



Department of Emergency Management Emergency Medical Services Agency

GOVERNMENT AUDITS AND OVERSIGHT COMMITTEE

MARCH 2, 2017

170171
Submitted
3/2/2017

Response Times

Summer 2014:

- First ALS (Paramedic) Unit on scene within 7 minutes – 89%
- First Ambulance Unit on scene within 10 minutes – 76%


For the last 12 months:

- On Time Performance (OTP) are nearly 93% and 90%


On-Time Performance (OTP)														
	Feb-16	Mar-16	Apr-16	May-16	Jun-16	Jul-16	Aug-16	Sep-16	Oct-16	Nov-16	Dec-16	Jan-17	Feb-17	Average
Ambulance Code 3	87.7	87.0	88.6	89.1	90.7	92.5	91.3	89.1	90.5	89.0	86.7	89.2	92.5	89.57%
First Paramedic	94.0	94.4	93.1	93.1	93.0	93.9	94.3	93.1	92.5	93.0	90.1	91.2	93.8	93.07%

EMS System Improvements

911 Provider Committee Meeting (est. 2014) ensured:

- King American Ambulance (KING) and American Medical Response (AMR) dedicated units to the 911 system, which provided more predictability and stability to the system
 - KING and AMR routinely identify “surge” units to assist in advance of anticipated surges due to special events or other circumstances
 - Established a daily call at 7am with the Division of Emergency Communications, Fire Department, AMR and King to identify any last minute scheduling issues or other issues such as road closures, ED closures or special events
 - Increased the use of non-911 ALS and BLS providers during major holidays and civic celebrations such as NYE, Pride, and Halloween
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Next Steps

- Support the work the Ambulance Work Group
 - Continue to convene and lead the 911 Provider Committee and the Data Working Group
 - Enhance the Computer Aided Dispatch system
 - Enhance interoperability with AMR and King
 - Regularly exercise in-county mutual and mutual aid
 - Revise the level zero policy for ambulances
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San Francisco Fire Department

Government Audits and Oversight Committee

Emergency Response Times Hearing

March 2, 2017

170171
Sullivan
3/2/2017

Background/Overview

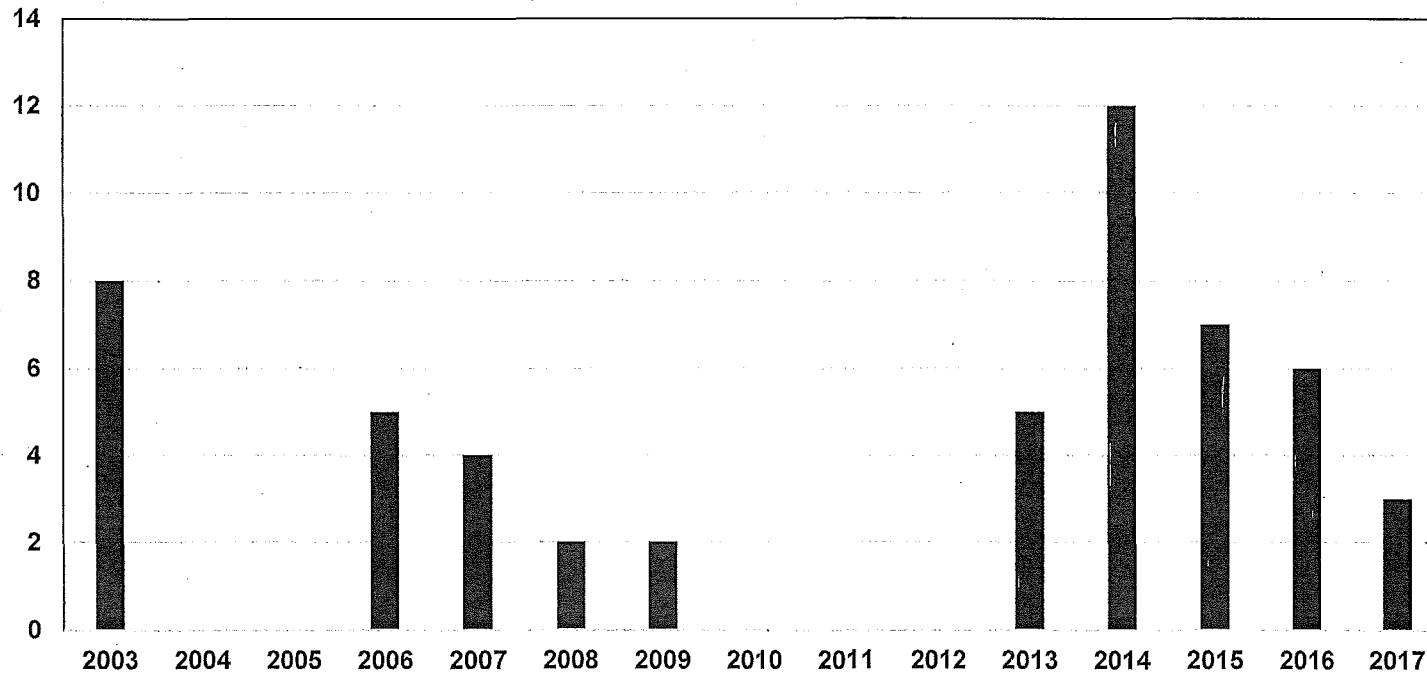
- Back in 2014, increasing call volume led to a number of challenges for the City's emergency 911 system, specifically related to ambulance deployment
- To analyze these challenges, a City-wide work group was convened to look at the issues surrounding the City's 911 ambulance system
- As a result of the implementation of a number of the work group's recommendations, as well as the infusion of additional resources, the City saw improvements system-wide in its response times
- Since that time, the City has seen continued increased to call volume to unprecedented levels

Ambulance Fleet

- Given increases in call volume and additional staff, the Department has increased its fleet of ambulances to 54 units.
- With significant investment in its ambulance fleet in recent years, the health of the Department's ambulance fleet is the best it has been in the Department's history
- The Department recently took receipt of nine new ambulances, and is in the process of ordering four additional units.
- Working with the Mayor's Office, the Department has established a replacement program of four ambulances per year.

Ambulance Fleet

SFFD Ambulance Fleet by Model Year



- Over 60% of Department ambulances are currently under five years old, and by the end of 2017, that number will increase to over 75% of the ambulance fleet

Response Times

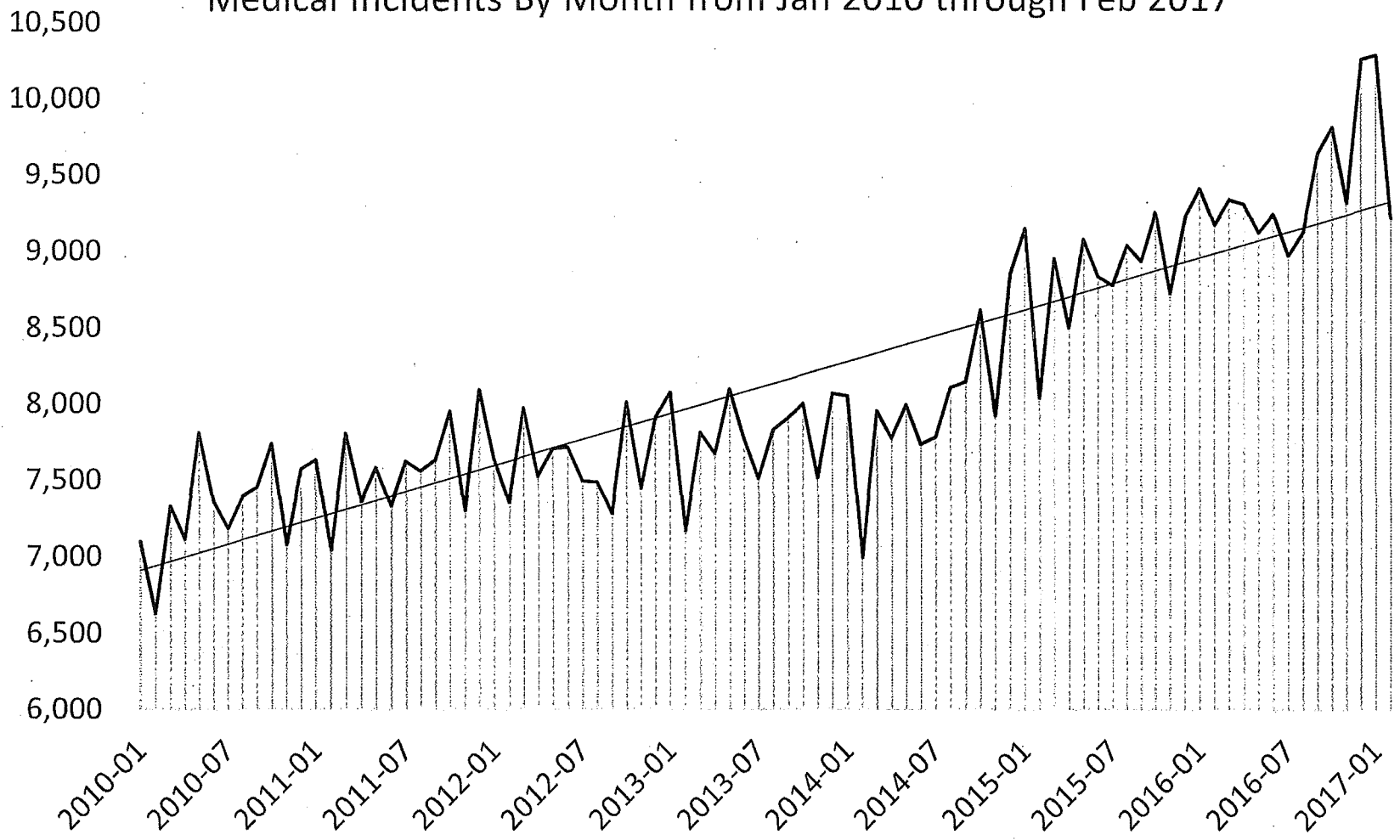
- Response time metrics for **Code 3 emergency response** for the City's emergency 911 system for the last 12 months (March 2016 – February 2017):

Description	Goal	Last 12 months
First ALS (Paramedic) Unit on scene (7 minutes)	90%	92.91%
First Ambulance Unit on scene (10 minutes)	90%	89.82%

- Recently completed month of February 2017 showed the City reaching its response time goals, with a **93.80%** on-time percentage (OTP) for the first paramedic on scene, and a **92.58%** OTP for the first responding ambulance.

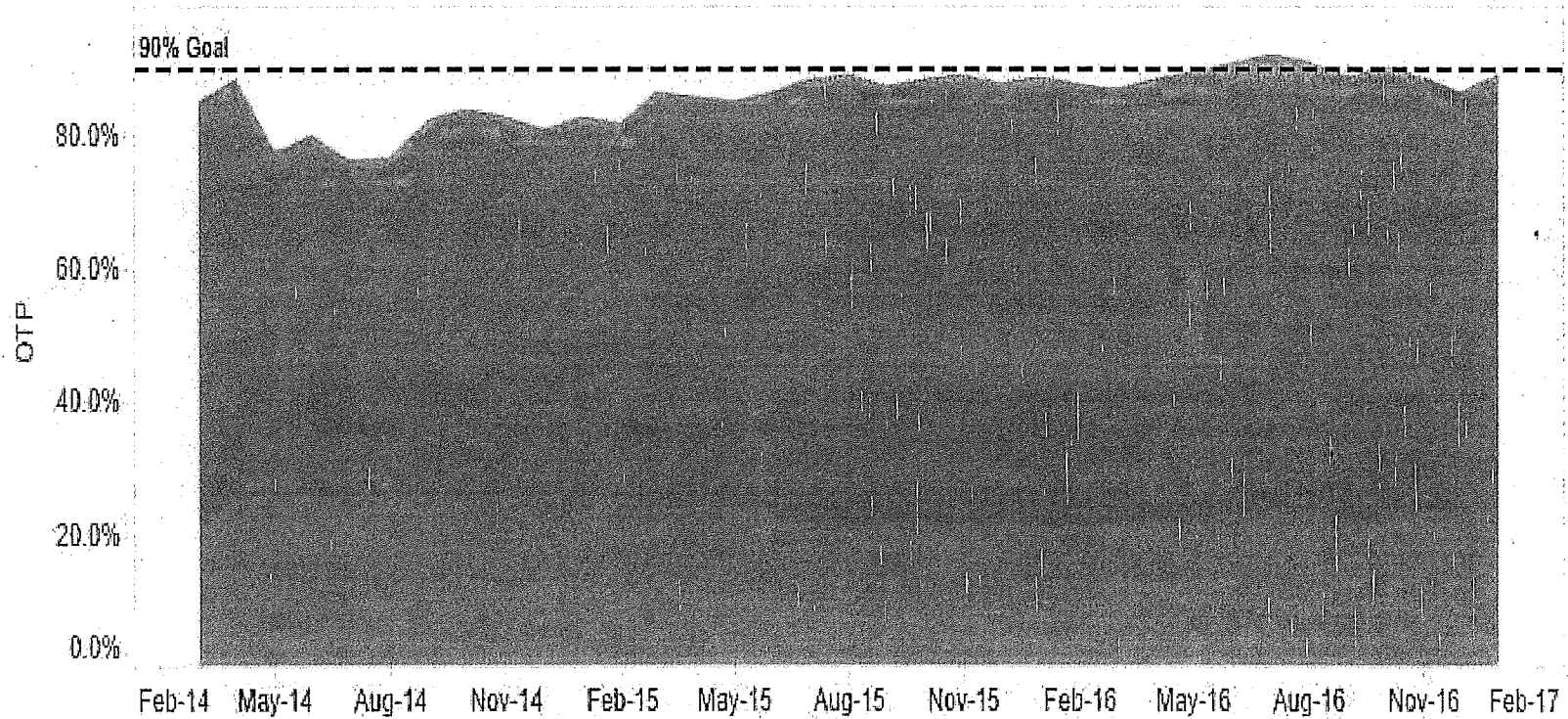
Call Volume

Medical Incidents By Month from Jan 2010 through Feb 2017



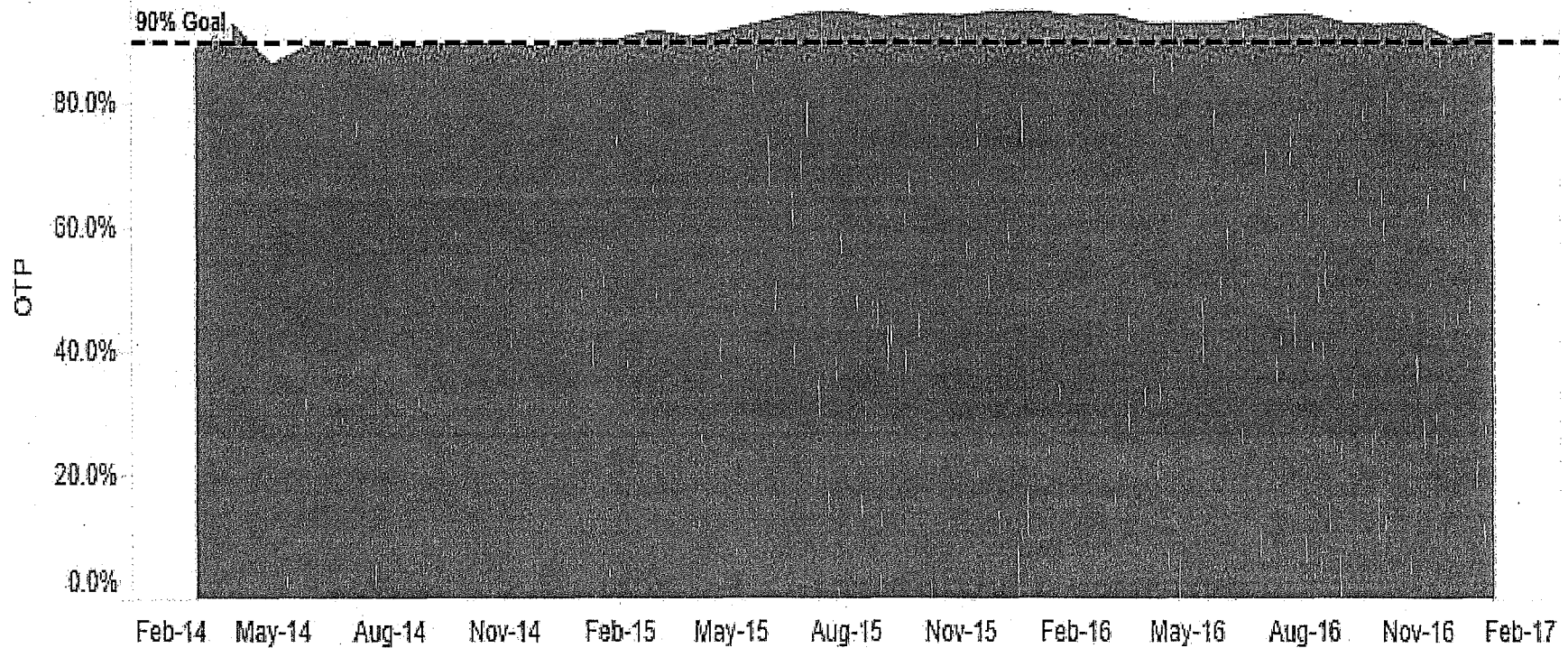
Emergency Response

Code 3 Emergency Ambulance Response

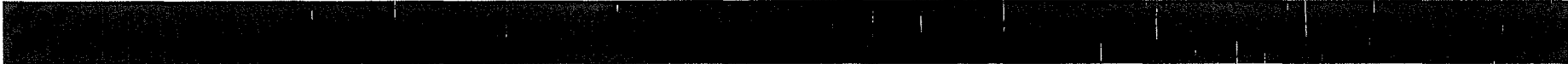


Emergency Response

ALS Response Interval (First Paramedic on-scene)



Staffing

- Working with the Controller's Office as part of the 2014 Ambulance work group, the Department analyzed its EMS staffing levels
 - Controller's Office recommendations were for a staffing increase to **200 FTEs** for the ambulance tier, currently the Department's budgeted staffing level
 - In addition, the H-8 per diem classification was created to help address surge and relief (Department currently has a pool of 80 at-will H-8 employees)
 - Fire Department also increased ALS Engine staffing on a daily basis
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Staffing

- Supervisory Staffing Model was improved at Station 49- Administrative Supervisor's shift was changed from a 24-hour shift to a more efficient 12-hour shift
- An additional 12-hour Administrative Supervisor was added to Station 49 to address the work load
- A Controlled Substance System was developed to also lighten the Supervisor's workload - a monitored narcotics room was incorporated at Station 49

System Improvements

- Other Personnel Changes
 - Restoration of RC4 in field operations
 - EMS6 positions working with DPH
- Collaboration
 - Improved collaboration and communication amongst SFFD and private ambulance providers
 - Regular meetings of ambulance provider work groups, headed by EMSA
 - EMSA works closely with all three ambulance providers on policy changes (“Level 0”, etc.)

System Improvements (cont.)

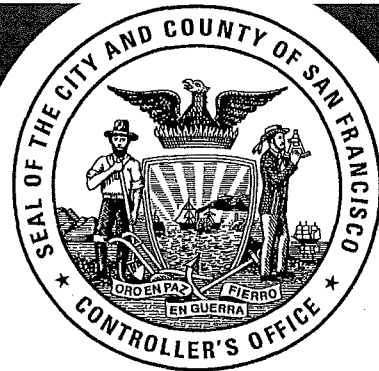
- Data/Technology
 - Public data dashboards (Controller)
 - AVL integration for private providers
 - CAD/Dispatch software upgrades
- Fleet/Equipment
 - Investment to replace outdated and aged ambulances
 - On-going ambulance replacement plan
 - Defibrillator and other medical equipment replacement

Next Steps

- Given continued increases in call volume, particularly over last six months, the City-wide Ambulance Work Group has reconvened to take a look at the state of the Emergency 911 system (resources, policies, hospitals, etc.) and update on previous initiatives that were implemented
- Fire Department currently working closely with Controller's Office on staffing level analysis

Emergency Medical Response System Performance Dashboards

Government Audit & Oversight Committee



CITY & COUNTY OF SAN FRANCISCO

Office of the Controller
City Performance Unit

Peg Stevenson | Heather Littleton | Celeste Berg

3.2.2017

Background

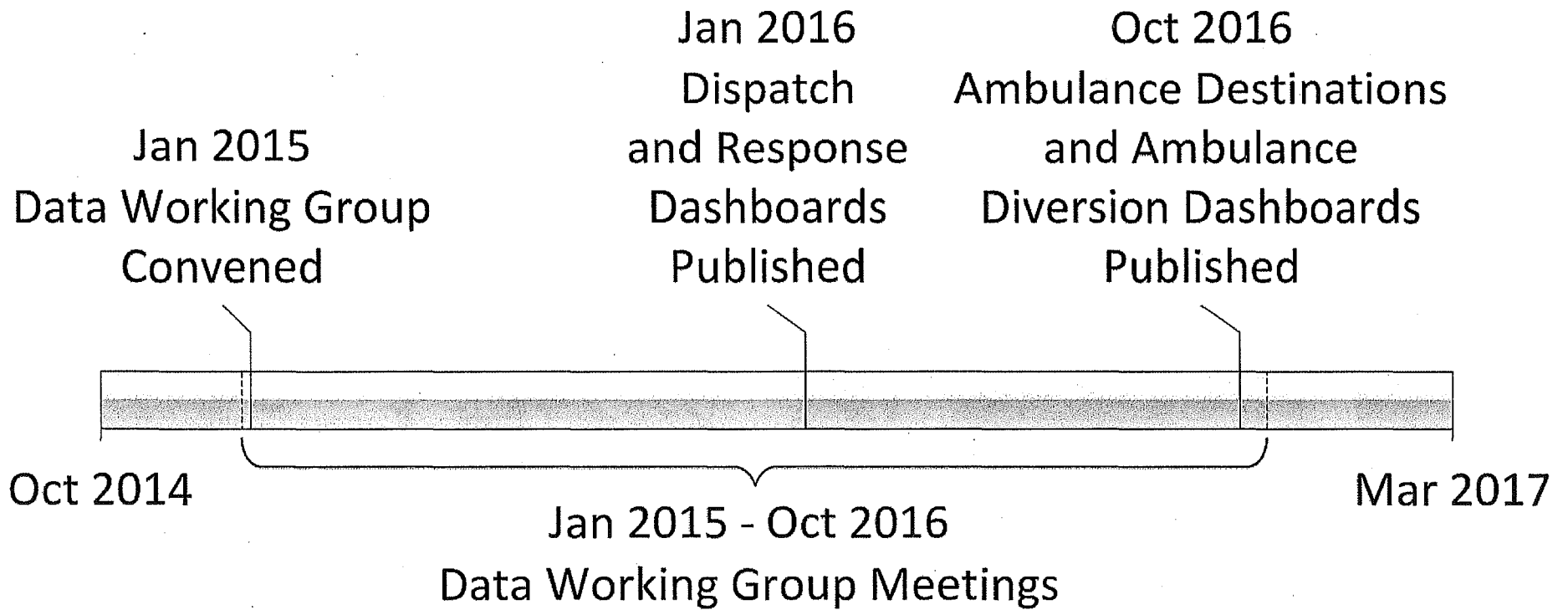
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Problem:

- Ambulance response times were exceeding the 10 minute goal in late summer 2014
- No shared performance reporting on response times



EMS Data Working Group Timeline



EMS Data Working Group

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- Goal 1: Develop agreed-upon data validation methodology for calculating response times
- Goal 2: Create a shared performance dashboard

SAN FRANCISCO EMERGENCY MEDICAL RESPONSE

Navigation menu
with interval pages

HOME DISPATCH RESPONSE AMBULANCE DESTINATIONS AMBULANCE DIVERSION ABOUT

System Performance Dashboards

First Responders and ambulances strive to arrive on scene by the respective time goal 90 percent of the time. The percent of responses with an on-scene time that met the respective response time goal in the month of January 2017 are below.

First Responder (Basic Life Support) - 74.82%
First Responder (Advanced Life Support) - 91.21%
Ambulance (Code 3) - 89.29%
Ambulance (Code 2) - 92.28%

ABOUT SAN FRANCISCO'S 911 SYSTEM

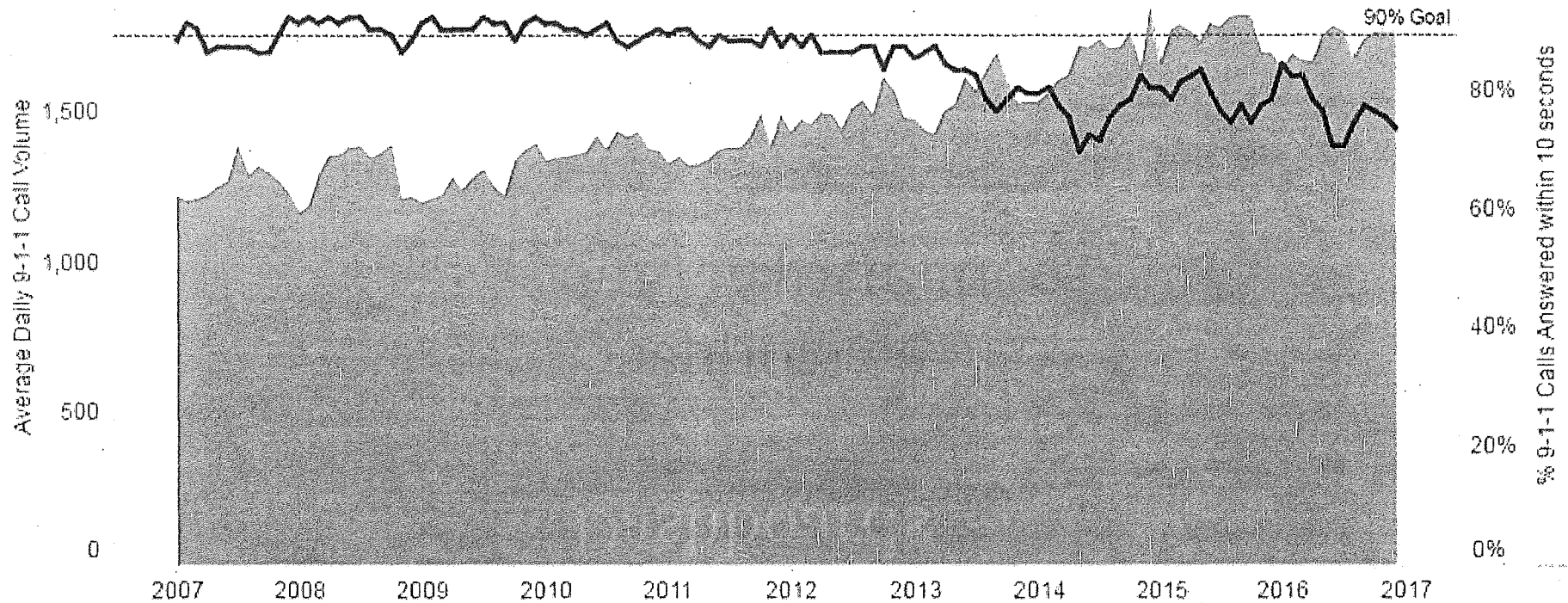
Link to page about the 911 system
and Data Working Group

Blurb on performance for
the most recent month

Website URL: <http://sfemergencymedicalresponse.weebly.com/>

911 Call Volume and Percent of 911 Calls Answered Within 10 Seconds

2007-2016



National Emergency Number Association (NENA) Call Answering Standard for answering 9-1-1 calls: Ninety percent (90%) of all 9-1-1 calls arriving at the Public Safety Answering Point (PSAP) shall be answered within ten (10) seconds during the busy hour (the hour each day with the greatest call volume, as defined in the NENA Master Glossary 00-001).

Note: 9-1-1 calls refer to those received through 9-1-1, 10-digit emergency number, and allied agency (CHP, other jurisdictions, etc.) transfers.

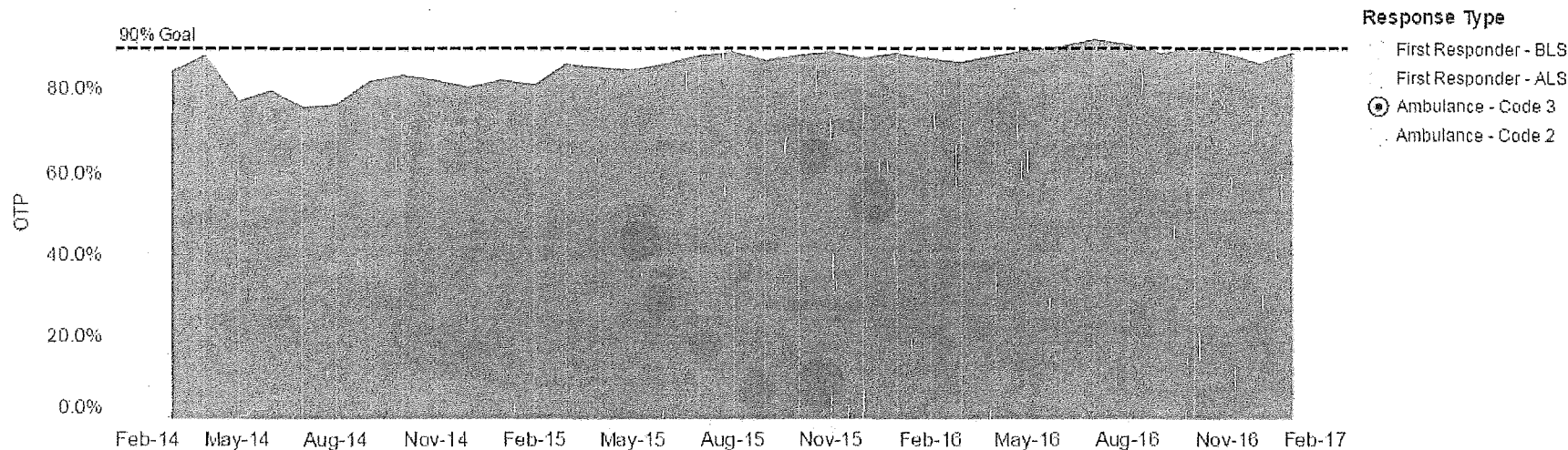
Explanation

■ % 911 Calls Answered w...

■ Average Daily 911 Call V..

On Time Performance (OTP) Rate

Ambulance - Code 3



On Time Performance Goal by Response Type (per SF EMSA Policy 4000)

First Responder - BLS	The SFFD shall ensure that responders capable of performing Basic Life Support (BLS) are on scene of all presumptively defined life-threatening emergencies (Code 3) within 4 minutes and 30 seconds, 90 percent of the time.
First Responder - ALS	Providers shall ensure that responders capable of performing Advanced Life Support (ALS) are on the scene of all presumptively defined life-threatening emergencies (Code 3) within 7 minutes, 90 percent of the time.
Ambulance - Code 3	Providers shall ensure that a Patient Transportation Capable Vehicle (Ambulance) is on the scene of all presumptively defined life-threatening emergencies within 10 minutes, 90 percent of the time.
Ambulance - Code 2	Providers shall ensure that a Patient Transportation Capable Vehicle (Ambulance) is on the scene of all presumptively defined non-life-threatening dispatches (Code 2) within 20 minutes, 90 percent of the time.

Response Data Table

	Feb-16	Mar-16	Apr-16	May-16	Jun-16	Jul-16	Aug-16	Sep-16	Oct-16	Nov-16	Dec-16	Jan-17
On Time Performance	87.72%	87.04%	88.60%	89.91%	90.79%	92.51%	91.35%	89.17%	90.50%	89.01%	86.79%	89.29%
Source Data Responses	4,074	4,166	4,060	4,102	4,184	4,098	4,075	4,250	4,418	4,150	4,609	4,687
Validated Responses	3,755	3,818	3,534	3,599	3,692	3,630	3,617	3,739	3,904	3,614	4,066	4,154
Avg Response Interval	6:40	6:43	6:29	6:15	6:05	5:48	5:57	6:17	6:13	6:23	6:38	6:11
90th% Response Interval	10:44	10:53	10:25	10:01	9:44	9:12	9:30	10:13	9:52	10:16	10:47	10:12

Source Data Responses: Raw number of responses recorded in Computer Aided Dispatch system (CAD).

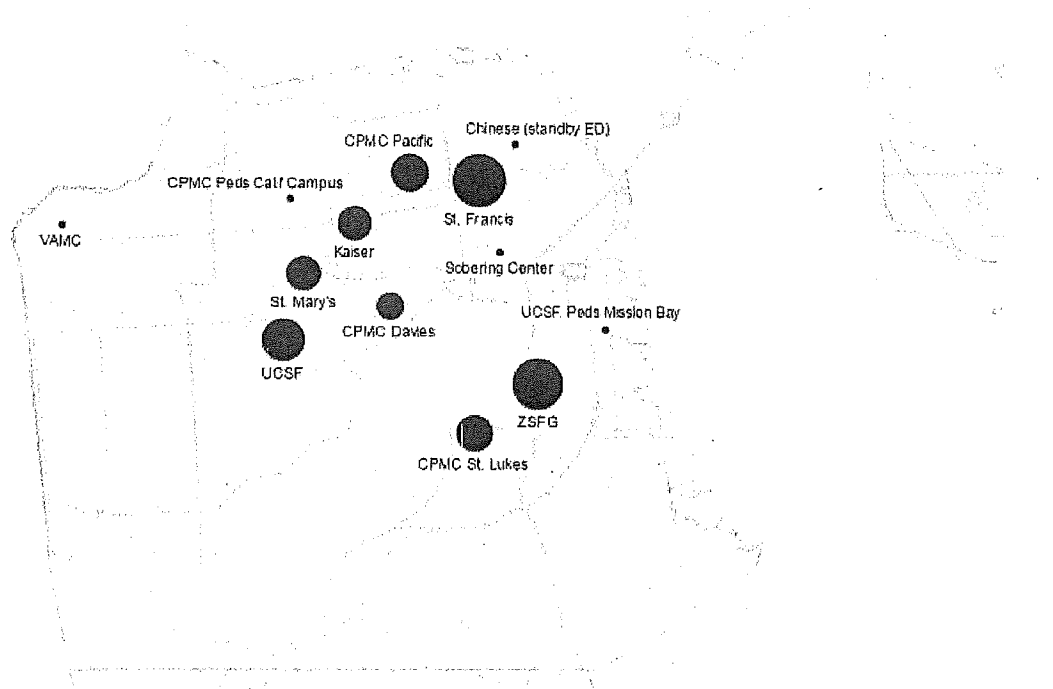
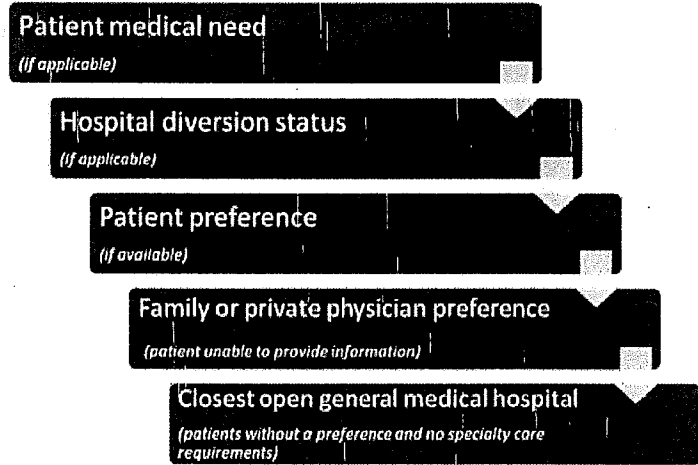
Validated Responses: Number of responses with an on-scene time after basic validation in which a) incidents that are upgraded from Code 2 to Code 3 are removed, b) incidents whose time stamps do not follow logical *dispatch* < *on scene* < *transport* sequence are removed, as are incidents whose *on scene* time stamp is less than 60 seconds before *transport* time stamp (this validation is effective for April 2016 onward), and c) earlier on scene times from AVL/GPS data logs are included. Automatic vehicle locator (AVL) data uses GPS to generate an on scene time based on when the unit is within 10m of the incident location entered by dispatch. AVL data is available from March 2015 onward for SFFD only.

San Francisco EMS Ambulance Destinations

The San Francisco Emergency Medical Services Agency Destination Policy 5000 identifies the hospital and center destinations for 911 ambulances. The choice of a hospital destination is first based on the patient's medical need, followed by hospital diversion status and patient or family preference as allowed by the patient condition. If there is no preference, then the patient is taken to the closest hospital.

The map below shows the location of the receiving hospitals and centers in San Francisco. The locations are sized by the average percentage of system-wide transports that the respective hospital received monthly for the rolling year. Hover over a location to see the percentage and transport count for that hospital.

The EMS destination chart below shows hospital destinations based on patient medical condition and characteristics. Zuckerberg San Francisco General Hospital (ZSFG) operates the City's Trauma Center. Patients who meet the Trauma Triage Criteria per Policy 5001 are transported directly to the Trauma Center.



Next Steps

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- Staffing model
 - Update demand
- Ambulance Turnaround Interval
 - Priority analysis for the Data Working Group

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