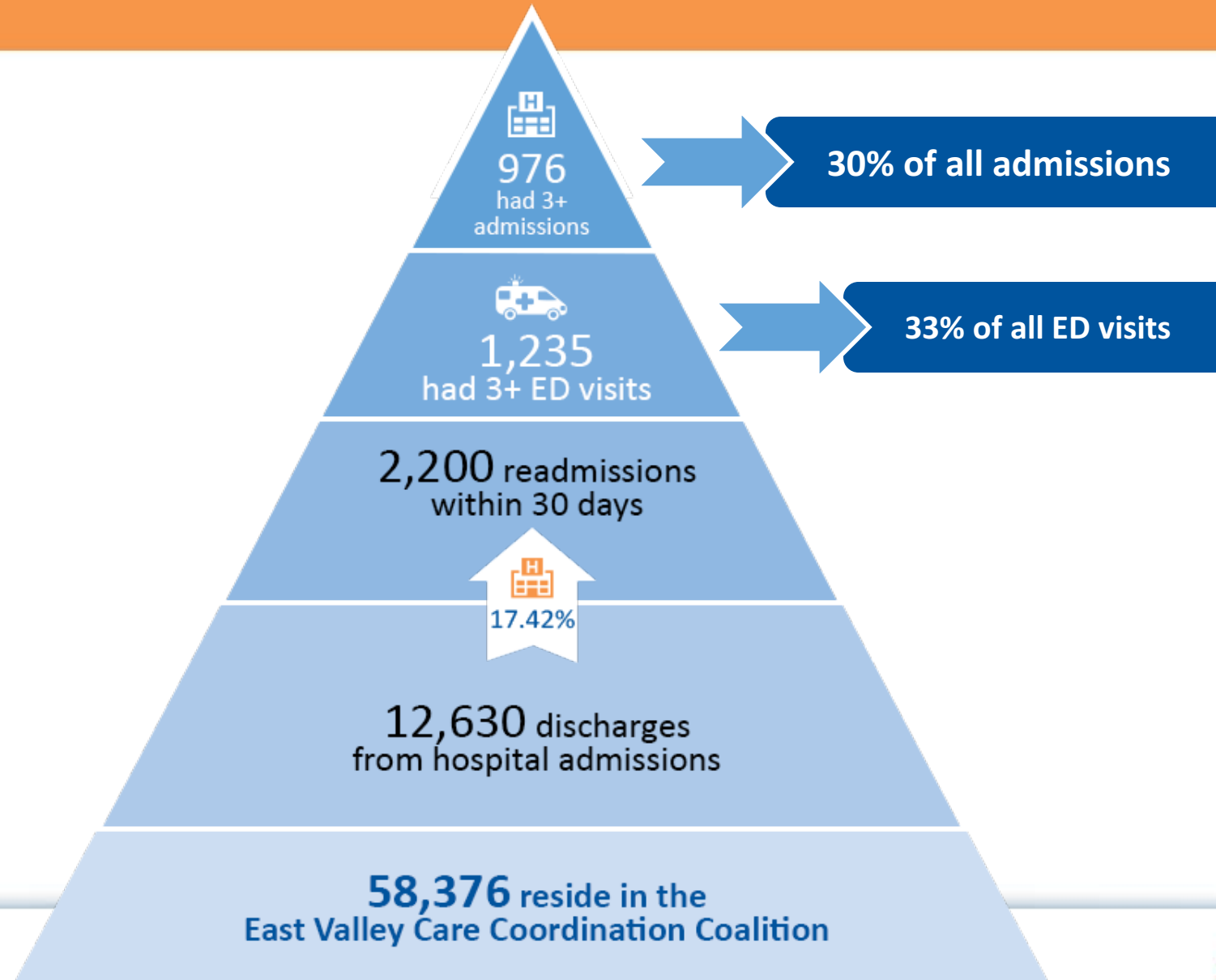
976 had 3+ admissions

30% of all admissions

1,235 had 3+ ED visits

33% of all ED visits

2,200 readmissions within 30 days

17.42%

12,630 discharges from hospital admissions

58,376 reside in the East Valley Care Coordination Coalition

*Source: HSAG Calendar Year 2014 Medicare Fee-For-Service (FFS) claims data.

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EVCCC 2014 Data: 30-Day All-Cause Readmissions

1	2	3	4	5	6	7
333 in days 1–3 🏠 176 🛏 61 ⚕ 52 ♡ 2 *Other: 42**			**451 in days 4–7** 🏠 257 🛏 80 ⚕ 76 ♡ 1 *Other: 37**			36% within week one 🏥

8	9	10	11	12	13	14
		546 in days 8–14 🏠 324 🛏 111 ⚕ 83 ♡ 1 *Other: 27**				25% within week two 🏥

15	16	17	18	19	20	21
		420 in days 15–21 🏠 225 🛏 94 ⚕ 69 ♡ 2 *Other: 30**				19% within week three 🏥

22	23	24	25	26	27	28
		450 in days 22–30 🏠 251 🛏 94 ⚕ 74 ♡ 1 *Other: 30**				21% within week four 🏥

29	30					
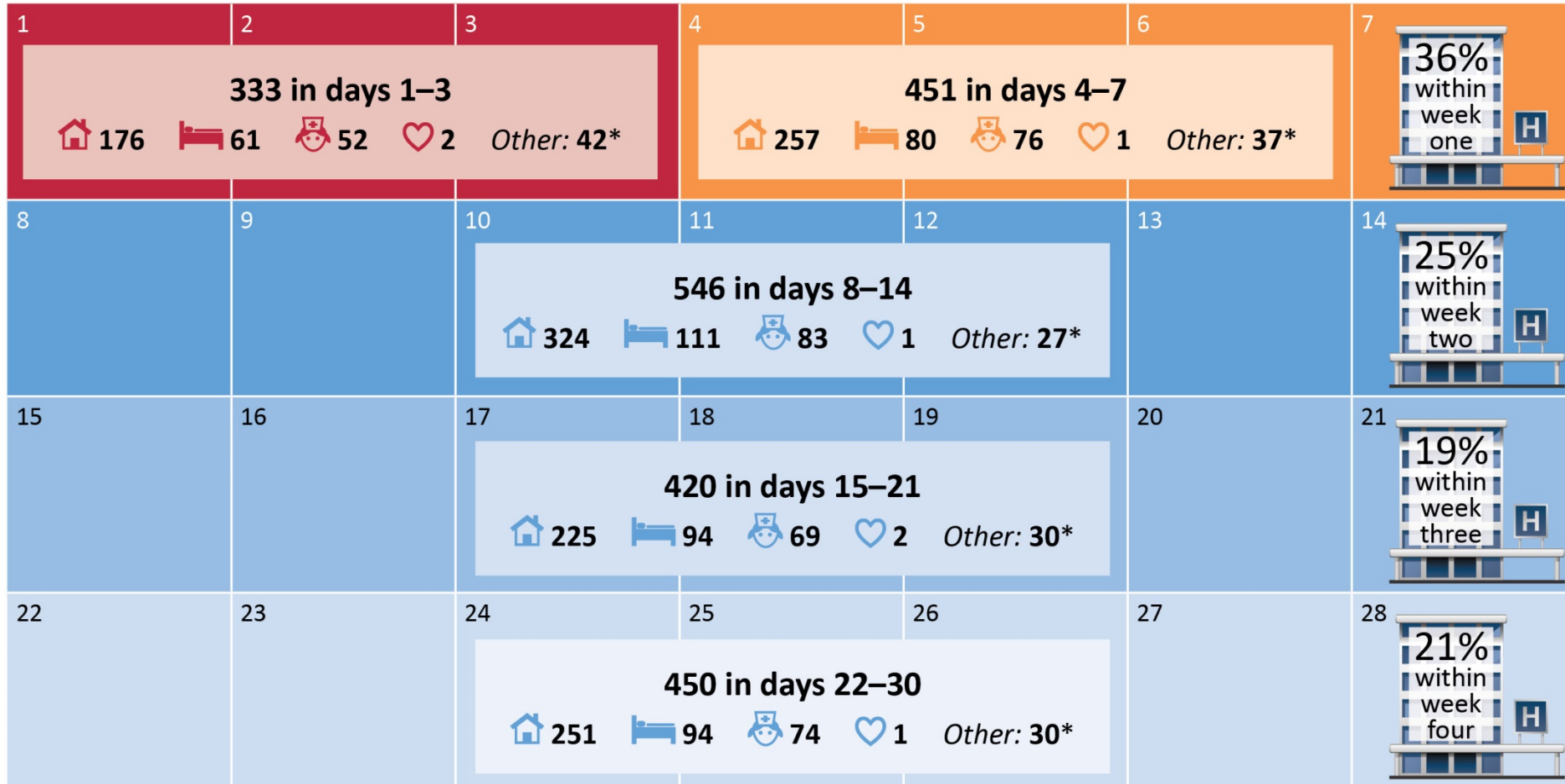
*Other are from the following settings: LTAC, Rehab facilities, Psych facilities, CAHs, Left AMA

🏠 = Home   🛏 = Skilled Nursing Facility   ⚕ = Home Health Agency   ♡ = Hospice

Source: HSAG Analysis of Medicare FFS Part-A Claims Data Q2 2014–Q1 2015

What Are Some of the Triggers or Contributing Factors that Indicate Risk for Readmission?

- We will explore the following areas:
  - High-utilizer patients
  - Heart failure
  - Medication management
  - High-risk medications
  - Behavioral health
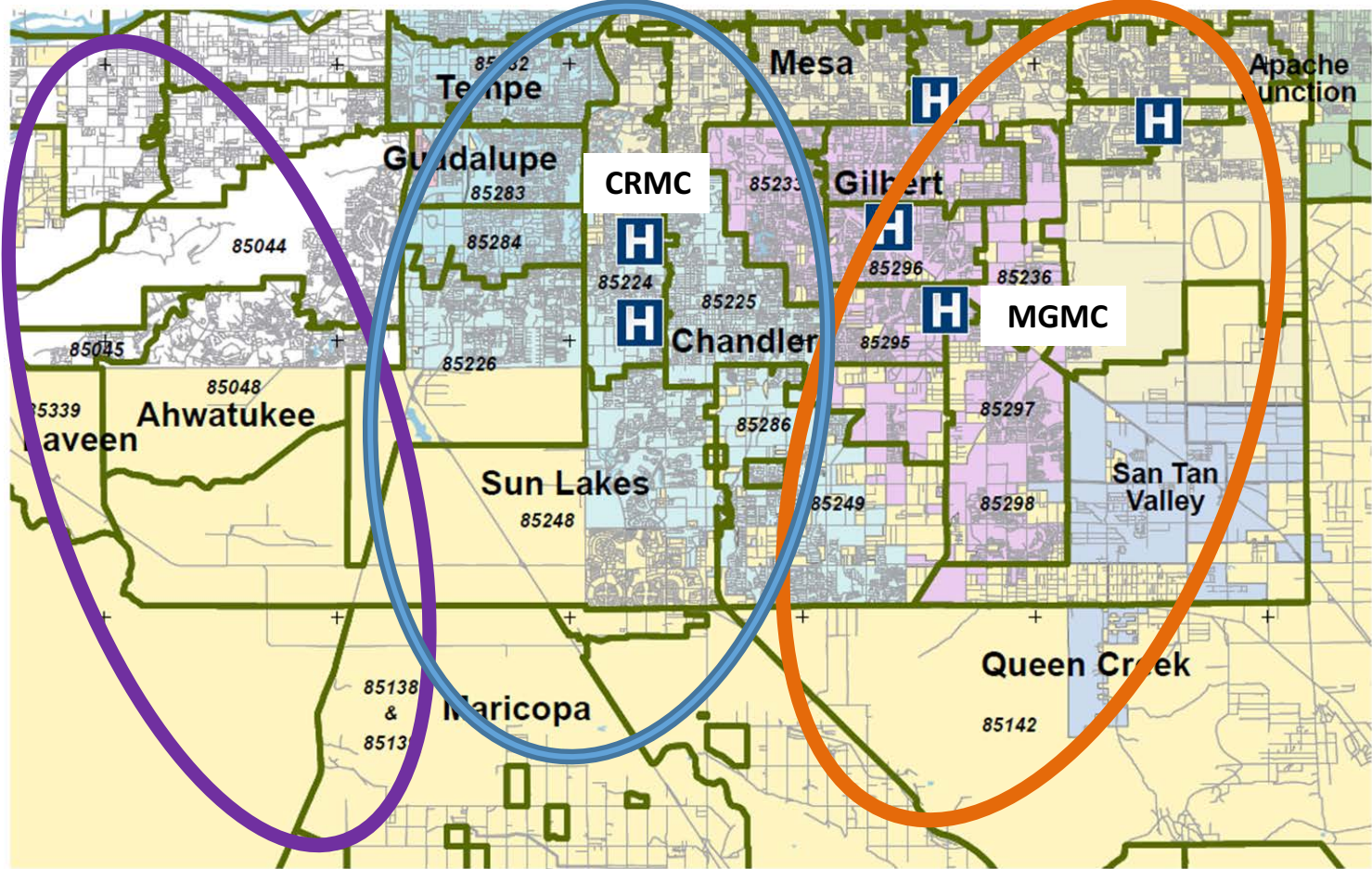
EVCCC High Utilizers by Purple Zone

ZIP Code	Beneficiaries With 3+ Admissions		Beneficiaries With 3+ ED Visits	
	# of Benes	# of Admissions	# of Benes	# of ED Visits
85044	52	226	91	430
85045	4	13	12	46
85048	24	91	60	235
85138	50	206	111	544
85139	40	163	73	389
85339	45	169	63	269

HSAG Analysis of Medicare FFS Part-A Claims Data January 1–December 31 2015
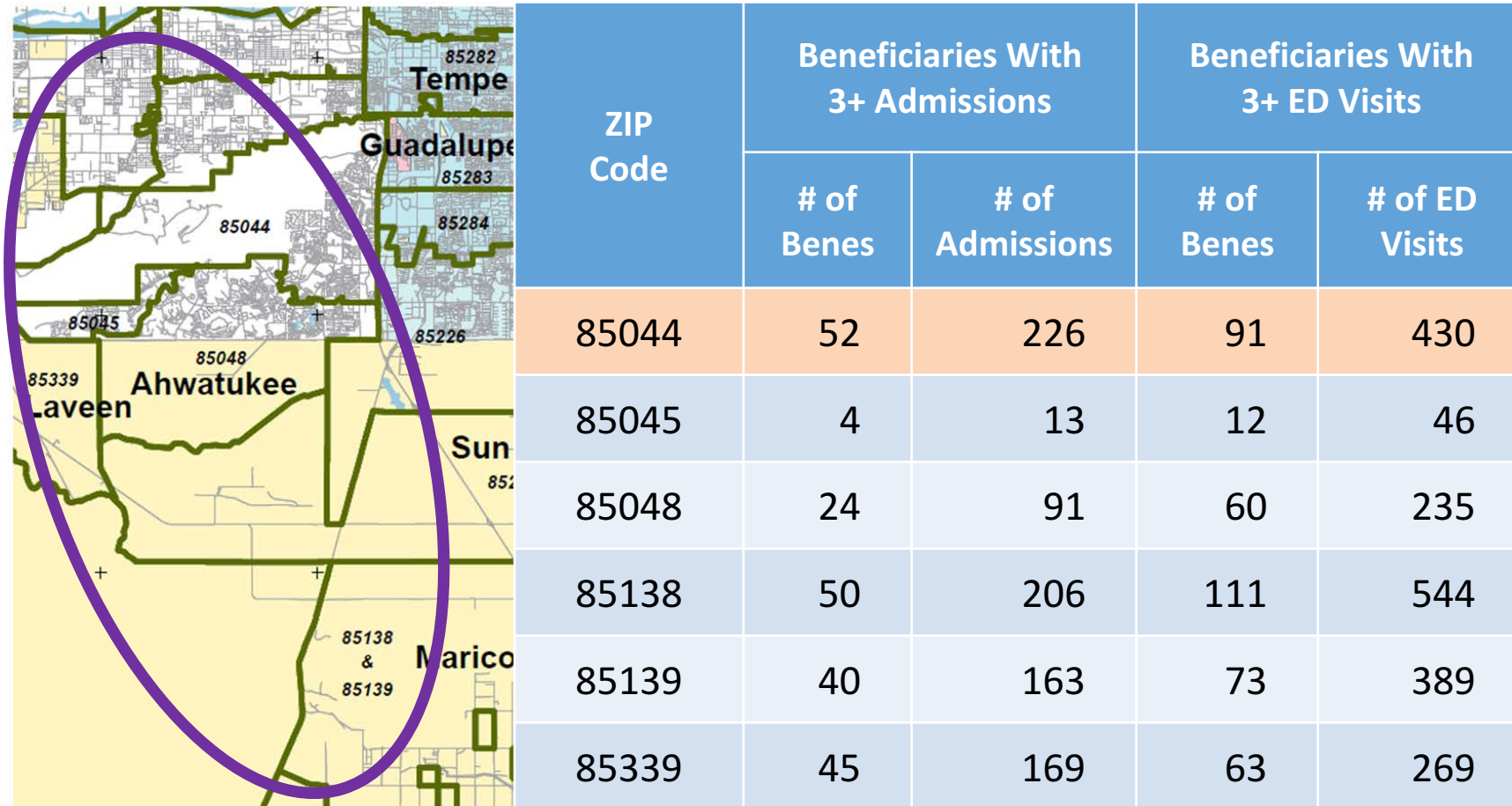
EVCCC High Utilizers by Orange Zone

ZIP Code	Beneficiaries With 3+ Admissions		Beneficiaries With 3+ ED Visits	
	# of Benes	# of Admissions	# of Benes	# of ED Visits
85295	20	82	27	126
85296	36	143	53	260
85297	23	97	36	163
85298	30	115	71	334
85236	3	11	5	25
85249	57	213	55	212
85142	48	192	112	483
85147	53	266	30	240
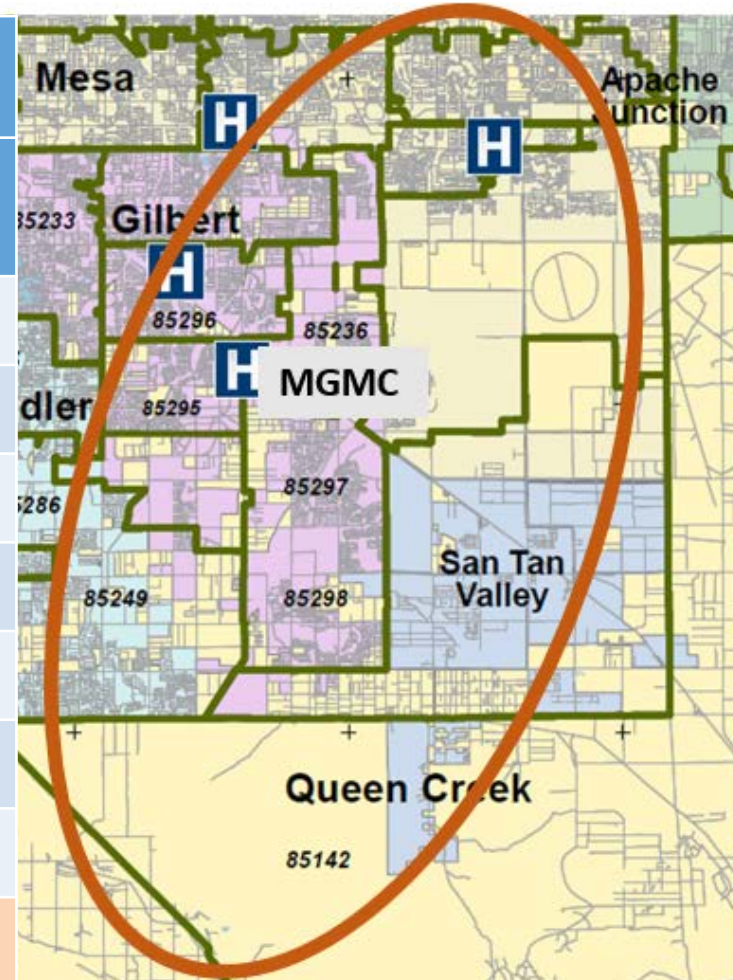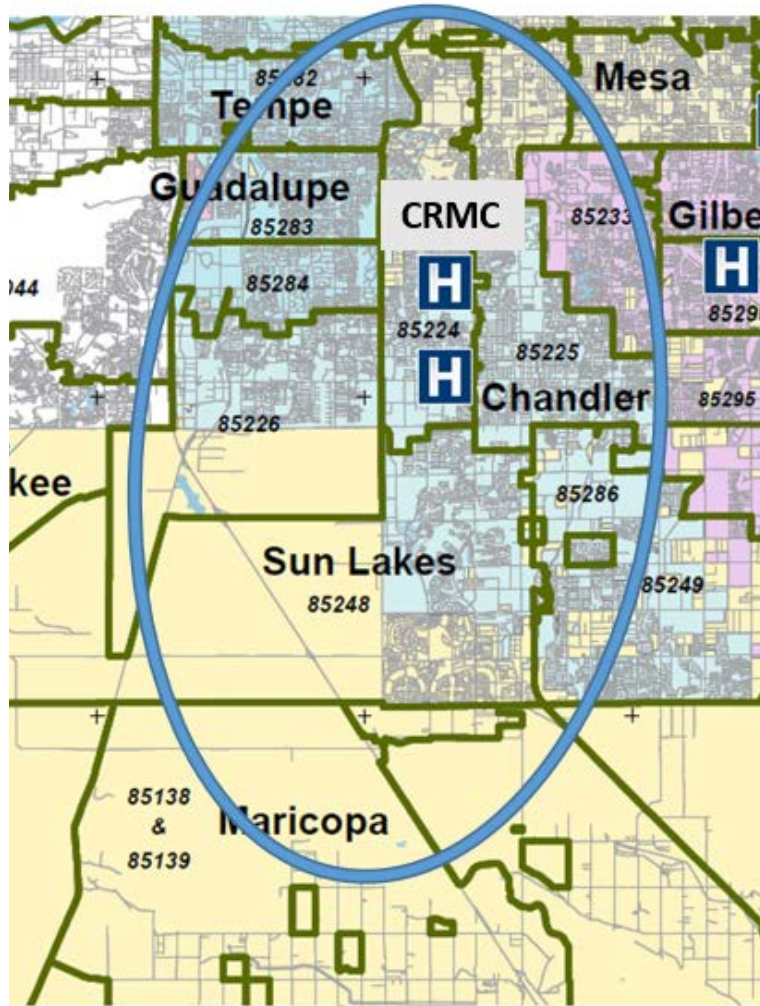
HSAG Analysis of Medicare FFS Part-A Claims Data January 1–December 31 2015

ZIP Code	Beneficiaries With 3+ Admissions		Beneficiaries With 3+ ED Visits	
	# of Benes	# of Admissions	# of Benes	# of ED Visits
85121	24	106	9	51
85224	65	249	59	273
85225	75	310	102	469
85226	36	156	39	154
85233	37	136	61	232
85248	128	46	108	407
85282	76	296	81	425
85283	56	219	52	226
85284	24	84	21	78
85286	28	117	24	99

HSAG Analysis of Medicare FFS Part-A Claims Data January 1–December 31 2015

What Does This Mean?

Top 6 Volume ZIP Codes
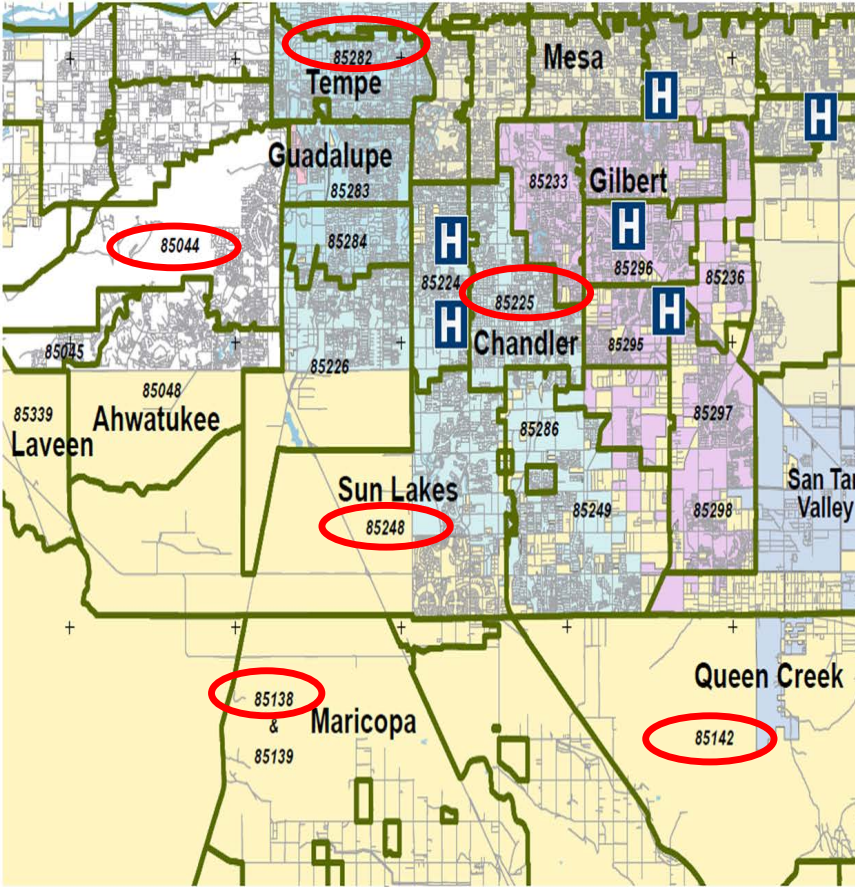
ZIP Code	Beneficiaries With 3+ Admissions		Beneficiaries With 3+ ED Visits	
	# of Benes	# of Admissions	# of Benes	# of ED Visits
85044	52	226	91	430
85138	50	206	111	544
85142	48	192	112	483
85225	75	310	102	469
85248	128	466	108	407
85282	76	296	81	425
Total	429	1,696	605	2,758

HSAG Analysis of Medicare FFS Part-A Claims Data January 1–December 31 2015

Heart Failure

Impact and Prevalence of Heart Failure

- Heart failure is the primary diagnosis in more than 1 million hospitalizations annually.

- Patients hospitalized for heart failure are at high risk for all-cause re-hospitalization
  —*with 1-month readmission rate of 25%.*

- After heart failure diagnosis
  - 83% of patients are hospitalized at least once
  - 43% are hospitalized at least 4 times

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Arizona State Heart Failure Readmission Rates: Q4 2014–Q3 2015

Group	30-Day Readmit Rate	30-Day Readmits to Same Hospital		30-Day Readmits to Different Hospital		Days to Readmission							
						0–7 Days		8–14 Days		15–21 Days		22–30 Days	
		N	%	N	%	N	%	N	%	N	%	N	%
Arizona	23.8%	1,082	70.7%	448	29.3%	502	32.8%	390	25.5%	330	21.6%	308	20.1%
Central Phoenix	25.5%	213	74.7%	72	25.3%	90	31.6%	81	28.4%	50	17.5%	64	22.5%

Source: Medicare Claims Data Q4 2014–Q3 2015

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Source: Medicare Claims Data Q2 201–Q3 2015

What Have We Learned About People and Their Relationship With Medications?

https://www.youtube.com/watch?v=f5Zqs74e1VI

Instead of taking their medication, respondents would rather...

47% Take out the trash

27% Get a shot in the arm

10% Get a cavity filled

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Medication Management

- In one study, 50% of patients taking anti-hypertensive drugs were unable to accurately name a single medication listed in their medical chart.[1]
  - Climbing to 65% for patients with low health literacy

- Studies have shown that 40–80% of the medical information patients receive is forgotten immediately and nearly half of the information retained is incorrect.[2]

- This phrase was tested: "Take two tablets twice daily."
  - Did that mean a total of two, or a total of four?

1. Patients Can't Recall Their Medication to Tell Doctors – Northwestern University, October 16, 2007 | by Marla Paul http://www.northwestern.edu/newscenter/stories/2007/10/health1.html#sthash.OvXO120q.dpuf
2.The Teach-Back Method: A Better Way to Patient Compliance and Understanding, Robert Glatter, MD, Emergency Medicine, 08:12PM Aug 16, 2012 http://boards.medscape.com/forums?128@175.C9SIapvbjfd@.2a342864!comment=1

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"Take two tablets twice daily."

$$\bigcirc + \bigcirc = 2/\text{day}$$

or

$$\bigcirc\bigcirc + \bigcirc\bigcirc = 4/\text{day}$$

???
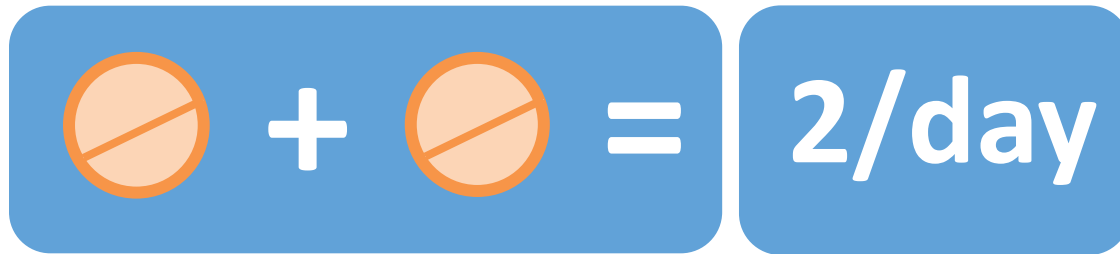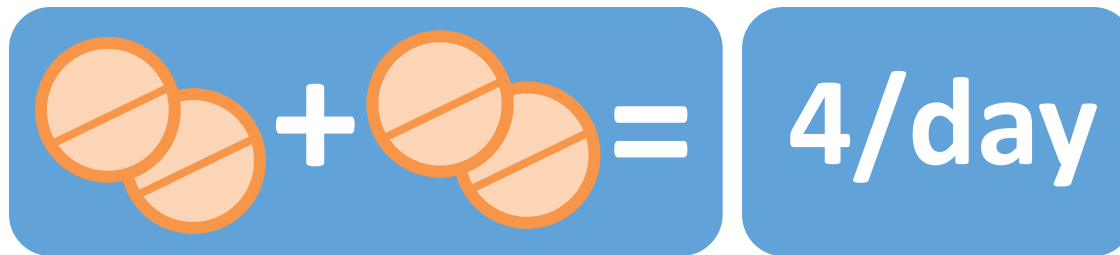
1/3 of patients who were deemed literate got confused.

Source: Annals of Internal Medicine: Literacy and Misunderstanding Prescription Drug Labels, Terry C. Davis, PhD; Michael S. Wolf, PhD, MPH; Pat F. Bass III, MD; Jason A. Thompson, BA; Hugh H. Tilson, MD, DrPH; Marolee Neuberger, MS; and Ruth M. Parker, MD. http://annals.org/article.aspx?articleid=731144

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The Literature is Compelling

- A recent study of patients with acute coronary syndrome or heart failure found more than 60% of hospitalized patients were taking medications incorrectly.

  - 36% were taking a previously prescribed medication that should have been discontinued

  - 27% were not taking a newly prescribed medication listed on the discharge medication list

  - 59% of all discharged patients also misunderstood the indication, dose, or the frequency of use
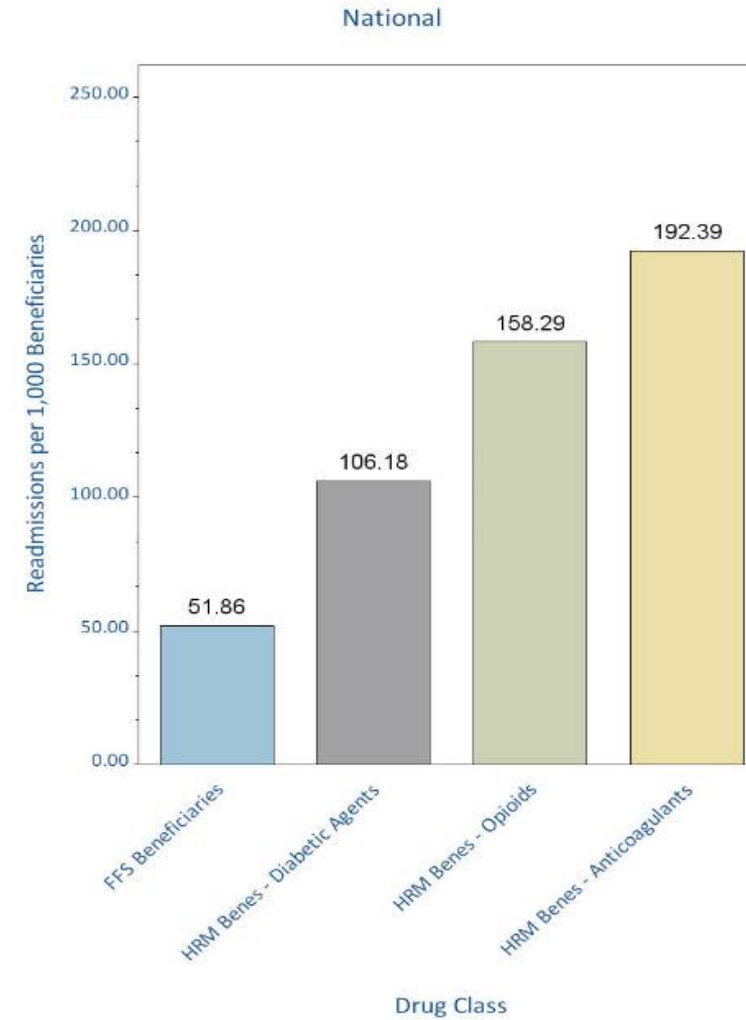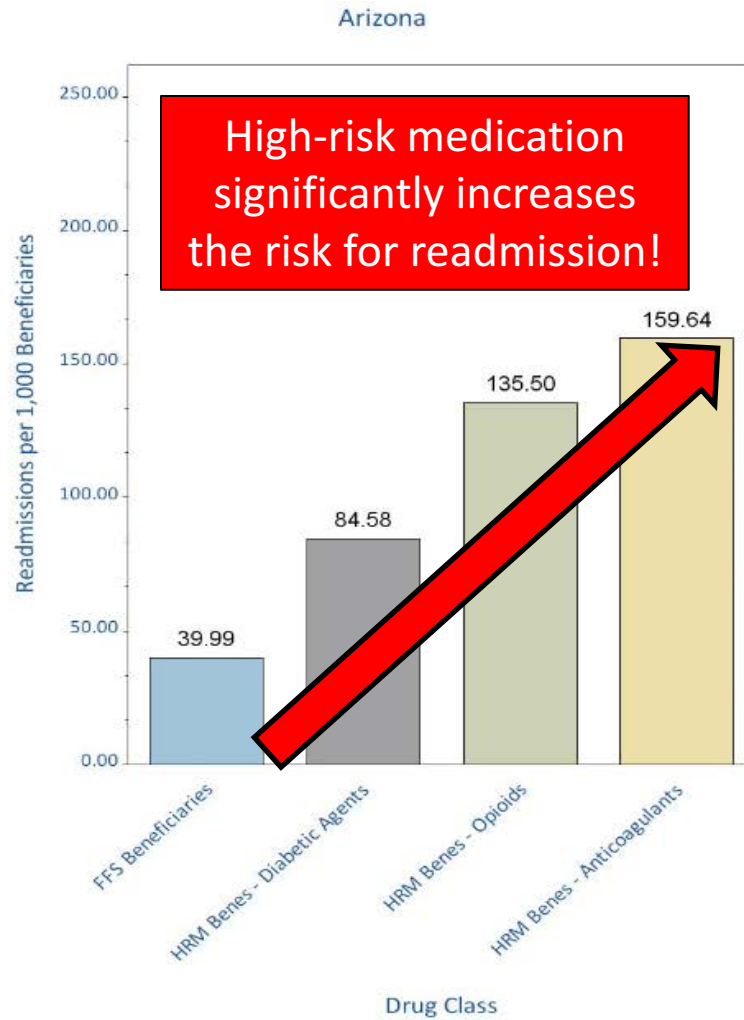
Mixon AS, et al. Characteristics associated with post-discharge medication errors. *Mayo Clinical Proc*. 2014; 89 (8):1042-51.

Arizona

High-risk medication significantly increases the risk for readmission!

Readmissions per 1,000 Beneficiaries
- FFS Beneficiaries: 39.99
- HRM Benes - Diabetic Agents: 84.58
- HRM Benes - Opioids: 135.50
- HRM Benes - Anticoagulants: 159.64

National

Readmissions per 1,000 Beneficiaries
- FFS Beneficiaries: 51.86
- HRM Benes - Diabetic Agents: 106.18
- HRM Benes - Opioids: 158.29
- HRM Benes - Anticoagulants: 192.39

Source: Calendar Year 2013 Medicare FFS Part-D Claims Data

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- 3,189 distinct beneficiaries had a 30-day all-cause readmission in 2014

- Of these, 1,692 distinct beneficiaries were on one or more high-risk medications during the 30-day period following the index discharge

53% of readmissions discharged on a high-risk medication

Source: Calendar Year 2014 Medicare Fee-For-Service Part A claims data.

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Maricopa: 30-Day Readmission for Medicare Beneficiaries Discharged on a High-Risk Medication

Central Valley, Phoenix

Of the **3,189** distinct Medicare beneficiaries in the CVCCC with a 30-day readmission, **1,692** (**53%**) were on one or more high-risk medications.

East Valley, Phoenix

Of the **1,434** distinct Medicare beneficiaries in the EVCCC with a 30-day readmission, **776** (**54.11%**) were on one or more high-risk medications.

Source: HSAG Analysis of Medicare FFS Part-D Claims Data for Q2 2014–Q1 2015

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Behavior Health Impact

1 in 4 persons 55+ suffers from a behavioral health disorder.[1]

Psychoses has the **2nd highest** readmission rate.[2]

Older adults die by suicide at a **higher rate** than the national average.[3]

1. Jeste DV, Alexopoulos GS, Bartels SJ, et al. Consensus statement on the upcoming crisis in geriatric mental health: Research agenda for the next 2 decades. Archives of General Psychiatry. 1999; *56(9):848-853.*

2. Elixhauser A, Steiner C. Readmissions to U.S. Hospital by Diagnosis, 2010. http://www.hcup-us.ahrq.gov/reports/statbriefs/sb153.pdf

3. *Area Agency on Aging and Substance Abuse and Mental Health Services Administration. Older Americans Behavioral Health Issue Brief: Series Overview. Available at https://www.ncoa.org/wp-content/uploads/Series-Overview-Issue-Brief-1.pdf, Accessed on July 22, 2015.*

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Maricopa County Beneficiaries Who Had a **Medical** Hospitalization and Also Had a Depression Diagnosis

Population	Discharges for Beneficiaries with Depression Dx*	30-Day Depression Dx Readmissions	
		N	%
Maricopa	8,996	1,633	18.2%

Data were included if depression was in top 5 diagnoses codes

*Diagnosis (Dx)
Data Source: HSAG analysis of Medicare FFS, Part-A claims for Q2 2014–Q1 2015

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Of those that readmit within 30 days, what percent readmit in week 1, 2, 3, or 4?

Discharged from general hospital: Percentage of readmissions by weekly increments.
Total readmits = 120

Discharged from behavioral health hospital or inpatient unit: Percentage of readmissions by weekly increments.
Total readmits = 613

Data Source: HSAG analysis of Medicare FFS, Part-A claims for Q2 2014–Q1 2015
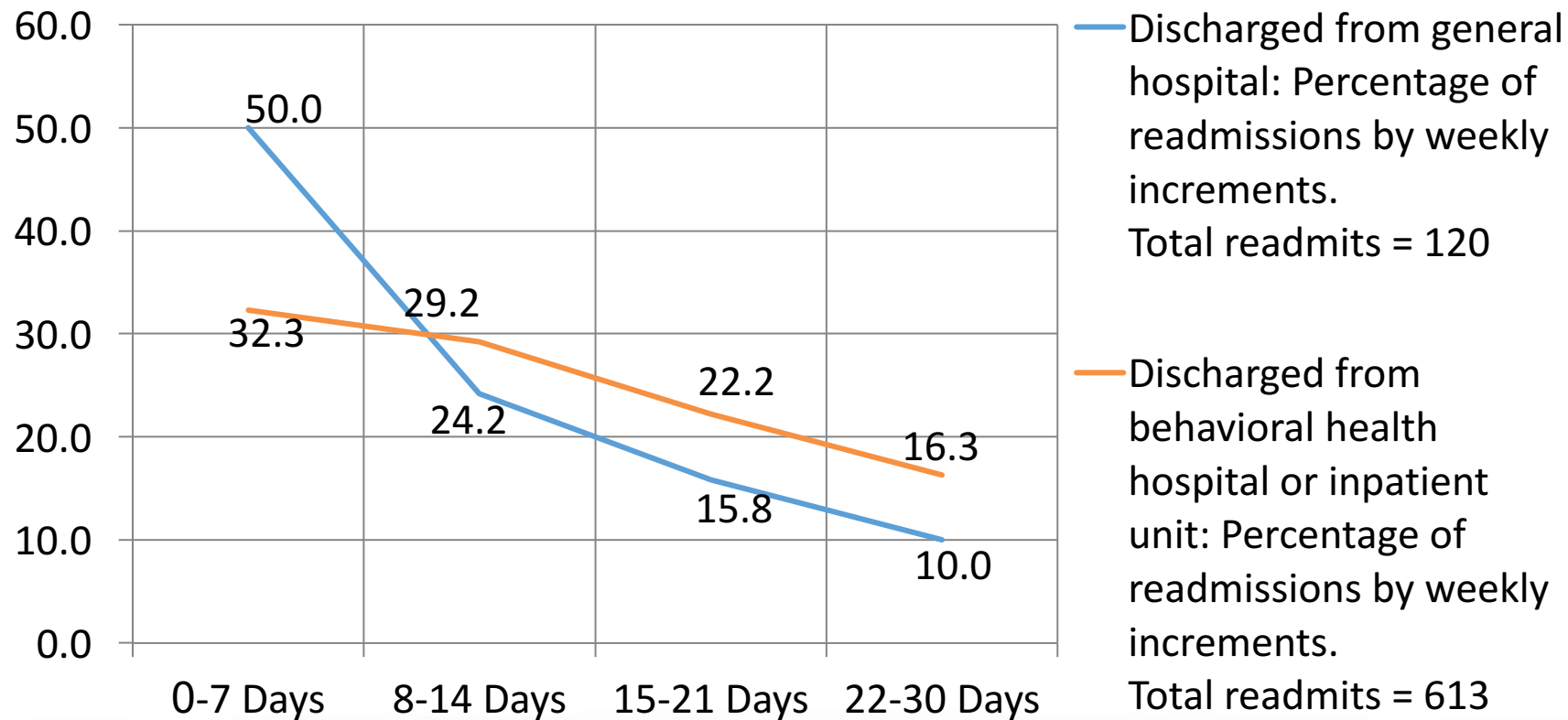
So Where Do We Go From Here?

1. Consider your resources
   – Do you have pharmacy residents that can partner with you? Do you have neighboring behavioral health facilities? Do you have a nurse practitioner?

2. Identify your area of interest
   – Heart failure patients, behavioral health, high-risk meds

3. How does your hospital, nursing home, or health plan want to support this work?
   – Know their readmission penalty (public information)

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Access HSAG Resources

- HSAG offers:
  - Medication History Toolkit
  - Community Resource Guide
  - Soon coming: Heart Failure Resource Guide
  - Data specific to your area when partnering with a hospital

  - Email me at baveryt@hsag.com or
    Cheryl Angotti at cangotti2@hsag.com and
    we can send you the link or answer your questions

Questions?
Thank you

Barb Averyt
baveryt@hsag.com

This material was prepared by Health Services Advisory Group, the Medicare Quality Improvement Organization for Arizona, under contract with the Centers for Medicare & Medicaid Services (CMS), an agency of the U.S. Department of Health and Human Services. The contents presented do not necessarily reflect CMS policy. Publication No. AZ-11SOW-C.3-01172017-03
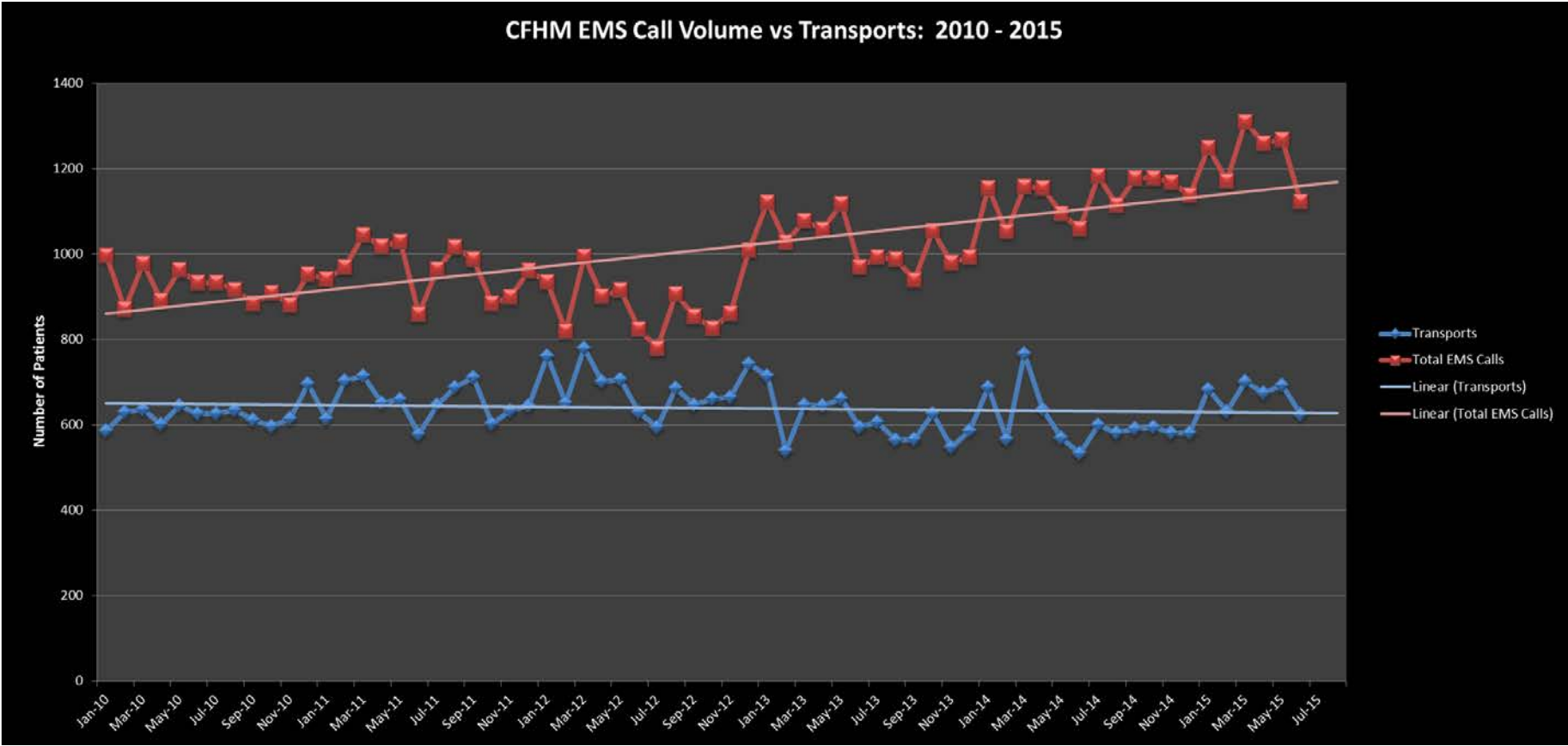
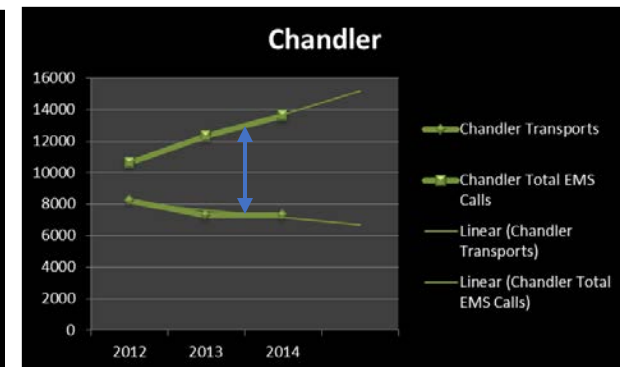# Enhancing EMS Destination Choices: Arizona's Treat and Refer Program
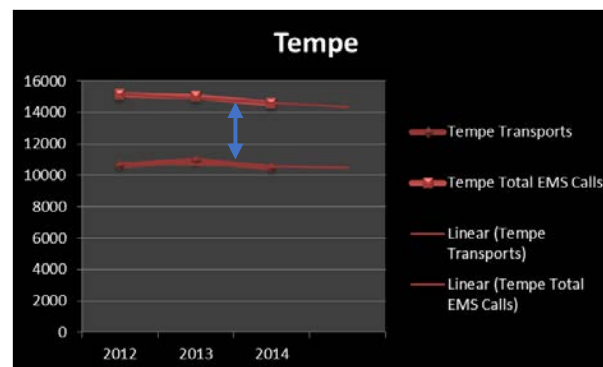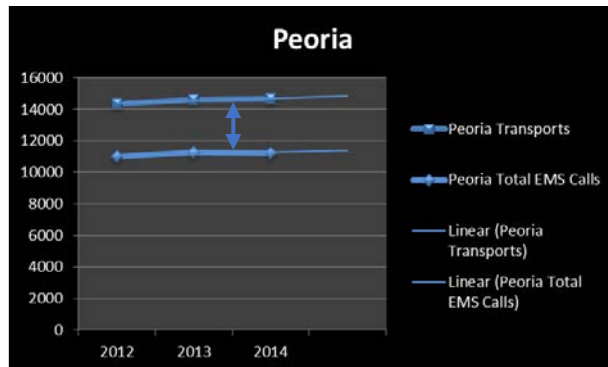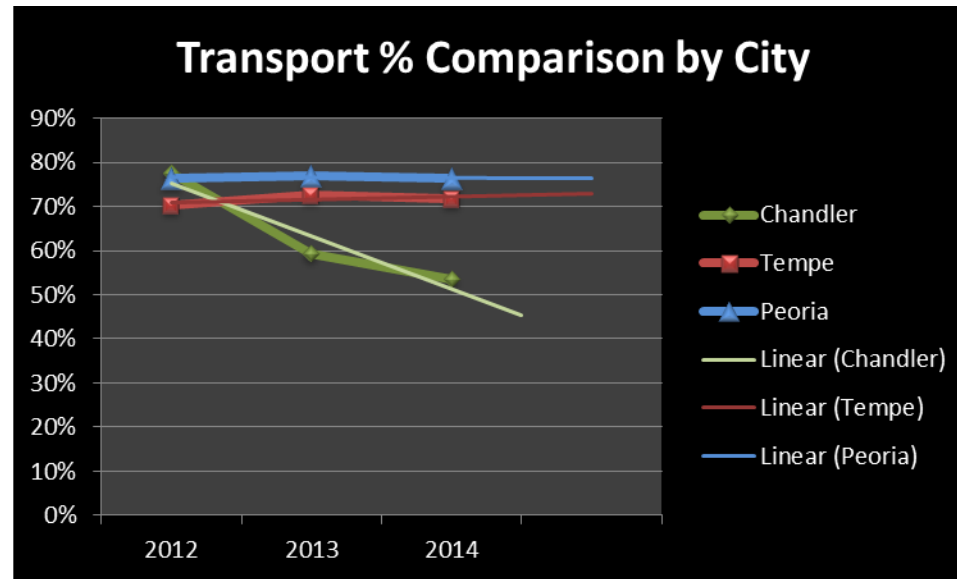
Jeff Clark, Fire Chief, Eastside Fire & Rescue

Beth Kohler, Deputy Director, AHCCCS

Mobile Integrated Healthcare 360 Arizona
Thursday, February 2, 2017

Trendlines for Call Volume/Transports

Transport % Comparisons by City

Treat and Refer Overview

- Collaboration between Arizona Department of Health Services, Bureau of EMS and Trauma System, AHCCCS, and EMS stakeholders.

- Supporting larger value-based purchasing efforts

- Give providers opportunity to address non-emergent health needs through assessment and referral to a more appropriate level of care (e.g. primary care doctor, urgent care or behavioral health office)
  - Improved quality and customer satisfaction
  - Lower cost

Treat and Refer Development

- AHCCCS approached by Chandler Fire

- Goal to support efforts without establishing duplicative regulatory process
  - Leverage ADHS/BEMS

- ADHS stakeholder group to establish requirements
  - Arizona Chapter of the American College of EMS Physicians
  - Pediatric Advisory Committee for Emergency Services
  - Professional Fire Fighters of Arizona
  - Arizona Fire Chiefs Association
  - Arizona Ambulance Association
  - Arizona Fire District Association

Reaching across Arizona to provide comprehensive
quality health care for those in need

Treat and Refer Development (ctd)

- Approved through the EMS Council and MDC

- Also conducted meetings with first responders, ambulance companies, payers

- Published rates for public comment

- Received CMS Approval

Reaching across Arizona to provide comprehensive quality health care for those in need

AHCCCS
Arizona Health Care Cost Containment System

Treat and Refer Process

- Apply for and receive recognition through ADHS through the **Treat & Refer Recognition Program** (demonstrate compliance with requirements)
  - o 1 year initial with continuation process
- Register with AHCCCS
- Contract with AHCCCS Health Plans

Participation Components

- Organizational support (CEO/Fire Chief and medical director)
- EMS personnel training
- Medical Director training
- Performance Monitoring and Improvement Plan (quality, safety and effectiveness)
- Submit data to ADHS

Treat and Refer

- New Provider Type effective 10/1/16
- A0988 – Ambulance Response, No Transport
- Modifiers:
  - UA – Treat at home, refer to PCP/specialist
  - UB – Treat at home, refer to Crisis Response
  - UC – Treat at home, refer to BH Provider
  - UD – Treat at home, refer to Urgent Care
- CMS Approval Received
- Implemented 10/1/2016

Reaching across Arizona to provide comprehensive quality health care for those in need

All presentation materials can be found online:

www.vitalysthealth.org/mih-360-az-symposium

Please complete your evaluations and leave them on the table.