PANDEMIC RESPONSE AND EMERGENCY PLANNING (PREP) REPORT

Best practices and recommendations for future large-scale public health crises

HOSPITAL ASSOCIATION of Southern California

Contents

Pandemic Response and Emergency Planning Report

The COVID-19 pandemic is an ongoing global health emergency on a scale never before seen in our lifetimes. While it's often compared to the global Spanish influenza pandemic of 1918–1919, early projections cast doubt that COVID-19 deaths would surpass the Spanish flu's mortality impact in the United States. Sadly, in September 2021, U.S. deaths from COVID-19 did indeed surpass the toll of the Spanish flu; as of this writing, more than 1 million people in the United States have succumbed to COVID-19's effects. However, contemporary medical science, vaccines and other measures are proving effective at slowing its severity and toll. The dream of complete eradication has been replaced with a national commitment to effective endemic management.

The PREP Report was created for two purposes. First, it aims to aggregate, codify and share the learnings, best practices and recommendations that drove the response of Southern California hospitals and health systems through the unknown of the COVID-19 pandemic's earliest phases. Second, the report is meant to share these learnings with the government agencies, elected officials, associations, community-based organizations, businesses and others that have partnered with the health care sector to benefit the communities we all serve.

One of the most important issues brought to light by the pandemic is the vast disparity in health care access that exists for many members of our community. Overall, COVID-19 reduced average U.S. life expectancy by 1.87 years from 2019 to 2020. In a study by Virginia Commonwealth University researchers published in JAMA Network Open, the life expectancy impact in the U.S. was greatest among a peer group of 21 other countries. Excluding the U.S., the other countries had an average life expectancy drop of 0.58 years. Within the U.S., life expectancy for men (-2.13 years) dropped more than for women (-1.51 years), and Hispanic and Black men experienced the highest drops — -4.31 years and -3.54 years respectively.

While those in health care have known this chasm exists, the pandemic's disproportionate morbidity and mortality impact on communities of color, particularly those also experiencing poverty, has brought forth long-overdue dialogue on ways to address these disparities. Our hope is that this imperative public discourse about disparities, as well as the important relationships and collaborations that have been established to address COVID-19, will continue to drive needed change.

Research for this report was conducted during the summer and fall of 2021, with final publication in fall 2022. In preparation for publication, information and data were updated several times, in hopes that the COVID-19 pandemic would reach some sort of conclusion prior to finalization. However, while we as a country have moved into an endemic stage, it is clear that the COVID-19 virus will continue affecting us for years to come. As a result, some of the data quoted in this report may be outdated by the time of reading. Irrespective of the ongoing impact of infection rates, vaccination rates and other factors, this report highlights important learnings for our "new normal," for driving action to address health disparities, and to support the ongoing collaboration that positively influences the health of our communities.

This report is divided into three major sections. Section 1: COVID-19 Response Lessons, Best Practices and Innovations highlights what we learned during the pandemic's first surges and how hospitals and health systems responded to the challenges. Section 2: Long-term Impacts and Recommendations looks at how learnings can drive change for the future. Section 3: County-specific Findings details best practices and recommendations from each county and/or regional area within the HASC geography.

Each section is subdivided into two main sections. The first section reviews issues that are external to hospitals and health systems and the second reviews those internal to hospitals. Understanding the external impacts raises awareness of the external partnerships and relationships that must be factored into leaders' decision-making and prioritization. Understanding internal impacts can help drive change that is within the control of health care leaders.

SECTION 1: COVID-19 RESPONSE LESSONS, BEST PRACTICES AND INNOVATIONS

A – External to Hospitals

Chapter 1: Introduction to Response Operations

Response to an emergency is complex and involves a variety of people and groups working together to ensure that roles are filled and operations run smoothly. This section outlines the roles and responsibilities of many key response agencies that function during a public health emergency outside of, but in support of, hospitals and health care facilities.

Chapter 2: Regulations and Guidance

During the pandemic's first chaotic months, a plethora of local, state and federal mandates impacted hospitals on an almost-weekly basis. Many mandates released by the state, while helpful, came without funding for implementation. Under the governor's proclamation of public health emergency, the State of California issued waivers allowing hospitals to reconfigure spaces and staffing ratios to manage the influx of patients. (In such matters involving the state, the California Hospital Association [CHA] provided a hospital voice with elected officials and various state agencies.) Outside the hospital setting, the South Coast Air Quality Management District (AQMD) released an emergency order to waive certain permit conditions for mortuaries to help expedite movement of deceased patients. It was difficult for health systems to track the frequent and sometimes contradictory orders, and they looked to associations such as HASC to continuously manage and communicate the most recent guidance.

BEST PRACTICES
Staffing and space waivers were critical for successful hospital response to COVID-19.
Advocacy for waiver implementation on AQMD crematorium limits greatly helped in addressing the decedent storage issue that arose.
HASC actively advocated for hospital needs and lobbied with key local regulating bodies. It facilitated regular communication among health care providers and local regulatory agencies to work through disparities in advice and regulations.[1]

RECOMMENDATIONS
Consider developing permanent policies on public health emergency waivers after the emergency declaration ends to take advantage of new forms of service delivery.
Provide sufficient time for hospitals to implement mandates before they are enforced.
To support preparation for future emergencies, member organizations noted that additional advocacy around regulatory relief was needed with local agencies and elected officials.

Chapter 3: Continuum of Care

The continuum of care includes pre-hospital, hospital, post-hospital and non-hospital patient care and involves coordination among a wide range of professional and support services, including those not directly under physician management. Organizations involved include hospitals, clinics, skilled nursing facilities (SNFs), emergency medical services (EMS), inpatient psychiatric units, crisis stabilization units and other clinical service providers. Continuity of quality care requires availability of personal protective equipment (PPE) and other basic supplies, infection control procedures, food services, behavioral health support for both patients and staff, and facility maintenance — all of which were affected by the pandemic.

The pandemic challenged hospitals' ability to provide quality care, not just for COVID-19 patients, but also for others with unrelated conditions. The surges of COVID-19 patients seeking treatment overloaded the capacity of the health care system, resulting in postponement or cancellation of necessary medical procedures, and limited access to facilities due to safety restrictions.

Factors affecting continuum of care included staffing, testing, PPE and other supply availability, availability of long-term care, infectious outbreaks and reductions in services, particularly in SNFs and behavioral health facilities.

A COVID-19 outbreak in any health care facility impacted the entire health care system. For instance, an outbreak in a SNF or psychiatric facility caused delays in patient transfer and reduced available units or beds. Psychiatric units experienced significant challenges when it came to infection control. While psychiatric patients, especially geropsychiatric, may be at highest risk, their condition raises complex issues impacting infection control (e.g., inability of patients to follow masking protocols, refusal of vaccines, constant cleaning needs).

1 HASC PREP Survey 2021

BEST PRACTICES

Public information campaigns to encourage people to not delay seeking needed care for any condition.
Engagement with members of the community deemed "high-risk" to inform them about testing and other services.
Direct collaboration with SNFs on infection control, including use of different sanitation products such as chlorhexidine soap, which reduced infections by 40%.[2]

RECOMMENDATIONS

Work with post-acute care partners to reduce wait times for discharging patients. Many hospitals were impacted but could not discharge patients due to limited placement options.
Support additional clinical research and education efforts regarding long-term health care impacts and service needs associated with post-acute COVID-19 care. Hospitals indicated these efforts should include clear guidance for recovering COVID-19 patients who may have long-term complications.
Assess countywide disaster planning related to potential large-scale loss of health care staff.
Continue to improve and expand telehealth capabilities, which will allow physicians to evaluate and treat patients remotely.
Invest in further support and local resources for SNFs. Many SNFs are under-resourced, with limited supply chain, and staffing is often considered "bare minimum."
Continue building relationships with health care coalitions and non-hospital partners, including SNFs, coroners, EMS and behavioral health.
Strengthen partnerships and open dialogue between hospitals, clinics, county resources and community-based organizations (CBOs) to work together to tackle challenges as they arise.
Improve health systems interoperability across the health care system continuum and continue to promote the ReddiNet® system and its expanded adoption across regions served.
Explore the opportunity to create waivers in times of public health emergencies to utilize crisis stabilization units and sobering centers to house patients on 5150 holds beyond 23 hours.

Chapter 4: Partnerships

The health care system in Southern California relied upon collaboration and cooperation between entities within and outside of health care to meet the extensive community needs during the COVID-19 pandemic. Hospitals and health care providers came together in a joint effort to care for communities. In some Southern California regions, it was noted that existing relationships and approaches to working together facilitated faster and more efficient coordination throughout the counties.

Relationships between health care and non–health care provider agencies were critical for pandemic response. Agencies and organizations joined efforts to support medical care and other community needs. HASC created forums for collaboration between health care providers, public health agencies and other relevant stakeholders. It assembled representatives, provided regular meeting opportunities, collected and disseminated data, facilitated introductions and pressed for resolution of issues.

Government departments created emergency operations centers (EOCs), public health department operations centers (DOCs) and COVID-19 task forces to organize the pandemic response. Within the EOCs, an important response partner was the Medical Health Operational Area Coordinator (MHOAC). In jurisdictions where the MHOAC organization system was well developed and understood by partners, data collection and information exchange were strong. Since the MHOAC system had established lines of communication, it enabled rapid changes to be made based on hospital and provider needs, as well as the sharing of situational awareness.

In late March 2020, supply chain disruptions and shortages in PPE were a major concern for health care and response partners across the U.S. To mitigate the potential impact on the City of Los Angeles and manage necessary response resources, the mayor named the Port of Los Angeles Executive Director as chief logistics officer for the city. Within days, Logistics Victory Los Angeles (LoVLA) and its website (www.LoVLA.org) were launched, enabling easy registration and matching of vendors with available medical supplies and health care providers needing supplies.

Continuous efforts to address supply chain shortages brought new partners together. For example, hospitals experienced an unprecedented need for oxygen when treating COVID-19 patients, leading to extreme shortages and infrastructural challenges. Together with the U.S. Army Corps of Engineers, California's Emergency Services Authority (CESA), the California Medical Assistance Team (CMAT) and Orange County EMS established a central oxygen depot. Utilizing a deployable system, the depot produced concentrated oxygen to fill tanks and support the needs of health care facilities within Orange County and across Southern California.

2 Medi-Cal Managed Care Organizations_08.30.2021

BEST PRACTICES
Created a process to connect member hospitals across the region, as well as by county, to share guidance, advice and resource needs.
Coordinated calls facilitated by HASC, which brought together diverse stakeholders and created opportunities for ongoing and consistent communication.
Hosted HASC member meetings that offered forums for hospitals to coordinate policies for consistency and share best practices.
Advocated for the needs of members with local and state partners.
Working with multiple agencies and groups, including LoVLA, HASC secured a variety of avenues for members to access necessary supplies.

RECOMMENDATIONS
Conduct recurring drills/exercises to create “muscle memory.”
Identify or develop funding opportunities to sustain collaborative partnerships.
Implement a SNF task force in each county/regional area to ensure SNFs are getting information and support to continue to function as an important part of the continuum.
Raise HASC’s profile to drive more opportunities for collaboration with other health care organizations, in addition to hospitals.
Maintain newly established partnerships with social service agencies and patient navigators to connect hospitals and CBOs.
Provide health education at CBO facilities to reduce risk and prevent clients from returning to hospitals.

Chapter 5: Communication and Public Information

Communication during a pandemic is crucial for timely response and can help to save lives. The process of obtaining information from trusted sources and filtering accurate messaging to colleagues and partners during an evolving pandemic requires collaboration and persistence among all parties. Consistency of information must be ensured both within internal communications to staff and when shared externally with the public.

At the beginning of the pandemic, communications and public relations were somewhat chaotic. This new hazard required a scale of response for which hospitals and response agencies were not fully prepared — yet timely communications were key to maintaining stability and public safety. Due to the situation's complexity, global lack of knowledge about the virus and rapidly changing protocols, response agencies often needed to work with vague or limited information. The vacillating guidance issued during this stage of the pandemic led to confusion over precautions, disease containment, PPE and other crucial operating directions, which in turn caused stress and lack of direction in response efforts. Hospitals had to modify communication strategies to ensure concise, accurate and compassionate messaging — while also maintaining morale and confidence in leadership — so their employees could continue providing services as efficiently as possible.

Communication and public information within and between HASC members and partner agencies were shared efficiently, and frequent updates conveyed. Additionally, weekly meetings and briefings between HASC and its members significantly contributed to communication success throughout the response. This emphasis on consistent and frequent communication with stakeholders and situational awareness for health care staff at all levels was a key theme of the COVID-19 response.

An additional source of information exchange was the previously developed relationships and steady communications facilitated by hospitals' contacts through area health care coalitions (HCCs), funded by the federal Hospital Preparedness Program (HPP). HCCs functioned as another forum for frequent coordination on public messaging and communication. Many HCCs coordinated weekly calls and regular email blasts with updated statistics and data for hospitals and other health care facilities. These communications kept organizations updated on trends and provided their public information officers (PIOs) with accurate information on response strategies being implemented across the region.

Communication and messaging tactics to reach the public had to be re-evaluated over the course of the pandemic. Methods and content needed to continuously adapt to the communities' needs, new information and changing situations. Any miscommunication or misinformation could cause confusion, limit trust and disrupt services.

During the initial stages of response, jurisdictions held press conferences, public town halls and informational sessions to share general health and safety information and community resources.

There were also tailored events targeting specific groups and their needs (e.g., parents and childcare). It quickly became apparent that negative opinions and misinformation had gained traction and publicity both nationally and locally, causing confusion and resistance and making it more difficult for health entities to gain public adherence to recommended guidelines. This challenge meant public relations approaches needed to change. Communications increased their focus on managing "the noise and getting people to look at true and scientific fact." Working with locally trusted messengers such as health care providers, pastors and other community leaders was necessary to provide accurate information in many populations with a distrust of government.

To support its members, HASC collaborated with the California Hospital Association and the regional associations to develop public-facing messaging and communications toolkits. These tools offered hospitals and health care systems and their communication teams digital assets that effectively conveyed public information, such as:

- Responding to patient concerns about seeking care in emergency departments or other care settings.
- Emphasizing the need to adhere to public health safety guidelines.
- Encouraging residents to receive influenza vaccinations.
- Highlighting the importance of following safety precautions during the holiday season.

BEST PRACTICES

HASC's role as a central communications hub was considered a best practice by all interviewees. The organized and curated approach to a variety of inputs and rapid-cycle turnaround with answers to member questions was imperative.
Regular participation in joint information center (JIC) calls to help ensure unified and consistent messaging to the various constituent groups.
Regular participation in HPP-funded health care coalitions (HCCs), together with Emergency Medical Services Agency (EMSA), Department of Public Health, and local medical health operational area coordinators (MHOACs), to assist with coordination of communication and planning.
Additional methods of communication were explored to assist members in communicating to the public, including continuing to develop toolkits for members.
Supported hospital PIOs by supplying template communication materials and persistently engaging with county departments to remind officials of how HASC can help address vaccine hesitancy and misinformation.

RECOMMENDATIONS
To better prepare for future emergencies, members believe HASC should centralize communications concerning regulations and information in a shared repository. [3]
Hospitals should designate PIO(s) who have crisis communications training.
Hospitals should get involved with the JICs and HCCs in each respective region.
Hospitals should utilize communications toolkits organized by HASC along with CHA and the other regional associations.
Hospitals should centralize all communication internally for ease of access by staff and physicians.
Host communicator or PIO-focused forums to discuss innovations in collectively addressing misinformation.
Set and streamline meeting agendas with clear deliverables and goals.
Identify communication leads for each stakeholder/ stakeholder group.
Develop protocols for communication lanes and media contacts, e.g., topics appropriate for public health, individual hospitals/systems, EMS, etc.

Chapter 6: Health Equity Planning

The COVID-19 pandemic exposed severe gaps and inequities in the health care system that impacted the course of the response. Most of these challenges have long existed, but were exacerbated and prolonged because of the pandemic, revealing heightened vulnerabilities. Due to historical exclusion and inequities in health care, along with perceived government involvement in COVID-19's spread, some communities did not trust information coming from authorities or were exposed to both misinformation and disinformation. This situation led to hesitation in following expert guidance around social distancing, COVID-19 testing, wearing masks and getting vaccinated. Upon the arrival of vaccines, there was confusion about who was eligible, how to receive vaccinations and whether they were safe.

Amid 2020's racial inequality protests and pleas for social justice, Communities Lifting Communities (CLC) launched several initiatives to improve health equity. A virtual workshop, *Advancing Health Equity: Pathways for Hospitals to Improve Health*, provided an overview of the health equity landscape, root causes of health inequities, and the impact of implicit bias on health outcomes. Additionally, CLC launched Cherished Futures for Black Moms & Babies, a collaborative effort to reduce Black infant mortality. In response to the alarming inequities faced by lower-income communities and communities of color, CLC launched a business and fund development plan that aims to align with American Hospital Association (AHA) guidelines for a diversity, equity and inclusion (DEI) strategy and to identify resources and best practices to support hospitals, health care and patients. This initiative will help to address racial, social and health inequities.

The pandemic also contributed to further division between those of lower and higher socioeconomic status. Members of many groups, particularly the Latinx community in Los Angeles County, did not have the option to work remotely because their work was considered essential, making them more vulnerable to being exposed to COVID-19. Many in multigenerational or multifamily homes could not quarantine or stay socially distanced, which increased the spread of disease if one person contracted COVID-19. Confusion was also noted regarding relief opportunities for businesses during the pandemic. Many small businesses did not know if they qualified for loans, grants or support. Some businesses returned the paycheck protection program loan and instead laid off employees because they were unable to operate during the shutdown.

BEST PRACTICES
CLC launched a virtual workshop for hospitals, *Advancing Health Equity: Pathways for Hospitals to Improve Health,* to provide an overview of the health equity landscape, the root causes of health inequities, and the impact of implicit bias on health outcomes.
CLC launched Cherished Futures for Black Moms & Babies, a collaborative effort to reduce Black infant mortality.
CLC launched a business and fund development plan to develop a diversity, equity and inclusion strategy and identify resources and best practices to help hospitals and the health care sector better address racial, social and health inequities among patients.
The local implementation of programs such as Project Roomkey, Project Homekey and Great Plates, as well as strong community support for local food banks, helped housing- and food-insecure people access needed resources.

RECOMMENDATIONS
Promote and deploy CLC's virtual workshops broadly across the regions served by HASC.
Convene a workgroup to better understand barriers in transferring patients to higher levels of care.
Partner with local CBOs and social service organizations to reach people who are traditionally underserved or marginalized to promote health and inform discharge plans.

3 HASC PREP Survey 2021

B – Internal to Hospitals

Chapter 1: Response Activities

HASC helped to organize a coordinated, informed and timely response for its six-county region as multiple hospitals, government and business organizations acted together to respond to the impact of COVID-19. HASC's advocacy team, issue managers, subsidiaries and communications teams played a lead role across the region, keeping almost continual contact with local public health departments, county EMS agencies, local elected officials, Medicaid managed care plans and community stakeholders and synthesizing this multifaceted information for their hospital members.

HASC led several areas of response within the regional groups that focused on the following key areas:

- **Reimbursement/Cash Flow:** COVID-19 significantly affected hospital revenues, leaving leaders responsible for quickly determining strategies to recoup expected reimbursement. According to a Kaufman Hall report published in April 2022, in 2021 California hospitals suffered financial losses of nearly $6 billion on a volume-adjusted basis, more than triple previous projections. Even after federal support, hospitals lost approximately $3.7 billion. These losses are in addition to 2020 losses totaling $8.4 billion. [4]

  Recognizing the severe financial impact experienced by hospitals during the pandemic, HASC coordinated efforts with the California Hospital Association (CHA) to provide some financial relief through four objectives:

  - Provide hospitals with options for alternative financing.
  - Expedite the processing of incurred claims to reduce the number of accounts receivable.
  - Relax preauthorization and other requirements to increase the timely adjudication of claims throughput.
  - Distribute CARES Act funds to support hospitals' increased expenses.

- **Communications:** Hospitals adapted to rapid-cycle changes and found efficient and reliable means to organize communications throughout their workforce. Suggested improvements for communications were discussed, and HASC worked diligently to ensure consistent and timely messaging to all health care entities. In addition, working collaboratively with CHA and the other regional associations, HASC produced a communications toolkit for use by all members in their own internal and external stakeholder communications.

RECOMMENDATIONS

HASC should continue its strong role in coordinating communication and guidance for its member hospitals.

Chapter 2: Testing and Testing Supplies

Testing patients for COVID-19 was integral to maintaining a safe hospital environment for patients and staff. On average, hospitals rated their satisfaction with timeliness of receiving COVID-19 lab results as 60 out of 100. For non-hospital health care partners, satisfaction with testing varied across time frames during the pandemic. These partners shared that "early on, the timeliness was very unsatisfactory and more recently [is] just satisfactory."

Early in the pandemic, testing challenges included:
- Long wait times to get a test and receive results.
- Limited quantities of testing supplies.
- Conflicting guidance from local and state officials.
- Financial burden of the cost of testing.

Three areas of success were noted in this chapter:
- Innovative use of hospital lab space to improve testing outcomes and turnaround times.
- Strengthened existing infrastructure and regional relationships to share services and resources.
- Partnered testing sites set up in the parking lots of large vacated office buildings to take the pressure off hospital laboratories.

Chapter 3: Supply Chain

One of the persistent challenges faced throughout the COVID-19 pandemic was the nationwide shortage of PPE, supplies, equipment and oxygen caused by early and ongoing disruptions in the supply chain. Hospital partners shared that some of the most challenging supplies to maintain during the response were ventilators, syringes, oxygen and vaccines. One hospital said it had to implement a major shift in thinking from the typical just-in-time inventory management approach: "Hospital thinking had to change as [we] could no longer count on state, regional or local caches for supplies; [we] are moving to keep more inventory stockpiled in house and having a plan to use our own independent resources."

Supply chain disruptions were identified along three dimensions:

- **Pricing:** Due to increased global demand and a scarcity of health care supply chain commodities, prices for medical materiel, supplies and PPE surged. In addition to excessive

4 "Analysis: California Hospitals Endured Significant Financial Strain in 2021," Kaufman Hall, April 19, 2022

pricing, one hospital received PPE that was old and unusable, and had to throw away the supply and repeat the procurement process at a financial loss. Staff spent significant time procuring supplies at a reasonable price, a task described as a "huge energy suck" that took employees away from other hospital activities.

- **Staff Well-being:** Hospitals knew they needed respirators, masks, gowns and other critical supplies during the pandemic. This lack of resources impacted not only patient care, as described in Section 2-A2, but also staff well-being. Workers in many locations in the region and across the country were forced to reuse PPE, which went against both internal hospital protocols and CDC guidance, until the supply chain caught up.
- **Inter-hospital Partnerships:** Many hospitals within the region served by HASC are part of statewide or multistate health care systems. Although more difficult than in the past due to the pandemic's impact on global supply chains, some larger multistate systems were able to deploy resources, including supplies, equipment, PPE and even staff, to hospitals that had more immediate needs. Extensive resource planning was happening at the regional and corporate levels, with continuous communication to the system's hospitals to allocate scarce resources where they were most needed.

  However, many hospitals within HASC do not have system partners and relied on their associations and other hospitals in the region. In some regions, hospitals partnered to manage supply chain issues. A coalition requires participation from all members, regardless of system affiliation, in order to plan. When hospitals are in regular and collaborative communication with each other, there is a better chance for equitable distribution of supplies and avoidance of a "free-for-all mentality of 'I should request this now while I have a chance.'"

Several success stories were noted relating to supply partnerships formed during the pandemic, including LoVLA, use of local manufacturers to produce facial coverings for providers, and MCO acquisition and distribution of PPE to their hospital and physician partners.

RECOMMENDATIONS
Support workshops to enhance training for scarce resource allocation planning and decision-making to bolster supply chain distribution with further resiliency.
Convene a team to examine the viability of creating regional warehouses/stockpiles of necessary supplies that can be tapped in emergencies.
Member hospitals must increase their focus on supply chain issues, providing additional support to materiel management departments.
Member hospitals should review and revise policies on supply chain management in order to create a proactive plan for early implementation in times of supply shortages.
Member hospitals must ensure appropriate diversification of supply chain vendors to provide additional options for sourcing.
For member hospitals that utilize a group purchasing organization (GPO) relationship, work closely with the GPO to identify specific suppliers that are experiencing delay.

Chapter 4: Waste Management

Health care facilities experienced difficulties with managing increased amounts of waste generated from the influx of additional patients. Challenges included:

- Increases in regulated and solid wastes from hospitals.
- Strained logistics from the increase in the amount of regulated medical waste (RMW) and municipal solid waste (MSW), which jeopardized service pickups, supplies, and staffing availability.
- Closure of material recovery facilities and transfer stations for solid wastes.
- Increases in hazardous waste disposal, (e.g., expired disinfection and sanitizer products).

RECOMMENDATIONS
Consider developing a master Southern California medical services waste management plan for both regulated and municipal solid waste to reduce public health risk and improve environmental sustainability, using recognized best management practices and technologies.
HASC should work with local regulators to recommend improvements to local medical and municipal waste management regulations.

Chapter 5: Capacity and Alternate Care Site Experiences

The U.S. Department of Health and Human Services' *Medical Surge Capacity and Capability Handbook* describes medical surge as "the ability to provide adequate medical evaluation and care during events that exceed the limits of the normal medical infrastructure of an affected community." Medical surge is the cornerstone for preparedness planning efforts.

Hospitals are also required to have an emergency management plan. Mitigation, preparedness, response and recovery are the four phases of emergency management. Hospitals have experienced surge capacity during flu seasons or disasters and have emergency plans that include an Incident Command System. The novel coronavirus COVID-19, however, created a surge capacity experience unlike any other.

There were many challenges in managing the surge and the sites of care. Services needed to be maintained and balanced with increasing surge capacity. For one organization, this balance meant anticipating four times their current volume of patients for more than two months. Non-acute facilities were unable — and sometimes unwilling — to take transfers, and out-of-county facilities were unable to take patients based on the COVID-19 rates in their counties. For patients that could be transferred, transportation was not consistently available. The creation of COVID-19 color zones (red, yellow, green) impacted 20% to 30% of SNF capacity on average. Loss of this necessary capacity impacted business operations from a throughput and financial perspective.

Capacity challenges in the following areas were examined:

- Public Health staff needed additional resources.
- Internal and external communications were essential to managing capacity and operations.
- Coordinating access to lower-acuity care was needed, specifically for SNF, Acute Psychiatric, Outpatient Dialysis and services for persons experiencing homelessness.
- Implementation of telehealth.
- Addressing staffing needs as part of surge capacity plans.
- Creation of alternate sites of care for surge capacity.

BEST PRACTICES
Setting up an Incident Command Center and activating roles within the Hospital Incident Command System (HICS) structure prior to the arrival of the first COVID-19 patient helped the organizations stay organized and have a head start on planning.
Meeting at least once daily during the first surge, then several times per week on an ongoing basis, kept lines of communication open and allowed for problem-solving in real time.
The joint response between hospital operational and medical staff leadership was termed “the best collaboration,” in one hospital CEO’s experience.
Lack of bureaucracy allowed for rapid response. Many hospitals tried to increase the efficiency of daily decision-making during the pandemic to allow for quick responses and effective management of the surge impacts.
External resources were brought onto hospital campuses, such as triage tents to expand the EDs. In addition, several hospitals used non–patient care space (e.g., lobby, auditorium) as surge space, partnering with facilities departments to ensure appropriate air flow.
Expanding capacity was a priority, which facilitated treating patients in a timely and efficient manner.
Evaluating facilities and collaborating with the facilities team expedited surge responses. For example, in the initial surge a lobby was repurposed; in the second, tents were secured and implemented.
In a usually competitive environment, hospitals and health systems became collaborators. CEOs and ED directors developed closer working relationships with peers at neighboring hospitals. This increased communication and collaboration is a best practice that many intend to continue.
Evaluating and expanding job roles to leverage available resources to support care needs.
Many organizations implemented telehealth very quickly. One Medi-Cal managed care organization reported seeing a significant increase in telehealth visits per quarter.
Prioritizing surgeries was inherently challenging; however, repurposing spaces, reducing the intensity of care where possible and using predictive analytics in some cases assisted in surge management.

RECOMMENDATIONS
Emphasize the need for EMS to actively triage patients in the field. Allow telehealth in the field to permit physicians and other providers to assist with remote patient evaluation.
Expand the available hours of health plans and UM staff to better meet hospital needs during a public health emergency.
Work with post-acute providers to develop and identify resources and technology to assess capacity in real time; identify and remove barriers to transfer patients across the continuum; identify and address gaps in post-acute providers/services.
Improve transfer agreements for patients requiring higher-level services.
Establish/facilitate/incentivize agreements to “share the load” in times of emergency based on agreed-upon protocols. Fire and law enforcement agencies have mutual aid agreements; HASC could help create a mutual aid agreement among hospitals in partnership with local EMS agencies and disaster resource centers.
In future surges/mass casualty events that cross county lines, HASC should convene groups from our six counties to advocate for common needs/resolution of common issues. Groups could include local EMS directors, public health directors, local managed care plans, etc.

Chapter 6: Workforce and Staffing Experiences

In hospital settings, workforce and staffing issues were institutional concerns before COVID-19. Nurses constitute the largest workforce in health care. Preliminary data on the pandemic's impact on California's registered nurse (RN) workforce detail a current shortage exacerbated by many experienced RNs having already left nursing. The data also indicate that a large number of nurses intend to retire or quit within the next two years. Nursing was not the only workforce impacted; gaps in staffing were apparent with physicians, as well as dietary, environmental services and other support areas. The pandemic exacerbated existing challenges and created new ones spanning the continuum of care and the full spectrum of organizations interviewed. Organizations transitioned employees to home wherever possible in all work environments. Information technology (IT) staff had intense workloads at the pandemic onset as they had to rapidly get their organizational colleagues fully remote and able to work from home without disruption in services.

Given the overwhelming challenges they experienced throughout the pandemic, organizations implemented best practices and innovations to meet the needs as best as possible. Staffing models were adjusted to include RN extenders, RN students and RN fellows as part of the team. A shared staffing pool was developed in conjunction with the local safety net hospital.

The team nursing staffing concept has not been widely used since nurse-to-patient ratios were enacted in California in 2004. In contrast with the primary nursing model, where a single nurse maintains patient care, the assigned nurse in the team model delegates appropriate tasks such as measuring vital signs, bathing, drawing blood and performing ECGs to the patient care technician or nurse's aide within their scope of practice. During the pandemic, many HASC hospital members implemented team nursing in ICUs and other units that were heavily utilized for COVID-19 patients. This type of workforce maximization assisted with the heavy staffing demands required during surge times. As California continues to struggle with workforce capacity, team nursing will be included in hospital surge plans for the future.

RECOMMENDATIONS
As nursing students have had less clinical experience, hospital members should ramp up new graduate residency programs, availability of preceptors, and other nursing education resources to assure a safe transition into clinical practice.
Disaster planning should be countywide and should also factor in scenarios related to a significant loss of staff and decreased ability for mutual aid from neighboring geographies. Team nursing and accelerated cross-training models are examples of additional disaster-based planning.
Stakeholders should develop a financial reserve for workforce needs, along with protocols and policies for eligibility and distribution.
Hold quarterly workforce summits to increase the pipeline of new health care workers.
Develop an on-demand behavioral health/fatigue support system for the workforce.
Establish a plan to house workers who need to be away from families for extended periods, including a system to support childcare needs.
Develop a partnership with staffing agencies and create a system to communicate needs and source workforce in an aligned and comprehensive way, rather than through a "dialing-for-staff" model.
Address traveler nurse agency costliness and inefficiencies (communication, timeliness and lack of transparency).

Chapter 7: Financial Impacts

In August 2021, the California Health Care Foundation published a report entitled "The Financial Impact of COVID-19 on California Hospitals: January 2020 Through June 2021." It contains a thorough review of the pandemic's fiscal effects on the state's hospitals and is highly recommended as a resource for hospital CEOs and other administrators. Another excellent resource is Kaufman Hall's April 2022 report, "Analysis: California Hospitals Endured Significant Financial Strain in 2021."

Hospitals in California experienced three main surges in COVID-19 patients: the first from July to September 2020; the second, and most impactful, driven by the Delta variant, January to March 2021; and the third, driven by the Omicron variant, January to March 2022. The state took proactive and extraordinary measures to assure inpatient capacity, including providing additional beds by requesting docking of the USS Mercy in an LA harbor and rapidly reopening several closed hospitals. In general, hospitals were able to adjust to the increased volume, although ICU beds were especially impacted during the winter surge. The impact to California hospitals peaked in January and February 2021, far after the influx that was forecast for the early months of the pandemic in March 2020.

At the same time, with the state expecting a significant COVID-19 surge similar to those taking place internationally (Italy) and domestically (New York City, Seattle), there was a strong push

for hospitals to delay or cancel elective procedures and outpatient services to reallocate resources in preparation. As a result of these decisions, hospital utilization across all sites of care decreased substantially. While usage rebounded somewhat in late 2020, outpatient and elective volumes decreased as compared to pre-pandemic levels.

Although both admissions and ED visits decreased in number, the length of stay increased substantially, which kept hospital beds full longer. The actual fiscal impact of increased length of stay varies by organization. In addition, hospitals in California averaged an 8% increase in expenses in 2020 as compared to 2019. Most of this increase directly correlated with longer-stay COVID-19 patients, higher supply costs, and costs associated with setting up surge areas, alternate care sites and testing facilities. Through the writing of this report, labor costs have also grown significantly due to nursing shortages. Much of the increased cost is due to rising costs of staffing agencies, registries and traveler agencies. The impact of higher registry and other staffing rates has been sorely felt by hospitals and health care providers nationally.

The Coronavirus Aid Relief and Economic Security (CARES) Act, enacted on March 27, 2020, initially provided $150 billion to help stabilize state, local and tribal budgets. Subsequent legislation increased the total allocation to $178 billion for Provider Relief Funds. As of October 2022, all California providers have attested to receiving and retaining $12.82 billion in Provider Relief funds. However, it's estimated that California hospitals have only received $9.8 billion in Provider Relief Funds and American Rescue Plan Act funds combined.

According to a Kaiser Family Foundation report, "Distribution of CARES Act Funding Among Hospitals" (May 13, 2020), the decision to allocate funding based upon total net patient revenue disproportionately favors hospitals with higher levels of private insurance payer mix. That gap was felt strongly in the region's hospitals served by HASC, especially since most hospitals with lower levels of private insurance payer mix were disproportionately impacted by COVID-19 patients due to health inequities.

RECOMMENDATIONS
Hospitals should invest in workforce development through internal initiatives and external partnerships.
HASC should work in conjunction with local public health departments to agree on criteria that would trigger decisions to decrease or temporarily halt elective procedures.
HASC should continue to advocate for funding and revenue increases for members, especially given the disproportionate CARES Act revenue-based allocation methodology.
Advocate for Health Enterprise Zones to support and/or incentivize delivery of health care in underserved areas and bridge health equity gaps.
Advocate for authority/rationale/protocols to support providers with city/county budget reserves, and/or federal/state "stimulus" funds provided to those entities in times of emergency.
Advocate for advance payments, expediting claims in adjudication by commercial/managed care plans.
Advocate for alternative payment models during a public health emergency (PHE) to ensure cash flow to hospitals.
Advocate for the reduction/forgiveness/delaying of certain fees/fines/taxes to alleviate the financial strain on hospitals and the reduction of services available to patients.
Advocate for expedited preauthorizations and ability to access out-of-network providers.

SECTION 2: LONG-TERM IMPACTS AND RECOMMENDATIONS

A – External to Hospitals

Chapter 1: Vaccine Distribution, Mandates and Hesitancy

Vaccine distribution during the COVID-19 pandemic was a large multisector effort engaging HASC region hospitals, health systems and the communities they serve. Local, state and federal public health and emergency management agencies worked to allocate and distribute vaccines throughout the nation based on established immunization models and networks of private and government sector partners. This section describes the response operations tactics to effectively monitor, distribute and administer vaccines and manage public messaging to promote their uptake and acceptance to rapidly immunize the public.

Working collaboratively with local and state public health and emergency management partners, hospitals, health care systems and clinics identified and activated a number of vaccination sites to augment response operations. While this effort enabled a more equitable vaccine access framework and reduced possible future COVID-19 surges within the hospital system, it had significant financial impacts for hospitals as a response partner. Interview participants shared that these expenses have largely gone unreimbursed. Clinics also struggled with administering vaccines to Medicare populations under payment models intended to support federal agendas to reach high-risk individuals.

Vaccine hesitancy within the public and among health care workers continues to prevent higher vaccination rates in the Los Angeles area. Hospitals, health care systems and health providers continue to serve as a trusted source of information providing messaging through internal communications to employees and advising patients in service settings.

Communications and outreach to the public, along with focused efforts to reach historically underserved communities, have continued to improve throughout the course of the pandemic. Response organizations engaged in innovative vaccine events to reach people in places they normally frequented and provided incentives to encourage uptake. Trusted community leaders, culturally informed outreach campaigns and partnerships with small business and faith-based organizations continue to increase vaccine awareness and dispel rumors about its safety and efficacy. Engaging local celebrities as well as physicians helped promote vaccination through different types of trusted messengers. The goal for many of these communications was to keep messages consistent and to increase awareness and trust.

Vaccine Distribution

RECOMMENDATIONS
Continue to collaborate with and contribute to public health and health care coalition preparedness planning workgroups. Additionally, HASC could include decision-making bodies, advisory panels and after-action review groups for vaccines and pandemic planning, in addition to other all-hazard responses (e.g., radiological) that would require the distribution or administration of medical countermeasures (MCM).
Working with local public health and emergency management agencies, HASC members could identify ongoing pandemic response roles and responsibilities for hospital systems and develop mutual aid agreements and possible cost-sharing strategies for equipment, supplies and other key capabilities for vaccine management (e.g., refrigeration units, handling and administration).
HASC should expand efforts to represent the interests of member hospitals and health care systems in local and state government pandemic and MCM preparedness planning to support proper alignment and “ground truth” frontline experience during response efforts.
Additionally, HASC should play a critical role in convening members to gain insight on proposed policies, procedures and strategic direction and solicit feedback on any new mandates.
Validate ongoing pandemic response roles and mass vaccination campaigns with state and local partners to ensure alignment with organizational emergency operations and continuity plans.
Identify key employers in the area (e.g., largest, most likely to employ high-risk populations) and invite them to explore becoming closed point-of-dispensing models for employees and immediate family members, alleviating the need for health care to support vaccination services at facilities.

Vaccine Mandates

RECOMMENDATIONS
Continue to internally track indicators demonstrating the impact of vaccine mandates across health care industries and other large employers within California to identify elements that have helped the organizations implement vaccine mandates, as well as opportunities to build on experience for future pandemic responses.
Organizations launching vaccine mandates can consider an internal debriefing and possible regional session identifying standardized performance indicators of a successful vaccine mandate program and rollout.
Organizations recently implementing COVID-19 vaccine mandates could consider conducting an internal review of actions and identify clearly defined priorities to enhance future implementation.
Build internal knowledge of and reinforce trainings for violence prevention within the workplace for all levels of administrative and operational staff, focusing on standard operating procedures for emergencies, reporting suspicious activity and prevention strategies.

Vaccine Hesitancy

RECOMMENDATIONS
Continue to serve as a trusted resource to communicate with the public, providing accurate and reliable vaccine information and resources.
Continue to collaborate and contribute as a partner in a unified approach to public crisis and risk communications alongside local, state and federal response agencies.
Working with local public health and emergency management agencies, HASC members should consider raising awareness of regional communications workgroups for hospital, health care and other allied health facilities. These groups could support further coordination, shared messaging and pre-identified roles for health care communication professionals in joint information system activation with government response partners.
Support building a regional network of hospital communications professionals. This group could identify gaps, connect partners and support development of public messaging and specific health communications directly for health care providers and hospitals.
Require individuals such as prison guards to be vaccinated to accompany inmates in hospitals.
HASC should establish key metrics for a performance improvement program to help inform the systematic corrective actions and improvement planning within concentration areas for the six-county region as a whole.
HASC should continue to leverage National Health Foundation–led programs and networks to connect populations to accurate and reliable vaccine information, increase awareness of available services, and support access to resources to improve the health of under-resourced communities and ensure equitable vaccine distribution.
HASC should continue professional development and peer education for CEOs, nurses and emerging health care leaders in public health and emergency management preparedness, crisis communications, violence prevention and specific vaccine training (e.g., point of dispensing, vaccine handling and transport, vaccine safety) by offering interdisciplinary networking sessions through online and on-site classroom learning, seminars, networking events and conferences.
HASC should increase outreach to eligible health care systems and Federally Qualified Health Centers, tribal members, etc. to amplify and broaden advocacy efforts.
HASC should continue participating in local government public health and emergency management workgroups through advisory boards, activations for a joint information system, and collaborative bodies for decision-making. This involvement will keep HASC active in both steady-state preparedness, incident response, and after-action/corrective action reporting and improvement planning for vaccine operations including policy and distribution and development of guidance and messaging for health care professionals.
HASC should continue to bring together health care and hospital systems with associate members of non-hospital organizations (consulting firms, law firms, education organizations) to further enhance vaccine planning infrastructure, apply effective practices for emergency distribution, and provide technical assistance for strategies to support increased vaccine adherence.

Chapter 2: Social Disparities, Community Needs and Health Equity

Many stakeholders agree on the importance of reducing social disparities to increase health and wellness in the community. In fact, the "Future of Nursing 2020–2030" report from the National Academy of Medicine identified the need to better equip nurses in all settings to fully respond to public health emergencies and disasters through a health equity lens. Likewise, stakeholders recognize the need to close health equity gaps that were spotlighted by the pandemic prior to the next public health emergency, to prevent these gaps from widening further.

Several challenges that drive social and health equity disparities were reviewed and recommendations provided:

Access and Barriers to Care: Telehealth use was complicated for some patients with limited availability of technology. Gaps in transportation and childcare combined with clinic closures limited access to health care.

RECOMMENDATIONS
Explore opportunities to expand community programs, outreach and service provision in rural and hard-to-reach communities to increase access to care. This effort may include increasing services in established community health locations, creating mobile outreach teams, working with CBOs to coordinate transportation, technology assistance, etc.
Use existing technology and tracking systems to identify communities with limited access to health care during day-to-day operations. When a disaster occurs, observe if/where closures of facilities will reduce the community's ability to receive care.
Determine the potential for setting up telehealth facilities in areas with limited access to care to increase technological access. This effort may be part of a health system expansion or interagency regional initiative.
Continue and increase inclusion of social service agencies in discharge planning at health care facilities on a regular basis to ensure all aspects of patient health and well-being are addressed.
Identify resources or partners that could be leveraged during patient discharge to address social determinants of health needs (e.g., housing, food access).
Plan and practice with agencies providing social services when preparing for health and medical disaster responses. For example, these agencies could be included in a health care facility and/or jurisdictional planning meeting or exercise.

Effective Outreach: Distrust of health care and government due to historical inequities caused hesitation in receiving COVID-19 care (e.g., testing, vaccines).

RECOMMENDATIONS
Expand partnerships with local CBOs and community influencers from historically underserved groups to design targeted informational campaigns and identify ways to reach people and promote health. Groups should include communities traditionally marginalized because of race, ethnicity, socioeconomic status, immigration status, etc.
Continue to increase diversity of decision-makers and request input on communications campaigns from a representative of the targeted community.
Collaborate with community partners to make public health information digestible, culturally competent and accessible for all.

Address Whole Person Well-being: Behavioral health needs increased while available services decreased, leading to an influx of behavioral health patients and a pause in care for some, including those experiencing homelessness.

RECOMMENDATIONS
Review disaster plans that outline essential health and medical care to ensure they include provision of behavioral health interventions. These plans could include health care facility and/or community-level disaster response and recovery plans.
Identify best practices establishing behavioral health "safety nets" in local communities. Include behavioral health planning for those experiencing homelessness. Incorporate these aspects into ongoing initiatives and/or determine how they can be deployed during a future disaster.

Chapter 3: Maintaining Partnerships

As numerous organizations came together to support a holistic response to COVID-19, the continuation of newly built and strengthened relationships is vital for both the remainder of the pandemic and future disaster responses. However, stakeholders are concerned that as response activities wane and prior responsibilities take precedence, there will be a loss of interest, resources and commitment to continue partnerships.

Continue to Clarify Roles: There was uncertainty around the roles, responsibilities, autonomy and authority of the various organizations (public health departments, elected officials, health care facilities) responding to the public health emergency.

RECOMMENDATIONS
Host an interagency forum for partners to discuss roles in various emergency responses. Specifically, it would be beneficial to have MHOAC, departments of public health, EMS, emergency management offices, etc. describe responsibilities and coordination processes.
Incorporate partner agencies into all disaster response and recovery plans (health care, government, non-government) by outlining roles and identifying how, when and why partners would be involved.

Centralized Information Sharing: Rapidly changing information was difficult to track and disseminate, which made it hard to ensure consistent implementation and adherence. When there were inconsistencies in policies or processes, they created the risk of competition between facilities and/or citations from regulatory authorities.

RECOMMENDATIONS
Create a central, easy-to-access location to store regulatory updates and guidance for health care facilities (e.g., HASC website).
Build clinical/medical associations and coalitions into government and response agency communication procedures when disseminating information to target health care audiences.
Design a process for collecting and sharing policies and procedures developed by health care agencies to facilitate consistency and joint learning. These could include items related to mitigation, preparedness, response and recovery.
For disasters impacting multiple health care facilities and/or the health care system broadly (e.g., regional earthquake, mass casualty event), include steps for communicating with partner agencies within all partner response plans.
Implement task forces focused on traditionally under-supported health care facility types, such as SNFs, to support preparedness efforts and ensure involvement during disaster response. Depending on the jurisdiction, this effort may be taken on by coalitions, associations or governmental agencies.
Implement a real-time hospital bed/ICU data dashboard with up-to-date information provided for review, as opposed to a retrospective snapshot report.

Refine the Unified Response: During the pandemic, stronger coordination and incident management was needed to unify response operations and resources within and between jurisdictions.

RECOMMENDATIONS
Assess jurisdictional supply stockpiles and work together as partner agencies to determine needs during different types of emergencies. Discuss if/what/how resources will be available to health care partners and the processes to access them.
Create or update emergency policies with health care systemwide reach (e.g., diversion, crisis standards of care) and involve all relevant stakeholders in the discussion. While governmental and health care partners may take the lead on this effort, associations may advocate for the involvement of additional partners.
Continue work to determine the possibility of implementing a data sharing platform that allows interagency data collection and streamlines patient care.
Create organizational charts and diagrams within each jurisdiction to clarify processes and chain of command for resource requests, status reporting, etc. Share these charts with all relevant partners through training, exercises and/or discussions.
Strategize how to maintain relationships developed during COVID-19 response for joint information sharing (e.g., interjurisdictional PIOs meeting) to continue communications on regional topics or other health epidemics.

Promote Partnerships: Some relationships needed to be established during the pandemic that required time and energy to facilitate introductions, build trust and create strong lines of communication.

RECOMMENDATIONS
Enhance outreach to and recruitment of non-hospital health care system partners (e.g., EMS, SNFs) for coalitions and interagency networks.
Work with hospital staff and leadership to determine ways to continue collaboration between facilities, for example, regular meetings, site visits or joint educational opportunities through HASC, associations, coalitions or other groups.
Continue interagency stakeholder meetings set up by HASC on a routine basis to keep current participants involved and ensure ongoing opportunities for new partners to collaborate.
Identify or develop funding opportunities to support relationship building activities, resource sharing, etc. Governmental partners, associations, coalitions and private health care facilities may all have separate streams of funding that could be available to support these efforts.
Create a multi-year training and exercise plan that includes annual drills or exercises for partners to jointly practice. Since CMS requires these drills, health care partners may find this recommendation particularly important and can schedule interagency exercises or work with coalitions or governmental partners who often lead such efforts.

Share Resources: Health care facilities continue to face extreme shortages of clinical staff.

RECOMMENDATIONS
Determine if, how and when emergency medical technicians (EMTs) or paramedics could provide care at health care facilities, if authorized by the state. This analysis could include having EMS, hospitals and other health care partners identify triggers, processes and coordination plans.
Develop ongoing partnerships with academic institutions with health care tracks to bolster training opportunities and explore potential emergency policies and procedures to bring students into health care settings as emergency staff.

Chapter 4: Advocacy

There is a continued need to publicly support the agencies responding to the pandemic, as well as their efforts to increase the safety and health of communities. Elected officials, HASC, medical associations, health care institutions and private citizens all have the power to advocate for political, physical, financial and social support of organizations and efforts to improve disaster preparedness and response.

Hospital Industry Voice in State Mandates: Hospital leaders should build relationships with local elected officials to share the real operational impact of mandates, especially where limited guidance was provided; request that mandates provide sufficient time for implementation before they become enforceable; and work to influence the creation of financial support for emergency mandates.

RECOMMENDATIONS
Meet with policy makers and public health officers to inform them of the challenges experienced by health care facilities when mandates included limited guidance. Advocate for more comprehensive information and support when future emergency mandates are issued. For example, a process could be developed to involve HASC, medical associations and other agencies in mandate development or review prior to release to ensure necessary details are addressed.
Create standard requirements that provide sufficient time for implementation of mandates before they become enforceable.
Influence the creation of financial support for implementation and administration of emergency mandates to cover items like supplies, staffing, space, etc.

Fund All Aspects of the Emergency Response Structure: Ensure all levels of public health response teams are leveraged during public health emergencies; continue to advocate for funding for long-term investments in public health staffing and infrastructure.

RECOMMENDATIONS
Work with the MHOAC program to ensure all levels of public health response understand their role and ensure its authority/responsibilities are leveraged during an emergency.
Continue to advocate for long-term investments in expanded public health and health care infrastructure. These investments would support effective vaccine management as well as other disaster response capabilities. Examples include storage capacity and the necessary equipment and supplies for cold-chain management; supply chain resiliency; enhanced IT systems for efficient and effective vaccine tracking and reporting; and capital investments, including structures such as Part B Ebola funds in previous communicable disease outbreaks.
Identify how to support the safe and regular distribution of vaccines within local local jails and prisons for inmates and employees, with a progressive timeline for launch and rollout utilizing change management principles.

Address Inequities: Insurance type influenced health care facilities' decisions on patient transfer, often due to the ongoing financial burden of patients who were underinsured or uninsured.

RECOMMENDATIONS
Work with all hospitals to understand existing non-capacity barriers to acceptance of routine requests for patient transfers to higher levels of care. Find ways to address identified barriers, e.g., out-of-county Medi-Cal coverage.
Support ongoing health care provider education on the Emergency Medical Treatment & Labor Act (EMTALA) during public health emergencies.
Collaborate with hospital associations to support additional EMTALA waivers permitting qualified hospital-authorized staff to conduct medical screening examinations within their state scope of practice and licensure, even if provided at an alternate site, and document care provided.
Collaborate on development of supplemental funding for patients with limited or no insurance coverage.
Collaborate on opportunities to increase awareness of health care professionals, patients and the public about current programs and policies for uninsured/underinsured COVID-19 patients seeking reimbursement for treatment and testing.
Identify ongoing opportunities and partnerships to support expanded access to and affordability of medical insurance to increase rates of medically insured individuals within the region, thereby enhancing future resiliency.
Advocate for expanded services to address social determinants of health within the community, for example, solutions that address the intersectionality of housing and health for people experiencing homelessness.

Increase Preparedness: Disaster response plans and infrastructure were not sufficient given the extent of the COVID-19 pandemic's impacts and duration.

RECOMMENDATIONS
Raise public awareness and work in tandem with HASC and other association partners to support direct hospital funding for hospital and health care preparedness and pandemic response. Additionally, seek opportunities for ensuring key pandemic competencies related to vaccine management and distribution such as technology modernization, supply chain resiliency and laboratory capacity.

B – Internal to Hospitals

Chapter 1: Long-term Staffing Impacts

A record 4.3 million workers in America quit their jobs in August 2021. An organizational psychologist at Texas A&M University, Anthony Klotz, dubbed this ongoing phenomenon "The Great Resignation." The pandemic created an opportunity for workers to re-evaluate what they were getting out of their job. Health care workers in particular have been greatly impacted, given the deaths experienced with COVID-19, lockdowns, risks, separation from family, ongoing surges and emotional impact.

A study from the University of California, San Francisco (UCSF) Health Workforce Research Center on Long-term Care used data from two nursing surveys to assess current and future supply and demand of RNs and how the pandemic impacted this workforce. The researchers found that many older RNs had left nursing and a large number intended to retire or quit within the next two years. In addition, unemployment increased for younger RNs and RN educational program enrollment decreased slightly from 2019–2021. RN degree enrollment had been expected to increase beyond pre-pandemic levels in future academic years, with the belief that the shortage would close by 2026. While that projection is hopeful, in the best case it still leaves five years of a nursing shortage that badly needs addressing. In the worst case, the emotional impacts of the pandemic may leave a larger portion of available nursing education slots unfilled.

The cost for using traveling nurses can be about $3,000 to $5,000 per week according to Aya Health Care, a San Diego–based health care staffing firm. While employees do not receive that amount due to staffing agency overhead and costs, they can get paid anywhere from $170 to $190 per hour. Organizations in San Diego have offered nurses $10,000 per week to cover four shifts. Comparing these salaries to current estimated average hourly rates ($54.44) for registered nurses in California makes clear why hospital nurses are joining the ranks of registry and traveler companies.

The challenges of staffing have been an ongoing issue since pre-pandemic times. The solutions identified need to be supported and funded. Opportunities remain to develop staff internally, partner with local college and universities, support existing bridge programs whether they are LVN/ADN to RN or master's entry programs in nursing (MEPNs) for non-RNs, and support educational programs that prepare individuals to respond to disasters and public health emergencies.

RECOMMENDATIONS
Invest in workforce development, including funding programs to onboard and educate staff.
Improve retention through development of tailored, data-driven retention programs specific to each organization.
Evaluate models and delivery of care, e.g., implementing team nursing, prone teams and other options.
Address the current fatigue and mental well-being of all health care workers.
Ensure work environments are healthy for all employees.

Chapter 2: Long-term Impacts

This chapter focuses on long-term impacts caused by the COVID-19 pandemic. It analyzes the impacts across several dimensions: health care delays, patient management, vulnerable populations, the workforce and infrastructure needs.

- **Health Care Needs:** Many patients held off seeking care during the pandemic and have only recently reengaged with their physicians and care teams. Other patients were forced to delay care, as hospitals on average said they suspended 75% of elective services to accommodate COVID-19 patients. This dual delay has created a bottleneck of patients and caused some patients' conditions to worsen significantly
- **Patient Management:** The pandemic experience has highlighted the need to shore up the health care continuum to assure its ability to serve the needs of patients during times of crisis. Applying the many learnings brought forward by this pandemic is essential to readiness for future crises.
- **Vulnerable Populations:** Vulnerable populations have increased health risks in addition to, or because of, poor access to health care. Individuals experiencing health inequities include those facing homelessness, coexisting behavioral and physical health conditions and comorbid conditions, along with those who are young, elderly or frail and minorities. These populations were at risk prior to the pandemic, given gaps in care access. The pandemic has exacerbated those risks and raised the conversation to the national level.
- **Staffing:** Organizations are seeing waves of staff retiring or leaving their professions. Having inadequate staff has long-term consequences. As expressed by participants, "Hospitals can handle anything as long as they have staff and nurses. Hospitals don't have staff and nurses now." New models of care in a disaster need to be evaluated to mobilize the most prepared licensed staff to assist the most critical patients. Hospitals are all competing for the same limited resources.
- **Mental Health Support:** The need for mental health support across the spectrum is paramount and these services must be expanded. As the COVID-19 pandemic continues, its long-term impact on mental health at an individual and aggregate level is not yet fully known.
- **Enhancing Planning, Training, Communication and Infrastructure:** The knowledge and lessons learned from the pandemic response need to be incorporated into training to enable the health care workforce — in all capacities and at all levels — to be more effective in their roles. This includes planning with local, county and state level agencies to ensure consistency in approach and communication. Maintaining situational awareness throughout the response is vital to allow personnel to mobilize quickly when needed.
- **Vaccine Hesitancy:** Vaccine hesitancy issues need to be better addressed to ensure our ability to dramatically lessen the effect of the COVID-19 virus.

RECOMMENDATIONS
Designate COVID-19 hospitals, similar to the SARS hospitals implemented in a prior pandemic. Target a few hospitals in each region that are able to take COVID-19 patients, and funnel resources to them accordingly. Ensure other hospitals can continue caring for regular patients. These steps would be helpful for the SNF network as well.
Provide care in the field. Leverage providers to triage patients according to where they should go.
Leverage practitioners to support physician work. Expand care pool to both help patients and better distribute emotional burden across staff.
Continue telehealth and implement where currently not available. Ensure all patients can be linked to a virtual network to receive care during a pandemic.
Consider adding paramedics in the ED to assist with staffing shortages. Paramedics could support EDs by caring for patients while in ambulances.
Implement new grad nursing orientation programs and infrastructure support.
Support ongoing educational LVN/AND to RN bridge programs and education.
Community organizations and agencies need to be continually engaged for situational awareness, and include additional agencies (SNFs, behavioral health) at the planning table.
Provide funding opportunities and more accessibility to programs for all populations.
Utilize telebriefings on a routine basis for providing a continuous stream of information.
The medical community needs to grapple with an accepted set of ethical guidelines for crisis care management. Much effort was put into this issue in December 2020, compelled by immediate care needs. It is imperative to develop a comprehensive set of guidelines ahead of the next pandemic situation.
Health systems interoperability is a challenge. Not all systems are interoperable, which impacts the continuum of care for data sharing across health organizations to best care for patients at different sites.
Ensure standardized data collection by counties and build a better infrastructure for data collection.

Chapter 3: Pandemic Planning and Disaster Preparedness

Hospital emergency preparedness plans and policies were put to the test during the COVID-19 pandemic. Several hospitals commented that the pandemic put them in situations that could not have been predicted. One hospital commented, "I think all agencies share in the responsibility of lacking preparation — in particular, staffing solutions. The lack of medical reserve corps that mobilizes resources (mainly ancillary staff, nurses, and physicians) to move to the most critical crisis areas and support them is a major weakness in our health system." Further, no adequate plans existed for long-term recovery, as state-level challenges and issues differ dramatically from the county level.

It is therefore important for hospitals to update their emergency preparedness plans and policies to reflect lessons learned from COVID-19 and to use infectious disease pandemics as a future training and drill scenario. One EMS leader suggested incorporating lessons learned from previous disasters and proactively training new staff on various emergency scenarios.

RECOMMENDATIONS
Consider developing a more robust internal emergency management program within hospitals to meet the need for planning, training and disaster drill exercises. This will also support incident response/continuity efforts and focused partnership building with local and state public health departments and emergency management jurisdictions to support after-action reports, corrective actions, and overall capability strengthening for pandemic response.
Ensure all newly procured emergency supplies, resources and facilities have a shelf-life management plan; have ready in place mitigative measures for all-hazard threats such as earthquakes, public safety power shutoffs and fuel shortages.
Consider developing emergency contract and mutual aid agreement templates for hospitals and health care systems to leverage networks and support sharing of logistical resources such as subzero vaccine freezers, transport or courier services, nitrile gloves, staffing pools and facilities for effective vaccine distribution.
Desired guidance: Recommendations for ongoing screening in health care settings (e.g., temperature checks), testing and quarantine procedures to accommodate ongoing new variants and COVID-19 cases in both vaccinated and unvaccinated populations.
Desired guidance: Public health guidance for COVID-19 booster information and administration to keep health care workers, including essential employees, informed and maintain vaccination rates in high-risk settings.

Chapter 4: Staff Wellness

The impact of the COVID-19 pandemic on health care workers has been profound. Employees across all job categories that provided care and support to COVID-infected patients have been and continue to be at increased risk for mental distress. The combination of a variety of factors has laid a heavy burden on staff mental health and well-being. In addition to the high risk of virus exposure, health care workers have experienced significantly stressful work environments due to patient surges and, in early stages, unpredictable availability of supplies. In addition to seeing extraordinary numbers of patients dying, workers have been subject to numerous traumatic events such as being separated from their loved ones and witnessing the death of colleagues.

Finding ways to support the practical and emotional well-being of workers has been a challenge for hospitals struggling to manage an acute pandemic-related crisis. Stress and burnout have been real experiences, even for health care workers who do not provide direct patient care and have moved to remote work environments. As one participant expressed, *"Health care burnout has been discussed for 20-plus years, but it's never been as real and distressing as it is right now."*

As employers, hospitals recognize that employees have experienced both pragmatic physical needs and emotional needs throughout the pandemic. During the early months, especially amid uncertainty about virus transmission, hospitals implemented many initiatives to meet employees' physical and emotional needs. In addition, specific leader behaviors were called out as important in maintaining a balanced workforce and culture, especially during this time of sustained crisis.

The COVID-19 pandemic required incorporating remote work into the work environment. Each organization implemented some form of remote work. Hospitals were able to deploy Zoom, Microsoft Teams, and other interoperable work environments at an expedited pace to ensure remote workers could stay connected with teammates and the organization and stay productive in their work expectations.

RECOMMENDATIONS
Ensure a strong, well-staffed and active EAP program that is willing to work inside the walls of the hospital.
Partner with philanthropic organizations, local community foundations and CBOs for assistance in meeting employees' physical and emotional needs.
Consider implementing a "Code Lavender – Care for the Caregiver" alert, supported by a dedicated and trained team that can assist with group critical incident stress debriefing (CISD) as well as immediate and ongoing individual support.
Implement a strong leader rounding program that includes all units and all shifts. Rounding should include active listening, identification of barriers and follow-up as appropriate.
Organizations should be thoughtful about how to deploy and invest in a hybrid workspace for employees.

SECTION 3: COUNTY-SPECIFIC FINDINGS

Los Angeles County

BEST PRACTICES
Creation of the LoVLA collaborative for supply chain access and optimization.
PIO collaboration with over 28 CBOs across the county to triage and coordinate messaging and connections.
Rapid implementation of the Project Roomkey and Great Plates programs.
Proactive cross-training of nursing staff during early downtime to prep for coming surges.
Repurposing of large call centers for public health purposes.
Cross-facility partnerships on access for underserved populations.

RECOMMENDATIONS
Continue promoting rapid nurse cross-training and team-nursing models for times of surge.
Implement critical incident stress debriefing/Care for the Caregiver programs.
Work with coroner and medical examiner offices to plan for additional morgue space. Advocate proactively for AQMD waivers for potential future surges or other public health emergencies.
Partner with businesses and other organizations to produce/access liquid oxygen beyond typical supply chain.
Use “celebrities”and trusted leaders to help create messaging to diminish vaccine hesitancy in Black, Indigenous and persons of color (BIPOC) populations and neighborhoods.
Communicate regularly with local governmental and regulatory agencies to ensure all are clear on staffing needs and can manage flexibility on staffing and space requirements.
Identify and maintain a list of regional emergency response resources, including non–health care organizations that can set up large field triage sites or testing locations (e.g., Pasadena Convention Center).
Identify and maintain a list of nontraditional supply chain resources for quick access to increase PPE or other supplies.
Develop official emergency processes/agreements with Port of LA and others to ensure medical supplies receive priority for offloading and delivery.
Develop a real-time database with the county for post-hospital patient care/admissions to SNFs or other care facilities, so that hospitals have access to current information on open beds.
Clear and regular communication between county DPH and nursing/other step-down care facilities that may be unsure of protocols for receiving patients post-hospitalization (whether or not COVID-19 positive).
Develop a protocol for establishing inpatient psychiatric units for specific emergency response for both adult and pediatric patients. (COVID-19 positive patient unit in LA County took far too long to set up.)
Improve communication between hospitals and DMH for better understanding of the actual impact of a mass casualty event on inpatient services and the entire health care delivery system.
Leadership from DMH to ensure behavioral health facilities receive clear information about protocols for protective gear and supplies.
Develop a process for setting up overflow behavioral health space in response to the emergency. For example, some BH facilities set up negative pressure rooms for COVID-19 positive patients, enabling these patients to stay in BH unit and not take up critical hospital beds.
Develop protocol to address discharge of stable psychiatric patients who are also COVID-19 positive. Issues arise with finding a placement and payer because insurance generally does not cover patients who are stable.

Orange County

BEST PRACTICES
OC Medical Association became very involved in support of county operations, physician practices and telehealth initiatives.
Partnerships with school district and schools to create “well spaces” for kids and resources for nurses.
One of the psychiatric hospitals created a COVID-19 positive ward to help offload other hospitals and emergency rooms.
Decedent management was well coordinated among coroner, EMS and hospital response.
CalOES offered many decedent management resources.
Expanded coroner transport hours benefited and were appreciated by hospitals.
Hospital disaster preparedness staff engaged in weekly EMS coalition meetings.
Collaboration between EMS and HASC helped to ensure timely updates and resource allocation.

RECOMMENDATIONS
Increase integration from hospitals with pediatric services with County Behavioral Health and schools/school districts for pediatric mental health information and resources.
Involve Behavioral Health more closely in OES and OES planning.
Determine what portions of the existing PPE cache are allocated for local, state or federal use.
Ensure reimbursement for the expanded use of telehealth.
Create and define more efficient MHOAC processes to ensure MHOAC directly receives resource requests needing its approval, avoiding time wasted in seeking approvals from other authorities.
Develop value system for creating cost-sharing trauma agreements.
Develop decedent management processes for mass casualty events. Examples: Establish regular meetings with chief deputy coroner, CalOES and EMS to determine when to contact the coroner or morgue; understand morgue contracts for extended pandemic relief; have clear understanding with coroner on the number of anticipated decedents; and ensure contracting for transporting refrigerated trailers between jurisdictions.
Advocate for flexibility on SNF-level care needs. Improve discharge feedback from alternate care sites, e.g., USS Mercy ship.
Hospitals should adhere to state law requiring PPE stockpiles for staff infectious disease safety.
Continue public messaging to encourage people not to delay routine health maintenance.
Formalize temporary policies for paramedic “treat and release” in the field or on hospital campuses to lessen ED burden.
Develop plans for crisis standards of care. Obtain buy-in from hospitals prior to future pandemics.
Develop better hospital relationships with SNFs through the EMS Preparedness Coalition.
Update the hospital and county MOU for disaster preparedness.
Hospitals should develop mass evacuation plans.
Develop physician-to-physician relationships among neighboring hospitals to expedite transfers in mass casualty events, rather than waiting for EMS approval.

Riverside County

BEST PRACTICES
The PIO team created daily broadcast video messages that gave timely information and were shared to ensure consistent communication.
Implemented a policy for those coming to the ED only for testing: posted signs and provided information about other nearby testing sites to those without symptoms. Only severely acute patients were triaged and treated. Once the community could access both at-home testing and county sites, the number of people coming to the ED for testing dropped.
Established a test-to-treat site (infusion center) so patients could test in a non-ED location and still receive treatment immediately based on criteria. This process helped reduce ED overcrowding from individuals who needed testing only and were not severely acute.
Used hospital-paid employee assistance programs (EAPs) to meet with onsite staff who were struggling from the pandemic. If employees called EAP on their own, there was no cost.

RECOMMENDATIONS
Include pandemic scenarios in existing disaster protocols.
Develop a better system for isolating behavioral health patients to avoid boarding in the ED.
Develop a better system for transporting COVID-19 positive patients (ambulances refused to transfer these patients).

San Bernardino County

BEST PRACTICES
Hospitals repurposed several pediatric units for adult care, relying on local children's hospitals for pediatric services.
Street medicine programs were helpful in reaching persons experiencing homelessness.
The PIO team created daily broadcast video messages that gave timely information and were shared to ensure consistent communication.
HASC created a collaboration through our members that met frequently and flexibly as needed, at times daily.
Having a specific point person/hospital liaison, such as a hospital advisor for the county, who communicated on many levels, both locally and statewide.
Meetings with the COVID-19 leadership huddle created open communication and the partnership was unique to San Bernardino County.
Public health data platform and specific hospital dashboards, along with sharing snapshots of capacity, were extremely helpful.
Utilizing a behind-the-scenes ad hoc group or "kitchen cabinet" of hospital leaders on policy and regulatory issues regarding alternative care sites, etc., was beneficial in providing the hospital advisor with pertinent information when updating the COVID-19 leadership huddle.
Working together hospital to hospital to aid with specific policy-related needs.
Great relationship with Inland Empire Health Plan (IEHP), which implemented expedited pre-authorization programs and strategies for creating capacity and transportation.
IEHP participated in the COVID-19 huddle and SNF task force. When care coordination issues arose during meetings, IEHP addressed them on a larger scale in real time.
IEHP, Molina and Kaiser provided global and expedited authorization.
Hospitals implemented their own policy requiring traveler nurses to be more than 50 miles from hospital.
Public Health effectively coordinated vaccine distribution despite an extremely disorganized overall process.

RECOMMENDATIONS
Improve EMS system to enable hospitals to transfer patients between facilities more efficiently.
Include pandemic scenarios in existing disaster protocols.
Establish a much broader group of people who oversee different key post-acute care services that impact a hospital's ability to discharge.
Engage with sheriff, coroner and local mortuaries early on in mass casualty events.
Create a process to escalate cases and learn reasons when resource requests are denied, e.g., a hotline for intervening on specific need requests and triaged based on potential HASC influence.
Create a streamlined MHOAC resource request process. The process was time consuming and difficult to get started, and delayed responses.
Other regional health plans should implement an expedited response model similar to IEHP's.

Santa Barbara and Ventura Counties

BEST PRACTICES
Hiring of Mixtecan (verbal language only) translators deployed by Public Health to clinic and ambulatory settings.
The Board of Supervisors set up a communication strategy on day one of the pandemic and stayed consistent. Use of a Joint Information Center to create and disseminate messaging consistently.
Set up alternate care sites to help decompress hospitals and the care continuum.
Arrangement of "field hospitals" within the walls of the hospital to act as surge units.
Creation and use of videos demonstrating PPE donning and doffing protocols.
Street medicine programs were helpful in reaching persons experiencing homelessness.
Public Health/EMS-led active hospital collaborative.
Identified a SNF designated for COVID-19 patients to decompress hospitals and assist the other SNFs.
Two-way information transfer through calls, online data submission and ReddiNet were all very effective, especially as they were fine-tuned over time.

RECOMMENDATIONS
Proactively work with county DMH to modify 5150 guidelines to allow other care sites to accept 5150 patients.
Proactively create plans to expand capacity for certain licensed facilities (e.g., PHFs, CSUs) to go above licensed bed count.
Highlight CBOs in press conferences to promote awareness of and contributions to services.
Share ReddiNet use and customizations with other HASC counties.
Hospitals should have designated PIO(s) with communications training — ideally Crisis and Emergency Risk Communication (CERC) — and an established CERC plan.
Sharply reduce the demand for data collection and reporting. The time burden required for staff to complete this task was "extremely excessive and unreasonable."
Hospital diversion should be triggered automatically in a public health emergency to help hospitals serve local patient needs without being overrun by patients from outside the county.
Create a mechanism/entity to respond to local manufacturers and companies who shift production to help address the public health emergency needs; identify those businesses wiling to shift production; monitor pricing to prevent gouging.
More coordination is needed across county lines.
Facilitate regular communications that enable hospitals to share supply requests, offers and contacts with one another.
Work through potential scenarios around the challenges of transporting patients outside of or across the county.

This report would be incomplete without mentioning the multitude of people that make our hospitals and health systems available every hour of every day to care for our communities. HASC honors all the nurses, physicians, ancillary support, administrative employees, first responders, hospitals, behavioral health, public health organizations and so many others who continue to make a difference every day. This *Pandemic Response and Emergency Planning (PREP) Report* would not be possible without their willingness to share their collective experiences, challenges and triumphs.

HOSPITAL ASSOCIATION of Southern California