Sutter Health: Emergency Departments

Ambulance Patient Offload Time (APOT)
February 13th, 2024

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Director Emergency Services
California Hospital Association:
EMS/Trauma Committee Co-Chair
Chair Sutter Health Clinical Improvement APOT Committee

Sutter Health

About Sutter Health

LOCATIONS

- Hospitals: 23
- ASCs: 33
- Cardiac Centers: 8
- Cancer Centers: 11
- Acute Rehabilitation Centers: 4
- Mental Health and Addiction Centers: 5
- Trauma Centers: 5
- Licensed General Acute Beds: 4,174
- Neonatal ICUs: 7

PEOPLE

- Physicians: 12,000
- Advanced Practice Clinician: 2000
- Nurses: 16,000+
- Employees: 53,000+

Sutter Emergency Departments: Who we are

2023 Emergency Department Data

Annual visits: 902,055

Ambulance arrivals: 190,859

Hospital admissions: 136,376

(59% of total admissions)

Total boarding hours: 186,387

Patients requiring psychiatric care 51,094

Approximately 40% of bed capacity limited by psych holds and boarding

Systemwide APOT Committee

GREAT REPRESENTATION FROM ACROSS THE SYSTEM!

A3 PROCESS

EXECUTIVE SUPPORT

REPORT TO SYSTEM ED CLINICAL IMPROVEMENT COMMITTEE MONTHLY

WEEKLY REPORTING

EPIC DATA COLLECTION

STANDARDIZE DATA COLLECTION

IMPROVING TECHNOLOGY

Ambulance Patient Offload Time (APOT)

SBAR

- **S**ituation
- **B**ackground
- **A**ssessment
- **R**ecommendation

Ambulance Patient Offload Time (APOT)

Sutter Health

October 2022

SBAR: Ambulance Patient Offload Time (APOT)

Situation

Sutter Health has identified delays to ambulance patient offload times (APOTS) across the system.

Background

At present, the APOTS times that are reported to the state are produced by local EMS. There is no current process for internal data review at the Sutter system level or individual affiliates.

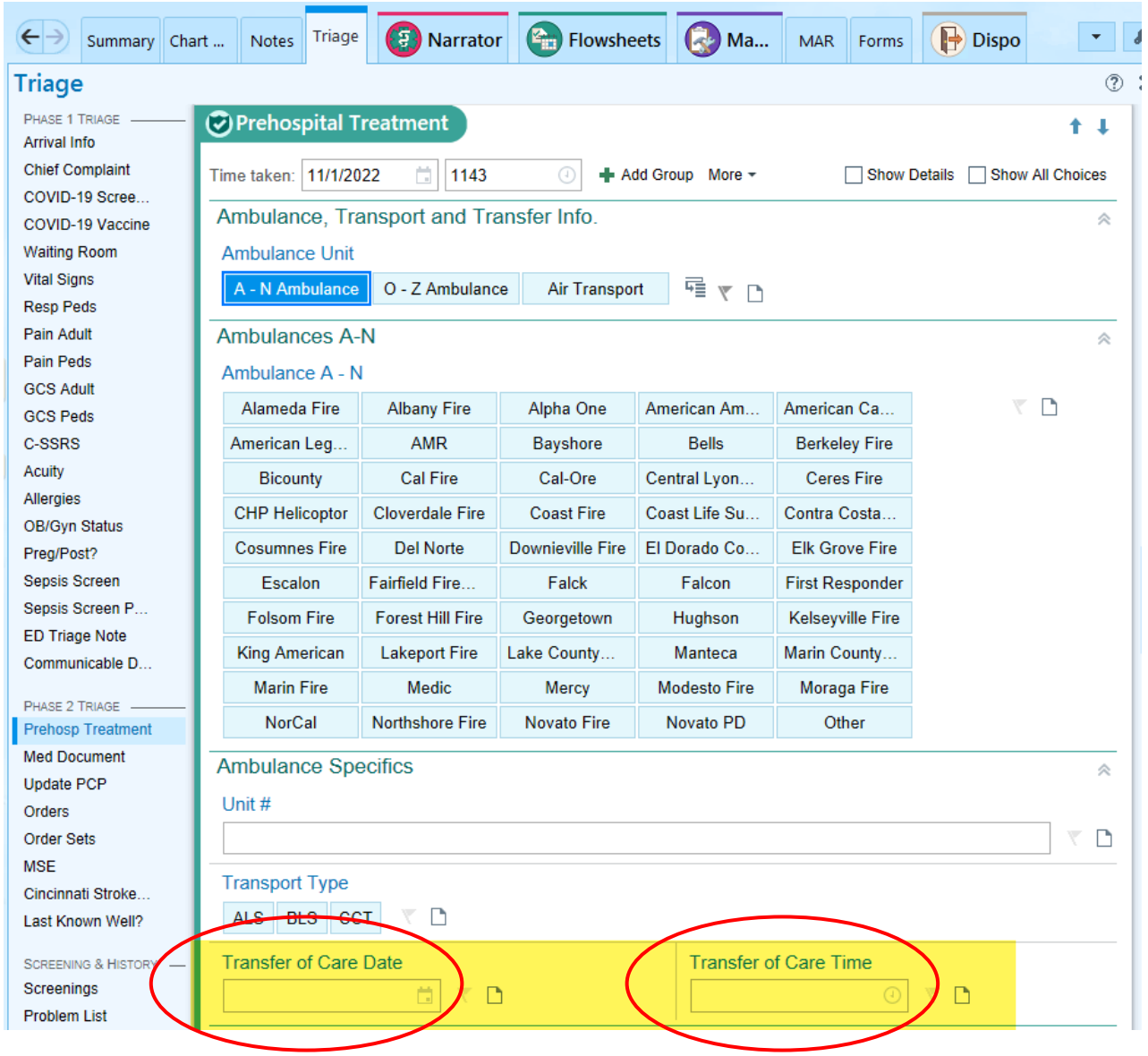
Assessment

There is variation across affiliates in both Epic ED Manager build structure as well as workflows for ambulance arrivals. There is currently no timestamp used in Epic that accurately represents ambulance offload time across all sites.

Recommendation

Adopt timestamp for "Transfer of Care" in Prehospital Treatment section of Triage navigator. Standardize EHR workflow across all affiliates to include this timestamp so reports can be produced Sutter System wide. When a patient arriving by ambulance is assigned a care space in the emergency department (i.e., ED room; triage; lobby) the nurse receiving report will open the Prehospital Treatment in the triage section and will update the "Transfer of Care Date and Time".

EPIC


Summary
Chart ...
Notes
Triage
Narrator
Flowsheets
Ma...
MAR
Forms
Dispo
Triage
PHASE 1 TRIAGE
Arrival Info
Chief Complaint
COVID-19 Scree...
COVID-19 Vaccine
Waiting Room
Vital Signs
Resp Peds
Pain Adult
Pain Peds
GCS Adult
GCS Peds
C-SSRS
Acuity
Allergies
OB/Gyn Status
Preg/Post?
Sepsis Screen
Sepsis Screen P...
ED Triage Note
Communicable D...
PHASE 2 TRIAGE
Prehosp Treatment
Med Document
Update PCP
Orders
Order Sets
MSE
Cincinnati Stroke...
Last Known Well?
SCREENING & HISTORY
Screenings
Problem List
Prehospital Treatment
Time taken: 11/1/2022 1143
Add Group
More
Show Details
Show All Choices
Ambulance, Transport and Transfer Info.
Ambulance Unit
A - N Ambulance
O - Z Ambulance
Air Transport
Ambulances A-N
Ambulance A - N
Alameda Fire
Albany Fire
Alpha One
American Am...
American Ca...
American Leg...
AMR
Bayshore
Bells
Berkeley Fire
Bicounty
Cal Fire
Cal-Ore
Central Lyon...
Ceres Fire
CHP Helicoptor
Cloverdale Fire
Coast Fire
Coast Life Su...
Contra Costa...
Cosumnes Fire
Del Norte
Downieville Fire
El Dorado Co...
Elk Grove Fire
Escalon
Fairfield Fire...
Falck
Falcon
First Responder
Folsom Fire
Forest Hill Fire
Georgetown
Hughson
Kelseyville Fire
King American
Lakeport Fire
Lake County...
Manteca
Marin County...
Marin Fire
Medic
Mercy
Modesto Fire
Moraga Fire
NorCal
Northshore Fire
Novato Fire
Novato PD
Other
Ambulance Specifics
Unit #
Transport Type
ALS
BLS
CCT
Transfer of Care Date
Transfer of Care Time

FAQ: Ambulance Patient Offload Time (APOT)

Sutter Health

EPIC: Ambulance Turnover of Care Time

October 21st, 2022

Q: When does the time start for "Turnover of Care"?

A: When a patient arrives by ambulance, the first contact with a healthcare provider when a patient is arrived into EPIC known as the "Arrival Time" will be captured as the first time stamp.

Q: When does the time end for "Turnover of Care"?

A: Turnover of care measures patient arrival time to actual hand off of care, i.e. turnover of care.

Q: If the patient is sent to the lobby or to a triage room, who completes the "Turnover of Care" date and time?

A: When a patient is sent to the lobby, the registered nurse (RN) who completes the triage report will complete the date and time in EPIC in Ambulance Transport and Transfer Info section

Q: Who can arrive a patient arriving by ambulance?

A: The arrival can be done anyone, i.e. RN, ED tech, unit secretary, clerk, etc. and the Transfer of Care has to be done by the actual RN?Yes. The arrival time starts when the patient is registered into EPIC by any hospital staff (Clerk/Reg/RN).

Q: Who can complete the Turnover of Care?

A: The Turnover of Care has to be completed by the actual RN receiving report and releasing the medic.

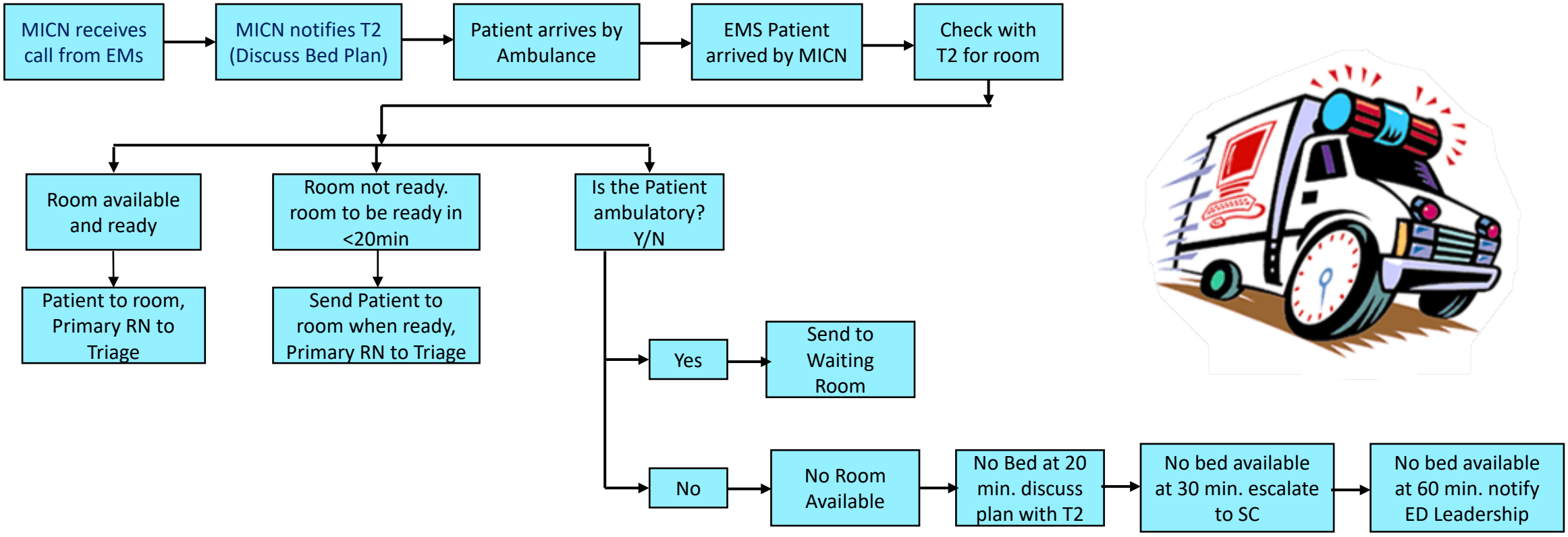
Standard Work: Direct Bedding

Standard Work					
Process	Direct Bedding of Ambulance Patients	Last Updated	1/24/2021	Owner	Debbie Madding
Done of Process	Patients that arrive by ambulance placed in bed	Rev. Number	1	Takt Time	
Performed by	MICN/T2/SC	Revised by			

Standard Work **Direct Bedding of Ambulance Patients**

	Major Steps	Details (if applicable)	Time	Diagram, Work Flow, Picture, Time Grid
1	MICN receives Call from EMS	• MICN answers call from EMS and determines level of acuity based on report	2 min	▼
2	MICN notifies appropriate staff based on level of acuity	Specialty Activation • Notify SC or North Lead to determine appropriate bed • Notify USNA to page based on specialty resources needed: Example: Stroke Code; Trauma; Code Critical; STEMI Ambulatory Patient • On EMS report if patient ambulatory; MICN to advise EMS to offload patient in wheelchair in ambulance by and direct EMS to go to Triage for arrival • MICN to notify T2 Medic number; chief complaint; and ETA • If patient arrives with an IV, triage RN to remove IV if no ED bed available and patient to be place in waiting	2-5 mins	***First Watch to be loaded on MICN; T2; and SC computers for early notification of incoming medics https://subscriber.firstwatch.net/login User ID: SRMC Password: SRMC

Ambulance Workflow



Sutter Health Monthly APOT Meetings

REPORT OUT DATA AND IMPROVEMENTS USING A3 PROCESS

SHARING BEST PRACTICES

A3 Process

Sutter Health CPMC Mission Bernal Campus	Title: Ambulance Patient Offload Time (APOT)	Sponsor (Coach):	Problem Solver: Bryan Mayo	Date Initiated: January 2023	Estimated Completion: TBD	Revision: (5) 8/23/2023
	Stakeholders: Emergency Department Leaders; Site Based Leadership					

Perceived Problem: *Due to pending legislation and a variation in workflow, standard work is needed to improve throughput in the Emergency Department to reduce Ambulance Patient Offload Times (APOT).*
AIM: To standardize the workflow in our emergency departments to reduce APOT to a transfer of care time of 30 minutes/90% of the time.
SCOPE: Sutter Health Emergency Departments; Local Emergency Medical Services (LEMSA); paramedics/fire; patients arriving by ambulance
TRIGGER: A patient arrives by paramedics for care at our emergency department
DONE: All patients arriving by ambulance; transfer of care is completed within 30 minutes/90% of the time

Target Condition: *Standard work is implemented at Sutter Health Emergency Departments and Turnover of Care for patients arriving by ambulance is within 30 minutes/90% of the time.*

1. *Design standard work at all Emergency Departments*
2. *Collaboration with local EMS Agency (LEMSA) agencies to validate data for Turnover of Care times*
3. *ED RN completes the Turnover of Care Time in EPIC 100% of the time*

Current Condition:

Date	Reported LEMSA APOT 2022	Reduce APOT by 10 minutes	Reported LEMSA 2023 YTD	Previous Month APOT 90th percentile
8/23/2023	46.1 min	36.1 minutes	47.6 min	(7/23) 45.2 minutes

Target
All patients arriving by EMS; Turnover of Care within 30 minutes/90% of the time

Step 2: Gap Analysis

- **CPMC EPIC data entered by triage nurses has many noted discrepancies to EMS data from PCRs.**
- **Reluctance from RNs to get brief report and VS and send EMS / patient to lobby for offload**
- **EMS bunching around 1400 – 1700 on most days of the week lends to increased APOT times.**
- **SF Reddinet ALERT function and recent modifications has rendered the function nonbeneficial to decreasing EMS bunching**
- **April 6, 2023: Meeting the local emergency medical services agencies (LEMSA) sharing system-wide APOT work group and system-wide level initiatives.**
- **Summer 2023: SF Controller's Office doing a report on APOT and diversion times to be presented to the CEOs in August 2023.**

APOT Process 04/01/2023

- **EMS arrives on apron of EMS bay. Once in department the UC or CN registers the patient into the "master log" in EPIC**
- **CN or available nurses triage triages patient or decides if patient can safely be sent to lobby for triage**
- **Triage is completed and offload location is identified, and EMS crew is directed to offload the patient**
- **If wall time is occurring, CN is to identify patients that can be moved to accommodate the EMS offload that is waiting.**
- **CNs are to run the board with ED provider every two hours to ensure maximum throughput is being achieved to decrease risk of APOT time with inbound EMS patients.**

Step 3: Identify and Test Countermeasure

Metric
< 30 min offload/90% of the time

Step 4: Implement Countermeasures

SEE BELOW

Step 5: Ambulance Patient Offload Time (APOT)

- EMS Data is not present for 7/28 and 7/31 for Mission Bernal ED

Step 6: Share Successful Processes/Action Items

- RNs have successfully been socialized to required prehospital documentation with minimal fallouts.
- NOC CN have been required to review and correct any CPMC prehospital missing offload times daily. This has been 94% successful. There may only be one or two charts where the CN missed correcting the times before the next day.
- APOT times have been reduced **4.8** mins as reported by EMS YTD **(January 2023 at 50 minutes → 45.2 minutes as of July 2023)**. CPMC Data reflects an average of **32.7** minutes in 90th percentile YTD.

Next Steps

- Continue working with data and sharing with LEMSA for comparison and validation of data
- Monitor and correct any barriers that arise causing issues with APOT times.
- Continue to work with Sutter APOT committees to ensure that we are sharing best practices to streamline the process across Sutter EDs

A3 Process

What	When	By whom	Complete	Last Action	
Socializing offload documentation through KDS shared by Rose Colangelo	10/2022	Bryan Mayo	Yes	Shared through mass mail to RNs in the MBC ED	Monitor c captured b
EPIC Ambulance Turnover of Care FAQ	10/21/2022	Bryan Mayo	Yes	Shared through mass mail to RNs in the MBC ED	Monitor c captured b
Monitoring Data Entry	11/2022 through 12/2022	Bryan Mayo	Yes	Shared findings with individual ED Managers how their departments we are meeting the metrics regarding data entry for prehospital information.	Continue to rega

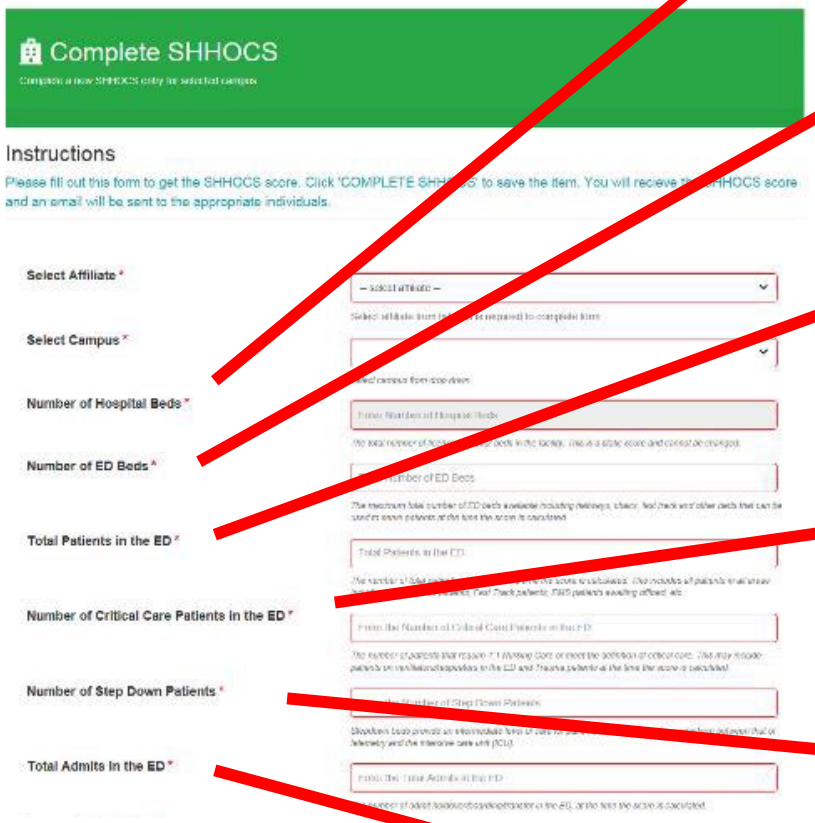
SHHOCS Tool

Sutter Health Hospital Over Capacity Scale

SHHOCS Score

Phase 1	Phase II	Phase III	Phase IV	Phase V	Phase VI
00 to 100 Normal Operations	**101 to 150** Daily Operations: Not exceeding current capacity/resources	**151 to 200** Over Crowded: Need for hospital/emergency services is nearing the limitations of available resources.	**201 to 250** Over Capacity: Need for hospital/emergency services exceeds available resources. **Code Triage Internal Alert, Hospital Incident Command System (HICS)** and **Ambulance Patient Diversion** may, but not always, be initiated (situational dependent)	**251** Critical Over Capacity: **Code Triage Internal Activation, Hospital Incident Command System (HICS)** and **Ambulance Patient Diversion** is strongly recommended for activation(situational dependent)	**Disaster: NO SCORE REQUIRED** **Extreme** Acute or Extended Disaster Response, Local and State and possible Federal Disaster involvement, Alternate Care Sites and Austere Care Activated. **HICS would be activated every time.**

In Detail



Hospital Beds

The total number of licensed hospital beds in the facility. This is a static score and cannot be changed.

ED Beds

The maximum total number of ED beds available including hallways, chairs, fast track and other beds that can be used to serve patients at the time the score is calculated.

Total Patients in ED

The number of total patients in the ED at the time the score is calculated. This includes all patients in all areas including waiting room patients, Fast Track patients, EMS patients awaiting offload, etc.

Critical Care Pts.

The number of patients that require 1:1 Nursing Care or meet the definition of critical care. This may include patients on ventilators/respirators in the ED and Trauma patients at the time the score is calculated.

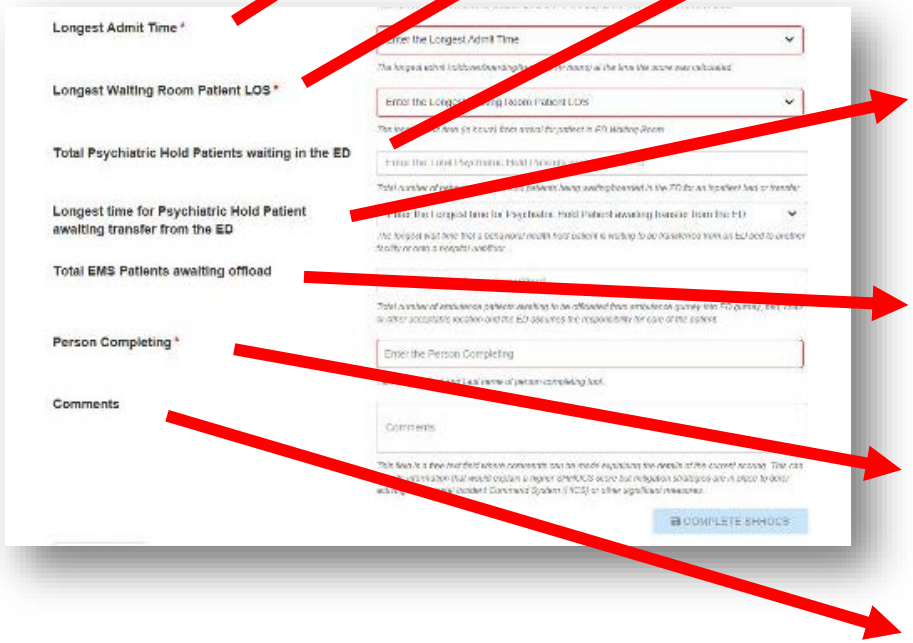
Step Down Patients

Stepdown beds provide an intermediate level of care for patients with requirements somewhere between that of telemetry and the intensive care unit (ICU). If this field does not apply to your affiliate, leave at zero (0).

Total Admits in ED (including transfers)

The longest admit holdover/boarding/transfers (in hours) at the time the score was calculated.

In Detail



Longest Admit
The longest admit holdover/ boarding/transfer (in hours) at the time the score was calculated.

Longest Waiting Room Patient LOS (in hours)
The longest wait time (in hours) from arrival for patient in ED Waiting Room.

Total Psychiatric Hold Patients waiting in the ED
Total number of behavioral health hold patients being waiting/boarded in the ED for an inpatient bed or transfer.

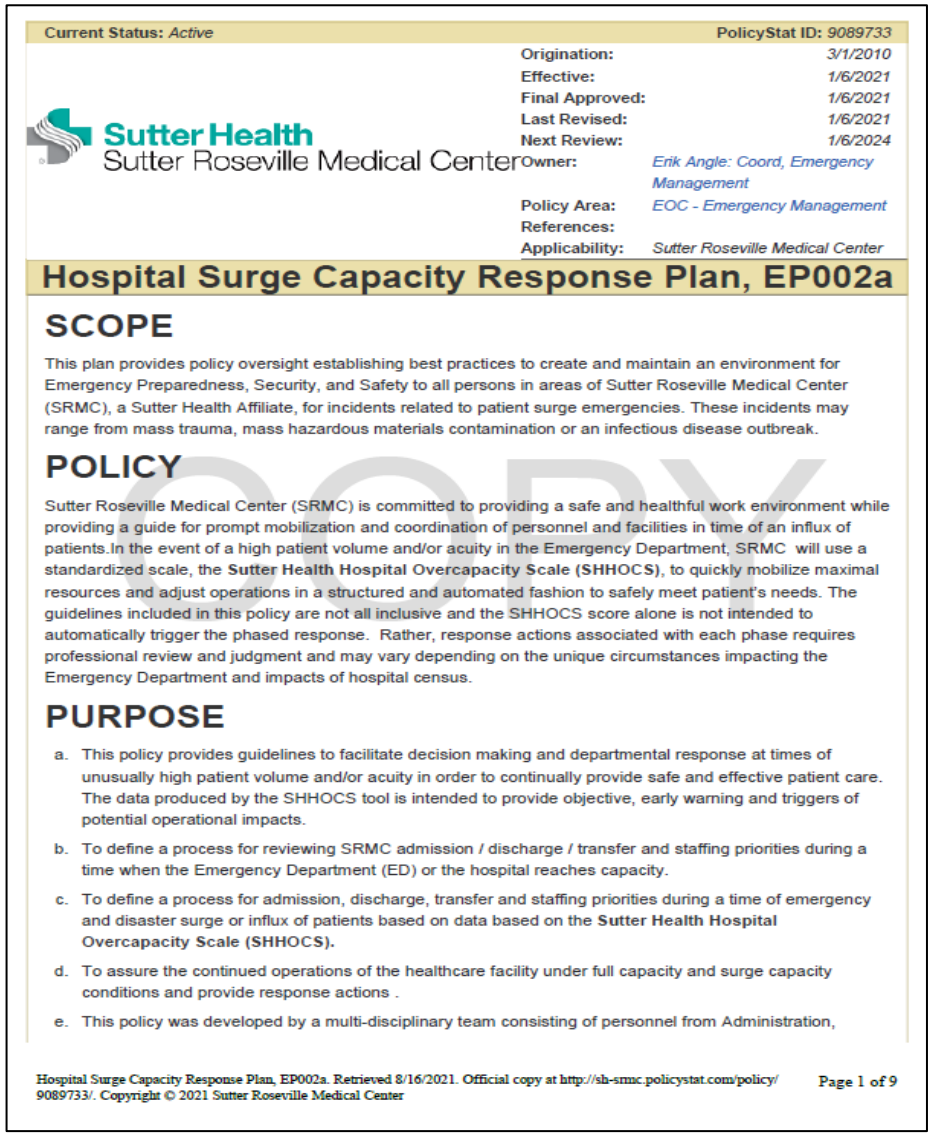
Longest time for Psychiatric Hold Patient awaiting transfer from the ED (in hours)
The longest wait time that a behavioral health hold patient is waiting to be transferred from an ED bed to another facility or onto a hospital unit/floor.

Total EMS Patients awaiting offload
Total number of ambulance patients awaiting to be offloaded from ambulance gurney into ED gurney, bed, chair or other acceptable location and the ED assumes the responsibility for care of the patient.

Person completing
Typed name of the person submitting the SHHOCS scoring/report. This is a required field and the form will not be submitted without.

Comments
This field is a free text field where comments can be made explaining the details of the current scoring. This can include information that would explain a higher SHHOCS score but mitigation strategies are in place to defer activing the Hospital Incident Command System (HICS) or other significant measures.

SHHOCS Capacity Management Policy



Current Status: *Active* **PolicyStat ID:** *9089733*

Sutter Health
Sutter Roseville Medical Center

Origination:	*3/1/2010*
Effective:	*1/6/2021*
Final Approved:	*1/6/2021*
Last Revised:	*1/6/2021*
Next Review:	*1/6/2024*
Owner:	*Erik Angle: Coord, Emergency Management*
Policy Area:	*EOC - Emergency Management*
References:	
Applicability:	*Sutter Roseville Medical Center*

Hospital Surge Capacity Response Plan, EP002a

SCOPE

This plan provides policy oversight establishing best practices to create and maintain an environment for Emergency Preparedness, Security, and Safety to all persons in areas of Sutter Roseville Medical Center (SRMC), a Sutter Health Affiliate, for incidents related to patient surge emergencies. These incidents may range from mass trauma, mass hazardous materials contamination or an infectious disease outbreak.

POLICY

Sutter Roseville Medical Center (SRMC) is committed to providing a safe and healthful work environment while providing a guide for prompt mobilization and coordination of personnel and facilities in time of an influx of patients.In the event of a high patient volume and/or acuity in the Emergency Department, SRMC will use a standardized scale, the **Sutter Health Hospital Overcapacity Scale (SHHOCS)**, to quickly mobilize maximal resources and adjust operations in a structured and automated fashion to safely meet patient's needs. The guidelines included in this policy are not all inclusive and the SHHOCS score alone is not intended to automatically trigger the phased response. Rather, response actions associated with each phase requires professional review and judgment and may vary depending on the unique circumstances impacting the Emergency Department and impacts of hospital census.

PURPOSE

a. This policy provides guidelines to facilitate decision making and departmental response at times of unusually high patient volume and/or acuity in order to continually provide safe and effective patient care. The data produced by the SHHOCS tool is intended to provide objective, early warning and triggers of potential operational impacts.

b. To define a process for reviewing SRMC admission / discharge / transfer and staffing priorities during a time when the Emergency Department (ED) or the hospital reaches capacity.

c. To define a process for admission, discharge, transfer and staffing priorities during a time of emergency and disaster surge or influx of patients based on data based on the **Sutter Health Hospital Overcapacity Scale (SHHOCS).**

d. To assure the continued operations of the healthcare facility under full capacity and surge capacity conditions and provide response actions .

e. This policy was developed by a multi-disciplinary team consisting of personnel from Administration,

Hospital Surge Capacity Response Plan, EP002a. Retrieved 8/16/2021. Official copy at http://sh-srmc.policystat.com/policy/9089733/. Copyright © 2021 Sutter Roseville Medical Center

Questions/Comments

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