



Bay Area Urban Area Security Initiative Pandemic Preparedness Framework

January 2023



Record of Changes

Version	Date of Change	Summary of Changes	Name/Title	Agency/Organization



Executive Summary

The Pandemic Preparedness Framework (“the Framework”) represents a collaboratively developed path for pandemic preparedness across the Bay Area. Constant Associates, Inc. (CONSTANT), a third-party, private sector emergency management and public health preparedness consulting firm, was contracted to write and develop this Framework.

The Framework is the outcome of a multi-phase development process starting in 2021. Stakeholders from around the Bay Area Urban Areas Security Initiative (Bay Area UASI) Region participated in surveys and planning meetings. Interviews and workgroup meetings provided data for a Regionwide COVID-19 After Action Report (AAR). Then, in 2022, stakeholders collaboratively developed the Framework’s vision, values, objectives, and identified resources and tools for inclusion. The resulting Framework is intended to assist local jurisdictions in updating or preparing local plans related to pandemic protection, preparedness, response, and recovery. This Framework leverages the Regionwide COVID-19 AAR to include the lessons learned, best practices, and recommendations. The full Regionwide COVID-19 AAR is found in the UASI Resource Library¹ under the Pandemic Preparedness Toolkit for further review. An executive summary is included in the Appendices of this document.

Framework Overview

The Pandemic Preparedness Framework describes the Vision, Core Values, and Objectives for regional preparedness for the next pandemic. The Framework also includes resources and tools that support the update and/or development of pandemic related plans as attachments. The Framework is not a mandate nor an operational plan but provides guidance and structure for pandemic preparedness as determined by the member jurisdictions of the Bay Area UASI.

Framework Vision and Core Values

Developed in a regionwide workshop attended by 40 representatives of public health, emergency management, healthcare, first response agencies, and community-based organizations. Together, participants developed a vision statement for what they view as being prepared for the next pandemic. The vision’s goal is to resonate with all members and help them feel proud, excited, motivated, and part of a whole community response to a pandemic while stretching the region’s capabilities in an achievable manner.

¹ <https://www.dropbox.com/sh/ccr42et7m41cd92/AADZrHTG1bgKZoQTQFQ0VzpAa?dl=0>



Vision Statement: *Bay Area UASI and member jurisdictions seek to promote a culture of pandemic preparedness and preserve community lifelines through collaboration and transparent communication.*

Core Values: *Local Ownership, Whole Community Approach, Partnership and Inclusiveness, Equity, Public Information Transparency and Trust, Timeliness and Flexibility, Resilience and Sustainability, and Psychological and Behavioral Health.*

Tools and Resources

The Framework includes twelve tools and resources recommended by member jurisdictions, Bay Area UASI, and identified best practices and reference documents. These are included to assist jurisdictions in updating or preparing local plans related to pandemic protection, preparedness, response, and recovery.

This document was prepared under a grant from FEMA's Grant Programs Directorate, U.S. Department of Homeland Security, Regional Catastrophic Preparedness Grant Program. Content does not necessarily represent the official position or policies of FEMA's Grant Programs Directorate of the U.S. Department of Homeland Security.



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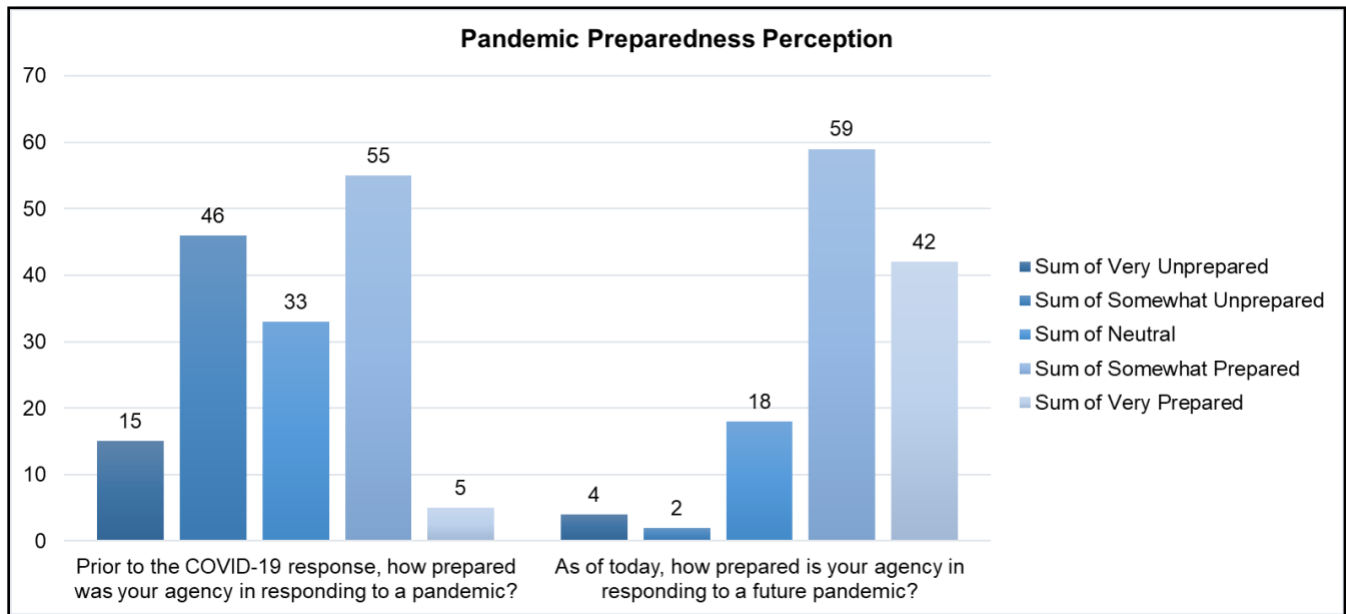


Overview

Purpose

The Bay Area UASI Pandemic Preparedness Framework assists local jurisdictions in updating or preparing local plans related to pandemic protection, preparedness, response, and recovery. This Framework leverages the Regionwide COVID-19 AAR to include its lessons learned, best practices, and recommendations. This Framework does not replace the plans, processes, or procedures from the jurisdiction. The Framework is not a mandate nor an operational plan but provides guidance and structure for pandemic preparedness.

The AAR development included polling representatives from Bay Area UASI member jurisdictions participating in small group interviews regarding their perception of preparedness prior to the COVID-19 pandemic compared to the present day (i.e., first half of 2022). The number of participants who felt their agency was “very prepared” to respond to a pandemic went from five when thinking about before COVID-19, to 42 when answering about current readiness. This demonstrates the great strides in preparedness that have been made since the start of the COVID-19 pandemic.



This Framework will memorialize the lessons from responding to the COVID-19 pandemic while also providing resources to further improve members’ level of pandemic preparedness. The contents of this Framework include lessons presented by Bay Area UASI member jurisdictions, examples and resources from the region, and tools to support the update and/or development of pandemic related plans.



Intended User

This document is designed to aid the 14-member jurisdictions of the Bay Area UASI and stakeholders who may contribute to the overall preparedness of the region. This document is meant to aid a variety of sectors, though much of the content is based on the combined perspectives of public health and emergency management.

Member jurisdictions of the Bay Area UASI include the major cities of Oakland, San Francisco, and San José. Additionally, the Bay Area UASI encompasses the following counties:

- Alameda
- Contra Costa
- Marin
- Monterey
- Napa
- San Benito
- San Francisco
- San Mateo
- Santa Clara
- Santa Cruz
- Solano
- Sonoma

Organization

This document is organized into two sections: a base document and resource appendices. The base document, intended to be brief, is comprised of an overview and three content subsections Vision and Core Values, Objectives, and a Crosswalk of Core Capabilities. The appendices, intended to be robust, provide specific details and case studies, including tools and templates that could be utilized to enhance pandemic planning.

How to Use This Document

To effectively use this document, the user should first review the base document (described above) to obtain a general understanding of the current climate for pandemic preparedness planning efforts. Following this review, the user should refer to Appendix A: Resources and Other Tools, to select the tools and resources that can be modified and implemented within their organization or jurisdiction, in coordination with community partners.



Document Development Process

The development of the Framework has involved multiple phases, all interweaving the tasks and outcomes from the Regional Pandemic Preparedness project. As the contracted project management firm, CONSTANT facilitated the development of the Framework through surveying, data collection, report creation, and finalization of the Framework. The below graphic outlines the development process.

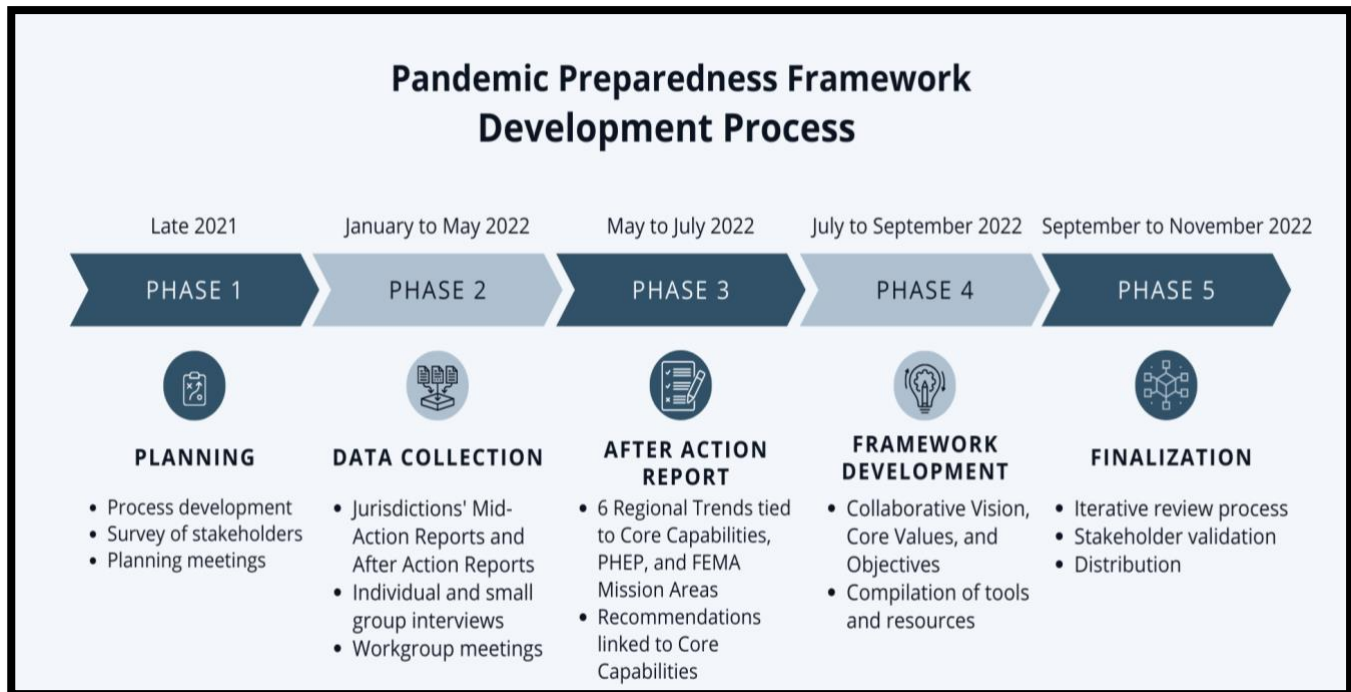


Figure 1: Development Process Graphic.

Document Assumptions

The following assumptions guided the development and review of this document:

- Although there are many similarities among the Operational Areas in the Bay Area, each one is unique with its own emergency management programs and plans. The authority outlined in approved state and local emergency management plans and policies supersedes the processes or guidance in this Framework.
- Susceptibility to a pandemic is universal and requires regional coordination and cooperation to respond effectively.
- Activities to support regional coordination are not reimbursable outside of formal mutual aid agreements.
- Unique circumstances of an emergency may prevent the implementation of framework components or require actions that are significantly different from those described in the Framework.



- All Bay Area jurisdictions align with the systems, concepts, and structures in the California Standardized Emergency Management System.
- Several tools and resources have been developed outside of the Framework as standalone resources such as the Bay Area UASI Pandemic Response Crisis Communications Toolkit, updates to the California Mutual Aid Region II Medical & Health Multiagency Coordination (MAC) Guide, and the Bay Area UASI Care and Shelter Planning Toolkit. These should be used in concert with tools and resources included in the Framework.
- A variety of terms are utilized within this document to refer to the populations and/or individuals of focus. This reflects the variety of terms utilized across the sectors, agencies, and experts.
- All planning, training, and response practices described herein should be designed and completed with and alongside community stakeholders.
- Collaboration and partnerships with stakeholders will build community resource capacity for preparedness, response, recovery, and mitigation.
- Effective mitigation, resiliency, continuity of operations, and continuity of government planning prior to a pandemic will greatly benefit preparedness.



Pandemic Preparedness Framework

Vision and Core Values

Vision

Developed in a regional workshop, representatives from Bay Area UASI member jurisdictions created a vision statement for what they view as being prepared for the next pandemic. The vision's goal is to resonate with all agencies and organizations in the Bay Area UASI region with pandemic response roles. It should help them feel proud, excited, motivated, and part of something bigger than themselves while stretching the region's capabilities in an achievable manner.

Vision Statement:

Member jurisdictions seek to promote a culture of pandemic preparedness and preserve community lifelines through collaboration and transparent communication.

Core Values

The Pandemic Preparedness Framework is guided by core values that, when put into practice, maximize the opportunity to achieve preparedness. The core values represent the planning priorities that Bay Area UASI jurisdictions, the community, and regional stakeholders define. The core values provide the inspiration for the objectives defined in the Framework. The values have been modified from the National Disaster Recovery Framework with input from representatives from the region during the Framework development.

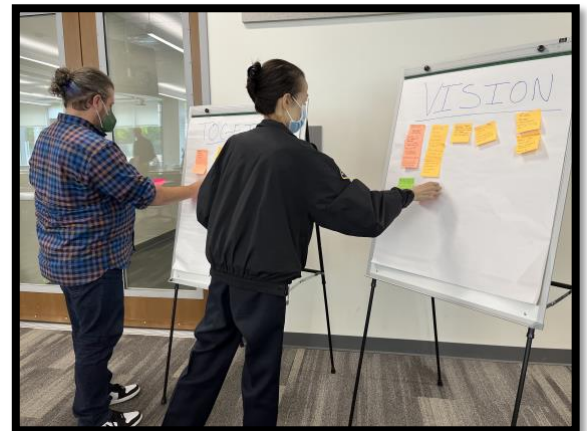


Image 1: Jurisdiction members provide input on the Framework Vision.



Summary of Core Values:

<i>LOCAL OWNERSHIP</i>	<i>WHOLE COMMUNITY APPROACH</i>	<i>PARTNERSHIP AND INCLUSIVENESS</i>	<i>EQUITY</i>
<i>PUBLIC INFORMATION TRANSPARENCY AND TRUST</i>	<i>TIMELINESS AND FLEXIBILITY</i>	<i>RESILIENCE AND SUSTAINABILITY</i>	<i>PSYCHOLOGICAL AND BEHAVIORAL HEALTH</i>

Local Ownership

Although it is anticipated that state, federal, and nongovernmental assistance will flow into jurisdictions during a pandemic, local leadership is expected to uphold responsibility for organizing, coordinating, and advancing response for the jurisdiction. Maintaining local ownership of pandemic operations is critical, so that assistance is prioritized and directed to response efforts based upon community needs. This Framework is one step in the process of enhancing local capabilities to manage and lead pandemic operations.

Whole Community Approach

The Pandemic Preparedness Framework uses a Whole Community approach to addressing preparedness issues. According to the Federal Emergency Management Agency (FEMA):

Preparedness is a shared responsibility; it calls for the involvement of everyone — not just the government — in preparedness efforts. By working together, everyone can help keep the nation safe from harm and help keep it resilient when struck by hazards, such as natural disasters, acts of terrorism, and pandemics.²

Whole Community includes:

- *Individuals and families, including those with access and functional needs*
- *Businesses*
- *Faith-based and community organizations (FBO)*
- *Nonprofit groups*
- *Schools and academia*
- *Media outlets*
- *All levels of government, including state, local, tribal, territorial, and federal partners*

² FEMA. *Whole Community*. Accessed August 4, 2022, from <https://www.fema.gov/glossary/whole-community>.



Partnership and Inclusiveness

Partnerships and collaboration across groups, sectors, and governments promote successful pandemic preparedness. Partnerships and inclusiveness are vital for ensuring that all voices are heard from all parties involved in preparedness and that all available resources are brought to the table. Partnerships and inclusiveness are especially critical at the community level, where nongovernmental partners in the private and nonprofit sectors play a critical role in meeting local needs. Inclusiveness in the process includes individuals with disabilities and people with access and functional needs, advocates for children, seniors, and members of historically underserved populations. Sensitivity toward and respect for social and cultural diversity must be always maintained. Compliance with equal opportunity and civil rights laws must also be upheld.

Some of the most successful approaches involved the presence of a dedicated, paid Volunteer Organization Active in Disaster (VOAD) or Community Organizations Active in Disaster (COAD) liaison within the Emergency Operations Centers (EOCs) and/or Department Operations Centers (DOCs) who could coordinate with targeted community groups within cities or targeted communities.

- Regionwide COVID-19 AAR

Equity



EMERGENCY PLANNING

Jurisdictions adapted their current ICS structures in the EOC and DOC to create groups dedicated to addressing equity and inclusion planning for specific aspects of the response, including vaccination, testing, case investigations and contact tracing. These sometimes took the form of a **dedicated Equity Officer**, and other times as **committees or Policy Group assignments**. One jurisdiction established an Access and Functional Needs Multiagency Coordination (MAC) Group as part of recovery planning, which has enabled expanded planning efforts while reducing vulnerability to hazards.

The COVID-19 pandemic demonstrated that more efforts needed to be made to ensure equity was at the forefront of emergency planning, particularly for pandemics.³ Creating a more equitable response improves health outcomes during a pandemic and must be a core value in any preparedness framework.

Chauncia Willis, CEO at the Institute for Diversity and Inclusion in Emergency Management, defined equity from the emergency management perspective⁴:

“Equity is a continuous process that requires understanding the needs of those you serve and then applying their perspective in solution-building. In times of disaster, diversity and equity become critical and must be operationalized. People who lack diversity

in perspective will not develop equitable policies, perform equitable planning, or create equitable programs that will benefit, rather than harm, the most vulnerable groups and communities.”

³ Bay Area UASI. COVID-19 After Action Report. 2022.

⁴ FEMA and Resilient Nation Partnership Network. Building Equitable Resilience Through Partnership and Diverse Perspectives. April 2021.



Public Information Transparency and Trust

Clear, consistent, culturally appropriate, and frequent communication initiatives promote successful public information outcomes. Such outcomes incorporate a process that is inclusive and ensures accessibility to all, including those with disabilities, persons who are deaf or blind, and those with limited English proficiency. Public information messaging helps manage expectations throughout a pandemic and supports the development of local communications plans. This messaging ensures that stakeholders have a clear understanding of available assistance and their roles and responsibilities including public participation in planning and decision making; makes clear the actual pace, requirements, and time needed to provide resources; and includes information and referral help lines and websites for pandemic resources.

Timeliness and Flexibility

An effective response to a pandemic upholds the value of timeliness and flexibility in coordinating and efficiently conducting response activities and delivering assistance. The process strategically sequences decisions and promotes coordination; addresses potential conflicts; builds confidence and ownership of the process among all stakeholders; and ensures that plans, programs, policies, and practices are adaptable to meet unforeseen, unmet, and evolving needs.

Some jurisdictions began activation of their EOCs and response plans as early as January 2020, which helped them to get a head start and build infrastructure they would desperately need in March of 2020 when shelter-in-place orders began.

- Regionwide COVID-19 AAR

Resilience and Sustainability

Pandemic preparedness promotes practices that minimize the community's risk to all hazards and strengthens its ability to withstand complex and multiple disasters during the pandemic. Together, these practices constitute the community's resiliency. Pandemic preparedness engages in a rigorous assessment and understanding of risks and vulnerabilities that might endanger the community or pose additional response challenges.

Resilience refers to creating and using the systems, policies, technologies, and other means that can give the Bay Area and its inhabitants an enhanced ability to respond to a pandemic and adapt to changing conditions over time. Sustainability refers to the ability to sustain the Bay Area's environmental, economic, and cultural qualities over time—including times of crisis and response. These two key themes are fundamental to the Framework.



Psychological and Behavioral Health

Pandemic preparedness addresses the full range of psychological and emotional needs of the community and responders as it endures a pandemic through the provision of support, counseling, screening, and treatment, when needed. These needs range from helping individuals to handle the shock and stress associated with the impact and challenges to addressing the potential for and consequences of individuals harming themselves or others through substance, physical, and emotional abuse. Preparedness acknowledges the linkages between the psychological and behavioral health of individuals, families, and communities.

Some jurisdictions implemented strategies to encourage work/life balance:

- *Offering mental wellness training from mental health experts.*
- *Incorporation of a Wellness Officer and program into the response.*
- *Making expanded Employee Assistance Programs (EAPs) available to staff to seek external mental health support.*
- *Implementing mental health checks amongst staff.*
- *Regionwide COVID-19 AAR*



Pandemic Preparedness Objectives

Pandemic Preparedness Objectives evolved out of the Regionwide AAR and were refined during the regional workshop that developed the Framework. The objectives were designed to be broad and overarching, applicable to any pandemic response, and based on the AAR's findings and recommendations. These objectives align with jurisdictional plans and objectives.

- Improve Disaster Service Worker (DSW) integration into response efforts to expand capacity and improve employee wellness.
- Refine Emergency Operations Centers (EOC) and Department Operations Centers (DOC) pandemic response roles, span of control, and improve coordination.
- Enhance and expand the Bay Area Joint Information System (JIS) membership and JIS Framework updates.
- Establish, maintain, and expand continuity capabilities.
- Prepare local pandemic resource request estimates and develop a scarce resource critical path decision making guide.
- Expand regionwide coordination through continued collaboration with member jurisdictions.



Image 2: Group Activity from the Regional Workshop prioritizing Framework objectives.



Crosswalk

The below crosswalk aligns the Framework Tools and Resources, Bay Area UASI Regionwide COVID-19 AAR Findings, and FEMA National Core Capabilities. This crosswalk allows the reader to understand how each tool and resource supports AAR findings and connects to Core Capabilities. The included findings are not all of those within the Regionwide COVID-19 AAR, only the findings relevant to the Framework objectives and suggested tools and resources from the planning workshop.

Bay Area UASI Framework Tool and Resources	AAR Finding(s)	Core Capability
1. Bay Area UASI DSW Program Toolkit Guidance and Templates	<i>Provide pre-activation training for DSWs about their roles.</i>	Planning
2. San José Office of Emergency Management (OEM) COVID-19 Preliminary Operational Assessment Report White Papers	<i>Jurisdictions needed to address significant accessibility issues.</i>	Public Health, Healthcare, and Emergency Medical Services
	<i>The intense and chronic response environment left many staff with extreme fatigue and burnout.</i>	Environmental Response/Health and Safety
3. FEMA COVID-19 Best Practice Information: Continuity of Operations	<i>Jurisdictions noted challenges with utilizing previous EOC activation and Continuity of Operations (COOP) plans.</i>	Planning
4. Centers for Disease Control and Prevention (CDC) Strategies for Optimizing the Supply of N95 Respirators	<i>The amount of information shared made it confusing to discern the most current and accurate guidance to follow.</i>	Planning



Bay Area UASI Framework Tool and Resources	AAR Finding(s)	Core Capability
5. FEMA COVID-19 Pandemic Operational Guidance – Preparedness Considerations Checklist	<p><i>Jurisdictions noted they let public health departments lead efforts with support from the EOC and other county DOCs.</i></p> <p><i>Existing MOUs established prior to the pandemic had limited value during response.</i></p>	<p>Operational Coordination</p> <p>Warehouse and Supply Chain Management</p>
6. Bay Area Regional Health Inequities Initiative (BARHII) and Public Health Alliance of Southern California Embedding Equity into Emergency Operations: Strategies for Local Health Departments During COVID-19 & Beyond	<p><i>Demographic data was not always collected with COVID-19 tests or reported with case rates to understand how COVID-19 impacted the lives of those most vulnerable.</i></p>	<p>Public Health, Healthcare, and Emergency Medical Services</p>
7. Stockpile Notable Practices Report	<p><i>Inventory Management Systems (IMS) fell short given the volume of requests and the new needs associated with vaccines, cold chain storage, and scarce resources.</i></p>	<p>Warehouse and Supply Chain Management</p>
8. California Emergency Operations Manual (EOM) Disaster Behavioral Health Resource Typing Tools	<p><i>Partnerships were established, including working with behavioral health departments and service providers, to address staffing needs for these facilities.</i></p>	<p>Operational Coordination</p>
9. Disaster Available Supplies in Hospitals (DASH) Tool	<p><i>Resource allocation plans were not prepared for the level of supply chain disruption and resource needs.</i></p> <p><i>Healthcare staff were rationing necessary equipment to protect themselves and their patients all while providing the most safe and effective method of care.</i></p>	<p>Planning</p> <p>Warehouse and Supply Chain Management</p>



Bay Area UASI Framework Tool and Resources	AAR Finding(s)	Core Capability
<p>10. Cal OES Blueprint for Success Actions Self-Assessment Form, Inclusive Planning Blueprint for Addressing Access and Functional Needs at Mass Testing/Vaccination Sites</p>	<p><i>Jurisdictions needed additional resources to ensure response services were accessible.</i></p> <p><i>There were limited resources to provide accessible messaging in various modalities such as American Sign Language (ASL) or alternate formats.</i></p>	<p>Public Health, Healthcare, and Emergency Medical Services</p> <p>Public Information and Warning</p>
<p>11. Bay Area UASI Training and Exercise Program (BATEP) Psychological First Aid Course</p>	<p><i>The integration of psychological first aid (PFA) into disaster plans was noted as necessary for long-term operations.</i></p>	<p>Environmental Response/Health and Safety</p>
<p>12. Assistant Secretary of Preparedness and Response Technical Resources, Assistance Center, and Information Exchange (ASPR TRACIE) Crisis Standards of Care Resources</p>	<p><i>Jurisdictions noted a gap in training regarding crisis standards of care.</i></p> <p><i>There was a need to incorporate crisis standards of care when there were supply and resource shortages to be more resilient.</i></p>	<p>Planning</p> <p>Public Health, Healthcare, and Emergency Medical Services</p>



Appendix A: Resources and Other Tools

This appendix provides several best practices, case studies, and sample resources collected through the Framework development process that jurisdictions can customize or reference for their planning purposes. The attachments included are as follows:

- [Attachment 1: Bay Area UASI DSW Program Toolkit Guidance and Templates:](#) Includes components to guide DSW integration into response efforts. Recommended for inclusion by attendees at the Pandemic Preparedness Framework Workshop.
- [Attachment 2: San José Office of Emergency Management \(OEM\) COVID-19 Preliminary Operational Assessment Report White Papers:](#) Summary extracts of brief reports on various topics that concisely informs the reader about how the City of San José responded to the COVID-19 pandemic. These documents can be disseminated to interested parties at the discretion of the San José OEM and designated City of San José staff. Recommended for inclusion by attendees at the Pandemic Preparedness Framework Workshop.
- [Attachment 3: FEMA COVID-19 Best Practice Information: Continuity of Operations:](#) List of Continuity of Operation Plans (COOP) key findings and considerations for jurisdictions and communities regarding ongoing coronavirus (COVID-19) operations across the country. These are best practices for consideration and do not constitute or should be considered as guidance in any way. Recommended for inclusion by attendees at the Pandemic Preparedness Framework Workshop.
- [Attachment 4: Centers for Disease Control and Prevention \(CDC\) Strategies for Optimizing the Supply of N95 Respirators:](#) This document offers a series of strategies or options to optimize supplies of disposable N95 filtering facepiece respirators (commonly called “N95 respirators”) in healthcare settings when there is limited supply. Recommended for inclusion by attendees at the Pandemic Preparedness Framework Workshop.
- [Attachment 5: FEMA COVID-19 Pandemic Operational Guidance – Preparedness Considerations Checklist:](#) Checklist for modifying the preparedness phase of all-hazards or incident-specific plans in the COVID-19 environment.
- [Attachment 6: Bay Area Regional Health Inequities Initiative \(BARHII\) and Public Health Alliance of Southern California Embedding Equity into Emergency Operations: Strategies for Local Health Departments During COVID-19 & Beyond:](#) This document provides examples and case studies of public health departments and other agencies that successfully embedded and operationalized equity through their jurisdiction’s emergency operations response to address the health and economic impacts of the pandemic. Recommended for inclusion by attendees at the Pandemic Preparedness Framework Workshop.



- [Attachment 7: Stockpile Notable Practices Report](#): The Stockpile Notable Practices report compiles important practices and lessons learned related to stockpile and warehouse management at the jurisdictional level before, during, and after disasters.
- [Attachment 8: California Emergency Operations Manual \(EOM\) Disaster Behavioral Health Resource Typing Tools](#): The California Public Health and Medical EOM Workgroup has developed two tools to support the ability of an impacted jurisdiction to assess its needs relative to disaster behavioral health, identify resource shortfalls, and request the appropriate types and numbers of assisting personnel. Recommended for inclusion by attendees at the Pandemic Preparedness Framework Workshop.
- [Attachment 9: Disaster Available Supplies in Hospitals \(DASH\) Tool](#): DASH is an interactive tool that can help hospital emergency planners and supply chain staff estimate supplies that may need to be immediately available during various mass casualty incidents (MCI) and infectious disease emergencies based on hospital characteristics. DASH recommends average par levels for specific supplies that acute care hospitals may need on hand to respond to a disaster in their community until resupplied. Recommendations are based on user inputs about the size of the hospital, risks in the community, regional role/designation of the hospital, and other factors. This interactive tool was designed by the Office of the Assistant Secretary for Preparedness and Response (ASPR) TRACIE with support from Healthcare Ready. Recommended for inclusion by attendees at the Pandemic Preparedness Framework Workshop.
- [Attachment 10: Cal OES Blueprint for Success Actions Self-Assessment Form, Inclusive Planning Blueprint for Addressing Access and Functional Needs at Mass Testing/Vaccination Sites](#): This Blueprint is written for emergency planners of governmental agencies, private sector, and CBOs. The Blueprint provides a comprehensive list of lessons learned and guidance that can be used to integrate access and functional needs-related considerations into mass testing or vaccination plans at the state, regional, tribal, territorial, or local levels.
- [Attachment 11: Bay Area UASI Training and Exercise Program \(BATEP\) Psychological First Aid Course](#): A series of four webinars hosted by BATEP provided participants specific, concrete, practical skills to use immediately during crises and in daily life. The Psychological First Aid (PFA) webinars were recovered and archived with presentations and worksheets also provided.
- [Attachment 12: Assistant Secretary of Preparedness and Response Technical Resources, Assistance Center, and Information Exchange \(ASPR TRACIE\) Crisis Standards of Care Resources](#): Included within ASPR TRACIE are two Crisis Standards of Care Topic Collections, one of which specifically focused on COVID-19. Additionally included is the Crisis Standards of Care Brief that provides links to a variety of applicable resources.



Attachment 1: Bay Area UASI's DSW Program Toolkit Guidance and Templates

In 2020, the Bay Area UASI funded a Regional Analysis of Disaster Service Worker (DSW) Programs to achieve a regional understanding of the Bay Area's local DSW programs, including strengths and challenges. Products developed through this project are available for download and customization from the UASI Resource Library⁵. Linked in this Framework is the DSW Program Toolkit Guidance and Templates.⁶ This includes:

- **Guidance for Establishing Essential Functions:** Provides guidance on establishing essential functions and incorporating DSW activities into Continuity of Operations (COOP) planning.
- **DSW Activities Descriptions:** Supplies examples of activities for various DSW assignments to aid in DSW recruitment and links to external resources available to assist in job description development.
- **DSW Messaging Template for Executives:** Offers sample language that can be used in COOPs or at the time of DSW activation to convey the importance of the DSW program and what to expect once the program has been activated.
- **Resources for Local DSW Programs:** Provides a list of available references and resources from local, state, and federal sources pertaining to DSW activities.
- **Modified ICS 214 Template:** Includes a template for more effective and efficient data collection from DSWs for state and federal reimbursement applications. This modified Incident Command System (ICS) 214 form was developed and used with permission from Mike Martinet at www.themartinetgroup.com.

⁵ <https://www.dropbox.com/sh/ccr42et7m41cd92/AADZrHTG1bgKZoQTQFQ0VzpAa?dl=0>

⁶ https://www.dropbox.com/sh/ccr42et7m41cd92/AAByzg8xxQ9ZRVCH33zPm6uia/DSW%20Programs?dl=0&preview=DSW+Program+Toolkit+Guidance+and+Templates.docx&subfolder_nav_tracking=1



Attachment 2: San José OEM's COVID-19 Preliminary Operational Assessment Report White Papers

San José Office of Emergency Management conducted a COVID-19 Preliminary Operational Assessment Report in 2020. Included in this report are eight white papers that can be found in the attachment sub-folder. These white papers are meant to act as summary extracts of various topics that concisely inform the reader about how the City of San José responded during the COVID-19 pandemic. Each paper follows a similar structure and contains five main sections: Executive Summary, Situation Overview, Accomplishments & Steps to Meet Challenges, Lessons Learned & Gaps, and Conclusion. The purpose of these documents is for dissemination to the public and other interested parties at the discretion of the San José OEM and designated City of San José staff. White paper titles are as follows:

- Food Insecurity
- The Development and Maintenance of Sheltering and Housing Efforts
- Serving Vulnerable and At-Risk Populations During the COVID-19 Response
- Impact of Race Equity in City of San José's Response
- Finance and Recovery
- Preparing for Sustained Response
- Staffing Considerations for the Ongoing COVID-19 Response
- How the City of San José Leveraged Technology to Solve Problems Caused by COVID-19



Attachment 3: FEMA's COVID-19 Best Practice Information Continuity of Operations

The following is a reproduction of the published PDF version of the FEMA COVID-19 Best Practice Information: Continuity of Operations document. This version can be found on FEMA's website under COVID-19 Best Practices.⁷

Background

- Continuity of operations (COOP) during a pandemic requires using existing continuity plans and strategies in more adaptive ways to address unique operational requirements, to include employee health, social distancing, and widespread absenteeism.
- The following is a list of key findings and considerations for jurisdictions and communities regarding ongoing coronavirus (COVID-19) operations across the country. These are best practices for consideration and do not constitute or should be considered as guidance in any way.

Key Considerations

- COOP planning during a pandemic must consider how to maintain operations while accounting for employee health and limited resources.
- Identifying and protecting critical infrastructure and essential services is key to keeping communities functioning.
- Working in virtual environments requires consideration of cybersecurity measures and provides opportunities for community engagement.

Lessons Learned Related to Continuity of Operations during COVID-19

Continuity of Operations Planning for Pandemics

- **Potential Best Practice:** Review and/or assess your organization's essential functions and personnel.
 - **Resource:** Use the FEMA Continuity Resource Toolkit and other continuity planning guides found on FEMA's website⁸ to identify your essential functions and develop a continuity plan.
 - **Resource:** State and local government and private sector organizations who have not yet been impacted by the coronavirus should participate in a continuity of operations training to guide preparatory planning. The Emergency Management Institute offers two online courses focused on continuity and resilience:

⁷ https://www.fema.gov/sites/default/files/2020-07/fema_covid_bp_continuity-operations.pdf

⁸ <https://www.fema.gov/continuity-resource-toolkit>



- An Introduction to Continuity of Operations: IS-1300⁹
- Introduction to Continuity of Operations Planning for Pandemic Influenzas: IS-0520¹⁰
- **Potential Best Practice:** Establish and practice your telework ability in advance. Employers should regularly check in with staff to see what is and is not working during teleworking to assess where new processes and procedures are needed to communicate with and support staff.
 - **Resource:** Consider Municipal Research and Services Center of Washington’s best practices¹¹ for implementing a telecommuting program.
- **Potential Best Practice:** As organizations implement expanded telework to maintain business operations, companies should examine IT practices and procedures¹², and security risks that may arise from a remote workplace.

Critical Infrastructure Considerations for Pandemic Preparedness

- **Potential Best Practice:** Identify essential workers needed to maintain the critical infrastructure services and functions Americans depend on daily.
 - **Resource:** Review the Department of Homeland Security’s guidance¹³ on essential critical infrastructure workforce and actions for protecting infrastructure and the supply chain.¹⁴
- **Potential Best Practice:** Key critical infrastructure sectors should consider procuring supplies to include cots, sleeping bags, and food¹⁵ if essential workers need to shelter-in-place at work to ensure continued reliable service while avoiding exposure to the virus.

Recommendations for Local Governments Working in Virtual Environments

- **Potential Best Practice:** Local governments should aim to conduct business remotely while continuing to make time-sensitive decisions.
 - **Resource:** The International City/County Management Association compiled Key Questions and Factors to Consider as Jurisdictions Shift to Virtual Governance including high- and low-tech options, paring meetings to cover essential business, and identifying and meeting legal requirements.

⁹ <https://training.fema.gov/is/courseoverview.aspx?code=IS-1300>

¹⁰ <https://training.fema.gov/is/courseoverview.aspx?code=IS-520>

¹¹ <https://mrsc.org/explore-topics/public-safety/emergency-services/public-health-emergencies/coronavirus-covid-19-faqs#best-practices-for-telecommuting-program>

¹² <https://icma.org/blog-posts/it-practices-and-procedures-consider-cases-extended-telecommuting>

¹³ <https://www.cisa.gov/identifying-critical-infrastructure-during-covid-19>

¹⁴ <https://www.cisa.gov/insights>

¹⁵ <https://www.reuters.com/article/us-health-coronavirus-usa-utilities/u-s-power-industry-may-ask-key-employees-to-live-at-work-if-coronavirus-worsens-idUSKBN2171AC>



- **Mitigating Action:** Incorporate established techniques¹⁶ for conducting successful government meetings remotely.
- **Potential Best Practice:** Kenmore, Washington, is using technology to expand virtual options to engage citizens in public meetings¹⁷ to maintain momentum on critical planning efforts.
 - **Resource:** Utilize multiple venues for engaging the public to include video conferencing, recording meetings, and streaming live meetings on YouTube to facilitate public engagement.

¹⁶ <https://mrsc.org/stay-informed/mrsc-insight/march-2020/tips-for-government-bodies-meeting-remotely>

¹⁷ <https://icma.org/blog-posts/public-meetings-time-covid-19>



Attachment 4: CDC's Strategies for Optimizing the Supply of N95 Respirators

The following is a reproduction of "Strategies for Optimizing the Supply of N95 Respirators" posted by CDC on their website. Content reproduced below was last updated Sept. 16, 2021.¹⁸

Audience

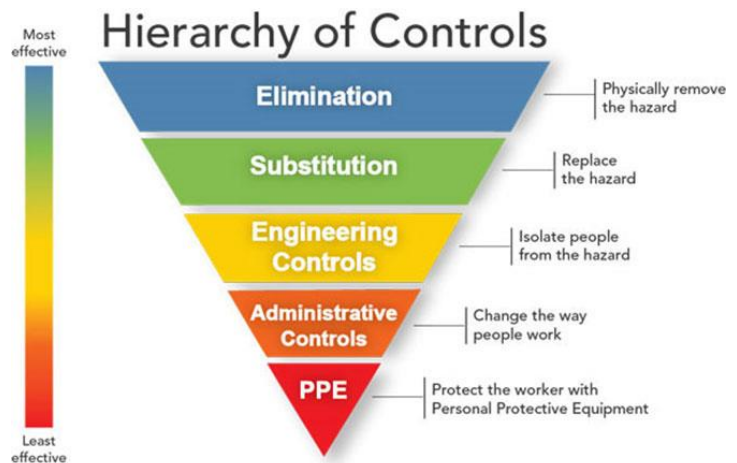
These considerations are intended for use by federal, state, and local public health officials, respiratory protection program managers, leaders in occupational health services and infection prevention and control programs, and other leaders in healthcare settings who are responsible for developing and implementing policies and procedures for preventing pathogen transmission in healthcare settings.

Purpose

This document offers a series of strategies or options to optimize supplies of disposable N95 filtering facepiece respirators (commonly called "N95 respirators") in healthcare settings when there is limited supply. It does not address other aspects of pandemic planning; for those, healthcare facilities can refer to COVID-19 preparedness plans.¹⁹ The strategies are also listed in order of priority and preference in the Summary for Healthcare Facilities: Strategies for Optimizing the Supply of N95 Respirators²⁰ during the COVID-19 Response in an easy-to-use format for healthcare facilities.

Controlling exposures to occupational hazards is a fundamental way to protect personnel. Conventionally, a hierarchy has been used to achieve feasible and effective controls. Multiple control strategies can be implemented concurrently or sequentially. This hierarchy can be represented as follows:

- Elimination
- Substitution
- Engineering controls
- Administrative controls
- Personal protective equipment (PPE)



To prevent infectious disease transmission, elimination (physically removing the hazard) and substitution (replacing the hazard) are not typically options for healthcare settings. However, exposures to transmissible respiratory pathogens in healthcare facilities can often be reduced

¹⁸ <https://www.cdc.gov/coronavirus/2019-ncov/hcp/respirators-strategy/>

¹⁹ <https://www.cdc.gov/coronavirus/2019-ncov/hcp/facility-planning-operations.html>

²⁰ <https://www.cdc.gov/coronavirus/2019-ncov/hcp/checklist-n95-strategy.html>



or possibly avoided through engineering and administrative controls and PPE. Prompt detection and effective triage and isolation of potentially infectious patients are essential to prevent unnecessary exposures among patients, healthcare personnel (HCP), and visitors at the facility.

N95 respirators are the PPE most often used to control exposures to infectious pathogens transmitted via the airborne route, though their effectiveness is highly dependent upon proper fit and use. N95 respirators are intended to be used once and then properly disposed of and replaced with a new N95 respirator. The optimal way to prevent airborne transmission is to use a combination of interventions from across the hierarchy of controls, not just PPE alone. Applying a combination of controls can provide an additional degree of protection, even if one intervention fails or is not available.

Respirators, when required to protect HCP from airborne contaminants such as some infectious agents, must be used in the context of a comprehensive, written respiratory protection program that meets the requirements of Occupational Safety and Health Administration (OSHA) Respiratory Protection.²¹ The program should include medical evaluations, training, and fit testing.

Surge capacity refers to the ability to manage a sudden increase in patient volume that would severely challenge or exceed the present capacity of a facility. While there are no commonly accepted measurements or triggers to distinguish surge capacity from daily patient care capacity, surge capacity is a useful framework to approach a decreased supply of N95 respirators during the COVID-19 response. To help healthcare facilities plan and optimize the use of respiratory protection in response to COVID-19, CDC has developed a Personal Protective Equipment (PPE) Burn Rate Calculator.²² Three general strata have been used to describe surge capacity and can be used to prioritize measures to conserve N95 respirator supplies along the continuum of care.¹

- Conventional capacity: measures consisting of engineering, administrative, and PPE controls should already be implemented in general infection prevention and control plans in healthcare settings.
- Contingency capacity: measures that may be used temporarily during periods of expected N95 respirator shortages. Contingency capacity strategies should only be implemented after considering and implementing conventional capacity strategies. While current supply may meet the facility's current or anticipated utilization rate, there may be uncertainty if future supply will be adequate and therefore, contingency capacity strategies may be needed.
- Crisis capacity: strategies that are not commensurate with U.S. standards of care but may need to be considered during periods of known N95 respirator shortages. Crisis capacity strategies should only be implemented after considering and implementing conventional and contingency capacity strategies. Facilities can consider crisis capacity when the supply is not able to meet the facility's current or anticipated utilization rate.

²¹ <https://www.osha.gov/laws-regs/regulations/standardnumber/1910/1910.134>

²² <https://www.cdc.gov/coronavirus/2019-ncov/hcp/ppe-strategy/burn-calculator.html>



CDC's optimization strategies for N95 respirator supply offer a continuum of options for use when PPE supplies are stressed, running low, or exhausted. Contingency and then crisis capacity measures augment conventional capacity measures and are meant to be considered and implemented sequentially. Once N95 respirator availability returns to normal, healthcare facilities should promptly resume conventional practices.

Decisions to implement contingency and crisis strategies are based upon these assumptions:

- Facilities understand their National Institute for Occupational Safety & Health (NIOSH)-approved respirator inventory and supply chain
- Facilities understand their NIOSH-approved respirator utilization rate
- Facilities are in communication with local healthcare coalitions and federal, state, and local public health partners (e.g., public health emergency preparedness and response staff) to identify additional supplies
- Facilities have already implemented other engineering and administrative control measures including:
 - Use physical barriers and other engineering controls
 - Limit number of patients going to hospital or outpatient settings
 - Use telemedicine whenever possible
 - Limit all HCP not directly involved in patient care
 - Limit face-to-face HCP encounters with patients
 - Limit visitors to the facility to those essential for the patient's physical or emotional well-being and care (e.g., care partner, parent)
 - Cohort patients and/or HCP
- Facilities have provided HCP with required education and training, including having them demonstrate competency with donning and doffing, with any PPE ensemble that is used to perform job responsibilities, such as provision of patient care

Once availability of NIOSH-approved respirators returns to normal, healthcare facilities should promptly resume conventional practices. Determining the appropriate time to return to conventional strategies can be challenging. Considerations affecting this decision include:

- I. The number of patients for whom respirator use is recommended for their care (e.g., number of patients with suspected or confirmed COVID-19 infection)
- II. Whether there is evidence of ongoing COVID-19 transmission in the facility
- III. The incidence of COVID-19 in the community
- IV. The number of days' supply of respirators currently remaining at the facility
- V. Whether or not the facility is receiving regular resupply with its full allotment



Conventional Capacity Strategies (should be incorporated into everyday practices)

Engineering Controls

- Select use of airborne infection isolation rooms
- Use of physical barriers
- Properly maintained ventilation systems

Administrative Controls

- Limit number of patients going to hospital or outpatient settings
- Telemedicine
- Limit all HCP not directly involved in patient care
- Limit face-to-face HCP encounters with patient
- Limit visitors to the facility to those essential for patients' physical or emotional well-being and care
- Source control
- Cohorting patients
- Cohorting HCP
- Training on use and indications for use of N95 respirators
- Just-in-time fit testing
- Limiting respirators during training
- Qualitative fit testing

Personal Protective Equipment: Respiratory Protection

- Use NIOSH-approved alternatives to N95 respirators
- Contingency Capacity Strategies (during expected shortages)

Contingency Capacity Strategies (during expected shortages)

Administrative Controls

- Decrease length of hospital stay for medically stable patients with an infectious diagnosis for who respirator use is recommended during their care
- Temporarily suspend annual fit testing

Personal Protective Equipment: Respiratory Protection

- Prioritize respirators for HCP who are using them as respiratory protection



- Use of N95 respirators beyond the manufacturer-designated shelf life for training and fit testing
- Extend use of N95 respirators as respiratory protection

Crisis Capacity Strategies (during expected shortages)

When N95 Supplies are Running Low

Personal Protective Equipment: Respiratory Protection and Well-Fitting Facemasks

- Use of respirators beyond the manufacturer- designated shelf life for healthcare delivery
- Use of respirators approved under standards use in other countries that are similar to NIOSH-approved respirators
- Limited re-use of N95 respirators
- Use of additional respirators beyond the manufacturer-designated shelf life for healthcare delivery that have not been evaluated by NIOSH
- Prioritize the use of N95 respirators and well-fitting facemasks by activity type

When No Respirators are Left

Engineering Controls

- Expedient patient isolation rooms for risk-reduction
- Ventilated headboards



Attachment 5: FEMA’s COVID-19 Pandemic Operational Guidance – Preparedness Considerations Checklist

The following content is a reproduction of Appendix B. Preparedness Considerations Checklist from the “COVID-19 Pandemic Operational Guidance: All-Hazards Incident Response and Recovery” document by FEMA released May 17, 2021.²³

Appendix B. Preparedness Considerations Checklist

Our State, Local, Tribal, and Territorial Government (SLTT) partners may consider using the following checklist when modifying the preparedness phase of all-hazards or incident-specific plans in the COVID-19 environment.

1. Review and Modify

- Have you reviewed and modified your emergency operations plan to align with public health guidance to include social distancing limitations, mask requirements, and travel restrictions?
- Does your emergency operations plan consider potential impacts to your supply chain or reduction of government services, as well as fiscal impacts to the jurisdiction due to lost revenue because of COVID-19 impacts on businesses?
- Have you reviewed your jurisdiction’s orders concerning any potential stay-at-home orders? Do any legal considerations require you to adjust your law enforcement, fire, Emergency Medical Services (EMS), or emergency operations?
- Are you coordinating updates to plans with the whole-community planning partners in your jurisdiction to ensure equitable distribution of information, resources, and services (e.g., public/private sectors, community-based service and advocacy organizations, nongovernmental organizations, faith-based organizations, nonprofits, and individuals and families)?
- Have you reviewed and modified your plans to promote equity, including considerations for individuals with disabilities, individuals with limited English proficiency, and others with access and functional needs in a COVID-19 environment?
- Have you reviewed and updated your continuity plans to successfully continue essential functions and tasks with little to no interruption in a pandemic environment?
- Have you updated your resource management inventory to make response personnel available to support non-COVID-19 incident response?
- Have you conducted a business analysis across government departments to identify mission essential personnel and potential shortfalls or limitations based on COVID-19 conditions?

²³ <https://www.fema.gov/press-release/20210517/fema-announces-operational-guidance-disaster-response-and-recovery-pandemic>



- Have you identified orders of succession for key personnel and leadership in your continuity plan? Do critical tasks and decision-making have approved delegations of authority?
- Have you identified alternate sites and capabilities to ensure continuity of operations (COOP) to include telework?
- Have you reviewed and evaluated current mutual aid agreements and Emergency Management Assistance Compact (EMAC) agreements if available resources and/or personnel are limited due to COVID-19 operations? Have you considered virtual support where possible?

2. Consider and Identify

- Do the impacts of COVID-19 within your, and neighboring, jurisdictions warrant the revision of mutual agreements with new partners?
- Have COVID-19 response and recovery efforts identified new partners, resources, planning shortfalls, or solutions to include in emergency operations plans and annexes, including private sector partners (e.g., grocery, fuel, home mitigation supplies, and medical equipment supplies)? Has a Pre-Disaster Recovery Plan been written for your state, local, or tribal jurisdiction that might already include this information?
- Have you considered resourcing cross training for emergency management roles and responsibilities to support concurrent disasters with extended timelines and limited resources?
- Have you assessed your personnel requirements and planned for contingency staffing?
- Have you determined alternate communication capabilities, information technology support, and remote platforms to operate your Emergency Operations Center (EOC) virtually, including accessibility and equity considerations?
- Have you explored inclusive virtual platforms to exercise plans and overcome the challenges of limited face-to-face training, seminars, and workshops?
- Have you coordinated with public health officials to identify health and safety guidelines for incident workforce response? (Note: Local conditions will influence decisions that public health officials make regarding community-level strategies)



3. Message and Engage

- Have you developed and disseminated accessible, multilingual, and culturally appropriate messaging to inform the public of changes in expected services or procedures (e.g., changes to shelter locations, evacuation routes, available transportation methods) due to impacts from COVID-19 and ensured the messaging is accessible and available in alternative formats?
- Have you met with leaders from underrepresented, multilingual, and cultural groups to discuss possible barriers and solutions to effective COVID-19 management in disaster situations?
- Have you updated pre-scripted messages to incorporate the current recommended personal protective equipment (PPE) posture for disaster survivors based on the Centers for Disease Control and Prevention (CDC) and/or local health guidance? How will you coordinate state and local messaging?
- Are you prepared to provide accessible multilingual and culturally appropriate messaging on increased personal preparedness measures and to encourage your community to evaluate personal emergency plans and familiarize themselves with guidance from their local jurisdictions related to COVID-19?
- Have you advised individuals and households to track their critical financial, medical, and household information by using the Emergency Financial First Aid Kit (EFFAK) tool as a guide?
- How will you use accessible, multilingual, and culturally appropriate messaging to communicate to employees and stakeholders?
- Have you engaged with public health officials to identify guidelines for workforce response in a COVID-19 environment, and to plan for public health support for evacuations and sheltering?
- Have you identified the essential workforce necessary for continuing critical infrastructure viability by using the Cybersecurity and Infrastructure Security Agency (CISA) advisory list as a guide?
- Have you engaged non-profits and small businesses in your jurisdiction to discuss how you would respond and recover from a natural hazard event in a COVID-19 environment?



Attachment 6: Bay Area Regional Health Inequities Initiative (BARHII) and Public Health Alliance of Southern California's *Embedding Equity into Emergency Operations: Strategies for Local Health Departments During COVID-19 & Beyond*

This document provides examples and case studies of public health departments and other agencies that successfully embedded and operationalized equity through their jurisdiction's response to address the health and economic impacts of the COVID-19 pandemic.

Topics:

- How Equity Elevates Emergency Response: Equity Spotlights from Member & National Departments
- Case Studies: Member Health Departments
 - City and County of San Francisco
 - County of Los Angeles Public Health Department
 - City of Long Beach Department of Health and Human Services
 - County of Santa Clara Department of Health
- Case Studies: National Models
 - Seattle-King County Public Health
 - Louisville, Kentucky Department of Public Health & Wellness
 - Portland, Oregon Office of Equity & Human Rights
- Policy & Process Recommendations for Embedding Equity into Emergency Response

[Link to BARHII's Embedding Equity into Emergency Operations: Strategies for Local Health Departments During Covid-19 & Beyond \(https://www.barhii.org/embedding-equity\)](https://www.barhii.org/embedding-equity)



Attachment 7: Stockpile Notable Practices Report

The following content was originally developed for a Bay Area UASI member jurisdiction and then edited to be applicable for all jurisdictions in the region.

Overview

The Stockpile Notable Practice report compiles important practices and lessons learned related to stockpile and warehouse management at the jurisdictional level before, during, and after disasters. These practices are not labeled as “best practices” due to the preliminary stages of evaluation following the pandemic and nuances related to jurisdictional application of the practices. A longer-term evaluation would be needed to identify best practices for a wide range of jurisdictions.

Methodology

Notable practices and lessons learned were identified via publicly available literature from the federal, state, local, and private sectors. Four Subject Matter Experts (SMEs) were also interviewed to discuss their practices and experiences with stockpiles and warehouse operations. Lastly, identified practices and lessons learned were included from the BA UASI Regionwide COVID-19 AAR’s small group interview about warehousing and supply chain.

Summary of Findings

The identified practices were organized into five categories: Plans and Processes, Warehouse Operations, Inventory Management System (IMS), Training and Exercises, and Pharmaceuticals. Plans and Processes highlighted alternative options for the main elements of stockpile operations – including multiple warehouse options. Warehouse access might be cut off or supplies might be destroyed in a disaster. A notable lesson learned that described by multiple SMEs was that plans often focus on the last emergency and will need to be adapted or new plans will need to be created entirely during emergencies.

The literature review and interviews indicated that there were characteristics within a warehouse which will allow for more efficient operations, such as additional space for receiving, reorganizing, and distributing inventory as it is received. This is because inventory may need to be distributed almost as soon as it is received instead of storing it within the warehouse. A key lesson learned during COVID-19 was the volume of requests and inventory received exceeded previous planning assumptions.

The IMS and Training and Exercises categories had a similar lesson learned that emphasized the need for regular training and practice for successful operations during an emergency. Because IMS software can be complicated and updated regularly, training a staff member on one of these systems often requires retraining or frequent use.

Lastly, pharmaceuticals focused on having a stock rotation plan in place to prevent expiration and medical waste. COVID-19 demonstrated the need for additional considerations for medical countermeasures such as cold chain logistics and climate-controlled warehouses.



Summary Table

Category	Notable Practice
Plans and Processes	Identify additional warehouse and transportation options throughout the jurisdiction as backups.
	Update emergency plans to follow day-to-day warehouse operations for stock rotations, after-hours access, security etc. and conduct exercises with local warehousing vendors.
	Review current MOUs and revise to be more specific, to include policies for prioritization against competitors, after-hours requests, audits, and stockpile rotation as well as driver and equipment availability.
	Engage private sector and hospitals/healthcare to provide input on the local stockpile contents.
Warehouse Operations	Consider investing in additional technology to streamline rapid documentation of new inventory, such as scanners.
	Engage private and community partners to identify local means of possible alternative warehouse space and especially cold-chain storage options.
	Evaluate and document warehouse sites against capabilities and throughput requirements. Each site may have pros and cons which may allow for crossdocking, loading docks, and turnaround space for trucks.
	Implement an inventory system which is organized by response type or inventory type and accounts for some of the lessons contained herein.
Inventory Management Systems (IMS)	Excel and manual processes will be needed in an emergency and for redundancy – have a plan in place.
	COVID-19 Lesson Learned: Several warehouse operations were working on a new IMS before COVID and abandoned those efforts after the pandemic because it would not meet their new needs.
	Consider a full-time warehouse manager fully trained on the IMS who is able to provide regular IMS training to designated representatives in the jurisdiction for surge capacity.
	Key IMS capabilities – offline functionality and automation.
Training and Exercises	Exercise your warehouse from start to finish.
	Training and Exercises build familiarity.



Category	Notable Practice
Pharmaceuticals	A climate-controlled warehouse is critical for the storage of pharmaceuticals and cold chain logistics.
	Describe the purpose and goals of the pharmaceutical stockpile in your planning documents.
	2–5-year stock rotation plans can be expensive and challenging, consider engaging in a stock rotation contract.
	The Emergency Prescription Assistance Program (EPAP) can alleviate some pressure on stockpiles to have commonly prescribed pharmaceuticals for citizens.

Category: Plans and Processes

Identify additional warehouse and transportation options throughout the jurisdiction as backups.

These additional options may be necessary due to the volume of inventory being received, supply chain impacts, geographic impact of the emergency, or additional requirements that impact operations that could not be anticipated ahead of time. The alternative options should be rapidly executable to include 24/7 points of contact for each option. Options should consider both public and private partners.

The CDC’s City Readiness Initiative recommends identifying multiple warehousing options and Butte County experienced first-hand the importance of this. During the Oroville Dam Spillway Emergency, members of the Health Department were unable to access their warehouse for 3 days. During the 2018 Camp Fire, the medical infrastructure in Paradise was destroyed including trailers holding supplies.

Update emergency plans to follow day-to-day warehouse operations for stock rotations, after-hours access, security etc. and conduct exercises with local warehousing vendors.

Exercises, stock rotations, after-hours access, and security are all examples of plans and processes that are used daily and should not be different during emergencies. In Butte County, they used smaller responses to activate and exercise their warehouse. This allowed them to improve their inventory, process, and increase familiarity for staff. Prior to emergencies, defining parameters and permissible adjustments will lower risk and allow staff to rapidly create new plans and processes when needed during an emergency.

Plans will be important, but the actual demands of the response will dictate significant adjustments to pre-disaster plans, collaborative problem solving and willingness to act based on less than full information. For example, the Disaster Service Worker program is a critical asset but may not always meet personnel needs in large scale emergencies. One solution during the pandemic was contracted staffing.



Review current MOUs and revise to be more specific, to include policies for prioritization against competitors, after-hours requests, audits, and stockpile rotation as well as driver and equipment availability.

When engaging private sector partners, specificity is needed because their processes may be different. For example, a contractor should know what documentation and accountability is needed for inventory recording. The contract should also describe access to the facility and work area, points of contact, documentation requirements, IMS, security, special handling requirements, and rapid adjudication of issues related to performance.

Engage private sector and hospitals/healthcare to provide input on the local stockpile contents.

During emergencies, the goal then becomes for local and regional stockpiles to keep their health systems up and running. While most knew that personal protective equipment (PPE) could expire, it was not a common planning assumption for scenarios which involved large-scale PPE demand. During the pandemic, strategies and adjustments were made to account for the use of expired PPE such as facemasks, gowns, and gloves. Hospitals often have their own specific requirements for PPE as well, which need to be identified ahead of time to ensure stockpiles contain PPE types which will be acceptable to hospital staff. Communicating with local healthcare systems will ensure a more suitable stockpile of PPE and ensure stockpiles have the appropriate equipment for their jurisdiction.

In the initial response to the COVID-19 Pandemic, public agencies were not always able to fulfill resource requests. Private partners may have the ability to fulfill the request and often were able to come up with innovative solutions to supply chain issues during the COVID-19 Pandemic. This should not just apply to warehousing but also staffing, drivers, and other warehouse functions. CBOs and private sector partners helped to manufacture PPE supplies as well. In addition, public agencies found themselves competing against each other for scarce resources. Regional or state purchasing plans can alleviate the competition and appropriately distribute scarce resources.

Category: Warehouse Operations

Consider investing in additional technology to streamline rapid documentation of new inventory, such as scanners.

Inventory accuracy will likely be sacrificed in the initial stages of an emergency. This is because the need to get the inventory to those who need it outweighs the necessity of completeness and total accuracy. Tools such as barcode scanners and an IMS that can incorporate scans can alleviate some inventory issues. One critical aspect of the rapid turnaround is being able to secure inventory documentation as trucks are unloaded, pallets are rearranged or broken down, and inventory is distributed.



Engage private and community partners to identify local means of possible alternative warehouse space and especially cold-chain storage options.

Many agencies were forced to find additional warehouse space once they realized the volume of supplies they were receiving from the state and federal government. A common solution was leasing space from private or community-based partners. In addition, the supplies being received sometimes required cold chain logistics, or were products and supplies that warehouse staff did not have familiarity. Often their IMS could not track all the necessary information required for the new items – such as lot numbers for pharmaceuticals.

Evaluate and document warehouse sites against capabilities and throughput requirements. Each site may have pros and cons which may allow for crossdocking, loading docks, and turnaround space for trucks.

The California Department of Public Health (CDPH) will use crossdocking procedures to quickly route trucks to local stockpiles. In California, local stockpiles should expect to receive a 12-hour push package from the Strategic National Stockpile (SNS) within 6 to 10 hours. In order to rapidly distribute the supplies being received, warehouses should have adequate space for the physical rotation of inventory, staging of pallets, and reorganizing the inventory received.

The SNS trucks will likely need to be able to turn around and back up to a loading dock. The SNS trucks do not have liftgates so local warehouses will need the means to unload the trucks in an efficient manner. In addition, warehouses should have at least 2-3 loading docks because initial push will likely be delivered by 2 trucks. This will also facilitate quickly unloading inventory and loading it into another truck for distribution.

Implement a new inventory management tool which is organized by response type or inventory type and accounts for some of the lessons contained herein.

The private sector identifies categorizing and organizing your inventory as notable practice. This can be accomplished by local warehouses by categorizing their inventory by response type or by inventory type. In addition, full annual inventories, and cycle counting are the common practices for maintaining an accurate inventory. Combining those systems with “First in, First out”²⁴ will ensure that the inventory is accurate and minimizes expired supplies.

Category: Inventory Management Systems (IMS)

Excel and manual processes will be needed in an emergency and for redundancy – have a plan in place.

Excel is straightforward to teach and works without the internet, making it a great backup system. In addition, your current IMS may not account for unidentified future needs. Because excel may be used, having a plan in place to use it will be necessary. There are a couple of

²⁴ First in, First Out – is an inventory process where the oldest inventory (first in) is distributed before older inventory. The inventory should be organized where the older products are the closest to the staff filling the requests.



factors to consider, such as document sharing capabilities and how the data is imported into an IMS or shared with other jurisdictions.

COVID-19 Lesson Learned: Several warehouse operations were working on a new IMS before COVID and abandoned those efforts after the pandemic because it would not meet their new needs.

During the COVID-19 Pandemic, several agencies reverted to excel when they found their IMS could not meet the needs. In addition, many were exploring new IMS before the pandemic and eventually abandoned that system due to new needs identified during the pandemic. Some of the newly identified needs were accounting for pharmaceutical information, viral media, and providing a live report or dashboard to be share with the public or other agencies.

Consider a full-time warehouse manager fully trained on the IMS who is able to provide regular IMS training to designated representatives in the jurisdiction for surge capacity.

Anyone who has the possibility of assisting warehouse, logistics, or stockpile operations should be trained on the IMS and it should be refreshed regularly. Many IMS systems are not intuitive and will be difficult to use if not exercised often. An alternative solution would be to train a staff member to be a just-in-time trainer. That staff member can train new staff members or volunteers and provide refresher training for previously trained staff.

Key IMS capabilities – offline functionality and automation.

IMS should have the ability to continue operations even if electrical power or internet connectivity is unavailable, which in some instances could last for an extended period. In addition, the IMS should automate as much of the warehouse process as possible by incorporating barcode scanners, notification of inventory expiration, resource requesting, ordering, dashboards, etc. These will limit human error and provide an operationally efficient inventory.

Category: Training and Exercises

Exercise your warehouse from start to finish.

Similarly to using the same plans for daily operations as in an emergency, warehouses should be exercised through the whole activation life cycle. To accomplish the full life cycle, exercises can be completed over multiple days allowing for normal operations to continue. Exercises should also include partners and contractors. No notice activations, although difficult to execute, should be attempted to the best of the warehouse's ability. If needed the California Department of Public Health can provide "Eagle" materials to simulate SNS shipments.

Training and Exercises build familiarity.

Frequent training and exercises familiarize staff with their roles and how they fit during an emergency. Exercising the warehouse also builds capacity to handle larger and more complicated emergencies. In Butte County, they used smaller events such as wildfires to review and improve their plans and procedures.



Category: Pharmaceuticals

A climate-controlled warehouse is critical for the storage of pharmaceuticals and cold chain logistics.

Climate-controlled warehouses are critical for pharmaceuticals and vaccines. This includes having backup generators capable of maintaining the temperature with only brief deviations. There should be intermediary storage options such as refrigerators or coolers in the warehouse as well. Of note, CDC will ship most SNS products requiring cold chain management in Endurotherm boxes.

Describe the purpose and goals of the pharmaceutical stockpile in your planning documents.

Describing the purpose and goal of the pharmaceuticals in the stockpile assists in identifying what pharmaceuticals to include and how much. Common strategies include complementing the 12-hour Push Package from the SNS, identifying a specific population such as first responders, or applying a percentage to the overall population. Both the CDC City Readiness Initiative and *Receiving Distributing and Dispensing Strategic National Stockpile Assets A Guide to Preparedness Version 11* acknowledge stockpiling for first responders as a viable option. IMS should also pre-designate possible categories and scenarios for activation of certain pharmaceuticals (e.g., shelter activations, wildfire response, flooding, pandemic, etc.).

2–5-year stock rotation plans can be expensive and challenging, consider engaging in a stock rotation contract.

Maintaining a pharmaceutical stockpile can be expensive and challenging because of the quick expiration and frequency of use. In addition, partnering with small pharmacies is a challenge because the large quantities of pharmaceuticals in a stockpile will likely exceed the turn rates of the pharmacy. One common suggestion is to engage a pharmaceutical distributor or wholesaler in a stock rotation contract. Then medications within the stockpile nearing expiration would be rotated out and new medications would then replace the older ones. Without this or similar procedure in place, expired medications will simply have to be discarded and new ones will need to be re-purchased. If a stock rotation contract is not possible then a contract should be in place for the destruction of pharmaceuticals. Occasionally, reverse distributors can reimburse the jurisdiction for certain pharmaceuticals. One suggestion worth exploring more in depth would be to engage a wholesaler in a cache/stockpile maintained by the wholesaler with quick distribution to the jurisdiction during an emergency.

The Emergency Prescription Assistance Program (EPAP) can alleviate some pressure on stockpiles to have commonly prescribed pharmaceuticals for citizens.

During the 2018 Camp Fire in Butte County, medical infrastructure was destroyed including pharmacies and the capability to write prescriptions. In extreme situations such as the Camp Fire, the federal government has the EPAP to assist citizens in getting access to their needed pharmaceuticals. This will likely alleviate some of the need for stockpiling of common pharmaceuticals in local warehouses. In addition, some notable practices during the fire were



having the County Health Officer review and write prescriptions and having standing orders for certain medicines where nurses could write prescriptions.

Conclusion

The notable practices and lessons learned were gathered from local, state, and federal sources; four SME interviews, and the COVID-19 AAR small group interview. Within the practices there were many common threads such as having a flexible plan, creating redundancies, training, and practicing stockpile and warehouse operations. Although further study and longer-term application is needed to label these as best practices, the pandemic further emphasized these practices as many agencies were forced to create new plans, rely on different systems, and faced the challenges of scarce resources. As stated by one SME, “plans will be important, but the actual demands of the response will dictate significant adjustments to pre-disaster plans, so collaborative problem solving and willingness to act based on less than full information is as important as plans.”



Attachment 8: Cal EMSA's Resource Typing Guidance Disaster Mental/Behavioral Health and Spiritual Care

The following is a reproduction of the introduction to the California Emergency Medical Services Authority (Cal EMSA) created "Resource Typing Guidance – Disaster Mental/Behavioral Health and Spiritual Care." The full content can be found on EMSA's website.²⁵

Introduction

The **California Public Health and Medical Emergency Operations Manual (EOM)** Workgroup has developed two tools to support the ability of an impacted jurisdiction to assess its needs relative to disaster behavioral health, identify resource shortfalls, and request the appropriate types and numbers of assisting personnel.

The first tool provides valuable information on the types of resources, along with numbers and ratios, which support certain disaster missions. The second tool provides greater detail regarding the specific types of personnel that may be suitable for deployment.

We recommend the following for all disaster missions:

- The requesting jurisdiction should specify the qualifications of the Behavioral Health (BH) and Disaster Spiritual Care (DSC) staff they are requesting.
- The sending jurisdiction should match the request to the qualifications of their staff offered for deployment.
- For resource requests for BH and DSC staff resources from out-of-county, consider a *minimum* of a 7-day disaster assignment (5 days working, 2 days travel).
- Statewide training/credentialing standards for Disaster BH and DSC have not yet been established. Therefore, staff offered for deployment should be vetted and trained in Disaster BH or DSC response *per the requirements of the sending organization*.

By Specific Resource Type (Tool 1)

Description from Framework authors: The first tool of this resource is a chart linking resource type to eligibility category, CA Licensing Board/Association, source of the resource, and mission/task.

By Disaster Mission (Tool 2)

Description from Framework authors: The second tool of this resource is a chart linking mission type to resource type, suggested staffing ratio, source of the resource, and notes.

²⁵ <https://emsa.ca.gov/wp-content/uploads/sites/71/2018/11/EOM-Disaster-Behavioral-Health-Resource-Typing-Aides-10-25-2018.pdf>



Attachment 9: Disaster Available Supplies in Hospitals (DASH) Tool

The following is a reproduction of the home page for the DASH tool. The full resource and interactive component of the tool can be accessed here: <https://dashtool.org>.

Welcome

Disaster Available Supplies in Hospitals (DASH) is an interactive tool that can help hospital emergency planners and supply chain staff estimate supplies that may need to be immediately available during various mass casualty incidents (MCI) and infectious disease emergencies based on hospital characteristics. DASH recommends average par levels for specific supplies that acute care hospitals may need to have on hand to respond to a disaster in their community until resupplied. Recommendations are based on user inputs about the size of the hospital, risks in the community, regional role/designation of the hospital, and other factors.

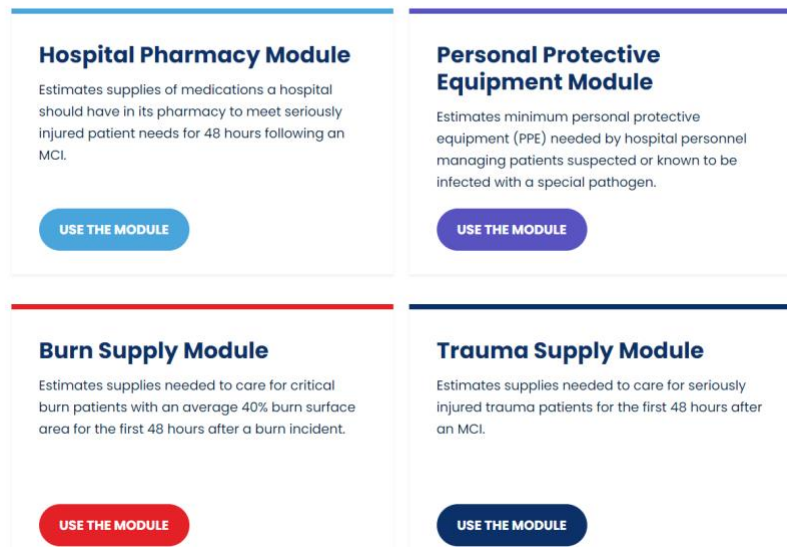


Image 3: DASH's Dashboard Landing Page

DASH is comprised of several modules which, taken together, can provide hospitals with a holistic view of the supplies needed to address various types of incidents. Each module also incorporates pediatric sizes and specific medication needs as appropriate to the incident. Most users will elect to complete one module or a segment of the module per sitting as inputs cannot be saved in the tool. Please read the instructions and refer to them as you complete each module.

NOTE: User inputs cannot be saved in the DASH tool. Please remember to download or share as described in the Instructions frequently to save your inputs as you work in DASH.

The U.S. Department of Health and Human Services' (HHS) Administration for Strategic Preparedness and Response (ASPR)'s Technical Resources, Assistance Center, and Information Exchange (TRACIE) and Healthcare Ready developed DASH in collaboration with: ASPR TRACIE Senior Editor, John Hick, MD, Hennepin Healthcare; the Health Industry Distributors Association (HIDA); and the Region VII Disaster Health Response Ecosystem. This project was funded by the U.S. HHS, Administration for Strategic Preparedness and Response.



Attachment 10: Cal OES Inclusive Planning Blueprint for Addressing Access and Functional Needs at Mass Testing/Vaccination Sites

The following is a reproduction of content from the “Inclusive Planning Blueprint for Addressing Access and Functional Needs at Mass Testing/Vaccination Sites” document.²⁶ This can be found on the broader Cal OES Access and Functional Needs Library.²⁷

Blueprint Overview

This Blueprint is written for emergency planners of governmental, private sector, and Community-Based Organizations (CBOs). The Blueprint provides a comprehensive list of lessons learned and guidance that can be used to integrate access and functional needs-related considerations when creating mass testing or vaccination plans at the state, regional, tribal, territorial, or local levels.

The Blueprint is based on:

- Access and functional needs-related lessons learned from 2020-2021 COVID-19 testing and vaccination activities
- Interviews with stakeholders in California’s access and functional needs community
- Conversations with the Cal OES Office of Access and Functional Needs Community Advisory Committee
- Reference materials listed in ‘Appendix B’

The Blueprint is organized by the following areas of focus:

Communications

Effective ways to communicate with and reach the whole community.

Physical Access

Steps to ensure sites are physically and programmatically accessible.

User Experience

Ways to provide the best overall experience during communicable disease testing and vaccination for people with disabilities and individuals with access and/or functional needs.

Community Engagement

²⁶ <https://www.caloes.ca.gov/wp-content/uploads/AFN/Documents/AFN-Library/Cal-OES-Blueprint-for-Addressing-AFN-at-Mass-Vaccination-and-Testing-Sites.pdf>

²⁷ <https://www.caloes.ca.gov/office-of-the-director/policy-administration/access-functional-needs/afn-library/>



Effective practices to engage people with disabilities and individuals with access and/or functional needs, and the organizations that serve them, during the planning and implementation of testing/vaccination sites.

Note from Framework authors: Included within this document is “Appendix C: Blueprint for Success Actions Self-Assessment Form” which provides a summary of actions in the form of a self-assessment checklist table.



Attachment 11: Psychological First Aid Training

Part of Bay Area UASI is the Bay Area Training and Exercise Program (BATEP)²⁸ which offers training and exercise opportunities, inclusive of community preparedness, supporting whole community partners throughout the Bay Area 12 county region in addressing natural and human-caused threats and hazards. One of the courses provided by BATEP in 2021 was Psychological First Aid (PFA).²⁹

Overview

Working with Dr. Elizabeth McMahon, BATEP offered four webinars on PFA skills that complement and expand on PFA trainings from the American Red Cross, FEMA, and SAMHSA. The course series was intended to have participants leave each webinar with specific, concrete, practical skills to use immediately during crises and in daily life. Topics of each included:

1-Coping with Stress: Know your stress signals and what to do; Learn a variety of skills.

2-Making Fast Connections: How to effectively connect with people in crisis and increase compliance.

3-Handling Difficult Reactions: Specific techniques for common difficult reactions from disaster survivors and those who are stressed: overwhelmed, grief, worry, panic, and anger.

4-Avoiding Personal Burnout: Practical, protective actions to foster resilience and help you cope in situations of ongoing stress.

Available Materials

Archived within the BATEP site is the PFA course materials and recordings.³⁰ These materials include:

- Webinar Recordings (four)
- Webinar PowerPoint Presentations (four)
- Worksheets and Handouts
 - Stress
 - Helpful Self-Talk
 - Mentally Prepare
 - Prevent Burnout
- PFA Resource Guide

²⁸ <https://batep.org/?p=home>

²⁹ <https://batep.org/?p=blog-single&blog=psychological-first-aid---a-four-module-course---module-4-recording-now-available-72>

³⁰ https://www.dropbox.com/sh/tikjvujokrp9xel/AAAwF9i_slWjM852exWNVKFQa?dl=0



Attachment 12: Assistant Secretary of Preparedness and Response Technical Resources, Assistance Center, and Information Exchange's *Crisis Standards of Care Resources*

Topic Collections

Crisis Standards of Care

The following is replicated from ASPR TRACIE's Crisis Standards of Care Topic Collection.³¹

The provision of medical care under catastrophic disaster conditions requires considerable pre-event planning, along with the recognition that the delivery of healthcare services will likely change due to the potential scarcity of required resources. Beginning in 2009, ASPR has focused significant attention on "crisis standards of care," spearheaded by the issuance of three reports by the Institute of Medicine of the National Academies. Work performed under this topic area provides a roadmap for medical decision-making during catastrophic events. Coordination of emergency response system planning is critical to successful health and medical outcomes under chaotic "crisis" conditions, which limit patient morbidity and mortality in an environment of collective rather than individual priorities. The standards of care proposed under the delivery of such conditions must represent a "reasonable" approach to healthcare service delivery merging public health, ethical, and medical care demands, albeit under unique and challenging conditions.

Note that many state plans use Sequential Organ Failure Assessment (SOFA) score thresholds (e.g., >11) to make decisions. Based on findings highlighted in articles from 2010 to present, this is not ethically justifiable. This Topic Collection includes plans that have adjusted their criteria to comparative use but also notes this limitation for a few otherwise excellent plans. For current frameworks, access Christian et al. (2014)³² and the ASPR TRACE document SOFA Score: What it is and How to Use it in Triage.³³

COVID-19 Crisis Standards of Care Resources

The following is replicated from ASPR TRACIE's COVID-19 CSC Resource Topic Collection.³⁴

This Topic Collection focuses on plans, tools, templates, and other immediately implementable resources to help with COVID-19 preparedness, response, recovery, and mitigation efforts, focusing on crisis standards of care (CSC). Implementing CSC in a hospital setting should be a last resort when all other surge strategies have failed and no other regional resources are available. Planners need to account for three domains:

³¹ <https://asprtracie.hhs.gov/technical-resources/63/crisis-standards-of-care/0#pandemic-specific-planning>

³² [https://journal.chestnet.org/article/S0012-3692\(15\)51990-9/fulltext](https://journal.chestnet.org/article/S0012-3692(15)51990-9/fulltext)

³³ <https://files.asprtracie.hhs.gov/documents/aspr-tracie-sofa-score-fact-sheet.pdf>

³⁴ <https://asprtracie.hhs.gov/technical-resources/112/covid-19-crisis-standards-of-care-resources/99>



- Concept of operations – What is the process for making decisions? Who makes the decisions? How is this integrated with the incident command system?
- Criteria – What will the decisions be based upon? Using the best evidence available, primarily prioritizing interventions on the basis of prognosis and duration of use.
- Coordination – How does the facility coordinate with others in the area through healthcare coalition/ other constructs to assure consistency of care and decision making?

Included in the topic collection are selected best practices designed for quick reference and application.

Crisis Standards of Care Brief

The following is replicated from the U.S. Department of Health and Human Services' (HHS) Office of the Assistant Secretary for Preparedness and Response Technical Resources, Assistance Center, and Information Exchange (ASPR TRACIE) Crisis Standards of Care Briefs April 2022.³⁵

Challenges posed by the COVID-19 pandemic and mass casualty incidents abound. These incidents often force many healthcare systems to adopt crisis practices that would normally be considered a compromise to usual standards of care. Strategies to address patient surge management and the allocation of scarce resources, such as Crisis Standards of Care (CSC), call for policy, regulatory, and systems changes implemented when the duration of crisis care practices is prolonged.

ASPR TRACIE hosted a webinar³⁶ where speakers discussed clinical consultation versus triage support, systems-level information sharing, coalition-level coordination activities, and recent publications/resources to help with planning efforts. ASPR TRACIE also published the following resources on CSC considerations to accompany the webinar:

Crisis Standards of Care Brief: Principles³⁷

This quick sheet describes the principles, values, foundational elements, and planning and implementation principles of CSC.

Crisis Standards of Care Brief: Planners³⁸

This quick sheet is geared towards hospital emergency planners and describes the principles of CSC and related planning considerations.

³⁵ <https://files.asprtracie.hhs.gov/documents/aspr-tracie-crisis-standards-of-care-briefs-summary.pdf>

³⁶ <https://files.asprtracie.hhs.gov/documents/aspr-tracie-csc-webinar-slides--final-508.pdf>

³⁷ <https://files.asprtracie.hhs.gov/documents/aspr-tracie-csc-principles.pdf>

³⁸ <https://files.asprtracie.hhs.gov/documents/aspr-tracie-csc-brief--planners.pdf>



Crisis Standards of Care Brief: Healthcare Providers³⁹

This quick sheet helps healthcare workers understand how their roles may be affected by CSC and provides related decision-making strategies.

Crisis Standards of Care Brief: Support for Clinical Allocation Decisions⁴⁰

This quick sheet helps healthcare workers understand the difference between clinical decision support and a triage team under the crisis standards of care umbrella. Tips for requesting and providing consultation are also included.

Crisis Standards of Care Brief: Public Messaging⁴¹

This quick sheet can help healthcare/hospital risk communicators develop and share messaging related to CSC.

COVID-19 Crisis Standards of Care⁴²

This graphic illustrates the roles of responsibilities of healthcare providers, healthcare facilities/systems, and healthcare coalitions/states when operating under CSC.

³⁹ <https://files.asprtracie.hhs.gov/documents/aspr-tracie-csc-brief-healthcare-providers.pdf>

⁴⁰ <https://files.asprtracie.hhs.gov/documents/aspr-tracie-csc-brief-support-for-clinical-allocation-decisions.pdf>

⁴¹ <https://files.asprtracie.hhs.gov/documents/aspr-tracie-csc-brief-public-messaging.pdf>

⁴² <https://files.asprtracie.hhs.gov/documents/aspr-tracie-csc-roles-and-responsibilities.pdf>



Appendix B: Acronyms

Acronym	Definition
AAR	After Action Report
ABAHO	Association of Bay Area Health Officials
AFN	Individuals with access and functional needs
ASPR	Office of the Assistant Secretary for Preparedness and Response
Bay Area UASI	Bay Area Urban Areas Security Initiative
BARHII	Bay Area Regional Health Inequities Initiative
BH	Behavioral Health
Cal OES	California Governor's Office of Emergency Services
CBO	Community-Based Organization
CDC	Centers for Disease Control and Prevention
CDPH	California Department of Public Health
COAD	Community-based Organizations Active in Disaster
CONSTANT	Constant Associates, Inc.
COOP	Continuity of Operations
COVID-19	Coronavirus Disease 2019
DASH	Disaster Available Supplies in Hospitals Tool
DOC	Department Operations Center
DSC	Disaster Spiritual Care
DSW	Disaster Service Worker
EMS	Emergency Medical Services
EOC	Emergency Operations Center
EOM	Emergency Operations Manual
FBO	Faith-Based Organization
FEMA	Federal Emergency Management Agency
HCP	Healthcare Personnel
HHS	United States Department of Health and Human Services
HIDA	Health Industry Distributors Association
HPP	Hospital Preparedness Program
ICS	Incident Command System
IMS	Inventory Management System
JIS	Joint Information System
MAC	Multiagency Coordination
MCI	Mass Casualty Incident
MOU	Memorandum of Understanding



Acronym	Definition
NIMS	National Incident Management System
NIOSH	National Institute for Occupational Safety & Health
OAR	Operational Assessment Report
OSHA	Occupational Safety and Health Administration
PIO	Public Information Officer
POD	Point of Dispensing Site
PPE	Personal Protective Equipment
SLTT	State, Local, Tribal, and Territorial Government
SNS	Strategic National Stockpile
TRACIE	Technical Resources, Assistance Center, and Information Exchange
VOAD	Voluntary Organizations Active in Disaster



Appendix C: Bay Area UASI Regionwide COVID-19 AAR Executive Summary

Executive Summary

The unprecedented nature of the Coronavirus Disease 2019 (COVID-19) pandemic cannot be understated. Public health leaders and emergency managers around the world navigated many unknowns as they learned as much as they could about the disease caused by the novel coronavirus while simultaneously responding to protect the public.

As COVID-19 response measures were rapidly ramping up, communities across the world erupted in mass protests and civil demonstrations compounded by growing concern over the socially devastating economic and social impacts of the pandemic. During this same period, the State of California and much of the western United States experienced an onslaught of wildfires that engulfed hundreds of thousands of acres and impacted many local communities. In addition, the death of George Floyd resulted in public outrage and protests over much of the Summer 2020. All these concurrent events took place with the backdrop of the COVID-19 pandemic beginning to reveal the impact it would have on our lives.

What this Report IS:

- A description of common trends and findings across Bay Area jurisdictions from COVID-19 response efforts from 2020 to early 2022

What this Report IS NOT:

- An analysis of individual Bay Area jurisdiction's responses

The Bay Area Urban Areas Security Initiative (UASI) remains committed to its mission of sustaining and improving regional capacity to prevent, protect against, mitigate, respond to, and recover from terrorist attacks and catastrophic disasters. This Bay Area UASI Regionwide COVID-19 After Action Report (AAR) represents the Bay Area UASI's continued collaborative approach to identify common capability gaps across the Bay Area jurisdictions, and to inform a Pandemic Preparedness Framework in order build a secure, prepared, and resilient region.

Purpose

The Bay Area UASI has compiled this Regionwide COVID-19 After Action Report to collate common findings and trends across the 14 Bay Area jurisdictions and their responses to COVID-19. In collecting these lessons together, the Bay Area UASI hopes to inform specific priorities for future consideration and advocacy. This Regionwide COVID-19 AAR does not replace the functionality nor purpose of local jurisdiction AARs. It does not follow the traditional AAR format in terms of identifying strengths or areas for improvement for any one organization



or jurisdiction. Instead, this report focuses on commonalities and some specific best practices that emerged across the Bay Area during the response. These best practices and regional recommendations will then inform the development of a Pandemic Preparedness Framework. This Framework document will be a resource to help improve pandemic preparedness efforts.

Given the length and breadth of the pandemic and the unprecedented scope of the response efforts in the Bay Area, this report is not meant to be a comprehensive description of all activities conducted in response to the pandemic in the Bay Area. Instead, this report is meant to focus on major trends and recommendations noted by multiple stakeholders to assist in identifying regional actions that are feasible and will have maximum impact on the ongoing pandemic as well as future public health and other emergency responses.

Report Format and Organization

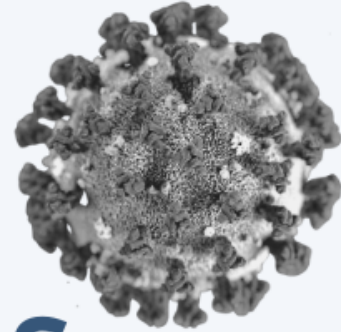
The AAR aims to provide readers with a regional perspective on the response and recovery efforts during the ongoing COVID-19 pandemic by describing the conditions, events, and factors that occurred. The report was organized to include:

- An Incident Overview, covering a basic background on the pandemic.
- An analysis of Regional Trends organized under some of the National Core Capabilities, including:
 - Operational Coordination
 - Planning
 - Environmental Response/Health and Safety
 - Logistics and Supply Chain Management
 - Public Health, Healthcare, and Emergency Medical Services
 - Public Information and Warning
- Final Thoughts, with implications for next steps.

The following section highlights overall findings and trends covered in this report. To review the full report please visit: XXXX



SIGNIFICANT TRENDS AND FINDINGS



1

There was confusion between roles and responsibilities for Emergency Operations Centers (EOC) and Health Department Operations Centers (DOC).

Over 60% of jurisdictions interviewed detailed challenges between EOCs and DOCs regarding identification of specific roles and responsibilities.

Over 40% of jurisdictions faced challenges integrating DSWs into response efforts whether from a lack of application, training, or engagement.

Jurisdictions faced challenges integrating Disaster Service Workers (DSW) into the COVID-19 response.

2

3

Telework, when applicable, allowed for increased staff capacity and increased staff safety.

Although not free of challenges, some jurisdictions noted telework allowed for increased capacity and safety among responders.



Over 40% of jurisdictions interviewed noted they relied on ad-hoc systems early in the pandemic due to unanticipated needs and volume.

Several response functions (logistics, warehousing, contact tracing) relied heavily on ad-hoc systems such as paper-based, Microsoft Excel, and Google Sheets early in the pandemic.

4

5

Gaps were exposed for services provided to people with access and functional needs (AFN).

Nearly 60% of reports and interviews noted that initially there were gaps in effectively providing services to AFN communities.

8 out of 14 jurisdictions interviewed found C/FBOs were critical to reaching high risk and AFN communities.

Jurisdictions relied on Community and Faith Based Organizations (C/FBO) to assist in engagement of AFN communities and other high risk populations.

6

7

Ensuring an equitable and inclusive response required additional layers of planning, coordination, and partnership which should be incorporated into updated plans.

Many jurisdictions had plans with a whole community approach. Yet over 50% noted needing more attention to equity and inclusiveness, requiring more planning and partnerships.

Mobile and strike teams were a valuable asset in meeting the needs of high risk populations in at least 6 of 14 jurisdictions.

Many jurisdictions created mobile outreach or strike teams to provide resources and services to high risk populations, including homebound residents.

8



9

Medical Health Operational Area Coordinators (MHOAC) and Regional Disaster Medical Health Specialists/Coordinators (RDMHS/C) were strong partners in the response for jurisdictions.

Nearly 60% of jurisdictions said their Area and Regional Coordinators were strong partners and critical to response success.

At least 4 of 14 jurisdictions noted they and their systems were not prepared for the volume of resource requests received.

Jurisdictions were not prepared for the volume of resource requests and scarcity of resources. They were forced to adjust systems and processes to meet the new demand.

10

11

Warehouse space and appropriately trained staff were the scarcest resource for logistics sections.

Nearly 30% of jurisdictions noted warehouse space and trained staff were the scarcest commodity.

At least 5 of 14 jurisdictions reported their supply chains were impacted by factors beyond planning efforts.

The supply chain was impacted by factors that were not accounted for in planning such as short notice health orders, absenteeism, scarce resources, and quarantine.

12

13

Previous plans could not account for the unforeseen scale and magnitude of COVID-19, forcing jurisdictions to quickly reformulate these plans during the response.

Most reports and interviews noted plans were not adequate for the scale of COVID-19 since they relied on mutual aid, not accounting for a global crisis impacting all areas at once.



50% of reports and interviews indicated that some level of responders did not fully understand ICS/NIMS/SEMS

There was a reported lack of ICS/NIMS/SEMS understanding among staff, DSWs, and volunteers.

14

15

Staff were overworked and experiencing high burnout across every sector involved in response.

Not every AAR focused on operational capacity of staff, but over 40% noted high staff burnout due to lack of surge capacity and response duration.

Responders from 5 out of 14 jurisdictions noted it was challenging to maintain day-to-day job responsibilities while also staffing EOC/DOC.

As EOC/DOC activations continued, it became challenging for staff to simultaneously be responsible for day-to-day professional responsibilities while also staffing the EOC/DOC.

16

17

Many jurisdictions added psychological first aid, mental and behavioral health services, and well-being initiatives for staff, DSWs, and volunteers.

Although likely higher, at least 5 jurisdictions noted by mid-response they offered mental health and well-being tools and training to responders.

Nearly 1/2 of jurisdictions noted their organizational culture made it difficult to balance work and life responsibilities.

The work environment, leadership, and/or agency or organizational culture continued to make it difficult for staff to prioritize work/life balance.

18

19

Staff were responsible for responding to overlapping and complex incidents during the pandemic.

All jurisdictions likely experienced other incidents during 2020-2022 (wildfires, extreme temperatures, civil demonstrations, opioid epidemic, Atmospheric River, etc.). Over 70% noted these events impacted the response and staffing.