

**Special Edition:
COVID-19 Lessons Learned**



**CORONAVIRUS
2019-nCoV**

the E **CHANGE**

ASPR
ASSISTANT SECRETARY FOR
PREPAREDNESS AND RESPONSE



TRACIE
HEALTHCARE EMERGENCY PREPAREDNESS
INFORMATION GATEWAY

FOREWORD

COVID-19 Healthcare Lessons Learned

Over the past several months, those of us in healthcare emergency readiness and response—and the communities we serve—have faced unprecedented challenges. COVID-19 has called for our partners and stakeholders to make herculean efforts to mitigate the virus' effects on patients and providers alike. To help manage the response, ASPR created a [COVID-19: 2019 Novel Coronavirus](#) webpage, where you can find information on:

- Biomedical Advanced Research and Development Authority's (BARDA) [Novel Coronavirus Countermeasures Portfolio](#) (e.g., vaccines, diagnostics, and therapeutics)
- [ASPR's Portfolio of Medical Countermeasures \(MCM\) Under Investigation](#) (therapeutic products and diagnostic tests)
- [Working with BARDA on COVID-19 MCM](#);
- The [Strategic National Stockpile](#) (e.g., ventilators, respirators, requesting support, training)
- [Hospital Preparedness Program and Healthcare System Preparedness and Response](#) (e.g., funding, grant flexibility)
- [Emergency Declarations and Waivers](#)
- [Mental and Behavioral Health](#)
- [Volunteering and Community Service](#)
- [Meeting the Needs of At-Risk Individuals](#)
- [Online Training Webinars and Peer-to-Peer Sessions](#)

We also include a link to ASPR TRACIE's [Novel Coronavirus Resources Page](#), where stakeholders can access succinct resource collections that contain the most current and relevant plans, tools, templates, and reports; links to other helpful COVID-19 websites (including the [Healthcare Resilience Task Force's COVID-19 Workforce Resilience Toolkit](#)); and ASPR TRACIE-developed COVID-19 resources (e.g., webinars and quick sheets). Please continue to monitor the Centers for Disease Control and Prevention's pages on [2019 Novel Coronavirus](#) and [Influenza](#).

The articles in this issue of *The Exchange* highlight lessons learned (from the responder, practitioner, and planner perspectives) specific to COVID-19 patient surge; patient, caregiver, and provider behavioral health; operational considerations; and telehealth. At the end, we consider "what's next" and include links to articles on topics such as civil unrest during a pandemic, resumption of services, and healthcare system preparedness for secondary disasters during COVID-19. Along those lines, I encourage you to visit ASPR's [2020 Earthquakes in Puerto Rico](#) webpage, ASPR TRACIE's [Natural Disasters Topic Collection](#), and [CDC's Influenza page](#).

As we continue taking steps to protect the country, exploring the development of new countermeasures and enhancing health security, it continues to be our honor to do so alongside so many esteemed partners and stakeholders. Our role in the federal COVID-19 response for vaccines/therapeutics has demonstrated the value of these partnerships; working together and around the clock has significantly shortened the amount of time it traditionally takes to develop countermeasures. We are currently conducting clinical trials of vaccine and monoclonal antibody candidates, and information about volunteering for one of these trials may be found at <https://www.coronaviruspreventionnetwork.org/>

ASPR TRACIE develops resources in conjunction with partners, stakeholders, and other subject matter experts who have direct experiences in the field. I invite you to [share](#) your own promising practices, lessons learned, or requests for technical assistance about COVID-19 so that others may learn from your experiences. As always, we welcome your feedback.



David Christian Hassell
PhD, Acting Principal Deputy
Assistant Secretary and Senior
Science Advisor

WELCOME TO ISSUE 11!

Our readers may notice that this issue of *The Exchange* is laid out a bit differently than [past issues](#). In the seven months since a public health emergency was declared due to the COVID-19 pandemic, our stakeholders are rapidly learning key lessons, driving innovation and making significant adjustments to protect patient and staff health. [ASPR TRACIE](#) has had the honor of working with subject matter experts (SMEs) to gather and share timely information throughout the pandemic. We recognize that our readers may feel overwhelmed by the amount of information coming out, and we know it changes frequently; we chose to present this issue in a “digest format,” allowing you to access numerous articles, tools, quick sheets, and templates—all vetted by SMEs and listed by category.

We hope that these resources and articles that document experiences shared by your colleagues across the nation are both helpful and reassuring. Please visit the [Centers for Disease Control and Prevention’s Coronavirus \(COVID-19\) page](#) for clinical information and our [Novel Coronavirus Resources page](#) for updates. Your feedback is what makes us successful—please [contact us](#) with comments, questions, technical assistance needs, and resources to share. We look forward to our continued collaboration.

Shayne Brannman, Director, ASPR TRACIE

John L. Hick, MD, Senior Editor

The ICF ASPR TRACIE Team:

Meghan Treber, Project Director

Audrey Mazurek, Deputy Project Director

Corina Solé Brito, Communications Manager and Technical Resources Lead

Bridget Kanawati, Assistance Center Lead

Jennifer Nieratko, Special Projects Manager

AT A GLANCE

5 Managing Patient Surge

These articles highlight various strategies, tools, and lessons learned related to COVID-19 patient surge.

7 Safety and Staff Health

This section includes links to resource collections, articles, webinars, and modules designed to support healthcare workers and other staff involved in COVID-19 response.

8 Operational Considerations

Many healthcare facilities had to make significant operational adjustments to manage their pandemic response. This section features links to resources (e.g., a webinar, articles) that detail how facilities ensured provider and patient safety.

9 Telehealth

The use of telehealth skyrocketed over the past several months; this section features various resources on the use of telehealth in alternate care sites, to provide behavioral health assistance, and in general.

10 Hot Topics/ What’s Next?

Critical incidents, natural disasters, and other challenges will not take a break as COVID-19 rages across the nation. This section highlights resources for on civil disturbance, planning for secondary disasters, rural challenges, and resuming healthcare services during a pandemic.



WHAT'S NEW WITH ASPR?

[The last issue of *The Exchange*](#) focused on preparing for and responding to wildfires and planned outages. A lot has happened around the world, the nation, and at ASPR since then. On January 31, 2020, HHS Secretary Azar issued the first COVID-19 public health emergency declaration; [this was renewed on July 23](#). What does a public health emergency declaration mean for public health and medical professionals? Check out the [PHE overview](#) and [frequently asked questions](#) (FAQ) to find out!

In July, BARDA and the Department of Defense [established an agreement](#) with a company to expand manufacturing capacity to produce safety needles and syringes in the United States. Throughout July and August, HHS and federal and private partners [announced collaborations](#) to manufacture and deliver millions of COVID-19 investigational vaccine doses.

Across the country, behavioral health practices are among the many kinds of healthcare practices that are reopening, but behavioral health practices face challenges, ranging from the interpersonal to the practical, as they reopen or find new ways to embrace telemedicine. The document [FAQ on Managing the Human Side of Reopening](#) includes for practical tips to help with reopening behavioral health practices.

We have witnessed firsthand how partnerships between public health and medical professionals to fight COVID-19 can help save lives. In April, HHS worked with its partners to transform the Javits Center in New York City into the Javits Medical Center, a facility that was used to treat 1,095 patients. [This video](#) highlights how responders from HHS/ASPR's National Disaster Medical System and other HHS experts rapidly scaled up operations at the Javits Center, turning it into a full-service field hospital, complete with an innovative oxygen supply system, a well-stocked pharmacy, lab and ICU.

Visit the [ASPR homepage](#), and [blog](#) and follow us on [LinkedIn](#), [Facebook](#), [Twitter](#), and [Instagram](#) to learn more about how ASPR is working to strengthen the nation's ability to prepare for, respond to, and recover from emergencies.



Managing Patient Surge

EDITOR'S NOTES

Surge capacity has been a key focus of healthcare disaster planning for over a decade. However, much of the planning has centered on hospital capacity for a mass casualty incident and not a protracted, regional/national event. This section highlights some lessons learned about standing up large alternate care sites (e.g., the Javits Center in New York City) to support hospital overflow, and describes the level of commitment needed to anticipate and overcome challenges, outlining the limitations and benefits of these sites. With many clinics closed, urgent care centers across the U.S. were positioned to provide critical services but also faced operational and coordination challenges. Overlapping lessons from our communities of color, indigenous, and rural communities are discussed in articles from Tuba City (AZ) and Imperial County (CA). A case study on regional patient movement (also called “load-balancing”), which can be critical to maintaining a regionally consistent standard of care, is also shared.

Experiences from the Field

- [Alternative Care Sites-The Federal Experience in New York City](#)
- [COVID-19 and Urgent Care: Lessons Learned for the Future](#)
- [COVID-19 and Tribal Hospitals: Tuba City Regional Health Care Corporation](#)
- [Moving Patients in a Pandemic: A Hybrid California Model Rescues Overwhelmed Hospitals](#)

Additional ASPR TRACIE Resources

- [ACS Funding Summary: Establishment and Operationalization](#)
- [Alternate Care Site \(ACS\) Toolkit: Third Edition](#)
- [Alternate Care Site Resources](#)
- [Alternate Care Sites \(ACS\) Sources of Additional Staff](#)
- [COVID-19 Alternate Care Site Resources](#)
- [COVID-19 Clinical Experiences from the Field](#)
- [COVID-19 Crisis Standards of Care Resources](#)
- [COVID-19 Critical Care Surge Resources](#)



- [COVID-19 Emergency Department Resources](#)
- [COVID-19: Healthcare System Operations Strategies and Experiences](#)
- [COVID-19 Outpatient Resources](#)
- [COVID-19 Pre-Hospital/EMS Resources](#)
- [Crisis Standards of Care and Infectious Disease Planning](#)
- [Establishing Medical Operations Coordination Cells \(MOCCs\) for COVID-19 Webinar](#)
- [Funding Sources for the Establishment and Operationalization of Alternate Care Sites Webinar](#)
- [Medical Operations Coordination Cells Toolkit \(First Edition\)](#)

Recognizing that there is likely to be a second wave, planning for the COVID-19 environment and providing a higher level of care upfront is safest. You can always take a step back and reduce levels, but we have to remember that these patients have a high degree of instability and we must have the PPE and appropriate medical equipment, supplies, and pharmaceuticals (and resupply) to treat higher-level of care patients and those also further decompensating in our ACS.

-- CAPT Renee Pazdan, PHS Strike Team 1





Safety and Staff Health

EDITOR'S NOTES

Maintaining a safe working environment and protecting staff has been a key challenge during COVID-19. Quality and education systems need to adjust to rapidly changing protocols and conditions. Further, healthcare staff face an unprecedented number of stressors including high patient volumes, acuity, and mortality rates; working long shifts often while wearing recycled or inadequate PPE; restrictions on patient visitors; fear of infecting family members; and many other factors. Maintaining staff physical and behavioral health is critical to maintaining adequate human resources. This section details some healthcare system safety and monitoring strategies from a recent webinar and provides links to resources that can improve staff safety, protection, and resilience.

Experiences from the Field

- [Ensuring Healthcare Safety Throughout the COVID-19 Pandemic Webinar](#)

Additional ASPR TRACIE Resources

- [COVID-19 Behavioral Health Resources](#)
- [COVID-19 Workforce Resilience/Sustainability Resources](#)
- [Disaster Behavioral Health Self Care for Healthcare Workers Modules](#)
- [Mini Modules to Relieve Stress For Healthcare Workers Responding to COVID-19](#)
 - [Creating a Practical Self-Care Plan in Difficult Times](#)
 - [Stress Management Exercise](#)
 - [Leading Towards Organizational Wellness in an Emergency](#)

Additional Resource

- [Well-being of Healthcare Workers During COVID-19 Crisis Webinar](#)

Treating COVID patients significantly affected many of our staff. Providers had to use Facetime to connect patients to loved ones so they could say goodbye before being placed on ventilators. It was heart-wrenching. On the flip side, in NY Metro, at 7:00 PM, when people would open their windows and cheer, and when firetrucks would line up outside of the hospitals to show support for the staff, that really kept staff going. We did and we still must provide ongoing psychological support for healthcare workers.

-- Mark Jarrett, Northwell Health



Operational Considerations

EDITOR'S NOTES

Hospital and healthcare system incident command rarely faces an event of the magnitude of COVID-19. Challenges faced include the protracted nature of the pandemic, the broad impact on services and supply chains, illness affecting staff at all levels, and the need to work and manage emergency operations virtually. Emphasis on using incident action plans, discipline in maintaining operational cycles, and ensuring adequate backup and time off for key positions is critical for success as detailed in our synopsis of learning points from leaders across the healthcare sector and related resources.

Experiences from the Field

- [Healthcare System Operations Strategies and Experiences Webinar](#)
- [Hospital Incident Command and Scalability in a Pandemic: Notes from the Field](#)

Additional ASPR TRACIE Resources

- [COVID-19 Drive-Through Testing/Community Screening Resources](#)
- [COVID-19 Emergency Department Resources](#)
- [COVID-19 Fatality Management Resources](#)
- [COVID-19 Hospital Triage/Screening Resources](#)
- [COVID-19 Legal/Regulatory/Authorities Resources](#)
- [COVID-19 Personal Protective Equipment Resources](#)
- [COVID-19 Pre-Hospital/Emergency Medical Services \(EMS\) Resources](#)
- [COVID-19 Regional Support Resources](#)
- [COVID-19 Supply Chain Resources](#)
- [Ensuring Healthcare Safety Throughout the COVID-19 Pandemic Webinar](#)

Additional Resource

- [COVID-19 Workforce Virtual Toolkit](#)

Our overall approach with individual HICS structures at each of our hospitals with a System Incident Management (SIM) coordinating response, through our corporate teams, worked very well. The use of Zoom, in particular, allowed us to communicate and address issues in an expedient fashion. I don't think a simple telephone call would have been able to accomplish as much and in-person meetings were not practical.

-- Jim Paturas, Yale New Haven Health





Telehealth

EDITOR'S NOTES

COVID-19 has prompted an explosion of telemedicine and telehealth applications. Though many of these are designed to replace or augment traditional outpatient services for patients, a key aspect of telemedicine is to bring physician consultation to rural or non-traditional sites of care. Defining the use in augmenting patient care and the public and private contributions to these systems is the foundation on which technological, policy, and clinical expertise must be leveraged to build a functioning system. This section details the application of telehealth in an alternate care site to augment on-site provider expertise and includes links to additional resources.

Experiences from the Field

- [Telehealth in Alternate Care Sites: Ensuring Patient Care and Staff Safety in Massachusetts](#)

Additional ASPR TRACIE Resources

- [COVID-19 and Telehealth Quick Sheet](#)
- [COVID-19 Telemedicine/Virtual Medical Care Resources](#)
- [Use of Telemedicine in Alternate Care Sites Webinar](#)

We quickly set up a virtual visit environment in lieu of having visitors within the room, particularly for those critically ill COVID patients. This allowed us to have as many family members virtually visiting with that patient (with a caregiver's assistance), making it more of a family unit celebration of life. Our virtual capacity was a significant success. We use Microsoft Teams all the time and that was, and continues to be, a lifesaver.

-- Julie Bulson, Spectrum Health





Hot Topics/ What's Next?

EDITOR'S NOTES

Unfortunately, a community can experience more than one emergency at a time. Despite the ongoing impact of COVID-19, many jurisdictions have also had to respond to mass casualty incidents, civil unrest, and natural disasters. In the accompanying articles, we summarize some of the key issues faced by Minneapolis/St. Paul healthcare coalition members during the civil unrest that followed the death of George Floyd. Healthcare entities should consider how they will structure incident command for multiple events and how they will share information and work with law enforcement during dynamic incidents that may involve risk to healthcare facilities and providers. Understanding the impact of COVID-19 on healthcare delivery (in rural, suburban, and urban areas) and preparing to resume services is also key to ensuring resilient communities.

Experiences from the Field

- [Civil Unrest During a Pandemic-Notes from Minneapolis](#)

Additional ASPR TRACIE Resources

- [COVID-19 Healthcare Delivery Impacts](#)
- [Federal Recovery Programs for Healthcare Organizations](#)
- [Healthcare System Considerations for Resumption of Services during COVID-19 Quick Sheet](#)
- [Healthcare System Preparedness for Secondary Disasters during COVID-19](#)
- [Recovery Planning Topic Collection](#)
- [Rural Health and COVID-19: Quick Sheet](#)

Being an international/ tourist destination means we have heightened situational awareness of all-hazard threats. Hurricane response often leads to EOC activations across our whole state, and there is a proven system for response with regional emergency response advisors. Our Healthcare Emergency Response Coalition has a diverse membership which enabled communication across the healthcare spectrum.

-- Mary Russell, Healthcare Emergency Response Coalition of Palm Beach County



RECOMMENDED RESOURCES



TECHNICAL RESOURCES

In addition to our 57 [comprehensively developed Topic Collections](#), we recently worked with subject matter experts to publish 21 [COVID-19 Healthcare Planning Resource Collections](#). We continue to add resources to our Collections; check back often. You can also learn more about rating, commenting on, and saving resources [in this short tutorial](#).



ASSISTANCE CENTER

We have received hundreds of requests for [COVID-19-specific technical assistance](#) (TA); we encourage you to review those and our [summary of responses to select TA requests](#). [Check out this tutorial](#) for assistance navigating the Assistance Center.



INFORMATION EXCHANGE

Check out the [COVID-19 threads in the Information Exchange](#) (IE) to access what your colleagues are sharing and provide feedback. Don't have an account? [Register for the IE today](#), where you can share your opinions and resources with us and your colleagues. [Access our quick tutorial](#) for help with registration.

ASPR TRACIE

Your Healthcare Emergency Preparedness Information Gateway

The Exchange is produced by the Office of the Assistant Secretary for Preparedness and Response (ASPR) Technical Resources, Assistance Center, and Information Exchange (TRACIE). Through the pages of *The Exchange*, emergency health professionals share firsthand experiences, information, and resources while examining the disaster medicine, healthcare system preparedness, and public health emergency preparedness issues that are important to the field. To receive *The Exchange*, visit <https://asprtracie.hhs.gov/register> and enter your email address.

ASPR TRACIE was created to meet the information and technical assistance needs of ASPR staff, healthcare coalitions, healthcare entities, healthcare providers, emergency managers, public health practitioners, and others working in disaster medicine, healthcare system preparedness, and public health emergency preparedness. The infographic illustrates ASPR TRACIE's reach since launching in September 2015.



ASPR TRACIE STATS



>860,000

VISITORS
TO WEBSITE

TECHNICAL ASSISTANCE
REQUESTS



~7,000

Types of professionals requesting TA:

- Healthcare Professional
- Federal, State, Local, Tribal Government
- Hospital
- Healthcare Coalition
- Healthcare Association
- Academia



NUMBER
OF SUBJECT MATTER
EXPERT CADRE MEMBERS:
>900

**TOPIC AND RESOURCE
COLLECTIONS**

78



Most frequently accessed resources:

- CMS EP Rule Page
- COVID-19 Virtual Workforce Toolkit
- Novel Coronavirus Resources Page
- HVA Topic Collection
- Coronaviruses Topic Collections
- HCC Resources Page



~9,000

INFORMATION
EXCHANGE MEMBERS:



ASPR TRACIE
DISTRIBUTION
LIST REACH: **~150,000**

CONTACT US

ASPR TRACIE



Toll-Free: 1-844-587-2243



askASPRtracie@hhs.gov



<https://asprtracie.hhs.gov>

The Exchange is not responsible for the information provided by any webpages, materials, or organizations referenced in this publication. Although *The Exchange* includes valuable articles and collections of information, ASPR does not necessarily endorse any specific products or services provided by public or private organizations unless expressly stated. In addition, ASPR does not necessarily endorse the views expressed by such sites or organizations, nor does ASPR warrant the validity of any information or its fitness for any particular purpose.