

ASPR TRACIE Technical Assistance Request

Request Receipt Date (by ASPR TRACIE): 8 November 2021

Response Date: 11 November 2021

Type of TA Request: Complex

Request:

The requestor asked for information in identifying emergency department (ED) waiting room processes and workflows that may improve door-to triage times during increased capacity/ surge while maintaining patient confidentiality and patient accountability. The requestor noted that due to the most recent COVID-19 pandemic surge, their regional level 1 trauma center ED has routinely remained at a disaster level National Emergency Department Overcrowding Scale (NEDOCS) census and admission holds remaining in the ED for the duration of their stay. Their 75-bed adult ED has had current patient numbers of 150-160 with 60-70 patients holding in the waiting room. This issue has created gridlock in the ED waiting room, slowing triage workflow and increasing patient safety risks.

Response:

The ASPR TRACIE Team reviewed our existing resources, specifically: [COVID-19 Hospital Resources](#), and [Hospital Surge Capacity and Immediate Bed Availability Topic Collection](#) (not COVID-19 specific). We also reached out to our Subject Matter Expert (SME) cadre members to gather feedback or related materials. All resources gathered are provided in this document.

Please refer to the Centers for Disease Control and Prevention's [Coronavirus Disease 2019 webpage](#) and the National Institutes of Health [Coronavirus Disease 2019 \(COVID-19\) Treatment Guidelines](#) for the most up-to-date guidance on COVID-19 outbreak management.

I. SME Comments

Please note: These are direct quotes or paraphrased comments from emails and other correspondence provided by ASPR TRACIE SME Cadre members in response to this specific request. They do not necessarily express the views of ASPR or ASPR TRACIE.

SME Cadre Member 1:

- I think there are a few considerations for this question.
 1. What is causing the ED holds? Is it due to lack of inpatient beds, lack of staffed inpatient beds, problems discharging to post-acute care, no place to discharge

(lack of home or family support), problems with Emergency Medical Services (EMS)/ transportation? Each of these issues would require a different response:

- a) Lack of inpatient beds: We have been able to double beds in some patient rooms, and also have converted non-traditional inpatient areas (PACU, diagnostic areas) to inpatient locations.
 - b) Lack of staff: In Texas, Tennessee, and Alabama, we received support from the National Guard. They were not all medical providers, but they were able to take on non-clinical roles, which freed some clinical staff.
 - c) Problems discharging to post-acute care: We have run into problems with discharge to long-term care (LTC) (not accepting COVID-19 positive patients or having to wait for a negative test, lack of personal protective equipment (PPE)/ staff), and also delays in discharge to home because of lack of durable medical equipment (DME) need by patient. For LTCs, we have worked with the facilities to either provide PPE, or work with state to provide staffing support. For DME, we purchased the DME (leveraging our national vendors) to assist with discharge.
 - d) No place to discharge: We worked with local (city/county) public health and emergency management to open shelters.
 - e) Problems with EMS: We have engaged private services, asked municipal services to perform transports (even though they traditionally did not do this. We also better trained our staff to use appropriate transportation (car, wheelchair van are alternatives to ambulance stretcher). We also have a relationship with Lyft to transport those that do not require special needs.
2. Alternate Care Sites: We have turned non-traditional areas into inpatient wards. This includes auditoriums, diagnostic areas, and PACU. We have three 60 bed hospital tents, and set up one, but never had to use it. We also helped local governments set up community care centers in Michigan, Texas, and Alabama (staffed by contract clinicians), but they never were fully utilized due to hospitals being able to increase capacity.
 3. Long Term Care: An associate in Virginia contracted for empty space in LTC facilities as overflow for medical/ surgical COVID-19 inpatients.
- Remember, many of these non-traditional surge areas may require an 1135 waiver. You must document in your Incident Command System (ICS) log what waiver you are using, the need for it, and when the waiver was closed. We also suggest you add these items to your emergency operations center (EOC) committee minutes.

SME Cadre Member 2:

- Deploy advanced practice providers (APPs) or medical doctors (MDs) to the triage area to participate in initial screening and either complete the visit at that time, refer to a clinic(s), refer to a “fast track” area of triage, or order workup to maximize use of time in the triage area.

- Develop a “fast track” ambulatory area. For example, reclining chairs with curtains or other alternatives, and convert rooms with different function in the triage area to private consultation rooms for rapid cycle exams/ results discussion.
- Assure process to move patients with pending radiographs to radiology waiting immediately from triage and return them to a designated area of the ED (results pending area).
- Deploy phlebotomists, paramedics, or other trained personnel to collect blood samples for lab testing at triage in a designated area,
- Consider a call-back/ text notification system for minor complaints to minimize congestion in the triage area.
- Partner with clinics to accept acute, non-emergency referrals. This may include dentists and other specialists in addition to primary care/ pediatrics.
- Consider use of abbreviated or paper charting for low acuity visits or create new templates for triage encounters to assure completion of Level 3 documentation by an APP/ MD for billing purposes. This may be appropriate even if the patient leaves without being further seen.

SME Cadre Member 3:

- Our hospital has been using a model of early patient evaluation by providers that is linked to use of internal waiting rooms following the evaluation in our ED for many years now, and it has proven to be very helpful to our flow and safety.
- Like everyone else, we are straining under the capacity challenges, but our median door to provider time is under 40 minutes and we do not have large crowds in the first waiting room who have not been evaluated well for possible major illnesses.

II. Select Resources

American College of Emergency Physicians. (2020). [National Strategic Plan for Emergency Department Management of Outbreaks of COVID-19.](#)

This plan identifies the ED capabilities required for effective management of the COVID-19 pandemic. It provides background information, risk awareness considerations, response recommendations, and a management strategy. It also includes an annex table of key actions needed indicating responsibilities of emergency management nationally, the federal government, state and local government, state and local public health, EDs, and hospitals.

ASPR TRACIE. (2021). [Hospital Emergency Department \(ED\) Overcrowding Scales.](#)

This ASPR TRACIE TA response document provides articles and a comparison calculation chart related to the (six) primary tools/ scales/ methods used by EDs to quantitatively determine overcrowding.

Boyle, A., Beniuk, K., Higginson, I., and Atkinson, P. (2012). [Emergency Department Crowding: Time for Interventions and Policy Evaluations](#). *Emergency Medicine International*.

This article discusses the causes and consequences of ED crowding, and interventions to address crowding at the hospital level, and at the policy level. Table 1 illustrates a comparison of ED crowding scales by calculation and outcome, and includes a notes section.

College of Urgent Care Medicine and American College of Emergency Physicians. (2020). [Risk Stratification Guide for Severity Assessment and Triage of Suspected or Confirmed COVID-19 Patients \(Adults\) in Urgent Care](#).

This one-pager developed jointly by the College of Urgent Care Medicine and the American College of Emergency Physicians assists clinicians in determining whether suspected or confirmed COVID-19 patients should be discharged to their homes or transferred to an ED.

Connecticut Children’s Medical Center. (2020). [COVID-19 Pathway Background and Objective\(s\)](#).

This web page features clinical pathways to assist providers in evaluating, diagnosing, and triaging patients possibly infected with COVID-19 while following appropriate infection prevention protocols. Algorithms exist for primary care, ancillary services, subspecialty ambulatory, and ED and inpatient settings.

Envision Physician Services. (2020). [Emergency Physician and Midlevel Surge Capacity Protocols \(ED & IPS\)](#).

This protocol defines the process for managing ED surge capacity and preventing patients from leaving without a screening exam.

Fagbuyi, D. B., Brown, K.M., Mathison, D.J., et al. (2011). [A Rapid Medical Screening Process Improves Emergency Department Patient Flow during Surge Associated with Novel H1N1 Influenza Virus](#). *Annals of Emergency Medicine*. 57(1): 52-9.

The authors used a new rapid screening process to manage patient surge associated with the 2009 H1N1 pandemic and found that it—along with a slight increase in staffing—improved patient flow and had no effect on emergency room return rates within two or seven days.

Love, J., Karp, D., Delgado, M., et al. (2016). [National Differences in Regional Emergency Department Boarding Times: Are US Emergency Departments Prepared for a Public Health Emergency?](#) (Abstract only.) *Disaster Medicine and Public Health Preparedness*. 10(4):576-582.

The authors examined differences in patient boarding times in U.S. areas at risk for public health emergencies. They found that 86% of at-risk hospital referral regions had high boarding times (suggesting greater vulnerability), though it is important to note the limitations associated with drawing conclusions solely based on daily capacity.

Mills, A., Helm, J., and Wang, Y. (2017). [Surge Capacity Deployment in Hospitals: Effectiveness of Response and Mitigation Strategies](#). (Free registration required.) Department of Operations and Decision Technologies, Kelley School of Business, Indiana University.

The authors used operations modeling to assess the effects of “coordinated discharge” (i.e., coordinated between the ED and in-patient units) during the response phase, and “workflow smoothing” (i.e., managing elective demand in the in-patient units) during the mitigation phase, on surge capacity. They concluded that hospitals with higher utilization and shorter lengths of stay would benefit more from workflow smoothing, and hospitals with lower utilization and longer lengths of stay would benefit more from coordinated discharge.

Soremekun, O.A., Capp, R., Biddinger, P.D., et al. (2012). [Impact of Physician Screening in the Emergency Department on Patient Flow](#). (Abstract only.) *The Journal of Emergency Medicine*. 43(3):509-15.

This two-year study was aimed at determining the impact of physician triage on ED patient flow. Results indicated that the median time to disposition decision decreased by six minutes. Other physician evaluation times also decreased, which provided statistically significant data.

Patient-Centered Outcomes Research Institute. (2021). [Confronting COVID-19: Finding Hospital Capacity and Improving Patient Flow](#).

This six-part webinar series offers information on managing patient surge during the COVID-19 pandemic. Topics include managing incident command, the ED, elective and urgent surgery, nurse staffing, patient discharge, and telehealth. Recordings and summary reports are available for each webinar.

Pollaris, G. and Sabbe, M. (2016). [Reverse Triage: More Than Just Another Method](#). (Abstract only.) *European Journal of Emergency Medicine*. 23(4):240-247.

The authors reviewed articles on reverse triage from 2004-2014 and found that, at most, 10-20% of hospital total bed capacity can be made available within a few hours. They note that reverse triage could be a response to ED crowding, as it gives priority to ED patients with urgent needs over inpatients who can be discharged with little to no health risks.

Project ECHO. (2021). [HHS ASPR Clinical Rounds](#). The University of New Mexico School of Medicine.

The U.S. Department of Health and Human Services (HHS), Office of the Assistant Secretary for Preparedness and Response (ASPR), Project ECHO, National Emerging Special Pathogens Training and Education Center (NETEC), and other public-private partners host a national series of weekly clinical rounds. This peer-to-peer learning network focuses on critical care, ED, and emergency medical services patient care and operations. Videos and slides are available following each session. **NOTE:** There are multiple sessions related to ED lessons learned and promising practices that may be of interest.

Rogg, J.G., White, B.A., Biddinger, P.D., et al. (2013). [A Long-term Analysis of Physician Triage Screening in the Emergency Department](#). *Academic Emergency Medicine*. 20(4), Pages 374-380.

The authors of this retrospective, observational, before-and-after study assessed the effect of the Supplemented Triage and Rapid Treatment (START) intervention on standard ED performance measures. They compared performance measures over four years in a tertiary care urban academic medical center with around 90,000 annual ED visits. Patients seen between December 2006 and November 2010 were included in the study. Results indicated that physician screening provided improvements in ED performance measures including ED length of stay, percentage of patients who left without complete assessment, door-to-room time, and percentage of patients treated without using a monitored beds, despite increasing ED volume.

U.S. Department of Health and Human Services, Office of the Assistant Secretary for Preparedness and Response. (2017). [Hospital Surge Evaluation Tool](#).

This tool can be used by hospital emergency planners, administrators, and other personnel to both assess and enhance their facility's surge plans. It includes evaluation tools specific to ED triage and hospital incident command.

White. B.A., Brown, D.F.M., Sinclair, J., et al. (2012). [Supplemented Triage and Rapid Treatment \(START\) Improves Performance Measures in the Emergency Department](#). (Abstract only.) The Journal of Emergency Medicine. 42(3), Pages 322-328.

The authors of this retrospective before–after study assessed the effect of the START intervention on standard ED performance measures. Results indicated that a comprehensive screening and clinical care program was linked with a significant decrease in overall ED length of stay, length of stay for discharged and admitted patients, and rate of patients left without complete assessment, despite an increase in ED patient volume.