



City and County of San Francisco
London Breed, Mayor

Department of Emergency Management
Emergency Medical Services Agency

Date: January 7, 2022

To: San Francisco EMS Providers & San Francisco Hospitals

From: John Brown MD, San Francisco EMS Agency Medical Director
Andrew Holcomb, Acting EMS Director

Subject: **Implementation of the EMS Alert System**

Beginning January 3, 2022, the San Francisco EMS system will implement a new feature in ReddiNet to replace the current version of the CADDiE pilot program with a new an automated ambulance routing function. Our goal is to improve the distribution of EMS patients and prevent surge events at local hospitals. **CADDiE call-ins will remain in effect until January 17, 2021. Please follow normal procedures. The EMS Alert procedures will start at 0700 on January 18, 2021. However, you may see EMS Alert featuring in ReddiNet starting January 3, 2022.**

BACKGROUND

We've seen concerning trends recently in critical performance and operational metrics. Since this time last year, the system-wide 90th percentile for Ambulance Patient Offload Times (APOT-1) has increased 23%, and total Diversion hours have increased 95%. We've also experienced a very large increase in total hours that Diversion is suspended. This is important because it increases the amount of time in which hospitals are unable to signal to the system when they are severely impacted by EMS.

In addition to mitigation measures being developed on the hospital side, extensive effort has been made to analyze transport data and collaborate with both hospital and EMS partners to determine the impact EMS has on these metrics. The primary issue identified by our efforts is "ambulance bunching." This is when a hospital receives a disproportionate number of ambulances at a single point in time, causing a surge on their emergency department. During a 6-month sample period in 2021, 47% of EMS surge events were followed by a Diversion event at that hospital within the next 2 hours.

EMS ALERT

A routing function called "EMS Alert" will be added as a supplement to Diversion. EMS Alert looks at a ratio of current EMS volume and ED size to provide a fluid, point-in-time reflection of each hospital's EMS impact.

60-Minute EMS Volume : ED Surge Cap

60-Minute EMS Volume (Numerator)

- The sum of the following updated on-the-minute: Units En-Route + Units At-Hospital + Units Cleared in Past 60 Minutes.

ED Surge Cap (Denominator)

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- Determined by the “30% or 6 Rule”: 30% of a hospital’s licensed ED bed count or 6, whichever is lowest. This represents a reasonable number of EMS patients that a hospital can intake within a 60-minute time window. Large hospitals default to 6 (e.g. 30% of ZSFG’s ED bed count is 18, resulting in a default cap of 6) while smaller hospitals will use 30% of their licensed beds (e.g. CPMC-Davies = 3, St. Mary’s = 5).

EMS Alert will trigger when the following condition is satisfied for any hospital:

If current 60-Minute EMS Volume is greater or equal to the ED Surge Cap, EMS Alert will initiate

Unlike diversion, which is initiated manually at the discretion of hospital staff, EMS Alert initiates automatically when the above condition is satisfied and turns off once it is not. EMS Alerts are totally dependent on current system conditions and cannot be manually manipulated by an individual.

FIELD OPERATIONS

Field providers will have access to a special ReddiNet account where they can view the current status of each San Francisco hospital. They will use the following instruction when determining a destination:

1. Open the ReddiNet Hospital Status Dashboard
2. Check the status of the desired hospital
 - **Diversion:** No change from current practice. Diversion may only be bypassed when patients meet qualifying criteria per policy.
 - **EMS Alert:** Treated the same as diversion – ambulances are not permitted to transport to that destination while EMS Alert is on. There are two exceptions:
 - 1) Patients who meet any criteria which would allow them to them bypass diversion (e.g. trauma, stroke, STEMI, in-custody).
 - 2) Extenuating circumstances where a patient has specific clinical needs that require care at a certain facility (e.g. recent transplant or <48 hour surgical patient requesting transport to the hospital that performed the procedure). These situations require approval from the Dispatch Rescue Captain or King American/AMR On-duty Supervisor prior to transport. EMS Alert bypass requires documentation of the extenuating circumstances within the PCR and the name of the supervisor who approved the bypass.
3. Diversion Suspension has no effect on EMS Alerts, and they should continue to be followed during these times.

Please note that EMS Alert is not a pilot program and is not a recommendation. This memo shall be followed as any other EMS Agency policy until replaced with a permanent policy. Development of a permanent policy around the EMS Alert system will take place 2022 as part of a larger effort around Diversion and APOT-1 mitigation.

EVALUATION AND FUTURE DEVELOPMENT

The EMS Agency will develop performance metrics to assess the EMS Alert system’s ability to improve EMS distribution and prevent surge, and to assess compliance with the guidance outlined above. These metrics will be reported to the system on a regular basis, either through existing performance reports or new formats. Technical teams are working on development of an EMS Alert Suspension feature, which will temporarily suspend EMS Alerts when the sum of EMS Alerts, Diversion, and/or Trauma Override exceed a certain threshold. We are also working to include banners for APOT Alerts in user’s ReddiNet accounts to accommodate the recent changes made to Policy 4000.1 – Ambulance Turnaround Time Standards.

For any questions or technical questions, please contact the EMS Agency by emailing ryan.seymour@sfgov.org.