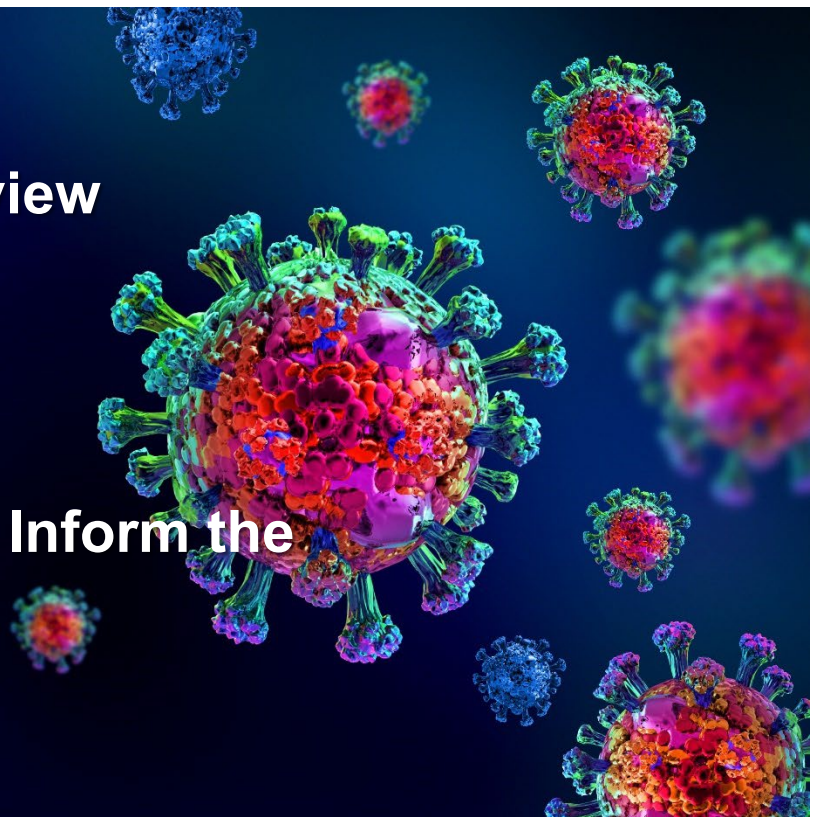




COVID-19 Pandemic Response Interim Review

Lessons Learned and Recommendations to Inform the Journey Ahead

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Preface

At the time of this writing, fall 2022, more than 34,000 Los Angeles County residents have lost their lives because of COVID-19. Countless individuals and families in our region have lost loved ones, been affected by severe illness, and experienced significant hardships during the past two and a half years.

The rapid spread of a highly contagious novel virus transmitted from animals to humans may have been inevitable, but Los Angeles County Department of Public Health (LAC DPH) professionals believe that the massive toll of the virus should not be viewed as inevitable and should never be forgotten.

The COVID-19 pandemic has affected every Los Angeles County resident but has shone a particularly harsh light on inequity across the County and country. The root causes of this inequity are deep and long-standing, and the cost to Los Angeles County residents and the broader society is unacceptable. The pandemic has also laid bare the fragility and vulnerabilities of the County's public health and safety net health care services infrastructure.

Many individuals have made extraordinary efforts and personal sacrifices, putting their health at risk on the front lines of the pandemic response in service to their fellow residents and communities. LAC DPH and its many partners in Los Angeles County government mobilized a massive and unprecedented public health effort to respond to outbreaks and mitigate the spread of infection. Despite a formidable pandemic, there have been many notable accomplishments, including extraordinarily rapid advances in scientific discovery, vaccination, and treatment on a timeline never before witnessed; new collaborations and partnerships across public and private entities throughout the County; and a shared understanding of and desire to address long-standing inequities that affect so many Los Angeles County residents. As the County continues to grapple with the suffering and loss sustained during the pandemic, it must gain wisdom from the experiences of the past two and a half years to ensure that COVID-19's galvanizing effects result in a county that is nimbler and better prepared to address inequities in the distribution of resources and opportunities during future public health crises.

The primary intent of the following report, an interim review of LAC DPH's efforts to respond to the COVID-19 crisis, is to document key aspects of the response and synthesize important lessons as part of an ethos of continuous learning and to identify ways of strengthening LAC DPH's response to the ongoing COVID-19 pandemic and future public health crises. Equally challenging imperatives are to contemplate what is required to ensure a sustainable and high-functioning local public health capability for a county as large, diverse, and interconnected as Los Angeles in the 21st century and to find ways to meaningfully and measurably advance equity.

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I. Glossary of Acronyms

Acronym	Definition
ACDC	Acute Communicable Disease Control
Cal/OSHA	California Division of Occupational Safety and Health
CBO	Community-Based Organization
CDC	Centers for Disease Control and Prevention
CDPH	California Department of Public Health
CEO	Chief Executive Officer (Los Angeles County)
CHC	Community Health Center
CHWOI	Community Health Worker Outreach Initiative
CHS	Correctional Health Services
CHW	Community Health Worker
DHS	Los Angeles County Department of Health Services
DMH	Los Angeles County Department of Mental Health
ECE	Early Childhood Education
EH	Environmental Health
ELC	Epidemiology and Laboratory Capacity for Prevention and Control of Emerging Infectious Diseases
EMS	Emergency Medical Services
FEMA	Federal Emergency Management Agency
FPP	Federal Pharmacy Partnership
FQHC	Federally Qualified Health Center
GAO	Government Accountability Office
HCW	Health Care Worker
HFID	Health Facilities Inspection Division
HHS	U.S. Department of Health and Human Services
HPI	Health Places Index
HRSA	U.S. Health Resources and Services Administration
ICS	Incident Command System
ICU	Intensive Care Unit
IHE	Institutes of Higher Education
ISD	Los Angeles County Internal Services Department
JIC	Joint Information Center
LAC DPH	Los Angeles County Department of Public Health
LACOE	Los Angeles County Office of Education
LAFD	Los Angeles Fire Department
LAHAN	Los Angeles County Health Alert Network
LAHSA	Los Angeles Homeless Services Authority
LAUSD	Los Angeles Unified School District
LASD	Los Angeles County Sherriff Department
LAX	Los Angeles International Airport
LTCF	Long-Term Care Facility
MHOAC	(EMS) Medical Health Operational Area Coordination Program
NIMS	National Incident Management System
OAECE	Office for the Advancement of Early Care and Education

OEM	Los Angeles County Office of Emergency Management
OMB	Outbreak Management Branch
PCR	Polymer Chain Reaction
PEH	People Experiencing Homelessness
PHEP	Public Health and Emergency Preparedness
POD	Points of Dispensing
PPE	Personal Protective Equipment
Q&I	Quarantine and Isolation
SNF	Skilled Nursing Facility
STAT	Schools Technical Assistance Team
STD	Sexually Transmitted Disease
TB	Tuberculosis
TK-12	Transitional Kindergarten Through 12 th grade
WHO	World Health Organization

II. Executive Summary

A coronavirus first identified in late 2019, SARS-CoV-2 caused a pandemic of respiratory illness called COVID-19, which resulted in the worst global public health emergency in over a century.

The pandemic has been a major health crisis that created extraordinary challenges for public health, clinical care delivery, and local governments across the country and around the globe. It has affected individual and family health and well-being and created significant social, educational, and economic disruption. The magnitude of the impact of the pandemic on the elderly, those with underlying medical conditions, people of color, and those working in essential jobs has been staggering.

Los Angeles County has witnessed over 34,000¹ deaths to-date because of COVID-19 and the disease remains a leading cause of death in the County² as well as the country³, even as new strains of the virus may result in less severe illness and there is widespread access to vaccines.

The County of Los Angeles Board of Supervisors quickly mobilized to deploy significant resources to mitigate the impact of the pandemic in the nation’s most populous county, with its public health agency playing a lead role in developing policies and providing services to save lives and protect public health. The Los Angeles County Department of Public Health (LAC DPH), the largest of nearly 3,000 local public health agencies in the United States, has been at the forefront of the COVID-19 response for over two and a half years. LAC DPH has been a source of scientific data and authoritative public health expertise to guide local policy- and

decision-making to respond to the threats of the pandemic. It has also served as a provider of critical services – in close coordination with many other County departments – such as testing, outbreak detection, contact tracing, quarantine and isolation support, treatment, vaccinations, and boosters.

In the face of a complex and constantly evolving pandemic that has spanned waves of outbreaks over multiple years, LAC DPH has strived to provide clear directives and policies to, above all else, accomplish the following:

- Mitigate the impact of the pandemic and prevent as much serious illness and death as possible.
- Ground policy decisions in the most current science.
- Advance an equitable response to address disparities in health outcomes related to race and class.
- Protect essential workers and ensure the viability of the health care safety net throughout the crisis.
- Ensure Countywide access to vaccines, treatments, and other resources as they became available.
- Keep Los Angeles County residents and stakeholders informed through frequent communications and rapid data sharing at a pace and scale never before attempted.

LAC DPH leadership embraced an ethic of continuous learning throughout this process, seeking to apply lessons learned across each phase of the pandemic in near real time to strengthen the County’s response, a commitment to data-informed policy- and decision-making, and a willingness to pivot

quickly and decisively as the trajectory of the virus changed.

In that spirit, this interim review seeks to reflect on LAC DPH’s response efforts across the pandemic to date, contemplating what has gone well and what can be addressed to further strengthen the department’s capacity to respond to public health crises. The findings, discussions, and recommendations in this review are based on a series of approximately 150 interviews with LAC DPH staff, staff from other County departments and services, other local and state government officials, health care providers, school officials, administrators in institutions of higher education, faith leaders, representatives from community-based organizations (CBOs), community advocates, business leaders, and representatives from trade associations and labor unions as well as residents of Los Angeles County. The interview findings are supplemented with extensive document and data review and insights from working sessions with LAC DPH leaders on specific topics related to the department’s response efforts.

Specifically, this review focused on decisions and circumstances that made the work of protecting public health during the COVID-19 pandemic easier or harder, with a goal of identifying policy, administrative, operational, financial, and structural challenges or barriers that may be addressed to strengthen the County’s public health infrastructure and nimbleness for addressing future public health crises.

An accompanying Fact Pack reviews the impact of COVID-19 on Los Angeles County and provides supplemental information on LAC DPH’s response efforts.

Time Frame

This interim review covers the period from January 2020 through early November 2022, though it primarily focuses on the time frame of March 2020, as cases began to spread in Los Angeles County, through the early summer of 2022.

Limitations

This report focuses on LAC DPH’s role in the COVID-19 response in Los Angeles County; it does not assess other County departments or agencies or state and federal efforts in the region. While it seeks to incorporate a diverse set of perspectives, given the breadth and reach of the pandemic it does not claim to be representative of all perspectives.

LAC DPH COVID-19 Response Efforts

Preventing and controlling the spread of communicable disease is a foundational area of expertise for LAC DPH.⁴ LAC DPH serves numerous essential roles in public health emergency response, spanning conducting surveillance and outbreak management, communicating risk reduction and infection control information to the public, engaging community stakeholders and CBOs to support vulnerable residents, providing vaccinations, and providing certain safety net services. LAC DPH’s responsibility also includes using existing laws and regulations that seek to protect the population from risk associated with unchecked and ongoing disease transmission, including issuing (and enforcing) Health Officer Orders and guidance for the public.

The challenges faced in managing the response to the pandemic have been numerous and

daunting. Local public health operates within a complex web of federal, state, regional, and local agencies and partners to promote and protect public health. The lines of authority, guidance, and resourcing are often overlapping and at times unclear, as the pandemic demonstrated, and the COVID-19 response was fragmented and led to questions about LAC DPH’s scope of authority and responsibilities even as the department was on the front lines of the initial response.

As the COVID-19 pandemic exposed deep, systemic issues regarding how the U.S. funds and supports public health, with insufficient and unreliable funding leaving local health agencies, including LAC DPH, grappling with thin and overtaxed workforces, antiquated IT and data systems, and insufficient infrastructure.⁵ Polarization, widespread misinformation, and threats against public health officials further complicated response efforts.

LAC DPH’s strategies and tactics to curb the spread and mitigate the impact of COVID-19 across the entire Los Angeles County population changed and evolved as the science and understanding of the virus advanced, as the virus itself evolved, and as more tools became available to combat the disease.

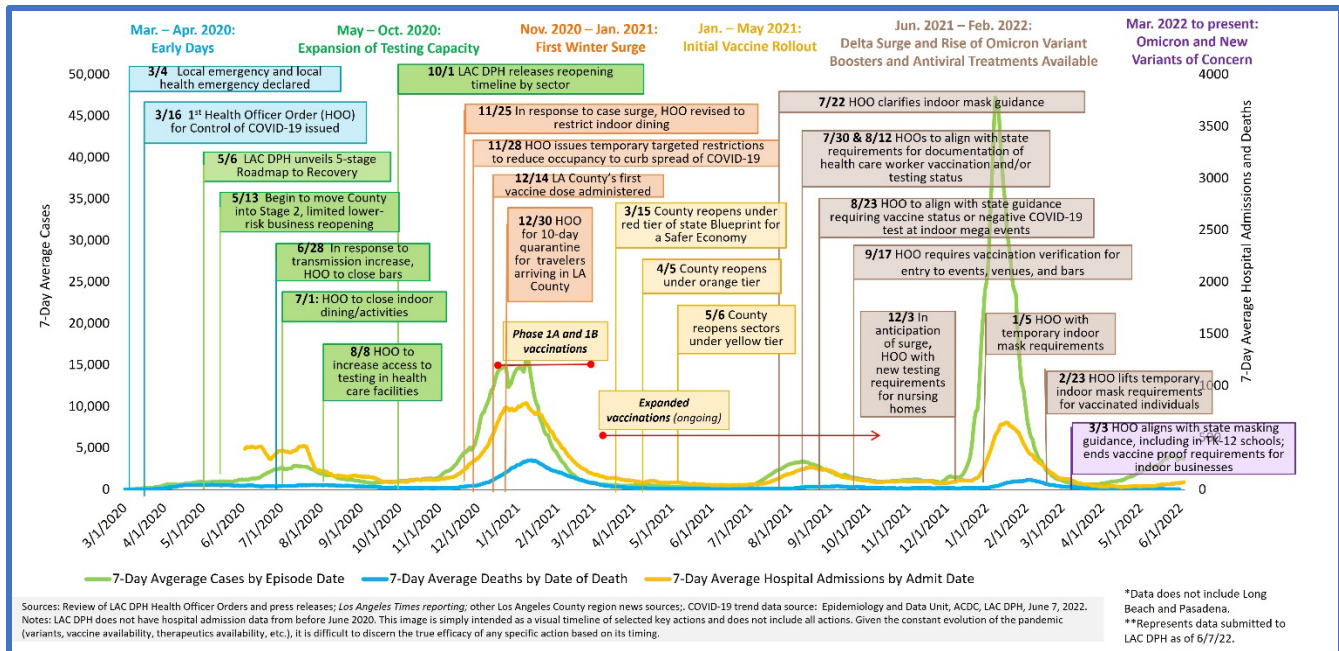
When COVID-19 outbreaks first emerged in the U.S. in March 2020, little was known about the new (or novel) virus, diagnostic testing capacity

and supplies were severely inadequate, there were global shortage of personal protective equipment (PPE) and other supplies, treatment options were limited, and infection mitigation strategies to control the spread of the disease and protect underlying health system capacity to care for the seriously ill were necessarily blunt.

Like other densely populated regions, Los Angeles County became a hot spot for COVID-19 infections early in the pandemic.⁶ As testing capacity increased and vaccines and new treatment options became available, public health was stressed to rapidly stand up new programs and radically scale up its staffing to support response demands. As the virus itself continued to change over time, the region grappled with surges of new infections and breakthrough cases, which continued to stretch public health, health systems, and community response capacity and created new challenges for government, businesses, schools, and individuals.

The country appears to be in a less acute phase of the COVID-19 pandemic than in previous periods, though the future of the pandemic remains highly uncertain. Many experts anticipate continuing virus surges, driven in part by the emergence of newer immune-evading COVID-19 variants and reinfections, which will require ongoing vigilance by both public health officials and the public at large.

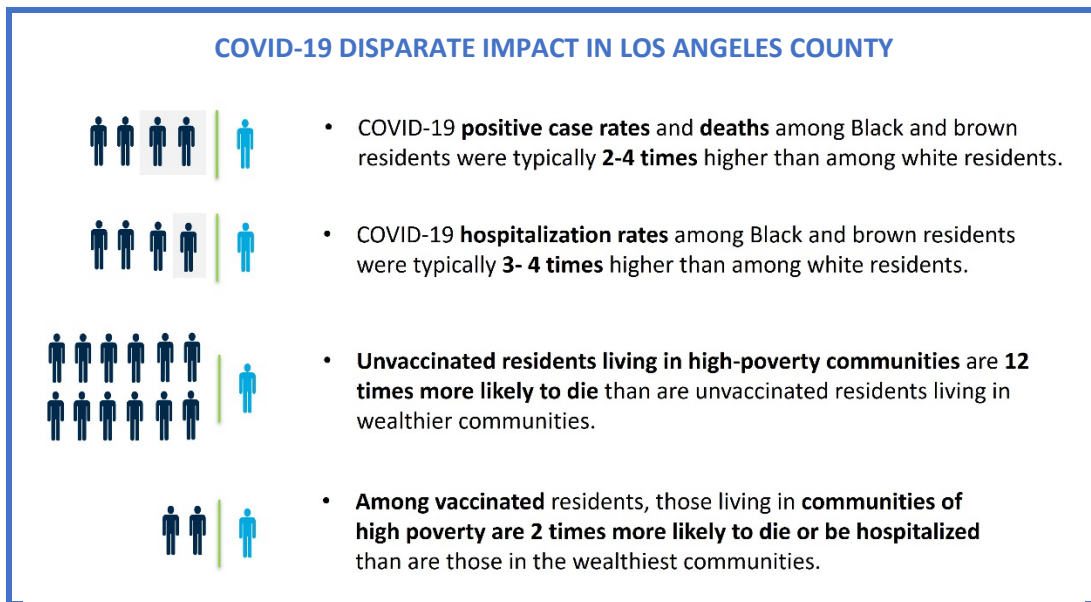
TIMELINE OF REPRESENTATIVE LOS ANGELES COUNTY COVID-19 MITIGATION STRATEGIES AND RESPONSE ACTIONS



Equity at the Center

Despite COVID-19’s vast spread, the disease has disproportionately affected communities of color, older adults, essential workers, and communities with fewer health affirming resources, exacerbating preexisting racial, social, and economic divisions. Throughout the pandemic, there have been persistent, large disparities in the number of COVID-19 cases, hospitalizations, and deaths among Black, Latinx, American Indian, and Alaska Native people.⁷ From the start of the pandemic, the

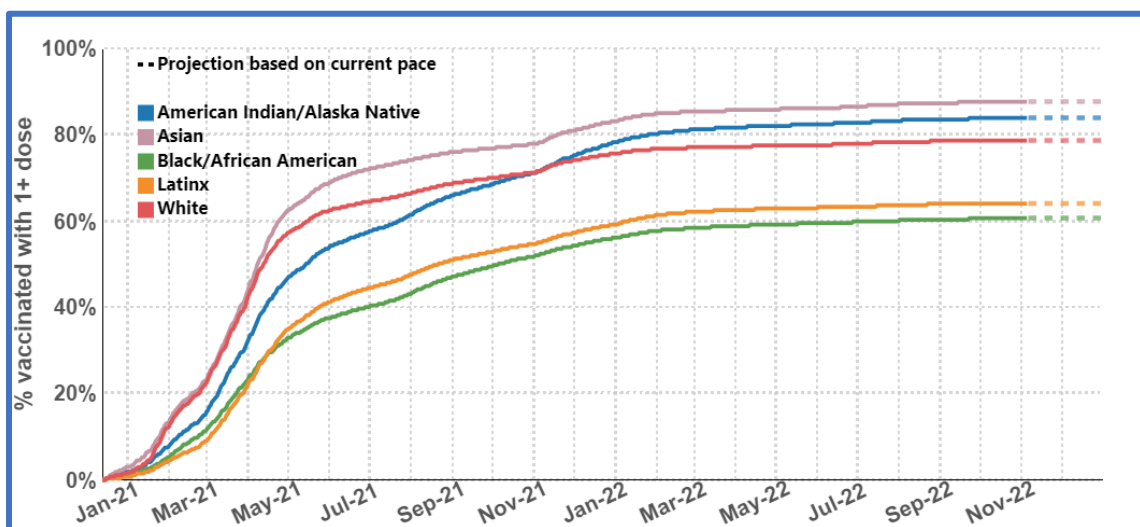
County of Los Angeles Board of Supervisors and LAC DPH prioritized equity-driven strategies and community partnerships to respond to the needs of the communities most impacted by COVID-19. However, despite significant efforts, racial and ethnic disparities in health outcomes due to COVID-19 persist. The root causes of these disparities are complex and have many underlying social, geographic, political, economic, and environmental factors. Advancing health equity and racial justice will continue to be central to LAC DPH’s work going forward.



Vaccination remains one of the most effective tools to combat the severity of illness due to COVID-19. LAC DPH is committed to vaccine equity and implemented multiple strategies throughout the pandemic to increase vaccination rates. As of November 2022, over 89% of County residents over the age of 18 have received at least one COVID-19 vaccine dose (including over 95% of residents over the

age of 65)⁸; however, racial and ethnic gaps in vaccination rates also persist, despite widespread availability of free vaccines and boosters. While vaccination, in and of itself, has been shown to not be an equalizer in associated health outcomes, persistent gaps in vaccination coverage leave some communities at higher risk than others.

PERCENTAGE OF LOS ANGELES COUNTY RESIDENTS AGE 5+ VACCINATED WITH 1+ COVID-19 DOSES BY RACE / ETHNICITY (NOVEMBER 2022)⁹



**90-DAY AGE-ADJUSTED HOSPITALIZATION RATES BY RACE / ETHNICITY AND VACCINATION STATUS
LOS ANGELES COUNTY (MAY 27 – AUGUST 25, 2022)**

Per 100,000 residents

	Asian	Black	Latinx	White
Hospitalizations¹				
Fully Vaccinated	45.4	107.5	89.1	64.7
Unvaccinated	93.2	161.1	184.8	165.3

1 Hospitalization rates reflect the 90-day period ending 8/25/22.

**90-DAY AGE-ADJUSTED HOSPITALIZATION AND DEATH RATES BY AREA POVERTY
AND VACCINATION STATUS**

LOS ANGELES COUNTY (MAY 27 – AUGUST 25, 2022)

Per 100,000 residents

	<10% area poverty	10% to <20% area poverty	20% to <30% area poverty	30% to 100% area poverty
Hospitalizations¹				
Fully Vaccinated	61.0	75.0	89.0	95.2
Unvaccinated	78.0	239.4	537.6	915.4
Deaths²				
Fully Vaccinated	6.0	8.8	8.5	12.5
Unvaccinated	14.3	35.4	79.4	115.0

1 Hospitalization rates reflect the 90-day period ending 8/25/22.
2 Death rates reflect the 90-day period ending 8/25/22.

Focus on Vulnerable Populations

COVID-19 has also exacted a disproportionate toll on older adults, homebound individuals, nursing home residents, people with disabilities, people experiencing homelessness (PEH), people in congregate living settings, the incarcerated, and people with underlying chronic medical conditions.¹⁰

Since the beginning of the pandemic, essential workers – including health care, food processing, meatpacking, agriculture, public transit, grocery and hardware store, manufacturing, and sanitation workers – have not been able to work from home, putting them at greater risk of exposure and infection despite, for many, low wages and limited access to health insurance.


Early childcare centers and transitional kindergarten through 12th grade (TK-12) schools faced unique challenges in navigating the pandemic and were also a critical partner in providing resources, including childcare for essential workers and food, access to testing, and access to vaccinations in their communities.

LAC DPH employed a myriad of strategies to address the needs of vulnerable populations as

described in the report, including, among others, PPE distribution and infection control support, outbreak management assistance, quarantine and isolation supports, targeted vaccine deployments, robust technical assistance to support safer reopening, and the formation of dedicated teams to serve as liaisons with stakeholders and coordinate with other County departments in support of special populations.

Key Functions of the COVID-19 Response

LAC DPH played a leadership role and provided many key functions throughout the pandemic, including:

 <ul style="list-style-type: none"> Issued over 130 Health Officer Orders that outlined essential safety measures for County businesses, workers, and residents Developed over 550 industry-specific guidance documents, best practices and toolkits to help implement safety measures 	 <ul style="list-style-type: none"> Developed nine interactive, multilayered public dashboards tracking COVID-19 cases, hospitalization, deaths, demographics, testing and vaccination rates, contact tracing, outbreaks, information on special populations and community-level metrics, among other dimensions.
 <ul style="list-style-type: none"> Distributed over 116 million PPE items to health care workers, including those in nursing homes and congregate living facilities Distributed over 3 million PPE items to childcare centers in the early weeks of the pandemic during shortages to ensure support for essential workers 	<ul style="list-style-type: none"> Data updated seven-days per week for two years (now five days per week and at selected intervals for specific information) One of first public health departments in the country to report on race and ethnicity data  <ul style="list-style-type: none"> Conducted over 1 million contact tracing interviews
 <ul style="list-style-type: none"> Distributed over 14 million over-the-counter (OTC) COVID-19 at-home antigen tests Delivered more than 2 million tests to support testing in nursing homes and selected health care facilities 	 <ul style="list-style-type: none"> Managed more than 8,000 confirmed COVID-19 outbreaks at worksites, schools, and congregate living facilities  <ul style="list-style-type: none"> Conducted over 170,900 Health Officer Order investigation / reinspection site visits
 <ul style="list-style-type: none"> With County partners, administered 1.1 million vaccine doses at vaccine megaPOD sites plus over 500,000 doses at other LAC DPH operated sites 	 <ul style="list-style-type: none"> Established more than 50 Public Health Councils to ensure that low-wage workers in sectors hard hit by COVID-19 were protected by County Health Officer Orders and had convenient access to vaccines
 <ul style="list-style-type: none"> Established vaccine network and distributed vaccines to over 1,400 sites and hundreds of mobile vaccination teams Over 20 million vaccine doses administered to homebound residents, workers, and residents at businesses, schools, and community events 	 <ul style="list-style-type: none"> Contracted with over 500 community health workers to provide education and outreach on COVID-19 and vaccinations Partnered with 99 CBOs to support outreach and linkages to services and supports for vulnerable residents, including food and transportation to medical services
 <ul style="list-style-type: none"> Provided daily updated information to the public, including over 5,500 COVID-19 press releases since the start of the pandemic and regular press briefings and townhalls Conducted over 600 weekly telebriefings with more than 40 different stakeholder groups to provide tailored insights and answer sector-specific questions Translated guidance into 12 languages 	<ul style="list-style-type: none"> Partnered with 470 faith-based organizations to expand access to vaccines and boosters through outreach, education, and coordination of convenient mobile vaccine clinic locations Engaged with over 3,400 members of the community as trusted ambassadors to share the most up-to-date LAC DPH information on COVID-19 and infection control with their communities (including a school liaison program)
	 <ul style="list-style-type: none"> Established a COVID-19 quarantine and isolation (Q&I) call center, which fielded over 23,000 calls and placed more than 9,700 residents in Q&I facilities who were experiencing homelessness, residing in congregate living situations, or unable to safely quarantine or isolate at home

These supports and accomplishments were not without their challenges, as further discussed in the report. Differing messages from federal, state, surrounding counties, and even various city leaders created public confusion. The broad reach and frequent changes to both state and local Health Officer Orders posed challenges for employers and at times created tensions between businesses and customers. At certain times during the pandemic, LAC DPH found it necessary to implement more stringent safety measures than other parts of the state in response to local circumstances, which was also a source of frustration for some stakeholders. The need to act quickly and decisively with imperfect data and to get information out fast, especially in the early weeks of the pandemic, also created tension and left some stakeholders feeling out of the loop.

The complexity and changing scientific understanding of the virus and resulting disease made communications and effective messaging challenging. The sheer volume of contact tracing, compliance visits, inspections, outbreak management support, and technical assistance required LAC DPH to rapidly scale up operations and integrate, train and procure technology for thousands of temporary and contract staff.

Supply limitations and allocation of scarce resources caused tension and contributed to public stress and fear, especially for vulnerable populations. Outdated technology platforms hampered early data collection and reporting efforts, and new systems required tremendous investment, workforce support, and training under enormous time pressures. Entire new programs and capabilities had to be implemented in short order, such as forming

one of the largest vaccination networks in the country.

Significant time and dedicated resources were required to build new relationships with stakeholders across multiple sectors and new community partnerships.

LAC DPH staff have had to play multiple roles in supporting the pandemic response, with many trying to juggle their core responsibilities with the many other vital functions public health serves, including responding to the Mpox crisis, while also supporting the COVID-19 response. LAC DPH has been under emergency operations for close to three years, necessitating 24/7 operations and limitations on personal leave, which has taken a toll on its already thin workforce.

The pandemic was unprecedented, and as such, it also tested the whole of County government. A lack of clarity related to roles and responsibilities in pandemic response, barriers to rapid funding, hiring and resource deployment, cross-departmental coordination challenges, and simultaneous demands across all of local government at times made the work of the response harder but also provide lessons to strengthen future emergency responses.

Despite these challenges, LAC DPH and its partners in County government, the private sector, and in the community have worked tirelessly to protect the health of Los Angeles County residents and accomplished much in their efforts to mitigate the impact of COVID-19 that can inform and prepare LAC DPH for future crises.

Emerging Lessons and Recommendations

The County of Los Angeles and LAC DPH facilitated a strong response to the COVID-19 pandemic that undoubtedly saved lives.

There are many lessons to learn and reflect on as LAC DPH and the County consider how to navigate the ongoing pandemic and strengthen their collective ability to mitigate impact and mobilize response strategies for future pandemics and other public health crises. A few themes, in particular, continued to rise to the top across the course of this review:

- Clarity of responsibilities and roles in pandemic preparedness and response is essential.
- An effective pandemic response requires flexibility and the ability to take actions and move resources quickly as the situation evolves.
- Confusion over the lead agency or authority to guide policy- and decision-making can hamper swift and coordinated response efforts.
- Strong, consistent public health leadership and capabilities on the ground are essential for public trust and to implement a whole-of-government response effort.

- COVID-19 laid bare the magnitude of health inequities and racial disparities in the County, and seeking to address them is an LAC DPH and County government-wide imperative.
- Effective communication in a pandemic is critical but extremely challenging.
- The future of public health is increasingly digitally enabled and real-time data and business intelligence capabilities are fundamental expectations for next-generation County public health capacity.
- LAC DPH employees are experiencing a high degree of burnout as the department's staff continue to work tirelessly on the front lines of the pandemic response.

Public health sustainability and resilience are equally ambiguous and ambitious concepts. Inconsistent funding, compartmentalization, and de-prioritization have resulted in a less-than-optimal Los Angeles County public health system that needs investment, modernization, and stabilization to serve the needs of the County's diverse population and to improve population health. Following is a summary of emerging lessons and recommendations based on the findings of this interim review:

Sustaining Recommendations

1

Strengthening External Communications

Emerging Lessons:

- Information about an ongoing health crisis, such as a pandemic, can be highly complex, as it can change frequently and is nuanced.
- Misinformation itself is a public health threat.
- Clear, data-driven messages from public health leaders to the public through multiple channels are essential to build public trust.

Recommendations:

- 1a. LAC DPH should implement strategies to strengthen its communication capabilities and minimize misinformation.
- 1b. LAC DPH communications and media relations capabilities should be augmented during a pandemic.
- 1c. LAC DPH and the CEO's office should evaluate ways to maximize the County's Emergency Operations Joint Information Center (JIC) to ensure the distribution of consistent and accurate information during a PHE.
- 1d. LAC DPH should continue efforts to provide advance notice of Health Officer Orders to the extent feasible.

2

Advancing Equity by Addressing Social Drivers of Health and Aligning County Resources More Effectively for Those Most Vulnerable

Emerging Lessons:

- The pandemic brought social and racial injustice and inequity to the forefront of public health and put a spotlight on the magnitude of U.S. health inequities.
- These inequities are the result of decades of systemic failures and biases, and at times were exacerbated by pandemic dynamics.
- A pandemic affects every sector and every individual. Whole-person supports are critical during public health crisis response.

Recommendations:

- 2a. Pandemic mitigation strategies should be jointly assessed and offered with guidance on how to access other resources such as food, housing, enrollment in benefit programs, etc.
- 2b. LAC DPH should continue its efforts to establish contact tracing as a trusted community resource that can be applied as a broad outreach tool to serve at-risk communities. This would require training and a stable contact tracing workforce.
- 2c. Community resources, including community health workers (CHWs), are an important component of local public health infrastructure that can help support not only public health crisis response efforts but other disaster and emergency responses.
- 2d. LAC DPH and its partners in County government should identify ways to effectively collaborate to ensure future public health crisis response strategies implement meaningful access for vulnerable populations as quickly as possible.

3

Building Stronger Stakeholder Relationships

Emerging Lessons:

- The pandemic catalyzed stronger relationships and partnerships across the County.
- LAC DPH established and deepened many partner and stakeholder relationships with schools, government officials, hospitals, industries, physicians/clinics, and others over the past two-plus years that it should nurture to sustain goodwill and facilitate swift activation in a future public health crisis.

Recommendations:

- 3a. A long-term communications plan should be developed to continue to foster stakeholder relationships and collaborations during non-emergency periods. Sector liaisons proved critical during the pandemic.
- 3b. To support more rapid and nimble outreach and communications during a public health crisis, and in support of future pandemic planning, LAC DPH should invest in relationship management software, including formalizing and maintaining a database of key contacts by industry sector, including emergency contact information.
- 3c. These relationships may also offer further partnership opportunities to advance the County's and LAC DPH's public health and equity goals; conducting post-pandemic sector-specific debriefs and brainstorming sessions would be valuable.

4

Utilizing Public-Private Convening

Emerging Lessons:

- Los Angeles County has a tremendous wealth of public- and private-sector expertise and resources that may be leveraged in a future public health crises to address similar issues.
- Philanthropic support may be helpful to support stakeholder convening during a health emergency and to help build and strengthen the public health workforce.

Recommendations:

- 4a. In coordination with the newly formed LAC Department of Economic Opportunity, LAC DPH may seek to engage a foundation or health policy nonprofit as a convener of a public-private partnership focused on designing and funding the frontline public health workforce of the future.
- 4b. In its post-pandemic analyses, LAC DPH should identify priority areas where more structured stakeholder collaboration and engagement could have been helpful to the department's efforts to ensure effective communication and implementation of Health Officer Orders.

5

Training and Recruiting LAC DPH Workforce

Emerging Lessons:

- The pandemic has illuminated where LAC DPH needs to build bench strength, clarify succession planning, and train the next level of leaders to serve as strong deputies.

Recommendations:

- 5a. Recognizing that the skill sets and competencies to lead during a crisis may not be the same as those needed for daily operations, LAC DPH should review its emergency operations training and evaluate its personnel gaps and implement strategies to strengthen preparedness and cross-train staff.
- 5b. LAC DPH should build into its recruitment strategies methods to screen candidates to ensure they would be comfortable with flexing their roles, depending on potential needs of current and future public health crises.

6

Enhancing Communications within LAC DPH

Emerging Lessons:

- While communications at senior levels of the department were robust, sustaining effective and ongoing communications within a large organization during a pandemic was challenging.
- Strengthening internal communications can help build bench strength during a pandemic.

Recommendations:

- 6a. LAC DPH should implement strategies to strengthen internal communications between its executive team and midlevel managers and operators including providing a clearer line of sight into decision-making processes, broadening exposure to planning discussions as new response functions are rolled out, and enhancing internal department-wide bidirectional communications forums.

7

Expanding Workforce Supports

Emerging Lessons:

- Many LAC DPH frontline staff experienced trauma in their professional and/or personal lives during the COVID-19 pandemic, including loss of family members, colleagues, and friends as well as threats to their personal safety as they worked to perform their job-related duties.

Recommendations:

- 7a. Strengthened mental health and social supports should be built into the department’s offerings to its teams.
- 7b. In response to the significant and ongoing threats that LAC DPH leaders and staff experienced throughout the pandemic, the state’s Safe at Home program should expand beyond its September 2022 modifications so it limits initial public disclosures of personal addresses of select LAC DPH staff, including departmental leaders and Environmental Health (EH) inspectors. LAC DPH should convene local health officers across the state to prepare joint recommendations to the California Legislature about how to better protect their and their teams’ personal safety.
- 7c. Recognition and appreciation matters. LAC DPH and the County should both recognize the immense personal sacrifices of the County’s public health workforce across this pandemic and build into future emergency planning compensation considerations as well as strategies to ensure a level of bench strength that will allow more manageable divisions of responsibility.

Transformational Recommendations

8

Ensuring Clarity Countywide of Roles and Responsibilities During a Health Emergency

Emerging Lessons:

- A pandemic of this scale has not been experienced in over a century.
- A lack of clarity around roles and responsibilities and authorities, particularly related to public health, caused operational and administrative friction in early response efforts. The duration of the pandemic, with its dynamic and ever-evolving needs, also stressed County response efforts on multiple fronts.

Recommendations:

- 8a. In instances of a local emergency and local health emergency resulting from a contagious, infectious, or communicable disease (such as a pandemic), clarify and affirm the roles and responsibilities of the Director of Public Health and County Health Officer to promulgate Health Officer Orders. In addition, in similar instances and based on its first-response capabilities, clarify LAC DPH’s roles and responsibilities for operational command and control, and deployment of resources relating to public health services to protect the public from ongoing communicable disease transmission.
- 8b. Evaluate potential revisions to sections of the Los Angeles County Code, including Section 2.68, to clarify roles and responsibilities in response to a local health emergency and local emergency arising from a contagious, infectious, or communicable disease.

9

Supporting Nimbleness in Pandemic and Public Health Crisis Response

Emerging Lessons:

- LAC DPH lacks the spectrum of necessary resources to ramp up as quickly as desired and needed to staff emergency responses.
- Communicable disease emergencies take many forms and require greater flexibility and nimbleness of response.

Recommendations:

- 9a. A new Los Angeles County health emergency response framework is needed that provides resource flexibility, funding, and stronger coordination and collaboration to mitigate contagious disease outbreaks.
- 9b. Given the emergency functions that LAC DPH is responsible for, including advocating with state and federal governments and the obligations of ensuring compliance with Health Officer Orders, enhanced and more dedicated legal resources for LAC DPH are needed and should be evaluated.

10 Reducing Barriers to CBO Partnerships

Emerging Lessons:

- CBOs can be effective partners in addressing the needs of those most at risk and support the advancement of equity efforts, but many need financial and technical resources to strengthen their capacity and readiness in an emergency.

Recommendations:

- 10a. The County should reduce administrative barriers and simplify avenues to contract with CBOs and establish long-term partnerships to advance the Board of Supervisors’ equity imperatives.
- 10b. The County should reevaluate its core contracting template requirements to determine whether certain provisions, insurance requirements, and other obligations are barriers to entry for businesses and not-for-profit organizations that are small and/or serve disproportionately impacted communities.
- 10c. The County should also seek to build on existing technical assistance programs to ensure these not-for-profit organizations are able to develop the capabilities to contract with local government.

11 Evaluating Compliance Tools

Emerging Lessons:

- LAC DPH stood up a wide-reaching public health enforcement capability essentially on the fly to respond to needs to promote and protect public health and safety during the pandemic.
- While LAC DPH sought to implement an education-first approach to compliance with Health Officer Orders and to take a measured approach to enforcement, the seriousness of the threat to public health during a pandemic requires a suite of effective enforcement tools.

Recommendations:

- 11a. LAC DPH, with its partners in the Office of the County Counsel, should review the County Code related to public health enforcement mechanisms as well as relevant policies developed during the pandemic and develop a set of recommendations regarding any additional compliance tools that may be necessary or helpful to protect public health during a pandemic, including whether different levels of administrative citations should be pursued.
- 11b. LAC DPH should work with the Office of the County Counsel to establish a shared process for rapidly evaluating egregious and/or repeated violations of Health Officer Orders and expediting enforcement actions in line with due process considerations.

12 Enhancing Public Health Information Technology

Emerging Lessons:

- During COVID-19, LAC DPH was challenged by outdated information technology, data interoperability, data analytics, and business intelligence capabilities.
- LAC DPH initiated modernization efforts in its data collection and systems during the pandemic, but the department requires sustained commitment and focus to ensure its capabilities are well prepared for future events.

Recommendations:

- 12a. Improvements to and investments in data systems initiated during the pandemic must continue to ensure LAC DPH has the competencies and capabilities to build a digitally enabled public health infrastructure and system as well as analytics and business intelligence skills to support a culture of data-driven decision-making.
- 12b. LAC DPH and the CEO’s office should investigate remote work flexibilities that would allow the County to access broader public health IT talent.
- 12c. LAC DPH should expand its department-wide data management and business intelligence skills and career pathways and seek to continue cross-departmental, rather than program-based, data analytics capabilities to the extent possible.
- 12d. The County should evaluate ways to support the modernization of public health data and interoperability.
- 12e. As LAC DPH continues to upgrade its surveillance systems, advancing interoperability with state data systems should be a priority.

13 Stabilizing the LAC DPH Workforce

Emerging Lessons:

- The LAC DPH team stepped up to fulfill its responsibilities in an unprecedented way over the past two years. However, not only has the field of public health changed as a result of this pandemic but the U.S. workforce has also changed, and LAC DPH must determine how to compete as an employer in this new environment.
- Burnout and exhaustion across the LAC DPH staff is a very real and prominent threat to the stability of LAC DPH’s workforce.

Recommendations:

- 13a. LAC DPH must consider the phenotypes and skill sets of the public health workforce of the future – including how to educate and recruit the next generation. It may consider deepening relationships with local schools of public health and nursing to expand its pipeline.
- 13b. LAC DPH and the County must plan for turnover and ensure greater flexibility and nimbleness in recruitment and hiring.
- 13c. LAC DPH must work with the County to ensure stable and consistent funding to retain skilled staff.
- 13d. LAC DPH should expand its training capabilities to ensure that each program leader has a deputy who can effectively fill in for them at points when departmental leaders take necessary breaks to attend to their or their families’ physical and mental health.

III. Introduction

A coronavirus first identified in late 2019, SARS-CoV-2, caused a pandemic of respiratory illness called COVID-19.

The pandemic has been a major health crisis that has created extraordinary challenges for public health, clinical care delivery, and local governments across the country and around the globe. It has affected individual and family health and well-being and created significant social, educational, and economic disruption. The magnitude of the impact of the pandemic on the elderly, those with underlying medical conditions, people of color, and those working in essential jobs has been staggering.

The County of Los Angeles Board of Supervisors quickly mobilized to deploy significant resources to mitigate the impact of the pandemic in the nation’s most populous county, with its public health agency playing a lead role in developing policies and providing services to save lives and protect public health. LAC DPH, the largest of nearly 3,000 local public health agencies in the United States, has been at the forefront of the frontline COVID-19 response for over two and a half years. LAC DPH has been a source of scientific data and authoritative public health expertise to guide local policy- and decision-making to respond to the threats of the pandemic and also has served as a provider of critical services – in close coordination with many other County departments – such as testing, outbreak detection, contact tracing, quarantine and isolation support, treatment, vaccinations, and boosters.

In the face of a complex and constantly evolving pandemic that has spanned waves of outbreaks over multiple years, LAC DPH has strived to

provide clear directives and policies to, above all else, accomplish the following:

- Mitigate the impact of the pandemic and prevent as much serious illness and death as possible.
- Ground policy decisions in the most current science and with willingness to rapidly pivot based on the changes in scientific understanding of the virus.
- Advance an equitable response to address disparities in health outcomes related to race and class.
- Protect essential workers and ensure the viability of the health care safety net throughout the crisis.
- Ensure Countywide access to vaccines, treatments, and other resources as they became available.
- Keep Los Angeles County residents and stakeholders informed through frequent communications and rapid data sharing at a pace and scale never before attempted.

The challenges faced in managing the response to the pandemic have been numerous and daunting. Local public health operates within a complex web of federal, state, regional, and local agencies and partners to promote and protect public health. The lines of authority, guidance, and resourcing are often overlapping and at times unclear, as the pandemic demonstrated. COVID-19 exposed deep, systemic issues regarding how the U.S. funds and supports public health, with insufficient and unreliable funding leaving local health agencies grappling with thin and overtaxed workforces, antiquated IT and data systems, and insufficient infrastructure.¹¹

Particularly surprising has been the degree of polarization and politization of safety measures coupled with persistent misinformation and disinformation, which have impeded efforts to control transmission of the virus and threatened the safety of vulnerable residents.¹² Further complicating response efforts, public health officials in Los Angeles County, like officials in many other parts of the country, experienced unprecedented personal attacks, harassment, and public threats of harm.¹³ Despite these formidable challenges, Los Angeles County mounted a strong response to the pandemic. The Board of Supervisors, LAC DPH, and other County leaders acted swiftly and decisively and have sought to be nimble, keeping science and equity at the center of efforts to protect public health and save lives, even in the face of criticism or, at times, unpopular decisions. LAC DPH built strong relationships and quickly stood up new capabilities and resources to the benefit of all residents, including developing one of the largest distributed vaccination networks in the country.

Los Angeles County has a long history of effective disaster response, which was an asset in facing COVID-19, but the pandemic was novel, frequently changing, and unprecedented in scale – touching the lives of all County residents simultaneously over a prolonged period. In the early months of the pandemic, as the virus rapidly spread, the tools to combat it were extremely limited, with inadequate access to testing,¹⁴ global supply shortages of personal protective equipment (PPE),¹⁵ overwhelmed hospital capacity,¹⁶ insufficient access to real-time data,¹⁷ and prevention measures requiring large-scale changes in public behavior.¹⁸ As the pandemic evolved, new tools and resources – such as expanded testing capacity including

rapid and home-based tests; the development and staged rollout of vaccines; the development of anti-SARS-CoV-2 monoclonal antibodies, Paxlovid and other COVID-19 therapeutics; and vaccines for children as well as expanded vaccine boosters for adults, among others – were invaluable in the effort to curb the impact of COVID-19, but each also brought new challenges for County pandemic response infrastructure and capacity. Further, through each stage of the pandemic, the science and understanding of the SARS-CoV-2 virus changed while the virus itself changed and new variants emerged, which continually tested the effectiveness of current prevention and treatment tools and required continual shifts in policymaking and strategy. As such, the pandemic has required a marathon response rather than a sprint, and it has exacted a terrible toll, claiming the lives of over 34,000 Los Angeles County residents and causing the sharpest decline in U.S. life expectancy in nearly 100 years.¹⁹ While tremendous advances have been made, in a region of over 10 million people, close to two million Los Angeles County residents remain unvaccinated and significant disparities in health outcomes persist.²⁰

The country appears to be in a less acute phase of the COVID-19 pandemic than in previous periods as the widespread availability of COVID-19 vaccines and boosters as well as new therapeutics continue to be effective in reducing prolonged surges in hospitalizations and mortality at the scale seen earlier in the pandemic. However, many experts anticipate continuing virus surges, driven in part by the emergence of newer immune-evading COVID-19 variants and reinfections, which will require ongoing vigilance by both public health officials and the public at large. At this time of transition, as the next stage still remains highly

uncertain, LAC DPH seeks to take stock of what worked well across the past two and a half years and what could be improved upon to further strengthen the County’s public health infrastructure and responsiveness in an ethos of continuous learning.

The goal of this interim review is to share contemporaneous perspectives, reflections, and lessons from a broad range of

stakeholders across this shared experience to help LAC DPH and its partners review the efforts of public health to respond to the pandemic, garner insights from the wisdom and experience of this community, and encapsulate learnings to enhance communications, reduce policy and operational friction, and strengthen public health capacity to address future public health crises in Los Angeles County.

IV. Methodology

To identify lessons learned and opportunities for improvements to further strengthen the County's ability to respond to public health crises such as a pandemic, LAC DPH engaged an external consulting firm to facilitate a participatory process over an approximately 10-month period to garner perspectives, experiences, and insights from a broad and diverse range of Los Angeles County stakeholders.

The findings, discussions, and recommendations in this review are based on a series of approximately 150 interviews with LAC DPH staff, staff from other County departments and services, and other local and state government officials, health care providers, school officials, administrators in institutions of higher education, faith leaders, representatives from community-based organizations (CBOs), community advocates, business leaders, and representatives from trade associations and labor unions (see Appendix B for the full list). In addition, 13 90-minute listening sessions were held to garner the experiences of and solicit input, thoughts, and advice from residents in neighborhoods and community groups disproportionately impacted by the pandemic as well as parents with school-age children. These community listening sessions were conducted in English, Spanish, and Mandarin. An additional Spanish-language focus group session with community health workers (CHWs) was also conducted. Due to ongoing COVID-19 outbreaks throughout the spring of 2022, these sessions were held virtually. Flyers were distributed and LAC DPH also worked with CBOs in communities disproportionately impacted by COVID-19 to recruit participants.

As a general guide, the listening sessions were limited to 15 participants to encourage robust participation, though a couple of exceptions were made based on strong interest. In line with LAC DPH policies to advance equity, community members received a \$40 stipend for their personal time.

The interview findings are supplemented with extensive document and data review and insights from working sessions with LAC DPH leaders on specific topic areas related to the department's response efforts. Specifically, this review focused on decisions and circumstances that made the work of protecting public health during the COVID-19 pandemic easier or harder, with a goal of identifying policy, administrative, operational, financial, and structural challenges or barriers that may be addressed to strengthen the County's public health infrastructure and nimbleness for future public health crises.

Limitations

While the interview and community listening session process sought to obtain a broad range of perspectives across multiple and diverse sectors, it is important to recognize that the findings in this report may not reflect the perspectives of *all* Los Angeles County government, business, and community leaders nor all County residents. While the report seeks to extrapolate key lessons from multiple sources, by its nature it cannot be comprehensive.

This interim review is focused on the scope of responsibilities of and actions taken by LAC DPH. It is not a review of actions taken by other

County departments or nongovernmental or private-sector partners, nor is it a review of Los Angeles County’s response efforts in full. LAC DPH recognizes and appreciates the tremendous and countless contributions across County government and the high degree of collaboration that was essential to effectuating the County’s pandemic response. In no way is this interim review intended to suggest pandemic response is the responsibility of one agency. Rather, it seeks to review the core capabilities and substantive expertise necessary to ensure a high-functioning, outstanding public health capability to serve the residents of the most populous county in the country and, by extension – given Los Angeles County’s position as an economic and travel gateway into the U.S. – effectively respond to broader health, safety, and security concerns.

Given the highly complex and interconnected nature of the COVID-19 response across the County and the fact that the pandemic response involved all local government, some observations and emerging lessons included in this report may pertain to aspects of County, state, and federal government beyond the direct control of LAC DPH. The authors recognize there may be multiple perspectives related to these findings and additional evaluation is likely needed in some cases. However, the hope is that this review can serve as a reference to the challenges faced, emerging lessons learned, and the work that lies ahead, as well as a catalyst to debate and effectuate policy decisions to strengthen public health now and in the future.

Organization of This Report

- Section I provides an introduction to the interim review and its objectives.
- Section II provides an overview of the methodology used to develop this report.
- Section III summarizes the evolution of the COVID-19 pandemic in the County.
- Section IV reviews LAC DPH’s equity-centered approach.
- Section V details LAC DPH’s response actions, including mitigation planning, compliance, surveillance, contact tracing, and other efforts.
- Section VI reflects on LAC DPH’s support for special populations and addressing inequities.
- Section VII considers LAC DPH’s partnerships with stakeholders and its market reception.
- Section VIII considers the department’s position in the context of broader County, regional, state, and federal structures.
- Section IX reviews LAC DPH’s internal organization, including its incident command system (ICS), internal communications, and resourcing.
- Section X considers future public health emergencies and ongoing health crises Los Angeles County must grapple with.
- Section XI concludes the report with the contemplation of cross-cutting recommendations that reflect on the lessons learned to date and seeking to support and further strengthen the ability of LAC DPH and its many partners to respond to this and future public health crises.

V. Evolution of the COVID-19 Pandemic in Los Angeles County

LAC DPH, the largest accredited local health department in the country by size of jurisdiction, has been at the forefront of the COVID-19 response since the novel coronavirus SARS-CoV-2 was identified as the cause of an outbreak of severe pneumonia in Wuhan, China, in late December 2019.

The fourth confirmed case in the United States of what would become known as COVID-19, and the first in Los Angeles County, was a traveler returning to Wuhan through Los Angeles International Airport (LAX) on January 22, 2020.²¹ The first confirmed case in the U.S. had been announced just two days earlier from samples taken on January 18, 2020, in the state of Washington.²² LAC DPH had been actively tracking the virus since the end of December 2019 and working closely with the U.S. Centers for Disease Control and Prevention (CDC) and health care providers across the County to monitor for and identify any suspected cases. Given Los Angeles County's size and position as a global hub for commerce and travel, LAC DPH was on high alert well before most Americans realized there was a potential threat.

Behind the scenes, LAC DPH and its partners at the CDC, LAX, the Los Angeles Fire Department (LAFD), and a local hospital were actively engaged (while keeping state and local officials apprised) in the fundamental public health communicable disease response activities necessary to protect the public, all of which have become familiar terms to the average American over the past two and a half years: implementing personal and community safety measures, testing, case identification, quarantine and isolation, contact tracing, and

treatment. Swift intervention and application of disease control protocols for the first case in Los Angeles County detected in a traveler coming into the country are believed to have prevented further transmission of the virus by that individual, as was true for several initial cases across the country.

On January 30, 2020, the CDC announced the first confirmed person-to-person transmission case in the U.S. identified through contact tracing.²³ The newly diagnosed patient had shared a household with a previously diagnosed individual. The same day, the World Health Organization (WHO) declared a Public Health Emergency of International Concern, warning international spread was likely and calling for rapid and expanded testing, tracing, and social distancing to curb transmission of the virus. It was only the sixth time since the WHO was founded that such a declaration was made (other times include the Ebola and Zika crises, among others).²⁴

It was not until mid-February 2020 that more cases were confirmed in Los Angeles County, despite many potential cases being investigated during a particularly active influenza season.²⁵ On February 26, the CDC announced the first confirmed case of unknown origin in the U.S.²⁶ This California resident, who did not have any relevant travel history nor exposure to another known patient, was at the time the first known possible U.S. case of "community spread" of the novel coronavirus.²⁷

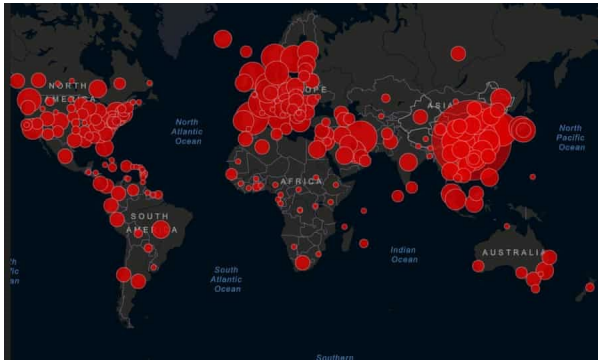
By early March, a mere six and a half weeks after the first identified case in Los Angeles County and less than two weeks after

community spread was confirmed in the U.S., Italy was on “lockdown”;²⁸ California Governor Gavin Newsom declared a State of Emergency within the state due to the threat posed by COVID-19;²⁹ LAC DPH declared a local health emergency due to increasing cases of COVID-19;³⁰ the Board of Supervisors, in concert, declared a local emergency due to the

imminent spread of the virus;³¹ the WHO declared the novel coronavirus outbreak to be a pandemic;³² Los Angeles County confirmed its first death attributable to COVID-19;³³ and the number of new cases of COVID-19 being reported by countries outside China surpassed those from within China.³⁴

COVID-19: RAPID SPREAD

Global COVID-19 Cases – March 16, 2020



Johns Hopkins University (JHU) coronavirus tracker as of 01:15 GMT, March 16, 2020³⁵

Photograph: Center for Systems Science and Engineering at JHU

It can be difficult to conceptualize how rapidly the SARS-CoV-2 virus spread. *(Note that reported and confirmed cases undercount actual spread.)*

By March 27, 2020:

- o There were **over half a million** confirmed cases of COVID-19 worldwide.
- o It took **67 days** for 100,000 cases to be reported but **just three days** to go from 400,000 to 500,000 cases.³⁶
- o The **U.S.** became the **first country to report 100,000 cases**, having passed just 10,000 eight days prior, on March 19, 2020.³⁷

By April 3, 2020 (one week later):

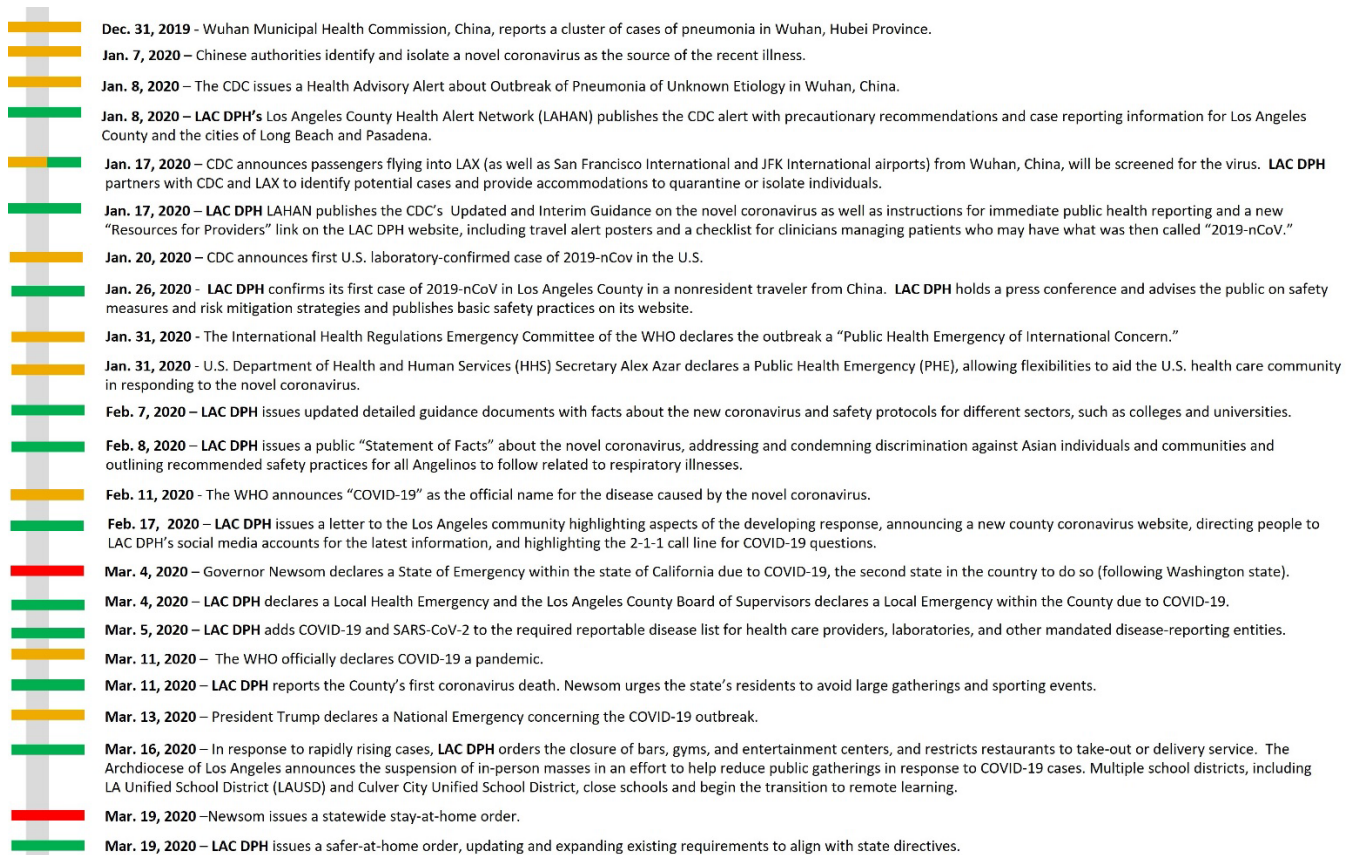
- o There were **more than one million** cases worldwide.³⁸
- o The U.S. had more than doubled its confirmed case count to 250,000.³⁹
- o Los Angeles County, which had seen its first confirmed case on January 22, 2020, and had been one of the very first counties to require safety measures, had over 4,500 cases *(including in Pasadena and Long Beach)*.⁴⁰

The country experienced growing concerns about hospital and first responder capacity to manage the virus based on experiences in other countries and rapid spread in the U.S.⁴¹ By mid-March, U.S. President Donald Trump had declared a national State of Emergency, LAC DPH had issued Health Officer Orders to close some businesses and restricted the size of gatherings in an effort to curb transmission, a collaboration of six Bay Area counties (San Francisco, Santa Clara, San Mateo, Marin,

Contra Costa, and Alameda) and the city of Berkeley had ordered sweeping business closures and a shelter-in-place order, and the majority of schools in Los Angeles County and across the state had elected to close.⁴² Shortly thereafter, California became the first state in the country to establish a statewide stay-at-home order as Governor Newsom issued Executive Order No. [N-33-20](#), the first of several to come.⁴³

FIGURE 1. TIMELINE OF NOTABLE EVENTS EARLY IN THE COVID-19 PANDEMIC AND LAC DPH ACTIONS

Note: The colors of the bars reflect the varying levels of government, with yellow representing international and federal, red representing state, and green representing LAC DPH.



For the first several months of COVID-19's spread in the U.S., scientists and policymakers sought to decipher the role asymptomatic and pre-symptomatic carriers played in transmission, a challenge with enormous implications for their strategies to control the spread of the virus.

Testing capacity across the country was extremely limited, and essential frontline medical devices, masks (including N95 respirators), other PPE, and even swabs and reagents necessary to develop test kits were all in short supply, part of a global supply chain breakdown.⁴⁴ Slow and uncoordinated action across both the federal government and states resulted in uneven and at times confusing

guidance to the public. COVID-19 spread through the U.S. among travelers, at large public and private gatherings, and in workplaces, even in the face of public health orders and guidance.⁴⁵

As community transmission increased, LAC DPH shifted from a strategy of case containment to slowing disease transmission and averting excess morbidity and mortality, particularly among highly vulnerable populations. What was abundantly clear from the earliest days of the pandemic – and has remained so across the course of it – was that the COVID-19 response would be challenged by the rapidly changing

disease epidemiology and that COVID-19 had shone a harsh light on long-standing racial and income disparities.

With over 34,000 deaths and nearly three million reported cases in Los Angeles County, COVID-19 has touched all County residents' lives. Residents of Los Angeles County have been deeply affected by the pandemic, which has impacted their physical and mental health, caused deep financial and educational stresses, and left many to grapple with the loss of loved ones.

COVID-19 has disproportionately affected communities of color, older adults, and essential workers, exacerbating preexisting racial, social, and economic divisions. Throughout the pandemic, there have been persistent, large disparities in COVID-19 cases, hospitalizations, and deaths among Black, Latinx, and American Indian and Alaska Native (AIAN) people.⁴⁶ COVID-19 has also exacted a disproportionate toll on older adults, homebound individuals,

nursing home residents, people with disabilities, people experiencing homelessness (PEH), people in congregate living settings, the incarcerated, and people with underlying chronic medical conditions.⁴⁷ Since the beginning of the pandemic, essential workers – including health care, food processing, meatpacking, agriculture, public transit, grocery and hardware store, manufacturing, and sanitation workers – have not been able to work from home, putting them at greater risk of exposure and infection despite, for many, low wages and limited access to health insurance.

While the specific path of the COVID-19 pandemic has been difficult to predict, it is a testament to the County's previous preparedness efforts that in the early days of 2020 LAC DPH recognized the potential risks of COVID-19 as well as the exacerbated risks to select populations and has since worked tirelessly to minimize impact for all its residents.

STRESS ON HOSPITALS AND HEALTH CARE SYSTEMS

Rapidly escalating demands on the health care system due to COVID-19 placed inordinate strain on the underlying medical infrastructure and the health care workforce. Unlike a one-time disaster event, the surges of outbreaks repeatedly stressed hospitals and clinicians, with ripple effects across the broader health care system. These trends emerged in states and counties across the country and were in no way unique to Los Angeles County.⁴⁸

In the early stages of the pandemic, prior to the widespread availability of vaccines, as many as 21 per 100,000 people were hospitalized with COVID-19⁴⁹ and 22% of those hospitalized with COVID-19 required ICU-level care.⁵⁰ When waves of critically ill patients arrived in a surge, demand for these services could overwhelm capacity. During waves, hospitals across the country faced crisis-level shortages of beds and staff needed to adequately care for patients, and many of those patients needed labor-intensive services such as prone positioning or ventilator management, further straining staff resources.⁵¹

During these periods, and in the weeks leading up to and following them, hospitals in many regions canceled nonemergency but still-needed procedures, and people with non-COVID-19 concerns avoided hospitals altogether. Rates of presentation to emergency departments for conditions that had been considered nondiscretionary, such as heart attack and stroke, plummeted.⁵² The combination of these factors meant that, across the United States, surges that were large enough to test the limits of hospital capacity were followed by increases in all-cause and COVID-19-specific mortality in the subsequent weeks.⁵³

When clinics temporarily closed and hospitals postponed surgeries and other procedures in an effort to limit the spread of the SARS-CoV-2 virus, millions of health care workers lost employment.⁵⁴ Safety net hospitals were particularly challenged by the financial burdens of COVID-19, which included not only forgone revenue but also the costs of reconfiguring space, paying higher costs for supplies (and buying new supplies and equipment), and retraining staff – costs only partly addressed by federal funds.⁵⁵ Physicians not providing hospital services experienced steep declines in revenues; one survey suggested that as many as 8% of physician practices closed under the stress of the pandemic.⁵⁶ The long-term care staff shortage, already evident before the pandemic, was exacerbated as workers left the field due to low pay, poor working conditions, and the risk of COVID-19 infection.⁵⁷

The pandemic's effects on the health care delivery system were shaped by its effects on the public health system and shaped those effects in turn. Peoples' experiences with the health care delivery system, among other institutions, shaded their confidence in and willingness to follow recommended public health interventions, such as vaccines and mask wearing, which in turn drove demand for health care during surges.

A. Role of Public Health

Public health is the science of protecting and improving the health of people and their communities and is mainly a local government responsibility. Like public safety (e.g., fire, police), public utilities (e.g., power, water), and other public infrastructure (e.g., roads, waste disposal, sewers), public health requires ongoing and predictable investments, specialized resources and expertise, and infrastructure to maintain the foundational capabilities necessary to provide protective services to communities. With a vision of “Healthy People in Healthy Communities,” LAC DPH’s mission is to maintain and improve the health and well-being of all Los Angeles County residents. To fulfill this mission, it provides a broad range of public health services to Los Angeles County residents, including but not limited to:

- Emergency preparedness;
- Substance abuse prevention and treatment;
- Communicable disease control;
- Vaccine-preventable disease education and immunization clinics;
- Medical, nursing, and support services to promote maternal and child health;
- Environmental health, food, housing, and manufacturing inspections and sanitation services;
- Public Health Laboratory services;
- Inspections of licensed health facilities;
- Operation of public health clinics;
- Public health statistics and analyses; and
- Promotion of policies and practices that ensure individuals and communities have the resources needed for optimal

health and well-being.

Preventing and controlling the spread of communicable disease is a foundational area of expertise for LAC DPH.⁵⁸ Communicable disease control requires identifying the source of the outbreak, when possible, and determining the appropriate response and course of action given the particular disease, means of transmission, and segment of the population at increased risk. Depending on the scale of the outbreak, LAC DPH’s responsibility as a local public health agency also includes using existing laws and regulations that seek to protect the population from risk associated with unchecked and ongoing disease transmission.

In addition to enforcing public health laws and regulations, LAC DPH serves numerous essential roles in public health spanning conducting surveillance and outbreak management, communicating risk reduction and infection control information to the public, engaging community stakeholders and CBOs to support vulnerable residents, providing vaccinations, and providing certain safety net services.

The response to COVID-19 has required relentless commitment, expertise, and innovation from LAC DPH leadership and its workforce for over two and a half years. It has required a deep understanding of County population and geographic dynamics and an ability to optimize limited and fragmented funding for local public health infrastructure.

The U.S. public health infrastructure has long been considered woefully underfunded.⁵⁹ California, for example, recently cut public

health funding from \$3.4 billion in FY2019-20 to \$3.2 billion in FY2020-21 despite the ongoing pandemic.⁶⁰ Although California allocated \$47.3 million to LAC DPH in FY2022-23 out of \$200.4 million provided annually to local health jurisdictions for public health infrastructure,⁶¹ the chronic underfunding, as well as LAC DPH’s historically grant-based funding, created a challenging dynamic for the department to commit the resources necessary to respond to the pandemic.

By the peak of the pandemic, LAC DPH had shifted nearly 80% of its staff to address COVID-19, with the majority taking on COVID-19 responsibilities in addition to their “normal” jobs. Over the course of the pandemic, LAC DPH impacted the lives of nearly all Los Angeles County residents by:

- Distributing over 14 million over-the-counter (OTC) at-home antigen tests;
- Coordinating a multifaceted vaccine administration strategy with state and other County department partners and managing the administration of nearly 1.1 million vaccine doses at LAC DPH vaccine “mega Points of Dispensing (PODs)” and half a million doses across other LAC DPH sites;
- Establishing and distributing vaccines to a network of over 1,000 fixed vaccination sites, as well as coordinating hundreds of mobile vaccination teams that collectively administered over 20

million vaccine doses to homebound residents, workers, and residents at businesses, schools, and community events;

- Conducting over one million contact tracing interviews;
- Managing more than 8,000 outbreaks at worksites, schools, and congregate living facilities;
- Establishing more than 50 Public Health Councils to ensure that low-wage workers in sectors hard hit by COVID-19 were protected by County Health Officer Orders;
- Contracting with over 500 CHWs to provide education and outreach on COVID-19 and vaccinations;
- Partnering with philanthropies to provide over \$54 million to fund CBOs and faith-based organizations (FBOs) to provide information and increase vaccination rates in communities hardest hit by COVID-19;
- Issuing over 130 Health Officer Orders that outlined essential safety measures for County businesses, workers, and residents; and
- Providing daily updated information to the public about the virus – who was infected, hospitalized, and dying – and the necessary steps to prevent transmission, severe illness, and death.

LOS ANGELES COUNTY POPULATION DYNAMICS

With over 10 million residents, Los Angeles County’s population is larger than that of 40 U.S. states. There are striking population differences across the 4,000-square-mile County regarding wealth, socioeconomic opportunity, and health status.

Diversity of Los Angeles County Population



One-third of residents are born abroad and 224+ languages are spoken



Nearly half of the County’s population is Hispanic or Latino



Over 15% identify as Asian



Almost 10% identify as Black or African American

Six percent of the population under age 65 has a disability. Almost 8% of the County’s residents lack insurance and over 42% are on Medi-Cal, the state’s health insurance program for low-income individuals.⁶² While 13% of all residents live in poverty, over 60,000 people are experiencing homelessness and over 10% of households lack broadband access.⁶³

B. Los Angeles County Government Response to the Pandemic

While the focus of this interim review is on the pivotal roles LAC DPH played in developing guidance and implementing aspects of the County’s pandemic response efforts, it is essential to note that Los Angeles County’s efforts to respond to and meet the needs of local residents and County employees throughout the pandemic were broad and far-reaching.

County government is an arm of state government and is responsible for providing essential services that residents rely on, such as

law enforcement, core health and human services, public welfare supports, election services, criminal justice, infrastructure and maintenance, economic development, and disaster and emergency response.

Los Angeles County is the single largest employer in the region. County employees, such as first responders, health care workers, firefighters, teachers, sanitation services workers, and many others, represent a large percentage of the essential workers who were critical to ensuring the continuity of functions

critical to public health and safety as well as economic and national security.

Like all local governments, Los Angeles County faced daunting challenges throughout the pandemic. In addition to supporting the public health response to the pandemic, the County simultaneously needed to ensure no or limited disruption of essential County services while also managing a significant transition to remote work under COVID-19 stay-at-home orders, undertaking large-scale projects to implement the COVID-19 safety measures necessary for County departments and services to reopen, and managing the economic fallout of the pandemic.

The early months of the pandemic brought tremendous financial uncertainty and budget cuts to county governments. In an attempt to limit social contact and curb the spread of the virus, the state, and the local Health Officer implemented policies that were likely to curtail economic activity and which were expected to have an impact on sales tax-based revenues for the County’s budget. To address an expected \$935 million revenue shortfall, the County implemented an 8% net County cost funding reduction from most County departments’

budgets and planned to tap into one-time reserves.⁶⁴ The economic uncertainty also necessitated hiring freezes across County government (with selected clinical and other roles exempted); the threat of budget shortfalls strained County pandemic response efforts. At the same time, federal COVID-19 stimulus packages provided critical funding for the necessary but unbudgeted expenditures required to respond to the pandemic. However, the “one-time” nature of much of the funding made it challenging for local jurisdictions to invest in sustainable public health infrastructure.

While this report focuses on the County’s public health response, it is important to remember that Los Angeles County sought to advance a “whole of government” approach to addressing the pandemic, including Board of Supervisors-sponsored economic and rent relief, Countywide food distribution events, and a commitment to safely reopen schools, among many other efforts. During the pandemic, the County also faced many other significant emergencies, such as the civil unrest following George Floyd’s murder and some of the region’s largest wildfires, that further stretched its resources.

C. Equity at the Center

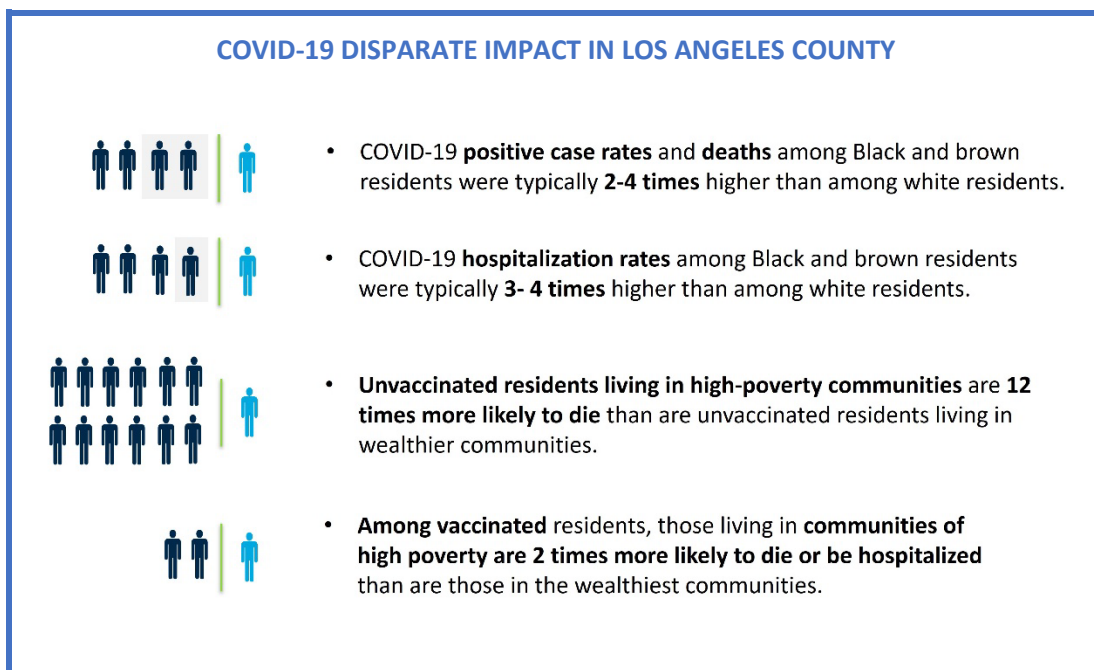
The pandemic laid bare stark health disparities for people of color and underserved communities and inequalities in workplace exposure due to economic insecurity and other factors in Los Angeles County.⁶⁵ It also shone a harsh light on the systemic flaws of the U.S. health care and public health systems.

Los Angeles County leaders recognized from the start that the pandemic would exacerbate existing and long-standing inequities in the County, and LAC DPH placed special focus on the most vulnerable residents, applying a health equity framework through which it evaluated all policy and operational decisions. Health equity is when everyone has the community

conditions and power needed for optimal health and well-being. Health is shaped by the community conditions in which we live, learn, work, play, and pray.⁶⁶

Notably, in June 2020, the Board of Supervisors approved a motion directing the County’s CEO, in partnership with relevant County departments, to pursue “a just and equitable response to disparities illuminated by the COVID-19 pandemic.”⁶⁷

LAC DPH defined its goal in the early days of the pandemic: to prevent as much serious illness and death as possible. To realize this goal, its broad-based response included focusing on minimizing inequities regarding risk of infection and death and expanding access to essentials for self-protection against the disease, including information, masks, testing, vaccines and treatment.



LAC DPH’s efforts to ensure equity were a core principle of its pandemic response, built on several years of work to identify best and promising practices to meaningfully address health and racial inequities. In 2017, for example, LAC DPH established the Center for Health Equity to identify and implement policies and practices that facilitate organizational change and eliminate inequities in health outcomes, including sexually transmitted

diseases (STDs), infant and maternal mortality, and exposures to environmental health hazards. On April 28, 2020, LAC DPH released the [“COVID-19 Racial, Ethnic & Socioeconomic Data and Strategies Report,”](#) which quantified the disproportionate toll of COVID-19 on Black and Hispanic/Latino residents compared to their white and Asian counterparts and gave stark indicators that poverty was also a leading influencer of COVID-19 impact. The report also highlighted the significant gaps in available race

and ethnicity data in the earliest days of the pandemic and laid out a series of strategies the department would undertake to support the most vulnerable populations in Los Angeles County.

LAC DPH is currently taking stock of its efforts in a series of reports, each of which will address the needs of a specific population of focus and describe the work LAC DPH has done to meet those needs. The first report was released in June 2022.⁶⁸

From developing and applying data analyses to identifying disproportionately impacted populations to fostering relationships with community partners, interviewees shared a perception that LAC DPH had taken equity seriously and put resources behind such efforts, though understandably there was also some who expressed a desire for stronger and more proactive actions to advance equity.

LAC DPH’s concerted efforts to combat COVID-19-related health outcome disparities are further described throughout subsequent sections of this report. Of note, significant actions by LAC DPH to address the needs of communities most vulnerable to COVID-19 include (among others):

- Engaging over 3,400 community members as trusted ambassadors capable of sharing accurate and updated information about COVID-19 and infection control.⁶⁹
- Applying the Healthy Places Index (HPI), which is based on 23 key social drivers of health, to ensure community testing, vaccine distribution, and contact tracing support the communities facing the greatest risks.⁷⁰

- Establishing a quarantine and isolation (Q&I) call center, which has fielded over 23,000 calls and placed more than 9,700 callers in Q&I facilities who were experiencing homelessness, residing in congregate living situations, or were unable to safely quarantine or isolate at home.⁷¹
- Refining the structure of testing and vaccine sites to make them more accessible to populations who lack cars and/or internet access.
- Ensuring that low-wage workers in sectors hard hit by COVID-19 (e.g., garment manufacturing, food manufacturing, warehousing, restaurants, grocery stores) are protected by County Health Officer Orders and establishing Public Health Councils that educate workers about COVID-19 safety.
- Investing over \$36 million across 99 subcontracts with CBOs via the COVID-19 Community Equity Fund (includes Los Angeles County Department of Health Services (DHS) budget and subcontracts), resulting in over 18,700 outreach events that nearly 7.6 million people in highly impacted census blocks as of November 2022. Over 16,000 service linkages have been made to date to support individuals and families with food access, health care needs, and financial assistance.⁷²
- Becoming an early reporter of COVID-19 data by race and ethnicity, when only half of states began doing so by April 2020 and far fewer local jurisdictions were able to, and publishing an assessment of this data along with strategies for addressing disparities soon after.⁷³

- Partnering with the Los Angeles County Office of Education (LACOE) to offer mini grants to schools and classroom teachers to mitigate the impact of COVID-19 on student health, with emphasis on chronic absenteeism, childhood obesity, socioemotional well-being, and interruption of routine childhood vaccines or immunization.
- Leveraging over \$1.2 million in philanthropic funds to resource CBOs and FBOs working to increase vaccination uptake in communities disproportionately impacted by the disease.

While important progress was made in extending COVID-19-related services to those Los Angeles County residents most in need of them, the factors that make up the root causes of health inequities are complex, deeply rooted, systemic, and interdependent. The relationships LAC DPH sought to both build and strengthen in the communities it serves throughout the pandemic are an important and promising building block for future public health efforts but alone are insufficient to advance the County’s health equity goals. A continued policy focus, dedicated – and flexible – financial and human resources, cross-county collaboration, and training and capacity building will be critical to ensure meaningful progress is made to advance equity.

VI. Reflections on LAC DPH’s COVID-19 Response Efforts

The following section provides a snapshot of the core functional areas with related strategies and activities of the County’s COVID-19 response that were led by LAC DPH. It is by no means comprehensive, given the breadth, scale, and duration of the pandemic.

Interviewees were candid in sharing their perspectives and experiences across multiple facets of LAC DPH’s response activities, both through the lens of their professional roles, where applicable, and through that of their personal and family experiences as residents of the County. Stakeholders universally praised LAC DPH for conducting an interim response review and for not only seeking but also welcoming both internal and external perspectives and critiques.

Interviewees also supported the timing of this review, with several commenting that it was “overwhelming” to reflect on the enormity of the activities, stresses, and losses over the past two years; that “pandemic fatigue” was real; and a sense of “short-term memory loss” created an urgency to document lessons before a greater passage of time. They also shared a sense of shifting national priorities that will undoubtedly divert attention and funding, threatening to leave public health and its community-based partners without the resources and capacity needed to continue the current work of COVID-19 mitigation and to nimbly respond to future emergencies.

Indeed, by the summer of 2022, a \$20 billion federal fund to cover the COVID-19 testing, vaccination, and treatment costs for uninsured people had been shut down, and though significant advances have been made in antiviral

drugs that, when taken early, can lessen the severity of COVID-19 symptoms and prevent hospitalizations, the future of their funding and availability is uncertain.⁷⁴ An Mpox outbreak that intensified during the spring and summer of 2022 left local public health officials across the country facing familiar challenges related to sources and uses of funding and resources.⁷⁵

Interviewee feedback was to a great extent positive and conveyed a strong sense of respect for how LAC DPH handled the enormity of the tasks at hand and recognition for the challenges of the work, a perception of strong leadership from the department, a belief that Los Angeles County had a highly knowledgeable and competent public health capability with a strong mission of public service, and an appreciation of LAC DPH’s efforts to listen and learn from stakeholders and communities. Most interviewees noted that LAC DPH improved its services, resources, and communications over time and that given the complexity and extensive reach of the pandemic response, frequent communication and increasingly granular sector- and population-specific guidance, resources, and technical assistance were essential.

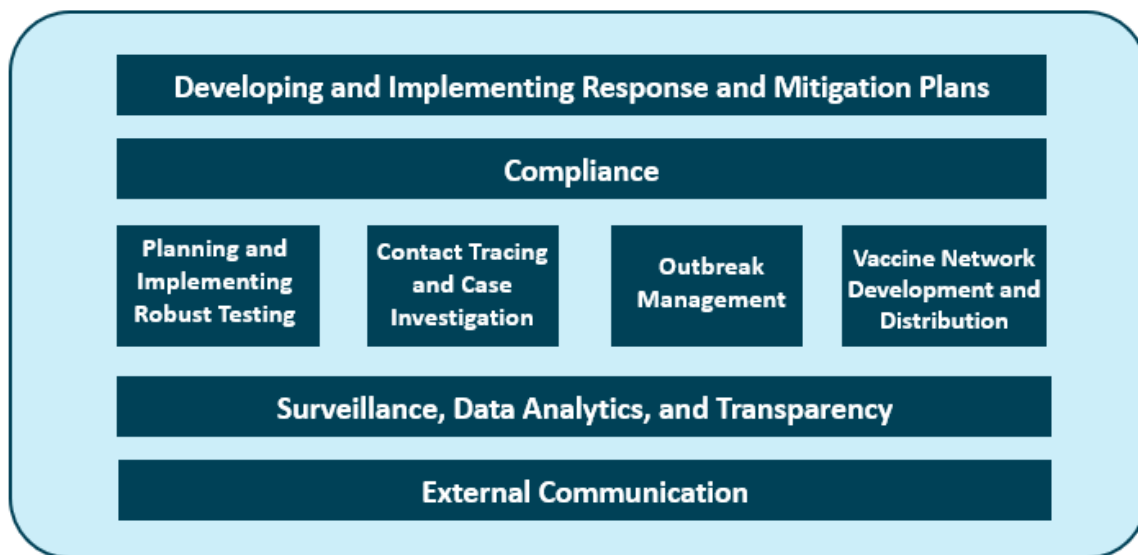
There were, of course, differences of opinion and critiques shared by interviewees relating to the COVID-19 response to date, and interviewees shared their perceptions and observations in the spirit of continuous learning with a shared goal of ensuring Los Angeles County is well prepared for the next stages of the COVID-19 pandemic and future public health crises. Interviewees noted points of friction, particularly during times of resource scarcity (e.g., limited PPE, insufficient tests, not

enough vaccines to meet demand), frequent changes in public guidance, and decisions related to reopening businesses and schools. While a few interviewees felt strongly that LAC DPH did not do enough fast enough in support of health equity, others felt equally strongly that equity played a central role in all aspects of the response efforts and that the department and the County “radically changed” their relationship with the communities they serve. As one interviewee (external to the County government) said: “It’s stunning to remember how much happened so quickly on the backs of public employees who entered the pandemic with insufficient infrastructure and inadequate tools. The pandemic was hard for the entire country, not just Los Angeles. LAC DPH isn’t the

only part of the government involved in the response. It is easy to criticize and say everything should have happened faster, but with the benefit of the perspective of time, I think LAC DPH did an incredible job in a devastating situation.”

The full impact of COVID-19 on Los Angeles County will not be understood or assessed until sometime in the future, but reflections on the efforts to date can hopefully inform the journey ahead.

The subsections below review the following core functions that LAC DPH performed in its COVID-19 response:



In reviewing LAC DPH’s actions, accomplishments, and challenges across these public health capabilities, it is important to recognize that local public health operates in the context of federal and state authorities. Multiple laws, regulations, and policies guide national health emergencies, such as a pandemic, intended to coordinate response efforts across all levels of government to curb

the spread of disease and to protect the health of the populous. While County government and local public health departments in California can take actions to most effectively respond to local circumstances, they must also abide by federal policies, adhere to governor executive orders, and implement state Public Health Officer Orders. Just as County leaders grappled with an ever-changing set of variables related to the

pandemic, state and federal policymakers also faced the daunting task of determining policy

with incomplete data on expedited timelines, which had direct implications for local efforts.

A. Developing and Implementing Response and Mitigation Plans

Overview

Promulgation of clear, actionable guidance that can help reduce the spread of disease and ensure sound infection control standards is one of the most important responsibilities of public health. Further, public health officials often face the imperative to act fast and make sound decisions without the benefit of complete information.

In response to the COVID-19 pandemic, LAC DPH, acting on its knowledge of the communities it serves as well as evolving science around COVID-19, strove to root its policies, directives, and guidance in the most current, comprehensive data.

Public Health Officer Orders are legally enforceable local directives that individuals, businesses, schools, and other organizations are required to implement to protect public health and safety. The Legislature provides legal authority for LAC DPH Health Officer Orders in the California Health and Safety Code, which grants broad discretion to local Health Officers to take measures or issue orders to protect the public from outbreaks of communicable disease during local emergencies and local health emergencies. The statutes primarily include [Health and Safety Code](#) sections 101040, 120175, 101080, and 101085.⁷⁶

Public Health Officer Orders are issued by the local Health Officer, a nonelected, nonpolitical position entrusted with the responsibility to

oversee public health response to disease outbreaks for the greater good of the entire community, among other responsibilities⁷⁷

Local public health departments have options when it comes to slowing the spread of a virus and protecting their communities. In California, local public health departments must implement the guidance provided by the state Department of Public Health under a statewide public health order. However, local Health Officers can implement stricter guidelines than the state, including but not limited to additional protective measures, local stay-at-home orders, and even enhanced sanitation or evacuation protocols, for example, provided local circumstances require such measures to protect health.⁷⁸

On March 4, 2020, Dr. Muntu Davis, the Health Officer of Los Angeles County, determined there was an imminent and proximate threat to the public health in Los Angeles County and declared a local health emergency.

Concurrently, the Chair of the County of Los Angeles Board of Supervisors proclaimed a local emergency for COVID-19, under the authority of Los Angeles County Code 2.68 and Government Code section 8630. On the same day, the County of Los Angeles Board of Supervisors ratified both the declaration of a local health emergency and the proclamation of local emergency for COVID-19.⁷⁹

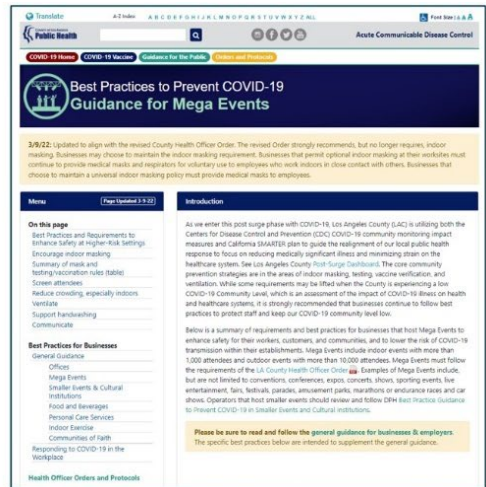
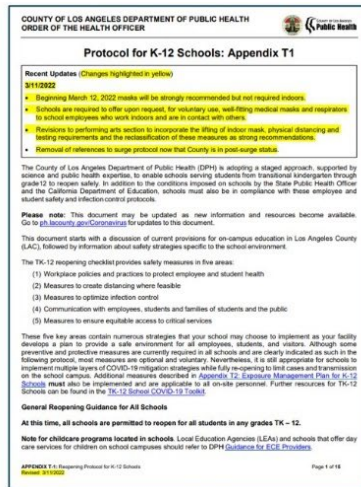
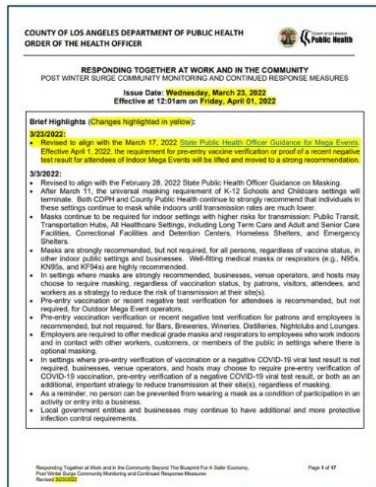
In the early months of the pandemic, prior to expanded testing capacity and the availability of

vaccines, public-facing actions taken by both the state and LAC DPH centered on limiting exposure to the virus, including developing mandates to limit situations where the virus could spread rapidly and implementing safety measures to control the spread of COVID-19 in homes, workplaces, schools, and communities. Examples of safety measures included:

- Instituting non-pharmacological interventions to reduce transmission (e.g., limiting the size of gatherings, requiring individuals to wear face coverings or masks in certain settings, social distancing);
- Closing or limiting access to certain locations;
- Requiring isolation or quarantine of individuals when necessary to protect public health; and
- Mandating businesses report potential outbreaks, amongst other actions.

As COVID-19 vaccines became available, LAC DPH developed policies and guidance specific to vaccines and vaccine boosters as well as overseeing the administration of County vaccine allotments. LAC DPH also closely monitored community vaccination levels, SARS-CoV-2 variants, the effectiveness of vaccines against specific variants, and a variety of community and hospital capacity indicators to determine when additional safety measures might be needed.

From the start of the pandemic through October 2022, LAC DPH issued 131 Health Officer Orders (see Appendix E for a summary). In addition to the Orders, LAC DPH developed extensive guidance and recommendations for different sectors to comply with requirements, including detailed tool kits for safer reopening and ongoing operations.



When LAC DPH issued its first COVID-19-related Health Officer Order in March 2020, the terms and language of the Order were largely in line with the federal declaration of emergency and California’s emergency orders. However, as the

COVID-19 case rates increased in Los Angeles County, and as data and community-level indicators specific to the County warranted – including during the Delta and Omicron surges – the Health Officer at times exercised discretion

to require broader safety measures than the state prescribed.

In a sense, the Health Officer Orders brought public health from “backstage to spotlight” for many businesses and community members. Many interviewees noted they had had limited or no material interaction with LAC DPH prior to the pandemic. Outside interviewees in health care, transitional kindergarten (TK)-12, and social services fields, who often had long-standing relationships with LAC DPH, most interviewees noted food service and sanitation inspections and updates on air quality index alerts as their primary knowledge of or interaction with LAC DPH before COVID-19. Combating the pandemic required LAC DPH to develop policies that applied to the entire County population at once, coupled with messaging around individual behavior changes and new workplace and school infection control measures, which thrust the LAC DPH into the public eye in a new way.

Perspectives and Challenges

Key themes from interviews related to LAC DPH guidance included the following complexities:

Learning curve. All residents and businesses were required to comply with Health Officer Orders, but many experienced a learning curve in understanding and applying orders to their individual circumstances. Some interviewees expressed initial surprise in learning the breadth of state and local authority to impose public safety measures. Several interviewees also expressed initial confusion regarding which actions were recommended and which were required and noted that the CDC and state also published recommendations for various sectors. Indeed, in the course of normal operations,

local public health agencies often enforce established state law and regulations but rarely issue more formal, binding Health Officer Orders to sectors or individuals. Large-scale isolation and quarantine orders, while firmly within the authority of local public health departments, had not been enacted widely since the 1918 influenza pandemic.⁸⁰

Many interviewees shared that they felt the Health Officer Orders were hard to read and understand. They considered the orders long and at times overly granular while at other times lacking detail necessary to guide implementation in specific settings. However, interviewees also stated they learned how to read the Orders over time and that LAC DPH worked hard to communicate salient points through multiple communication channels and developed helpful companion education materials. Several interviewees noted that the Orders became clearer over time; one interviewee described looking back at the Orders from early in the pandemic two years later and observing that the early Orders no longer felt confusing or overwhelming. The newness and unfamiliarity of the situation played a large role in individuals’ level of comfort with the guidance.

Frequent changes. The COVID-19 emergency response evolved rapidly in response to changes in COVID-19’s viral kinetics and the tools available to fight it, shifting availability of data and resources, changes in state guidance and requirements, and evolving scientific knowledge. Public health guidance and safety requirements, by necessity, changed as well, sometimes frequently. Even though these changes caused tension, LAC DPH leadership felt strongly that public safety and trust required rapid responses to local needs coupled

with transparent explanations of why the guidance needed to change. Staff within LAC DPH and external interviewees noted that communications around the rationale for policy changes did improve over time, although they noted the public also became more versed in the subject matter.

One of the most cited points of friction across all interviewees was the promulgation of guidance and Health Officer Orders with little to no lead time for implementation, particularly Orders that were published on a Thursday or Friday with a Saturday or Sunday effectiveness date. Almost all interviewees noted a desire to view Health Officer Orders in advance and many indicated they would have liked opportunities to comment on feasibility and applicability to their unique circumstances. At the very least, interviewees requested more notice, such as a week, to be able to implement changes that would materially impact their operations. Several interviewees felt the County was quick to impose new restrictions or add to Health Officer Orders but slow to make adjustments or roll back provisions that were no longer backed by science. Some safety requirements were quickly changed by LAC DPH to comply with recently released guidance updates from or orders issued by the state. When feasible, LAC DPH discussed proposed changes to safety requirements and their implementation dates prior to release via sector-specific telebriefings and during press briefings, both of which included time for comments and questions, and also included some lead time for implementation of updated sector-specific protocols.

One interviewee noted, however, that their concerns were largely limited to issues that made the guidance challenging to implement in their specific business setting but that they

appreciated the broader population view LAC DPH needed to take, which was “daunting to consider.”

Implications for procurement. County departments and partners also expressed some frustration around changes in guidance without prior notice. A few interviewees noted notice prior to certain PPE requirements, such as requirements around mask wearing, going into effect could have allowed the County to make arrangements with supply channels in advance, potentially saving money and allowing the County to be better prepared with a stockpile on hand.

Communications. Effective and efficient communication of guidance updates to stakeholders and the public was a resource-intensive challenge. Ultimately, LAC DPH implemented a system of highlighting in yellow changes to updated versions of Health Officer Orders. Most interviewees stated this approach was somewhat helpful but not a panacea, given what was perceived as the complexity of the orders and the overwhelming volume of changes. LAC DPH also held regular press briefings (for several months on a daily basis and later on a weekly basis), held multiple standing business sector-specific telebriefings, hosted ad hoc calls and webinars on specific issues, established helplines and email inboxes for questions and technical assistance needs, identified LAC DPH business-sector liaisons, and sought to develop an education-forward approach to site inspections and outbreak management supports to share best practices and ensure compliance with guidance. Understanding and communicating frequent changes in guidance were also challenges for the training and education of field teams enforcing guidance (see next section) and for

CBOs working to educate community members and essential workers. CBOs cited lags in language translation of the Orders and their supplementary materials as particularly vexing challenges in their efforts to reach high-risk populations.

Differences across jurisdictions and with state and federal agencies. Perceived incongruity of Health Officer Orders with guidance issued by other health departments in the region was the most frequent topic of discussion raised by interviewees related to the Orders, with differing decisions made by the public health departments in Pasadena and Long Beach and differing strategies implemented in neighboring Orange County cited most often in interviews. Interviewees noted that the Health Officer Orders in Los Angeles County sometimes included requirements beyond those required by the state and that individual cities within the County imposed further requirements on businesses or individuals operating within their borders. Private-sector interviewees were candid that they felt these differences in public safety measures may have had negative implications for their businesses and organizations. Most often these differences related to face covering requirements, food-and-beverage-related services, and proof-of-vaccination requirements.

Interviewees also identified confusion and at times frustration with local guidance. For example, while Los Angeles County required face coverings when indoors, the cities of Glendale and Beverly Hills required them whenever an individual left their home, even for a walk outside, for a period.⁸¹ Various cities across the County also had proof-of-vaccination requirements for some businesses when neighboring cities did not.

A few interviewees shared that they would sometimes follow CDC guidance over LAC DPH Health Officer Orders, suggesting that when presented with inconsistent, under-coordinated guidance, some businesses and residents elected to follow guidance based on personal preference or economic drivers over local directives. Several business and community member interviewees shared that even two and a half years into the pandemic, they did not fully understand the divisions or roles and responsibilities related to public health ordinances across the state, the County, and cities within the County.

Finally, while local and hyper-local flexibilities related to safety measures were initially viewed as desirable by most interviewees, the vast majority of interviewees said, more than two years into the pandemic, that they now most wished for regional alignment and consistency in COVID-19 protocols or, at the very least, a consistent approach across the County.

TK-12 schools.⁸² Interviewees broadly noted dissatisfaction with changing public school requirements related to COVID-19 safety measures but also appeared to appreciate that LAC DPH was not the sole government entity driving local school decisions.

While there were state and County Health Officer Orders specific to TK-12 schools, other state and local agencies as well as schools themselves promulgated policies and procedures related to operating during the pandemic. Campus closures and reopening plans for TK-12 schools were subject to overlapping authorities and guidance to schools necessarily had to change as the circumstances of the pandemic changed. For example, local school boards made decisions related to

individual/district school closures in the early days of the pandemic to help prevent the spread of COVID-19.⁸³ Through an Executive Order, Governor Newsom tasked the California Department of Education and the Health and Human Services Agency to develop guidance for distance learning, provision of technology, and access to meals, among other provisions.⁸⁴ The California Department of Public Health (CDPH) issued state Public Health Officer Orders detailing school reopening requirements. LAC DPH collaborated with the LACOE and the Los Angeles County Superintendents Task Force to develop detailed guidelines and messaging to help County schools comply with state requirements for the 2020-21 school year, and LAC DPH continued to work closely with LACOE to provide guidance and technical assistance to the County’s schools.⁸⁵ At the start of the 2021-22 school year, California was the first state in the country to require all school staff to either show proof of full vaccination or be tested at least once per week through a CDPH state Public Health Officer Order.⁸⁶ While LAC DPH could impose more protective measures (but not less protective measures) than the state requirements, and at times during the pandemic did implement additional COVID-19 mitigation measures in TK-12 schools, the department increasingly sought to align with the state regarding school closures and reopenings as vaccines and treatments became more widely available. At various points throughout the pandemic, individual local school boards and private

schools also evaluated and in some cases enacted additional safety measures, such as vaccine requirements.

A more detailed discussion of LAC DPH’s efforts to support County schools can be found in Section VI. While interviewees who were parents with school-age children discussed the complex challenges of both distance learning and returning to the classroom, LAC DPH’s guidance was largely considered clear, at least in cases when parents were able to differentiate between LAC DPH guidance and that of other agencies. The majority of parents interviewed, however, said while they monitored multiple sources for information about the pandemic, they largely relied on their child’s school or school district for communications on safety measures and protocols. Some parents interviewed expressed personal disagreements with Health Officer Orders from both the state and the County related to COVID-19 safety measures and/or the way their local schools sought to implement them.

Interviewees from TK-12 schools highlighted the value of open lines of and frequent communication with LAC DPH. They also shared challenges in implementing guidance at times and emphasized the need for ongoing technical assistance.

MASKS AND FACE COVERINGS

While interviews for this review were structured to cover multiple aspects of the pandemic response, the subject of masks and face coverings was the single largest topic of discussion across all interviews.

Guidance related to masks was a flashpoint both nationally and in California throughout the pandemic, even as numerous studies demonstrated that high-quality, well-fitting masks, particularly in indoor public settings, were associated with significantly lower odds of acquiring SARS-CoV-2 infection.⁸⁷

Both the WHO and the CDC released and changed guidance related to face coverings and masks early in the pandemic, ultimately advising cloth face coverings after previously recommending against their use.⁸⁸ Communication about types of masks (such as N95, surgical masks, clothing coverings, and paper masks) and their effectiveness caused public confusion throughout the pandemic.⁸⁹

Of note, LAC DPH provided direction on masks from its very earliest communications about the virus, suggesting in the first weeks of the pandemic that masks should be reserved for health care workers (HCWs) and those visibly symptomatic. However, even as early as February 2020, Dr. Davis published a public “Message From the Health Officer for Los Angeles County” titled “Novel Coronavirus – What It Is and How We Can Prevent It” that outlined current federal guidance related to masks but also recognized that face masks were used in other countries and urged the public to use their own discretion related to masks.⁹⁰ By April 2020, as asymptomatic spread was confirmed, LAC DPH – recognizing the risks to essential workers coupled with increasing transmission rates – required indoor face coverings for everyone, regardless of visible symptoms.⁹¹ (CDPH issued guidance on April 1, 2020 recommending but not requiring face coverings⁹²; the CDC issued similar recommendations related to use of cloth face coverings in public spaces on April 3, 2020.⁹³ Several Southern California counties and several cities in Los Angeles County also mandated face coverings in the first two weeks of April.⁹⁴)

In June 2020, Governor Newsom issued a statewide mask mandate, ending a patchwork of county and local rules after months of polarization, public resistance among some local government officials, and even death threats against public health officials who supported the mandate.⁹⁵

Several interviewees from within LAC DPH regretted the department’s delay in activating mask requirements, even though the County was an early adopter in mandating face coverings in comparison to the rest of the country. They noted significant internal focus and discussion, as well as a study of the evidence available at the time, were devoted to the topic and that advocates from large Asian communities in the County asked for masking guidance quite early in the pandemic. Ensuring PPE, including masks, for HCWs and nursing home staff and residents was deemed a priority in the early weeks of the crisis, with consideration given to the global supply shortages. As a lesson for future outbreaks, public health officials felt strongly that better public education on masks and an assumption of asymptomatic spread, unless otherwise confirmed, should be a first line of defense in the case of future respiratory pandemics.

Face coverings became a deeply personal and polarizing issue. Several interviewees appreciated both LAC DPH’s detailed guidance for different settings and the provision of masks at workplaces, including upgraded masks such as the KN95, as they became more available. Many interviewees were highly supportive of LAC DPH’s guidance on wearing masks and understood the role they could play in reducing transmission of the virus.

However, interviewees were also candid about the challenges of behavior change. Many business and labor interviewees spoke to the challenges faced by essential workers in businesses that served the public, such as grocery stores, restaurants, and delivery services, and the added complexity of social media attacks.

Issues related to face covering compliance among children, especially young children, and persons with special needs were raised as stressful and at times difficult to navigate by both business and community interviewees. Several interviewees brought up different mask requirements in nearby jurisdictions as causing tension and confusion. The requirements in Los Angeles County for indoor versus outdoor mask wearing in different settings at different times during the pandemic were particularly vexing for some interviewees.

Other interviewees voiced disagreement with the concept of mask requirements altogether – some for ideological reasons and some because they were unsure which information was trustworthy. Several interviewees raised the Los Angeles County Sheriff Department’s (LASD’s) public stance and repeated refusal to enforce County mask mandates.⁹⁶

Resistance to wearing masks despite clear evidence and lingering confusion around trusted messengers is illustrative of the formidable challenges public health officials have grappled with across multiple phases of the pandemic, in particular the challenge of providing education to and building trust with a public deeply divided on the core elements of a viral respiratory disease response.

Desire to influence. Many County government and private-sector stakeholders wanted more insight into public health policy decision-making and the ability to shape Health Officer Orders. This created tension and at times challenged LAC DPH’s ability to promulgate guidance efficiently and effectively. Interviewees across almost all sectors indicated a desire to review and comment on guidance in advance more frequently; some thought there should be limitations on the types of guidance public health should be able to promulgate. One interviewee felt the Health Officer Orders

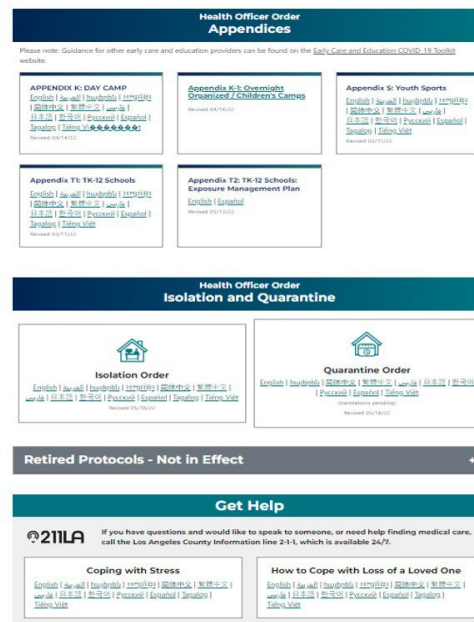
should be optional or advisory in nature rather than binding.

Interviewees from LAC DPH noted that while it took a few months to establish new relationships across many sectors, as the pandemic progressed, a variety of systems were put in place to strengthen communications and foster bidirectional dialogue with residents and stakeholders, including regular telebriefings and industry liaisons. These practices were appreciated by interviewees and should be built upon in future emergencies.

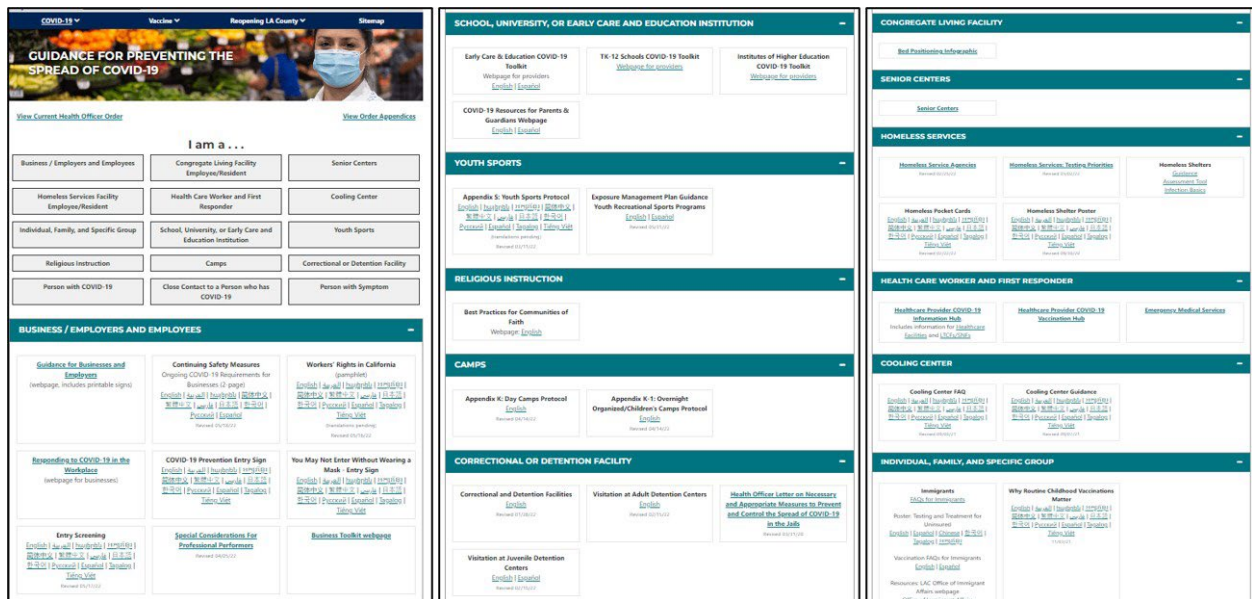
Guidance dissemination. While several interviewees said it was challenging to navigate changes in guidance and cited multiple sources for reopening protocols and operating requirements – including the CDC, the state of California, the California Division of Occupational Safety and Health (Cal/OSHA), individual city websites, and the Board of Supervisors’ COVID-19 website, among others – LAC DPH invested significant manpower, finances, and IT system upgrades in an easy-to-access comprehensive web portal, regularly updated and inclusive of all current Los Angeles County Health Officer Orders, with supporting

materials. Going into the pandemic, LAC DPH’s web platform was severely outdated; it was organized more around departmental programs and static information. Upgrades to the website were made over time as funding was made available to improve navigation and user experience.

Over time, the website evolved so that standing Health Officer Orders as well as information on how to report a complaint are now organized on one landing page:
<http://publichealth.laCounty.gov/media/corona-virus/reopening-la.htm>.



Industry- and sector-specific detailed guidance has a linked and independently accessible landing page: <http://publichealth.laCounty.gov/media/Coronavirus/guidances.htm>.



Detailed vaccine guidance can be accessed easily across the site but also has its own landing page to coordinate all guidance and public resources and ensure ready access to the most up-to-date information: <http://www.publichealth.laCounty.gov/media/Coronavirus/vaccine/index.htm>.



Despite LAC DPH’s efforts to organize and continually refresh all policy and recommendation materials by sector, multiple interviewees noted confusion over where to look for policies and guidance that applied to them or their specific situation, highlighting that there were multiple COVID-19 websites (in addition to press releases and media briefings) across Los Angeles County government at the departmental, CEO’s office, and Board of

Supervisors levels, as well as individual city websites (in addition to city press releases and media briefings). One interviewee noted, “It can be very helpful to have multiple channels to access the same information, but for most of the pandemic the websites were not all clearly and obviously linked and there was a lot of noise, so you were never sure if you were getting the same or the most authoritative information.”

B. Compliance

Overview

In California, oversight of compliance with public health laws and ordinances is, in large part, a local responsibility. LAC DPH regularly ensures compliance with Health and Safety Code requirements for certain businesses it has jurisdiction over, such as restaurants and food retailers. LAC DPH largely relies on inspections and follow-ups to address violations, rather than enforcement actions such as fines, license suspensions or revocations, or legal actions (though it does have such enforcement authorities in some sectors and uses them on rare occasions). The unique circumstances of the pandemic have required issuance of Health Officer Orders with directives that extend to all businesses and residents and have required LAC DPH to develop new protocols and capabilities to leverage its enforcement authority more fully to protect the public.

Governor Newsom largely opted against using state resources for enforcement of COVID-19 Executive Orders and state Public Health Officer Orders, instead encouraging education and calling for voluntary compliance while

reinforcing local obligations and enforcement authority. The governor also threatened to withhold state funds from local jurisdictions that failed to enforce orders or allowed businesses to reopen before reopening was approved by the state.⁹⁷

Local governments across California, as well as the country, grappled with an inadequate suite of tools and resources to support broad compliance with the Health Officer Orders. Many counties, including Los Angeles County, relied heavily on education and technical assistance to ensure adherence to required safety measures. This reflected the shared understanding of the need to preserve civil liberties while protecting the health and safety of all residents during an unprecedented health crisis. Over time, COVID-19 safety measures became polarizing and compliance activities became politically charged, creating a challenging – and at times dangerous – situation for those tasked with the job of enforcement. While the County and its departments plan for temporary increased resource needs to maintain law and order and public safety in an emergency, the pandemic

affected multiple sectors over an extended period, testing the County’s limited resources. The responsibilities and authorities of law enforcement in pandemic response and enforcement are mainly discretionary and state law ([Health and Safety Code](#) section 101029 in particular) gives county sheriffs latitude to enforce local Health Officer Orders:

“The sheriff of each county, or city and county, may enforce within the county, or the city and county, all orders of the local health officer issued for the purpose of preventing the spread of any contagious, infectious, or communicable disease. Every peace officer of every political subdivision of the county, or city and county, may enforce within the area subject to his or her jurisdiction all orders of the local health officer issued for the purpose of preventing the spread of any contagious, infectious, or communicable disease.”⁹⁸

In Los Angeles County, LAC DPH’s collaboration with law enforcement varied based on both geography and phase of the pandemic. In Los Angeles County, some cities have local municipal police, fire, and paramedic services while others contract with LASD for law enforcement, traffic, fire, and paramedic services. LASD is the law enforcement agency for all unincorporated regions.

Countywide, however, LAC DPH had responsibility for COVID-19 Health Officer Order enforcement, with certain key decisions related to financial penalties or legal actions maintained by the Board of Supervisors in consultation with County counsel.

LAC DPH did not have a ready workforce of sufficient scale and training to oversee compliance across all Los Angeles County businesses, nor did it have the administrative and IT systems in place to manage wide-scale compliance support and monitoring. Prior to the pandemic, LAC DPH’s enforcement actions were largely limited to referral of identified slumlords to a city attorney for investigation and prosecution, civil detainment of contagious and noncompliant tuberculous patients in health facilities when necessary to protect health, suspension of retail tobacco licenses for tobacco sales to minors, and compliance for the food and garment industries. A July 2020 report by the UCLA and UC Berkeley labor centers found that LAC DPH lacked “sufficient investigators to pose a credible threat of a compliance check at the County’s 244,000 businesses.”⁹⁹ In the summer of 2020, LAC DPH rapidly stood up a new COVID-19 compliance capability, housed in its Environmental Health (EH) division to provide outreach, education, technical assistance, and compliance monitoring regarding the COVID-19 requirements of the Health Officer Orders in business and community settings.

While most businesses and individuals in the County took the necessary steps to comply with the Orders, there unfortunately were instances of “bad actors” whose continued disregard for the safety measures and infection control requirements of the Health Officer Orders resulted in serious illnesses and, in some cases, deaths.¹⁰⁰ LAC DPH and the EH division implemented new compliance procedures to protect public health during the pandemic, including an administration citation system as a tool to provide warnings for businesses that were repeatedly out of compliance with Health Officer Orders. Prior to the pandemic, LAC DPH

had not administrated financial penalties. EH also developed a site visit capability to respond to inbound complaints and reported outbreaks and to conduct periodic random compliance checks. LAC DPH coordinated with the Office of the County Counsel to obtain compliance for repeat or serious violations via administrative remedies or civil litigation as a last resort.

LAC DPH embraced an approach of providing education and technical assistance as the first line of on-the-ground compliance support wherever possible. Compliance efforts between April and October 2020 primarily took the form of issuing notices of violation and requiring businesses, organizations (such as places of worship), and private entities to close if: (a) the state Public Health Officer Order required that type of business to cease indoor operations but the business or entity had continued them; (b) their workforce was experiencing a large outbreak at the business or location; or (c) they were covertly hosting live gatherings (such as concerts, large parties, or other events). In many cases, a notice of violation was sufficient to prompt remediation. When needed, LAC DPH issued a formal closure order (for outbreaks, for example) or the Office of the County Counsel issued a cease and desist letter (for large commercial gatherings, for example).

In late summer 2020, as the state and County began phased reopening in line with California’s Pandemic Resilience Roadmap, LAC DPH began to issue administrative citations that carried a \$500 fine for Health Officer Order violations to a small number of businesses that were repeatedly noncompliant with COVID-19 required protocols. In the first six months of the pandemic, the department issued only 14 administrative citations. In most instances, after an initial complaint investigation or an

inspection, if LAC DPH determined a violation existed, it would issue a notice of violation to the operator with a “no later than” date for compliance. Upon revisit, if the violation remained unresolved and was considered significant (i.e., likely to increase the risk of spreading COVID-19 to employees and customers), a citation would be issued. There were instances when Health Officer Order violations necessitated the issuance of citations on a first inspection visit if significant violations were identified that increased the risk of spreading COVID-19 to employees and customers, but these cases were largely exceptions. LAC DPH instituted an administrative appeal process that allowed businesses to challenge the citation and fine amount. A significant number of businesses filed appeals. Managing appeals required significant time and resources for LAC DPH to staff and manage.

For the relatively small cohort of businesses that had multiple repeated violations, LAC DPH worked with the Office of the County Counsel to determine whether the initiation of civil litigation to obtain compliance was recommended. In selected instances, where administrative citations were not successful in obtaining compliance, the County determined litigation was required. The County ultimately filed a number of lawsuits and sought temporary restraining orders and/or preliminary injunctions to gain compliance. Almost all achieved compliance and were settled via a stipulated court order and an agreement to comply with future Health Officer Order infection control requirements.

LAC DPH’s EH division conducted routine inspections (those previously scheduled as part of ongoing operations in the businesses over

which it has jurisdiction), random inspections, and inspections in response to complaints from the public. The department expanded its online complaint system to support reports of possible violations of Health Officer Orders related to COVID-19.

Certain business sectors demonstrated low overall compliance with Health Officer Orders coupled with a higher level of reported outbreaks, including – most notably – garment manufacturers, gyms and fitness centers, food wholesalers, hair salons, and barber shops. Warehouses, manufacturing, and logistics businesses demonstrated a higher degree of compliance with COVID-19 safety measures in their inspection findings as compared to some other sectors but were also challenged with a high number of COVID-19 outbreaks.

In total, LAC DPH’s EH division conducted over 170,900 Health Officer Order investigations in total plus over 6,400 outbreak investigations. It issued only 1,664 administrative citations (less than 1% of investigations resulted in citations), which the department credits to its education-first, technical assistance, and reinspection approach to compliance.

Perspectives and Challenges

Compliance was a significant topic of discussion in interviews, and the following themes emerged across many of those interviewed:

Staffing. LAC DPH interviewees noted the challenges of hiring and training to scale up a compliance operation quickly during the most acute period of the pandemic. In addition to substantive expertise on the operations of a variety of business sectors, language and cultural proficiency were also highly desired but

challenging to recruit for “on the fly.” As one interviewee noted: “The inspector role is very hard to recruit for. You cannot work remotely – you have to go to the location in person, sometimes into settings where there are confirmed outbreaks. Inspectors were worried about their own health and that of their families.” Interviewees stated that a few LAC DPH inspectors were harassed, followed, and threatened in the course of their work. LAC DPH also required health inspectors to provide coverage seven days per week, including early and late hours. LAC DPH expanded shifts up to 11:00 PM on weekends and extended weekday shifts, noting that retention was as difficult as recruitment.

Administration and IT systems. LAC DPH interviewees noted the department did not have adequate IT systems for managing compliance outreach and tracking at the start of the pandemic. The platform EH used for food service inspections was outdated and no longer being supported by its vendor; while it had some functionality that could be manipulated to support COVID-19 inspection tracking, it could not support analytics around all the business sectors EH and the County required. While LAC DPH developed a solution, the initial process of inspection and outbreak intake and tracking, which also needed to be staffed, was manual, laborious, and time consuming.¹⁰¹

Insufficient compliance tools. Interviewees within both Los Angeles County and the private sector raised the need for consistent and more nuanced compliance levers. While education and technical assistance have real benefits, interviewees from both within the County and the business sectors commented that meaningful consequences were needed for serious or persistent violations that impact

public health, if and when warranted. At the same time, some interviewees felt that \$500 fines and a threat of legal action were too blunt and more flexibility was needed. Some interviewees proposed smaller fines for less-substantial infractions, as well as the ability to issue larger financial penalties if violations continued or if the situation warranted a stronger financial deterrent before initiating legal action. Under Title XI of the Los Angeles County Code (section 11.02.080), violations of Health Officer Orders are punishable by a fine of not more than \$500, so smaller fines could be implemented. However, LAC DPH chose to impose fines only when necessary due to violations that posed a danger to public health and not as a first-line action. LAC DPH does not have the ability to increase fines without changes to the County Code and has limited flexibility to enact other measures.

Inconsistency across inspections. Some private-sector interviewees raised frustration with what they perceived as inconsistency in enforcement activities and variability in site inspectors’ knowledge and interpretation of Health Officer Orders. EH inspectors in the field possessed varying levels of knowledge and sophistication in their ability to interpret the implementation of guidance across different business sectors. Several interviewees described productive and solution-focused discussions of specific guidance implementation issues with senior LAC DPH leaders but found many on-the-ground inspectors to be inflexible or arbitrary in their approach. Some businesses noted they had several “random” inspection visits while others said they had had no interaction with LAC DPH inspectors. A few interviewees noted they were aware that LAC DPH fielded complaints from the public, which may have led to more frequent inspections for some businesses, but

felt there was not transparency as to how and when complaints translated to site visits. Further, while interviewees almost universally reported a highly positive interaction with LAC DPH’s outbreak management team, which was clinician led and seen as focused on collaboration to prevent further disease spread, a high percentage of interviewees noted they felt COVID-19 inspections were punitive and “in the weeds.”

Given the risks to the public associated with the pandemic, LAC DPH needed to quickly and significantly scale up its compliance workforce and conduct inspections across multiple sectors. At times throughout the pandemic, particularly during surges in case and hospitalization rates in the first year and a half, Health Officer Orders did change frequently as the community situation and risk of transmission changed. There was admittedly a steep learning curve for inspectors and businesses alike. In practice, implementation of Health Officer Orders for reopening may result in different recommendations in specific settings, depending on the physical layout, air circulation, and other features of a given location. EH identified quality control and continuous process improvement as priorities for its support of field investigators and has focused on implementing training programs for its inspection teams that emphasize a uniform and detailed inspection process.

Ability to manage changing guidance. Interviewees from both within LAC DPH and in the business community also commented on the challenges of changes in Health Officer Orders and accompanying field inspections. Rapidly communicating guidance changes, as well as providing necessary training and updated tools for a distributed group of EH

inspectors, many of whom were new or temporary employees learning on the job, was difficult. Some interviewees gave specific examples where guidance had changed, such as over a weekend, but an inspector relying on outdated Health Officer Orders flagged their business for violations in error. Several interviewees reported differences of opinion with inspectors who had their own interpretation of a specific Order’s meaning and implementation in each business or setting, which could result in arguments and notices of violation that businesses appealed. LAC DPH recognized these challenges and worked to enhance a real-time training function to support inspectors, as well as FAQ documents and related tools, but agreed it was an area for improvement.

Managing challenging or nuanced situations.

Interviewees also raised a need for better training and preparation to respond to employee-generated complaints and gave examples of EH inspectors questioning employees in front of management about their concerns related to safety violations, which could prompt employee fears of retaliation. Some interviewees expressed frustration with EH inspector schedules and noted, for example, that many warehousing and logistics companies have peak staffing in the pre-dawn hours (as early as 3:00 AM) as trucks are loaded for the day. Inconsistent compliance with safety measures was most risky for employees in those early hours, but interviewees believed EH inspectors conducted most inspections in the middle of the day. Similarly, many unsanctioned large gatherings happened at night and some interviewees felt that not only were few EH inspectors available, but that EH inspectors could do little without assistance from law enforcement.

Timeliness of inspections. Several interviewees felt it took too long for EH inspectors to respond to violation complaints submitted through the website. Due to an increased number of complaints, reflecting both COVID-19 violations and other environmental health-related issues, the department instituted a protocol to prioritize field investigations for those of greatest urgency and potential impact regarding violations of Health Officer Orders, including mitigating disease transmission.

Some interviewees felt strongly that enforcement decisions were political and gave examples of businesses or situations they believed operated in continual open violation of COVID-19 Health Officer Orders. Very few interviewees felt they could understand the steps LAC DPH took after issuing a notice of violation or the extent of actions LAC DPH would take.

Lack of alignment with state agencies. A related challenge for businesses – and perhaps the greatest point of friction over the past year – was variation between local Health Officer Orders and Cal/OSHA statewide Emergency Temporary Standard (ETS) requirements. While EH inspectors worked to stay abreast of changing local Orders, businesses were put in the position of trying to understand both County directives and Cal/OSHA requirements. While LAC DPH’s EH division reported it had a positive relationship with Cal/OSHA and open lines of bilateral communication, business interviewees felt the majority of EH inspectors were not helpful in navigating areas of confusion and that it was challenging to obtain clarity on the “gray areas.” Several interviewees shared ongoing confusion around COVID-19 case or death reporting requirements across Cal/OSHA and the County.

Both LAC DPH and Cal/OSHA chose to publish information about citations on their websites. This was a particular frustration for businesses – several interviewees said they were working with the County to comply with violation flags or had fully addressed any issues and that there was no clear process to reassess compliance or have the web posting taken down.

Private sector in the role of regulation

enforcer. Finally, several private-sector interviewees voiced frustration with what they viewed as being expected to enforce Health Officer Orders in their businesses or workplaces, particularly those who interfaced with the public on a large scale. Interviewees felt overburdened by challenges related to

trying to get the public to comply with mask-wearing policies, such as at amusement parks, at sports and music events, and on public transportation, as well as social distancing protocols. Examples of specific challenges shared included managing different masking requirements for vaccinated and unvaccinated persons in their business, requirements to verify vaccine status or confirm a negative test prior to a member of the public entering their business, and validating vaccination requirements for children age 5 and older. Businesses did not feel they had the staff, training, or capabilities to manage public behavior at scale and that private businesses were unfairly put between customers and regulators.

C. Planning and Implementing Robust Testing

Overview

Over the course of the pandemic, testing strategies and practices have significantly evolved to reflect changes in both supply and science. In the earliest days of the pandemic, all tests for COVID-19 were done at health care facilities where only those who were ill with COVID-19-like symptoms were tested and these specimens were then sent through LAC DPH to the CDC for analysis. Within a few weeks of rapidly increasing spread, the CDC allowed state and qualified local public health labs to process tests and there were more locations where individuals could provide samples for testing.

LAC DPH has long operated a nationally recognized Public Health Laboratory and was able to locally conduct early testing in February 2020.¹⁰² As the demand for COVID-19 testing

increased rapidly, and reagent supplies became more plentiful, it was important to expand both the locations where those who were symptomatic could get tested and the number of laboratories that could process specimens. By March 2020, academic health system labs had developed their own tests and the County implemented commercial laboratory partnerships. It is important to note that throughout the winter and most of the spring of 2020, testing supplies were constrained across the country, resulting in limitations on who was eligible for testing. While LAC DPH maintained responsibility for refining testing protocols and testing special populations, the chair of the Board of Supervisors at the time asked the Los Angeles County Fire Department (LACoFD) to operate a small number of community testing sites. Responsibility for these community testing sites was shifted to DHS in April 2020 by

the board chair. Testing practices have greatly evolved over time, with initial testing being polymerase chain reaction (PCR)-based and later testing including broad use of at-home antigen tests. With improved access to testing and rapid results, improvements in data systems, wastewater surveillance, and more advanced genomics surveillance, Los Angeles County residents are much more easily able to assess their status and LAC DPH is more prepared to assess the level of community spread and the role of specific virus strains than it was at the beginning of the pandemic.

Early days of COVID-19 testing. Initial COVID-19 testing capacity was very limited, primarily due to severe constraints in the supply of tests that affected communities across the nation. Los Angeles County was better situated than many communities, as LAC DPH’s public health labs received approval from the CDC to perform testing locally. Still, CDC guidance in the earliest days of the pandemic indicated that tests should be reserved for evaluation of “persons under investigation” (PUI), the highest-risk individuals, such as those with a recent history of travel to China and concerning symptoms.¹⁰³ LAC DPH rapidly redeployed a team of around 70 public health physicians and additional nurses to interact with providers and hospitals. These teams helped with identifying PUIs, arranging testing, and managing positive results. As an example of the strain that COVID-19 put on existing public health resources, LAC DPH’s hospital and physician call center volume ballooned from around five calls per week to 8,000 calls per day. Community providers report that the early expectation that they call the County for permission to administer a test was inefficient. Since then, their processes have streamlined substantially, but the County’s public health lab still does not have complete

electronic lab reporting (ELR) capability with all its hospital partners, meaning that some results reporting still requires a paper-based process. Given limited testing capacity within the County and overall, the earliest screening efforts, such as those that began at LAX for travelers arriving from China, were led by federal officials and focused on temperature checks and symptom questionnaires rather than tests.¹⁰⁴

Los Angeles County launched its County laboratory testing program with four labs in late February 2020; by September 2020, it had grown to six laboratories and had processed around \$60 million worth of tests. In the first year of the pandemic, all County testing was primarily PCR-based, in part through a commercial contract with Fulgent Genetics. Some private-sector providers were able to quickly develop their own independent testing capabilities while others continued to rely on County testing capabilities. Even when community partners were able to develop their own testing capabilities, however, they sometimes called on LAC DPH labs to share swabs and reagents during the frequent shortages of these materials.

Interviewees described LAC DPH’s expansion of laboratory capacity as a stressful process, with political pressure to build new processes and expand throughput quickly. Under this pressure, however, LAC DPH was able to streamline administrative processes substantially, particularly in the areas of contracting and procurement, with support from its County partners.

Expanding access to tests through community testing events. As laboratory capacity expanded, LAC DPH developed new partnerships and innovative programs for

community members to access testing. One hundred and twenty-five testing sites were launched over the course of the pandemic, with 66 sites in operation as of May 2022, including 24 County sites, nine state sites, and 33 pop-up testing sites. In addition to the testing sites, LAC DPH also provided testing at its three full-service PODs (Ted Watkins, Obregon, and Market Street) without appointments. In addition to testing at these specialized sites, LAC DPH released a Health Officer Order to facilitate testing for symptomatic individuals and those with COVID-19 exposure at health care facilities as part of a broader plan to integrate testing and vaccination more seamlessly with routine health care delivery.¹⁰⁵

The city of Los Angeles and the LAFD oversaw mass testing sites and focused testing events, such as Skid Row testing. At the height of the Omicron surge, LAFD had 130 firefighters working with more than 1,000 civilian volunteers engaged in these efforts. These testing events required extensive planning to provide tents, water, generators, parking, security, and staff, in addition to testing supplies. LAFD subsequently transitioned these efforts over to the County, where responsibility for their implementation shifted between a range of agencies – LACoFD, LAC DPH, and DHS were all charged with leading at various points.

In addition to supporting community testing events, LAC DPH funded a program developed and administered by its sister agency, DHS, to deliver at-home PCR tests to residents' homes. The program, which began in December 2020 with molecular testing performed by Fulgent and was meant to provide easier access to people with symptoms or who had been exposed during the winter surge, was initially intended to be temporary but was relaunched

in the winter of 2021 during another surge.¹⁰⁶ The program is currently available for Los Angeles County residents who are 65 years of age or older or who are homebound and have concerning symptoms or a suspected COVID-19 exposure.¹⁰⁷

DHS has distributed more than 230,000 at-home PCR tests through the countywide home delivery program with funding from LAC DPH. In January 2022, responding to a further increase in demand during the Omicron surge, DHS added a program allowing Los Angeles County residents to pick up these molecular test kits at 13 designated sites, self-administer them, and leave them for processing, with results expected within 48 hours. This program has provided more than 80,000 additional tests.¹⁰⁸

While community testing site management transitioned to DHS and testing in general became further embedded into the established health care system, with the advent of over-the-counter (OTC) antigen test kits, LAC DPH took lead responsibility for securing and distributing millions of test kits to residents in high-need communities and those most vulnerable to poor outcomes. This included managing a massive distribution of OTC tests to public and private schools and school districts.

LAC DPH continued and continues to run outbreak management strategies for special populations, including targeted testing for PEH and people in congregate living facilities such as skilled nursing facilities (SNFs) at points of outbreaks. In addition, LAC DPH oversees testing in schools. LAC DPH's testing capabilities – focused on special populations – have become increasingly efficient, due to expanded funding availability and the department becoming more agile in team building,

procurement, and community and clinical partner network development. To support these efforts, LAC DPH maintains and manages a warehouse storing test kits, testing supplies, PPE, vaccines, and therapeutics.

Testing for special populations is further described in a subsequent section.

Antigen tests. The U.S. Department of Health and Human Services (HHS) began purchasing antigen tests for distribution through states in late summer 2020¹⁰⁹ and leveraged American Rescue Plan Act of 2021 (ARP) funding to deliver large numbers of antigen tests in the summer of 2021.¹¹⁰ LAC DPH was at the forefront of antigen guidance and studies, conducting one of the first studies that documented lower sensitivity among antigen tests when compared to PCR in routine clinical care and issuing this information shortly before the tests received emergency use authorization.¹¹¹

While these tests are now typically available for self-administered use, they were initially used in Clinical Laboratory Improvement Act (CLIA) - waived laboratory settings. Unlike many other jurisdictions, LAC DPH generally did not encourage SNFs and other congregate settings to use these initial antigen tests for routine screening unless under extenuating circumstances and offered rapid access to PCR tests as a preferred alternative. Later, when antigen tests gained approval for OTC and self-administered use, LAC DPH distributed millions of these tests to schools, CBOs, food pantries, social services agencies, and other settings to alleviate the shortage of tests in the community.¹¹²

As in other communities, Los Angeles County is seeing increasing use of self-administered at-

home tests, which are covered by insurance for many individuals and have been provided using County funds since federal Health Resources and Services Administration (HRSA) funding was not renewed in spring 2022.¹¹³ Because individuals with no or mild symptoms may now take a self-administered test and forgo seeking health care, samples gathered in clinical settings may be more skewed toward people who present with significant symptoms or exposures than they were in the past. Hospitals that administer routine testing for preoperative patients or patients admitted to labor and delivery can provide alternative data to inform trends, as can surveilled wastewater, described below.

Wastewater and community infection trends.

LAC DPH assesses wastewater concentrations to understand the spread of the virus across different parts of the County. Beginning in April 2020, the Los Angeles County Sanitation District (LACSD) began regularly collecting untreated wastewater samples at its two largest treatment plants and assessing levels of SARS-CoV-2 RNA.¹¹⁴ The presence and concentration of SARS-CoV-2 RNA in untreated wastewater samples cannot diagnose a specific individual with COVID-19 nor can it be translated into a precise estimate of the number of cases in the communities served by the treatment plant, but rising or falling trends in wastewater concentration when collected at the same site using a consistent technique generally correspond to trends in community infection rates.¹¹⁵ The LACSD has refined its sampling approach and its laboratory partnerships over time, and its current laboratory partner is able to contribute genomic sequencing data.¹¹⁶ This data can serve as a helpful supplement to sequencing data generated through analysis of

clinical samples, as untreated wastewater is not affected by changes in testing patterns.

Genetic sequencing. Around 20% of samples have been sequenced in recent months, allowing insight into outbreaks and the progress of emerging variants. Public health has the unique ability to link sequenced samples collected through community testing with infected individuals, allowing for detailed analysis of not just what is circulating but how a particular strain is affecting the health of residents. LAC DPH reports sequencing results from its own Public Health Laboratory as well as from clinical, commercial, and academic laboratory partners publicly in its weekly “COVID-19 Watch” newsletter.¹¹⁷

Perspectives and Challenges

Balancing roles and areas of specialization across county and city governments. The logistics required to organize large and small testing events represent a distinct skill set. Over the course of the pandemic, several different entities within Los Angeles County have managed these logistics, including the County of Los Angeles Internal Services Department (ISD), Los Angeles city and County fire departments, LAC DPH, and DHS. For testing, LACoFD initially led testing efforts until the role transitioned to DHS, while LAC DPH provided guidance and funding. ISD supported logistics and procurement activities. While all interviewees agreed LAC DPH had the skills and authority to set policy for testing, they differed on whether LAC DPH should also lead the logistical elements for community testing or whether it should instead provide guidance and consultation to a logistics specialist.

Impact of COVID-19 testing on other LAC DPH laboratory testing priorities. As was experienced across all core programs administered by LAC DPH, the need to scale up to support the COVID-19 response required tradeoffs that affected other programs in service to public health and welfare. This was particularly acute in laboratory services. While great efforts were made to ramp up COVID-19 testing capacity, these gains were made at the expense of other surveillance and testing programs for conditions such as tuberculosis, HIV, and other diseases, as there were limited available trained and skilled staff. As the Mpox outbreak has demonstrated, nimble and available Public Health Laboratory capacity is essential for early intervention, and investments will be needed to ensure the Public Health Laboratory can continue to support robust COVID-19 surveillance efforts while also returning to pre-pandemic services across all other priority program areas.

However, LAC DPH also took a forward-looking and strategic view of Public Health Laboratory enhancement opportunities during COVID-19. When federal funding was available to expand testing capacity and throughput, the department focused on equipment that could be used to test for a variety of conditions. COVID-19 has also created expectations regarding the speed at which data is generated, shared, and packaged in dashboards meant to guide public health actions. Nationally, COVID-19 strained public health reporting capacity and delays in data reporting added to the challenge of managing disease spread across many jurisdictions; the challenge was so pervasive that in 2022, the federal government created a Center for Forecasting and Outbreak Analytics intended to remedy gaps and delays related to lagging data in the future. In Los Angeles

County, significant efforts were made to improve electronic lab reporting and develop systems to improve data aggregation. As one interviewee noted, public health disease

surveillance programs that have historically worked under substantial data lags may also benefit from new data collection standards set by LAC DPH.

D. Contact Tracing and Case Investigation

Overview

LAC DPH administered case investigation and contact tracing programs for a range of infectious diseases.¹¹⁸ Like community testing, these are core public health functions that LAC DPH has performed in the past. However, the scale and clinical characteristics of COVID-19 pushed LAC DPH to adopt new practices that hold potential for future community engagement.

LAC DPH’s case investigation, contact tracing, and outbreak management capacity prior to the pandemic was scoped to meet anticipated needs of a largely well-understood group of diseases, such as tuberculosis, HIV, and STDs. The workforce needed to respond to the pandemic greatly exceeded the number available in the early days of the pandemic. Scaling up case investigation, contact tracing, and outbreak management capability for COVID-19 required rapid and substantial increases in staffing and funding as well as investments in training and technology. Conducting contact tracing and case investigation successfully requires a diverse set of skills. An April 2020 report from the Johns Hopkins Center for Health Security and the Association of State and Territorial Health Officials described the knowledge and training case investigators and contact tracers must have to be effective, including “the basics of

disease transmission, the principles behind case isolation and quarantine of contacts as a public health measure, the ethics around public health data collection and use, risk communication, cultural sensitivity, and the specifics of local processes and data collection for the effort.”¹¹⁹

Before the availability of vaccines and therapeutics, in particular, contact tracing was an important tool to help interrupt transmission and often the only way for individuals to know they had been in contact with an infected person at a time when testing was not widely available. Contact tracing also provided other important benefits, including providing information on the virus and instructions on how to isolate at a time when people were scared and overwhelmed. Contact tracing and case investigation also allowed the County to reach residents in need and provide access to services and supports.

Establishing COVID-19 case investigation and contact tracing programs. Development of case investigation and contact tracing programs involved a multiweek process of developing a script and training staff. In April 2020, LAC DPH had about 15 people on staff making outbound calls to known cases and contacts. Initial efforts in data collection and response were labor intensive, using paper forms; a County-employed interviewee described a staff member delivering bags of groceries in her

personal vehicle to quarantining households. At first, LAC DPH staffed a contact tracing call center with the role of calling cases and contacts (at this point, the center could not take inbound calls from Los Angeles County residents who were or suspected they were infected). Subsequently, LAC DPH built a COVID-19 information, referral, and vaccine line (the LAC DPH Call Center), a resource for contact tracers to provide to cases and contacts in need of additional COVID-19-related information, resources, and referrals. In July 2020, the LAC DPH Call Center’s telephone number was made public and expanded services to include connecting COVID-19-positive individuals to their case interviewer. The Nurse Triage Line was launched at the same time to assist with determining callers’ eligibility for temporary housing, to support pilot projects such as a food delivery service in partnership with the city of Los Angeles, and to provide clinical-level expertise to the LAC DPH Call Center. The following year, the LAC DPH Call Center expanded again, this time to assist with vaccination appointments, including transportation, for vulnerable populations. In April 2022, the LAC DPH Call Center expanded services further to include the ability for nurse triage staff to screen and connect eligible COVID-19-positive cases with therapeutics through various sources, including the LAC DPH Therapeutics Telehealth service.

The LAC DPH Call Center is managed by a strong multidisciplinary team and operators who have come from a variety of sources (e.g., LAC DPH staff, other County departments, the city of Los Angeles, the state of California, contract employees, and graduate students). The LAC DPH Call Center, which has received several hundred thousand calls since its inception, has grown tremendously in scope and size in the past two and a half years; the line began with only 15 staff, who answered six calls on the first day, and expanded to over 300 operators, who answered 3,000 calls per day during the largest surge to date.

Call volume waxes and wanes with surges, making it challenging to manage staffing needs, given intense competition for staff. An interviewee noted that when the contact tracing call center is optimally staffed for its caseload, operators can reach contacts within 24-48 hours; but during surges, when they receive thousands of cases each day, they cannot meet those benchmarks – making it less likely contact tracers can reach potentially infected contacts before those individuals in turn can infect others. To increase the speed of response, LAC DPH shifted to an automated text-based approach for most contacts. Figure 2 shows that the proportion of cases receiving a live interview decreased over time.

FIGURE 2. FREQUENCY OF NEW CASES ASSIGNED BY MONTH (MAY 2020-MAY 2022)

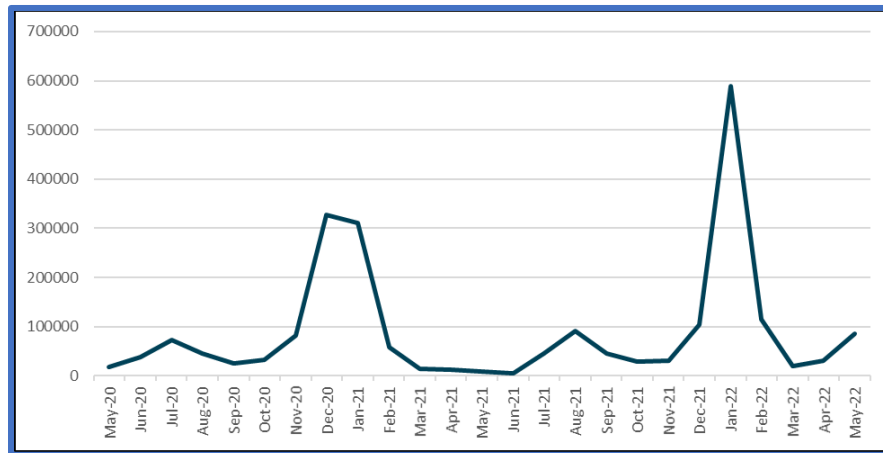
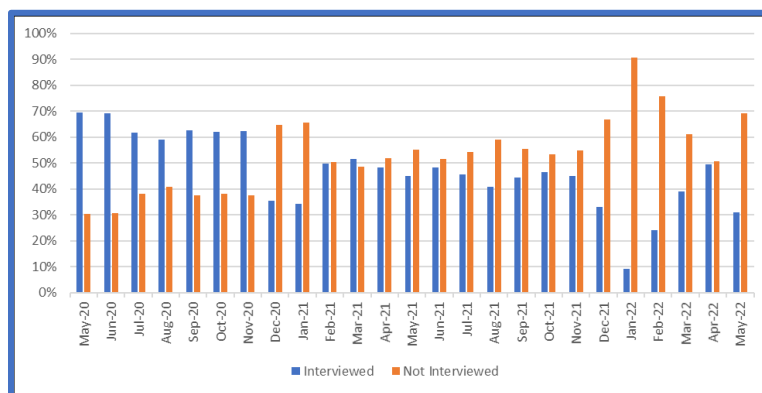


FIGURE 3. PROPORTION OF CASES INTERVIEWED AND NOT INTERVIEWED BY MONTH (MAY 2020-MAY 2022)



Over time, call center staffing grew to as many as 3,000 people working each day; taking turnover into account, more than 4,000 people have been trained as contact tracers. Some were public health staff but many were County staff detailed from other areas through the County’s Disaster Services Worker program, including many library employees, students, and contract employees. California state also assigned 1,206 state staff members to help with contact tracing.¹²⁰ In addition, beginning in September 2020, LAC DPH partnered with CBOs

so their staff, under LAC DPH supervision, could support contact tracing services in highly impacted communities.

As the system became larger and more standardized, and as guidance became more nuanced, script development and training were noted as time-consuming processes because of the need to capture changing understanding of the disease. Currently, the system offers three levels of service: one for triaging callers and addressing routine needs, another for clinical

staff who can work with symptomatic patients and provide support during isolation, and a third for people who may need additional support in using technology to schedule appointments.

Perspectives and Challenges

Stress of contact tracing for temporary staff.

While detailing staff from other departments allowed LAC DPH to meet its case investigation and contact tracing needs quickly, it also brought challenges. Case investigation and contact tracing could be extremely stressful for staff, particularly in the period prior to vaccination – while these interviews were conducted via phone, investigators and tracers routinely spoke to contacts of people who were critically ill or had died from the disease or were simply frustrated and afraid of having to miss work and lose a job or housing, and this caused stress for interviewers, particularly those without prior clinical experience. However, an interviewee noted that many nonclinical staff did excellent work and found meaning in their new roles despite the strain.

Evolving role of contact tracing. Several LAC DPH interviewees reported that their assessment of the value of contact tracing

changed over the course of the pandemic. In the initial phases of the pandemic, when there were relatively few cases and transmissibility was low (as compared with the variants that would subsequently dominate), contact tracing could fulfill a traditional public health purpose of slowing disease transmission. When COVID-19 became widespread and increasingly transmissible, contact tracing was no longer an effective way to halt disease transmission chains. However, others within LAC DPH supported contact tracing, even in these circumstances, as an important way to identify people who might have needs that LAC DPH could address. In this regard, contact tracing appears to be transitioning from a specific intervention intended to control communicable disease transmission toward a broader community outreach that might be geared equally effectively to under-resourced communities to address social drivers of health and provide those infected with much-needed support for securing basic needs.

As the pandemic evolved, the role of contact tracing shifted. In late February 2022, the CDC shifted its recommendations away from universal contact tracing for COVID-19, encouraging health departments to focus those resources on high-risk settings.¹²¹

E. Outbreak Management

Overview

Outbreak management is an important component of any response to an infectious disease outbreak or increase in disease over what would be expected at a specific place and time. Outbreak response follows nine basic

steps, beginning with establishing the presence of an outbreak and continuing through identifying the pathogen and verifying diagnosis of the disease, establishing a case definition to guide identification of additional cases, identifying cases and contacts, conducting epidemiological studies to understand potential

pathways of transmission, testing hypotheses regarding origins and trajectory of the outbreak, instituting controlling measures that could bring the outbreak to a close, and conducting ongoing surveillance.¹²² Both strong public health systems and community engagement can contribute to the effectiveness of outbreak management; public health systems can bring to bear resources, such as testing capacity, data analytics, and trained epidemiologists, and community engagement drives the public's willingness to participate in case investigations, share personal information, and adhere to recommendations.

In previous outbreaks, LAC DPH utilized a number of best practices: in a prior measles outbreak, LAC DPH was able to call on its 70 person provider staff quickly to investigate and manage cases. Several interviewees described the previously referenced hepatitis A outbreak as having informed their approach to community outbreak control efforts for the COVID-19 pandemic, with particular focus on earning trust by working through partners well known to affected communities and ensuring staff could rotate in and out of intensive response roles to reduce burnout.

In the early weeks of the COVID-19 pandemic, LAC DPH was able to identify individual confirmed cases and implement tightly controlled quarantine or isolation protocols. As community spread rapidly increased, around three months into the pandemic, LAC DPH created an Outbreak Management Branch (OMB) of the ICS to support investigations of case clusters of a prespecified size. OMB teams that conducted site visits were comprised of a public health nurse outbreak investigator, physician specialist(s), and in the event of workplace outbreaks, an EH public health

investigator. OMB physicians, nurses, and investigators were dispatched to outbreak sites, such as SNFs, long-term care facilities (LTCFs), businesses, and education settings, to provide advice and infection control interventions to impacted facilities and their personnel. The OMB team needed to work closely with the site to determine the nature and extent of the outbreak, cases and their close contacts, the likely route of transmission between persons, and the best mitigation measures to lower the risk of continued transmission. The OMB team evaluated outbreaks by visiting the site, evaluating long lists of cases and contacts, and suggesting and requiring infection control measures, such as masking, testing, and increasing ventilation or distancing. Each outbreak was unique and required maintaining regular contact with the site operator to verify that the implementation measures were working to stop transmission at the site. Throughout the pandemic, the minimum number of cases that constituted an outbreak that warranted site investigation changed, in part due to cycles of the pandemic and in part due to LAC DPH capacity. In total, there were more than 8,000 outbreaks investigated across all sectors: more than 2,600 at worksites, more than 3,300 at SNFs, more than 700 at schools and institutes of higher education (IHEs), and more than 1,500 at facilities serving PEH.¹²³

When OMB identified an outbreak, its initial site visits were educational and focused on root cause identification and solutions development rather than punitive or disciplinary action. Interviewees noted outbreak management teams also provided information and assistance related to ventilation and air flow and that their recommendations were usually practical and implementable. An LAC DPH interviewee noted that if continuing outbreaks happened at the

same location, stricter enforcement actions were sometimes required, but LAC DPH prioritized ensuring businesses felt supported in reporting outbreaks so that lifesaving public safety actions could be taken.

Perspectives and Challenges

Role challenge for newly trained staff. An interviewee noted that some clinical staff recently out of training struggled transitioning

to roles in outbreak management. These roles were particularly challenging when outbreaks occurred outside of facilities such as SNFs that are traditionally overseen by LAC DPH; interviewees described outbreak sites such as factories, large venues, and theme parks as challenging for investigations because of the specific knowledge required to understand their structure and function and because these sites were less accustomed to receiving full campus inspections for Health Officer Orders.

F. Vaccine Network Development and Distribution

Overview

LAC DPH maintains an established program to address vaccine-preventable diseases, which includes support for the provision of routine childhood vaccinations and the administration of vaccinations during outbreaks of viruses such as hepatitis A. When COVID-19 emerged, LAC DPH needed to adopt new approaches to its existing vaccine delivery system with the twin goals of rapid and equitable distribution across the County. By the end of June 2022, there were over 800 mobile vaccination sites and over 1,300 fixed vaccination sites, which together vaccinated over 8.1 million Los Angeles County residents, or just under 80%, with at least one dose of a COVID-19 vaccine; 7.4 million Los Angeles County residents are fully vaccinated.¹²⁴ This highly effective strategy and attendant impressive outcome can be counted as one of LAC DPH's strongest achievements.

Los Angeles County residents brought a diversity of perspectives and experiences to the question of vaccination, meaning that no single approach could encourage vaccination across

the entire population. While approximately 80% of County residents have received at least one dose of vaccine, reaching that 80% posed an evolving series of challenges for LAC DPH. Initially, the County's most immediate challenge was the scarcity of vaccines, which required rigorous attention to allocation protocols and concern for equity, with efforts to ensure that the best-resourced individuals did not consume the limited number of available doses. Within a few months, however, the supply of vaccines and the pace of vaccination had increased; it took three months (from January to March 2021) to vaccinate the first 20% of Los Angeles County residents with one dose (see Figure 3), but only one month (April 2021) to provide at least one dose to the second 20%. The third 20% took three months, until July 2021; at this point, the residents who had most avidly sought vaccination as soon as it became eligible had completed their initial vaccine series and many of those remaining had questions or concerns about receiving the vaccine, faced barriers to obtaining it, or did not see a reason to prioritize getting it. It took more than half a year, and two more significant surges, for the next 20% to

receive at least one vaccine dose, reflecting the difficulty of reaching those groups, and the

projected pace for the final 20% appears similar.¹²⁵

FIGURE 4. PERCENTAGE OF LOS ANGELES COUNTY RESIDENTS VACCINATED WITH AT LEAST ONE DOSE¹²⁶

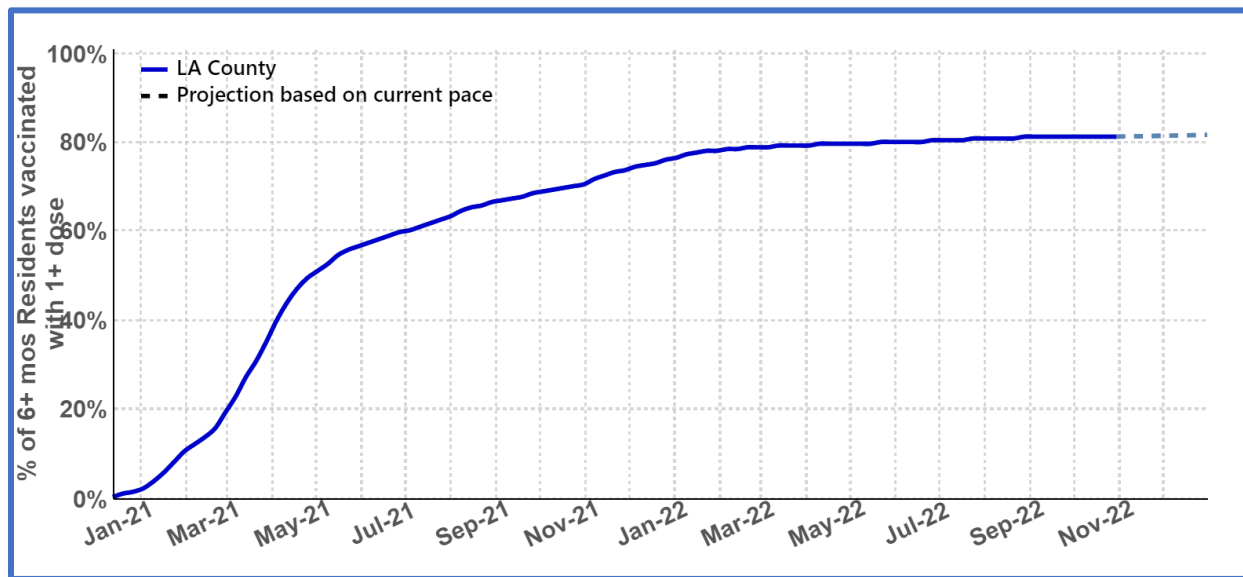
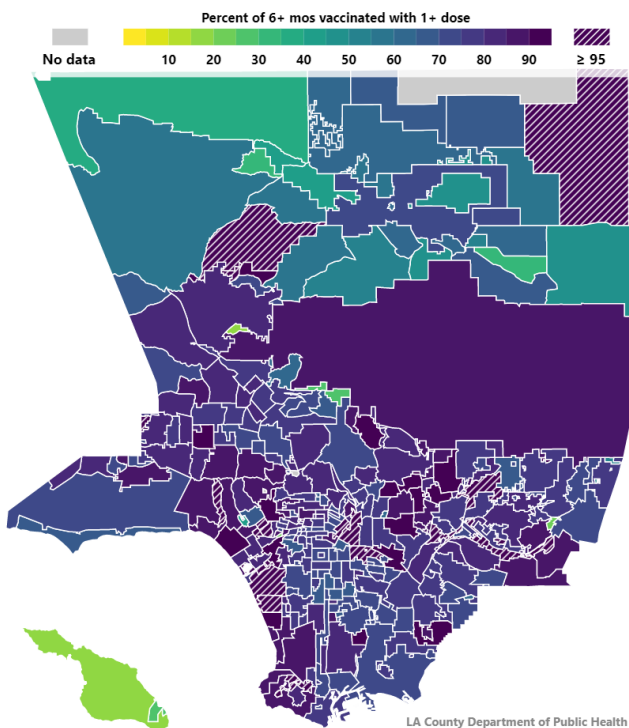


FIGURE 5. PERCENTAGE OF COUNTY RESIDENTS 5 YEARS AND OLDER WHO ARE FULLY VACCINATED AGAINST COVID-19 BY CITY/COMMUNITY (AS OF NOVEMBER 6, 2022)¹²⁷



Vaccine rollout. The COVID-19 vaccination effort was unprecedented: a phased national rollout of a vaccine technology that had never previously been deployed at scale with what were originally strict ultracold chain distribution requirements. Given the initial scarcity of the vaccine, California developed a statewide playbook for administering vaccines that outlined requirements for counties to allocate vaccines. In addition to state-led allocation efforts, the federal government directly sponsored efforts to vaccinate residents of Los Angeles County LTCFs working through CVS and Walgreens, although LAC DPH opted out of this program and implemented its own SNF-focused effort to increase the rate of vaccination for this vulnerable group. LAC DPH initially worked with the Los Angeles County Office of Emergency Management (OEM) and LAFD to plan a mass vaccination approach, which required navigating logistics that had stringent requirements associated with delivering a clinical service. Sites planning to administer mRNA vaccines needed to manage ultracold chain logistics: For major centers, this required procurement of specialized freezers and ensuring an appropriate space for the freezer was available, while smaller sites received boxes that held fewer vaccine vials, with the expectation that they would use them all during a limited period.

Mass vaccination efforts. After the initial phase of delivery in hospitals, the County's OEM worked with LACoFD, LAFD, ISD, and LAC DPH to establish five large-scale, drive-through vaccination sites, one in each supervisorial district. The five "megaPODs" began operating on January 19, 2021, and each could vaccinate up to approximately 3,000 people per day. These sites, which were established and

delivering doses within ten days of their inception, were a core component of LAC DPH's strategy to vaccinate quickly – each of the five sites required around 120 staff daily and ultimately delivered just under 1.1 million vaccine doses. However, predicting demand for vaccines was challenging, as was matching vaccine supply to communities' risk from COVID-19 infection.

The vaccine supersites were possible in part due to partnership and cooperation with private-sector partners and others that made their properties available, including the Pomona Fairplex, The Forum, Six Flags Magic Mountain, and California State University, Northridge, as well as LACOE in Downey.

Altogether, LAC DPH's POD sites, including the megaPODs, had administered nearly 1.5 million vaccine doses by June 2022. In June 2021, the megaPODs were converted to smaller volume points of dispensing, which LAC DPH continued to maintain while coordinating a vast network of smaller distributed sites and mobile vaccination teams.

County-run megaPODs were not the only source of vaccination, even in the initial months of vaccine availability. In January 2021, LAC DPH used HPI data to identify communities that would most benefit from easy access to vaccination and opened four vaccination sites in community centers in East L.A. (two centers), Pacoima, and Boyle Heights.¹²⁸ In addition, many hospitals and health systems had allocations for their workforce and Kaiser Permanente received vaccine distributions to inoculate its nine million members in California as part of the statewide strategy. The federal government established a retail pharmacy

vaccination program, and as supply increased, HRSA began direct allocations to federally qualified health centers (FQHCs) and clinics. LAC DPH also directly managed vaccinations at the County's 340 SNFs rather than delegating this responsibility to the federal partnership with CVS and Walgreens, and it worked closely with DHS' Housing for Health and Correctional Health Services division to ensure vaccinations were provided for PEH and incarcerated individuals.

As additional stores of vaccines were released to local jurisdictions, LAC DPH continued in its role of coordinating distribution across a rapidly widening network of providers. LAC DPH turned to smaller sites with an emphasis on organizations, such as community health centers (CHCs) and pharmacies, that were well established in communities of focus. In addition, LAC DPH worked with approximately 60 partners to develop mobile vaccine sites, including entities like Walgreens, Curative, Fulgent, and CVS, as well as trusted community organizations and groups dedicated to vaccine promotion. LAC DPH's efforts were guided by analysis of the HPI data platform used to identify the initial community vaccine sites as well as a vaccine equity metric developed by CDPH intended for ZIP codes with lower populations or where much of the population resides in a group setting.¹²⁹ LAC DPH developed partnerships with FQHCs and CHCs, prehospital providers, and pharmacies, among

others, with the goal of offering vaccination in every setting. Managing this network and providing appropriate allocations has required extensive engagement with the state, which at one point sought to require counties across the state to turn over their oversight of the allocation process to Blue Shield of California and suggested that LAC DPH and other jurisdictions would lose some of their vaccine allocations if they did not comply.¹³⁰ Currently, LAC DPH coordinates efforts across more than 1,000 fixed vaccination sites and 800 weekly mobile sites. Residents can be vaccinated in their homes via scheduled visits or door-to-door outreach, at their worksites, in bus and subway stations, at local parks, at places of worship, and at their primary care providers.¹³¹ LAC DPH spent approximately \$14.6 million between April 2021 and August 2022 working with CBOs and CHCs doing direct neighborhood outreach to discuss vaccination, guided in part by analysis of geographic information system (GIS) mapping of community characteristics and vaccination rates, allowing them to direct their mobile teams to areas with the lowest vaccination rates. In recognition that residents may be more interested in vaccination when other immediate needs have been met, LAC DPH has transitioned three vaccination clinics to offer social services such as food assistance and mental health counseling in addition to vaccination and testing.

STATEWIDE TIERED VACCINE ELIGIBILITY AND DISTRIBUTION PROCESS

The national COVID-19 vaccine rollout began in mid-December 2020, during the first winter surge of the pandemic. In the early weeks of the rollout, as national production ramped up, vaccines were available in only extremely limited supply. Unsurprisingly, the initial state and Countywide demand for this lifesaving tool outweighed available supply. At the state level, California – like all states – developed a tiered vaccine eligibility schema that prioritized specific vulnerable population groups for vaccination in phases before the public at large became eligible. Frontline HCWs and staff and residents of SNFs were given highest priority for the first wave of vaccines. In short order, vaccine eligibility then expanded to include those 65 and older, other frontline and essential workers, community-dwelling elderly, those in congregate living settings, teachers, and those with underlying conditions that put them at higher risk. In developing the state’s vaccine plan, CDPH drew on federal and federal-adjacent efforts at the CDC’s Advisory Committee on Immunization Practices and the National Academies of Science, Engineering and Medicine, and sought input from a statewide Community Vaccine Advisory Committee.¹³²

CDPH’s vaccine allocation process and LAC DPH’s vaccine strategy both emphasized equity and sought to ensure meaningful vaccine access for racial and ethnic minorities and underserved communities. LAC DPH launched a COVID-19 Vaccine Equity Committee in December 2020 comprised of more than 150 local community and advocacy organizations to provide recommendations and insights for expanding vaccine access. Beginning in March 2021, California announced it would reserve 40% of vaccine doses for residents in the most disadvantaged areas of the state.¹³³

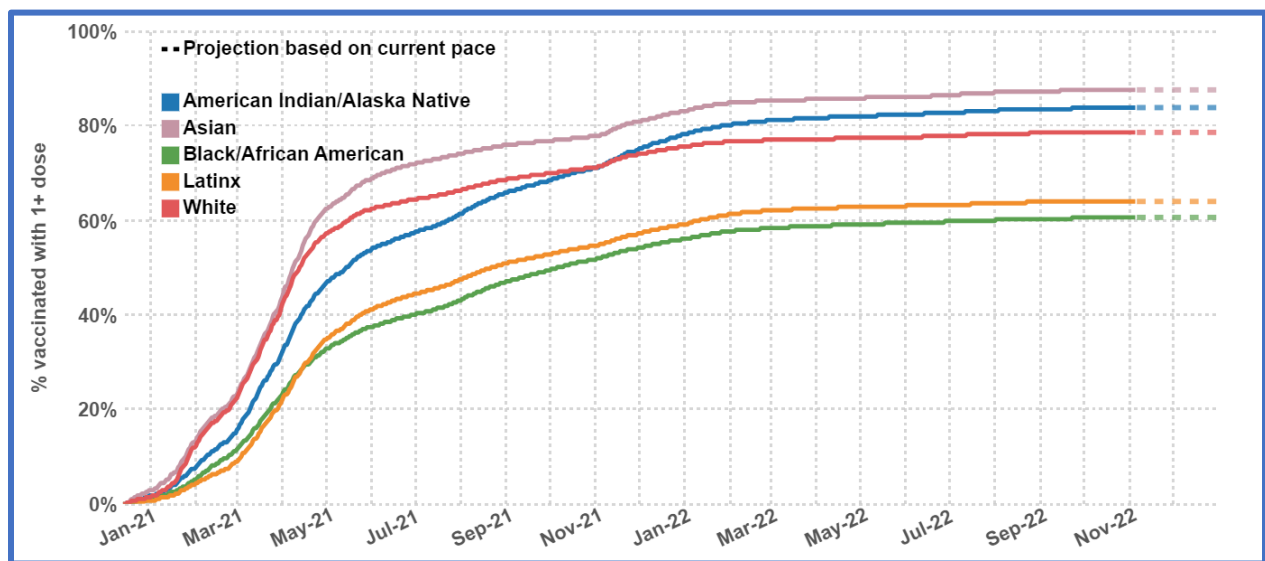
Many interviewees raised frustration with the early vaccine rollout, including fears experienced by their employees and communities on behalf of themselves and their family members. Several interviewees took exception to the order in which essential workers were prioritized in the initial phases of the vaccine rollout, feeling the earliest phases were either too exclusionary or so loosely defined that people who were at lower risk had ways to “cut in line.” These concerns echoed similar fears and challenges related to vaccine rollouts and prioritization across the country.¹³⁴ While the County followed state policy related to vaccine prioritization, some interviewees felt LAC DPH could have developed a local prioritization schema. Some interviewees felt that the County should have moved quickly to open-to-all vaccine administration to “get as many shots in arms as possible” to fight community spread, while others felt equally strongly that the County should have done more to prioritize disadvantaged communities and racial and ethnic groups and should have allocated more of the early vaccine supplies to equity-driven efforts.

Many interviewees also expressed a desire for vaccines to be moved into community locations more rapidly or for pop-up sites to be established quickly at large worksites as a way to promote equity in addition to prioritization efforts; however, interviewees with firsthand knowledge of the early distribution and operations efforts felt that LAC DPH, the County, and community partners did not have the capacity for largely decentralized vaccination efforts in the earliest days.

Ultimately, LAC DPH’s efforts to promote vaccine equity were moderately successful. As of the summer of 2022, at least 80% of white, Asian, and American Indian/Alaska Native Los Angeles County residents had received at least one dose of vaccine, compared with 62% of Black and 67% of Latinx Los Angeles County residents. While Los Angeles County’s overall performance is higher than national averages for all groups, its gap between racial and ethnic

groups is greater: nationally, 63% of the white residents of states reporting stratified data have received at least one dose of vaccine, and the gap between white and Black and white and Latinx residents is 5% and -2%, respectively.¹³⁵ Figure 5 below shows persistent gaps in vaccination rates for Black and Latinx Los Angeles County residents when compared to white residents since January 2021.

FIGURE 6. PERCENTAGE OF LOS ANGELES COUNTY RESIDENTS 5+ VACCINATED WITH 1+ COVID-19 DOSES BY RACE / ETHNICITY (NOVEMBER 2022)¹³⁶



Of note, the gap in vaccination is most prominent among younger Los Angeles County residents; for older residents, who have been among those at greatest risk of morbidity and mortality, the gap in vaccinations is minimal.

Nevertheless, while vaccination, in and of itself, has been shown to not be an equalizer in associated health outcomes, persistent gaps in vaccination coverage leave some communities at higher risk than others.

**FIGURE 7. 90-DAY AGE-ADJUSTED HOSPITALIZATION RATES BY RACE / ETHNICITY AND VACCINATION STATUS
LOS ANGELES COUNTY (MAY 27 – AUGUST 25, 2022)**
Per 100,000 residents

	Asian	Black	Latinx	White
Hospitalizations¹				
Fully Vaccinated	45.4	107.5	89.1	64.7
Unvaccinated	93.2	161.1	184.8	165.3

1 Hospitalization rates reflect the 90-day period ending 8/25/22.

**FIGURE 8. 90-DAY AGE-ADJUSTED HOSPITALIZATION AND DEATH RATES BY AREA POVERTY AND VACCINATION STATUS
LOS ANGELES COUNTY (MAY 27 – AUGUST 25, 2022)**
Per 100,000 residents

	<10% area poverty	10% to <20% area poverty	20% to <30% area poverty	30% to 100% area poverty
Hospitalizations¹				
Fully Vaccinated	61.0	75.0	89.0	95.2
Unvaccinated	78.0	239.4	537.6	915.4
Deaths²				
Fully Vaccinated	6.0	8.8	8.5	12.5
Unvaccinated	14.3	35.4	79.4	115.0

1 Hospitalization rates reflect the 90-day period ending 8/25/22.
2 Death rates reflect the 90-day period ending 8/25/22.

Interviewees noted that issues affecting vaccines similarly affected therapeutics: both faced common constraints of scarcity, complex allocation processes that benefited the most informed and empowered residents, and the need to ensure equitable distribution and earn trust. Therapeutics bring the additional challenge that their delivery must be coordinated within a short period of a positive test.

Although therapeutics and vaccines were covered by federal funds, their delivery was sometimes a poor financial proposition for participating providers. According to media reports, some community clinics went unpaid by the state of California for many of the vaccinations they delivered.¹³⁷ A community provider of therapeutics reported that even though it was paid, it lost money on every dose of antivirals delivered because of the costs of

stocking and coordinating delivery of the therapy, despite LAC DPH advocating the state and federal government to address these shortfalls. These financial challenges may affect LAC DPH’s ability to build robust community networks for the delivery of vaccines and therapeutics, particularly with smaller or independent community partners.

Perspectives and Challenges

Aligning megaPODs with community needs.

While megaPODs were geographically distributed in diverse areas of the County, ensuring that megaPOD offerings matched the needs of the communities they were intended to serve was a process of trial and error. For example, most megaPODs initially operated as drive-through only, meaning that people who did not have access to a car could not be vaccinated at those sites, so sites in areas with low vaccination rates transitioned to providing walk-up access and offering free Uber rides to people who wanted to drive through but did not have transportation. Some megaPODs that did offer walk-up appointments operated on a first-come, first-served basis, which in the very early days on occasion led to long lines. People who did not have flexibility to take time away from work or childcare or were reluctant to spend hours in crowded lines and potentially risk exposure, could not participate.¹³⁸

Early vaccine deliveries. Initially, in the first phase of reaching HCWs, major health care providers that were tasked with distributing vaccines to smaller providers reported that the process was time consuming and required keeping up with frequently changing guidance regarding transportation, storage, and use. One interviewee reported engaging armed security guards to oversee the process of distributing

vaccines to local partners because of the tension they perceived when they had to tell partners that they could not receive their expected vaccine allocation when, for example, their intended transport container did not meet requirements.

Because of the initial cold chain requirements, as well as guidance prioritizing HCWs for vaccination, most early vaccines were delivered through hospitals, as LAC DPH followed the prioritization framework of state and federal policymakers. Several interviewees reported that this approach raised concerns about inequity, particularly when alternative sites had invested in the freezers needed for ultracold storage. To obtain vaccines for their communities more quickly, some nonhospital providers resorted to joining with community and civil rights organizations to write open letters to LAC DPH leadership.

While one interviewee stated they were happy to help with logistics and operations for the initial vaccine allocations because “it is all hands on deck during an emergency and we all needed to help get this lifesaving resource distributed as fast as possible,” they also suggested in the future a large-scale operations partner, such as the National Guard, to work directly with public health should be evaluated as an option.

Vaccination scheduling. Community members who wanted to receive a COVID-19 vaccine were initially required to sign up for appointments through a rapidly launched Los Angeles County-specific online system, in the absence of a statewide platform. The initial County vaccination platform was considered difficult to use, so LAC DPH began developing requirements for a successor, a Salesforce-

based system, first on its own and then in partnership with the state. Los Angeles County became one of the first two pilot sites for the state's MyTurn platform in late January 2021.¹³⁹ MyTurn, supported by Salesforce and Accenture, was up and running within four to six weeks; it initially had very minimal functionality and interviewees described its development and rollout as "glitchy." However, the platform had more IT development resources than the County could provide independently and ultimately the state solution evolved to support vaccine scheduling and key indicator tracking across the state. Universally, respondents described the software used to schedule vaccinations and collect required information about vaccine recipients as having an important impact on efficiency and their experience of scheduling and providing vaccinations.

Vaccine scheduling software added to the challenge of matching supply with demand: Shortages and shifting allocations meant that sites could not always operate as planned, but the scheduling platform did not offer ways to rapidly redirect people once their appointments had been made. And people sometimes appeared for scheduled appointments only to be turned away because no vaccines were left. California recognized the risks that vaccines would go unused because of inefficiencies in scheduling and delivery and, as early as January 2021, engaged with Blue Shield of California to oversee the allocation of vaccines.¹⁴⁰

Interviewees said this work, which slowed as California's vaccine allocation increased, created an additional intermediary for them to navigate, and several noted how it negatively impacted efforts to distribute vaccines swiftly, broadly, and equitably.

The online scheduling requirement meant that many residents were unable to sign up for vaccine appointments, including those who lacked internet access altogether, those who relied on smartphones for internet access as the platform was difficult to navigate on mobile devices, those who were not comfortable with online scheduling forms, or for some were visually impaired (as was raised in one interview). In response to on-the-ground challenges for some residents, LAC DPH established a call center where residents could schedule vaccinations by telephone. In addition, the department reserved codes that allowed users to book appointments even when the scheduling software indicated that no appointments were available. These codes were distributed to community organizations and CHWs that could provide them to members of the populations they served. Providers reported that these approaches allowed them to prioritize people they felt were at highest risk, even when lower-risk people from other communities were booking many of their appointments. At the same time, community members who did not know to reach out and seek assistance could not benefit from these codes.

Community sites were easier to staff than megaPODs, which required pulling personnel from other efforts and mediating between career and contract staff who were working together to deliver services under significant strain. In addition, interviewees noted that these providers were more able to attract residents who were most at risk of contracting COVID-19 and experiencing morbidity and mortality and those who felt the megaPODs deployed in their communities were not meant for them.

Efforts to achieve equitable vaccine

distribution. Interviewees agreed that LAC DPH maintained a focus on equity throughout its interactions with partners but differed on the extent to which it was able to translate that focus into action – for example, by more quickly distributing vaccines to ambulatory providers associated with underserved populations rather than to well-resourced tertiary care centers with more tenuous ties to those communities. The complex prioritization approach LAC DPH

inherited from state and federal policymakers, when combined with concerns stemming from generations of mistreatment and mistrust among the most-affected communities, required LAC DPH to maintain a difficult balance of dedicating vaccines to providers that served those at the greatest risk while managing demand from, and in some cases turning away, healthier people who traveled from other neighborhoods or counties in search of vaccination.

G. Surveillance, Data Analytics, and Transparency

Overview

Prior to COVID-19, LAC DPH routinely conducted surveillance for infectious diseases such as influenza and managed outbreaks of diseases such as hepatitis A and tuberculosis. LAC DPH has long operated one of the most advanced public health labs in California, on par with the state’s public health lab, and maintained a call line for providers and hospitals to answer day-to-day questions.

Prior to COVID-19, LAC DPH’s surveillance activities had some interaction with Los Angeles County’s adjacent jurisdictions as Los Angeles County residents and their neighbors crossed county or city lines; the volumes of cases for surveilled diseases were small enough that LAC DPH staff were able to manage communications and concerns on an ad hoc basis. In addition, LAC DPH staff engaged with state-level public health staff around HIV and STD surveillance. Because of its size and location, LAC DPH has routinely received independent funding from the CDC for grants that were large by comparison to peer institutions in smaller

counties. For other grants, LAC DPH has passthroughs from funding directed from the CDC to California.

LAC DPH staff report that these pre-COVID-19 efforts were under-resourced, as in other public health programs and jurisdictions, and followed a pattern where public interest and support for funding during a crisis would quickly die down once the crisis resolved, while averted crises went unnoticed altogether.

Accurate and timely data on COVID-19 was essential to guide policy decisions and keep the public informed. Public health-managed COVID-19 dashboards, including trends across multiple indicators and data on specific subpopulations, outbreak maps, and interactive COVID-19 data tools with daily and weekly updates, have become ubiquitous around the globe. However, prior to the pandemic, such near-real-time data visualization and analysis was not a common function of local public health departments, which more typically released static data after periods of analysis.

LAC DPH invested millions of dollars to stand up enhanced digital capabilities related to data collection, management, and presentation across multiple facets of communicable disease monitoring such as population surveillance, case identification, contact tracing, vaccination, health system capacity, outbreak identification, and intervention evaluation.

At the beginning of the pandemic, LAC DPH’s web platform was severely out of date, with a patchwork of legacy program-based webpages, limited functionality, and relatively low traffic. However, LAC DPH has since created extensive dashboards and other reporting tools on its website. Since the early part of the pandemic, there have been over 15 million website visits to LAC DPH’s COVID-19 webpage. Social media accounts also experienced exponential growth.

LAC DPH leadership prioritized data transparency and building the capabilities and capacity necessary to increasingly expand the types and granularity of data desired to understand the impact of the pandemic in Los Angeles County. For over two years, LAC DPH staff updated dashboards daily, seven days per week (moving to five days per week starting in May 2022).

Dashboards. LAC DPH has developed and maintains several data dashboards that make a wide array of COVID-19 data publicly available in different formats and with different foci:

- [Los Angeles County Daily COVID-19 Data](#): New and total cases, mortality rates by race/ethnicity and area poverty, average and daily testing, testing positivity, deaths, and hospitalizations.
- [Locations and Demographics](#): Case summary, hospitalizations, residential congregate settings, SNFs, nonresidential settings, homeless services settings, educational settings, correctional settings, citations, and PEH.
- [COVID-19 Surveillance Dashboard](#): Maps, graphs, and supporting tables of cases, deaths, testing, demographics, and hospitalizations
- [COVID-19 Outcomes by Vaccination Status](#): Cases, hospitalizations, and deaths among vaccinated; age-adjusted cases, hospitalization, and death rates by vaccination status and age group
- [Contact Tracing](#): Cases assigned to interviewer, cases that had follow-up initiated within one day of assignment, assigned cases that completed interviews, contacts identified through case interviews, contacts that had follow-up initiated within one day of assignment, contacts that completed interview, and case processing data
- [SNFs](#): Total number of facilities, COVID-19 vaccine coverage by staff and residents, new cases by staff and residents, cumulative cases by staff and residents, number and percentage of facilities reporting no new cases or missing data, facilities with adequate PPE, facilities with adequate staffing, and information by facility
- [COVID-19 Vaccinations in Los Angeles County](#): Residents vaccinated with one or more doses, full vaccination, and one or more additional doses; cumulative doses administered; and vaccination data stratified by community,

race/ethnicity, school district, age group, and gender

- **[TK-12 School and Youth Programs:](#)**
Weekly testing volume and positivity, seven-day testing volume by school district or school, weekly cases, weekly cases by school and program type, new seven-day COVID-19 cases mapped against community case and vaccination rates, cumulative COVID-19 cases by school and program, and active outbreaks by site, cases, and contacts
- **[Post-Surge Dashboard and Strategies:](#)**
Metrics to determine community level and safety protection measures based on the CDC’s [COVID-19 Community Level Matrix](#), including the Los Angeles

County Early Alert Signals Dashboard and Preparedness Dashboard

The dashboards have continued to evolve as the pandemic evolves, with an emphasis on most actionable data and ease of use.

Throughout the pandemic, LAC DPH also developed new capabilities to track and publish indicators and recovery metrics. For example, LAC DPH currently tracks the pandemic’s impact on hospitals using the CDC’s COVID-19 Community Level Matrix released in March 2022 and has created a set of early alert signals to inform appropriate community- and sector-specific actions.

A NATIONAL LEADER IN OBTAINING AND PUBLISHING RACE AND ETHNICITY DATA

In addition to providing a wide breadth of data, Los Angeles County was an early reporter of COVID-19 data by race and ethnicity. In mid-April 2020, Health Affairs highlighted the urgent need for COVID-19 data by race and ethnicity and better data reporting and collection.¹⁴¹ State Health and Value Strategies reported that in April 2020, only 27 states reported COVID-19 cases by race and 22 states reported COVID-19 deaths by race.¹⁴² However, LAC DPH was already publishing preliminary race and ethnicity data by mid-April at the County level, and by the end of the month, LAC DPH published the [COVID-19 Racial, Ethnic, and Socioeconomic Data and Strategies Report](#), containing an assessment of cases, deaths, testing, hospitalizations, and strategies for addressing disparities in COVID-19 health outcomes in highly impacted populations.¹⁴³

Within LAC DPH, data management and analytics were largely decentralized and based in public health programs. A section dedicated to COVID-19 reports and data management as part of the department’s response structure (see next section) was formed to align approximately 12 distinct data teams, facilitating improved communication and enhancing the department’s ability to rapidly stand up new tools and resources.

Perspectives and Challenges

Lack of interoperable IT. While LAC DPH has been able to report, analyze, and publish large volumes of information, underlying systems issues – both within the department and across the regional health care system – made it difficult to scale efforts and keep up with daily County, state, and CDC reporting. A significant challenge for LAC DPH across much of the pandemic has been the lack of interoperable IT

systems and a significant percentage of data inputs still being collected and manipulated manually. For example, while the department has ELR capabilities, as noted earlier, and is a participant in Los Angeles County’s health information exchange, it still received daily COVID-19 case reports via fax and flat data files, which then had to be manually entered and manipulated. Sometimes, case reports were delayed or sent in batches that covered multiple days’ worth of reporting. This required LAC DPH staff to work late into the night, often requiring all-nighters, to be able to update the department’s data reporting systems. The department also had to interface with CDPH for some data sets, such as hospitalizations and ICU capacity and data from the state’s vaccine registry. In addition, the department’s case data platform has been unstable at various times across the pandemic, particularly as the volume of data grew, resulting in system failures or issues extracting data, which at times resulted in delays in publishing updates.

Desire for more expansive data. While interviewees widely appreciated LAC DPH’s

efforts related to data transparency, some interviewees criticized LAC DPH for presenting incomplete information or for having “swings” in the data due to delayed reporting at certain times across the pandemic. Others wanted more granular neighborhood information. One state interviewee noted that Los Angeles County accounts for such a significant proportion of the state’s population that if it was delayed in reporting data – for example, testing data – the state could not reliably assess its statewide rates. Few interviewees had a detailed understanding of how data was collected or the state of interoperability across the health care system. At the same time, several interviewees noted that the County’s COVID-19 data sets were far more robust than most county or local municipality dashboards and on par with the types of data being managed by states and the federal government. The County’s leading efforts to provide detailed information on disparities, including race and ethnicity data, was lauded.

H. External Communication

Overview

As part of its public health functions, LAC DPH routinely leads communications campaigns to promote health education and disease awareness through informational postings via billboards, bus stations, banner ads, and social media. LAC DPH is experienced in distributing information in multiple languages, in keeping with the County’s rich diversity, and these pre-pandemic campaigns yielded hundreds of

millions of impressions.¹⁴⁴ The scale, spotlight, and ever-changing nature of COVID-19, however, tested LAC DPH’s communications capabilities in new ways. LAC DPH’s leaders participated in daily or near-daily press conferences for months at a time. LAC DPH expanded its use of social media and its website to help County residents understand how their communities were affected by the pandemic and how they could protect themselves and their families in near real time.

Key strategies have included:

Press conferences, press releases, and media engagement. At times, LAC DPH was joined by supervisors or other Los Angeles County leaders in televised press conferences. For the local and national news media covering Los Angeles County, these press conferences were the primary mode of communication. Interviewees noted there was not a consistent press resource at LAC DPH and only a general inquiries email inbox; answers to general inquiries were often delayed or truncated, partly attributable to an unprecedented volume of media inquiries from local, national, and even global outlets. Interviewees strongly recommended a more extensive press communications strategy, potentially leveraging expanded communications and media relations resources from the County.

A high percentage of community listening session participants (further described below) also noted that despite the vast number of news resources available today, including on-demand digital access to content from around the country and the globe, they still looked first to and trusted local news channels, local public radio, and local newspapers for regional COVID-19 information.

Daily press briefings early in the pandemic were well received by a wide range of stakeholders for providing consistent transparency into the latest COVID-19 data and guidance. In addition to baseline case and death counts, stakeholders appreciated LAC DPH’s transparency around complex and sensitive data such as vaccine access disparities, posting recordings and materials online¹⁴⁵, and providing access to subject matter experts. These press conferences are now weekly, which

stakeholders find appropriate given how understanding of the pandemic has evolved. Regular press releases (over 1,200 as of June 2022) kept the public up to date with respect to COVID-19 cases and deaths, changes in Health Officer Orders, and other COVID-19-related news.¹⁴⁶

LAC DPH Director Barbara Ferrer largely became the public face of the County’s pandemic response. Her leadership, extensive involvement in external communications, and accessibility were raised as among the most important elements of the County’s response; even interviewees who questioned other aspects of her role in Los Angeles County’s COVID-19 response lauded her clear, warm, and engaging communication and her mastery of complex and rapidly changing data. Her consistent participation made her a familiar, trusted face and voice. However, some interviewees shared that it also meant fewer opportunities to build similar familiarity with others on LAC DPH’s leadership bench, including faces and voices that could represent and speak directly to communities of focus. Press briefings were repeated in Spanish by bilingual LAC DPH experts, but interviewees universally described Dr. Ferrer as the public face of LAC DPH. This approach reflected a deliberate choice from Dr. Ferrer and LAC DPH leadership, making Dr. Ferrer the focus of public anger and threats around COVID-19 guidance and Orders but sparing other staff members the risk. At times, it also had the unintended consequence of limiting media coverage of LAC DPH’s efforts; a media interviewee noted that it was difficult to pitch two separate stories centered around announcements from Dr. Ferrer and suggested that announcements delivered by different staff members might have generated more detailed coverage. On the

other hand, observers noted that when other County leaders joined Dr. Ferrer, these additions sometimes seemed to shift the tone of the conferences away from scientific communication and toward political aspects of the pandemic response.

The frequency of press conferences meant LAC DPH staff had to generate and check updated status reports summarizing testing, cases, hospitalizations, and other outcomes, initially on a daily basis. The effort required to prepare these documents was substantial, reportedly occupying a full-time staff member. Some of this effort would likely have been required regardless of the LAC DPH press conference schedule, given that supervisors, other Los Angeles County leaders, and many private-sector stakeholders avidly consumed these reports as well. However, the public nature of Dr. Ferrer's press conferences shone a spotlight on LAC DPH's commitment to sharing up-to-date information and the challenges in doing so. Finally, interviewees noted that the large amounts of data at times were difficult to absorb and made it hard for watchers to discern the overarching narratives of Los Angeles County's progress against the disease.

Sector-specific telebriefings and community town halls. LAC DPH also held weekly telebriefings with more than 40 different stakeholder groups that reached over 160,000 people. The telebriefings always included senior LAC DPH leaders, often Dr. Ferrer and/or the County's Health Officer, Dr. Davis, and provided information on the latest COVID-19 response activities tailored to specific sectors and offered a platform for Q&A and stakeholder feedback. For example, regular telebriefings were held for TK-12 schools, IHE leaders, childcare providers, elected officials, and specific business sectors

on the latest COVID-19 response and safety requirements; over 600 telebriefings have been held since March 2020. Additionally, 19 virtual town halls were streamed live with simultaneous translation, reaching over a million people. For example, LAC DPH has hosted virtual town halls to discuss the latest updates on COVID-19 vaccines and vaccine safety. Interviewees universally praised the telebriefings as a best practice, though some wished for even further segmentation to allow for more targeted Q&A and guidance.

Alerts, science updates, and educational materials. LAC DPH began sending alerts and health advisories to the medical community about the novel SARS-CoV-2 virus in early January 2020 through its Los Angeles Health Alert Network. Its medical information team began developing tools and resources for health care providers, including information sheets, check lists, and guidelines. LAC DPH created an early website for the novel coronavirus in February 2020 and began regularly updating information for medical professionals and the general public, including FAQs. Throughout the pandemic, LAC DPH invested significant resources in a more comprehensive COVID-19 web-based resource portal. By late February and early March 2020, LAC DPH had also begun developing guidance documents for specific sectors, including health care professionals, employers, IHEs, and early childhood education (ECE) providers, among others.

LAC DPH recognized the need to develop more detailed, sector-specific guidance and tool kits and to develop resources specifically for the public in multiple languages. Stakeholders needed simple and clear summaries and visual aids. The scale and scope of need and the volume of materials to be created was

overwhelming, and communications materials became increasingly sophisticated over several months to meet the department's needs. Initially, communications and materials development responsibilities were distributed throughout the department. It was not until about a year into the pandemic that LAC DPH established a coordinated COVID-19 education function to build a coordinated communications strategy across exposure management, outbreak management, media, and communications as part of the department's COVID-19 response structure (see next section). Many interviewees, particularly CBOs, those working with vulnerable populations, and community members, said they needed infographic-type educational materials, videos, and more "bite sized" accessible communications to cut through the volume and density of COVID-19 information and to help focus on actions they needed to take or information they needed to know. While LAC DPH produced volumes of detailed and precise information, many members of the public said pithy campaigns and social media messaging would be more effective ways to reach them.

Broader information campaigns. Along with its regular televised press conferences, LAC DPH invested in messaging through traditional advertising spots and social media. LAC DPH engaged a marketing firm in March 2020 to support social media strategies with an organization that had developed non-COVID-19-related communications for the department in the past. This contract yielded a range of

advertisements in English and Spanish featuring diverse groups of Los Angeles County residents, beginning with messaging around social distancing, infection control, and mask wearing and progressing to communication around vaccines. LAC DPH also hosts a monthly COVID-19 podcast and has provided support for public education campaigns that community stakeholders, including the County's health systems, have developed in the private sector.

Interviewees reported that messaging was particularly challenging when policymakers had reversed course or where there was substantial ambiguity. LAC DPH's rapid public shifts on mask wearing, which was initially discouraged when supplies were low and then heavily promoted, and its pause in providing the Johnson & Johnson vaccine to align with U.S. Food and Drug Administration and CDC guidance, mirrored similar changes nationwide and were described as particular challenges. While some interviewees emphasized the importance of articulating the scientific basis for each policy, others noted that for some in the audience the clarity and simplicity of misinformation might have more appeal than the ambiguity and complexity of emerging science-based qualities. Featuring compelling stories from neighborhoods most affected by COVID-19, in addition to science and statistics, could speak to a broader range of audiences. Including such stories in press conferences could also provide LAC DPH with a vehicle to draw media attention to these neighborhoods and the people who live there.

PERSPECTIVES FROM COMMUNITY MEMBERS ON COMMUNICATIONS NEEDS AND EXPERIENCES

As part of the interim review process, 13 community listening sessions and a community health worker focus group were held to garner insights and reflections from residents of Los Angeles. Five geographical areas across Los Angeles County were identified as communities of focus, including Antelope Valley, San Gabriel Valley, Southeast Los Angeles, South Central Los Angeles, and Northeast San Fernando Valley. Additional sessions were centered on parents with school-age children from across the County. Sessions were conducted in English, Spanish, and Mandarin.

Due to the continuing spread of the Omicron variant and, at the time, emerging subvariants, the listening sessions were convened virtually, using the Zoom platform, rather than in person as originally planned. The virtual platform had some advantages, allowing broader and larger participation, more flexibility to offer convenient times (including evenings and weekends), and technical support for different languages. The broader participation in practice also meant that several sessions had interested participants from all over the County, in addition to residents of a specific regional community for whom a given session might be intended, including a small number who lived in Long Beach and Pasadena. The feedback and experiences across all sessions generated remarkably consistent themes and diverse participation sparked dialogue.

A summary of key themes from those discussions follows, with expanded information available in Appendix C.

Personal Experiences During the Pandemic

- Fear and anxiety were common emotions; many participants reported they had been on the verge of crisis during the shutdown and reported isolation, loneliness, and fear of homelessness.
- Several participants had family members who died from COVID-19. Participants wished they had understood earlier the seriousness of the threat, what the right safety protocols were, and that things like distancing and masking mattered and could be effective. Many people were in situations where distancing was not possible.
- Participants reported fear and hesitancy about getting tested, including fear of what positive results could mean, not being able to take time off work, and not having access to childcare if sick. Participants reported confusion over their out-of-pocket costs for getting tested.
- Curfews and lockdowns had challenging ripple effects for essential workers who rely on public transportation to get to and from work, often work odd hours, and may have multiple jobs and rely on transit and ride shares to get to them. Participants reported a fear of public transportation and concerns about their ability to maintain distancing at bus stops and in other public places.
- Many participants spoke about the challenges of managing stay-at-home orders with immunocompromised family members, children with special needs, elderly family members

who needed care, and the challenges and fear associated with getting groceries, waiting in long lines, and performing other tasks.

- Participants reported some vaccine hesitancy and seeing substantial misinformation. However, many participants said their openness to vaccination grew over time, as did their perception of the ease of obtaining vaccines. Participants also reported that the online system for scheduling vaccine appointments was challenging, transportation was an important barrier, and many felt megaPODs were “a hassle.”
- Participants reported mixed knowledge and understanding of antiviral treatments and their free availability.

Familiarity with LAC DPH and Trusted Information Sources

- Participants had varying levels of knowledge regarding LAC DPH prior to the pandemic, but most participants had heard of and received information from LAC DPH or knew LAC DPH had a County leadership role in the response by the time of the listening sessions.
- Local news remains a primary source of information and trust, but participants now use many sources to get their news, particularly social media (Facebook, Twitter, and Instagram, in particular).
- Participants said they trust their family physician and local medical providers; they do not automatically think of County resources as trusted sources for medical care, tests, and vaccinations.
- Participants listed faith-based leaders, the CDC and the WHO, other family members, social media influencers, and sports and entertainment figures, among others, as more trusted messengers than local government officials.
- Schools were a trusted and important source of community information. The LAC DPH school ambassador program was viewed favorably.

Channel Preferences

- Several participants had signed up for LAC DPH listservs and other communications services. Very few had knowledge of or had accessed 2-1-1 or the LAC DPH COVID-19 Call Center.
- Participants described a need for more visual aids and very simple messaging and communication. Participants reported a desire to see materials in multiple languages developed quickly (especially in Asian languages). Simple videos were requested on popular social media platforms covering topics such as how to use a home test for those who are challenged by reading in English language or find written instructions challenging (LAC DPH reports that these videos were developed but not accessed by these stakeholders).

Information in multiple languages. LAC DPH’s online dashboards were designed to convey COVID-19 trends in stratified and neighborhood-level data to a wide range of audiences, including the general public. Some pages can be viewed in Spanish, a functionality that was launched in April 2020. Dashboard pages can be viewed in a wide range of other languages through the use of an embedded Google Translate function, but this may be less accurate than a human translation.

Health materials related to COVID-19 are available on LAC DPH’s website in many languages, including English, Spanish, Arabic, Armenian, Cambodian, Farsi, Japanese, Korean, Russian, simplified and traditional Chinese, Tagalog, and Vietnamese.

Perspectives and Challenges

Polarization and deeply divided opinions related to public health safety measures and vaccines also created unexpected and unprecedented challenges for LAC DPH leadership, including:

Combatting misinformation. As with other regions, Los Angeles County communities were “bombarded,” in the words of one interviewee, by waves of misinformation. Observers noted that communities that had experienced injustice in the past seemed to be targets. LAC DPH leaders worked to provide correct information and address misinformation when they encountered it, including speaking personally with and taking questions from a wide range of town halls and other groups. Given the environment of mistrust and misinformation, however, LAC DPH faced an uphill battle to regain the confidence of many communities. One interviewee noted that even if LAC DPH featured a scientist from their

community testifying to the risks of COVID-19 and the importance of vaccination, some community members would question whether the scientist was speaking honestly or had been pressured to repeat a party line. Several interviewees recommended active, systematic surveillance for misinformation, so that LAC DPH could intervene proactively rather than respond on an ad hoc basis or react when the effects of misinformation became obvious in case rates and vaccination data. Listening session participants also highlighted community interest in more opportunities for two-way dialogue with LAC DPH, such as through more town hall meetings, focus groups, and community meetings with Q&A sessions, to clarify their understanding of the changing virus and appropriate response.

Threats against public health officials. As noted earlier, Dr. Ferrer was subject to death threats and harassment, including at her home. Other LAC DPH leaders also reported hateful and threatening comments on social media and at public briefings. Some inspectors were harassed and followed. LAC DPH leaders were, unfortunately, not alone in this experience. Research by the Johns Hopkins Bloomberg School of Public Health identified 1,499 unique threats to local public health leaders between March 2020 and January 2021; more than 220 local health leaders left their positions during that same time, many due to harassment.¹⁴⁷ Their heightened public profile made LAC DPH leaders the target of campaigns to discredit their credentials by those who disagreed with safety measures or had differing political views. It is notable that the LAC DPH maintained a stable senior leadership team, with committed individuals staying the course throughout the pandemic. Interviewees universally noted a high

degree of respect for LAC DPH leaders and recognition of the intense personal scrutiny they were subjected to, even when the

interviewee had very different opinions on how the response should be managed.

VII. Reflections on Supporting Special Populations and Addressing Inequities

As described earlier, LAC DPH’s pandemic response goal has been to reduce serious illness and death from SARS-CoV-2 across the County and beyond. In implementing strategies to achieve that goal, LAC DPH particularly focused on populations with the greatest vulnerability to the disease due to clinical and/or social drivers of health, with a focus on frontline workers, SNF residents, PEH, and students. Engaging with these special populations requires detailed knowledge of each group and how services for each population or sector are regulated and administered. For example, TK-12

education and ECE are managed by different administrative entities, meaning that tests distributed to TK-12 schools did not reach ECE sites, except for those that TK-12 schools operated. In addition, each population has specific nuances that shaped how they could implement LAC DPH policies.

Many of the tactics LAC DPH deployed to support vulnerable populations have been discussed throughout this report; additional observations are described below by population of focus.

A. Frontline and Essential Workers

Overview

Workers and businesses offering “essential” or “critical” services are typically exempt from state and local shelter-in-place orders. In general, in California and across the country, essential workers during the pandemic included frontline HCWs (including in hospitals and physician clinics, home health aides, nursing home personnel, and many others), first responders and emergency personnel, and childcare providers, as well as those working in several industry and infrastructure sectors where remote work was not feasible and in businesses deemed essential to ensure

provisions and critical services (e.g., grocery stores, pharmacies, medical supply stores, post offices, convenience stores, pet stores, hardware stores, auto repair shops, office supply stores, hotels, emergency repair contractors, and food service for takeout and delivery only).

The state designated Essential Critical Infrastructure for which workers needed to maintain continuity of operations as well as additional sectors determined by the state Public Health Officer as critical to protect the health and well-being of all Californians and provided detailed guidance by sector.¹⁴⁸

DESIGNATED ESSENTIAL WORKERS IN CALIFORNIA

- Health Care/Public Health
- Emergency Services
- Food and Agriculture
- Energy
- Waste and Wastewater
- Transportation and Logistics
- Communications and Information Technology
- Government Operations and Other Community-Based Essential Functions
- Critical Manufacturing
- Financial Services
- Chemical and Hazardous Materials
- Defense Industrial Base
- Industrial, Commercial, Residential, and Sheltering Facilities and Services

California’s statewide stay-at-home mandate occurred during the earliest days of the pandemic, when little was known about how exactly the virus was transmitted and public health officials and health care providers had very limited tools with which to fight the virus.

While the initial stay-at-home orders and subsequent phased reopening over many

months had profound implications for Los Angeles County residents, many of which are discussed throughout this report, it is critical to note that, reflective of the County’s size and economic position, millions of Los Angeles County residents were considered essential workers and had to physically show up at their jobs throughout the pandemic, putting themselves and their families at risk.

ESSENTIAL WORKERS IN LOS ANGELES COUNTY

Los Angeles County is a large and diverse region with millions of frontline and essential workers who played vital roles throughout the pandemic in ensuring stability in the core functions of the economy and society of not only the County but – given its role as a manufacturing, health care, agricultural, and shipping and trade hub – the country.

A November 2020 analysis found that at least 40% of the workforce in the Los Angeles Basin (defined as Los Angeles and Orange counties), or 2.6 million residents, were essential workers in the first months of the pandemic.¹⁴⁹ This number does not include farm/agriculture workers.

Health care and other essential workers in Los Angeles County are often people of color and immigrants, many in low-wage jobs. Some estimates suggest essential workers make up more than half of all workers in low-wage occupations nationwide.¹⁵⁰ While all residents faced risks across the pandemic, essential workers literally put their lives on the line during periods of PPE shortages, few treatment options, and (eventually) limited access to vaccines.

A large percentage of essential workers have low-wage jobs, and many work more than one

job. During the pandemic, low-wage essential workers were more likely to work in crowded

environments and live in crowded, multigenerational housing, where it is easy for a highly infectious, airborne virus to spread and family members may be more vulnerable to COVID-19 and to lack access to adequate PPE. In addition, they were more likely to have underlying medical conditions and face structural barriers, like more limited access to medical care and food and basic supplies, and essential workers often bore the brunt of the dilemma and burden of needing to work while schools were closed and childcare options were not available.

Many low-wage workers are treated as independent contractors or otherwise have limited or no job benefits, including access to paid leave that would allow them to stay home if symptomatic. Many essential workers also do not have the basic protections or bargaining power in their companies and sectors to voice concerns about their working conditions.

Public Health Councils. The Public Health Council program was developed to serve workforces in prioritized sectors disproportionately impacted by the COVID-19 pandemic and help address the pandemic’s toll on essential workers. The Board of Supervisors passed a motion to establish the Councils on November 20, 2020, at a time when the County was experiencing at least 2,000 confirmed cases per day. The initial implementation focused on industries and sectors hardest hit by COVID-19 outbreaks, including food manufacturing, apparel manufacturing and garment workers, restaurants, warehousing and storage, and grocery stores and supermarkets. Public Health Councils are comprised of workers in certain industry sectors who are trained and empowered to conduct peer-to-peer education with their co-workers related to COVID-19

personal and workplace safety, identify potential Health Officer Order violations, and give workers a voice to help increase compliance at their worksites. The Public Health Councils are supported by third-party not-for-profit organizations that educate workers on Health Officer Orders and provide technical assistance for workers in their roles in the councils, including helping them report violations, if needed. Public Health Councils provide peer-to-peer education to their co-workers on how to collectively increase Health Officer Order compliance at worksites. Public Health Council members are informed about their rights (including Order requirements, sick pay, and protection from retaliation) and how to access PPE, vaccines, therapeutics, and other resources. Employers in the prioritized business sectors are encouraged, but not required, to allow workers to hold formal one-hour weekly Public Health Council meetings during regular business hours to support implementation of Health Officer Orders.

As of the end of June 2022, LAC DPH had contracted with 11 CBOs, worker centers, and trainers to provide technical assistance and training to 54 Public Health Councils.¹⁵¹ In addition, 71 CHWs were trained and certified to provide outreach and assist in education related to Health Officer Orders and COVID-19 safety measures and to answer questions and counter misinformation about vaccines.¹⁵² The program supported 38 mobile vaccination clinics at high-risk worksites, vaccinating 690 workers.¹⁵³ The Public Health Council program also helped resolve some workplace compliance issues without need of EH intervention.

One unique aspect of the program is robust public and private collaboration, with funding support provided by the County and several

private foundations. To launch the program, LAC DPH partnered with the Liberty Hill Foundation, the UCLA Labor Occupation Safety and Health Program, and the Southern California Coalition for Safety and Health. The program rollout included training ten CBOs to provide outreach, engagement, and technical assistance to workers in the identified priority sectors.

Additional worker protections. The Board of Supervisors enacted key worker protections and supports including an emergency anti-retaliation ordinance (Los Angeles County Code 11.01.010) on November 24, 2020, protecting workers from employer backlash when speaking up about public health violations. The County also expanded its paid sick leave policy and instituted a paid leave requirement for individuals to get COVID-19 vaccinations.

The Board of Supervisors adopted Right of Recall and Worker Retention policies to protect workers in the janitorial, maintenance, security service, and hospitality industries in unincorporated areas of the County.¹⁵⁴ The Right of Recall ordinance gives workers laid off because of the pandemic first right of recall to their jobs, when their employer is ready to bring employees back. The Worker Retention ordinance restricts layoffs in some situations if a business is sold because of the pandemic.

Partnering with labor unions. LAC DPH hosted regular briefings with labor unions to discuss safety measures, address concerns, and provide education and insights as to emerging guidance to reflect changing conditions. LAC DPH identified labor union liaisons within the department who worked with unions to understand the specific health officer order implementation questions or challenges in

different business sectors and to ensure ease of bidirectional communication about potential safety or COVID-19 outbreak concerns.

LAC DPH worked with labor unions on strategies to increase vaccinations, including site-based vaccination clinics. Labor unions also worked directly with other vaccine providers, such as local hospitals and FQHCs, to expand access and noted LAC DPH was supportive and assisted, when applicable.

Protecting HCWs. HCWs are at increased risk of COVID-19 infection due to the nature of their work. Los Angeles County has over 4,200 licensed health care facilities and thousands more non-licensed health care settings.¹⁵⁵ From the beginning of the pandemic, LAC DPH has actively tracked COVID-19 cases and trends amongst HCWs to understand the burden of COVID-19 on HCWs and to provide appropriate guidance.

For purposes of COVID-19 tracking and support, LAC DPH defined HCWs as any person working or volunteering in a licensed or non-licensed health care setting, including hospitals, SNFs, clinics and outpatient practices, mental health facilities, emergency medical services (EMS), home health, and other settings. HCWs included both clinical staff who interacted directly with patients and nonclinical staff who worked in the health care industry but did not provide direct clinical care to patients. In addition, to the extent known and data available, LAC DPH included persons providing care in non-health care settings, such as school or correctional facility nurses or caregivers in senior living facilities.

LAC DPH built a surveillance system to identify all HCWs with COVID-19, initially using case

interviews of all COVID-19 cases in Los Angeles. The department produces and publishes a weekly or biweekly report, depending on overall transmission levels, that includes case counts, demographics, HCW role, facility type, and data on hospitalizations and deaths. Health care facilities and HCWs regularly interact with LAC DPH regarding communicable disease reporting, licensing, certification, and inspections for certain health care facilities, disease management tools, and some health care services. Throughout the pandemic, LAC DPH has maintained a robust web resource for all types of health care facilities and updates it continuously not only with County health officer order information and recommendations but also guidance from CDPH, the CDC, Cal/OSHA, and other pertinent sources.

To support HCWs directly, LAC DPH continues to provide a series of educational and technical assistance webinars, including a regular “COVID-19 Science Update” and issue-specific topics such as correct use and reuse of PPE, vaccine safety, and a vaccine mandate Q&A. The department also hosted standing webinars and calls for health care sectors and participated in Countywide calls organized by different sectors.

LAC DPH implemented outbreak response teams focused on specific health care settings to provide technical assistance and recommendations to curb infection.

LAC DPH also distributed the first vaccine allotments to hospitals and SNFs, and HCWs were the first group of essential workers to be vaccinated in December 2020. LAC DPH issued Health Officer Orders requiring all HCWs and home health, home care, and EMS personnel to receive initial vaccinations no later than

September 1, 2021, and a booster dose no later than March 1, 2022.

Labor interviewees indicated they found LAC DPH to be highly responsive and that regular briefings were very helpful as unions worked to ensure their members understood the Health Officer Orders as well as their rights. The Right to Recall and anti-retaliation ordinances were viewed as highly positive and necessary actions. One interviewee noted, for example, that 95% of its members in janitorial services were laid off within 48 hours.

Considerations for Ongoing Response

“Whole person approach” needed. Labor interviewees discussed the deep financial pressures many of their members faced under the stay-at-home orders and various city curfews. Many members faced food insecurity and inability to pay rent and monthly bills due to layoffs, hours reductions, or inability to continue in their jobs due to vulnerable family members or lack of childcare. Interviewees also shared stories of employers not understanding or not honoring COVID-19 paid leave requirements as well as members being afraid to stay home even if symptomatic for fear of losing their jobs. Many unions provided assistance programs for their members but felt the County could have provided more and easier-to-navigate safety net supports. Interviewees also noted that most essential workers are not unionized and likely faced similar challenges with fewer supports.

Lack of understanding persists related to essential worker interconnectivity. Despite ongoing messaging from LAC DPH and broader County leaders about the interconnectedness of the County, some interviewees expressed their

disagreement with strict safety measures that applied to the entire County rather than more localized measures based on local COVID-19 case rates and other indicators. Given the large income divides across Los Angeles and the tendency for lower-wage workers to commute from neighborhoods with lower housing costs, the County experienced patterns of initial case upticks in wealthier neighborhoods followed by

devastating spread in poorer communities, indicating the County is highly interconnected despite its size and geography. Similarly, LAC DPH leaders found that labor perspectives about having more time to ensure protective health measures were in place were sometimes at odds with owners who were eager to reopen their businesses.

B. Skilled Nursing Facilities and Congregate Living Settings

Overview

The pandemic has taken a disproportionate toll on residents and staff in nursing homes, other LTCFs, and congregate living settings in Los Angeles County and across the country. Nursing homes provide residence and care to many older, frail adults with underlying medical conditions who live in close proximity to each other, making them particularly vulnerable to COVID-19. Nursing homes and many congregate living facilities also serve persons with physical or cognitive disabilities who require assistance with daily living functions, which provides unique challenges for implementing safety measures such as physical distancing and masking.

Nursing homes and congregate living facilities in Los Angeles County experienced a high number of outbreaks and deaths from COVID-19 across residents and staff, with most cases occurring in the earliest months of the pandemic, before the availability of vaccines, and during the winter 2020-21 surge, during which time vaccines first became available. There was also an uptick in outbreaks in SNFs during the Omicron surge, which aligned with national trends as more

breakthrough infections were experienced by vaccinated individuals than in prior surges, such as Delta, but vaccinated individuals who were infected by Omicron variants were far less likely to experience severe illness and death than were unvaccinated individuals.

Los Angeles County was not an outlier in this experience. A May 2021 Government Accountability Office (GAO) report found:

*“The congregate nature of nursing homes, with staff caring for multiple residents and residents sharing rooms and other communal spaces, as well as high incidence rates in the surrounding community, can increase the risk that COVID-19 will enter the home (for example, through staff) and easily spread. Asymptomatic transmission can further complicate a nursing home’s efforts to prevent and control the spread, as it allows the virus to continue to transmit in the home undetected.”*¹⁵⁶

A review of COVID-19 outbreak data from 13,380 nursing homes (representing 88% of the nation’s nursing homes) over an eight-month period, from May 2020 through January 2021, shows that 94% of the nation’s nursing homes

experienced more than one outbreak; 85% of the nursing homes had an outbreak lasting five or more weeks; and in aggregate, nursing homes had an average of three outbreaks over the eight months reviewed, despite COVID-19 mitigation efforts.¹⁵⁷

Because Los Angeles County was one of the first regions in the U.S. to have confirmed cases of COVID-19, in part due to its role as a global travel hub, it is a reasonable assumption that community spread of the disease began earlier than confirmed, which led to an earlier spike in nursing home outbreaks than in some other parts of the country.¹⁵⁸

While most of the rules that governed activities and actions at SNFs were set primarily by the federal government and the state, LAC DPH had an ability to issue orders related to specific mitigation efforts – particularly managing during outbreaks – but could not be less restrictive than the state or federal guidance. On April 24, 2020, LAC DPH issued comprehensive Health Officer Orders to protect residents and staff in all licensed congregate living facilities and reduce COVID-19 transmission, containing several measures including universal masking and PPE requirements, limited entry and access to facilities, testing of staff and residents, and mandatory reporting of cases and deaths to LAC DPH.¹⁵⁹

While testing of all nursing home residents and staff was mandated, in the early months of the pandemic, getting a steady and predictable supply of tests was challenging and lab processing times could exceed a week.¹⁶⁰ Additionally, early in the pandemic, there was little known about asymptomatic spread, including that it could result in an outbreak well

before public health and medical officials could confirm an infection.

By May 2020, approximately half of COVID-19 deaths to date in Los Angeles County were attributable to residents and staff in nursing homes and other congregate living settings. Given a lack of federal data standards and definitions and reporting requirements for COVID-19 data, comparative data across states and local jurisdictions related to SNF and congregate living facility infections has been difficult for researchers to access, but review of data from 36 states shows that long-term care deaths consistently made up nearly half of all COVID-19 deaths from the beginning of the pandemic through at least August 2020 and likely until vaccines were introduced (though more study is needed).¹⁶¹ The share of overall deaths dropped after vaccines were rolled out and now account for less than 25% of overall deaths nationally and less than 18% in Los Angeles County.¹⁶² The consistent national experience underscores the challenges of mitigating and managing the transmission of a highly contagious viral disease in long-term care settings due to complex and long-standing systemic issues.¹⁶³

To support SNFs and congregate living facilities, LAC DPH implemented and continues to maintain several strategies, including:

Education and technical assistance. LAC DPH developed an extensive web-based resource center for SNFs¹⁶⁴ and other community and congregate care facilities¹⁶⁵ in addition to infection control technical assistance. LAC DPH’s Health Facilities Inspection Division (HFID) conducted infection control assessment and response visits while LAC DPH’s Acute Communicable Disease Control (ACDC) SNF

team developed training and educational programming, including the “Ask an Infection Preventionist” weekly Q&A for SNFs as well as infection prevention programming tailored to non-SNF LTCFs.

PPE and tests. The department also distributed over 101 million items of PPE for HCWs in SNFs and congregate living facilities (as of October 2022). SNFs generally could perform their own testing with federal support, particularly with LAC DPH supporting connections to commercial testing companies. Once rapid tests became available, LAC DPH provided 2.1 million tests to the County’s SNFs and congregate living facilities to support infection control in these settings and compliance with LAC DPH Health Officer Orders for SNFs, which have included regular testing of staff, residents, and visitors.

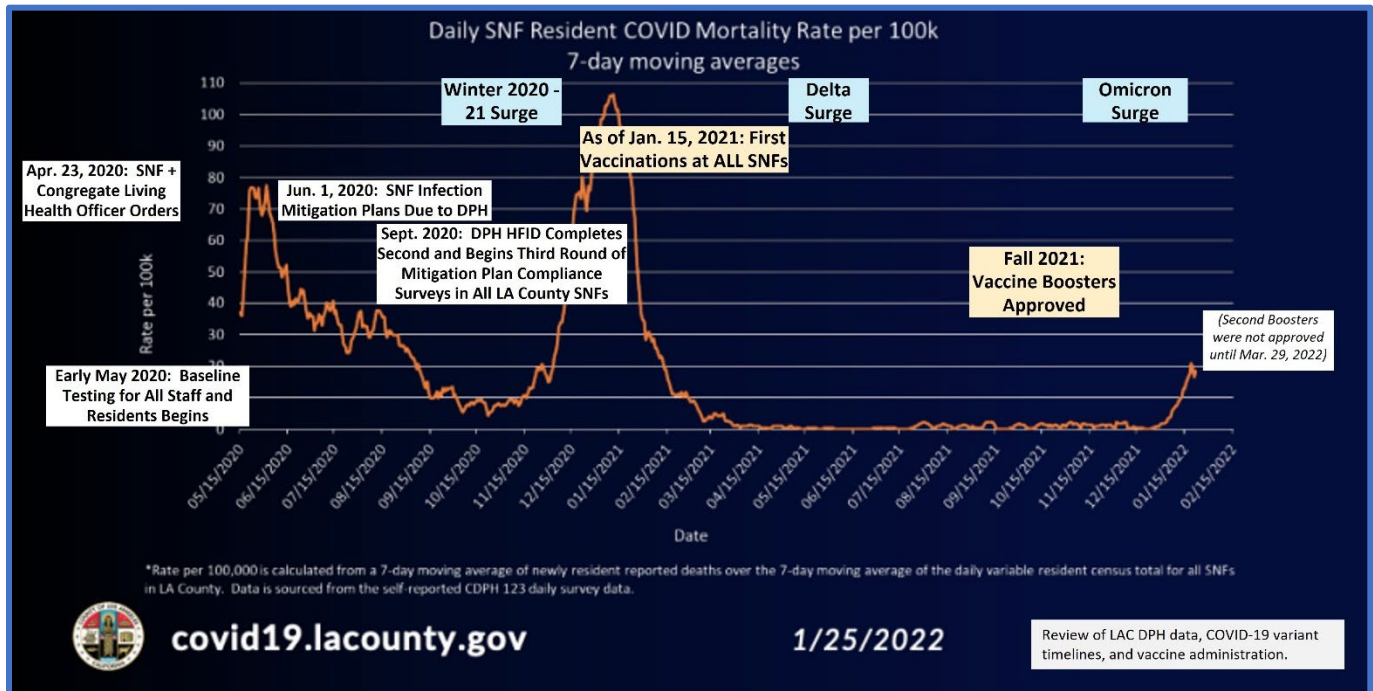
Public dashboard. LAC DPH, under the direction of the Board of Supervisors (see below), also developed a public-facing COVID-19 dashboard (version 1.0 was released August 12, 2020) and actively monitored (via the dashboard inputs and ongoing communications) new outbreaks, current or anticipated staffing shortages, PPE shortages, COVID-19 positivity rates among staff and residents, COVID-19 hospitalizations and deaths, and other information, as available.

Vaccination strategy. Perhaps the most impactful strategy was LAC DPH’s decision to administer the first available COVID-19 vaccines directly to SNF residents and staff rather than

rely on the federal nursing home vaccine program. The federal government established the Federal Pharmacy Partnership (FPP) program for LTCFs in December 2020 and contracted with retail pharmacy partners to coordinate and administer the LTCF vaccination process. LAC DPH initially enrolled all County SNFs as well as the County’s 3,500 congregate living facilities in the FPP.

The FPP faced numerous operational challenges in its initial rollout and had vaccine allocation limitations, and federal contractors would not enter facilities with a COVID-19 outbreak. Recognizing the winter surge that began in November 2020 was a grave threat to SNFs, LAC DPH, in consultation with the County’s SNFs, decided to unenroll from the FPP and manage SNF vaccinations locally. LAC DPH leveraged internal and external partners to assist with clinic registration, support vaccine administration, and provide technical assistance; the department also developed a strike team to assist facilities that had challenges completing vaccinations. With distribution beginning in December 2020, the first dose of vaccines had reached all SNFs in the County by January 15, 2021.

FIGURE 9. TIMELINE OF LAC DPH MAJOR SNF INTERVENTIONS



By the summer of 2021, 84% of residents and staff in the County’s SNFs were fully vaccinated. By April 2022, 98% of staff and 91% of residents were fully vaccinated, significantly higher than the national average.¹⁶⁶ LAC DPH also instituted requirements that all staff at SNFs and other high-risk congregated living settings who are eligible for vaccine boosters must receive them and have led intensive and extensive on-the-ground efforts to ensure all SNF and congregated living residents have immediate access to free booster shots.¹⁶⁷ As of August 21, 2022, 80% of staff and 82% of residents received their first booster.¹⁶⁸

Considerations for ongoing response. SNFs and congregated living facilities emerged as hotspots for COVID-19 outbreaks early in the pandemic due to their unique circumstances and the highly contagious, respiratory nature of the virus and have been the focus of much study

and policy focus, nationally and in Los Angeles County. The focus of this review was broader than the specific and highly complex issues of congregated living facility outbreaks and, as such, the commentary included here is not comprehensive to the issues faced in these settings. However, stakeholders and community members interviewed as part of this particular process did share selected and helpful insights and observations specific to improving preparedness for the next public health crisis relative to SNFs and congregated living facilities.

Clarifying transfers across health care facilities.

Amidst widespread fear and confusion at the start of the pandemic, some nursing homes reportedly refused to accept returning residents who had been hospitalized with COVID-19, and some closed their doors to any new residents during a time when hospitals were trying to discharge patients who no longer needed to be

hospitalized to ensure capacity for critically ill COVID-19 patients. Shortages of COVID-19 tests coupled with long waits for results complicated efforts to prove an individual was free of the virus. Many nursing homes were under-prepared to separate and manage residents who tested positive but did not need hospitalization. This resulted in cases of residents being sent to hospitals for any (non-COVID-19) low-level cold or flu symptom and not being allowed to return to the SNF until the hospital could prove negative COVID-19 status.

Interviewees raised that nursing homes are indeed homes, and those who live there are residents, not patients or wards. While the lack of clear, consistent guidance and protocols from all levels of government early in the pandemic for both hospitals and nursing homes related to patient transfers and housing of COVID-19-positive SNF residents imposed great challenges for the health care delivery system, it also created tremendous stress for residents who lost their voice and agency. As one interviewee put it, “a situation where in normal times if someone had the sniffles, that person would be advised to ‘rest, drink fluids, and maybe eat some chicken soup in their room instead of in the dining hall’ became a potential trigger to be thrown out of their home with the risk of not being let back in for weeks, or ever. And if you were critically ill but recovered and were COVID-19 free and ready to go home, your own bed with familiar surroundings may no longer be available for you.”

“Education first” approach to engaging SNFs.

Interviewees raised that prior to COVID-19, the relationship between congregate living facilities and LAC DPH, particularly with nursing homes, was almost entirely rooted in regulatory compliance and inspection. One interviewee

described it as “arm’s length with an undercurrent of trepidation.” The pandemic has shown that facilities need technical assistance and help with infection control and training. Nursing homes that were anxious about the repercussions of reporting their first COVID-19 outbreaks to LAC DPH reportedly found the outbreak management team offered practical assistance with clear instructions. LAC DPH’s efforts to provide PPE and vaccines directly to nursing homes, establishment of new relationships and frequent ongoing communications with all nursing home administrators in Los Angeles County, and training resources were seen as positive. While recognizing there are many challenges across the sector that will result in changes in federal and local government oversight, interviewees hoped similar avenues for nonpunitive collaboration and quality and infection control education would continue post-pandemic.

Easing visitation restrictions with testing and PPE access.

In preparing for future infectious disease emergencies, which will undoubtedly have a disparate effect on congregate living facilities, interviewees urged LAC DPH to prioritize lifting restrictions for some visitors sooner with appropriate testing and PPE and for the state and County to develop programs to assist congregate living facilities with the infrastructure needed to support more widespread technology adoption (e.g., laptops or tablets with video call functionality, expanded use of smartphones). Strict infection control protocols and long restrictions on visitors were very hard on residents and families across all congregate living facilities. Interviewees raised issues of isolation, extreme loneliness, and depression for residents. Not all facilities were equipped with technology, including sufficient broadband or Wi-Fi

capabilities, to help residents remain connected to loved ones, nor enough staff to provide frequent assistance for residents and family members who wanted to engage in virtual communication and had access to the necessary devices. Family members are often important members of the care team for residents in congregate living settings and many provide direct aide services, helping with activities such as feeding, teeth brushing, and bathing as well as movement and exercise. Congregate living facilities lost this extended care network, further stressing the understaffed workforce, and residents lost the intimacy of family

caregivers. One interviewee noted there was a lot of press about many families with school-age children setting up “pods” of people who would agree to socialize and share childcare responsibilities with a limited group of people. Residents of congregate living facilities, on the other hand, lost their existing limited social networks due to fear of bringing the virus into the facility. There were also challenges in providing palliative care and hospice services, with some use of telemedicine rather than allowing clinicians into nursing homes in some cases, which was viewed as inadequate and “a disservice” to residents.

C. People Experiencing Homelessness

Overview

Shelters generally relied on LAC DPH to supply PPE and (other than a few that had in-house clinical capabilities) deferred to LAC DPH outbreak management teams to conduct all testing related to outbreaks. LAC DPH funded DHS COVID-19 Response Teams to provide regular PCR screening testing at shelters and for unsheltered PEH in accordance with LAC DPH guidance. At the beginning of the pandemic, LAC DPH leadership determined it was best to house PEH and bring services directly to them. LAC DPH designated staff to support testing for these populations. At points in the pandemic where even a single case in a shelter was considered an outbreak, LAC DPH strike teams were essential in facilitating robust testing in these institutions.

In addition to testing and distribution of PPE and hundreds of thousands of antigen tests at shelters, LAC DPH managed a wider range of

needs for PEH. Although LAC DPH was able to draw from its experience in the 2016-18 hepatitis A outbreak, addressing the needs of PEH remained a significant challenge during the COVID-19 pandemic.

Housing issues were described as a key challenge for LAC DPH. People who were precariously housed were not able to comply with quarantine or isolation recommendations because they needed to leave their homes to work and earn money for rent or did not have a private space within their home, while PEH lacked private places to stay and often could not safely quarantine or isolate in congregate shelters. In March 2020, LAC DPH established a separate Q&I call center staffed by 35 nurses that managed referrals from clinicians, LAC DPH outbreak investigators, and a DHS response team working with PEH and other vulnerable individuals who required temporary housing to be able to isolate or quarantine. Since inception, the call center has answered over

23,000 calls and has placed over 9,700 callers, as of July 18, 2022. LAC DPH also worked with DHS to relocate hundreds of people to private rooms through Project Roomkey and other programs.¹⁶⁹

Considerations for Ongoing Response

Fluctuating Q&I demand. Q&I demand fluctuated greatly across the ebbs and flows of COVID-19 cases in the County, posing challenges to LAC DPH in staffing the call center and accessing appropriate quantities of living spaces. Flexible solutions related to staffing and housing will be important considerations in future surges and pandemics.

Need for permanent housing solutions. COVID-19 took a substantial toll on the population experiencing homelessness in Los Angeles County, with 351 deaths as of June 2022.¹⁷⁰ Unfortunately, the pandemic also exacerbated a

broader trend in increased mortality among PEH that predated the pandemic; a study of the first pandemic year found that the primary cause of death for this community was opioid overdose, which increased by 78%.¹⁷¹ The solutions for keeping PEH safe during the pandemic – primarily, access to permanent housing and building trusted relationships that support their health and well-being – are the same as the solutions to other pre-COVID-19 problems such as opioid use disorder. LAC DPH invested tremendous resources into meeting the needs of PEH, often in partnership with DHS’ Housing for Health, and likely saved lives with its vaccination campaign, highly responsive outbreak management, and access to temporary isolation and quarantine housing. In the absence of widespread access to affordable supportive housing and high-quality behavioral treatment, however, overall mortality will likely continue to rise.

D. Incarcerated Populations

Overview

LAC DPH put significant efforts into ensuring robust data reporting to monitor the case and death trends within these facilities and advised administrators of Los Angeles County’s seven jails and additional juvenile camps as well as DHS’ Correctional Health Services (CHS) regarding COVID-19 response planning.

While the LAC DPH team developed policy guidance and made recommendations, the CHS team was responsible for pandemic response decisions in correctional facilities. DHS provided much of the direct testing and vaccination services due to its existing footprint in jails,

while LAC DPH funded a significant portion of this effort and provided occasional mobile vaccination clinic services on-site. LAC DPH developed written guidance including Q&A documents and decision flows to support infection control in correctional settings for

inmates and detainees and staff, which interviewees identified as helpful.

Considerations for Ongoing Response

The challenges of mitigating an infectious disease as highly transmittable as SARS-CoV-2 in a correctional setting are immense. While initial guidance from LAC DPH focused on protecting

CHS’ most vulnerable populations was seen as helpful, there was a perception from some stakeholders that LAC DPH’s later guidance to try to keep COVID-19 from spreading at the jails was unrealistic given the institutional constraints of the incarceration settings,

including limited space for distancing and building ventilation and internal air quality. The pandemic laid bare some of the deep and systemic challenges of America’s incarceration system, and facilities and stakeholders struggled to implement public health guidance without sufficient resources or capacity.

E. Educational Institutions

Overview – Early Child Education and Childcare

The Office for the Advancement of Early Care and Education (OAECE), which moved under LAC DPH’s purview four years ago, serves as a hub for policy and system improvement for ECE programs. As schools across the County closed in March 2020, OAECE built on its existing strong County partnerships to establish a task force that brought together ECE organizations as well as First 5 LA, the Child Care Alliance of Los Angeles, Child Health 360, several school districts (including Los Angeles Unified School District (LAUSD) and Pomona Unified), the County’s Department of Education, the LA Mayor’s Office, and the Center for Strategic Partnerships to ensure that childcare continued to be available for essential workers’ families. Throughout the pandemic, early childcare remained open and even took on significant responsibilities for school-age children that schools would typically provide. With a goal of helping keep hospital and grocery stores open, this task force established a toll-free telephone number and subsequently launched the [Child Care Heroes website](#) to help connect parents to childcare options and advise ECE facilities about COVID-19 safety and exposure management.

Through this effort, during the first several months of the pandemic, childcare was

provided for over 6,000 children from low-income families and of essential workers across Los Angeles County and another 3,000 within the city of Los Angeles, supported by state and Coronavirus Aid, Relief, and Economic Security (CARES) Act funding.

OAECE worked with childcare providers throughout the pandemic to ensure they had appropriate resources to safely maintain operations. Before the state circulated PPE to ECE facilities, LAC DPH distributed three million masks and later provided 44,000 test kits ahead of the 2021 winter holidays and over 261,000 as of early July 2022. While LAC DPH is not the regulatory agency for this sector, it established guidance (e.g., setting a policy limit of ten children per ECE room at points of high local transmission when the state had higher thresholds) and provided significant coaching to ECE leaders, describing this as an “educational journey for everyone.” LAC DPH found that doing joint visits with the state oversight agency, Community Care Licensing, promoted alignment and greater understanding of expectations. While there is no vaccine mandate for ECE staff, LAC DPH performed significant outreach and education about the importance of vaccinations; it also set up dedicated clinics at a local children’s hospital (later discontinued due to state registration

requirements), provided vaccine codes, and established mobile clinics in select geographies (e.g., Antelope Valley and South Los Angeles) to encourage and facilitate ECE staff vaccinations. The office is now focused on messaging about vaccines being available for the young children in ECE settings.

Overview – TK-12 Schools

Elementary and secondary schools (i.e., transitional kindergarten (TK) through 12th grade level) are a vital component of both the local community and public health infrastructure, providing not only education but also food and meal services, limited health services, mental and behavioral health counseling, safe daytime childcare so that parents and caregivers can work, organized physical activities, occupational therapy and supports for those with disabilities, community gatherings, and trusted information dissemination to both parents and community members, among other services and community benefits. Collectively, Los Angeles County’s TK-12 schools are also among the largest County employers.

In Los Angeles County, TK-12 schools’ pandemic response work has been supported through long-standing collaboration across LAC DPH and its sister agency, LACOE.

LACOE is the largest regional education agency in the country. The agency oversees Los Angeles County’s 80 TK-12 public school districts, including 1,840 schools and 372 charter schools supporting 1.4 million students and thousands of staff.¹⁷² This includes LAUSD, the second largest public school district in the United States, serving over 600,000 students residing in the city of Los Angeles as well as all or parts of

31 municipalities and several unincorporated regions in Southern California, at over 1,000 schools.¹⁷³ LACOE also operates specialized programs such as specialty high schools, programs for incarcerated juveniles, and alternate education programs.

In addition, over 1,000 private TK-12 schools operate in the County, including independent, parochial, religious, and nonreligious charter schools, boarding schools, Christian schools, preparatory schools, and others.¹⁷⁴

In California, as in all states, most schools (both public and private) were closed to in-person learning – with a shift to distance or remote learning – by the spring of 2020, though exact closure dates varied by community.¹⁷⁵

On March 19, 2020, Governor Newsom issued a statewide shelter-in-place order, closing schools, though at the time of the order, most of the state’s TK-12 schools were already closed via individual school district decision. In July 2020, the governor announced a plan for the 2020-21 school year that effectively closed most of the state’s schools (allowing distance learning only) by outlining a framework for reopening that defined strict local COVID-19 indicator thresholds and other requirements that applied to all public and private schools in the state.¹⁷⁶

School districts were provided with significant funding, tests, and support through a partnership between LACOE and LAC DPH. LAC DPH received \$302 million in CDC funding to support TK-12 testing programs for the 2021-22 school year, with funding extended to 2023. LACOE was a formal, funded (contracted) partner in facilitating distribution of testing resources to schools, including more than 21 million COVID-19 tests conducted through

school testing programs and over nine million OTC COVID-19 tests distributed. LAC DPH also helped analyze testing data and guide districts on determining next steps based on these findings. Working with schools, LAC DPH piloted innovative efforts such as test-to-stay in September 2021. Per the CDC, test-to-stay interventions involve contact tracing and repeated testing to allow school-associated contacts to continue in-person learning during their quarantine period. Data from Los Angeles County, among other sites, guided a subsequent change in federal policy supporting test-to-stay approaches nationwide.¹⁷⁷

LAC DPH and LACOE closely collaborated and directed intensive planning efforts from the earliest days of the pandemic to help school district leaders navigate the complex challenges of the pandemic and provide guidance to parents and guardians. LAC DPH partnered to safely reopen buildings where permitted by the state orders (both in settings with and without students) in the 2020-21 school year as well as plan for safe extracurricular activities, manage early childcare programs, support food preparation programs and other critical activities, and prepare for Countywide in-person learning during the 2021-22 school year.

LAC DPH employed several strategies to support TK-12 schools, including:

Detailed guidance. LAC DPH issued a Health Officer Order appendix that specified safety protocols for TK-12 schools. LACOE developed a detailed reopening framework tied to LAC DPH guidance, and the agencies collaborated on tool kits outlining multilayered COVID-19 mitigation measures, including social distancing and handwashing protocols, school facility ventilation updates, masking, vaccinations,

ongoing testing and contact tracing, and guidance on isolation and/or quarantine policies.

Integrated team. LAC DPH established a dedicated team to support schools and participated in weekly calls with all 80 public school district superintendents and their cabinets (coordinated by LACOE). LAC DPH hosted a series of virtual town halls and almost weekly telebriefings for parents, teachers, and staff on topics such as vaccinations for school-age children and general reopening guidance. The department also held meetings with school labor partners and school nurses to communicate key updates and answer safety and clinical questions.

On-site technical assistance. LAC DPH established the Schools Technical Assistance Team (STAT) to conduct school visits as well as special exposure and outbreak management teams dedicated to the TK-12 school setting, which worked to stop in-school disease transmission. Among LAC DPH innovations was its piloting of a test-to-stay program, which allowed children who have been exposed to COVID-19 but test negative on a rapid assay to attend school in person rather than quarantining at home. Los Angeles County's efforts, along with a similar pilot in Illinois, informed federal guidance for schools across the country.¹⁷⁸

Resources for families. LAC DPH created a web-based resource center for parents and guardians and launched Student and Parent School Ambassador programs.¹⁷⁹ The ambassador programs provided training for hundreds of students and parents to be able to answer common questions from and provide accurate information to their peers. Three

hundred and two students across 32 schools continued to meet every week through the end of the most recent school year to receive training about safety measures to mitigate COVID-19 transmission and exposure.¹⁸⁰

Although a planned public school vaccine mandate was delayed until 2023, in line with a state-level timeline, LAC DPH supported school staff, students, and families to achieve high rates of voluntary vaccination, coordinating connections to clinic partners and facilitating the use of schools as vaccination sites.¹⁸¹

Considerations for Ongoing Response

Interviewees were supportive of LAC DPH’s efforts related to TK-12 schools, noting that LAC DPH leadership was available, highly responsive, and collaborative. Internal and external interviewees noted that prior to COVID-19, LAC DPH did not have many direct relationships with school district superintendents and the personal connections that were forged during the response will be valuable in developing collaboration and strategies to address health and prevention efforts well after the pandemic. LAC DPH’s decision to develop a dedicated school support team was widely recognized as a best practice. LAC DPH’s pre-opening and technical assistance site visit teams were appreciated and, while reopening protocols were complex, the department’s participation in both standing meetings and working sessions and its availability to answer ad hoc queries were appreciated. One interviewee noted LAC DPH was very helpful and creative in helping schools plan for meal preparation and distribution when classes were remote.

One interviewee also commented specifically on LAC DPH’s management of press

conferences and daily media inquiries, noting that the department was professional, poised, and consistent in messaging, which was appreciated in a time of tension and fear across staff and parents alike.

Interviewees commented on the fact that many parents and family members of students enrolled in Los Angeles County public schools were at high risk for COVID-19, which put added stressors on students – many students had parents who were essential and low-wage workers who were not able to be home during the remote learning sessions and over 60,000 students in the County’s public schools experience homelessness. Distance learning, access to PPE and testing, and lack of social interactions were quite challenging for many and exacerbated disparities and the impact of the pandemic.

Some also noted it was challenging for schools to manage contact tracing, masking enforcement, and test distribution and results tracking but that public health did not have the resources or bandwidth to manage every school site. One interviewee commented on reductions in the school nursing workforce over the past several years as a deficit in both responding to the current pandemic and for future partnerships with LAC DPH on public health initiatives.

Overview – TK-12 School Waivers

Prior to July 17, 2020, when CDPH released its “COVID-19 and Reopening In-Person Learning Framework for K-12 Schools in California, 2020-2021 School Year,” in-person instruction or other services in TK-12 schools were only permitted for small cohorts of students with specialized needs that could not be adequately

met solely through remote or distance learning. The framework established criteria for the reopening of in-person instruction. While schools within counties that had been on the state’s monitoring list within the past 14 days were generally not permitted to reopen, there was a waiver program for elementary schools (TK-6).

Local health officers were permitted to grant waivers if requested by a district superintendent (or heads of school for private schools) initially in consultation with labor organizations, parents, and CBOs (later amended). While the state established the guidelines for the waiver program, it relied on local health departments to create a process to implement the program and required the County to make waiver determinations based on local data and in consultation with CDPH. There were no specific resources linked to the effort for local jurisdictions, and the process and protocols evolved over time and with experience. At the start of the 2020-21 school year, LAC DPH initiated a waiver program for grades TK-2 only that launched in early October. The waiver program remained in effect until CDPH released a new consolidated framework and guidance document for reopening of TK-12 schools that went into effect January 14, 2021. Before the state ended the program, CDPH approved 297 waiver applications; it also received but did not grant final approval for 89 waiver applications.¹⁸² This included 39 waiver applications that met local and state criteria for approval but were still in process for final approvals when the state ended the waiver program and 50 waiver applications that never met waiver requirements due to missing information or revisions to the application needed to align with requirements, despite continued outreach from LAC DPH staff

detailing the required changes.¹⁸³ Following the sunset of the waiver program and the launch of a new school framework, all grades TK-6 in all counties were permitted to reopen upon filing of a safety plan and completion of our LAC DPH reopening protocol for schools.¹⁸⁴

Considerations for Ongoing Response

A couple of interviewees felt that the waiver application process was disjointed, that it took too long to implement, and that LAC DPH was overly conservative in considering waiver requests.

Some interviewees also felt strongly that guidance for schools, at both the state and County levels, was too “one size fits all,” geared toward public health districts, and not flexible enough to accommodate small schools with varying community case dynamics or resources.

Multiple interviewees – across public schools, private schools, and community members – felt staggered reopening schedules with different grades alternating days and different age groups having different in-person and remote learning configurations were highly confusing, too difficult to manage, and not ultimately beneficial for students, parents, or educators. All these strategies were offered by LAC DPH as recommendations to address state requirements for distancing, cohorts, and infection control.

Overview – Higher Education

Since the start of the COVID-19 pandemic, LAC DPH has assigned dedicated teams to liaise with IHEs, providing technical assistance, situational awareness, policy analysis, and outreach to ensure open channels of communication. The

IHE sector was invited to IHE telebriefings held every two to three weeks during the academic year to provide detailed situational updates and give callers the opportunity to ask questions live. Since April 2020, LAC DPH has responded to over 1,300 formal inquiries received from IHEs via the customer relationship management system. Subject matter experts have addressed wide-ranging issues related to occupational and business guidance, contact tracing and outbreak investigation, isolation and quarantine guidelines, Health Officer Orders, PPE, vaccine information, events, collegiate athletics, travel, testing guidance, housing, and recovery. Documents on best practices, protocols, commencement FAQs, presentations, and state and federal resources were and continue to be developed and shared in a tool kit for IHEs. To help IHEs limit COVID-19 transmission on campus and minimize community transmission, LAC DPH conducted surveys and convened ad hoc committees to monitor and evaluate on-campus activities, assess planning gaps and vulnerabilities, and understand vaccination rates.

To assist IHEs with their vaccination efforts, LAC DPH helped onboard providers to MyCAVax; connected IHEs with third-party providers and mobile clinics; provided technical assistance with vaccine logistics, resources, and guidance; and followed up on vaccination campaign plans and clinics. The Education Sector Outbreaks unit of the OMB provided individualized support for IHEs that experienced on-campus transmission and off-campus transmission in congregate housing settings (e.g., Greek societies or large, private, multi-unit residential buildings). The largest COVID-19 outbreaks in the education sector have been associated with IHEs, which correlates with the large number of students

and the social nature of college and university life.

Stakeholders described some IHEs as “complex little cities” that required LAC DPH to delve into understanding their nuances to appropriately shape guidance related to everything from performing arts to sports to food service. Other interviewees perceived LAC DPH as “highly supportive” as it strove to help schools both keep staff and students safe and remain open when they could. The Education Sector Outbreaks unit was viewed positively, both for fostering relationships with LAC DPH and in enabling institutions to share ideas and best practices among themselves; some participants sought further segmentation in these discussions – for example, distinguishing between large universities and smaller colleges. LAC DPH guidance was found to be complex and at times overwhelming to implement. Some stakeholders expressed frustration with the different rules for on-campus food service as compared to restaurants within their communities as well as with the rapid timelines to implement new protocols (e.g., new policies released on a Friday with a Monday effective date). However, consistent with feedback from other sectors, LAC DPH’s approach to outbreak management was seen as highly supportive, educational, and helpful rather than punitive.

Considerations for Ongoing Response

Maintaining and strengthening established relationships. Many TK-12 and IHE interviewees expressed a strong desire to continue to build their relationship with LAC DPH in subsequent phases and/or following the pandemic. As multiple universities established their own testing capabilities, several suggested that there may be opportunities for the County to partner

or contract with them for public health functions in future emergencies, potentially via more formal memoranda of understanding, or to have more collaborative public-private testing workstreams. Many lower and higher education institutions also flagged opportunities to work together to address other pressing health needs of their students and staff, particularly related to mental health but also including nutrition, other vaccinations, and STDs.

Recognizing the diversity of higher education institutions. The higher education sector is very broad, and it can be challenging to provide uniform guidance across it – for example, a commuter college is not dissimilar from another business or a TK-12 school; however, residential institutions are more similar to closed communities. While LAC DPH ultimately engaged with different subsets of the IHE sector differently, having a leader who understands these dynamics early on and can engage with the sector accordingly may be important in determining future responses.

VIII. Strengthening Partnerships with Stakeholders

LAC DPH’s pandemic response has not solely been dependent on its own expertise and capabilities, but also on those of a network of partners spanning the County and beyond. In particular, the department leveraged and expanded its relationships with health care providers, CBOs, the business sector, adjacent counties, and municipalities within the County to enhance the scale and reach of the response efforts. Each of these relationships is unique. In

some – such as with the health care and business sectors – LAC DPH is responsible for ensuring sector compliance with public health regulations and directives while also seeking to collaborate on pandemic response and operations. In other cases, such as with CBOs, the department has an opportunity to extend its reach in communities of focus by engaging these organizations as partners.

A. Collaborating with Hospitals, Clinics, and Other Health Care Providers

Overview

The pandemic demonstrated that building and strengthening partnerships between clinical care providers and public health is critical for rapid and effective action to control disease transmission. LAC DPH expanded productive relationships with health care entities – including hospitals, clinics, physician practices, pharmacies, provider organizations, and health plans – across the County during the pandemic. The department had maintained effective relationships with hospitals since the SARS outbreak (first reported in 2003), while LAC DPH’s vaccine unit also built relationships with clinics that were strengthened during the pandemic response. Interviewed stakeholders perceived an overall sense of collaboration from LAC DPH, generally respecting the work of the department and appreciating the aligned mission they were working toward in the pandemic. One interviewee noted, “Dr. Barbara Ferrer was professional, and it calmed us all down. LAC DPH has really stepped up for our

community; it was the stronghold for all of Los Angeles County.”

Select examples of LAC DPH’s effective relationships with the health care system include:

- **Building a broad network of vaccine partners.** Within a few months of vaccine rollout planning, the department had over 800 – and ultimately over 1,400 – fixed and mobile vaccine delivery sites, including clinics, pharmacies, and health systems, to distribute the vaccine. It held office hours to enable cross-site learning.
- **Establishing a Q&I connector function.** LAC DPH established a call center to serve as a connector between referring providers and placement sites for patients who had tested positive for COVID-19, were suspected of being positive, or were close contacts. This private line is open every day of the week. It initially solely served PEH and then expanded to others. In non-surge times, it addressed 20-40 cases per day.

During surges, it addressed up to 3,000 cases per day.

- Leveraging health care sector capabilities to expand its response.** LAC DPH was able to benefit from support from the Medi-Cal health plans and Los Angeles County Medical Association to support its pandemic response, including sharing feedback and perspectives, distributing patient and provider education and guidance to their members, and promoting testing and vaccination to their patients. At a point where LAC DPH’s contact tracing teams were particularly stretched, the L.A. Care Health Plan loaned 30 staff that the department trained to temporarily serve as case and contact interviewers.

Communication and guidance. Across the four distinct surges, stakeholders found communications and coordination with LAC DPH improved with each surge. Health care stakeholders reported LAC DPH leaders made it clear that they were accessible and receptive to candid feedback. Many health care stakeholders benefited from existing relationships with LAC DPH – including acute care facilities, the County-operated delivery system, community health clinics, and the Los Angeles County Medical Association, which served as a conduit to the many solo or small-group physicians who serve a diverse range of patients across the County.

LAC DPH established a range of channels for health care stakeholders to interface with the department regarding pandemic response planning. During the 2020-21 winter surge, LAC DPH began its weekly office hour calls. Hospital CEOs met daily with LAC DPH for much of the pandemic, ramping down frequency as

appropriate when surges subsided but flexing up again as needed; hospital chief medical officers met with LAC DPH regularly as well. Several planning task forces benefited from health care stakeholder participation (e.g., the Equitable Vaccine Committee and the Mass Vaccination Task Force). Health care leaders were also in regular ad hoc dialogue with LAC DPH leaders; one even reported that texting was also a source of information, with LAC DPH staff addressing many questions through this medium.

Inspections and support. Under contract with CDPH for facility licensing and certification, LAC DPH’s HFID provides support to health care facilities related to infection control practices. HFID oversees a range of health care facilities, including over 780 LTCFs within the County – SNFs, congregate living facilities, intermediate care facilities, and facilities for those with intellectual disabilities – as well as over 1,200 non-long-term facilities, including outpatient centers, transplant centers, home health agencies, hospice, end-stage renal disease facilities, and acute care hospitals.

In March 2020, CMS prompted inspection teams to redirect efforts related to routine surveys and recertifications to infection control, ensuring facilities’ mitigation plans were up to standard. In coordination with CDPH, HFID created a COVID-19 response monitoring unit to give new staff trainings, make daily calls to facilities with increased cases to review infection control practices and CDC guidelines, and conduct video reviews of facilities through teleconferences. Through just-in-time training related to de-escalation and with an equity lens for regulators, HFID pivoted to an education-first approach of engaging facilities, aiming to reemphasize regulatory standards and provide

them with general guidance. As seen across the country, some health care entities lacked sufficient PPE, particularly in the early months of the pandemic, and during this time, the department also supported them in accessing the necessary supplies.

Throughout much of the pandemic, facilities faced staffing shortages, in part because of rising rates of infections and nursing departures. This became particularly taxing during the surge fueled by the Omicron variant during the winter of 2021-22. Jointly with the Emergency Medical Services Authority's Medical Health Operational Area Coordinator (MHOAC), LAC DPH teams assisted facilities with getting the appropriate staff onboarded by calling staffing and traveling nurse agencies as well as engaging CDPH, the Navy, the National Health Corps, the Department of Veterans Affairs, and the National Guard to send in nurses. The department also assisted in advocating at the state level for local facilities to receive staffing waivers and other necessary flexibilities related to use of space as hospitalizations spiked across the County.

Reporting. LAC DPH long relied on online surveys to gauge facility needs and situations, but the pandemic has made these more comprehensive, enabling HFID to direct response efforts based on received data. Through surveys, facilities communicate their needs related to PPE, staffing, case rates, bed

availability, and ICU capacity and can report outbreaks among staff. For example, acute care facilities are expected to report whether ICU capacity is less than 20% for three days in a row and LAC DPH teams follow up.

Considerations for Ongoing Response

Streamlining data expectations. Health care stakeholders report that there was opportunity to better coordinate, share, and streamline data collection efforts across LAC DPH, CDPH, and other entities. One health system interviewee noted that due to the scale of data requirements, three people within their organization focused on data collection and reporting for these purposes. However, data exchange is perceived to have improved over the course of the pandemic, with DPH's integrated reporting, investigation, and surveillance (IRIS) system supporting improved information sharing.

Improved visibility into hospital capacity. While LAC DPH dashboards are generally considered to be helpful, acute care facilities reported frustration in not having visibility into which specific hospitals had capacity at points of surges. One interviewee noted, "[w]ith one hundred-plus hospitals in the area, we can't just cold call." They proposed establishing a password-protected site to have more visibility into local capacity.

B. Role of Community-Based Organization Partners

Overview

Given Los Angeles County’s broad geography and highly diverse populations, CBOs have the potential to play a critical supporting role to assist frontline public health and emergency responders during public health crises. These organizations are trusted entities that both understand the cultures and speak the languages of and are physically proximate to their community members. LAC DPH had many existing relationships with CBOs before the pandemic and was able to quickly engage many as important partners. However, the COVID-19 response required a broader and larger network. CBOs are a critical part of the COVID-19 response and all public health efforts going forward, but they are historically under-resourced and many of them have limited ability to expand during an emergency. However, given that CBOs are part of the essential public health infrastructure, there is an imperative to provide consistent support that allows for their full participation in ongoing efforts to strengthen community health and resident well-being.

LAC DPH engaged communities of focus across the County through its liaison structure. Through these channels, LAC DPH was able to connect community leaders to testing vendors and provide information to community members about where and how to access testing and other necessary resources (e.g., how to keep themselves safe and obtain food and PPE).

While outreach efforts were important throughout the pandemic, CBOs felt they provided the most assistance in vaccine efforts

– helping get people to vaccines (including leveraging a collaboration LAC DPH established with UberHealth to support transportation to vaccine sites for those in need), helping certain communities navigate the vaccination process, providing information, and countering misinformation. CBOs also connected residents, including those directly impacted by the pandemic, to social services and resources, noting food insecurity and housing fears as particularly challenging for residents. Priority groups engaged by these organizations included elderly and disabled populations, those caring for persons with special needs or vulnerable family members, justice-involved populations, those with limited English language proficiency, those laid off from low-wage jobs, and frontline workers working multiple jobs. Interviewed stakeholders noted that many of these populations would have fallen through the cracks if LAC DPH had not been as deliberate and strategic in its work with CBOs. These organizations shared that they perceived LAC DPH taking leadership and responsibility in reaching and supporting these populations and that the tone and outreach were very positive and supportive. One CBO interviewee said the COVID-19 response effort was the “first time” they perceived the County to frankly and openly acknowledge disparities and “to publicly take actions to address them.”

LAC DPH provided weekly talking points and resource materials to CBOs that were seen as very helpful, though some stakeholders expressed a wish that public-facing education materials and visual aids were made available sooner. LAC DPH was also proactive in seeking feedback from CBOs related to vaccine barriers

and vaccine hesitancy – including understanding scheduling, access, and language barriers emerging through the MyTurn platform – by conducting focus groups, issue-specific calls, and technical assistance briefings. LAC DPH’s use of program agency liaisons was identified as a best practice by several interviewees.

Through its Community Health Worker Outreach Initiative (CHWOI), LAC DPH mobilized and trained CHWs to provide education and outreach on COVID-19 and vaccinations. While some CHWs are in-house at LAC DPH, many of those engaged are from CBOs with a track record of working in highly impacted communities with various outreach models (e.g., promotores, essential worker advocates). LAC DPH contracted with 17 agencies and over 500 CHWs to implement this work, using GIS data to identify highly impacted census blocks and communities, and between May 2021 and June 2022, these CHWs conducted 645,988 outreach activities and reached over 4.3 million people.¹⁸⁵ CHWs who participated in interviews said they felt respected by LAC DPH and that their role was valued and seen as important. That was very important, especially as they also encountered challenges and politicization in the field. In addition, LAC DPH partnered with 470 FBOs, liaising between FBOs and mobile vaccination clinics to maximize uptake via on-site mobile vaccination clinics, outreach (e.g., canvassing), vaccine education, and follow-up phone calls for second doses.¹⁸⁶ By coordinating 1,831 vaccination clinics, this effort vaccinated 65,378 people and distributed over 100,000 COVID-19 antigen tests as of June 30, 2022.¹⁸⁷

Considerations for Ongoing Response

Streamlining contracting and financing of CBO partners. While there was great success in

deploying CBO support to date, there are also opportunities for LAC DPH and the County infrastructure to better facilitate their engagement in the future. The most significant issues that interviewees noted were the challenges associated with contracting with the County and accessing associated financial supports – including receiving funding, having necessary flexibility with this funding, and spending funding in line with certain federal/program timelines. Contracting with the County is particularly challenging, especially for smaller organizations that struggled with insurance and audit requirements. While the County did take some steps to be more flexible during the pandemic, further flexibility is necessary, along with technical assistance to help such organizations effectively contract with the County. LAC DPH staff also were challenged by several funding deadlines related to federal funds that were not always helpful or optimal in working with many small not-for-profit organizations. Funding flows are really critical/“make it or break it” for many CBOs. They cannot sustain competency with intermittent funding and staffing up in an emergency takes time for them. Many LAC DPH-CBO contracts historically have been reimbursement based, which is unworkable for many CBOs in a public health crisis, such as a pandemic, as they are unable to front the work and wait for months for County reimbursement.

Consistency of contacts and clarity of roles. A few CBOs noted that with LAC DPH and DHS needing to move staff to manage COVID-19 workstreams, they felt they lost continuity and relationships with key liaisons and contacts within the departments who knew them well and knew their communities. That continuity of contact and relationship built through “home programs” was missed. They felt that

individuals who really knew and understood their organizations and their communities were no longer available to them. Additional areas of opportunity for LAC DPH to strengthen its partnerships with CBOs include providing greater clarity and transparency around who was responsible for what decisions, programs, and resources across the County (including County departments – especially LAC DPH and DHS, the CEO’s office, and certain city governments). Expanding efforts related to convening CBOs can be particularly hard since there are many different types and all are differently resourced. The convening, outreach, assistance, and oversight are very time and labor intensive, and can be even more of a challenge during a crisis when LAC DPH staff are

all stretched. Some philanthropic, academic, or other resources to help with convening could be beneficial.

Transparency of CBO-LAC DPH relationships.

Because CHWs and health educators engaged through CBOs are not LAC DPH employees, there was sometimes confusion in the field about whether they represented LAC DPH. Some wanted a badge or credential to signal they were working with LAC DPH to give them credibility; however, others wanted to be distanced from LAC DPH because of public mistrust in government. Navigating this in future partnerships – in the context of the specific communities LAC DPH is engaging – will be important.

C. Engaging Business Sectors

Overview

LAC DPH’s Emergency Preparedness and Response Division formed a team of 32 sector-specific public health liaisons dedicated to different sectors and entities, ranging from schools to entertainment to sports to transportation to funeral homes and mortuaries, among others. In sectors where a liaison was identified, interviewees were broadly supportive of the approach, were able to identify specific contacts at LAC DPH with whom they regularly engaged by name, and reported that they felt LAC DPH took concerted interest in learning more about their businesses and specific settings and circumstances under which guidance needed to be implemented. Multiple interviewees noted the personal relationships built with employees at LAC DPH were very impactful. As one interviewee said:

“It was so incredible to realize that the pandemic response is individual human beings working incredibly hard to do the right thing and save lives. [LAC DPH] isn’t ‘the government’; it’s smart and thoughtful people doing the best they can. If they made a mistake, they wanted to know; if there was a better way to do something, they wanted to know. We were all in this together.” Interviewees reported building positive relationships, with many expressing they hoped those relationship channels could remain open and “warm” after the pandemic subsides.

Those who had a personal contact at LAC DPH also felt that the department was willing to hear criticisms and at least consider adjustments to guidance, even if the department ultimately decided not to implement changes, which was valued. Those who did not have a personal

contact and/or primarily interacted with LAC DPH through sector briefing calls or town halls seemed more likely to believe that LAC DPH pushed out decisions with limited input and was difficult to navigate.

Most employer interviewees expressed they felt LAC DPH had performed well in managing the pandemic response and recognized the challenges of an unprecedented situation and the complexity of responding to a pandemic when multiple players involved were by necessity involved in various aspects of the response but were frequently uncoordinated in their efforts. However, as detailed earlier, interviewees expressed near-universal frustration with (1) frequently changing guidance; (2) conflicting guidance across federal, state, regional, and local agencies; and (3) what was viewed as uneven government enforcement and businesses being put in the position of trying to manage customer behavior.

While interviewees were generally quite savvy about state and local government and understood that technically the state made most decisions related to broad business closures and reopening requirements for many business sectors, there was great dissatisfaction about how long California’s stay-at-home orders were in effect and how that affected different business sectors. Many who tried to keep staff on or do limited furloughs ultimately conducted layoffs, and anger over that situation was also projected onto both LAC DPH and the County Board of Supervisors. Certain business sectors in Los Angeles County, including multiple types of organizations that provide food or beverage service as part of their business, were particularly stressed by closures and safety measures that differed in Los

Angeles County compared to other regional jurisdictions. Some felt the state did not offer enough assistance to Los Angeles County, noting that due to its population density and urban centers, the County will always be at greater risk of more widespread communicable disease outbreaks.

Considerations for Ongoing Response

Desire for more rapid and two-way engagement. One criticism raised by several business interviewees was that the industry liaison and sector telebriefings did not launch until several months into the pandemic and interviewees strongly recommend these types of communication channels should stand up rapidly in future emergencies. Some interviewees also would have welcomed having industry associations or affinity groups being tasked with convening businesses in their sectors to help develop safety plans and make proposals to LAC DPH to help implementation guidance be advanced more rapidly and at a more granular level.

Several felt that LAC DPH could have benefited more from expertise across the private sector in Los Angeles, including those in the local business community who operate globally and have experienced pandemic management and emergency response in multiple settings. Los Angeles’ technology sector and research/biotech communities, its leading academic institutions, its logistics and distribution enterprises, and its entertainment industry were all raised as potential resources that could contribute to a pandemic response in innovative ways in the future. Multiple interviewees suggested the County or a philanthropic partner should fund cross-sector,

public-private pandemic planning and tabletop exercises in the wake of COVID-19.

Continued pursuit of creative solutions. Many interviewees commended LAC DPH for being a creative partner and willing to consider ways to help businesses stay afloat while also abiding by health and safety regulations. Interviewees shared examples including hotel kitchens preparing meals for those in need, restaurants

being permitted to temporarily resell grocery and pantry items so that food did not go to waste when capacity restrictions were implemented, certain large venues being given permission to allow use by small film or video crews when otherwise closed, and collaborative support for the development of protocols to support musicians being able to perform once limited reopening began, even though there were likely more pressing issues.

D. Collaborations with Adjacent Counties

Overview

Infectious diseases know no borders. Los Angeles County residents travel throughout and outside the County’s 88 cities to work and play, as do residents of neighboring Orange, Riverside, San Bernardino, Kern, and Ventura counties. Even prior to COVID-19, LAC DPH collaborated with its neighbors to manage outbreaks and other concerns that crossed jurisdictional borders, and city and County Health Officers in the region met routinely to discuss issues of common interest.

Public health entities and providers in local and neighboring jurisdictions have worked and continue to work together to manage case investigations that crossed county lines and – particularly during periods of surge – to transfer patients from overwhelmed hospitals or those in need of highly specialized services, such as extracorporeal membrane oxygenation (ECMO), that are only available at a few health facilities in the region.¹⁸⁸

Despite operational coordination, Southern California jurisdictions were not always in

lockstep regarding policymaking. Diversity in size, geography, and density has meant that policies appropriate for one jurisdiction may be deemed inappropriate for a neighbor.

Beyond its work with cities, LAC DPH is also a member of regional collaboratives where it shares discussions and feedback with other jurisdictions. Some interviewees desired more collaboration with LAC DPH, including jointly developing regional policies and aligned Health Officer Orders. Coordination, or advance notice, was particularly important to neighboring counties because when Los Angeles County rolled out new policies, neighboring health officers could expect to be questioned immediately about whether their jurisdiction would follow. Advance notice was most valued for politically sensitive requirements such as those related to face coverings. While interviewees agreed some disconnection was inevitable given the pace and complexity of the pandemic, some contrasted Los Angeles County with what they perceived was a more coordinated landscape in San Francisco and its Northern California neighbors.

Because many people live in one jurisdiction and work in another, neighboring counties often compete for staff. While public health salaries generally are low compared to clinical positions in the private sector, Los Angeles County was reported to pay better than its neighbors for its public health roles, and some neighboring jurisdictions perceived they were unable to fill positions or lost existing staff to LAC DPH’s higher wages. In one case, LAC DPH was reported to offer salaries nearly twice as high as a neighbor.

Considerations for Ongoing Response

More frequent communication with surrounding counties desired. While regional collaboration is a laudable goal, public health leaders must take a realistic view of their local circumstances, policymaking needs and realities, and goals to determine how much time and resources they will allocate to collaborative activities while effectively managing their local responsibilities. Jurisdictions that collaborate do so voluntarily. Given the intense politicization of COVID-19 in

Southern California, there was likely no one collaborative process that could have generated a policy acceptable to all local health jurisdictions in the region. However, the same politicization highlights the importance of proactive communication. The COVID-19 emergency response, particularly in its early months, was marked by the appearance of confusion to the public, with state and federal governments seeming to take opposing stances on such fundamental issues as the extent and risk of the pandemic. While neighboring local health jurisdictions might not be positioned to adopt coordinated policies, they could promote coordinated messaging that promoted trust and confidence in local authorities by giving each other time to prepare and respond. And providing advance notice can decrease the burden on smaller jurisdictions that otherwise must dedicate staff to monitoring LAC DPH’s announcements. Unfortunately, it also increases risks that draft or proposed policies will be leaked or mischaracterized before LAC DPH can finalize and formally release them, which can cause greater confusion and, potentially, public harm.

E. Collaborations within Los Angeles County

Overview

To improve coordination and sustain relationships across Los Angeles County, LAC DPH developed a robust infrastructure to share information, answer questions, provide technical assistance, and implement infection control measures. A dedicated call line was stood up for elected officials, city managers, and staff to elevate concerns and questions. A cadre of supervisorial district liaisons worked with subject matter experts to respond to city

and constituent inquiries, policy questions, and requests for clarification regarding Health Officer Orders, enforcement, COVID-19 basics, testing, and vaccination issues. LAC DPH held regularly scheduled telebriefings with elected officials and city staff where LAC DPH leadership and subject matter experts provided the latest COVID-19 updates. Additional information was sent to about 800 elected officials and staff in local cities through LAC DPH’s Gov Affairs GovDelivery listserv regarding COVID-19 orders,

guidance, and other policy updates. LAC DPH also facilitated information sharing between cities. For example, after the issuance of California’s Pandemic Roadmap, the four-stage plan for modifying the state’s stay-at-home order, the cities of Long Beach and Pasadena – which have their own CDPH-recognized local health departments – and LAC DPH began routinely discussing and sharing strategies for

controlling the pandemic. These discussions often occurred both after changes to state guidance and orders were issued and before local safety requirements were updated. Finally, LAC DPH helped host mobile vaccination clinics at city sites and collaborated to establish vaccination partnerships with FQHCs and other clinics in local cities.

IX. Leadership in a Decentralized System

Los Angeles County occupies a unique position in California and the U.S.: It is a county that is larger than many states as measured by both population and geography, comprising approximately one-quarter of California's

population, with a direct relationship with the CDC and other federal entities. Los Angeles County contains 88 cities, including the city of Los Angeles, the second largest city in the U.S., and numerous unincorporated regions.

PUBLIC HEALTH IS FUNDAMENTALLY LOCAL

While a complex network of federal, state, territorial, tribal, and local governmental agencies and authorities comprises the nation's public health system, the governance and administration of public health in the U.S. is fundamentally local. There are varied models and approaches for the organization, management, and delivery of public health services among states and local government across the country. Every state has a health agency that is directed by a health commissioner or secretary of health. Each also has a state health officer who is the top public-sector medical authority in the state. Their exact titles and departmental structures vary.

Local health departments are the front line of public health agencies and carry out their activities under authority delegated by their state or local governing board. There are myriad operating models across the country – some states have a centralized model where all local health departments (and their employees) are units of state government, some are fully decentralized whereby the local health department is a unit of local government (though with certain powers, including in an emergency, granted to the local public health officer), and most have a hybrid or shared model where some services and governance sit with the state and others remain local.¹⁸⁹

Given its size and diversity, California has a decentralized model where the predominant authority for local public health services throughout the state is via county-level departments of public health or health services.¹⁹⁰ California state law “grants local health officers and local governing bodies substantial authority to respond to declared emergencies, such as COVID-19. The California state constitution also grants counties and cities the general authority to enact and enforce laws and regulations to promote health, safety, and general welfare (i.e., ‘police powers’) if those laws do not conflict with state law; these powers exist irrespective of a declared emergency.”¹⁹¹

A. Los Angeles County Structure and Emergency Response

Overview

The most populous county in the U.S., Los Angeles County has the largest municipal government in the country, providing services that affect the lives of all residents, including education, public health protection, law enforcement, fire services, tax collection, public social services, elections, and emergency response, among others.

The County is governed by five elected board supervisors, each of whom represents a sub-geographic region of the County and serves a four-year term. The Board of Supervisors serves as both the legislative and executive branches of County government. The supervisors pass laws and oversee the annual County budget, including setting the budget for each of the County’s departments and agencies. Los Angeles County has 36 departments, including LAC DPH, many of which contribute to emergency responses.¹⁹² All County departments report to the Board of Supervisors. The district attorney, the assessor, and the sheriff¹⁹³, are elected by voters, department heads are appointed by the board and serve at the pleasure of the board. (The County Health Officer, who reports to the Department of Public Health director, is appointed by and serves at the pleasure of the Board.) A nonelected CEO provides administrative and operational support to the Board of Supervisors, including budget oversight, countywide communications, and implementation coordination for key initiatives.

Los Angeles County is well versed in responding to emergencies and incidents, both natural and human caused. The routine, day-to-day

management of government differs greatly from emergency operations.

In the event of a “local emergency,” under the Emergency Services Act,¹⁹⁴ the Board of Supervisors is vested with the authority to declare a local emergency, which the Government Code defines as “proclaimed existence of conditions of disaster or of extreme peril to the safety of persons and property within the territorial limits of a county...”¹⁹⁵ If so declared, the board, “or officials designated thereby,” may promulgate orders and regulations necessary to provide for the protection of life and property.¹⁹⁶ Accordingly, the board has broad authority to direct and respond to an emergency or delegate such powers as it deems appropriate.

A local emergency declaration enables important flexibilities to aid the County’s emergency response activities, including activating an Emergency Operations Center (EOC) to maximize efficiency and coordination of resources across County departments. Most events managed under this emergency governance system are limited in time and reach and historically have encompassed disasters such as wildfires, flooding, utilities interruptions, civil unrest, and mass casualty events.

California state law also grants local (or county) Health Officers¹⁹⁷ authority to take any preventive measure that may be necessary to protect and preserve the public from any public health hazard during any “state of war emergency”; “state of emergency” *as declared by the Governor*; or “local emergency” *as*

declared by the Board of Supervisors, as defined under the Emergency Services Act (Section 8558 of the Government Code).¹⁹⁸ A preventive measure includes “abatement, correction, removal[,] or any other protective step that may be taken against any public health hazard that is caused by a disaster and affects the public health.”

Further outlined in Appendix E, there are several sections in the Health and Safety Code that also outline authorities of the Health Officer and that are relevant to pandemic response, including declaring a “local health emergency” and taking “measures as may be necessary to prevent the spread of the disease”. Related, the local Health Officer also has the authority to issue and enforce Health Officer Orders, which are mandatory, enforceable, and binding obligations.¹⁹⁹

Confusion about the role and authorities of the Department of Public Health. The Local Health Officer holds residual authority under state law, independent of any delegation from the board, to take certain measures to respond to certain emergencies in an effort to protect public health. However, interviewees within Los Angeles County government raised issues of confusion and lack of clarity across County government particularly about distinct authorities of the Local Health Officer and LAC DPH.

The pandemic necessitated rapid and sweeping actions via Health Officer Orders to protect the public and seek to slow the transmission of the novel virus. The magnitude of early pandemic-related Health Officer Orders was highly unusual, though deemed necessary given the circumstances. Interviewees described a lack of clarity in terms of roles and responsibilities in

policymaking and resulting tensions and operational challenges during the early months of the pandemic, particularly regarding distinct authorities of the Board and the Health Officer.

A further complication appeared to be that while state government gives Health Officer Orders broad and significant authorities which are exercised by the issuance of Health Officer Orders, they largely do not come with clear lines of budget flexibility and access to resources to implement the Health Orders.

The County’s emergency response capabilities are strong and seasoned. Interviewees noted they were critically important to and valued in supporting the pandemic response.

However, the pandemic differed from other local emergency response events in several critical ways:

- It affected all areas and all residents of the County simultaneously (although not equitably).
- After a certain point, the rapid spread of the virus could not be contained and mitigation and slowing of transmission were still essential to save lives, reduce the threat of critical illness, and protect the underlying health care system from being overwhelmed. This required multiple strategies that involved restrictions on businesses, employers, and individuals, including all of County government.
- The emergency has been multiple years in duration with numerous phases of differing risk and intensity that required “dialing up” or “dialing down” safety measures based on local surveillance data and has necessitated LAC DPH

remaining in emergency activation for close to three years.

- Unbudgeted and unplanned new, wide-scale capabilities had to be rapidly stood up and operated on an ongoing basis (such as community testing, Countywide vaccination network, nursing home vaccination program, etc.).
- The federal and state government dictated many of the requirements of the response and set policies that required rapid County actions and compliance.
- The scientific understanding of the virus changed rapidly, which had direct and immediate implications for prevention, mitigation, and response strategies.
- Major sectors of the economy required simultaneous technical assistance to understand and implement safety measures.
- A global supply chain breakdown affected the entire country and much of the world at once, with direct impact on the timely ability to obtain the supplies and resources necessary to fight the disease.

While various emergency preparedness plans existed to address all types of emergencies, in reality the pandemic was unpredictable and quickly overwhelmed resources and capacity. Further, during the course of the pandemic, there were other local emergencies that also demanded coordination, resources, and manpower.

On March 31, 2020, in the early stages of the pandemic response, the County revised its emergency services provisions in the County Code to specify a unified command protocol.

These changes were directed by the County of Los Angeles Board of Supervisors in response to the 2018 Woolsey Fire. As further outlined in Appendix E, the revisions to County Code Chapter 2.68, in part, clarified the roles of the CEO and OEM for emergency planning, response, and recovery.²⁰⁰

Interviewees noted these changes were helpful and facilitated a more seamless County emergency response infrastructure. However, with respect to the pandemic response, confusion about sources and uses of funding and cross-departmental resource management impacted the effectiveness and nimbleness of early response efforts.

As further described in the following sections, without broad County leadership understanding and support of LAC DPH mitigation goals and decisions, LAC DPH struggled to engage appropriate and timely resources to achieve goals and implement decisions, including skilled workforce and quarantine and isolation supports.

Setting pandemic-related goals. LAC DPH established a steadfast goal in the early days of the pandemic – *to prevent as much serious illness and death as possible* – as it sought to apply the state’s vested authority that “the local health officer may take any preventive measure that may be necessary to protect and preserve the public health from any public health hazard during” any state of emergency.

While LAC DPH was, upon review, highly consistent in its communications about the imperative to mitigate spread and the specific and defined goals of the response, a diverse cross-section of interviewees said they were unclear at times whether the goal was to

“flatten the curve” and protect hospital capacity, to try to contain all spread of the virus, to lessen the impact in vulnerable settings, or to “move to recovery.” Much of this confusion is likely a result of mixed messaging across political leaders at the local level, exacerbated by frequently conflicting messages at the national level.²⁰¹ From a county governance and operations perspective, lack of unity around the goals of the pandemic response caused tension and distractions.

Supporting policy decisions. While the state code outlines clear delegated authority and responsibilities of local Health Officers for efforts to respond to communicable disease outbreaks (as well as other health emergencies), the LAC DPH Director and Health Officer sought alignment with the Board of Supervisors, frequently building consensus across supervisors regarding response direction. During the few times when one or two supervisors were not in agreement with proposed public health measures, interviewees from both within the County and in the private sector noted that the discord created additional difficulties and/or confusion in the implementation of safety directives. While there are well-defined processes for managing differences among supervisors regarding customary County business (which are to be

expected), the inherent challenges local government grappled with in striking the right balance to protect the health and safety of all residents and also protect economic interests, and the intense pressure felt during a protracted and unprecedented health crisis, were more difficult to navigate.

Some County stakeholders pushed back on policy decisions that LAC DPH made – for example, publicly (and widely reported in the press) calling into question its authority to mandate mask wearing in certain public settings in 2020. In addition, there was a perceived lack of confidence in LAC DPH’s positioning and leadership role expressed by some County interviewees that likely undermined the department’s ability to be as effective as possible as quickly as possible.

Ultimately, response to a public health crisis of this magnitude came with a steep learning curve for government leaders. While the extensive network of laws, regulations and policies related to health emergency management across federal, state, and local contributed to confusion, personal opinions regarding safety measures required to reduce disease transmission played an outsized role in the COVID-19 response.

B. LAC DPH in the Context of State and Federal Responses

Overview

The public health system in the U.S. is a complex, interconnected network of public and private entities operating at the national, regional, state, and local levels. While local

public health departments have given responsibilities in a public health crisis, the duration and intensity of the pandemic meant that these responsibilities were closely adjacent to or even overlapping with state and federal authorities.

Comments on coordination with the state. Los Angeles County private-sector stakeholders are required to adhere to all local Health Officer Orders, as these could never be less restrictive than state orders but they could be more restrictive. When the County orders diverged from the state by requiring additional safety measures, many stakeholders noted resulting frustration and confusion. This was particularly true around school reopenings in 2021. However, ambiguities and inconsistencies could serve stakeholders’ purposes as well. One private-sector stakeholder reported taking their requests to the state government if the response they obtained from the County did not match their preferences.

In August 2020, the state developed standardized tiers to establish minimum requirements for counties based on their levels of community transmission with the goal of harmonizing state-county efforts; however, this approach likely had less effect on inconsistencies between LAC DPH and CDPH as Los Angeles County tended to lead, rather than lag, other jurisdictions’ levels of mitigation measures. However, LAC DPH increasingly sought to align with state guidance as the pandemic evolved. At times, particularly when the state was distributing resources, there were superimposed requirements that did not reflect well-developed systems and practices in counties such as Los Angeles. This was particularly the case when the state established a limited statewide network for the distribution of vaccines after the County had already created a vast local network of hundreds of vaccine providers.

For health care providers, another challenging aspect of fragmentation between federal, state,

and county governments was conflicting or duplicative data collection requirements. The overlapping requirements around documentation of bed availability were called out by several interviewees as particularly onerous and inefficient.

Comments on the federal response. While the U.S. public health system has always been fundamentally decentralized, state- and county-level COVID-19 responses were particularly important because of the vacuum in visible federal leadership during the pandemic’s early days.²⁰² Some challenges were technical, such as a flaw in an early CDC-developed COVID-19 test that delayed widespread testing, but exacerbated by the federal decision not to initially authorize alternative testing capabilities, resulting in early lost opportunities to slow the virus’s spread. Other challenges were political, such as a failure to accurately describe the pandemic’s risk. For the crucial first year of the pandemic, states and counties were operating without the backstop of supportive federal messaging and federal resources to coordinate provision of tests, PPE, and other necessary goods, adding to the challenges faced by local health jurisdictions. The federally sponsored effort to develop a COVID-19 vaccine led to the unprecedented feat of multiple viable vaccines developed, approved, and manufactured in under one year. The enormity of the task to manufacture, track, distribute, and equitably administer vaccines across the entire country at once proved challenging as well; this was acutely felt at the local level as local health departments were tasked with “last mile” rollouts with unpredictable supplies and constantly changing federal and state guidance.

X. LAC DPH Internal Leadership and Organization

Steady and effective leadership is an essential component of LAC DPH’s pandemic response. Many internal and external interviewees – including stakeholders whose perspectives at times significantly differed from the policies established by the department – expressed admiration for LAC DPH executive leaders’ command of changing information, foresight, and dedication. Despite its leaders facing death threats due to COVID-19 policies, LAC DPH

experienced relatively little leadership turnover, particularly in contrast to many other local public health departments across the country.²⁰³ This level of leadership commitment was a hallmark of the department’s response as it established and evolved its Incident Command System (ICS) response, sought to most effectively leverage limited staffing and funding resources, and built and applied robust analytics capabilities.

A. ICS: Evolution and Limitations of Organizing Structure

Overview

The National Incident Management System (NIMS) was established by FEMA in 2004 to guide all levels of government and its partners to prevent, protect against, mitigate, respond to, and recover from incidents.²⁰⁴ NIMS includes the ICS, a standardized approach to managing emergency situations that is used by public agencies, including state and local public health departments, as well as health care organizations and many other entities engaged in emergency response.

The ICS provides highly structured guidance on how to organize and respond to an incident as well as processes to sustain the response through its successive stages. ICS supersedes the management structure of any agency responding to an incident or event. Incidents may be emergency or nonemergency. ICS is often used to respond to natural disasters or occasions of demonstrated or threatened civil unrest, for example, but may be deployed even

for planned routine events, such as concerts or parades. ICS typically organizes personnel and assets into five functional areas: Command, Operations, Planning, Logistics, and Administration/Finance.

Benefits and limitations of ICS within LAC DPH.

LAC DPH utilizes an ICS structure for its emergency response activities, and its ICS has been in long-term activation since the beginning of the pandemic.

For ICS to be most effective, the incident must be formally defined so that there is clarity and consistency as to what is being managed. The extended duration of the pandemic coupled with the rapidly changing nature of the SARS-CoV-2 virus and the extensive collaboration and coordination required with a broad range of outside organizations and public and private partners required LAC DPH to alter and evolve its emergency response structure and practices.

Fast and nimble decision-making, including the willingness to rapidly change guidance and pivot on policies as scientific knowledge increased, also proved essential to an effective pandemic response. This required further flexibilities that are often beyond a traditional ICS structure as well as long-term and continual involvement of and leadership by subject matter experts.

Throughout this interim review, interviewees described both how the ICS model was helpful to remove artificial barriers to nimble response inherent in organizational and bureaucratic silos and to deploy resources based on areas of greatest need supported by the right skill sets and competencies, and how, at the same time, the ICS model was stressed by the scope, scale, duration, and politicization of the COVID-19 response.

Prior to COVID-19, LAC DPH frequently activated and deactivated its ICS over several years due to hepatitis A, Ebola, and other public health concerns in the County. While this experience provided department employees familiarity with the structure, the sustained duration of the COVID-19 pandemic – with minimal backup leadership support, a shallow “bench” for talent to step up into new roles, and limited ability to continue ongoing non-pandemic responsibilities – wore teams down over the course of the pandemic.

The ICS introduces both benefits and challenges to the department. The structure directs staffing, financial resources, and action toward the most pressing needs of the public health response to the pandemic. As compared to normal processes within LAC DPH, the ICS structure – in combination with the declared local health emergency in Los Angeles County –

enabled it to move quickly on key staffing actions, including recruiting, bringing on board multiple staffing agencies and a communications vendor, and pulling in staff from other areas of the County family. Contracting approvals shifted from the Board of Supervisors to the CEO, cutting review and approval process timing by half. These changes also prompted LAC DPH to adjust its resourcing practices as leaders now meet earlier in the funding process to determine need and application of resources.

With nearly 80% of LAC DPH staff redeployed to ICS responsibilities, a key challenge is “the unrelenting nature of people’s assignments,” as described by a team member. The ICS is designed to enable individuals to serve intensively in a role for a defined period (e.g., 60 days) and then cycle out, but LAC DPH did not have the workforce bench strength to shift employees in and out of command roles. Many employees remained in their primary ICS roles for the duration of the pandemic, and leaders often either lacked an assigned deputy or felt their deputies were not sufficiently experienced to wholly assume responsibility during leaders’ time off. In addition, individuals assigned to ICS still maintained responsibilities in their “home programs,” effectively having two supervisors and burdening those non-ICS teams that couldn’t advance critical, often grant-based work without appropriate staffing. Multiple employees described a burden of being fully committed to LAC DPH’s role in the pandemic response as well as the mental health toll of the unrelenting responsibilities during this time, with one saying, “We’re just hanging on by a thread.”

Additionally, an ICS often requires individuals to take on new roles that involve skills outside

their non-ICS responsibilities. Several interviewees reported having up to three different roles within the ICS structure as the team was reconfigured over time to fulfill pandemic needs. Each new role requires learning new content as well as building internal and external relationships. While the department established systems to adjust roles quickly, using a training and onboarding team that facilitated just-in-time training based on an individual’s new role, there may be opportunities to better facilitate cross-training staff and recruiting individuals comfortable with this type of role flexing.

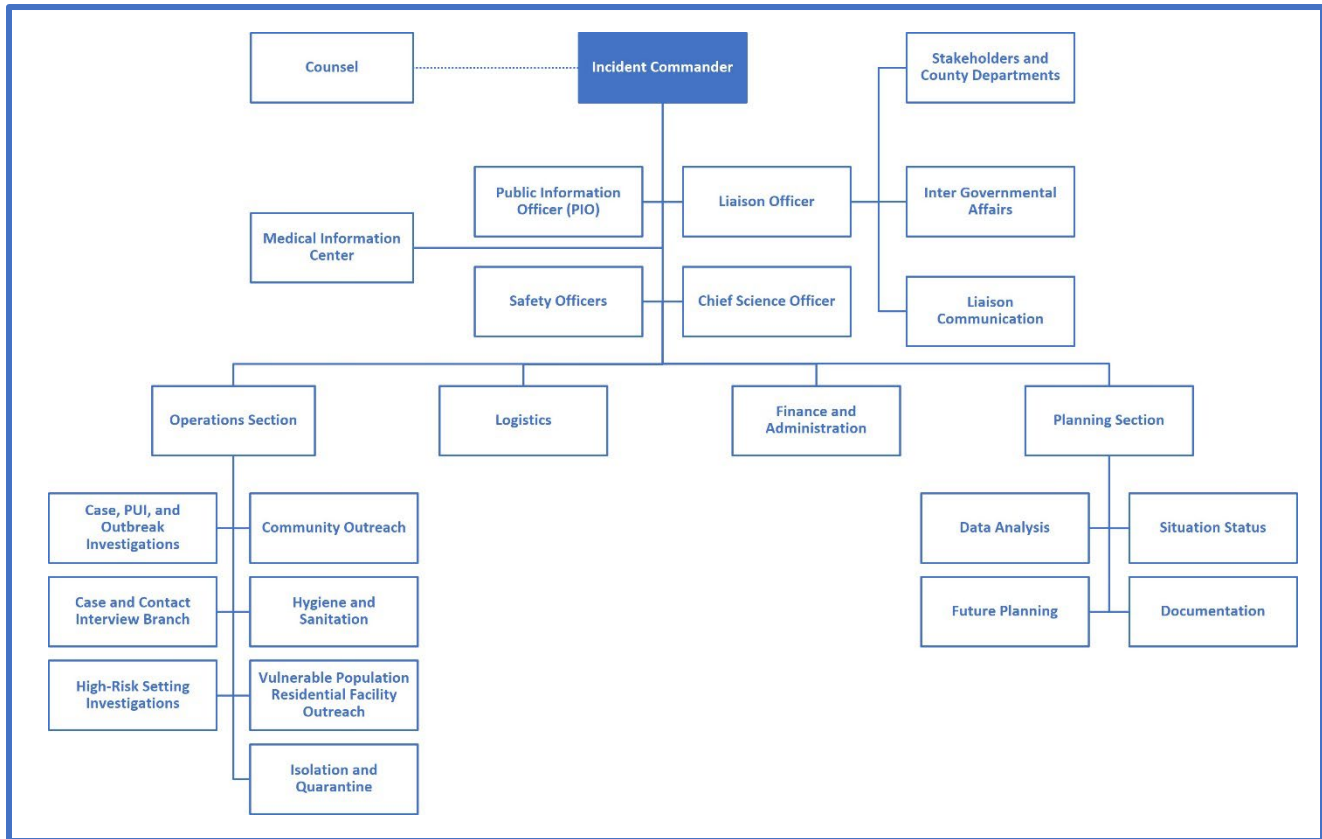
Policy group formation and equity focus. While the ICS structure is recognized as helping the department move quickly, LAC DPH leadership struggled to shift its meetings from primarily progress report-outs to a decision-making channel and to weave in outside perspectives when considering decisions. Leaders specifically sought to establish a common set of principles and then apply those principles in driving decisions. As a result, in the summer of 2020, LAC DPH expanded its existing four-person Policy Group to 18 ICS leaders to meet on a regular – at times, daily – basis to address emerging policy issues. As leaders perceived a

lack of alignment on policy decisions, LAC DPH now expects each ICS group to submit policy documents to this group for review. In addition, members bring outside perspectives to the group based on their interfaces with the County family and other stakeholders.

The Policy Group retains a focused commitment to equity in determining the department’s pandemic response. Specifically, this group supports the departmental journey to embed and operationalize equity in all decisions, specifically considering: *Who is disproportionately impacted by this work? What actions are being taken to address this disproportionate impact? What partnerships are we developing to address this?*

Evolution of the ICS. LAC DPH’s ICS structure changed over time to reflect the evolving demands of the pandemic and lessons learned by the department. The original ICS structure closely aligned with the traditional role categories – including operations, logistics, finance and administration, and planning – with a necessary hierarchy to support a nimble response. A liaison officer connected with other government agencies and supervisor districts.

FIGURE 10. ORIGINAL COVID-19 ICS ORGANIZATIONAL CHART, APRIL 2020

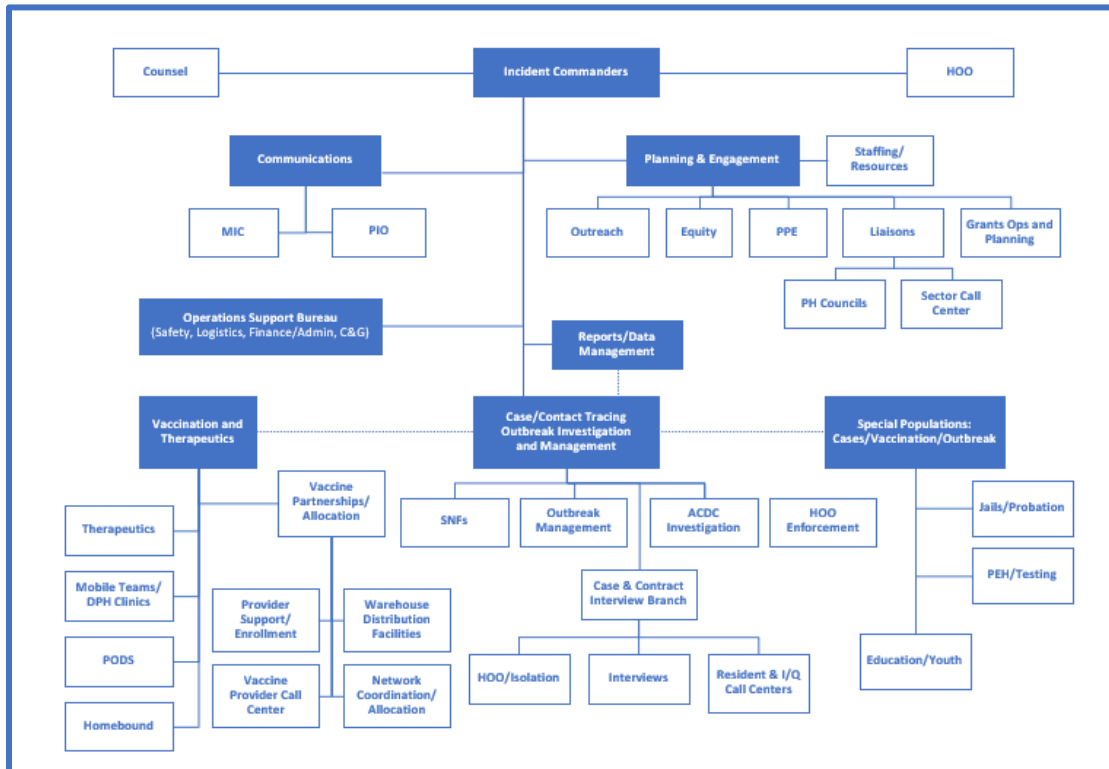


With at least 11 revised ICS organizational iterations since April 2020, there were two primary evolutions. About six months into the COVID-19 response – when it became clear vaccines were on the horizon – the structure changed to accommodate two parallel operational teams, one with a continued focus on case response and the other focused on vaccine response. The liaison officer’s scope also expanded to include vaccine stakeholder engagement, recovery planning, and schools.

The structure later evolved toward an approach more suited to lower and/or more stable levels of ongoing transmission (Figure 8), rolling up a crosscutting operations support bureau and

data management teams to support teams focused on vaccination and therapeutics, case investigation, contact tracing and outbreak management, and case investigation, vaccinations, and outbreak services for special populations. Liaisons have been folded under planning and engagement, which also includes staffing and resources, equity, grant operations, and other responsibilities. Importantly, the medical information center and public information officer now report to one communications lead, establishing a single funnel for messaging to support alignment and consistency. The organization has remained generally consistent with this structure since November 2021.

FIGURE 11.COVID-19 ICS ORGANIZATIONAL CHART, NOVEMBER 2021



B. Internal Communications

Overview

Over the past two years, internal communications within LAC DPH has been critical to sharing understanding of the evolving dynamics of the pandemic, establishing policy, determining and operationalizing tactics, and assessing the impact of the County’s response. Internal interviewees report that communications within the Policy Group were highly effective; however, communications across the broader leadership team and the full organization were challenged at times.

The Policy Group’s scale, composition, and frequency of meeting supported effective

communication within it. However, not surprisingly, the department grappled with the fundamental challenges of internal communications across a large and complex organization during a crisis. While the ICS structure is helpful for communications protocols, new work streams and response implementation needs were constantly emerging, with different operational leaders needing to be tapped for different facets of the response.

To facilitate communication across the entirety of LAC DPH, daily standing ICS leadership calls determined actions in real time. ICS leaders then communicated key messages and action

steps to their teams. Larger standing progress update and knowledge-sharing meetings, with 150-200 participants, supplemented the daily calls. LAC DPH leadership also convened monthly full-department town halls where issues and questions could be raised as well as a weekly director’s briefing and regular email updates.

Despite these efforts, many LAC DPH interviewees raised internal information sharing and day-to-day response communications as challenges and areas for improvement. As one interviewee said, “Overcommunication and transparency [are] necessary in the beginning

weeks and months of such an emergency and really hard to manage and staff given how many directions all leaders are pulled [in] at once.”

Another interviewee raised that the public health field is highly collaborative and there is a high degree of vetting data and consensus efforts in day-to-day work. Crisis response operations require a different skill set and mentality, with more rapid, definitive decision-making. This abrupt shift in work style and culture may have created some stress for some employees, including feeling a lack of ownership in decision-making, and further training on crisis response may be valuable.

C. Resources

Overview – Public Health Funding

LAC DPH entered the pandemic after decades of declining public health funding in the U.S. and with most of its funding coming through federal grants that limit discretionary spending. Across the pandemic to date, LAC DPH has been allocated approximately \$2 billion to support its COVID-19 response from federal, state, and County sources to support a population greater than 40 states.²⁰⁵ Of this funding, over \$1.8 billion was allocated directly to the County from

the federal government and the CDC. A large percentage of funding was delivered through existing vehicles, such as the Public Health and Emergency Preparedness Cooperative agreement (PHEP), the Epidemiology and Laboratory Capacity for Prevention and Control of Emerging Infectious Diseases (ELC), and the Immunization and Vaccines for Children Program. In terms of general funds, DHS and DPH manage ELC funds and the CEO manages CARES Act and FEMA funding.

FIGURE 12. COVID-19 RESPONSE GRANT FUNDING ALLOCATED TO LAC DPH (AS OF NOVEMBER 2022)²⁰⁶

Funding Allocated by:	Allocated Funds
Federal	\$1,430,616,075
County	\$433,925,509*
State	\$143,188,181
Total Allocated	\$2,007,729,765
Funds available through 6/2023	\$1,846,276,793
Funds available to be spent after 7/2023	\$161,452,972

*Grant allocation March 2020 through June 2023. *Allocations to LAC DPH from federal CARES and ARP Act Coronavirus Relief Funds paid to County of Los Angeles.*

FIGURE 13. FEDERAL COVID-19 GRANT FUNDING ALLOCATED BY THE COUNTY TO LAC DPH (AS OF NOVEMBER 2022)²⁰⁷

Federal Funding Sources	Amount Allocated to the County	Amount Allocated by the County to DPH	% Allocated to DPH
CARES (March 2020)	\$1,415 M	\$206 M	15%
ARP (March 2021)	\$1,950 M	ARP Tranche 1 (July 2021): \$71 M ARP Tranche 2 (Sept. 2022): \$156 M	12%
Total	\$3,365 M	\$434 M	13%

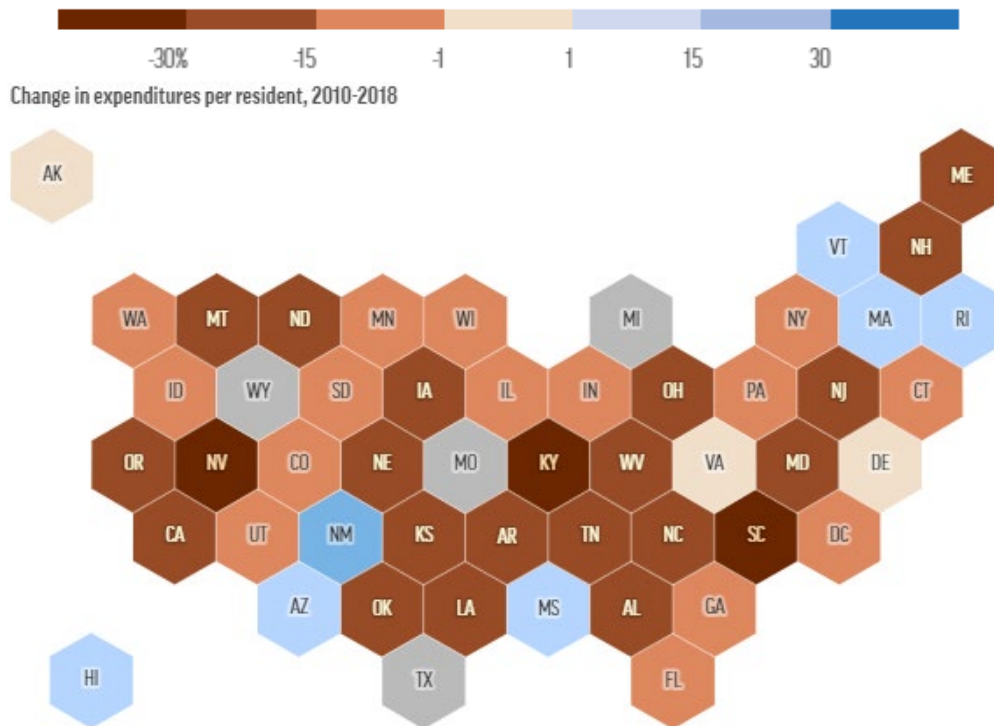
In addition to internal County contracting requirements described in the section below, the department faces restrictions from funding entities that hamper its ability to direct funds to the most pressing needs. Of LAC DPH’s COVID-19 funds, over \$1.8 billion must be spent by June 2023, and because most COVID-19 relief funding provided during the pandemic has not been renewed, LAC DPH must rely on County funds to deliver services as the pandemic

continues to evolve or face considerable budget shortfalls. Moving forward, LAC DPH requires more substantial and sustainable funding pipelines. While the County’s sphere of influence may be limited in the realm of federal funding advocacy, it has an opportunity to renew its commitment to public health by allocating a greater percentage of its budget to prevention and response activities as the pandemic evolves and new threats arise.

HISTORICAL UNDERFUNDING OF U.S. PUBLIC HEALTH

Public health spending per capita has declined significantly over the past decade, dropping 16% in state public health departments and 18% in local health departments.²⁰⁸

Changes in Per Capita Public Health Expenditures by State (2010-18)²⁰⁹



Staff data represents full-time equivalent employees. Expenditures are inflation-adjusted to constant 2019 dollars

Source: Association of State and Territory Health Officials Graphics: Hannah Recht/KHN, Francois Duckett/AP / Map data: Telegrams/NPR **KHN** **AP**

There have been surges of federal funding, but such funding has rarely been sustained. For example, the Prevention and Public Health Fund, as part of the Affordable Care Act, was cut to extend payroll tax cuts, reducing fund flow to local and state health departments by \$12.4 billion between 2010 and 2018.²¹⁰ The lack of consistent federal funding is exacerbated by the fact that state and local health departments rely on a patchwork of grants that are time limited, come with restricted use cases, and have flatlined as CDC funding continues to stagnate.²¹¹ In fact, some local health departments are disincentivized from building public health capacity due to limited funding.

Overview – Contracting and Expenditures Flexibility

The Board of Supervisors authorizes departmental budgets each fiscal year and also authorizes Departmental contracts during the fiscal year that are required to spend portions of the Departmental appropriation. Given the magnitude of the pandemic, the board delegated broad authority to the CEO’s Office to expedite a number of actions, including delegating authority to approve certain contracts. This was viewed as helpful and an important action to ensure the County was able to more flexibly and rapidly authorize expenditures as well as navigate the complex (and at times unclear) requirements related to one-time federal COVID-19 relief funds.

While positive, this change also came with a steep learning curve, new responsibilities, and the need to build new capabilities within the CEO’s office. Interviewees noted this change in protocol coupled with County budget pressures and the hiring freeze led to sometimes protracted funding approval processes.

In addition, the majority of federal funds to support the COVID-19 response were one-time funds and not budgeted departmental funds. As such, there were some restrictions on their use. For example, the funding could not be used to hire for permanent County-employed positions, although it could be used for some time-limited contracted positions. Interviewees noted that, due in part to concern about uncertain, frequently changing and complex federal funding requirements and potential future audits, it was perceived that the CEO’s office took a very cautious approach to funding COVID-19 investments. The bolus of one-time funding also came with strict time-limits for

expenditure which was critical to fund the pandemic response but also stretched contracting, procurement, and grants management teams across the County.

Even though LAC DPH is one of a small number of local health departments across the County that directly received Public Health Crisis Response funding from the CDC,²¹² for example, as a County department, it does not have the authority to spend the funding without authorization from the board or its delegate. The department also did not always have a clear line of sight as to how different funding streams would be applied to supplemental efforts from other departments, which - even though the funding uses were permissible and appropriate – made forecasting and resource management challenging.

It is hard to overstate how profoundly the COVID-19 pandemic disrupted and upended normal operations, even those under emergency response flexibilities. Urgency of action was paramount as COVID-19 cases were growing exponentially.

The resource allocation needs of the pandemic were not easy to predict, and LAC DPH found it needed flexibility to quickly deploy personnel and resources and to scale up and down requirements in contracts without the same degree of specificity employed in normal budget cycles. LAC DPH needed to make significant IT investments on rapid timelines that were previously unheard of. LAC DPH also had to augment its workforce, in many cases needing highly skilled workers who could be difficult to recruit into positions that may not have been contemplated prior to the pandemic, while its staff experienced the same COVID-19

conditions as the rest of the County, which put continual strain on manpower.

The hurdles and delays in expenditure and contracting authorizations caused operational and administrative friction. These challenges and the implications for LAC DPH’s core responsibilities were perceived to be particularly acute in the early days of the pandemic and during surges.

While creating nimbleness in local government is challenging, interviewees believe the COVID-19 experience made clear that creating greater flexibility for contracting and expenditures to spend any related pandemic funding, while meeting funding requirements is necessary during a pandemic while maintaining appropriate fiscal oversight and accountability.

Contracting with CBOs. As LAC DPH seeks to continue to build its network of CBOs across the County as a frontline connection to communities of focus, the department and potential CBO partners struggle with County contracting requirements, such as proof of insurance. Many not-for-profit CBOs serving Los Angeles County are operated by women and/or individuals from communities

disproportionately impacted by COVID-19, and many operate with razor-thin margins.

Restrictions related to paying these organizations up front for their services – since they do not have the financial flexibility to deliver services before payment – also complicates LAC DPH’s funding efforts.

Overview – Staffing Challenges

LAC DPH has been understaffed since the start of the pandemic. On March 31, 2020, shortly after the County declared a local emergency, it instituted a hiring freeze. While the hiring freeze excluded clinical positions, critical administrative and programmatic positions were affected. Nearly 60% of LAC DPH’s positions were subject to the hiring freeze,²¹³ and a resource-intensive exemption process prevented sustainable change. The burden on the department was exacerbated with the shift to 24/7 operations, necessitated by the pandemic. Even after the hiring freeze ended on October 5, 2021, the effects were long lasting. For example, in December of that year, shortly before the Omicron surge, LAC DPH reported the highest vacancy rate (21.8%) among County departments.²¹⁴

FIGURE 14. COUNTY DEPARTMENT HIRING FREEZE AND VACANCY DATA (AS OF DECEMBER 6, 2021)²¹⁵

Department	% Positions Subject to the Hiring Freeze	Vacancy Rates
DPH	59%	21.8%
DMH	32%	21.1%
DHS	11%	15.5%
Average Across All County Departments	N/A	12.4%

In order to address workforce challenges related to the COVID-19 response, LAC DPH reassigned 35% of its employees to full-time

COVID-19 roles.²¹⁶ In total, 80% of LAC DPH employees were either reassigned or redeployed on a full- or part-time basis to

support the COVID-19 response.²¹⁷ While these reassignments and redeployments bolstered the response to the pandemic, they impacted LAC DPH’s ability to operate non-COVID-19 public health programs. For example, the Tuberculosis (TB) Control Program reported two-month wait times for TB tests among PEH, attributable to the reassignment of LAC DPH’s TB Control Program staff to the COVID-19 response.²¹⁸ Additionally, 25%-30% of the inspections conducted by the EH Division were not performed, attributable to workforce

shortages and the demands of the COVID-19 response.²¹⁹ It is worth noting that County administration at times challenged LAC DPH’s staffing approach, particularly as the department sought to build a more permanent planning, integration, and engagement unit that reflected what was needed to continue a robust pandemic response that was coordinated and supported longer-term needs of public health infrastructure.

FIGURE 15. LAC DPH EMPLOYEE PROFILE (AS OF FEBRUARY 9, 2022)²²⁰

Staff Type	# of Employees
Clinical	1,311
Full Time	1,095
Part Time	216
Nonclinical	2,984
Full Time	2,804
Part Time	180
Total	4,295
Reassigned to COVID-19 Roles	1,520

In addition to reassigning and redeploying LAC DPH staff, the department adopted three major strategies to address workforce challenges:

1. **Leveraging contracting flexibilities:** LAC DPH onboarded 2,118 contractors to support the COVID-19 response across a wide variety of functions (e.g., testing, health equity, communications) and

professions (e.g., epidemiologists, nurses, administrative staff).²²¹

However, significant vacancies persist across multiple functions, including testing, operations, and CHW outreach. Within those functions, significant vacancies by profession include CHWs, nurses, and contact tracers.

FIGURE 16. VACANCIES BY LAC DPH FUNCTION (AS OF FEBRUARY 9, 2022)²²²

LAC DPH Function	Total Positions	% Vacant
LAC DPH Testing	60	48%
Laboratory Operations	19	47%
Operations Support	70	44%
CHW Outreach Initiative	84	44%

LAC DPH Function	Total Positions	% Vacant
Communications	12	42%
School Technical Assistance Team (STAT) and Exposure Management Unit (EMU)	102	32%
Disease Surveillance Operations /ACDC	301	28%
Case and Contact Interview Branch	526	21%
Mobile Vaccination Teams	145	21%
OMB	264	20%
POD Operation	231	15%
Contact Tracing Interview Branch (CCIB) and OMB Admin Team	9	11%
Vaccine Operations	82	9%
Health Officer Order Enforcement	66	3%
PEH Outbreak	99	1%
Health Equity	23	0%
PH Councils	5	0%
Sector Liaison	8	0%
Translation Services	12	0%
Total	2,118	22%

2. **Redeploying non-LAC DPH County staff:** During the height of the pandemic, LAC DPH leveraged non-LAC DPH staff to supplement emergency response functions. For example, through the County’s Disaster Services Worker program, about 400 library staff were redeployed on a part- or full-time basis as contact tracers and non-LAC DPH staff in limited outpatient settings. However, as reopening continued and non-LAC DPH staff returned to their original roles, burnout and competing priorities increased. Supplementing the LAC DPH workforce through non-LAC

DPH County staff became increasingly unsustainable.

3. **Onboarding temporary seasonal and volunteer staff:** LAC DPH leveraged COVID-19 relief funding to onboard seasonal staff based on needs. It also worked with organizations and schools to recruit over 200 volunteers. However, Los Angeles County can only sustain temporary seasonal staff for as long as funding is available. Given persistent workforce needs and the eventual expiration of COVID-19 relief funding, this workforce strategy will soon be unsustainable, despite ongoing need for their services.²²³

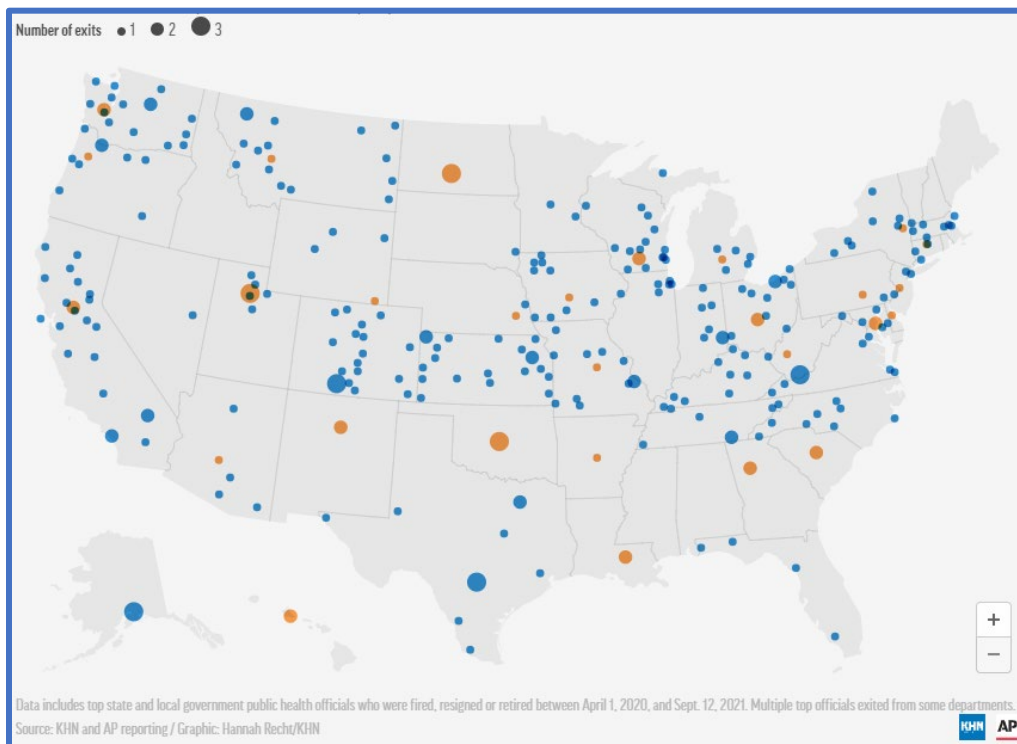
FIGURE 17. CONTRACTED, VOLUNTEER, AND SEASONAL STAFF (AS OF FEBRUARY 9, 2022)²²⁴

Staff Type	Number of Employees
Contract Agency Staff	2,213
Volunteers	249
Los Angeles County Temporary Seasonal Staff	396
Total	2,858

LAC DPH’s workforce challenges were exacerbated by, but not a product of, the pandemic. Turnover in the public health workforce across the country was increasing well before COVID-19, driven largely by the lack of career advancement opportunities and inadequate pay.²²⁵ Between April 2020 and September 2021, at least 303 state and local public health department leaders left their

positions, roughly equating to a loss of a local public health leader for every five Americans.²²⁶ Notably, LAC DPH has not yet experienced significant turnover in leadership but its workforce is not immune to larger market trends. Moving forward, LAC DPH needs the strategies and funding to sustain a robust workforce that can prepare for and respond to future public health threats.

FIGURE 18. STATE AND LOCAL PUBLIC HEALTH LEADERSHIP EXITS (APRIL 2020-SEPTEMBER 2021)²²⁷



In addition to supporting the COVID-19 response, LAC DPH is a major employer within the Los Angeles County government and needed to support its workforce with the tools and processes for remote work, as well as compliance with the safety measures that applied to all businesses, in addition to standing up its response efforts and infrastructure. Like many businesses, it needed to enable video call

platforms, procure laptops and other technology, and train workers in new technologies. LAC DPH also needed to supplement its workforce with temporary and contract staff – including, for example, contact tracers – and to ensure the temporary workforce had the appropriate technology, training in new systems, and training in County IT usage protocols.

XI. The Public Health Imperative Ahead for Los Angeles County

In discussing public health preparedness for the next public health crisis, interviewees for this review most often contemplated the notion of a viral or bacterial outbreak and the need to prepare for different ways in which it could be spread. Such outbreaks are indeed likely scenarios. However, some noted that other health emergencies are already playing out in real time.

One lesson from the COVID-19 pandemic and other infectious disease outbreaks is that early detection, intervention, and mitigation of individual outbreaks is an easier and less costly strategy than managing the consequences of an entrenched pandemic.²²⁸ Further, data suggests the threat posed by zoonoses – infectious diseases that jump from animals to humans – is on the rise.²²⁹

A strong, highly functioning, and sustainably funded public health capability in Los Angeles is essential. Interviewees identified specific public health crises for which Los Angeles County must prepare, including:

Continuing phases of the COVID-19 Pandemic.

At the time of this writing, in fall 2022, the COVID-19 pandemic is resulting in less-severe morbidity and lower mortality, despite periodic surges in cases. Nevertheless, COVID-19 remains a pervasive threat. New and more transmissible variants of the SARS-CoV-2 virus continue to emerge, causing waves of infection and reinfection that may require intermittent returns to nonpharmaceutical interventions such as face covering and limiting high-risk indoor activities. While great progress has been realized, vaccination and booster efforts must

continue. Further, COVID-19's long-term effects on health are largely unknown.

Despite the importance of sustaining COVID-19 response efforts, local public health departments, including LAC DPH, have been in an all-hands-on-deck exercise, with both expertise and manpower pulled away from other essential public health duties and programs and redeployed to emergency operations. The current public health staff cannot continue doing multiple jobs indefinitely, and many critical functions of public health have suffered from the diffusion of resources and strains on staff. Much of the funding provided to local health departments from grant programs (federal, state, and private), and even new COVID-19 response investments, is time limited, tied to specific uses, or both; as a result, many of the staffing gains for public health during the pandemic are (very) temporary. In addition, as Los Angeles County has worked to resume expanded business operations, many individuals from different County departments who temporarily augmented the LAC DPH workforce have returned to their core jobs.

The ongoing COVID-19 response work must become integrated into the daily functions of LAC DPH with the necessary skilled workforce and modernized supporting information technology systems and infrastructure, but doing so while shoring up critical public health work will require a higher level of resourcing than LAC DPH has been able to achieve prior to or during the pandemic.

COVID-19 is not the only infectious disease affecting residents of Los Angeles County.

While the pandemic understandably consumed a lion’s share of public health focus and attention across the past two years, LAC DPH continues to monitor and respond to other pathogens and diseases. Seasonal epidemics of community-associated viral respiratory infections such as influenza and respiratory syncytial virus (RSV) can cause serious illness, and even death, and require ongoing public health department capacity for surveillance, laboratory tests, communication, and intervention. Preventing the spread of other communicable diseases – such as the measles, hepatitis, tuberculosis, HIV/AIDS, West Nile Virus, rabies, and STDs, among others – remains an essential local public health responsibility and imperative for community health and security. Local public health is at the front line of identifying outbreaks, instituting safety measures to contain spread, and ensuring treatment.²³⁰

Notably, across 2022, Los Angeles County has witnessed a growing number of confirmed and suspected cases of Mpox, a rare disease caused by a virus that is not typically found in the U.S. While Mpox is not a new disease, the recent outbreak – deemed an outbreak of international concern by the WHO – demonstrated unprecedented levels of undetected community transmission in this country. As discussed earlier, the 2022 Mpox outbreak has in some ways mirrored the early days of COVID-19, including limited access to a centrally administered diagnostic test and concerns about stigma from the infection.²³¹ As with COVID-19, the federal, state, and local response will require implementation of a contact tracing function that is trusted and embraced by individuals and communities, the

capability to reach and educate those most vulnerable or susceptible to the disease, and for frontline HCWs to be fully informed and armed with treatment protocols.

Large-scale and pressing public health crises are not limited to infectious diseases.

Throughout the pandemic, Los Angeles County has also been fighting parallel public health crises: an opioid epidemic and a growing mental health challenge, particularly notable in youth and young adults.²³²

Deaths from accidental drug overdoses in Los Angeles County surged during the pandemic, with a 52% increase in the first ten months of the pandemic alone.²³³ In May 2022, the CDC reported that drug overdoses nationally reached an all-time high during the pandemic.²³⁴

Behavioral health needs, a significant challenge before the pandemic, exploded. In the months after COVID-19 reached Los Angeles County, calls to the County’s mental health helpline rose as much as 25%; in response to increased demands, LAC DPH’s sister agency, the Department of Mental Health (DMH), offered access to referrals and resources such as the Headspace app.²³⁵ Deaths due to drug overdose rose nearly two-thirds between 2019 and 2020, moving overdose to within the top ten causes of death in Los Angeles County.²³⁶

Equally concerning are the less visible, long-term debts against individual health and life expectancy because of the pandemic. Delays in both essential screenings and preventive care are expected to have serious repercussions. People who experience severe disability will enter a skilled nursing and long-term care sector that is struggling to address enormous

staffing challenges and institutionalize infection control practices. Undiagnosed and untreated serious health issues (including cancers), unmanaged chronic medical conditions, weight gain (for adults and children), increased substance use, and under-treated cognitive issues rose throughout the pandemic. And among those who have contracted COVID-19, some number will experience extended, activity-limiting symptoms.²³⁷

Public health crises are also caused by heat, natural disasters, and weather-related events.

Public health helps respond to and address the immediate needs as well as health-related effects of non-pathogen-related threats, which can include extreme heat, wildfires, earthquakes, and other natural disasters. Extremely high temperatures and heat waves can lead to heat-related illnesses, which are the leading cause of weather-related deaths.²³⁸ Aging populations, infants and children, pregnant women, and individuals with chronic conditions are especially sensitive to heat exposure.²³⁹

Heat-related illnesses also disproportionately impact poorer communities, agricultural workers, and other low-wage workers and essential workers who do not have access to shaded and cooling relief or air conditioning or who work at or live in sites that have inadequate air filtration and out-of-date HVAC systems.²⁴⁰

Heat and dry conditions also increase the risk for wildfires in Southern California. In addition to the devastating and immediate dangers wildfires bring, they also have far-reaching implications for air quality. A particular challenge in Los Angeles County during parts of the pandemic period has been dangerous air quality due to smoke from wildfires. Even as scientists confirmed that transmission of COVID-19 in outdoor settings was significantly less likely, millions of Angelinos were confined to indoor settings due to air quality concerns. The variable air quality also had repercussions for outdoor COVID-19 testing and vaccination sites.

The crisis of inequity. As with elsewhere in the U.S., COVID-19 morbidity and mortality in Los Angeles County traveled along pathways worn smooth by generations of structural inequality. Before the pandemic, County residents in some Los Angeles County communities could expect as much as a decade longer life than their neighbors in other communities.²⁴¹ These differences reflect disparities in exposure to environmental risk, chronic stress, lack of access to protective foods and activities, and lack of meaningful access to health care services. In terms of risk for infectious disease, poverty in Los Angeles County is, in effect, an underlying condition. The work of public health, both in responding to the crises outlined above and in strengthening the resilience of Los Angeles County in the face of the next pandemic, must address disparities and advance equity over the long term.

XII. Emerging Lessons and Cross-Cutting Recommendations to Strengthen LAC DPH

The County of Los Angeles and LAC DPH facilitated a strong response to the COVID-19 pandemic that undoubtedly saved lives.

Emergency preparedness, early threat identification and ongoing assessment, early and decisive action, relentless surveillance, frequent public information and increased data sharing, a passionate and committed core of public servants, and strong leadership have been hallmarks of LAC DPH's efforts to respond to the pandemic.

However, the magnitude, needs, and impact of the pandemic were overwhelming. Scaling up sufficient resources, standing up new capabilities (often in a matter of days or weeks), and seeking to respond to the daily threats to the health of the entire County population was an enormous task. The extended duration and recurring surges have been challenging and exhausting for both responders and the public at large. Long-standing systemic challenges, frequently changing federal and state guidance, resource constraints, and inherent tensions in the ability for government to be nimble were constant sources of friction for LAC DPH and its partners in County government.

A pandemic of this scale has not been experienced in a lifetime, and it stressed all functions of county government. While Los Angeles County is extremely experienced in emergency response, it quickly became clear that COVID-19 was a crisis of unprecedented proportions.

There are many lessons to learn and reflect on as LAC DPH and the County consider how to navigate the ongoing pandemic and strengthen their collective ability to mitigate impact and mobilize response strategies for future pandemics and other public health crises. A few themes, in particular, continued to rise to the top across the course of this review:

- Clarity of responsibilities and roles in pandemic preparedness and response is essential.
- An effective pandemic response requires flexibility and the ability to take actions and move resources quickly as the situation evolves.
- Confusion over the lead agency or authority to guide policy- and decision-making can hamper swift and coordinated response efforts.
- Strong, consistent public health leadership and capabilities on the ground are essential for public trust and to implement a whole-of-government response effort.
- COVID-19 laid bare the magnitude of health inequities and racial disparities in the County, and seeking to address them is an LAC DPH and County government-wide imperative.
- Effective communication in a pandemic is critical but extremely challenging.
- The future of public health is increasingly digitally enabled and real-time data and business intelligence capabilities are fundamental expectations for next-generation County public health capacity.

- LAC DPH employees are experiencing a high degree of burnout as the department’s staff continue to work tirelessly on the front lines of the pandemic response.

Public health sustainability and resilience are equally ambiguous and ambitious concepts. Inconsistent funding, compartmentalization, and de-prioritization have resulted in a less-than-optimal Los Angeles County public health system that needs investment, modernization, and stabilization to serve the needs of the County’s diverse population and to improve population health.

The spirit of this review is to recognize the accomplishments and learn from the challenges of the past two and a half years. The recommendations that follow seek to be forward-looking, building on what worked well and identifying where improvements can be made. They seek to both suggest practical and tactical steps that LAC DPH and its partners in County government can take and to recognize there are also systemic challenges that are not easy to address and do not have a quick fix.

The following begins with recommendations essential to sustaining and strengthening the resilience of Los Angeles County’s public health capabilities and preparing the County for the next large-scale public health crisis. These are followed by a series of transformational recommendations for LAC DPH to consider in its health emergency planning that would enable the County to advance its responsiveness and adopt an aligned and crosscutting approach to future emergencies.

These recommendations are based on the findings of this interim review. Given the vast

scope of the pandemic response and its ongoing nature, while they are important, they should not be viewed as comprehensive.

Sustaining Recommendations

Recommendation 1: Strengthening External Communications

Lessons to date:

Information about an ongoing health crisis, such as a pandemic, can be highly complex, as it can change frequently and is nuanced. LAC DPH made significant efforts to work with businesses, schools, and health care entities on clear and – over time – simplified requirements, and to educate these organizations on how to comply with state and local Health Office Orders. LAC DPH also regularly combatted health misinformation about COVID-19, vaccines, and treatments, as such misinformation itself was a public health threat. Two lessons from the pandemic are clear – the time and capacity needed to effectively manage public and stakeholder communications are extensive and should not be underestimated (or undervalued) and there is no one-size-fits-all communications strategy. Clear, data-driven messages from public health leaders to the public through multiple channels – news, social media, multilingual, etc. – are essential to build public trust and cut through misinformation and disinformation.

Recommendations:

1a. LAC DPH should consider the following actions to strengthen its communication capabilities:

- Outside critical periods where new policy information must be announced and

discussed, LAC DPH can use press conferences less frequently and emphasize not only data but also narratives that the press may use to reinforce LAC DPH guidance.

- LAC DPH leaders, deputies, and others who may be subject matter experts should receive media training to ensure comfort and competency in communicating key information during an emergency.
- Building on existing relationships, LAC DPH should continue to codevelop messaging materials with trusted community organizations within disproportionately impacted communities.
- Balancing the focus to refine detailed guidance, LAC DPH should establish and maintain general resources, including FAQs written at a fourth grade literacy level and using solely visual-based messaging, and consider developing or procuring short-form video content on topics such as “how to use a home test kit.”
- LAC DPH, the County, and the state should collaborate on public messaging campaigns that include visual aids, pithy repetitive messages, social media strategies, and resources for community-based partners to support public education and compliance with health and safety measures during a public health crisis. Emerging science in behavioral marketing can also be a useful tool for public health in determining whether campaigns and messaging related to everything from flu shot reminders to specific pandemic-related actions are effective.

1b. LAC DPH communications and media relations capabilities should be augmented during a large-scale public health crisis. It is not realistic to maintain such capacities in the course of normal operations at the same level the pandemic demanded. However, given the highly sensitive and complicated nature of accurately representing communicable disease information, LAC DPH needs access to experienced communications experts from public health, medical, and/or government policy fields. LAC DPH and the CEO’s office should determine whether such capabilities can be identified and leveraged from other departments or whether a short list of identified contractors can be maintained with expedited contracting when necessary in the event of a state or local health emergency.

1c. The County’s Emergency Operations Joint Information Center (JIC) is an important resource. LAC DPH and the CEO’s office should evaluate ways to maximize the JIC when operational during a local health emergency to ensure the distribution of consistent and accurate information during a health emergency. This evaluation should include identifying necessary minimum levels of substantive understanding for JIC roles to be able to expand and enhance support for public health-related communications in a crisis.

1d. LAC DPH should endeavor to give advance notice of new or changes to existing Health Officer Orders to allow employers and individuals time to take necessary steps to comply to the extent feasible, recognizing, however, that the protection of public safety and welfare in a health emergency will not always permit extended lead time and that the County Health Officer must also follow state guidance and timelines as applicable.

Recommendation 2: Advancing Equity by Addressing Social Drivers of Health and Aligning County Resources More Effectively for Those Most Vulnerable

Lessons to date:

The pandemic brought social and racial injustice and inequity to the forefront of public health and put a spotlight on the magnitude of U.S. health inequities. These inequities are the result of decades of systemic failures and biases, and at times were exacerbated by pandemic dynamics, such as which types of workers were deemed “essential” and some safety measures introduced by public health authorities. Per the CDC, “We need to work together to reduce the negative effects that COVID-19 community mitigation strategies have had on individuals and communities, including working to address inequities in the social determinants of health.”

Advancing health equity is complex and requires a coordinated whole-of-government response to “meet people where they are.” The responsibility and imperative are shared across County government – coordinated, cross-departmental/agency efforts with quick mobilization to implement strategies can save lives and support livelihoods. LAC DPH, with its partners across County government, has an opportunity to strengthen efforts to align and coordinate whole-person supports to address the disparate impacts of local health emergencies as a core strategy for pandemic and other public health crisis response efforts.

Extensive efforts went into scaling up LAC DPH’s response infrastructure, which can be a tool to help ensure residents have access to essential resources to both further mitigate the impact of the current pandemic and act as a foundational strategy in future efforts. While effective public

health response requires regularly identifying and addressing barriers people face to accessing resources and supports, the methods and the actions needed to ensure an equitable response will change depending on the situation and pandemic response tools available.

Recommendations:

2a. The need for contagion-mitigation related services – including vaccinations, testing, quarantine and isolation, and therapeutics – should be jointly assessed and offered with guidance on how to access other resources such as food, housing, enrollment in benefit programs, etc.

2b. While contact tracing generally involves identifying people who have an infectious diseases, identifying people who they came in contact with, and working with them to interrupt disease spread²⁴², contact tracing that is executed in a way that is appropriate to the needs of specific populations (including issues such as language, health literacy, cultural competency, access to health care services) can be an important component of strengthening the local public health infrastructure. LAC DPH should continue its efforts to establish contact tracing as a trusted community resource that can be applied as a broad outreach tool to serve at-risk communities, not only focused on slowing disease transmission but also on identifying people who could have needs or vulnerabilities and linking them with County services as appropriate. This would require training and a stable contact tracing workforce.

2c. Community investments, particularly in CHW initiatives, should help build up essential capabilities and channels of communication within prioritized communities during a health

emergency and aid in developing longer-term public health infrastructure in these communities. These relationships, if well-established, can also be helpful to reach certain communities in other types of disasters and emergency events.

2d. As LAC DPH develops and introduces safety measures to respond to a public health crisis, such as a pandemic, the broader County should – in parallel – consider the economic/financial, housing, mental health, transportation, and whole-person/family supports needed and implement mitigation strategies that counter or otherwise address the detrimental impacts that these policies may have on individual residents’ livelihoods.

LAC DPH and its partners in County government should identify ways to effectively collaborate to ensure future public health crisis response strategies implement meaningful access for vulnerable populations as quickly as possible, including:

- Linking Health Officer Orders for isolation and quarantine to resources that allow for individuals to be out of work and isolated from others as appropriate, such as rent relief and food assistance.
- Building a cross-departmental structure for making those linkages, refining it through tabletop exercises, and sustaining it in nonemergency times, ready for activation during emergencies.
- Incorporating strategies to balance the simplest and most effective ways to reach “the many” (e.g., mega drive-through vaccine PODs) with more rapidly advancing strategies to reach the most vulnerable, such as mobile vaccination clinics and pop-up sites, extended hours

and weekend walk-up testing and vaccination sites, and messaging and instructions in multiple languages, in health emergency and pandemic response plans.

- Working with County partners to ensure community members feel safe accessing public health services by effectively communicating how individuals’ information will and will not be used and shared with other agencies and engaging culturally competent, community-connected individuals as its frontline workforce.

Realizing this ambition will require enhanced, timely communication by LAC DPH with County government partners during a local health emergency and a structure to facilitate collaboration to ensure access to social services and other supports. LAC DPH and the CEO’s office should assess how the County’s Center for Health Equity can help outline the most effective strategies and action plans specific to local health emergencies.²⁴³

Recommendation 3: Building Stronger Stakeholder Relationships

Lessons to date:

The pandemic catalyzed stronger relationships and partnerships across the county. LAC DPH established and deepened many partner and stakeholder relationships with schools, government officials, hospitals, industries, physicians/clinics, and others over the past two plus years that it should nurture to sustain goodwill and facilitate swift activation in a future public health crisis.

Very personal, collaborative relationships were fostered, but turnover is inevitable both within LAC DPH and in the private sector. Of note, cellphone texting emerged as a key communications tool during the pandemic, but prior to COVID-19, emergency contact information for private-sector companies was not routinely updated by LAC DPH.

Recommendations:

3a. Timely and effective communications between LAC DPH and stakeholders is essential during the peak of emergencies; keeping the channels open through regular communications – even when there are not material updates – is also important during non-peak periods. A long-term communications plan should be developed that outlines the many types of communications needed for all the types of partnerships and communities represented across the state. Sector liaisons are critical and should be resourced and fostered through industry- and situation-specific briefings and technical assistance related to other pressing public health challenges that they or their staff may face. For those sectors regulated by LAC DPH, the department should continue the education-first approach to engagement and enforcement.

3b. In an effort to support more rapid and nimble outreach and communications during a public health crisis, and in support of future pandemic planning, LAC DPH should invest in relationship management software, including formalizing and maintaining a database of key contacts by industry sector, including emergency contact information.

3c. These relationships may also offer further partnership opportunities to advance the County’s and LAC DPH’s public health and

equity goals; conducting post-pandemic sector-specific debriefs and brainstorming sessions would be valuable.

Recommendation 4: Utilizing Public-Private Convening

Lessons to date:

Los Angeles County has a tremendous wealth of public- and private-sector expertise and resources that may be leveraged in a future public health crises to address similar issues.

Many interviewees indicated a willingness and desire to find ways to help LAC DPH and the County access academic, private-sector, and other subject matter experts and to participate on task forces, advisory panels, or working groups both to prepare for the next pandemic and to help with response efforts in the event of the next pandemic.

Such convening can be helpful and provide valuable insights and recommendations to the department but is time and resource intensive and must be appropriately staffed and managed in order to be effective. LAC DPH may seek to identify a public health-oriented foundation, university, or other entity that may be an effective partner to support stakeholder convening in the event of a future pandemic.

LAC DPH was able to effectively leverage philanthropic support during the pandemic to expand its partnerships with CBOs to strengthen its engagement with communities. In addition, some cities have sought grant and philanthropic funding sources (as well as using federal COVID-19 relief funds) to secure a public health corps to widen the base of CHWs cross-trained with the requisite skills to amplify the

message around public health and various thematic imperatives such as COVID-19 testing, preventive screening, and the wealth of information and services provided by local health departments.²⁴⁴

Some communities and states are identifying critical workforce needs to improve health outcomes and eliminate inequities. These jurisdictions are working in collaboration with collective bargaining entities and other partners to cocreate a workforce curriculum. For example, workforce investment organizations have been established to target direct care workers with the goal of supporting long-term health care workforce infrastructure through retraining, redeployment, and enhancing skill sets.

Recommendations:

4a. In coordination with the newly formed LAC Department of Economic Opportunity, LAC DPH may seek to engage a foundation or health policy nonprofit as a convenor of a public-private partnership focused on designing and funding the frontline public health workforce of the future. Establishing such a structure may promote targeted direction of philanthropy to play a critical supportive and facilitative role in future emergencies. With many donors interested in targeted impact, LAC DPH may shape opportunities related to developing the public health workforce of the future, advancing public health analytics, and building networks of health partners in disproportionately impacted communities, among other activities.

4b. In its post-pandemic analyses, LAC DPH should identify priority areas where more structured stakeholder collaboration and engagement could have been helpful to the

department’s efforts to ensure effective communication and implementation of Health Officer Orders (such as a clinical advisory task force or a vaccine/booster equity community advisory group).

Recommendation 5: Training and Recruiting LAC DPH Workforce

Lessons to date:

The pandemic has illuminated where LAC DPH needs to build bench strength, clarify succession planning, and train the next level of leaders to serve as strong deputies.

Recommendations:

5a. Recognizing that the skill sets and competencies to lead during a crisis may not be the same as those needed for daily operations, LAC DPH should review its emergency operations training and evaluate its personnel gaps.

- Ongoing training and drilling with a regular cadence would benefit tier 1 and tier 2 personnel. Various tabletop exercises of varying complexity and duration would enhance the capabilities of the department to maintain the necessary balance between core operations and incident command structure. It would create a second tranche of decision-makers and reduce burnout.
- Cross-training staff would help ensure they are more readily capable of flexing roles, including leveraging just-in-time training to reflect lessons learned and the emerging science of the public health crisis (whatever its form).
- Creation of ICS job aides (e.g., Job Action Seats) outlining available resources of

the position and decision-making criteria is recommended. These guides should be updated annually and be heavily guided by hazard vulnerability analysis and the most frequent scenarios for ICS structure activation.

5b. LAC DPH should build into its recruitment strategies methods to screen candidates to ensure they would be comfortable with flexing their roles, depending on potential needs of current and future public health crises, including project management skills to start up units and lead different projects, program planning, evaluation, leadership, innovation, and detail orientation skills to lead response efforts.

process can build buy-in among teams and empower ownership of problem-solving.

- Particularly when standing up new functions, leaders charged with building out these capabilities should be intentionally included in executive planning and decision-making discussions.
- Internal department-wide bidirectional communications efforts should be expanded – for example, via town halls and online messaging tools. Overcommunicating (until the internal team pushes back and asks for less) is critical in an emergency as well as in a largely virtual workforce situation.

Recommendation 6: Enhancing Communications within LAC DPH

Lessons to date:

While communication at the senior LAC DPH leadership levels was robust throughout the pandemic, sustaining effective and ongoing communications within a large organization during this emergency was challenging. Strengthening internal communications can help build bench strength during a pandemic.

Recommendation:

6. LAC DPH can strengthen internal communications between its executive team and midlevel managers and operators who may be capable of stepping into stretch roles but do not feel knowledgeable enough to be effective. Specifically:

- While admittedly very challenging to do during a fast-moving emergency response situation, providing a clearer line of sight into the decision-making

Recommendation 7: Expanding Workforce Supports

Lessons to date:

Many LAC DPH frontline staff experienced trauma in their professional and/or personal lives during the COVID-19 pandemic, including loss of family members, colleagues, and friends as well as threats to their personal safety as they worked to perform their job-related duties.

Recommendations:

7a. Strengthened mental health and social supports should be built into the department’s offerings to its teams.

7b. In response to the significant and ongoing threats that LAC DPH leaders and staff experienced throughout the pandemic, the state’s Safe at Home program should expand beyond its September 2022 modifications so it limits initial public disclosures of personal

addresses of select DPH staff, including departmental leaders and EH inspectors. LAC DPH should convene local health officers across the state to prepare joint recommendations to the California Legislature about how to better protect their and their teams' personal safety.

7c. Recognition and appreciation matters. LAC DPH and the County should both recognize the immense personal sacrifices of the County's public health workforce across this pandemic and build into future emergency planning compensation considerations as well as strategies to ensure a level of bench strength that will allow more manageable divisions of responsibility.

Transformational Recommendations

Recommendation 8: Ensuring Clarity Countywide of Roles and Responsibilities During a Health Emergency

LAC DPH's existing statutory authorities and leadership and operational responsibilities in a large scale health public health crisis should be clarified to enable the department to more effectively lead the response to a local health emergency.

Lessons to date:

A pandemic of this scale has not been witnessed in over a century. A lack of clarity around roles, responsibilities, and authorities, particularly related to public health, caused operational and administrative friction in early response efforts. The duration of the pandemic, with its dynamic and ever-evolving needs, also stressed County response efforts on multiple fronts.

Promoting public health and safety and saving lives is the top priority and mission of the Public Health Department. It is also the delegated governmental responsibility of the department and the County's Health Officer. Actions and policies to prevent the spread of infectious diseases and protect communities are not always popular but are necessary and must be grounded in science, expertise, and equity. Decision-making must necessarily be swift and decisive, particularly at the onset of public health crisis. Speed of action is critical and clarity of roles and responsibilities is needed to ensure alignment of County response efforts.

Early in the COVID-19 pandemic response, Los Angeles County implemented changes that shifted emergency response leadership to the CEO. Several interviewees reported these changes were positive and helped streamline some emergency operations. However, the COVID-19 pandemic tested the County's infrastructure in the context of a large-scale and sweeping health emergency. There was uncertainty about authorities related to resource mobilization and allocation between the CEO's office and LAC DPH. Because the ultimate responsibility for emergency response to a health-related local emergency was not clear, LAC DPH struggled to engage appropriate and timely resources to achieve goals and implement decisions.

There will inevitably be other crises when a local health emergency and a local emergency overlap, including pandemics, that require strong coordination across County departments to enable effective responses. The County should seek to further reduce friction in early decision-making and resource allocation in its responses.

Recommendations:

8a. In instances of a local emergency and local health emergency resulting from a contagious, infectious, or communicable disease (such as a pandemic), clarify and affirm the roles and responsibilities of the Director of Public Health and County Health Officer to promulgate Health Officer Orders.

In addition, in similar instances and based on its first-response capabilities, clarify LAC DPH’s roles and responsibilities for operational command and control, and deployment of public health resources to protect the public from ongoing communicable disease transmission.

8b. Evaluate potential revisions to sections of the Los Angeles County Code, including Section 2.68, to clarify roles and responsibilities in response to a local health emergency and local emergency arising from a contagious, infectious, or communicable disease.

Recommendation 9: Supporting Nimbleness in Pandemic and Public Health Crisis Response

A new Los Angeles County health emergency response framework is needed that provides resource flexibility, funding, and stronger coordination and collaboration to mitigate contagious disease outbreaks.

Lessons to date:

Given Los Angeles County’s position as a global economic and travel hub and its population density, LAC DPH has extensive experience in responding to emerging infectious diseases from around the world compared to most local health departments across the country. The County is fortunate (compared to many local

jurisdictions) that LAC DPH possesses the training and expertise to respond to a health emergency such as a pandemic through its experienced leadership, expertise in addressing contagions, long-standing partnerships with the CDC and other agencies to combat rare diseases that enter the region due to Los Angeles County’s economic and global travel positions, and access to state, federal, and world public health leaders. However, LAC DPH lacks the spectrum of necessary resources to ramp up as quickly as desired and needed to staff emergency responses.

Communicable disease emergencies take many forms. Some will be pandemic in nature and trigger a local emergency proclamation and the related governmental flexibilities under the Emergency Services Act. Others will be more limited in geographic or population impact (and may or may not require a local emergency proclamation) but will still require equal flexibility and nimbleness of response. In addition, a local health emergency proclamation can be issued under the California Health and Safety Code which grants broad powers to the Health Officer to prevent the spread of contagious diseases through the issuance of Health Officer Orders.

Recommendations:

9a. Los Angeles County should develop a new health emergency response framework to assist LAC DPH and its County agency partners in being more nimble in combatting communicable disease and ensures appropriate flexibility during multiple types of public health crises. The framework should ensure:

- LAC DPH receives stable, sustainable, and appropriately flexible funding during a health emergency to support a large-scale communicable disease emergency

response that addresses Countywide surveillance and mass testing, vaccination, and isolation/quarantining needs along with flexibilities to support the efficient application of funds, as appropriate, including:

- Expedited hiring approvals;
 - Ability to redeploy current staff into the ICS;
 - Rapid temporary approval of funding decisions with longer finalized approval processes to occur in parallel with use of funds; and
 - Ability to establish a County public health emergency reserve fund that can immediately be directed to the early stages of a local health emergency and/or a local emergency that requires rapid response from LAC DPH, with recognition that longer-term federal and state funds will be deployed to backfill these investments.
- Reduction of barriers to leveraging the County’s full assets and resources to support a coordinated response, including:
 - Establishing LAC DPH as a leader or coleader – rather than solely a subject matter expert – in driving a highly coordinated Countywide response (with appropriate linkages to the County’s Unified Command); and
 - Expanding and expediting procurement flexibility within the confines of federal and state requirements.

9b. Given the emergency functions that LAC DPH is responsible for, including advocating with state and federal governments and the obligations of ensuring compliance with Health Officer Orders, enhanced and more dedicated legal resources for LAC DPH are needed and should be evaluated.

Recommendation 10: Reducing Barriers to CBO Partnerships

CBOs and FBOs can be essential to the public health front line as they support the health, wellness, and economic needs of their communities. They must be empowered and resourced.

Lessons to date:

One lesson of the pandemic is that CBOs can be effective partners in addressing the needs of those most at risk and support the advancement of equity efforts, but many need financial and technical resources to strengthen their capacity and readiness in an emergency. These organizations are trusted in their communities and can help tailor public health messaging to their residents, distribute supplies like PPE, and connect residents to needed services like vaccines and treatments. In addition, the department can work with these groups to flex over the course of a pandemic so that it has appropriate staffing for periods of case surges and declines. These partnerships with LAC DPH are fragile and must be sustainably shored up. In addition, CBOs and FBOs cannot sustain reimbursement-based contracting; they are often strapped for resources and unable to adopt new responsibilities such as the ones they took on in the COVID-19 pandemic without parallel access to additional resources.

Recommendations:

10a. The County should reduce administrative barriers and simplify avenues to contract with CBOs in “normal” times – in addition to under emergency declaration – and establish long-term partnerships to advance the Board of Supervisors’ equity imperatives. Outside a health emergency, LAC DPH can work with these organizations to address other standing public health issues (e.g., STDs and mental health).

10b. The County should reevaluate its core contracting template requirements to determine whether certain provisions, insurance requirements, and other obligations are barriers to entry for businesses and not-for-profit organizations that are small and/or serve disproportionately impacted communities.

10c. The County should also seek to build on existing technical assistance programs to ensure these not-for-profit organizations are able to develop the capabilities to contract with local government.

Recommendation 11: Evaluating Compliance Tools

The County’s public health enforcement and compliance tools and flexibilities should be reevaluated through the lens of effectiveness and adequacy.

Lessons to date:

LAC DPH stood up a wide-reaching public health enforcement capability essentially on the fly to respond to needs to promote and protect public health and safety during the pandemic. While LAC DPH sought to implement an education-first approach to compliance with Health Officer

Orders and to take a measured approach to enforcement, the seriousness of the threat to public health during a pandemic requires a suite of effective enforcement tools.

Recommendations:

11a. While education and promotion of voluntary compliance with Health Officer Orders is likely to be heavily relied on in future local health emergencies, ensuring public health and safety in the event of contagious outbreaks, environmental hazards, or other health emergencies will at times require enforcement. LAC DPH, with its partners in the Office of the County Counsel, should review the County Code related to public health enforcement mechanisms as well as relevant policies developed during the pandemic and develop a set of recommendations regarding any additional compliance tools that may be necessary or helpful to protect public health during a pandemic, including whether different levels of administrative citations should be pursued.

11b. LAC DPH should work with the Office of the County Counsel to establish a shared process for rapidly evaluating egregious and/or repeated violations of Health Officer Orders and expediting enforcement actions in line with due process considerations.

Recommendation 12: Enhancing Public Health Information Technology

Significant investments are needed in IT systems, analytics capabilities, and expanded health IT interoperability that includes public health. This is a shared federal, state, and County responsibility.

Lessons to date:

During COVID-19, LAC DPH was challenged by outdated information technology, data interoperability, data analytics, and business intelligence capabilities. LAC DPH initiated modernization efforts in its data collection and systems during the pandemic, but the department requires sustained commitment and focus to ensure its capabilities are well prepared for future events. The need for data strategy and experienced professionals across multiple aspects of data management and information technology systems will continue, even grow, at the same time as funding for the pandemic response decreases. LAC DPH’s need for expanded analytic capabilities and modernized systems extends well beyond communicable disease control to include many health promotion efforts. This is not easy and will require funding and new policies at the state and federal levels in addition to local efforts.

Recommendations:

12a. Improvements to data systems – with increased access to near-real-time insights and greater transparency and more advanced genomics surveillance (including tracking the spread of and monitoring changes to the genetic code of variants) – must continue to ensure LAC DPH has the competencies and capabilities to build a digitally enabled public health infrastructure and system as well as

analytics and business intelligence skills to support a culture of data-driven decision-making.

12b. The pandemic served as a catalyst for changes in work, including the development of effective systems for remote work. Competition for a skilled health IT workforce is particularly steep, especially in the Los Angeles County market. Much of the core work to support LAC DPH’s work to expand cloud-based solutions and stand up new analytics capabilities can feasibly be supported through remote work. In addition, many IT resources are needed at odd hours and require staff to work nonstandard shifts. LAC DPH’s investments in remote work capabilities may provide the department with access to a much broader talent pool potentially including software developers, coders, web developers, programmers, and many others. LAC DPH and the CEO’s office should investigate flexibilities that would allow selected positions to be exempt from in-office policies going forward.

12c. LAC DPH should expand its department-wide data management and business intelligence skills and career pathways and seek to continue cross-departmental, rather than program-based, data analytics capabilities to the extent possible.

12d. The County should evaluate ways to support the modernization of public health data infrastructure, ensure that investments are made focusing on solutions and platforms that are efficient, scalable, and interoperable, and increase the sophistication of data visualization to advance business intelligence, with specific attention to:

- Monitoring and responding to evolving state activity related to health

information exchange (HIE) development and electronic reporting requirements and California Advancing and Innovating Medi-Cal (CalAIM) delivery system investments and the growth in provider networks that may support improved data related to social drivers of health.

- Further engaging with the Los Angeles Network for Enhanced Services (LANES) HIE and associated clinical data so that during a local health emergency, LAC DPH can easily gain access to both the data and analyses to better understand the progression of a pandemic.
- Advocating the state require and support broader hospital participation in electronic surveillance and reporting systems, including syndromic surveillance, strengthening associated early alert signals, and gaining access to disease severity and demographic data of patients.

12e. To the extent possible and feasible, as LAC DPH seeks to replace and modernize its core Public Health systems (including its surveillance infrastructure), interoperable data exchange between the County and state systems should be prioritized. This would require collaboration on design requirements and may necessitate some flexibilities in procurement requirements.

Recommendation 13: Stabilizing LAC DPH Workforce

LAC DPH has an imperative to implement strategies to stabilize and retain its workforce while positioning itself as a destination for the public health workforce of the future.

Lessons to date:

The LAC DPH team stepped up to fulfill its responsibilities in an unprecedented way over the past two years. However, not only has the field of public health changed as a result of this pandemic but the U.S. workforce has also changed, and LAC DPH must determine how to compete as an employer in this new environment. Further, burnout and exhaustion across the LAC DPH staff – as it is across all frontline responders to the pandemic – is a very real and prominent threat to the stability of LAC DPH’s workforce as the County enters the next phase of the pandemic.

Recommendations:

13a. LAC DPH must consider the phenotypes and skill sets of the public health workforce of the future – including how to educate and recruit these individuals. It may consider deepening relationships with local schools of public health and nursing to expand its pipeline.

13b. LAC DPH and the County must plan for turnover and ensure flexibility and nimbleness in recruitment and hiring. Rather than reverting too quickly to lengthy hiring processes, LAC DPH should work with the CEO’s office to build on recruitment/retention efforts that are already underway and consider maintaining some hiring efficiencies that were introduced during the COVID-19 pandemic.

13c. LAC DPH must work with the County to ensure consistent and stable funding as a necessary component of maintaining a robust, highly-skilled, and nimble workforce in the future.

13d. After LAC DPH makes hires, the department should expand its training capabilities to ensure that each program leader

has a deputy who can effectively fill in for them at points when departmental leaders take necessary breaks to attend to their or their families' physical and mental health.

Further Observation:

Stabilizing public health. Public health has long been caught in a cycle of one-time funding boluses (H1N1, Ebola, Zika, COVID-19), with limited ability to strategically invest funding for pan-emergency response capacity followed by deep funding cuts. Public health is “working” when the public is unaware of public health threats and the efforts the department is taking to address them, which makes it hard to prioritize funding when many crises compete for limited governmental dollars. While public health agencies try to be strategic during an

emergency response, many of the solutions are situation limited – for example, a COVID-19 vaccine scheduling software solution is important at a key point in time but does not solve the problem of interoperable case reporting and the ongoing staffing needed to produce expanded data sets.

LAC DPH must have more fungible, unrestricted funding to build systemic capabilities and enhance core functions, rather than investing only in grant-dependent capabilities. Predictable and more flexible funding is critical to ensure a resilient public health capability. Public health is largely funded by federal, state, and local government. The pandemic has shown that a national effort is needed to support a new approach to public health infrastructure development.

XIII. Appendices

A. Mission and Organization of LAC DPH

LOS ANGELES COUNTY DEPARTMENT OF PUBLIC HEALTH

Vision:

Healthy People in Healthy Communities

Mission:

Advance the conditions that support optimal health and well-being for all. Protect health, prevent disease, and promote health and well-being for everyone in Los Angeles County.

Values

Equity: We collaborate with public, private, and community partners to ensure just systems, policies, and practices that eliminate gaps in health outcomes and lead to optimal health.

Inclusivity: We honor the dignity and worth of all people and create welcoming environments that invite and sustain meaningful engagement with people and organizations that represent diversity in experience, thought, and culture.

Collaboration: We promote, nurture, and honor partnerships with our employees, community partners, and residents to strengthen our capacity to accomplish shared goals.

Accountability: We act with transparency and integrity as responsible stewards of public funds.

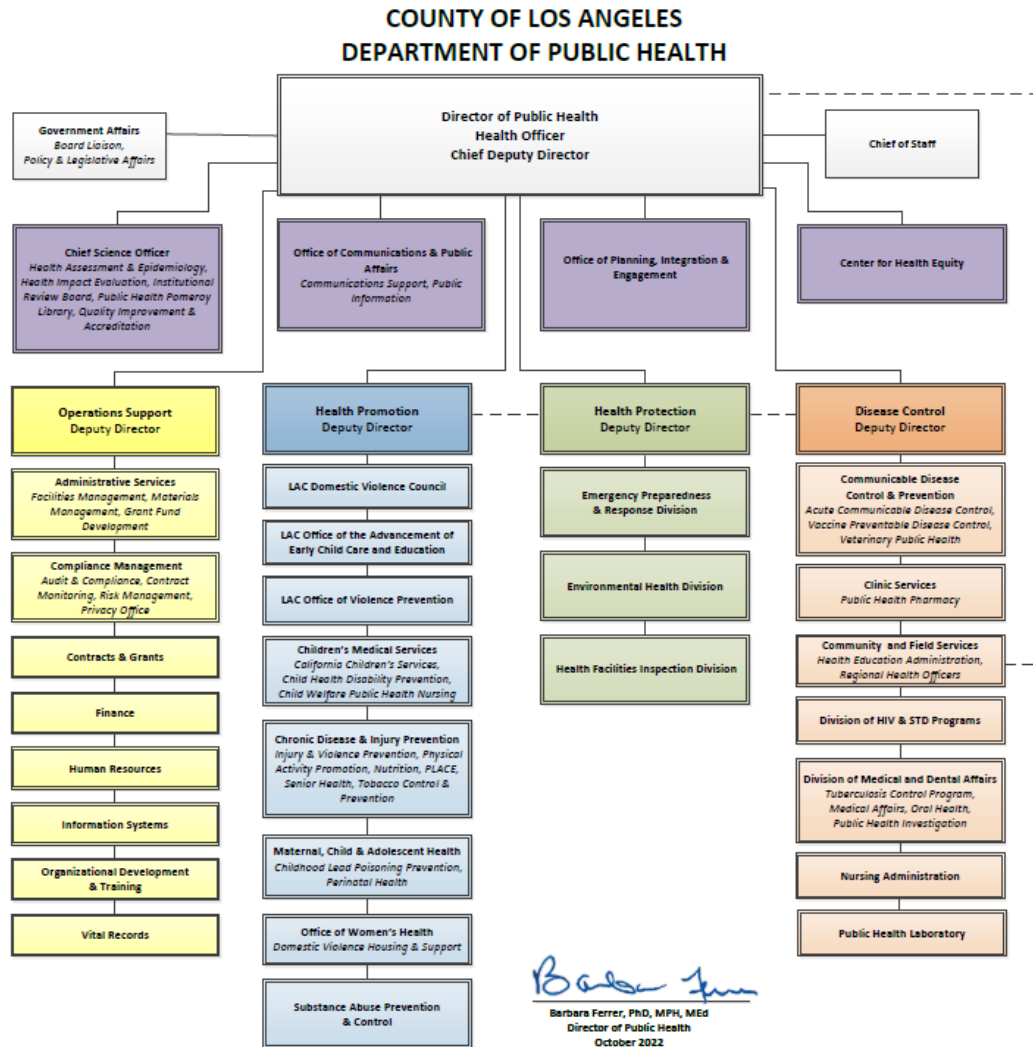
Compassion: We treat each other and those we serve with respect, kindness, humility, and empathy.

Quality: We utilize state-of-the-art science, best and promising practices, and continuous improvement to maintain and enhance program efficiency and efficacy.

Innovation: We embrace new approaches to address challenges that are too complex to solely rely on proven practices.

Leadership: We are recognized throughout the field for our innovative programming and community-driven strategies that transform systems, policies, and practices.

TABLE OF ORGANIZATION



LAC DPH Programs²⁴⁵

- [Acute Communicable Disease Control](#)
- [Cardiovascular Health Program](#)
- [Center for Health Impact Evaluation](#)
- [Children’s Medical Services](#)
- [Chronic Disease and Injury Prevention](#)
- [Communicable Disease Control and Prevention](#)
- [Communications & Public Affairs](#)
- [Community Health Services](#)
- [Contracts and Grants Division](#)
- [Data Collection & Analysis Unit](#)
- [Division of HIV and STD Programs](#)
- [Domestic Violence Council](#)
- [Emergency Preparedness and Response Program](#)

[Environmental Health](#)
[Epidemiology Unit](#)
[Health & Aging Services](#)
[Health Assessment](#)
[Health Education Administration](#)
[Health Facilities Division](#)
[Human Resources](#)
[Injury & Violence Prevention Program](#)
[Institutional Review Board](#)
[JUMPP – Joint Shared Use Moving People to Play Task Force](#)
[Lead Program](#)
[Maternal, Child, and Adolescent Health](#)
[Medical Affairs Program](#)
[Medical Marijuana Identification Program](#)
[Nutrition Program](#)
[Office of Health Assessment and Epidemiology](#)
[Office of Planning](#)
[Office of Senior Health](#)
[Office of Violence Prevention](#)
[Office of Women’s Health](#)
[Oral Health Program](#)
[Organizational Development & Training](#)
[Policies for Livable, Active Communities and Environments \(PLACE\)](#)
[Public Health Education for Physicians](#)
[Public Health Investigation Administration](#)
[Public Health Laboratory](#)
[Public Health Library](#)
[Public Health Nursing](#)
[Quality Improvement & Accreditation Program](#)
[Substance Abuse Prevention and Control](#)
[Tobacco Control and Prevention Program](#)
[Toxics Epidemiology](#)
[Tuberculosis Control Program](#)
[Vaccine Preventable Disease Control Program](#)
[Veterinary Public Health](#)
[Web Informatics](#)

B. Internal and External Interviewees

In addition to a series of initial interviews and follow-up conversations with over 45 leaders and staff within LAC DPH, Manatt conducted a series of interviews with stakeholders across the state and County, largely between March and early June 2022.

Los Angeles County Government

- Los Angeles County Board of Supervisors Offices
 - Office of Supervisor Barger, Fifth District
 - Office of Supervisor Hahn, Fourth District
 - Office of Supervisor Kuehl, Third District
 - Office of Supervisor Mitchell, Second District
 - Office of Supervisor Solis, First District
- Los Angeles County Chief Executive Officer’s Office
- Los Angeles County – Office of Emergency Management (OEM)
- Los Angeles County Department of Health Services (DHS)
- Los Angeles County DHS, Housing for Health and Correctional Health Services
- Los Angeles County Department of Mental Health (DMH)
- Los Angeles County Internal Services Department (ISD)
- Los Angeles County Library
- Los Angeles County Office of Education (LACOE)
- Los Angeles County Sheriff’s Department (LASD)
- Los Angeles Homeless Services Authority (LAHSA)
- Los Angeles County Probation Department
- Superior Court of Los Angeles County

State Government

- California Department of Public Health (CDPH)

Other Government

- City of Beverly Hills – Risk Management
- City of Long Beach – Mayor’s Office and Department of Health
- City of Los Angeles
 - Mayor’s Office
 - Los Angeles Fire Department (LAFD)
 - Los Angeles Police Department (LAPD)
- City of Inglewood – Emergency Services
- City of Pasadena – Public Health
- Orange County – Public Health
- Riverside County – Public Health
- San Bernardino County – Public Health
- San Diego County – Public Health

Nongovernment

- TK-12 Schools and Related
 - Archdiocese of Los Angeles
 - California Teachers Association (CTA)
 - Los Angeles Unified School District (LAUSD)
 - Village Christian School
 - *(Note LACOE above as part of County government)*

- Higher Education
 - Claremont McKenna College
 - Los Angeles Community College District
 - Pepperdine University
 - University of California Los Angeles (UCLA)
 - University of Southern California (USC) Student Health, Keck School of Medicine
 - West Coast University

- Hospitals
 - Cedars-Sinai Medical Center
 - Hospital Association of Southern California (HASC)
 - Kaiser Permanente
 - UCLA Hospital System

- FQHCs and Clinics
 - Clinica Romero
 - Community Clinic Association of LAC (CCALAC)
 - Kedren Health
 - St. John's Community Health

- Pharmacies
 - Albertsons Pharmacies, Southern California Division
 - Pico Care Pharmacy

- Other Health and Health Care
 - California Association of Health Facilities (CAHF) *(SNFs and long-term care)*
 - LA Care Health Plan
 - Los Angeles County Medical Association (LACMA)
 - Union of American Physicians and Dentists (UAPD)

- Community Focused and CBOs
 - California Community Foundation (CCF)
 - Community Health Councils, Inc. (CHC)
 - Community Partners, Inc.
 - Soledad Enrichment Action CHWOI
 - Temple of Deliverance Ministries – Palmdale
 - Union Rescue Mission

- **Businesses and Business Representatives**
 - California Restaurant Association (CRA)
 - Crypto.com Arena/Microsoft Theater/L.A. Live
 - Hollywood Bowl
 - Los Angeles Convention Center
 - Los Angeles Dodgers
 - Los Angeles Football Club and Banc of California Stadium
 - Los Angeles World Airports/LAX
 - Los Angeles Lakers
 - Los Angeles Tourism & Convention Board
 - Ritz-Carlton, Los Angeles & JW Marriott Los Angeles at L.A. LIVE
 - Six Flags Magic Mountain and Hurricane Harbor
 - Sushi Nozawa Group
 - SoFi Stadium
 - The Gardens Casino
 - Universal Studios Hollywood

- **Labor and Labor Related**
 - Food Sanitation Advisory Council
 - International Brotherhood of Teamsters
 - Labor Community Services (LCS) Los Angeles County
 - Los Angeles County Federation of Labor
 - Unite Here Local 11

- **Media Organizations**
 - Los Angeles Times
 - KABC-TV Los Angeles
 - KPCC/LAist

C. Summary of Listening Session Themes

Manatt Health conducted 14 listening sessions with a total of 155 community members. Participants were from communities that were disproportionately impacted by COVID-19 and included frontline workers, homemakers, educators, retirees, CHWs, disability rights and special populations advocates, local spokespeople, and students. One focused session was held for a group of community promoters from East Los Angeles, and two sessions were held for parents of school-age children. There were several participants from broader geographies beyond the focus areas, including Long Beach, Culver City, Venice, and Santa Monica. The sessions were conducted in English, Spanish, or Mandarin. LAC DPH engaged its community partners to recruit participants and participating community members were compensated for their time.

Due to the limitations imposed by the pandemic, the 90-minute listening sessions were conducted virtually on an online videoconferencing platform (Zoom). In all sessions, participants generally preferred to be off camera during the sessions and frequently participated verbally as well as via the Zoom chat function. Participant engagement tended to increase over the course of each session, suggesting that people may have felt more comfortable speaking up to provide their input after observing participation from other attendees.

LAC DPH awareness. During initial polls at the beginning of each listening session, 40% of participants indicated familiarity with LAC DPH and 33% of participants indicated they had received COVID-19 information from LAC DPH.

Participants generally signaled a perception of the County as one health entity and often interchangeably used “DPH” and “DHS” when describing roles and responsibilities with a lack of division or attribution to specific agencies. Participants also expressed their perceived alignment of local guidance but noted differences between local orders and those provided in other states and at the federal level.

LAC DPH as an information resource. Participants spoke to variable frequency of and purposes for utilizing the LAC DPH website: some sought COVID-19 data and statistics on occasion while a larger number of participants used the website for personal and community guidance and information. More than a dozen participants were aware of LAC DPH’s Twitter and Instagram pages and cited them as helpful news sources.

“In my household, the most trustworthy information was information we got from [LAC] DPH because they were the ones with the data that helped us understand where we were overall, how many cases we had, and how people were impacted. It was very helpful, and I found it very trustworthy.” – Listening Session Participant, May 2022

Understanding that guidance needed to rapidly change, some individuals found LAC DPH’s website difficult to navigate, especially as sector-specific updates were found across multiple locations on the site. Many more participants reported successfully obtaining helpful information from LAC DPH’s website and spoke to the value of having a single true north for complex and developing information. Interestingly, some individuals questioned the accuracy of LAC DPH’s positive case data due to both a perceived lack of testing availability within their communities (some citing the need to travel across two localities to obtain a test) and the lack of self-reporting results from rapid tests. About a third of the participants signed up for LAC DPH listservs and other communications services that provided them with important updates.

Very few people had knowledge of the LAC DPH COVID-19 call centers or received one-on-one support from the 2-1-1 helpline. Those who had used the call center spoke of long wait times to speak with a representative and a small number of participants had their calls end prematurely.

Community promotores shared that LAC DPH provided helpful educative resources to their organizations (such as flyers), which helped combat misinformation, reduce the fear within their communities, and educate elderly community members. When asked if they found other communication channels from LAC DPH beneficial, some participants mentioned how helpful it was to see joint press conferences between LAC DPH and other officials on their televisions. A small fraction of attendees said they were not aware of the LAC DPH-organized town halls until after they were held, while others attended and found them very informative but craved more engagement during the Q&A portions of the meetings.

“The town halls were more people talking at us, and they were selective about the things they wanted to address. I attended a few town halls but found it frustrating that the chats were disabled and during the Q&A I was not being chosen. I am really enjoying this session and think that the powers that be should have been more engaging with people during the town halls. Public engagement would have made a big difference.”

– Listening Session Participant, May 2022

More than a dozen attendees described the need for updated online information in different languages (particularly Asian languages) and explained that as mandates and recommendations evolved, the multilingual resources were sometimes lagging updates or were only available in a few languages. A couple of participants who responded noted that these resources should be accurately interpreted by certified translators. In more than half of the listening sessions held, participants also expressed a desire for visually focused guidance that required limited text for comprehension; simple videos were requested (disseminated through platforms such as YouTube or TikTok) on how to use at-home test kits, for example, for those who are challenged by reading in English and/or find instructions challenging. Additionally, people elaborated on their strong desire for consistent and bidirectional communication from health officials to ease panic and uncertainty. In the session for community promotores, and a couple of other sessions, participants mentioned that receiving mail from LAC DPH would have helped curb the spread of misinformation, since some people may not have easy access to the internet but

most can receive mail. Acknowledging that nuanced information might be dated by the time the mail arrived, there was certain guidance that remained constant throughout the pandemic’s course such as the need to wash hands, remain socially distant, reduce mass congregation, and maintain a testing cadence.

Reliance on social media and TV as information sources. Although there were many sources that participants relied on for COVID-19 news and updates, almost all participants used social media as their primary sources of evolving information about the pandemic, with Facebook and Twitter the most popular sites. Although a dozen shared their awareness of LAC DPH’s Twitter and Instagram pages, most of the respondents were either unaware of their existence or gravitated toward other local news pages and community groups to obtain COVID-19-related news on social media sites.

Nearly all who responded shared their reliance on television news outlets for updates and general awareness of local pandemic-related changes, but a smaller fraction of attendees were skeptical of the information from news outlets as it was not congruent with information shared by the aforementioned sources.

“The news provided information but sometimes it was manipulated, and that can be confusing. Instead, they should ensure that the information is accurate.” – Listening Session Participant, May 2022

Trusted sources beyond LAC DPH. Family physicians and primary care providers were cited as the most trusted sources of information during sessions. Other trusted sources of information included celebrities, religious leaders, the CDC, the WHO, and other health professionals, especially those on television. When asked about what makes sources credible, most respondents cited feeling a heightened sense of trust from licensed health professionals, scientists, and those identified as community liaisons representing LAC DPH in public settings such as grocery stores and health centers.

Schools. Parents noted their confusion related to the abrupt school closures and reported getting related updates via phone calls from others in their network as well as from churches, social media, and direct communication from County agencies and school districts.

“Our superintendent in the school district would email weekly, and we also got messages from principals. None of our teachers knew after that Friday that they won’t be coming back.” – Listening Session Participant, April 2022

The LAC DPH school ambassador program was viewed as a positive resource, as several parents reported that they had relied on these ambassadors for information about the COVID-19 virus and supportive services. Parents also noted the trust they had in teachers. In reference to improving children’s knowledge and awareness of the pandemic, one parent suggested increased use of teachers as educative resources during the current and future health emergencies.

Testing access. Session attendees learned about testing from trusted sources, particularly social media, the CDC website, health care professionals, local politicians, and local news. Most participants perceived testing as broadly accessible. While most respondents found that testing was harder to access at the beginning of the pandemic but is now easier to locate, a smaller subset noted that testing continues to be difficult to find and a few flagged that the closest testing sites were cities away from their communities. More than a dozen participants elaborated on their deterrence from testing due to long wait times, testing fees, or the inability to go into work if they received a positive test result.

“I think it was a bit difficult to test. A lot of people wanted to get tested and the locations nearby only took appointments. At first, there were no walk-in options, only by appointment. We had to make an appointment and wait for a week, maybe even longer, to get tested because there were so many people.” – Community Promotora, May 2022

More than half of respondents also noted their initial hesitancy to test, citing concerns about what it could mean if they tested positive and were not able to take time off work and/or lacked access to adequate childcare while they were sick. Some attendees mentioned that there were too few home test kits available to their households, especially in multifamily residences and those in intergenerational households. Many people shared that they received information about where to go for testing on their phones through text messages from physician offices, from County agencies, and through the news. A handful of parents reported receiving these texts through their children’s schools.

Vaccine access. Most participants obtained information about vaccines through social media and from family physicians. However, social media was also noted as an avenue to spread myths and misinformation about vaccines, and participants expressed frustration with LAC DPH for not intervening sooner to combat these myths. There is a known mistrust of vaccine efficacy and a history of medical experimentation that some attendees expressed. About half a dozen attendees also shared their preference for more natural and holistic approaches to preventing themselves from getting COVID-19, such as eating a balanced diet to boost their immune system and taking herbal remedies.

A handful of respondents noted that their minds were changed about becoming vaccinated based on conversations with a family member, friend, or religious leader, or when a public persona (such as a politician) openly received the vaccine. Opinions also changed when any of the aforementioned influencers contracted the virus or died from COVID-19-related complications.

“Earlier, I was one of those people [who] was pretty clear I didn’t want it for me or my household. I waited a long time until I saw others get the vaccine. I waited until several age groups got it, and what changed my mind is first the clinic gave me information and [it] also offered the vaccine and explained the vaccine to me. I talked about it with my family and then my husband, [I], and my mom got it, and then my children. We changed our minds because several people in my family got COVID-19 and we lost two people in our family due to COVID-19.” – Listening Session Participant, May 2022

Most participants discussed the initial challenges in navigating the process of obtaining COVID-19 vaccines, though it has gotten much easier now. The online registration system was challenging for people to use and there were transportation barriers. Upon arrival to large vaccination sites (megaPODs), there were long wait times (two to three hours) and lines, which were particularly discouraging for those facing long workdays. Some participants were confused by wayfinding signage at mass vaccination sites. One participant noted the process was streamlined once she and her grandparents interacted with the registration and nursing staff.

Some participants were unaware that vaccines were free and expressed frustrations about their perceived high cost; provider offices were noted as places where vaccination expenses were being covered.

COVID-19 treatment options. Most session participants had little knowledge of the available COVID-19 treatment options. There was mention of treatment only being encouraged for severe cases or being hard to obtain, requiring lengthy travel to access it. The media (television news, radio) was cited as a source of disseminating information on treatment by most attendees. Many community members expressed their desire for additional education on treatment options. During one session, two participants noted their awareness of COVID-19 treatment options was a result of the listening session line of questioning and “wished they had known prior.”

Hardest aspects of the pandemic. Individuals reported that the hardest aspects of the pandemic were being isolated for long durations, not being able to visit loved ones or care for family members when they were positive with COVID-19, facing financial hardships related to losing jobs and/or receiving pay cuts, and experiencing the daily fear of bringing the virus home to their families.

“For those [who] lost their jobs, I feel like the government didn’t do enough to help them. People were frustrated and the health of the public worsened as there were not enough resources to help them. It’s stressful and mental health is terrible right now. I think that was the hardest part.” – Listening Session Participant, May 2022

Additionally, the imposed curfews and lockdowns had challenging ripple effects for essential workers who relied on public transportation to get to and from work, particularly for those working multiple jobs with odd hours and having to rely on transit and ride shares to get to them. These aspects of the pandemic led to a lot of anxiety for a large majority of community members. A large number of participants reported being on the verge of financial and emotional crisis during the shutdown and shared their feelings of isolation and loneliness and fear of homelessness. One parent noted that the ability to have paid COVID-19 leave and extra days off from work and school to quarantine with their children, without fearing potential job loss, was very reassuring.

Close to a dozen session attendees had family members who died from COVID-19-related complications. People wished they had understood earlier the seriousness of the pandemic, what the right safety protocols were, and the importance and effectiveness of precautions such as distancing.

“For me, it was difficult to believe that you could get sick through contact with someone else. I remember in the beginning, my doctor told me, ‘You have nothing to worry about.’ They said my health is normal and, ‘If you catch this it will be like a very bad flu but you don’t have to worry about dying.’ It was reassuring to me and my family but I knew people who ended up dying and a lot of people close to me died.” – Listening Session Participant, May 2022

More than two dozen people also shared that they were in living situations that were not conducive to social distancing, facing challenges in adequately isolating from elderly loved ones, children with special needs, and immunocompromised family members. It was difficult for participants to take care of these family members while facing further challenges with grocery shopping due to long wait times, supply shortages, and the fear of bringing the virus home.

Several parents described the difficulties of raising children with special needs during the pandemic, particularly related to the disruptiveness of interrupted daily care routines and their restricted ability to receive timely care for urgent health issues. Some parents are worried about the long-term effects of the pandemic on their children, particularly related to virtual learning and lack of access to a balanced selection of food options.

Participants expressed frustration about the points in the pandemic where the virus and appropriate responses were in flux and reiterated the desire for consistent communication from County departments at these times.

There was consensus among participants that the COVID-19 pandemic took a toll on the mental health of community members. Attendees noted that the pandemic was associated with the onset of depressive and/or anxious feelings or the worsening of preexisting mental illnesses. Almost all respondents shared that they observed the enormous mental toll that the pandemic took in their communities, making specific mention of seniors living in homes, individuals with special needs, and PEH. During several sessions, participants shared personal anecdotes of trying to assist a child with special needs, attempting to visit family in nursing homes, or trying to support loved ones or neighbors they knew were under economic or psychological duress. They expressed a desire for additional resources to support the mental health needs in their communities, including support in multiple languages.

“I don’t know if this counts, but during this time I was most interested in mental health. I was going somewhere for mental health meetings held by mental health professionals. They shared info about COVID-19 and they talked about how the experience impacted us from a mental health perspective.” – Listening Session Participant, May 2022

Opportunity areas for LAC DPH to strengthen community relationships. In all sessions, community members seemed unaware of many of the educational resources that are currently provided by LAC

DPH for the community; several participants shared their desire for podcasts (perhaps not realizing LAC DPH does currently produce a podcast), one-on-one forums, and other avenues for firsthand information from LAC DPH officials, even though these resources already exist. Broader dissemination of available resources through all relevant channels will greatly improve the community’s awareness of LAC DPH as a reliable, trustworthy resource.

There is a desire from community members to interact more frequently and personally with LAC DPH through channels such as webinars, focus groups, and town halls, particularly at points of high uncertainty and/or concern during the pandemic. While there was general acknowledgment that in-person town halls were not possible during most of the pandemic, many attendees expressed interest in LAC DPH hosting town halls either within their communities or virtually, where there would be an opportunity to both listen and pose questions, so that they felt more heard. When asked about awareness and participation in LAC DPH’s virtual town halls, most respondents shared that they either were unaware of their existence or frustrated that they did not know how to share feedback with LAC DPH through them or in follow up to them. To the extent possible, in-person engagement from LAC DPH with communities was encouraged by attendees. The desired engagement would go beyond an authoritative presence and include personable interactions during community events such as health fairs or in settings familiar and often visited by community members such as markets and grocery stores.

“When approaching small businesses in the communities, I would recommend approaching them respectfully. I would say that just making sure these businesses feel like [LAC] DPH is an ally, and not just as inspectors.” – Listening Session Participant, June 2022

Enhanced engagement in communities of focus can also be achieved through LAC DPH ambassadors and partnering CHWs, who can be present for in-person events on behalf of the department or help with information dissemination at a household level.

Most participants acknowledged the community engagement framework and cultural competency lens that LAC DPH operated within and encouraged LAC DPH to deepen the relationships and continue to work closely with CBOs and/or FBOs to perform outreach and disseminate information. About two dozen attendees noted the desire for resources on low-cost or free health services, which may align with work that is already being done by these organizations.

D. Summary of LAC Health Officer Orders

LA County has published 131 Health Officer Orders as of October 28, 2022.

#	Date Issued	Name	Content
1	3/5/2020	Addition of COVID-19 to the Reportable Diseases and Conditions List	Updates reportable diseases list
2	3/16/2020	Order for the Control of COVID-19: Temporary Prohibition of Group Events and Gatherings, Required Social Distancing Measures, Closure of Certain Businesses	Prohibits mass gatherings and requires social distancing
3	3/19/2020	Safer at Home Order for Control of COVID-19: Temporary Prohibition of Events and Gatherings of 10 Persons or More; Closure of Non-Essential Businesses and Areas	Prohibits events and gatherings of ten persons or more and closes nonessential businesses and areas
4	3/21/2020	Safer at Home Order for Control of COVID-19: Temporary Prohibition of All Events and Gatherings; Closure of Non-Essential Businesses and Areas	Prohibits all events and gatherings and closes nonessential businesses and areas
5	3/24/2020	Updated COVID-19 Reporting Requirements	Establishes reporting requirements for health care providers and lab directors
6	3/25/2020	Health Officer Order for the Control of COVID-19: Public Health Emergency Isolation Order	Isolation order
7	3/25/2020	Health Officer Order for the Control of COVID-19: Public Health Emergency Quarantine Order	Quarantine order
8	3/27/2020	Addendum to Safer at Home Order for Control of COVID-19: Temporary Closure of Public Trails and Trailheads, Beaches, Piers, Beach Bike Paths and Beach Access Points	Closes beaches and trails
9	3/31/2020	Addendum #2 to Safer at Home Order for Control of COVID-19: Clarification of March 21, 2020	Clarification of Safer at Home Order regarding essential workers

#	Date Issued	Name	Content
		Health Order Regarding Essential Workers and Revision of Paragraph 13(o)	
10	4/1/2020	Order for the Control of COVID-19: Public Health Emergency Isolation Order	Isolation order
11	4/1/2020	Order for the Control of COVID-19: Public Health Emergency Quarantine Order	Quarantine order
12	4/10/2020	Safer at Home Order for Control of COVID-19: Temporary Prohibition of All Events and Gatherings: Closure of Non-Essential Businesses and Areas	Closes nonessential businesses and areas
13	4/24/2020	Order of the Health Officer for Control of COVID-19: Prevention of COVID-19 Transmission in Licensed Health Care Facilities	Establishes infection control and social distancing requirements (e.g., access limited to staff, providers, and essential workers) for licensed health care facilities
14	5/1/2020	Order for the Control of COVID-19: Public Health Emergency Isolation Order (Revision)	Isolation order
15	5/1/2020	Order for the Control of COVID-19: Public Health Emergency Quarantine Order (Revision)	Quarantine order
16	5/3/2020	Addendum to Safer at Home Order for Control of COVID-19: Television and Film Entertainment Production as a Non-Essential Business	Establishes television as a nonessential business
17	5/8/2020	Addendum #2 to Safer at Home Order for Control of COVID-19: Conditional and Limited Reopening of Certain Lower Risk Retail Businesses, Golf Courses, and Public Spaces	Reopens lower-risk retail businesses, golf courses, and public spaces
18	5/13/2020	Safer at Home Order for Control of COVID-19: Continuation of Safer at Home Order that Begins to Move the County of Los Angeles into Stage 2 of the County’s Roadmap to Recovery	Reopens lower-risk nonessential businesses

#	Date Issued	Name	Content
19	5/22/2020	Safer at Home Order for Control of COVID-19: Continuation of Safer at Home Order that Moves the County of Los Angeles into Stage 2 of the County’s Roadmap to Recovery	Reopens lower-risk nonessential businesses
20	5/26/2020	Reopening Safer at Work and in the Community for Control of COVID-19: Moving the County of Los Angeles Through Stage 2 of California’s Pandemic Resilience Roadmap	Aligns with CA Pandemic Resilience Roadmap
21	5/29/2020	Reopening Safer at Work and in the Community for Control of COVID-19: Moving the County of Los Angeles Through Stage 2 of California’s Pandemic Resilience Roadmap	Adds hair salons and barbershops; allows indoor dining at restaurants
22	6/11/2020	Reopening Safer at Work and in the Community for Control of COVID-19: Moving the County of Los Angeles Through Stage 3 of California’s Pandemic Resilience Roadmap	Adds music, film, and TV production; day camps; fitness facilities; museums and galleries; botanical gardens, zoos, and aquariums; professional sports without audiences; campgrounds, RV parks, and associated outdoor activities
23	6/18/2020	Reopening Safer at Work and in the Community for Control of COVID-19: Moving the County of Los Angeles Through Stage 3 of California’s Pandemic Resilience Roadmap	Adds cardrooms; personal care establishments (e.g., nail salons, tattoo parlors, estheticians); bars with limited occupancy
24	6/28/2020	Reopening Safer at Work and in the Community for Control of COVID-19	Closes bars
25	6/29/2020	Reopening Safer at Work and in the Community for Control of COVID-19	Closes beaches for the 4th of July; prohibits fireworks shows
26	7/1/2020	Order for the Control of COVID-19: Public Health Emergency Isolation Order (Revision)	Isolation order

#	Date Issued	Name	Content
27	7/1/2020	Order for the Control of COVID-19: Public Health Emergency Quarantine Order (Revision)	Quarantine order
28	7/1/2020	Reopening Safer at Work and in the Community for Control of COVID-19	No change other than updated appendices
29	7/1/2020	Reopening Safer at Work and in the Community for Control of COVID-19	Closes museums, zoos, aquariums, and indoor dining for at least 21 days or until further notice
30	7/4/2020	Reopening Safer at Work and in the Community for Control of COVID-19	No change other than an updated appendix
31	7/8/2020	Reopening Safer at Work and in the Community for Control of COVID-19: Diagnostic Testing in Health Care Facilities	Ensures access to testing in health care facilities across Los Angeles County
32	7/14/2020	Reopening Safer at Work and in the Community for Control of COVID-19	Ceases indoor operations
33	7/18/2020	Reopening Safer at Work and in the Community for Control of COVID-19	Schools to remain closed to in-person learning until Los Angeles County has been off the state’s County Monitoring List for 14 consecutive days; schools (TK-12) and school districts may conduct distance learning only; elementary schools may seek a waiver, as permitted by the July 17, 2020 State Health Officer directive
34	7/23/2020	Blanket Quarantine	Quarantine order
35	7/23/2020	Blanket Isolation	Isolation order
36	8/8/2020	Reopening Safer at Work and in the Community for Control of COVID-19: Diagnostic Testing in Health Care Facilities	Ensures access to testing in health care facilities across Los Angeles County
37	8/12/2020	Reopening Safer at Work and in the Community for Control of COVID-19: Moving the County of Los Angeles Through Stage 3 of California’s Pandemic Resilience Roadmap	Updates content for higher education institutions

#	Date Issued	Name	Content
38	9/2/2020	Reopening Safer at Work and in the Community for Control of COVID-19: Moving the County of Los Angeles Through Stage 3 of California’s Pandemic Resilience Roadmap	Updates content to allow in-person specialized services at schools at 10% total school capacity and up to 25% interior capacity at hair salons and barbershops
39	9/4/2020	Reopening Safer at Work and in the Community for Control of COVID-19: Moving the County of Los Angeles Through Stage 3 of California’s Pandemic Resilience Roadmap	Updates dates for appendices
40	9/18/2020	Order for annual influenza immunization programs for health care personnel or masking of health care personnel during the influenza Season	Mandates licensed acute care hospitals, SNFs, intermediate care facilities, and EMS provider agencies in Los Angeles County to assist their health care personnel to obtain influenza immunizations by requiring health care personnel who decline immunization to wear a mask when in contact with patients during flu season
41	10/2/2020	Reopening Safer at Work and in the Community for Control of COVID-19: Blueprint for a Safer Economy–Tier 1	Reopens nail salons for up to 25% occupancy and outdoor playgrounds under the discretion of the public or private owner but requires use of face coverings and social distancing
42	10/5/2020	Order of the Health Officer for Control of COVID-19: Prevention of COVID-19 Transmission in SNFs	
43	10/5/2020	Order of the Health Officer for Control of COVID-19: Prevention of COVID-19 Transmission in Community Care Facilities	
44	10/5/2020	Reopening Safer at Work and in the Community for Control of COVID-19: Blueprint for a Safer Economy–Tier 1	Reopens cardrooms to outdoor operations but no food; reopens indoor malls as of October 7, 2020, up to 25% occupancy; no food court or common spaces are open
45	10/6/2020	Reopening Safer at Work and in the Community for Control of	Permits outdoor dining at non-restaurant breweries and wineries

#	Date Issued	Name	Content
		COVID-19: Blueprint for a Safer Economy–Tier 1	in compliance with Appendix I and the October 6, 2020 health officer order titled “Conditional Opening of Wineries and Breweries for Outdoor Dining Operations with Modifications”
46	10/6/2020	Reopening Safer at Work and In the Community for Control Of COVID-19: Conditional Opening of Wineries and Breweries for Outdoor Dining Operations with Modifications	Relates to the Board of Supervisors’ motion on permitting conditional opening of wineries and breweries that do not serve food for outdoor dining operations; permits wineries and breweries, on or after October 6, 2020, to serve wine or beer when served with a bona fide meal prepared or served on-site by the approved food provider upon implementing the required infection control protocols; wineries and breweries may continue to remain open for retail sales in compliance with Appendix B
47	10/9/2020	Reopening Safer at Work and In the Community for Control Of COVID-19: Conditional Opening of Wineries and Breweries for Outdoor Dining Operations with Modifications	Updates the list of license types that could open
48	10/14/2020	Reopening Safer at Work and in the Community for Control of COVID-19: Blueprint for a Safer Economy–Tier 1	Allows private gatherings of persons from no more than three households with additional restrictions
49	10/23/2020	Reopening Safer at Work and in the Community for Control of COVID-19: Blueprint for a Safer Economy–Tier 1	Reopens family entertainment, all personal care; reopens schools for high need from 10% to 25% and school waiver TK-12
50	10/23/2020	Reopening Safer at Work and In the Community for Control Of COVID-19: Conditional Opening of Wineries and Breweries for Outdoor Dining Operations with Modifications	Wineries that do not serve food may offer wine tastings outdoors with modifications
51	10/26/2020	Blanket Isolation	Updates definition of close contact to align with CDC

#	Date Issued	Name	Content
			definition; clarifies whether you have symptoms to stay home; also encourages testing
52	10/26/2020	Blanket Quarantine	Updates definition of close contact to align with CDC definition; clarifies whether you have symptoms to stay home; also encourages testing
53	11/19/2020	Reopening Safer at Work and in the Community for Control of COVID-19: Blueprint for a Safer Economy–Tier 1 Surge Response	Limits the number of persons at private indoor gatherings to 15; at outdoor restaurants, breweries, and wineries to 50%; at cardrooms, mini golf, batting cages, and go kart racing to 50%; at indoor operations for retail, office, and personal care to 25%
54	11/19/2020	Reopening Safer at Work and In the Community for Control Of COVID-19: Conditional Opening of Wineries and Breweries for Outdoor Dining Operations with Modifications–Surge Response Version	Limits capacity of brewery and winery outdoor dining and outdoor wine service operations to 50% maximum occupancy of the outdoor dining/wine service area(s); closed for in-person outdoor dining and outdoor wine service at 10:00 PM; allows continued offering of delivery and carry-out during permitted hours of operation
55	11/25/2020	Reopening Safer at Work and in the Community for Control of COVID-19: Blueprint for a Safer Economy–Tier 1 Surge Response	Aligns with state 10:00 PM-5:00 AM cease of service except for takeout and delivery; ceases outdoor dining
56	11/25/2020	Reopening Safer at Work and In the Community for Control Of COVID-19: Conditional Opening of Wineries and Breweries for Outdoor Dining Operations with Modifications–Surge Response Version	Aligns with state 10:00 PM-5:00 AM cease of service; ceases operations except for retail
57	11/28/2020	Temporary Targeted Safer at Home Health Officer Order for Control of COVID-19: Tier 1 Substantial Surge Response	Temporarily limits occupancy of some sectors and closes others from November 30 through December 20
58	12/6/2020	Revised Temporary Targeted Safer at Home Health Officer	Revised to align and comply with the state’s December 3, 2020

#	Date Issued	Name	Content
		Order for Control of COVID-19: Tier 1 Substantial Surge Updated Response	Regional Stay at Home Order in light of adult ICU bed capacity for the Southern California region falling below 15%
59	12/9/2020	Revised Temporary Targeted Safer at Home Health Officer Order for Control of COVID-19: Tier 1 Substantial Surge updated Response–12/9/2020	Updates capacity for retail and stand-alone food markets to match the state; adds outdoor playgrounds
60	12/17/2020	Blanket Quarantine	Quarantine order
61	12/17/2020	Blanket Isolation	Isolation order
62	12/19/2020	Revised Temporary Targeted Safer at Home Health Officer Order for Control of COVID-19: Tier 1 Substantial Surge Updated Response–12/19/2020	Updated to permit indoor operations in places of worship; further aligns with state order
63	12/27/2020	Order of the Health Officer for Control of COVID- 19: Prevention of COVID-19 Transmission in Community Care Facilities	
64	12/27/2020	Order of the Health Officer for Control of COVID-19: Prevention of COVID-19 Transmission in SNFs	
65	12/29/2020	Revised Temporary Targeted Safer at Home Health Officer Order for Control of COVID-19: Tier 1 Substantial Surge Updated Response–12/29/2020	Clarifies that where a conflict exists between a Los Angeles County order and any state order, the most restrictive provision controls, unless Los Angeles County is subject to a court order; notes that persons arriving in Los Angeles County from other states or countries for nonessential travel must practice self-quarantine for ten days after arrival
66	12/30/2020	Revised Temporary Targeted Safer at Home Health Officer Order for Control of COVID-19: Tier 1 Substantial Surge Updated Response–12/30/2020	Mandates ten-day self-quarantine for persons arriving in Los Angeles County from anywhere outside the Southern California region
67	1/25/2021	Reopening Safer at Work and in the Community for Control of COVID-19 Blueprint for a Safer	Reinstates the November 25, 2020 Health Officer Order; maintains FBO-related language from the

#	Date Issued	Name	Content
		Economy–Tier 1 Surge Response–1/25/21	December 20, 2020 order (i.e., not prohibiting indoor services but encouraging continued use of outdoor and remote services)
68	1/29/2021	Reopening Safer at Work and in the Community for Control of COVID-19 Blueprint for a Safer Economy–Tier 1 Surge Response–1/29/21	Aligns with the state public Health Officer Order; reopens outdoor dining and other sectors with limited capacity
69	2/10/2021	Reopening Safer at Work and in the Community for Control of COVID-19 Blueprint for a Safer Economy–Tier 1 Surge Response–2/10/21	In light of U.S. Supreme Court decision and the subsequent change made by the state related to places of worship in Tier 1, reopens places of worship for indoor services limited to 25% of indoor capacity and requires continued compliance with the required modifications provided in Appendix A
70	2/18/2021	Reopening Safer at Work and in the Community for Control of COVID-19 Blueprint for a Safer Economy–Tier 1 Surge Response–2/18/21	Updated to note that per the state Consolidated Framework and Guidance, when the Los Angeles County adjusted daily case rate has been less than 25 per 100,000 population for five consecutive days and the school has met all state and County requirements for reopening, schools may open for in-person instruction for students in grades TK-6; schools in California may not reopen for in-person instruction for grades 7-12 if the County is in Tier 1 (Purple Widespread)
71	3/10/2021	Reopening Safer at Work and in the Community for Control of COVID-19 Blueprint for a Safer Economy–Tier 1 Surge Response–3/10/21	Updated to include the CDC Interim Public Health Guidance for fully vaccinated people and visits or small private gatherings
72	3/12/2021	Reopening Safer at Work and in the Community for Control of COVID-19 Blueprint for a Safer Economy–Red Tier Risk Reduction Measures–3/12/21 First Issue	Edits reflect Los Angeles County’s movement from Red to Orange Tier within the state’s Blueprint for a Safer Economy framework; adds

#	Date Issued	Name	Content
			new section for limited services businesses
73	3/19/2021	Revised Reopening Safer at Work and in the Community for Control of COVID-19 Blueprint for Safer Economy–Red Tier Risk Reduction Measures–3/19/21 Edition	Updates protocols to mostly align with state guidance and to provide further clarity on sections introduced in March 12, 2021 edition; distinguishes operating practices for breweries, wineries, and distilleries that serve a bona fide meal and those that do not; increases participant numbers for support groups that cannot be done remotely from 10 to 12
74	4/2/2021	Revised Reopening Safer at Work and in the Community for Control of COVID-19 Blueprint for a Safer Economy–Orange Tier Risk Reduction Measures–4/2/21 Edition	Moves the County into Orange Tier
75	4/9/2021	Order for Control of COVID-19: Prevention of COVID-19 Transmission in Community Care Facilities	Updated to include a new reporting method, new infection prevention and control training offerings, and some changes to terminology
76	4/14/2021	Revised Reopening Safer at Work and in the Community for Control of COVID-19 Blueprint for a Safer Economy–Orange Tier Risk Reduction Measures–4/15/21 Edition	Adds protocols for indoor seated live events and performances, private events (meetings, receptions, and conferences), and guidance for informal social gatherings; adds fairs to the protocol for amusement and theme parks
77	4/29/2021	Revised Reopening Safer at Work and in the Community for Control of COVID-19 Blueprint for a Safer Economy–Orange Tier Risk Reduction Measures–4/29/21 Edition	Aligns with CDC interim recommendations for fully vaccinated people; adds indoor playgrounds and arcades; requires day camps operating outside of TK-12 sites to register using an online form
78	5/5/2021	Revised Reopening Safer at Work and in the Community for Control of COVID-19 Blueprint for a Safer Economy–Yellow Tier Risk Reduction Measures–5/5/21 Edition	Moves the County into Yellow Tier of the state’s Blueprint for a Safer Economy; adds water parks to Appendix AA

#	Date Issued	Name	Content
79	5/14/2021	Revised Reopening Safer at Work and in the Community for Control of COVID-19 Blueprint for a Safer Economy–Yellow Tier Risk Reduction Measures–5/14/21 Edition	Clarifies that professional services businesses, including residential and commercial real estate, should operate in compliance with Appendix A: Social Distancing
80	6/2/2021	Revised Reopening Safer at Work and in the Community for Control of COVID-19 Blueprint for a Safer Economy–Yellow Tier Risk Reduction Measures–6/2/21 Edition	Revised to permit the operation of overnight organized/children’s camps in compliance with the requirements of Appendix K-1; owners and operators must give prior notice of intended operation to EH to allow sufficient time for an inspection of the premises before reopening
81	6/14/2021	A Safer Return Together at Work and in the Community Beyond the Blueprint for a Safer Economy—Encouraging COVID-19 Vaccination Coverage with Limited Risk Reduction Measures--6/14/21 Edition	Rescinds most LAC DPH sector-specific protocols and aligns with the state Beyond the Blueprint for Industry and Business Sectors and the accompanying memoranda and orders of the State Public Health Officer; urges everyone, especially those who are not or cannot be vaccinated against COVID-19, to continue to exercise caution and good judgment as physical distancing requirements and capacity limitations are removed
82	6/15/2021	A Safer Return Together at Work and in the Community Beyond the Blueprint for a Safer Economy—Encouraging COVID-19 Vaccination Coverage with Limited Risk Reduction Measures--6/15/21 Edition	Updates schools section (Paragraph 11b) to clarify their need to follow Appendix T1
83	6/28/2021	A Safer Return Together at Work and in the Community Beyond the Blueprint for a Safer Economy—Encouraging COVID-19 Vaccination Coverage with Limited Risk Reduction Measures--6/28/21 Edition	Clarifies a section regarding face masks (4bvii) to include “Any business or government office serving the public that requires everyone to wear a mask”

#	Date Issued	Name	Content
84	7/16/2021	Responding Together at Work and in the Community Beyond the Blueprint for a Safer Economy, Substantial Transmission— Encouraging COVID-19 Vaccination Coverage with Limited Risk Reduction Measures	Reinstates indoor mask-wearing mandate for all, regardless of vaccination status
85	7/22/2021	Responding Together at Work and in the Community Beyond the Blueprint for a Safer Economy, Substantial Transmission— Encouraging COVID-19 Vaccination Coverage with Limited Risk	Clarifies when to wear masks while indoors (e.g., stadium concourses while not in a ticketed seat at an event; can remove for procedures that require removal, such as in personal care establishments or while eating or drinking in a stationary place)
86	7/30/2021	Responding Together at Work and in the Community Beyond the Blueprint for a Safer Economy, High Transmission—Encouraging COVID-19 Vaccination Coverage with Moderate Risk Reduction Measures	Incorporates by reference the July 26, 2021 State Health Officer Order that mandates specific public health requirements regarding worker vaccination status, respirators or masks, and testing requirements for acute health care and long-term care settings, high-risk congregate settings, and other health care settings; reiterates that because the County is currently experiencing high rates of COVID-19 community transmission, all persons, in indoor public and business settings, must wear a face mask regardless of vaccination status
87	8/12/2021	HCW Vaccination Requirement Mandating Employers of Health Care and Home Care Workers Who Work in or Routinely Visit High-Risk or Residential Care Settings to Document their Fully Vaccinated Status; For Those with Approved Medical or Religious Exemptions, Document Weekly or Twice Weekly Regular Testing for COVID-19	Mandates employers of health care and home care workers who work in or routinely visit high-risk or residential care settings to document their fully vaccinated status

#	Date Issued	Name	Content
88	8/16/2021	Responding Together at Work and in the Community Beyond the Blueprint for a Safer Economy, High Transmission—Encouraging COVID-19 Vaccination Coverage with Moderate Risk Reduction Measures	Requires all persons at an outdoor mega event to wear a face mask except when actively eating or drinking; clarifies that “actively eating or drinking” is the limited time during which the mask can be removed briefly to eat or drink and that it must be immediately put back on afterward
89	8/23/2021	Responding Together at Work and in the Community Beyond the Blueprint for a Safer Economy, High Transmission—Encouraging COVID-19 Vaccination Coverage with Moderate Risk Reduction Measures	Aligns with the State Health Officer Order of August 18, 2021, regarding indoor mega events; beginning September 20, 2021, all attendees at indoor mega events involving 1,000 or more persons must, prior to entry, show verification of COVID-19 vaccination status or a negative COVID-19 (diagnostic) test result; this is a lower attendance threshold than the previous requirement of 5,000 participants; clarifies that for all indoor mega events scheduled on or after September 20, 2021, self-attestation is no longer a permitted method for vaccination verification or verification of a negative COVID-19 test; requires specific infection control protocols for youth sports effective September 1, 2021 (Appendix S)
90	8/26/2021	Order for the Control of COVID-19: Public Health Emergency Isolation Order (Revision)	Isolation order
91	8/26/2021	Order for the Control of COVID-19: Public Health Emergency Quarantine Order (Revision)	Quarantine order
92	9/17/2021	Responding Together at Work and in the Community Beyond the Blueprint for a Safer Economy, High Transmission—Encouraging	Aligns with the state’s definition of outdoor mega events; beginning October 7, 2021, all attendees ages 12 and over at

#	Date Issued	Name	Content
		COVID-19 Vaccination Coverage with Moderate Risk Reduction Measures	outdoor mega events involving 10,000 or more persons must, prior to entry, show proof of full vaccination against COVID-19 or a pre-entry negative COVID-19 (diagnostic) test result; self-attestation is not a permitted method for verification of vaccination or test result; beginning October 7, 2021, requires bars, breweries, wineries, distilleries, nightclubs, and lounges for indoor service and operations to verify the COVID-19 vaccination status of their patrons and employees; strongly recommends that, beginning October 7, 2021, operators of all restaurants and food facilities reserve and prioritize indoor seating/service for those who are fully vaccinated against COVID-19
93	9/22/2021	Order for the Control of COVID-19: Public Health Emergency Quarantine Order (Revision)	Quarantine order
94	9/27/2021	Order for Control of COVID-19: SARS-CoV-2 Data Sharing and Reporting	Requires entities that are performing SARS-CoV-2 sequencing and molecular testing on specimens collected from residents of the Los Angeles County Public Health Jurisdiction to register with LAC DPH, report information about sequenced samples as directed, report findings of public health significance, and submit specimens upon request; also encourages these entities to provide public access to whole genome sequencing data
95	9/28/2021	Responding Together at Work and in the Community Beyond the Blueprint for a Safer Economy,	Clarifies that starting November 1, 2021, operators of outdoor mega events are required to cross-check

#	Date Issued	Name	Content
		High Transmission—Encouraging COVID-19 Vaccination Coverage with Moderate Risk Reduction Measures	proof of full vaccination or negative COVID-19 viral test result against a photo identification for all attendees who are 18 years of age or older
96	11/1/2021	HCW Vaccination Requirement Mandating Employers of Health Care and Home Care Workers Who Work in or Routinely Visit High-Risk or Residential Care Settings to Document their Fully Vaccinated Status; For Those with Approved Medical or Religious Exemptions, Document Weekly or Twice Weekly Regular Testing for COVID-19	Updated to align with high-risk setting facilities/agencies and workers included in the September 28, 2021 issue of the State Health Officer Order “Adult Care Facilities and Direct Care Worker Vaccine Requirement”
97	11/8/2021	Order for the Control of COVID-19: Public Health Emergency Quarantine Order (Revision)	Quarantine order; removes the text regarding the IHE modified quarantine
98	11/10/2021	Order for the Control of COVID-19: Public Health Emergency Isolation Order (Revision)	Isolation order
99	12/3/2021	Order for Control of COVID-19: Prevention of COVID-19 Transmission in SNFs	From December 15, 2021, through January 31, 2022, all SNF residents, employees, and contractors, regardless of vaccination status, who may encounter residents must test for COVID-19 infection on a weekly basis; in addition, to obtain entry into a SNF, all visitors, regardless of vaccination status, must provide proof of negative COVID-19 viral test; those who show documentation of recovery from COVID-19 within the prior 90 days are exempt from weekly testing and from showing proof of a negative viral test for entry
100	12/16/2021	Responding Together at Work and in the Community Beyond the Blueprint for a Safer Economy, High Transmission—Encouraging COVID-19 Vaccination Coverage with	Updated to align with the State Health Officer’s requirement that beginning December 15, 2021, all persons attending an indoor or outdoor mega event who cannot provide proof of full vaccination

#	Date Issued	Name	Content
		Moderate Risk Reduction Measures	against COVID-19 must present proof of a pre-entry negative COVID-19 test result from either an antigen test conducted within one day or a PCR test conducted within two days prior to entry; for indoor mega events, children under 2 years of age are exempt from the pre-entry testing requirement for entry; for outdoor mega events, children under 5 years of age are exempt from the pre-entry testing requirement for entry; continues to require that masks be worn in all public indoor settings, irrespective of vaccination status; encourages everyone age 16 and older to receive a COVID-19 booster vaccination dose as soon as they are eligible
101	12/17/2021	Order for the Control of COVID-19: Public Health Emergency Isolation Order (Revision)	Isolation order; clarifies that recipients of the order must identify their close contacts to LAC DPH when interviewed for purposes of contact tracing
102	12/23/2021	HCW Vaccination Requirement: Mandating Employers of Health Care and Home Care Workers Who Work in or Routinely Visit High-Risk or Residential Care Settings to Document Their Fully Vaccinated and Booster Dose Vaccination Status for Those with Approved Medical or Religious Exemptions or Booster-Eligible Workers Who Have Not Yet Received a Booster, Document Weekly or Twice Weekly Regular Testing for COVID-19	Updated to mainly align with the December 22, 2021 State Health Officer Order, which requires that workers who provide services or work in high-risk settings – including hospitals, SNFs, and other health care settings – and who are currently eligible for a COVID-19 booster vaccination receive their booster dose by no later than February 1, 2022; workers not yet eligible for a booster must receive a booster within 15 days of becoming eligible for receiving one; beginning December 27, 2021, workers in acute health care and long-term care settings who are booster-eligible but have not yet received a booster dose of COVID-

#	Date Issued	Name	Content
			<p>19 vaccine must test at least twice each week; booster-eligible workers in other high-risk settings must test at least once each week; includes a strong recommendation that even workers who have received a booster immediately begin to wear a surgical mask or higher-level respirator approved by the National Institute of Occupational Safety and Health (NIOSH), such as an N95 filtering facepiece respirator, at all times while in a high-risk setting</p>
103	12/27/2021	Order for Control of COVID-19: Prevention of COVID-19 Transmission in Community Care Facilities	Updated to include acute psychiatric hospital facilities; updates requirements for COVID-19 and COVID-19 booster immunization offerings and record maintenance
104	12/31/2021	Order for the Control of COVID-19: Public Health Emergency Isolation Order (Revision)	
105	12/31/2021	Order for the Control of COVID-19: Public Health Emergency Quarantine Order (Revision)	
106	12/31/2021	Responding Together at Work and in the Community Beyond the Blueprint for a Safer Economy, High Transmission—Encouraging COVID-19 Vaccination and Booster Dose Coverage with significant Risk Reduction Measures	<p>Due to the Omicron surge, isolation and quarantine requirements are revised to mainly align with the State Public Health Officer’s revised Guidance for Local Health Jurisdictions on Isolation and Quarantine of the General Public, released on December 30, 2021; the guidance does NOT apply to health care personnel in any setting; see AFL-21-08.6; in the workplace, employers are subject to the Cal/OSHA COVID-19 Prevention ETS or in some workplaces the Cal/OSHA Aerosol Transmissible</p>

#	Date Issued	Name	Content
			Diseases Standard and should consult those regulations for additional applicable requirements; as soon as practicable, employers should provide and require employees to wear a well-fitting, medical-grade mask, surgical mask, or higher-level respirator approved by NIOSH, such as an N95 filtering facepiece respirator, at all times while indoors at a worksite or facility
107	1/5/2022	Responding Together at Work and in the Community Beyond the Blueprint for a Safer Economy, High Transmission— Encouraging COVID-19 Vaccination and Booster Dose Coverage with significant Risk Reduction Measures	Masks must be worn at all times while indoors at cardrooms; eating and drinking in cardrooms must be in designated areas and can't be done while playing; employers must provide and require use of medical-grade masks; aligns with state definition of mega events, which decreases size thresholds for these events; requires mega events, performance venues, movie theaters, and entertainment venues to post signage about masking and recommends these venues allow eating and drinking in designated areas only
108	1/5/2022	Order for Control of COVID-19: Prevention of COVID-19 Transmission in SNFs	Aligns with the state Health Officer Order issued on December 31, 2021, "Requirements for Visitors in Acute Health Care and Long-Term Care Settings"; requires SNFs to verify a negative SARS-CoV-2 test within 48 hours for a PCR test or within 24 hours for an antigen test for indoor and outdoor visits for all visitors regardless of their vaccination and booster status; additionally, for indoor visits, visitors must show proof of their fully vaccinated status and, if booster-eligible, proof of receipt of a booster dose

#	Date Issued	Name	Content
109	1/10/2022	Responding Together at Work and in the Community Beyond the Blueprint for a Safer Economy, High Transmission—Encouraging COVID-10 Vaccination and Booster Dose Coverage with Significant Risk Reduction Measures	Aligns with the state Health Officer Order regarding isolation and quarantine
110	1/11/2022	Order for the Control of COVID-19: Public Health Emergency Isolation Order (Revision)	
111	1/11/2022	Order for the Control of COVID-19: Public Health Emergency Quarantine Order (Revision)	
112	1/12/2022	HCW Vaccination Requirement Mandating Employers of Health Care and Home Care Workers Who Work in or Routinely Visit High-Risk or Residential Care Settings to Document their Fully Vaccinated Status; For Those with Approved Medical or Religious Exemptions, Document Weekly or Twice Weekly Regular Testing for COVID-19	Updates “When to get the vaccine booster dose” column in Table A to reflect booster dose can be received at five months instead of six months after second dose of Pfizer-BioNTech, Moderna, and other specified COVID-19 vaccines
113	1/28/2022	HCW Vaccination Requirement Mandating Employers of Health Care and Home Care Workers Who Work in or Routinely Visit High-Risk or Residential Care Settings to Document their Fully Vaccinated Status	Updated to align with the recent change to the state Public Health Officer’s “HCW Vaccine Requirement Order,” which extends the deadline for workers to acquire their COVID-19 vaccine booster dose from February 1, 2022, to March 1, 2022
114	1/28/2022	Order for Control of COVID-19: Prevention of COVID-19 Transmission in SNFs	Updates Section 3.b.iii of this document to clarify that for indoor visits, all visitors who are 5 years of age or older must provide the facility with their proof of all recommended doses, including the primary series and, if booster-eligible, a booster dose, as described in the LAC DPH COVID-

#	Date Issued	Name	Content
			19 Vaccine Eligibility Summary Table
115	2/1/2022	Order for the Control of COVID-19: Public Health Emergency Isolation Order (Revision)	Updates masking, testing, workplace, and TK-12 portions of the order
116	2/1/2022	Order for the Control of COVID-19: Public Health Emergency Quarantine Order (Revision)	Updates masking, testing, workplace, and TK-12 portions of the order
117	2/4/2022	Order for Control of COVID-19: Prevention of COVID-19	Updates testing requirements for indoor visits
118	2/15/2022	Responding Together at Work and in the Community Beyond the Blueprint for a Safer Economy, Post Winter Surge, High Transmission—Encouraging COVID-19 Vaccination and Booster Dose Coverage with Risk Reduction Measures	Returns thresholds to 1,000 for indoor mega events and 10,000 for outdoor mega events; lifts outdoor masking requirements at mega events, TK-12 schools, and ECE
119	2/23/2022	Responding Together at Work and in the Community Beyond the Blueprint for a Safer Economy, Post Winter Surge, High Transmission—Encouraging COVID-19 Vaccination and Booster Dose Coverage with Risk Reduction Measures	Lifts interim indoor masking restrictions for fully vaccinated individuals at sites that verify vaccination status
120	2/25/2022	HCW Vaccination Requirement Mandating Employers of Health Care and Home Care Workers Who Work in or Routinely Visit High-Risk or Residential Care Settings to Document their Fully Vaccinated Status; For Those with Approved Medical or Religious Exemptions, Document Weekly or Twice Weekly Regular Testing for COVID-19	Extends time in which HCWs can get their booster if they have had COVID-19 infection within the past 90 days
121	3/3/2022	Responding Together at Work and in the Community Post Winter Surge Community Monitoring and Continued Response Measures	Revised to align with the February 28, 2022 State Health Officer guidance on masking; After March 11, the universal masking requirement for TK-12

#	Date Issued	Name	Content
			<p>schools and childcare settings will terminate; both CDPH and County Public Health continue to strongly recommend that individuals in these settings continue to mask while indoors until transmission rates are much lower; masks continue to be required for indoor settings with higher risks for transmission: public transit, transportation hubs, all health care settings (including long-term care and adult and senior care facilities), correctional facilities and detention centers, homeless shelters, and emergency shelters; masks are strongly recommended, but not required, for all persons, regardless of vaccine status, in other indoor public settings and businesses; well-fitting medical masks or respirators (e.g., N95s, KN95s, and KF94s) are highly recommended; in settings where masks are strongly recommended, businesses, venue operators, and hosts may choose to require masking, regardless of vaccination status, by patrons, visitors, attendees, and workers as a strategy to reduce the risk of transmission at their site(s); pre-entry vaccination or recent negative test verification for attendees is recommended, but not required, for outdoor mega event operators; pre-entry vaccination verification or recent negative test verification for patrons and employees is recommended, but not required, for bars, breweries, wineries, distilleries, nightclubs, and lounges; employers are required</p>

#	Date Issued	Name	Content
			to offer medical-grade masks and respirators to employees who work indoors and in contact with other workers, customers, or members of the public in settings where there is optional masking; in settings where pre-entry verification of vaccination or a negative COVID-19 viral test result is not required, businesses, venue operators, and hosts may choose to require pre-entry verification of COVID-19 vaccination, pre-entry verification of a negative COVID-19 viral test result, or both as an additional, important strategy to reduce transmission at their site(s)
122	3/16/2022	Order for the Control of COVID-19: Public Health Emergency Isolation Order (Revision)	Isolation order
123	3/16/2022	Order for the Control of COVID-19: Public Health Emergency Quarantine Order (Revision)	Quarantine order
124	4/13/2022	Order for the Control of COVID-19: Public Health Emergency Quarantine Order (Revision)	Updates definition of close contact; maintains quarantine requirements in high-risk settings
125	4/21/2022	Responding Together at Work and in the Community Post Winter Surge Community Monitoring and Continued Response Measures	Revised to continue to require masks on all public transit within the County, such as commuter trains, subways, buses, taxis and ride-shares, and indoor transportation hubs, including airport terminals; bus, train, and subway stations; and marina or port stations
126	5/18/2022	Order for the Control of COVID-19: Public Health Emergency Isolation Order (Revision)	Isolation order; revised in response to changes in the April 6, 2022 State Health Officer “Guidance for Local Health Jurisdictions on Isolation and Quarantine of the General

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			Public”; changes the definition of close contact to align with the new CDPH definition of “someone sharing the same indoor airspace, e.g., home, clinic waiting room, airplane, etc., for a cumulative total of 15 minutes or more over a 24-hour period (for example, three individual 5-minute exposures for a total of 15 minutes) during an infected person’s (laboratory-confirmed or clinical diagnosis) infectious period”
127	5/18/2022	Order for the Control of COVID-19: Public Health Emergency Quarantine Order (Revision)	Clarifies that asymptomatic persons who have been exposed to someone with COVID-19 (asymptomatic contacts) are exempt from quarantine, regardless of vaccination status; however, they are required to follow the requirements specified below; notes that some people who live or work in specified high-risk settings will have to follow the setting-specific requirements in relationship to work restrictions or work exclusions; workers in other settings are required to follow Cal/OSHA work exclusions and/or return-to-work requirements; notes exemption for COVID-19 testing for asymptomatic contacts who previously tested positive using a viral test for COVID-19 in the prior 90 days and recovered, as long as they have no symptoms; notes that all contacts, regardless of vaccination status, must wear a highly protective mask around others while indoors and when close to others while outdoors through Day

#	Date Issued	Name	Content
128	9/16/2022	Health Care Worker Vaccination Requirement Mandating Employers of Health Care and Home Care Workers Who Work In or Routinely Visit High-Risk or Residential Care Settings to Document Their Fully Vaccinated and Booster Dose Vaccination Status	Updated to align with the recent change to the State Health Officer’s Health Care Worker Vaccine Requirement Order, which: (1) rescinds the testing requirement (except as specifically noted to comply with federal requirements) for workers exempt due to medical reasons or religious beliefs; (2) notes that facilities should maintain testing capacity at their worksite and have the ability to ramp up testing at their worksite in the event of an outbreak or if it is required again at a future date; and (3) updates timing of required booster doses consistent with current CDC recommendations
129	9/22/2022	Responding Together at Work and in the Community, Community Monitoring of COVID-19 and Continued Response Measures, Community Monitoring of COVID-19 and Continued Response Measures	Revised to (1) strongly recommend, but no longer require, masking for all persons using public transit or at indoor transportation hubs – transit agencies may elect to continue requiring masking; (2) align with the State Public Health Officer’s September 20, 2022 guidance regarding masking in the following high-risk settings: correctional facilities, homeless shelters, emergency shelters, and cooling and heating centers; (3) continue to require masking at all indoor health care settings; and (4) update Appendix T1: Protocols for TK-12 Schools to align with the state and retire the requirement for schools to conduct routine testing of unvaccinated school staff
130	9/22/2022	Order of the Health Officer for Control of COVID-19, Prevention of COVID-19 Transmission in Skilled Nursing Facilities	Removes the requirement for facilities to verify vaccination status and/or negative test results for general visitors seeking

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			indoor visitation; please see “Guidelines for Preventing & Managing COVID-19 in Skilled Nursing Facilities” for full guidance on conducting visitation safely
131	10/17/2022	Health Officer Order for the Control of COVID-19: Public Health Emergency Quarantine Order (Revision)	Clarifies that asymptomatic people who are close contacts to someone with COVID-19 must wear a highly protective mask around others while indoors for a total of ten days after the last contact with the person infected with COVID-19; masks are not required when outdoors

E. Relevant California State and Los Angeles County Codes

State Health and Safety Code

The local Health Officer may take any preventive measure that may be necessary to protect and preserve the public health from any public health hazard during any “state of war emergency,” “state of emergency,” or “local emergency,” ... within his or her jurisdiction.²⁴⁶

Additional authorities of the local Health Officer that are relevant to pandemic response, include:

- **Section 101040.** The local Health Officer, upon consent of the Board of Supervisors, is permitted to certify any public health hazard resulting from any disaster condition if certification is required for any federal or state disaster relief program.²⁴⁷
- **Section 101080.** The local Health Officer is authorized to declare a “local health emergency” in their “jurisdiction or any area thereof affected by the threat to public health” upon, for example, “an imminent and proximate threat of the introduction of any contagious, infectious, or communicable disease.”²⁴⁸
- **Section 101085.** By declaring a local health emergency, the local Health Officer activates the provisions of Section 101085.
 - (a) After the declaration of a health emergency or a local health emergency pursuant to Section 101080, the director or local health officer may do any or all of the following:
 - (1) *[Sub-section defines specific authorities in the case of a release, spill, escape, or entry of waste; not included in this Appendix.]*
 - (2) Provide necessary information available to the [county public health department] director or local health officer to state or local agencies responding to the health emergency or local health emergency or to medical and other professional personnel treating victims of the local health emergency.
 - (3) Sample, analyze, or otherwise determine the identifying and other technical information relating to the health emergency or local health emergency as necessary to respond to or abate the local health emergency and protect the public health.
 - (b) After the declaration of a local health emergency:
 - (1) Other political subdivisions have full power to provide mutual aid to any area affected by a local health emergency in accordance with local ordinances, resolutions, emergency plans, or agreements therefor.
 - (2) State agencies may provide mutual aid, including personnel, equipment, and other available resources, to assist political subdivisions during a local health emergency or in accordance with mutual aid agreements or at the direction of the Governor.
 - (3) In the absence of a state of war emergency or state of emergency, the cost of extraordinary services incurred by political subdivisions in executing mutual aid agreements in a local health emergency shall constitute a legal charge against the state when approved by the Governor in accordance with orders and regulations promulgated as prescribed in Section 8567 of the Government Code.

In addition, the section stipulates that a local health emergency shall be considered a local emergency for purposes of Section 8659 of the Government Code and that this section does not limit or abridge any of the powers or duties granted to certain water, air pollution, and food and agriculture authorities.²⁴⁹

- **Section 120175.** Each local Health Officer knowing or having reason to believe that any case of the diseases made reportable by regulation of the department or any other contagious, infectious, or communicable disease exists, or has recently existed, within their jurisdiction shall take measures as may be necessary to prevent the spread of the disease or occurrence of additional cases.²⁵⁰
- **Section 120200.** The local Health Officer, whenever required by the department [CDPH], shall establish and maintain places of quarantine or isolation subject to the special directions of the department.²⁵¹
- **Section 120210.** Whenever in the judgment of the department [CDPH] it is necessary for the protection or preservation of the public health, the local Health Officer will quarantine or isolate and disinfect persons, animals, houses, or rooms.²⁵²
- **Section 120215.** Upon receiving information of the existence of contagious, infectious, or communicable disease for which the department may from time to time declare the need for strict isolation or quarantine, each Health Officer shall:
 - (a) ensure the adequate isolation of each case and appropriate quarantine of the contacts and premises.
 - (b) follow local rules and regulations, and all general and special rules, regulations, and orders of the department, in carrying out the quarantine or isolation.²⁵³

Selections from County Code of Ordinances – Chapter 2.68 Emergency Services²⁵⁴

Part 3 – BOARD POWERS

2.68.080 – Powers. The board specifically reserves the power to initiate, coordinate and direct, except as otherwise provided, all activities made necessary by war or as the result of an emergency that directly affects the County government and requires organized community action within the county. Such power may be exercised by the Chair.

2.68.150 – Authority for emergency orders and regulations. To provide prompt response to emergency situations following the proclamation of a local emergency as authorized in this chapter, the proclamation of a state of emergency, or the existence of a state-of-war emergency, the Board specifically delegates, in the following priority order, to the Chair, the Chief Executive Officer or the Sheriff, authority to promulgate orders and regulations to provide for the protection of life and property, including but not limited to orders and regulations imposing a curfew within designated boundaries, where necessary to preserve the public order and safety. All such orders and regulations to be effective must be in writing and signed by the promulgating official, and must be ratified at the next regular meeting of the Board.

2.68.160 – Authority for alerts, warnings, and emergency notifications to the public. The Chief Executive Officer, the Sheriff, the Fire Chief, and the County Director of Public Health are each authorized to issue, disseminate, and coordinate alerts, warnings, and emergency notifications to the public. With respect to such alerts, warnings, and emergency notifications, the Office of Emergency Management is authorized to coordinate consistency of messaging.

Part 5 – EMERGENCY AND DISASTER ACTIVITIES AND OPERATIONS – ROLES AND RESPONSIBILITIES

2.68.200 – Chief Executive Officer. The Chief Executive Officer is responsible for coordinating the County's activities and operations relating to emergency and disaster preparedness, response, and recovery.

2.68.210 – Powers and duties. The Chief Executive Officer shall have the following duties:

- A. To maintain, manage, activate, and operate the County Emergency Operations Center at all times, including during an emergency;
- B. To assemble and lead a Unified Coordination Group during a full activation of the Emergency Operations Center and, at the Chief Executive Officer's election, during a partial activation of the Emergency Operations Center;
- C. To coordinate the utilization of County, other local government, State and federal resources within the operational area;
- D. To coordinate operations conducted by the local governments in the Los Angeles County operational area in accordance with approved mutual aid and operations plans;
- E. To collect and disseminate information and instructions to other jurisdictions, agencies, and the public;
- F. To establish and maintain a recovery coordination center, as warranted, to: (1) coordinate the recovery operations of county departments; and (2) coordinate with State and federal agencies, impacted cities, and other agencies that are part of the County emergency organization; and
- G. To respect insofar as possible, in carrying out the above duties, the integrity of local government entities and the unity of their service forces.

2.68.260 – Office of Emergency Management

- A. The County Office of Emergency Management is created within the County Chief Executive Office.
- B. The Chief Executive Officer shall appoint the Director of the Office of Emergency Management.

2.68.270 – Powers and duties. The Director of the County Office of Emergency Management shall have the following duties:

- A. To organize and coordinate the emergency organization of the county, including coordinating: (1) training, (2) the development and review of the Los Angeles County

Operational Area Emergency Plan and Board-ordered departmental emergency plans, and (3) County emergency preparedness activities;

B. To establish and maintain liaison with city governments within Los Angeles County and other governmental and quasi-governmental agencies and volunteer organizations relating to emergency preparedness;

C. To develop appropriate plans, standard operating procedures, and planning guidance in collaboration with other County departments;

D. To prepare and process program papers and applications for federal and State funds;

E. To coordinate: (1) initial disaster recovery services to the public, including the administration of local/federal/State financial aid programs, which may include one-stop disaster assistance centers; (2) applicants' briefing for State and federal grant programs; and (3) provision of County services to expedite recovery;

F. To obtain (for operational and administrative purposes) vital supplies, equipment, and such other properties found lacking and needed for the protection of life and property, and to bind the County for the fair value thereof and, if required immediately, to commandeer the same for public use [...]

F. LAC DPH COVID-19 Interim Review – Supporting Fact Pack

See separate attachment.

Endnotes:

- ¹ LAC DPH. (November 11, 2022). LA County Daily COVID-19 Data. LAC DPH. <http://publichealth.lacounty.gov/media/coronavirus/data/>
- ² COVID-Associated Deaths Drive All-Cause Mortality Rate Increases in LA County Since 2020. (October 21, 2022). LAC DPH. <http://publichealth.lacounty.gov/phcommon/public/media/mediapubhpdetail.cfm?prid=4115>
- ³ National Center for Health Statistics: Fast Facts – Leading Causes of Death in the U.S. (November 2022). CDC. <https://www.cdc.gov/nchs/fastats/leading-causes-of-death.htm>
- ⁴ The Public Health National Center for Innovations (February 2022). Foundational Public Health Services. The Public Health National Center for Innovations. <https://phnci.org/uploads/resource-files/FPHS-Factsheet-2022.pdf>.
- ⁵ Institute of Medicine of the National Academies (2009). HHS in the 21st Century: Charting a New Course for a Healthier America. National Academies Press; DeSalvo, K., Hughes, B., Bassett, M., Benjamin, G., Fraser, M., et al. (April 7, 2021). Public Health COVID-19 Impact Assessment: Lessons Learned and Compelling Needs. *NAM Perspectives*. <https://doi.org/10.31478/202104c>; Maani, N. Galea, S. (June 2020). COVID-19 and Underinvestment in the Public Health Infrastructure of the United States. *Milbank Quarterly*. <https://doi.org/10.1111/1468-0009.12463>; U.S. Government Accountability Office (GAO) Report to Congressional Committees (January 2022). COVID-19: Significant Improvements Are Needed for Overseeing Relief Funds and Leading Responses to Public Health Emergencies. GAO. <https://www.gao.gov/assets/gao-22-105291.pdf>; National Network of Public Health Institutes (May 2021). Challenges and Opportunities for Strengthening the U.S. Public Health Infrastructure: Findings from the Scan of the Literature. National Network of Public Health Institutes. <https://nnphi.org/wp-content/uploads/2021/06/NNPHI-E2A-Kresge-Report-Web.pdf>.
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- ⁷ Hill, L. & Artiga, S. (August 22, 2022). COVID-19 Cases and Deaths by Race/Ethnicity: Current Data and Changes Over Time. Kaiser Family Foundation. <https://www.kff.org/coronavirus-covid-19/issue-brief/covid-19-cases-and-deaths-by-race-ethnicity-current-data-and-changes-over-time/>.
- ⁸ LAC DPH. (November 11, 2022). COVID-19 Vaccinations in LA County. LAC DPH. <http://publichealth.lacounty.gov/media/coronavirus/vaccine/vaccine-dashboard.htm>
- ⁹ LAC DPH. (November 9, 2022). COVID-19 Vaccinations in LA County. LAC DPH. <http://publichealth.lacounty.gov/media/coronavirus/vaccine/vaccine-dashboard.htm>.
- ¹⁰ Centers for Disease Control and Prevention (CDC) (August 11, 2022). COVID-19. Understanding Risk. CDC. <https://www.cdc.gov/coronavirus/2019-ncov/need-extra-precautions/index.html>.
- ¹¹ Institute of Medicine of the National Academies (2009). HHS in the 21st Century: Charting a New Course for a Healthier America. National Academies Press; DeSalvo, K., Hughes, B., Bassett, M., Benjamin, G., Fraser, M., et al. (April 7, 2021). Public Health COVID-19 Impact Assessment: Lessons Learned and Compelling Needs. *NAM Perspectives*. <https://doi.org/10.31478/202104c>; Maani, N. Galea, S. (June 2020). COVID-19 and Underinvestment in the Public Health Infrastructure of the United States. *Milbank Quarterly*. <https://doi.org/10.1111/1468-0009.12463>; U.S. Government Accountability Office (GAO) Report to Congressional Committees (January 2022). COVID-19: Significant Improvements Are Needed for Overseeing Relief Funds and Leading Responses to Public Health Emergencies. GAO. <https://www.gao.gov/assets/gao-22-105291.pdf>; National Network of Public Health Institutes (May 2021). Challenges and Opportunities for Strengthening the U.S. Public Health Infrastructure: Findings from the Scan of the Literature. National Network of Public Health Institutes. <https://nnphi.org/wp-content/uploads/2021/06/NNPHI-E2A-Kresge-Report-Web.pdf>.
- ¹² Bruns, R., Hosangadi, D., Trotochaud, M. & Sell, T.K. (October 20, 2021). COVID-19 Vaccine Misinformation and Disinformation Costs an Estimated \$50 to \$300 Million Each Day. The Johns Hopkins Center for Health Security. https://www.centerforhealthsecurity.org/our-work/pubs_archive/pubs-pdfs/2021/20211020-misinformation-disinformation-cost.pdf.
- ¹³ Ward, J.A., Stone, E.M., Mui, P. & Resnick, B. (April 2022). Pandemic-Related Workplace Violence and Its Impact on Public Health Officials, March 2020-January 2021. *American Journal of Public Health*. <https://doi.org/10.2105/AJPH.2021.306649>; Shalby, C. (June 22, 2020). L.A. County Health Director Receives Death

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<https://www.nytimes.com/2020/03/28/us/testing-coronavirus-pandemic.html>.

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<https://www.who.int/news/item/03-03-2020-shortage-of-personal-protective-equipment-endangering-health-workers-worldwide>.

¹⁶ Becker, R., Ibarra, A., Lin, J. (March 18, 2020, updated March 22, 2020). How overwhelmed is California’s health care system about to be? *Cal Matters*. <https://calmatters.org/health/coronavirus/2020/03/california-hospitals-coronavirus-shortage-ventilators-beds/>;

Karlmangla, S. (July 13, 2020). “We’re just overwhelmed”: The view from inside hospitals as coronavirus surge hits. *Los Angeles Times*. <https://www.latimes.com/california/story/2020-07-13/overwhelmed-hospitals-coronavirus-surge-california>;

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¹⁹⁵ California Code, Government Code § [8558\(c\)](#).

¹⁹⁶ California Code, Government Code § [8634](#).

¹⁹⁷ The County Health Officer is designated by the Board of Supervisors pursuant to California Code, Health and Safety Code § [101000](#). Under California state law, the health officer must be a physician; however, the health officer does not necessarily need to also be the public health department director. Counties are permitted to have a separate department director.

¹⁹⁸ California Code, Health and Safety Code § [101040](#).

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Interim COVID-19 Response Review

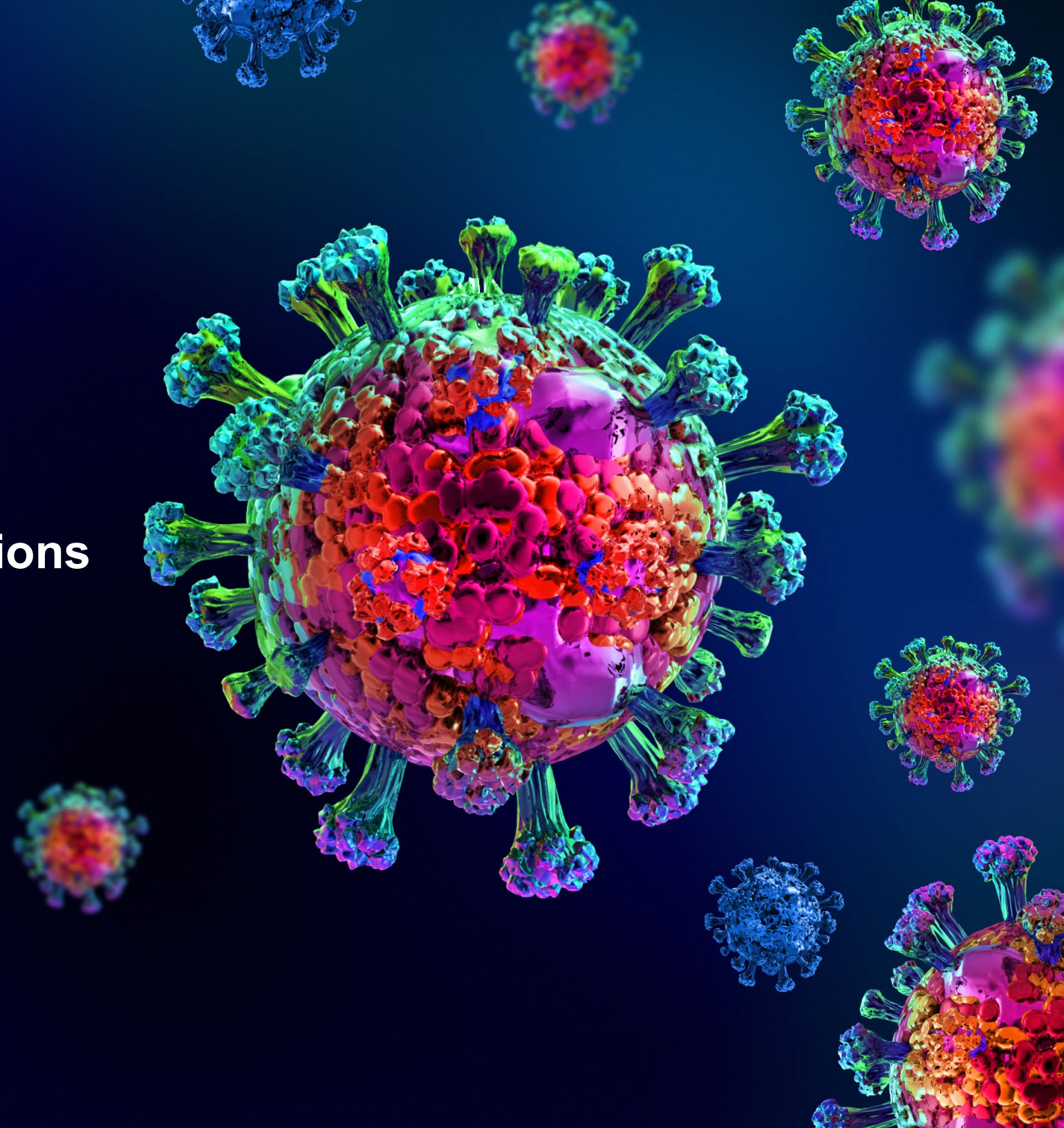
Lessons Learned and Recommendations
to Inform the Journey Ahead

*Appendix F
Supplemental Fact Pack*

December 2022

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Manatt Health Strategies, LLC



- **Context and Sources**
- **Glossary of Acronyms; Key Definitions**
- **Los Angeles County – Pre-Pandemic**
- **Impact of the Pandemic on Los Angeles County**
 - Cases, Hospitalizations, and Deaths
 - Regional Hospital ICU Capacity
 - Impact by Population: Frontline Healthcare Workers, People Experiencing Homelessness, SNFs, County Correctional Facilities, and K-12 Schools
- **LAC DPH Pandemic Response Strategies and Mitigation**
 - Key Activities
 - Health Officer Orders and Compliance
 - Contact Tracing
 - Outbreak Management
 - Quarantine and Isolation Support
 - Personal Protective Equipment (PPE) Distribution
 - Networks: Testing, Vaccination, and Therapeutics
 - Surveillance and Data Transparency
 - Protecting Vulnerable Populations and Community Engagement
 - Healthcare Worker Protections
- **LAC DPH Pandemic Workforce Deployment**
- **LAC DPH Pandemic Response Funding**

Purpose: This fact/chart pack, summarizes critical quantitative data that provides additional detail and information on the size and scale of the COVID-19 impact on the County of Los Angeles and gives context to the timeline of Public Health response activities.

It is not comprehensive of all COVID-19 response activities in the County nor to all of the activities and responsibilities of the County of Los Angeles Department of Public Health (LAC DPH). Rather, it is a selection of key fact areas that are helpful to display visually and which provide important contextualization to review of the pandemic response efforts.

This document has been developed as an accompaniment to the LAC DPH COVID-19 Interim Response Review report.

Timeframe: The content represents a moment in time using the most current data available at the time of analysis. The majority of data points and COVID-19 trends or impact data included in this fact pack are as of summer 2022.

Underlying COVID-19 case rate, hospitalization, and mortality data is publicly available through LAC DPH's COVID-19 dashboards but may be visually displayed in these slides in alternate ways, including aggregation of data over time or overlays of different data points for specific sub-populations, for example.

Sources of Data Include, But Are Not Limited To:

- Publicly available Los Angeles County information, press releases, and communications documents
- Los Angeles COVID-19 dashboards
- LAC DPH COVID-19 timelines and Health Officer Orders
- LAC DPH planning and strategy documents, including playbooks and pandemic response documents
- LAC DPH internal daily and weekly data reports
- Various County Department presentations to the Los Angeles County Board of Supervisors
- Key stakeholder briefing documents
- LAC DPH grant documents
- Summaries of community engagement activities, partnerships, and resources
- Workforce reports
- National and regional landscape review
- Media and literature scans

Glossary of Acronyms

Acronym	Definition
ACDC	Acute Communicable Disease Control
Cal/OSHA	California Division of Occupational Safety and Health
CBO	Community-Based Organization
CDC	Centers for Disease Control and Prevention
CDPH	California Department of Public Health
CEO	Chief Executive Officer (Los Angeles County)
CHC	Community Health Center
CHWOI	Community Health Worker Outreach Initiative
CHS	Correctional Health Services
CHW	Community Health Worker
DHS	Los Angeles County Department of Health Services
DMH	Los Angeles County Department of Mental Health
ECE	Early Childhood Education
EH	Environmental Health
ELC	Epidemiology and Laboratory Capacity for Prevention and Control of Emerging Infectious Diseases
EMS	Emergency Medical Services
FEMA	Federal Emergency Management Agency
FPP	Federal Pharmacy Partnership
FQHC	Federally Qualified Health Center
HCW	Health Care Worker
HFID	Health Facilities Inspection Division
HPI	Health Places Index
ICS	Incident Command System
ICU	Intensive Care Unit
IHE	Institutes of Higher Education
ISD	Los Angeles County Internal Services Department

Acronym	Definition
LAC DPH	Los Angeles County Department of Public Health
LACOE	Los Angeles County Office of Education
LAHAN	Los Angeles County Health Alert Network
LAHSA	Los Angeles Homeless Services Authority
LAUSD	Los Angeles Unified School District
LTCF	Long-Term Care Facility
OMB	Outbreak Management Branch
PCR	Polymer Chain Reaction
PEH	People Experiencing Homelessness
PHEP	Public Health and Emergency Preparedness
PHEP CoAG	Public Health Emergency Preparedness (PHEP) Crisis Cooperative Agreement (CoAG)
POD	Points of Dispensing
PPE	Personal Protective Equipment
Q&I	Quarantine and Isolation
SNF	Skilled Nursing Facility
STAT	Schools Technical Assistance Team
STD	Sexually Transmitted Disease
TB	Tuberculosis
TK-12	Transitional Kindergarten Through 12 th grade
WHO	World Health Organization

Health Disparities: Inequities in the quality of health, health care and health outcomes experienced by groups based on social, racial, ethnic, economic and environmental characteristics.

- For additional information: [*“Disparities in Health and Health Care: 5 Key Questions and Answers,”*](#) Racial Equity and Health Policy Issue Brief, Kaiser Family Foundation, May 11, 2021

Health equity: Health equity is when everyone has the community conditions and power needed for optimal health and well-being. Health is shaped by the community conditions in which we live, learn, work, play, and pray

- For additional information: [*“A Call To Action Supporting a Movement for Fair and Just Health Outcomes. Action Plan 2018-2023,”*](#) Los Angeles County Department of Public Health Center for Health Equity, February 14, 2019.

Healthcare Workers (HCWs): In monitoring the impact of COVID-19, LAC DPH defined HCWs as any person working or volunteering in a licensed or nonlicensed healthcare settings, including hospitals and skilled nursing facilities, as well as outpatient practices, mental health facilities, emergency medical services, and so forth. HCWs include both clinical staff that interacted directly with patients and nonclinical staff that worked in the healthcare industry but did not provide direct clinical care to patients. In addition, the definition of HCWs also includes professionals providing care in nonhealthcare settings, such as school or correctional facility nurses, or caregivers in senior living facilities.

- For additional information: Hartmann, S., et al. [*“Coronavirus Disease 2019 \(COVID-19\) Infections Among Healthcare Workers, Los Angeles County, February-May 2020.”*](#) *Journal of Clinical Infectious Disease*, October 5, 2021.

Communities most impacted by COVID-19: COVID-19 has differentially impacted people according to their race/ethnicity, socioeconomic status, and preexisting conditions. Despite its vast spread, the disease has disproportionately affected persons of color, older adults, essential workers, and communities, which includes certain geographic regions, with fewer health affirming resources.

Public Health departments use several tools to in disease surveillance efforts to identify neighborhood-level characteristics that may indicate a higher risk for COVID-19 and associated adverse health outcomes and to understand the impact of their socioeconomic characteristics on the severity and spread of a disease and actionable strategies that can be taken to help mitigate risk. These include (among others):

- **Higher-Poverty Areas:** Defined as communities where the percentage of residents living under 200% of the Federal Poverty Line is above the median for the county.
- **Healthy Places Index (HPI):** HPI is a data measure that looks at socioeconomic opportunities by census tract, and includes 25 individual indicators across economic, social, education, transportation, housing, environmental and neighborhood sector.
- **Census Tract:** a Census Tract is a relatively small geographic area—a subdivision of a county—that is established by the U.S. Census Bureau for collecting census data. It can be roughly regarded as a neighborhood, as it generally has 2,500 to 8,000 residents and its boundary follows visible features like roads and/or bodies of water. Evaluating population socioeconomic and health needs in relation to census tracks can be useful to obtain a more granular perspective of needs considering factors including, but not limited to, population characteristics, school enrollment, poverty level, median household income, housing vacancy, etc.
- **American Community Survey (ACS):** A demographics survey program conducted by the U.S. Census Bureau that collects and produces information on social, economic, housing, and demographic characteristics about our nation's population every year.

Los Angeles County – Pre-Pandemic

Los Angeles County Overview

Key Statistics

- Population¹: 10,178,592
- Median Household Income: \$71,358
- Poverty Rate (<100% Federal Poverty Level)²: 14.7%
- Uninsured (Under Age 65): 11.1%
- Disability (Under Age 65): 6.2%
- Households with Broadband: 89.7%
- Languages Spoken: >224 languages
- # of People Experiencing Homelessness: 63,706

Demographics by Race, Ethnicity, and Age-Group¹

Race* and Ethnicity	%
Hispanic	48.6%
White	26.3%
Asian	14.2%
Black	7.9%
Two or More Races	2.2%
Other Race	0.3%
Native Hawaiian or Other Pacific Islander (NHOPI)	0.2%
American Indian or Alaska Native (AI/AN)	0.2%

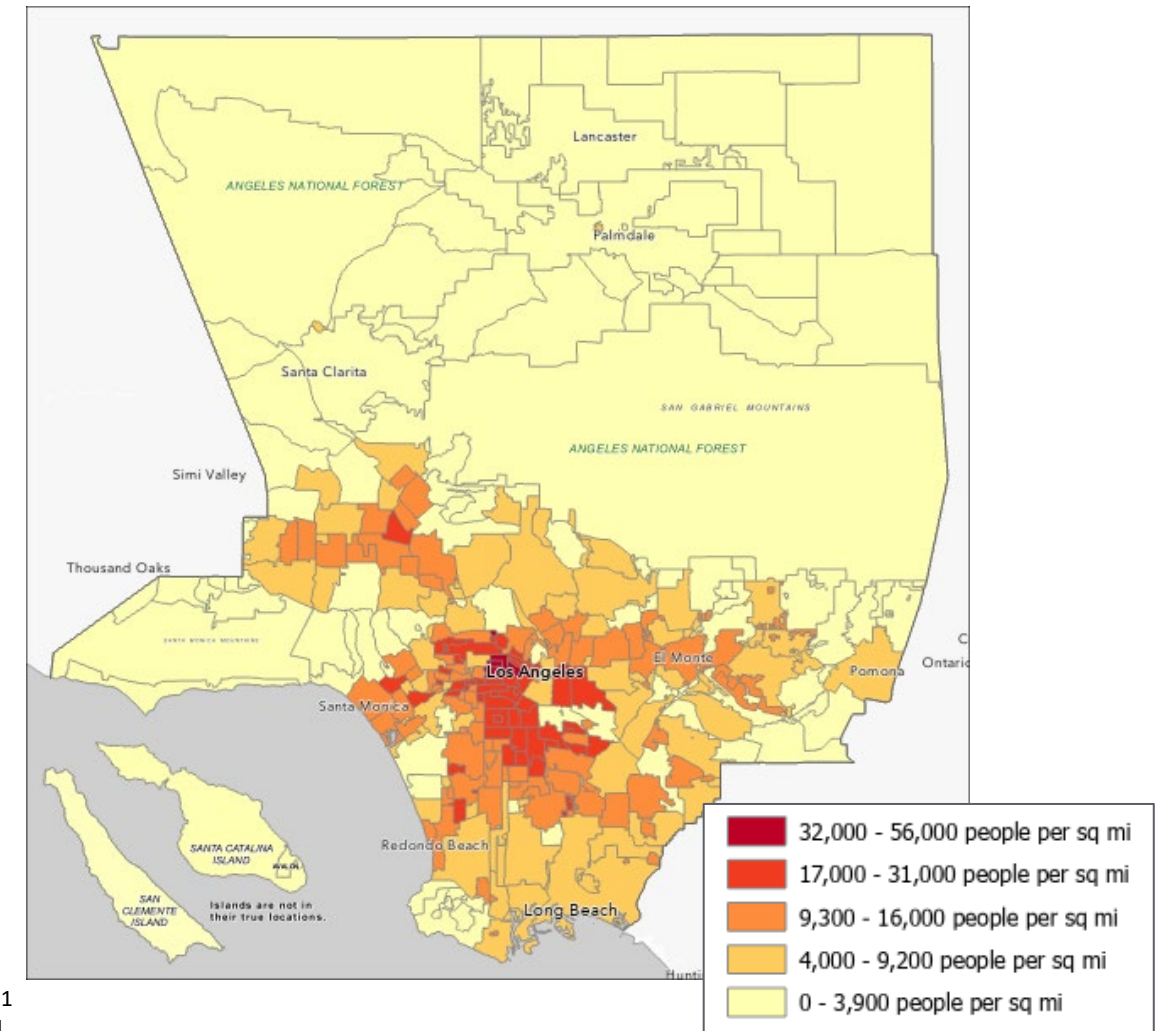
Age-Group	%
0-4 years	5.0%
5-11 years	8.5%
12-17 years	7.4%
18-64 years	65.1%
65+ years	14.0%

* All race categories are non-Hispanic; percentages do not total to 100 due to rounding

¹ July 1, 2020 (Provisional) Population Estimates, prepared by Hedderson Demographic Services for Los Angeles County Internal Services Department, April 27, 2021

² July 1, 2020 (Provisional) Poverty Estimates, prepared by Hedderson Demographic Services for Los Angeles County Internal Services Department, August 20, 2021

Population Density by Neighborhood

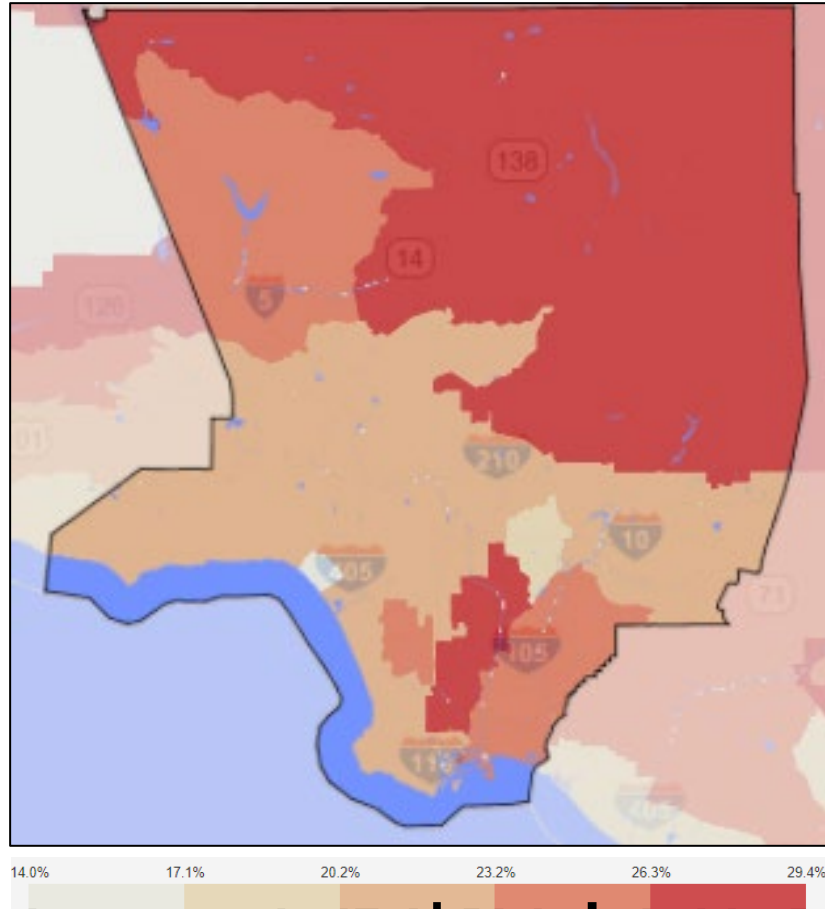


Sources: Quick Facts: Los Angeles County, California, U.S. Census Bureau; 2020 Greater Los Angeles Homeless County, LAHSA; Population Density, Provisional 2020 Population Estimate and Projection System (PEPS), October 2021; Broadband, U.S. Census Bureau's American Community Survey (ACS) – 2016–2020 five-year estimates, Table B28011 – Internet Subscriptions in Household; ICS COVID-19 Response Reports and Data Management, June 9, 2022; Language Spoken at Home, Los Angeles County, Los Angeles Almanac, 2019.

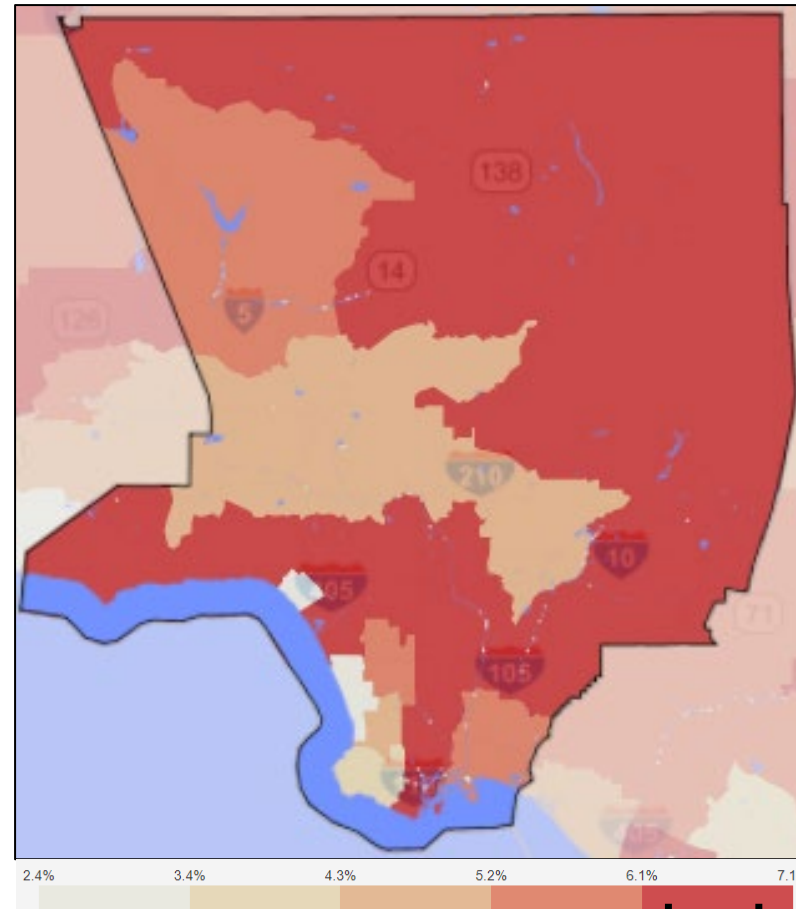
Los Angeles County Overview

Age Distribution (0 – 29)

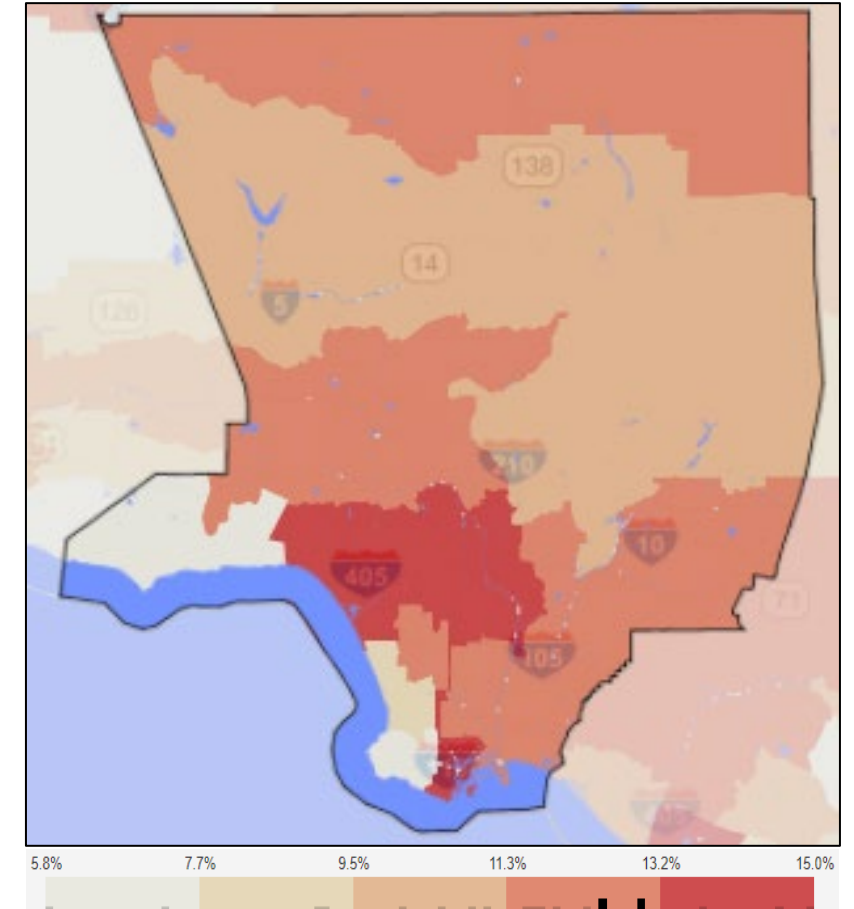
% Population Aged 0-17



% Population Aged 18-21



% Population Aged 22-29

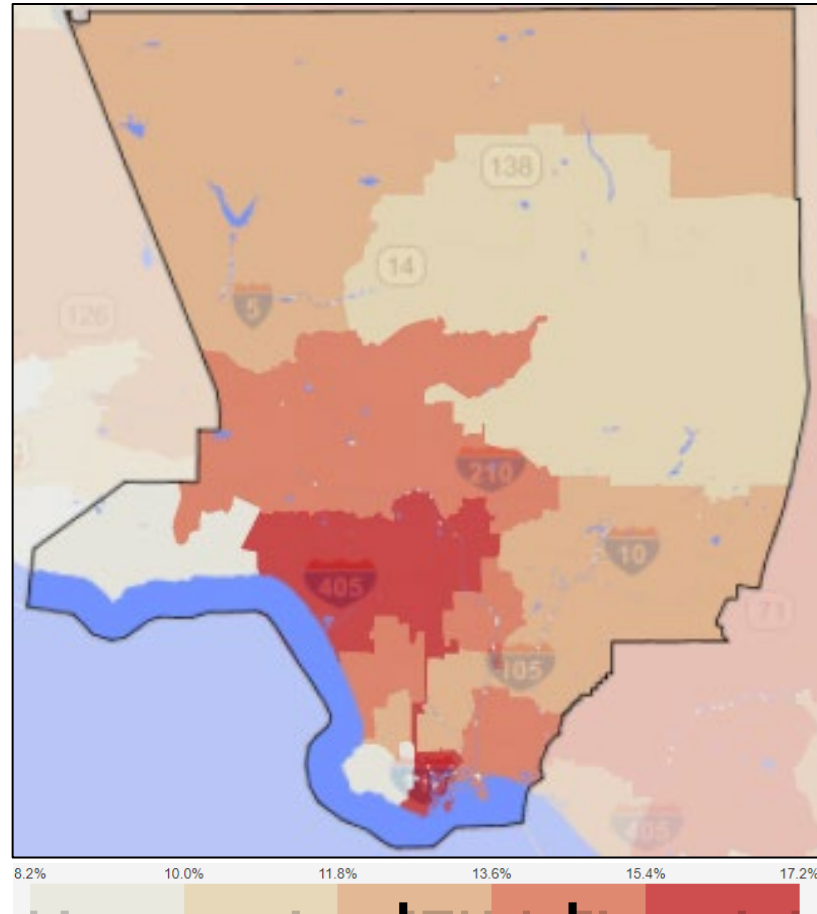


Source: [Map of Age Cohorts by County Subdivision in Los Angeles County, Statistical Atlas, Accessed June 24, 2022.](#) Maps leverage 2010 Census and 2012-2016 ACS data.

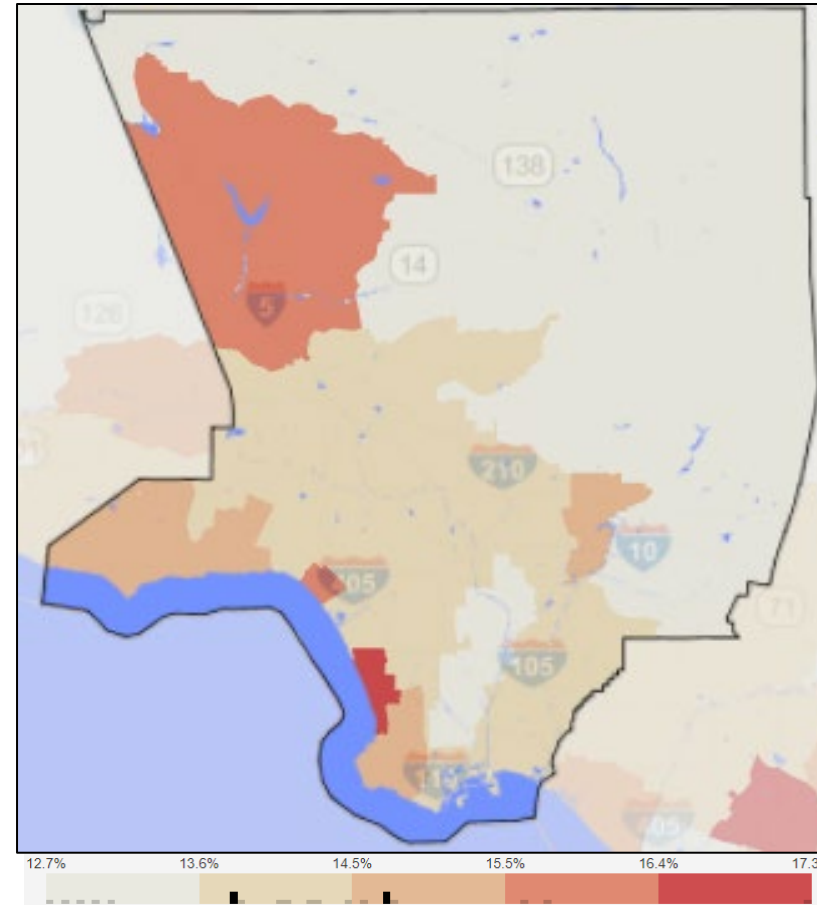
Los Angeles County Overview

Age Distribution (30 – 59)

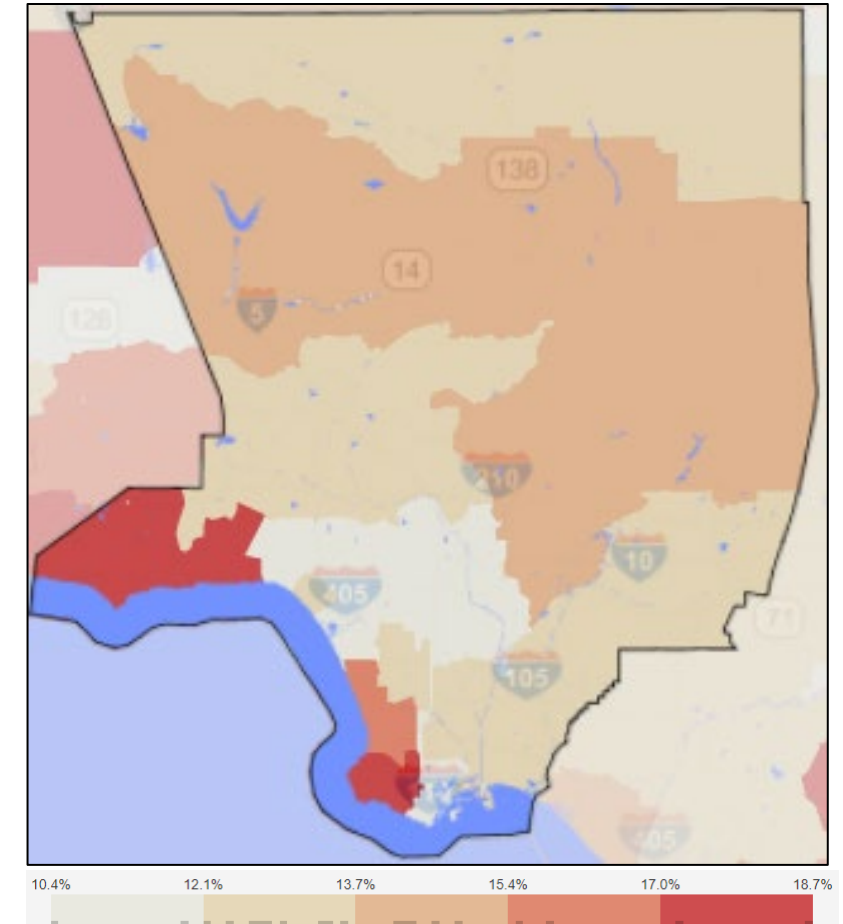
% Population Aged 30-39



% Population Aged 40-49



% Population Aged 50-59

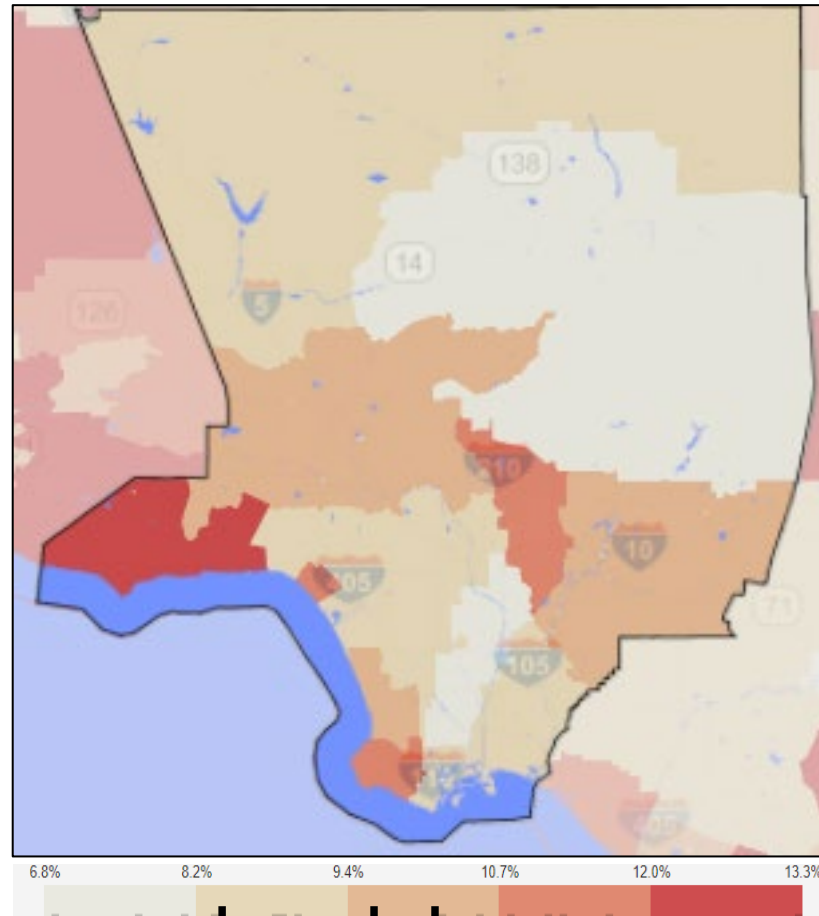


Source: [Map of Age Cohorts by County Subdivision in Los Angeles County, Statistical Atlas, Accessed June 24, 2022. Maps leverage 2010 Census and 2012-2016 ACS data.](#)

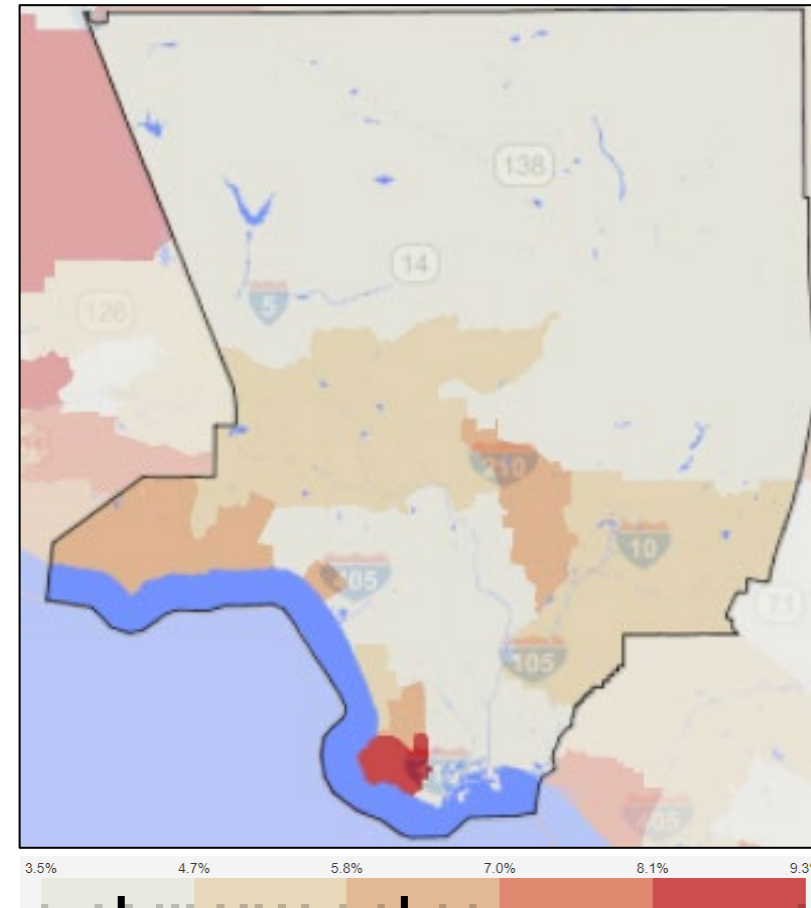
Los Angeles County Overview

Age Distribution (60+)

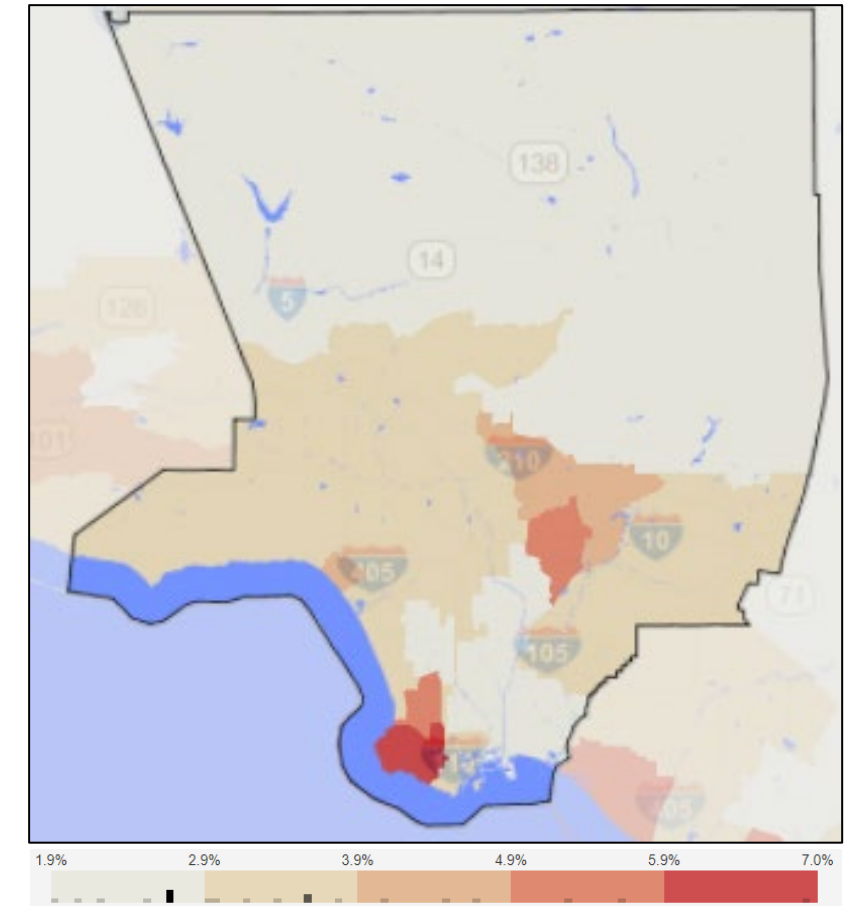
% Population Aged 60-69



% Population Aged 70-79



% Population Aged 80+

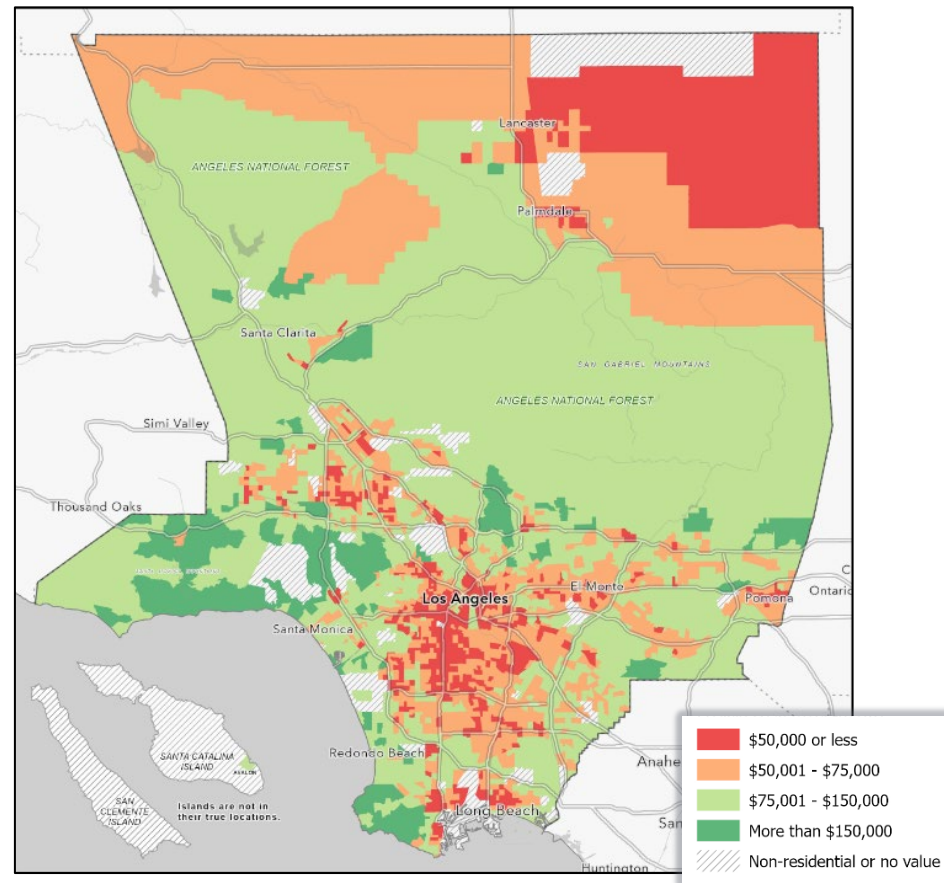


Source: [Map of Age Cohorts by County Subdivision in Los Angeles County, Statistical Atlas, Accessed June 24, 2022. Maps leverage 2010 Census and 2012-2016 ACS data.](#)

Los Angeles County Overview

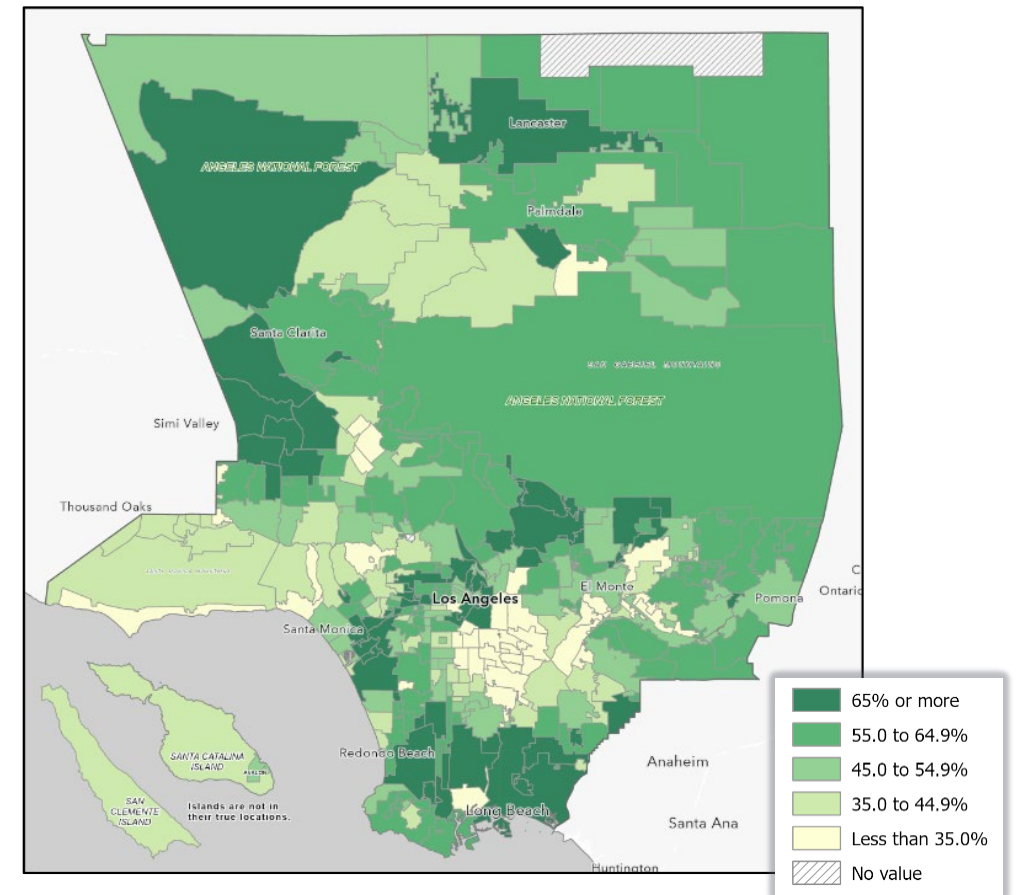
Median Household Income, and Diversity Index

Median Household Income by Census Tract



Diversity Index by Neighborhood

Diversity index: probability that any two residents are of different race/ethnicity



Sources: Diversity, Diversity Index Equation from U.S. Census Bureau, population data from Provisional 2020 Population Estimate and Projection System (PEPS), October 2021; Median Household Income, U.S. Census Bureau's American Community Survey (ACS) – 2016–2020 five-year estimates, Table S1903 – Median Income in the Past 12 Months (in 2020 inflation-adjusted dollars); ICS COVID-19 Response Reports and Data Management, June 9, 2022.

Los Angeles County Overview

Income Disparities by Race and Ethnicity

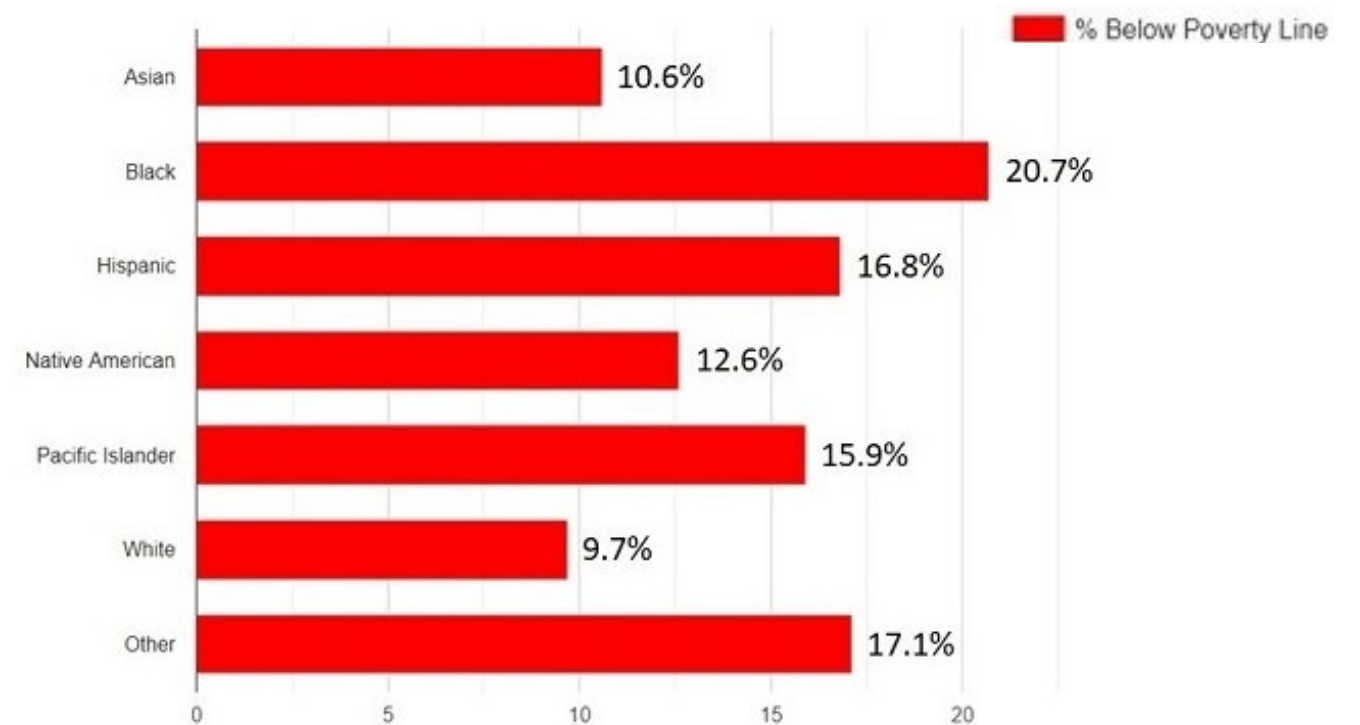
Median Household Income by Race and Ethnicity (2018)

Black households in Los Angeles County have less than 60 percent of the median household income of white households.



Poverty Rate by Race and Ethnicity (2018)

The poverty rate for Black residents in Los Angeles county is more than double that of white residents. The poverty rate for Hispanic residents is more than 1.5 x that of white residents.

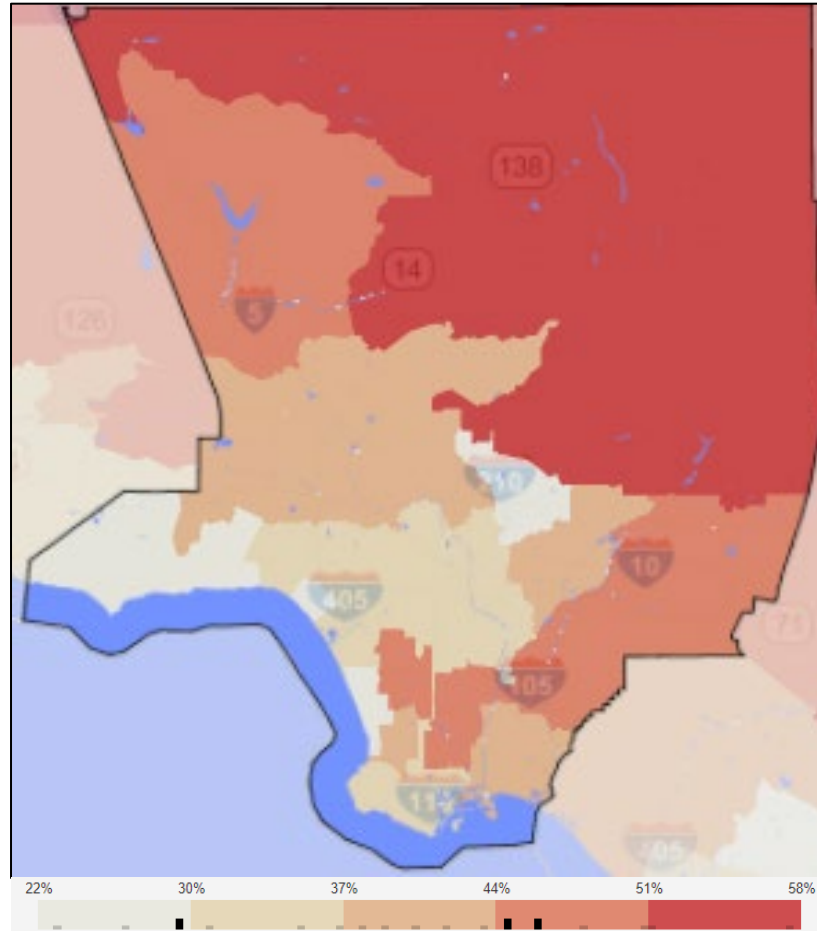


Source: [Racial Disparities in Six Charts Los Angeles County](#), U.S. Census Bureau data, 2018. Image source: [Los Angeles Almanac](#).

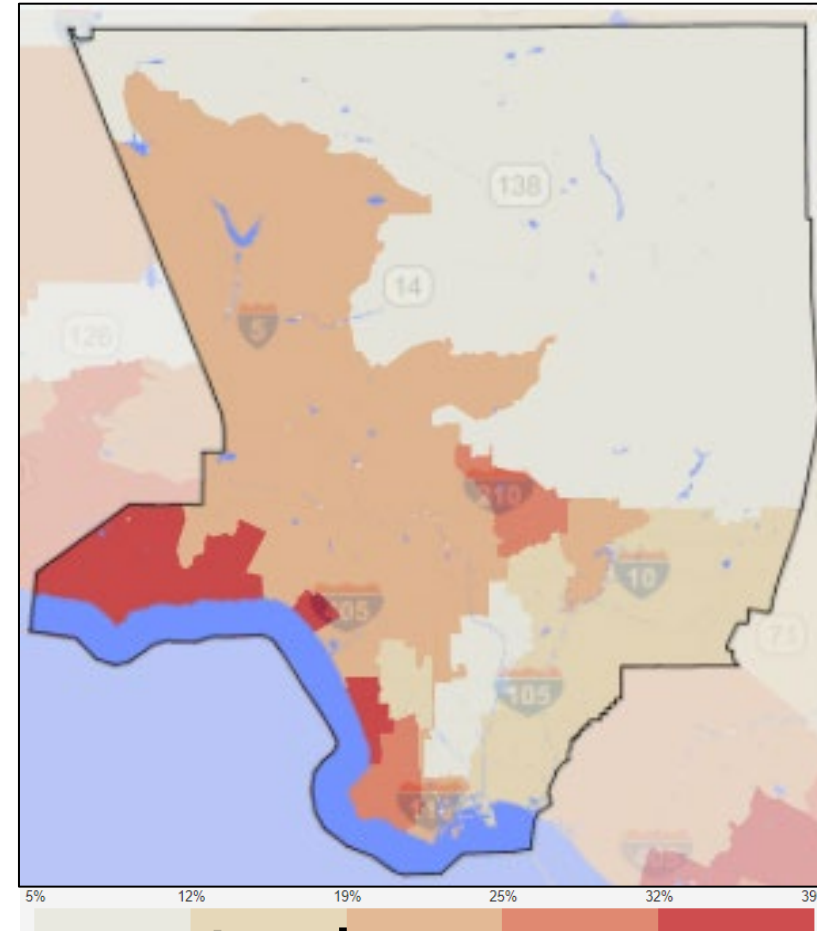
Los Angeles County Overview

Educational Attainment by County Subdivision

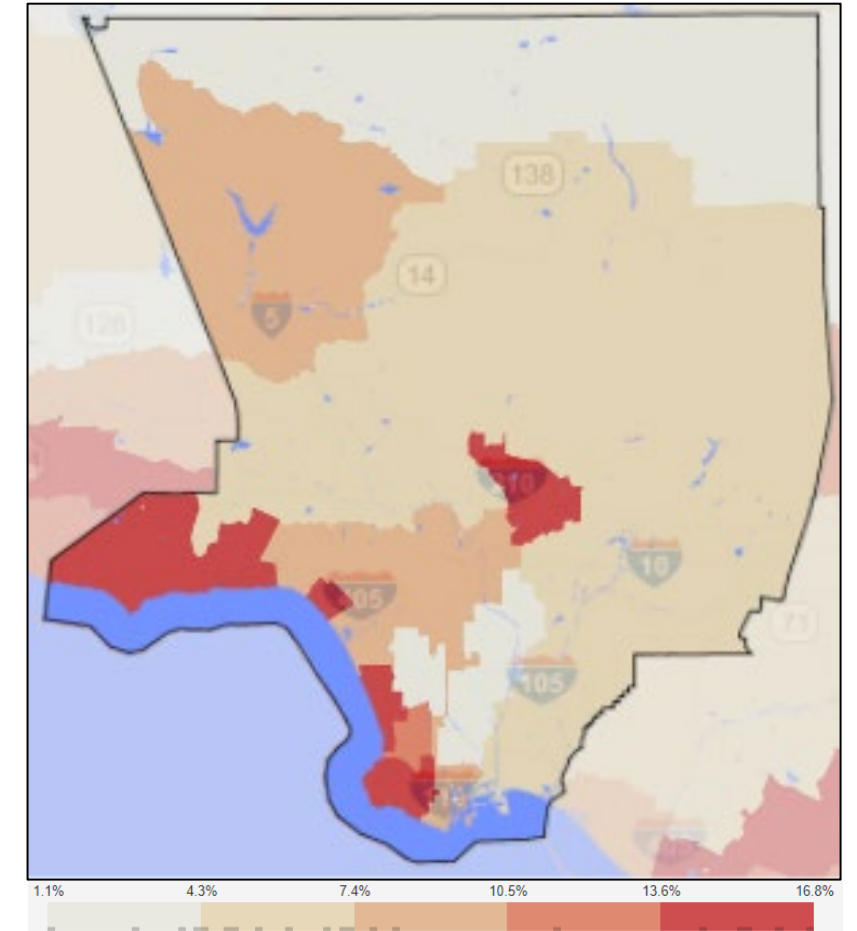
% Population 25+ with a High School Diploma



% Population 25+ with a Bachelor's Degree



% Population 25+ with a Master's Degree

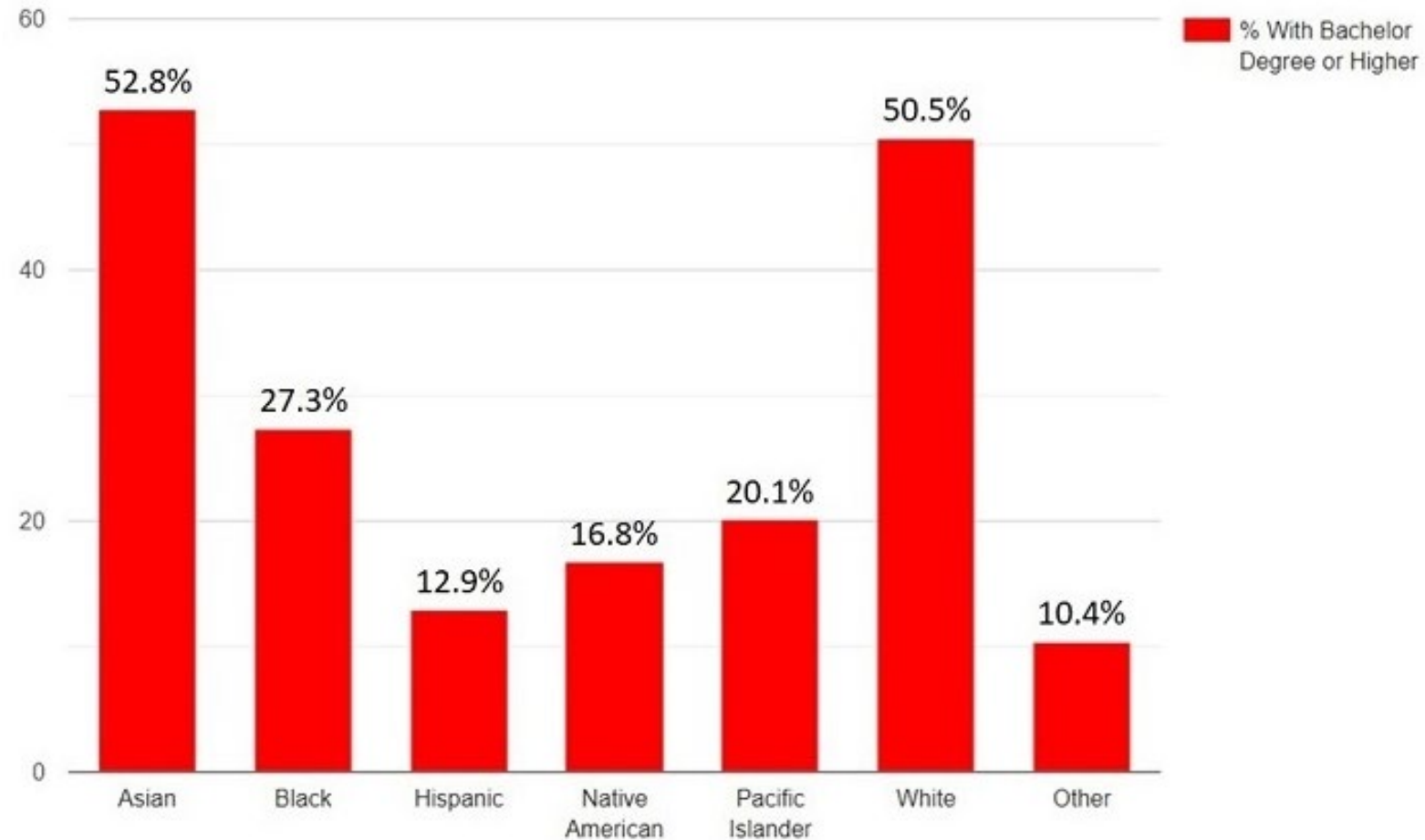


Source: [Map of Educational Attainment by County Subdivision in Los Angeles County, Statistical Atlas, Accessed June 24, 2022. Maps leverage 2010 Census and 2012-2016 ACS data.](#)

Los Angeles County Overview

Educational Attainment by Race/Ethnicity

Adults with a Bachelor Degree or Higher by Race and Ethnicity (2018)



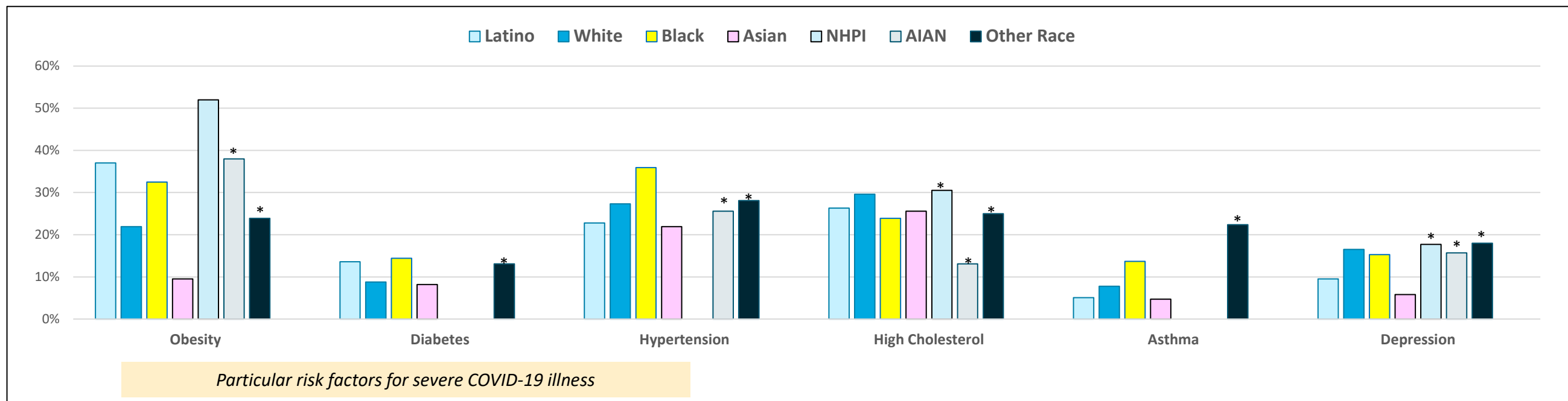
Source: [Racial Disparities in Six Charts Los Angeles County](#), U.S. Census Bureau data, 2018, Image source: [Los Angeles Almanac](#).



Prevalence of Chronic Conditions by Race and Ethnicity

The prevalence of chronic conditions vary by race and ethnicity. For example, White Angelenos have a lower prevalence of obesity and diabetes than Latino and Black Angelenos, but a higher prevalence of high cholesterol and depression.

Percent of Adults with Various Chronic Conditions by Race and Ethnicity in Los Angeles County (2018)



Sources: [2018 Los Angeles County Health Survey](#); ICS COVID-19 Response Reports and Data Management, June 9, 2022.
Note: NHPI - Native Hawaiian and Pacific Islander; AIAN - American Indian and Alaska Native
* Estimates are unstable; Data not presented are suppressed due to confidentiality

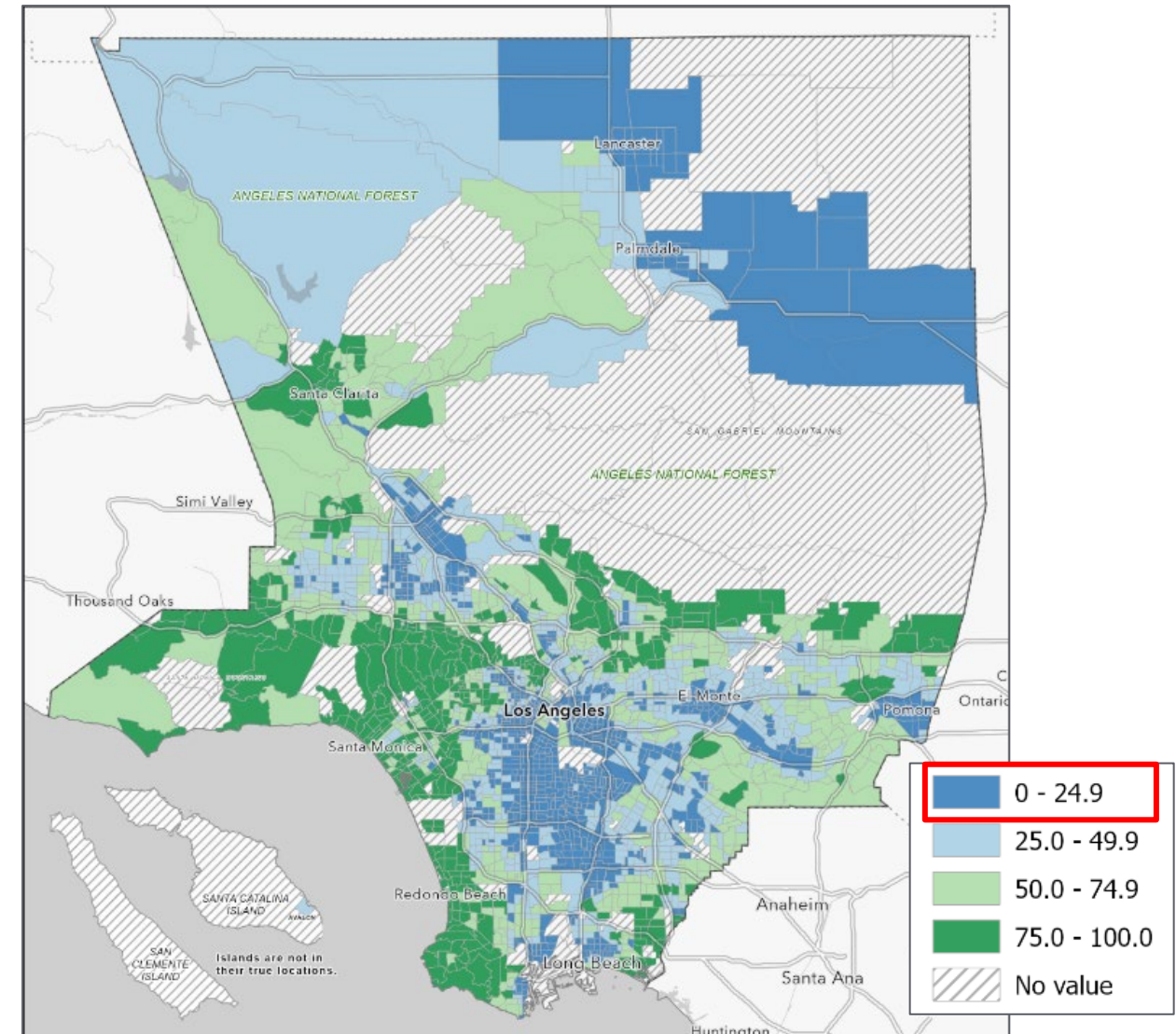
Los Angeles County Overview Healthy Places Index (HPI)

California HPI 3.0 Score Percentile Ranking by 2010 Census Tract

- HPI 3.0 examines social determinants of health to generate an HPI score to measure community well-being at the census tract level, using data primarily from 2015-2019.
- Percentile rank describes a census tract's place in the overall HPI score distribution. **Ranks closer to 0 indicate unhealthy conditions, while ranks closer to 100 indicate healthy conditions.**
- HPI 3.0 is used by local and state government agencies and leaders to drive decision-making (e.g., investments, grants, planning, policies).
- Los Angeles County has tremendous community-level variation in the factors that indicate socio-economic opportunity. **Low scores correlate with marginalization and disadvantage.**

A project of the Public Health Alliance of Southern California, HPI maps data on social conditions that drive health — like education, job opportunities, clean air and water, and other indicators that are positively associated with life expectancy at birth.

The Public Health Alliance is a coalition of 10 health departments in Southern California, representing 60% of the state's population.



Sources: [About the HPI, California Health Places Index](#); [HPI, Public Health Alliance of Southern California, 4/4/2022](#); ICS COVID-19 Response Reports and Data Management, June 9, 2022.

About Healthy Places Index (HPI) Indicators



public health alliance™ of southern california *A Partnership for Healthy Places*
Fiscally administered by the Public Health Institute



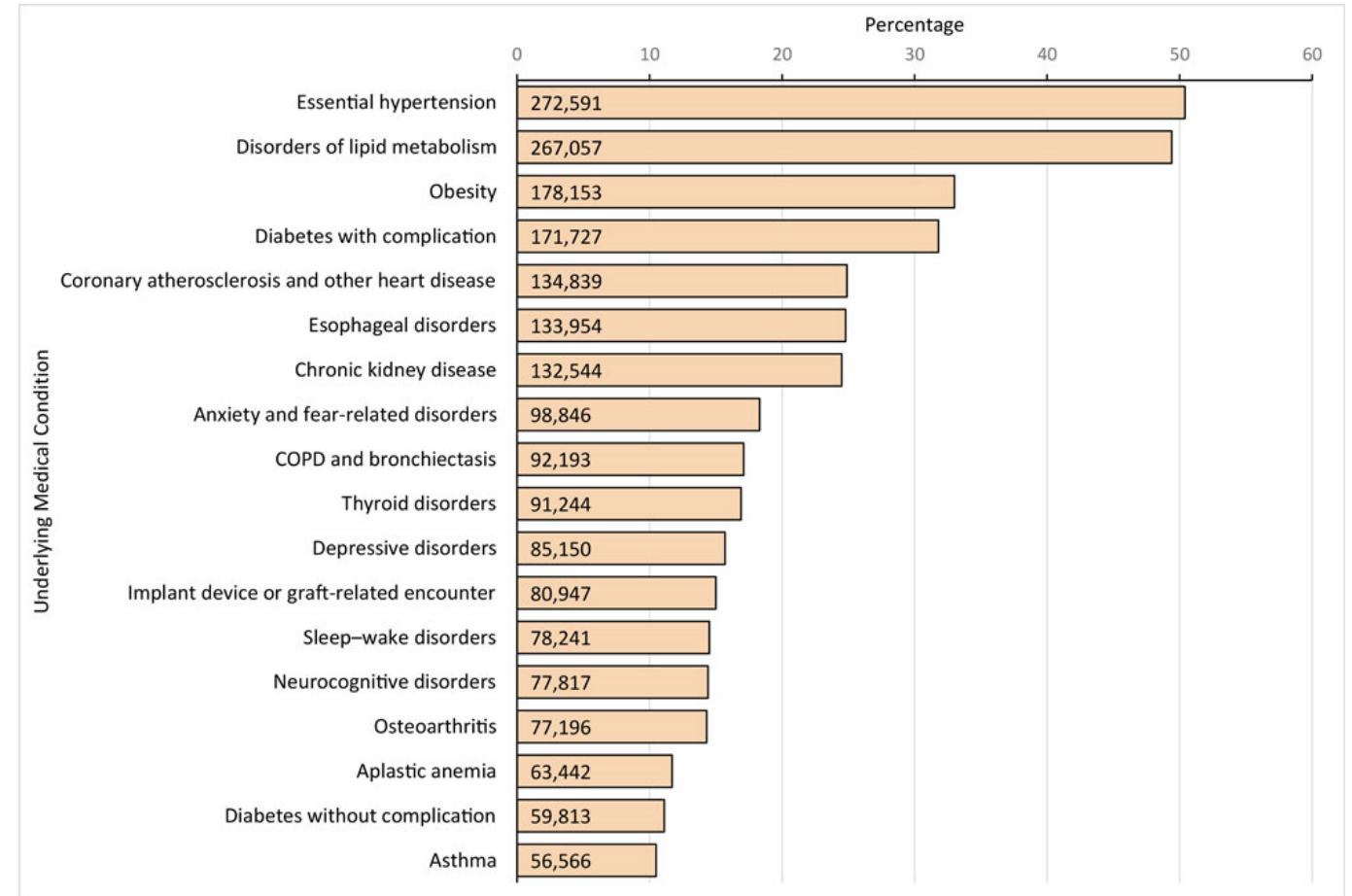
Source: "Using Disadvantage Indices to Advance Health Equity: Lessons Learned from State COVID-19 Response Efforts," Academy Health, August 2021.

Los Angeles County Overview

Chronic Disease Burden and COVID-19

- While the HPI provides an important view into the socio-economic factors that affect health, it also provides a helpful view of chronic disease burden in different neighborhoods (see the following slides).
- Increasing data indicate that COVID-19 presents in a severe form in patients with pre-existing chronic conditions like cardiovascular diseases, diabetes, obesity, respiratory system diseases, and renal diseases.
- In Los Angeles County, many communities that scored low on the HPI composite score have high prevalence of chronic diseases that make their residents more vulnerable to the harshest effects of COVID-19, such as being more likely to experience severe symptoms, higher likelihood of ICU admission and a higher risk of mortality.
- The striking differences seen across Los Angeles County in wealth, opportunity, and environments are mirrored by stark inequalities in health.

In one study of 540,000 hospitalized patients with COVID-19 (between March 2020 – March 2021), 94.9% had at least 1 underlying chronic medical condition.



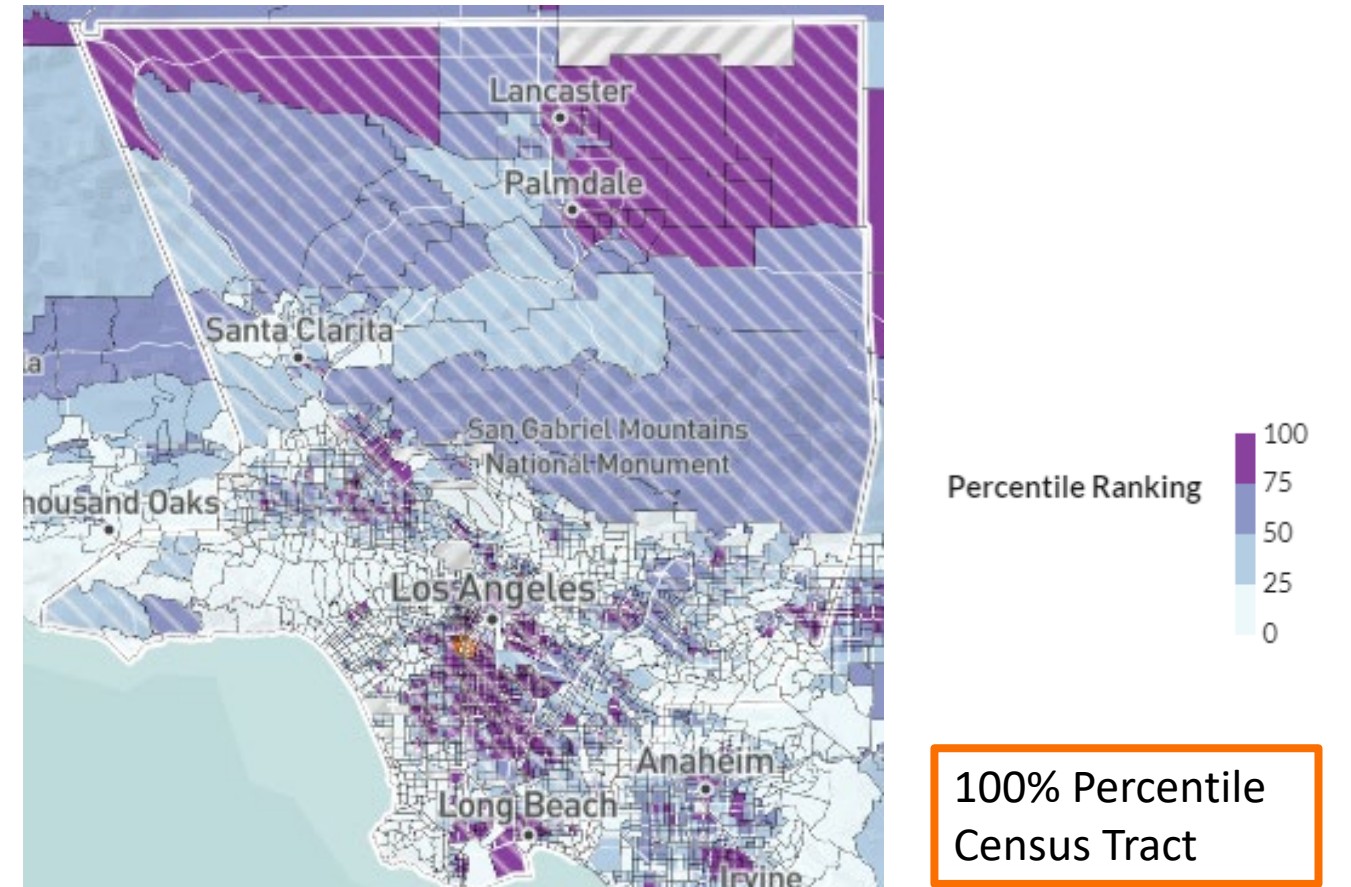
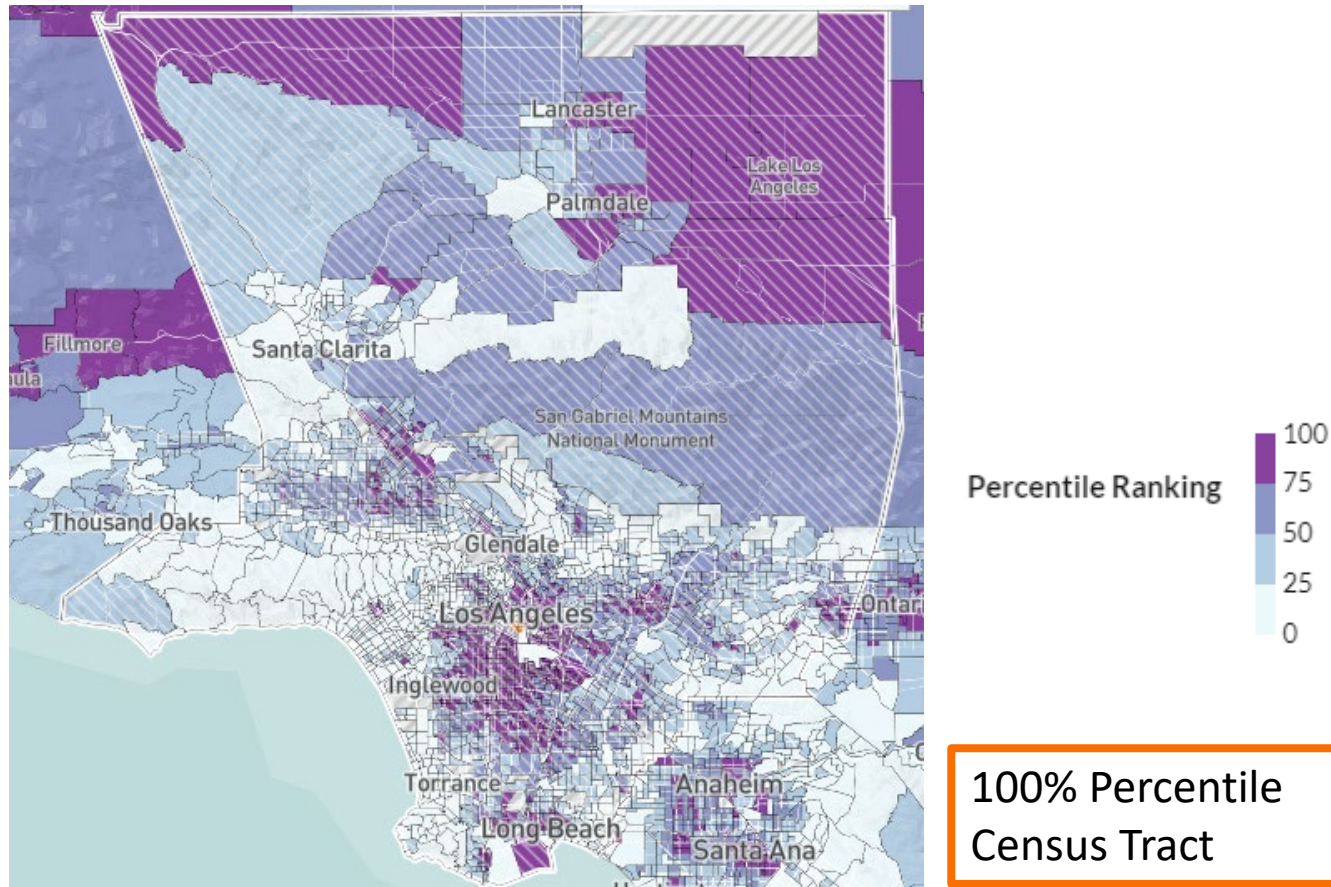
Sources: Kompaniyets L, Pennington AF, Goodman AB, Rosenblum HG, Belay B, Ko JY, et al. Underlying Medical Conditions and Severe Illness Among 540,667 Adults Hospitalized With COVID-19, March 2020–March 2021. *Prev Chronic Dis* 2021;18:210123. DOI: <http://dx.doi.org/10.5888/pcd18.210123>; Geng, JinSong et al. “Chronic Diseases as a Predictor for Severity and Mortality of COVID-19: A Systematic Review With Cumulative Meta-Analysis.” *Frontiers in medicine* vol. 8 588013. 1 Sep. 2021, doi:10.3389/fmed.2021.588013



HPI: Geographic Disparities in Health Status

Adults Reporting Physical Health “Not Good” During 2 or More Weeks in the Past 30 Days (2018)

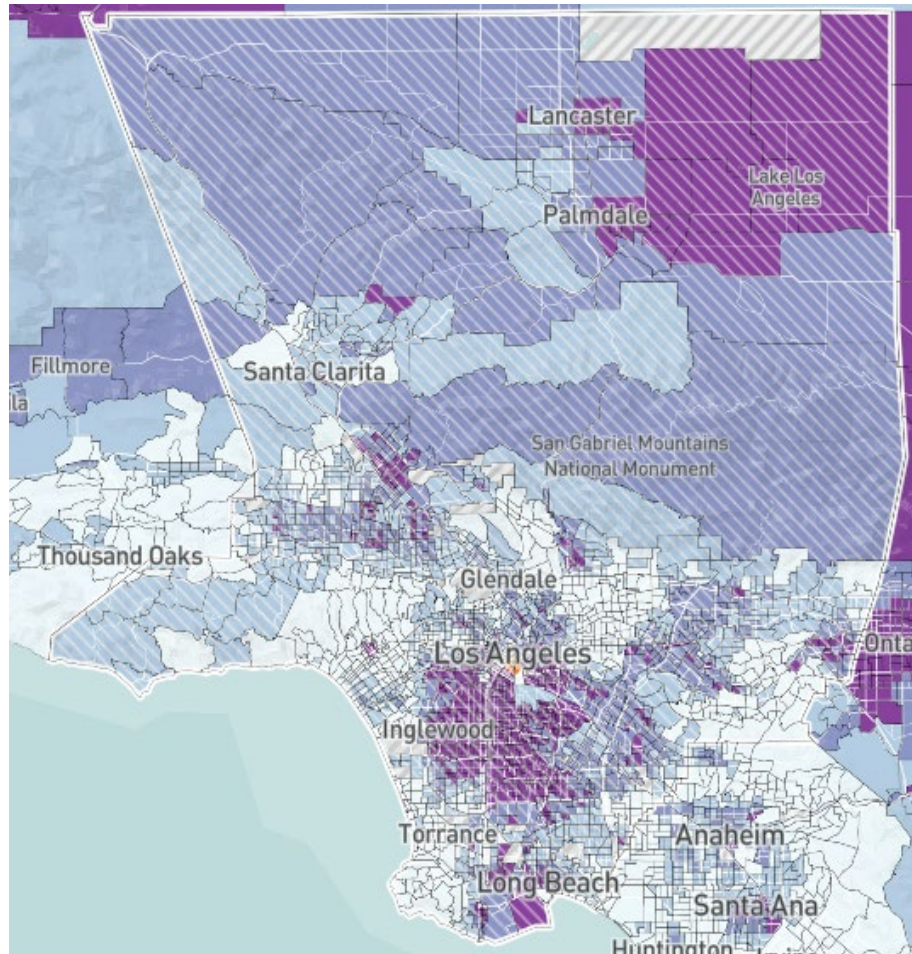
Adults Reporting Mental Health “Not Good” During 2 or More Weeks in the Past 30 Days (2018)



Sources: [HPI](#); [HPI Technical Report](#)

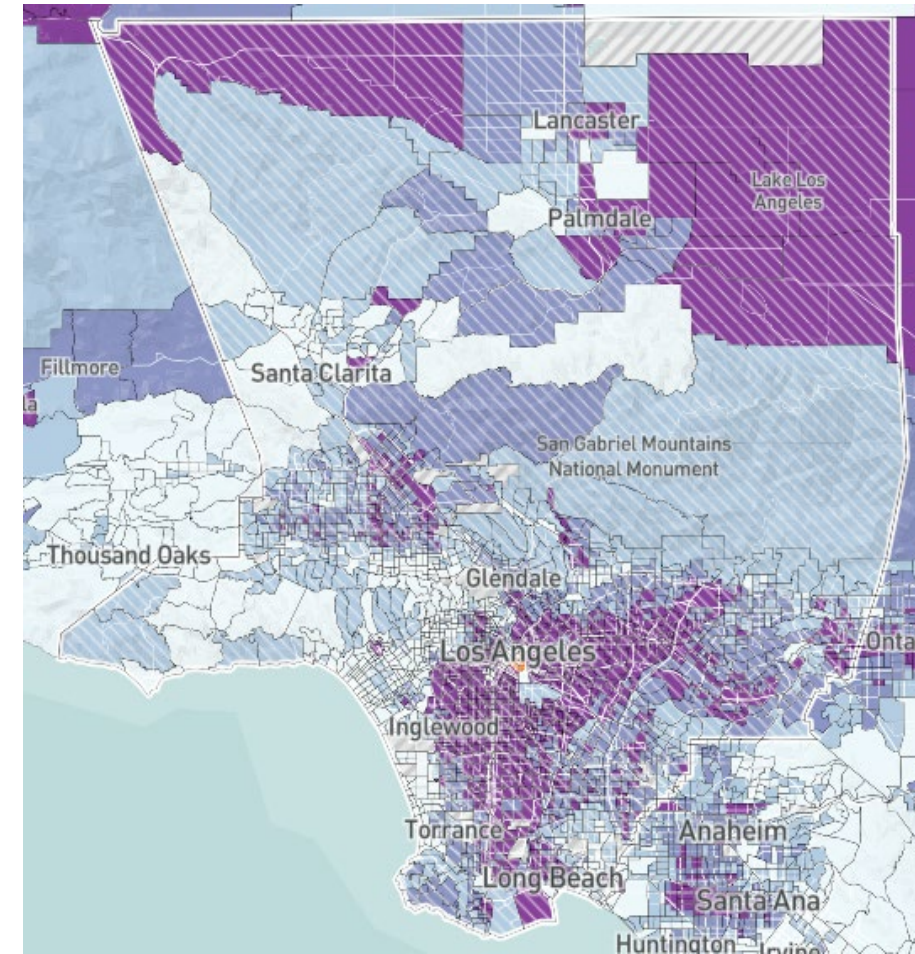
HPI: Geographic Disparities in Diabetes and Obesity

Obese Adults (BMI > 30.0 kg/m²) (2018)



100% Percentile
Census Tract

Adults Diagnosed with Diabetes (2018)

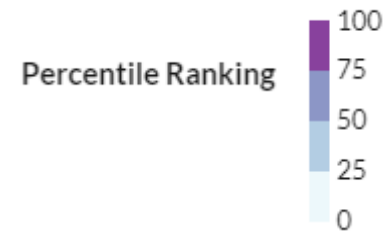
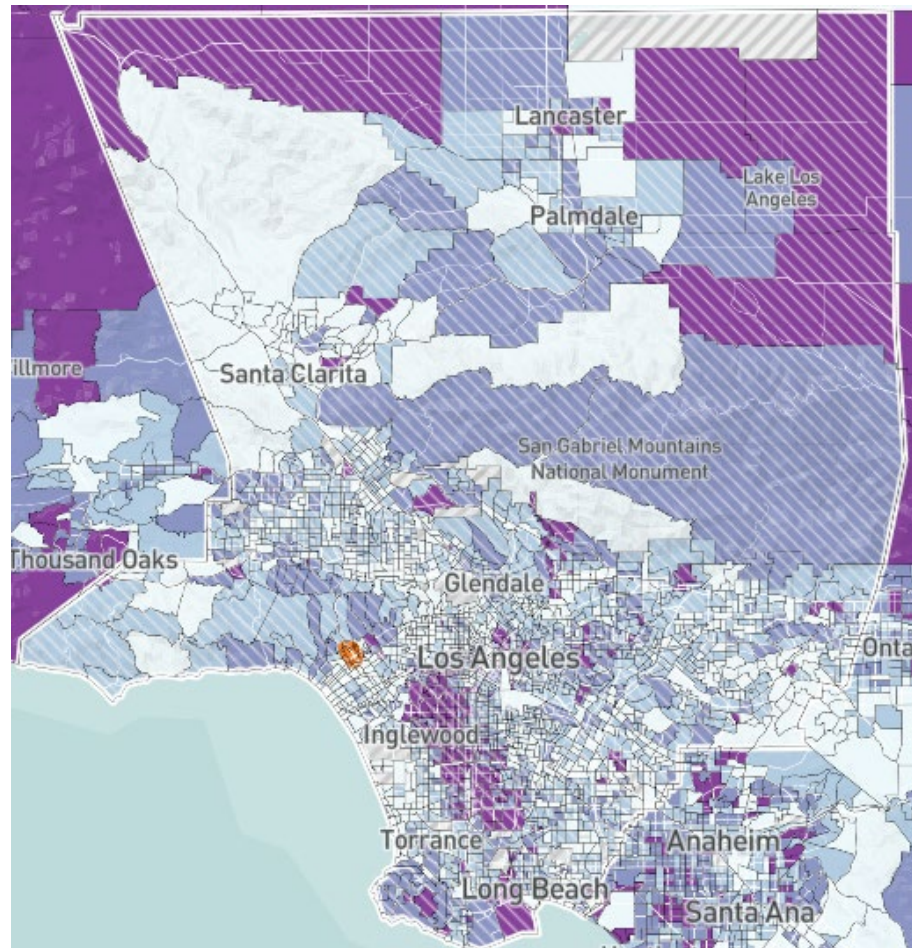


100% Percentile
Census Tract

Sources: [HPI](#); [HPI Technical Report](#)

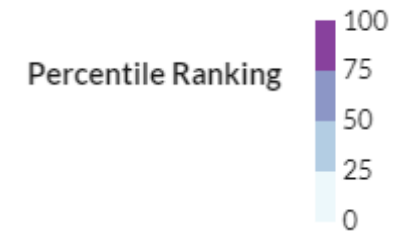
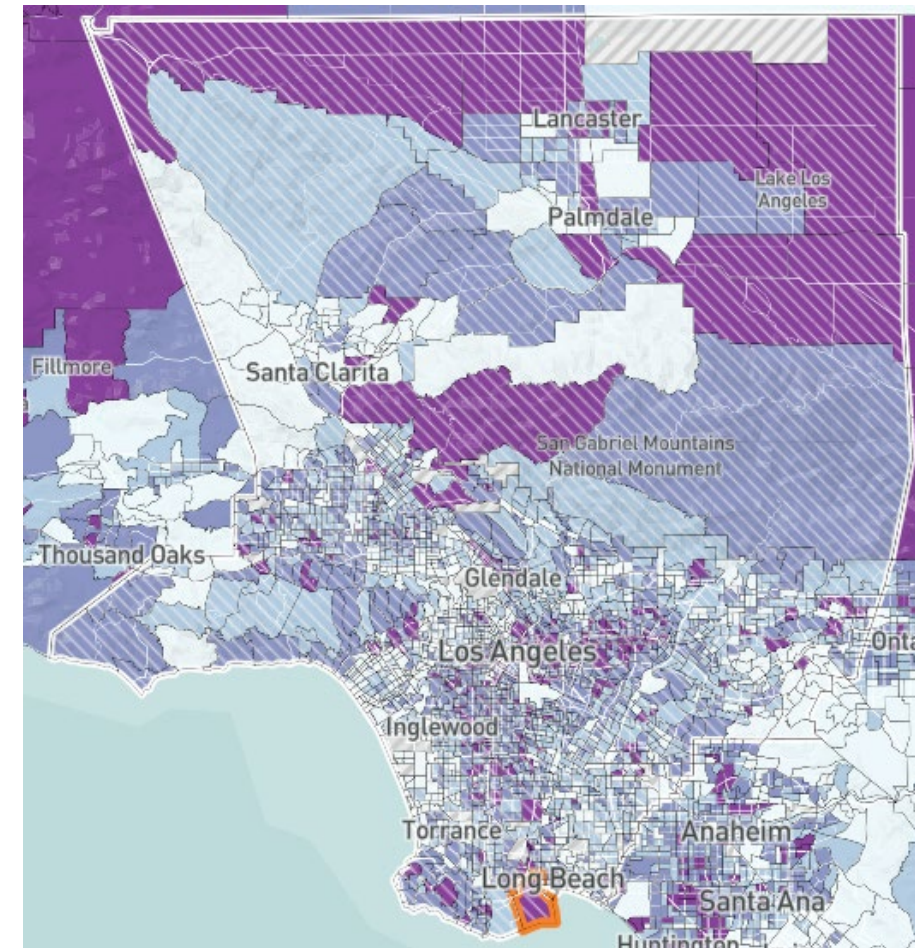
HPI: Geographic Disparities in High Blood Pressure and Coronary Heart Disease

Adults Diagnosed with High Blood Pressure (2018)



100% Percentile Census Tract

Adults Diagnosed with Angina or Coronary Heart Disease (2018)

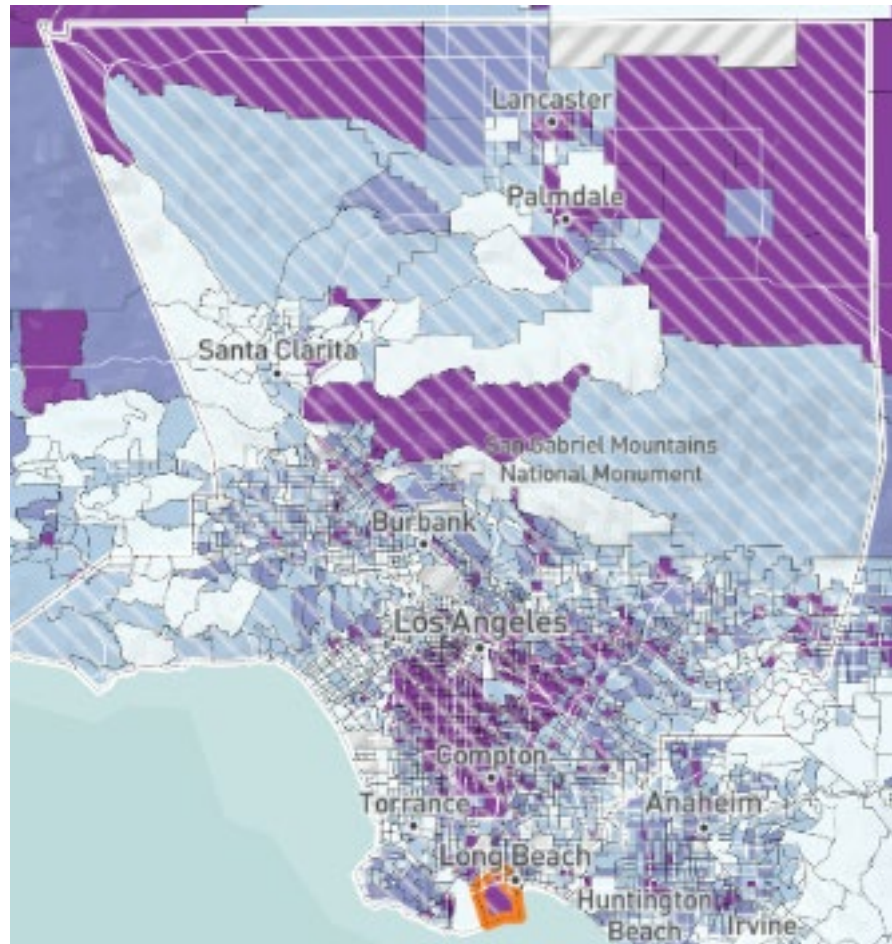


100% Percentile Census Tract

Sources: [HPI](#); [HPI Technical Report](#)

HPI: Geographic Disparities in CKD and COPD

Adults Diagnosed with Chronic Kidney Disease (CKD) (2018)

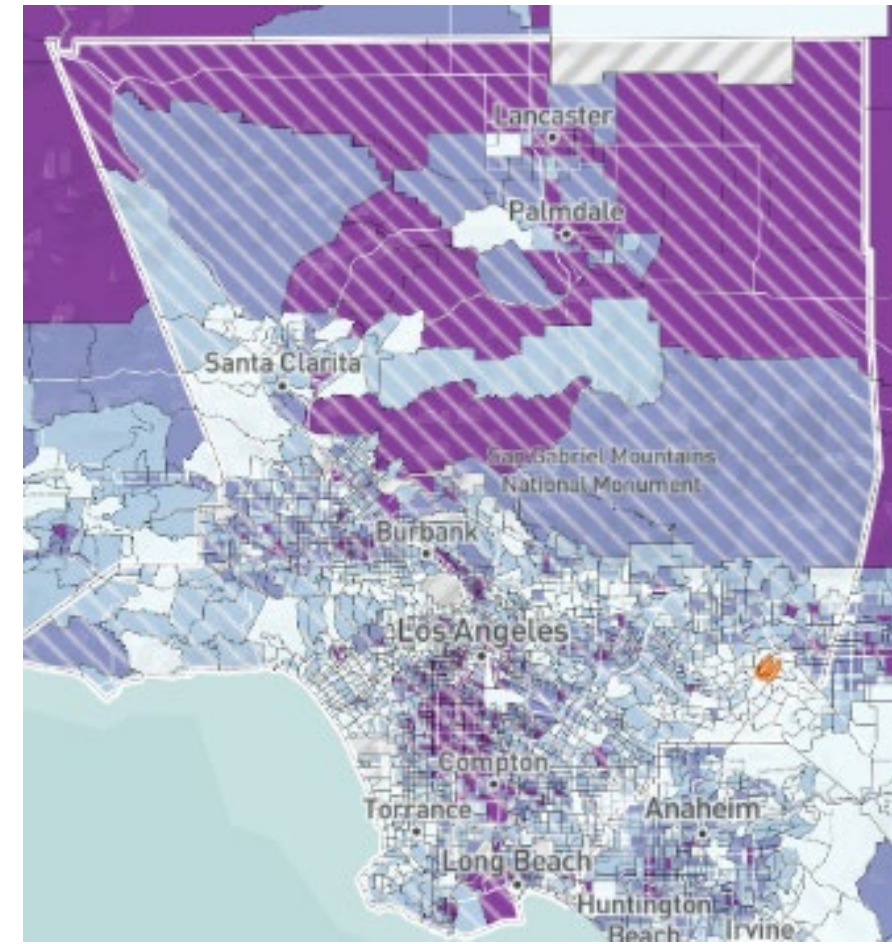


Percentile Ranking

100
75
50
25
0

100% Percentile
Census Tract

Adults Diagnosed with Chronic Obstructive Pulmonary Disease (COPD) (2018)



Percentile Ranking

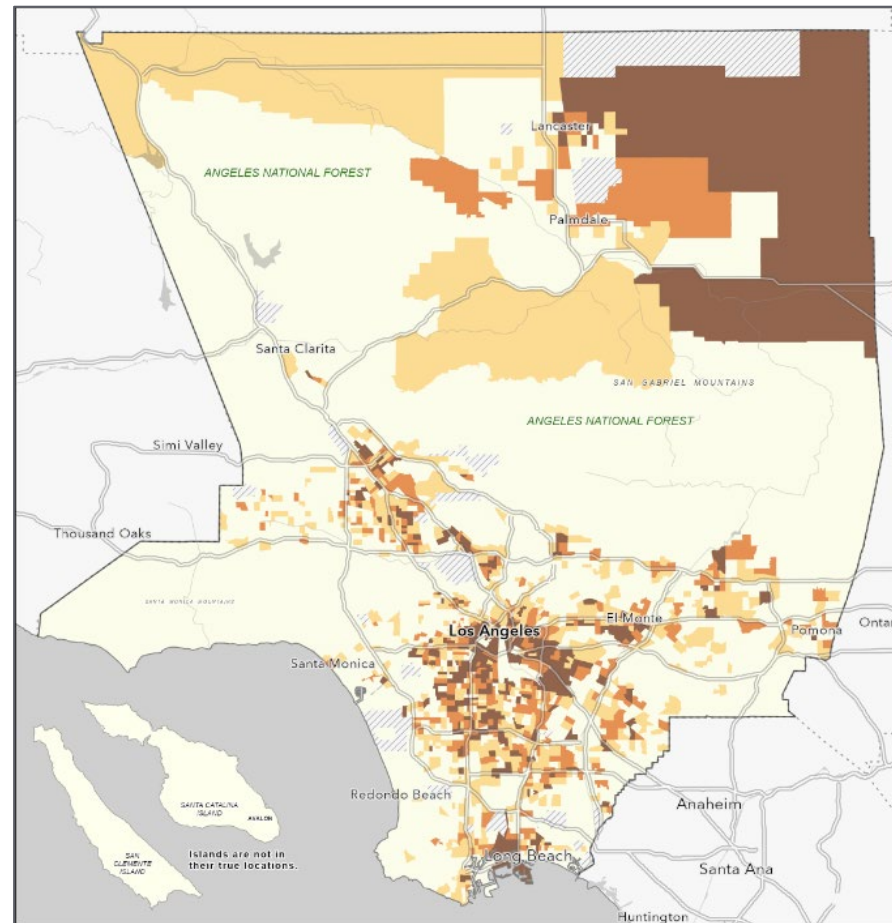
100
75
50
25
0

100% Percentile
Census Tract

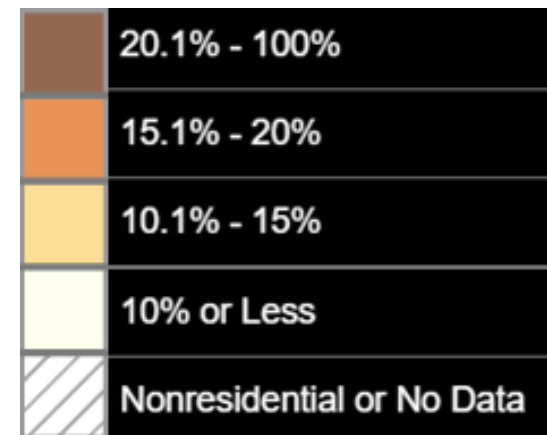
Sources: [HPI](#); [HPI Technical Report](#)

Access Disparities: Cities and Communities Without Internet

Cities and communities facing the greatest health burden also have more limited internet access and therefore, more limited access to telehealth options.



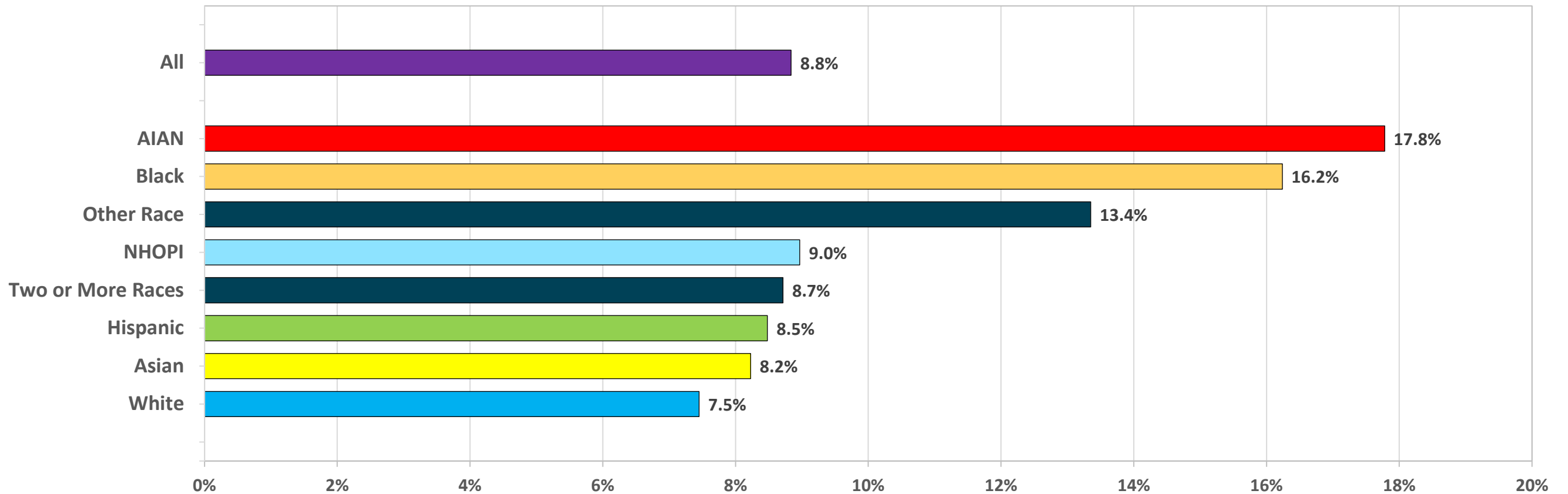
% Households Without Internet



Sources: Data from U.S. Census Bureau's American Community Survey (ACS) – 2016–2020 five-year estimates, Table B28011 – Internet Subscriptions in Household; LAC DPH ICS COVID-19 Response Reports and Data Management, June 9, 2022.

Access Disparities: Households Without Vehicles

Effectiveness of drive-thru and other vaccination initiatives are reliant on transportation by car, yet 8.8% of all Angelenos, 17.8% of AI/AN, and 16.2% Black Angelenos had no vehicle available.*



Sources: U.S. Census Bureau 2016 - 2020 American Community Survey 5-year Public Use Microdata Samples; LAC DPH ICS COVID-19 Response Reports and Data Management, June 9, 2022.

*Passenger cars, vans, and pickup or panel trucks of one-ton (2,000 pounds) capacity or less kept at home and available for the use of household members

Impact of the COVID-19 Pandemic on Los Angeles County

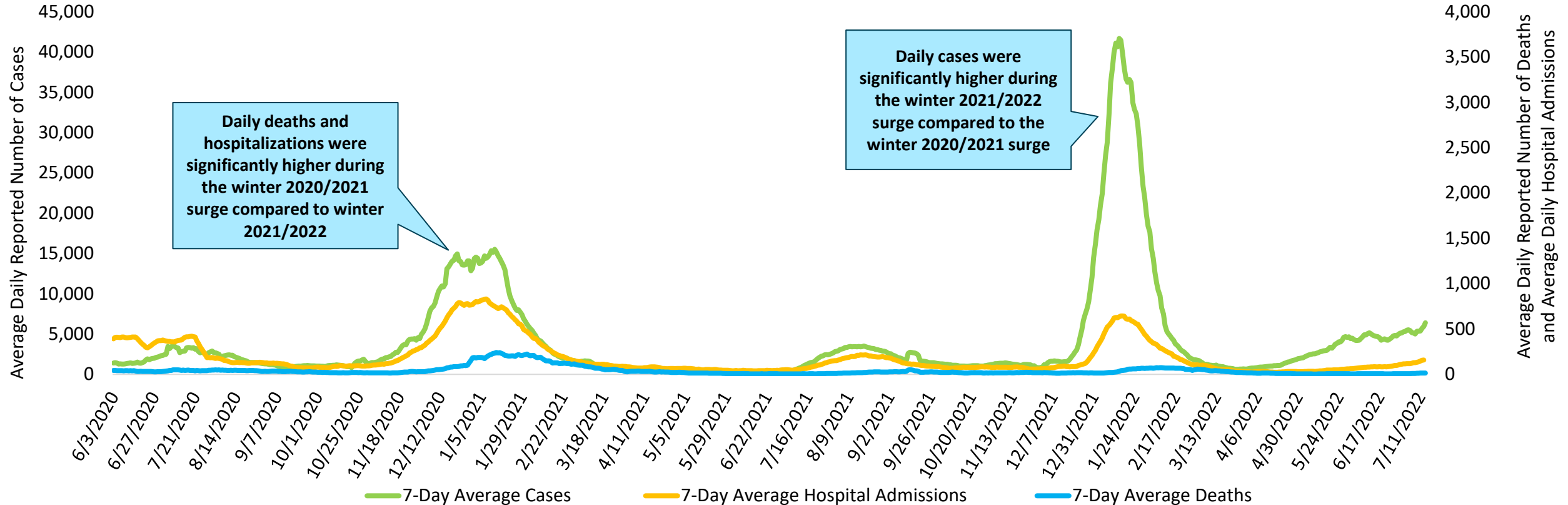
Impact of the COVID-19 Pandemic: COVID-19 Cases, Hospitalizations and Deaths

COVID-19 Cases, Deaths, and Hospitalizations in Los Angeles County

Los Angeles County faced the most severe surge in COVID-19 deaths and hospitalizations in winter 2020/2021. The ongoing surge from the Omicron variant and subvariants has resulted in more cases, but fewer hospitalizations and deaths.

7-Day Average Daily Cases by Episode Date, Deaths by Date of Death, and Hospital Admissions by Admit Date (as of July 14, 2022)

Cumulative Cases: 3,198,377 | Cumulative Deaths: 32,492



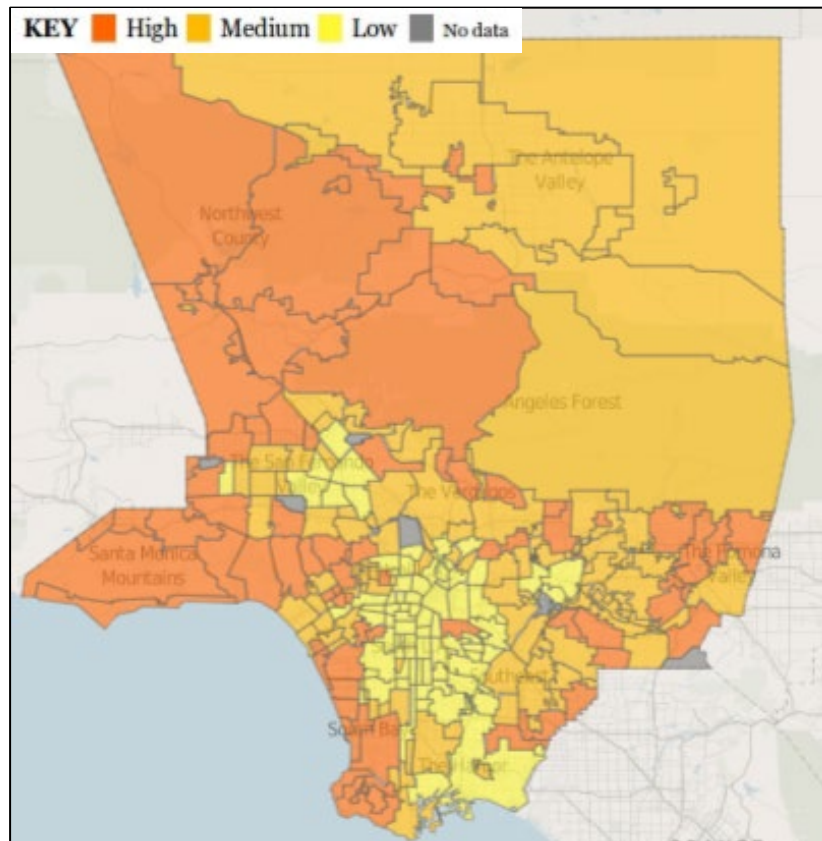
Sources: Epidemiology and Data Unit, ACDC, LAC DPH, July 14, 2022.



Disparities in Cumulative COVID-19 Cases by City and Community in Los Angeles County

There is a clear inverse correlation between income and cumulative case rates. In cities and communities with higher median household income, cumulative adjusted case rates are generally lower.

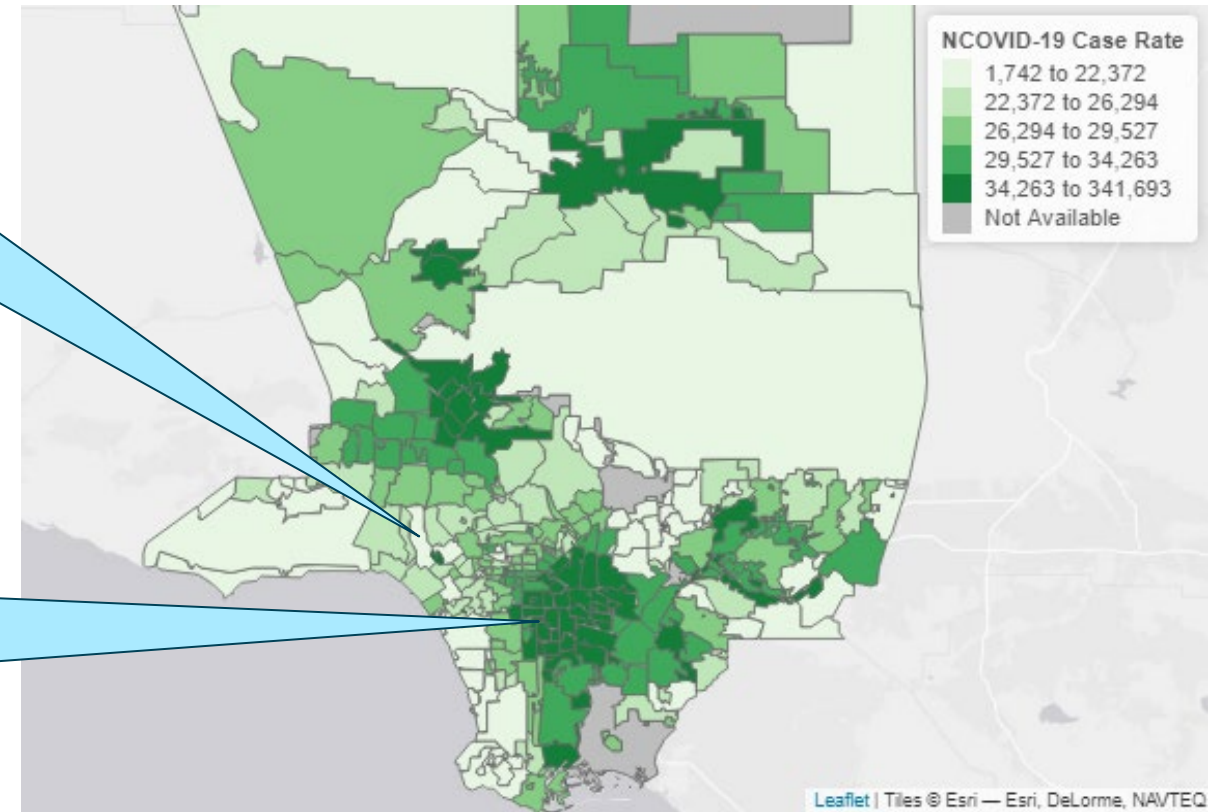
Median Household Income by Neighborhood



Cities and communities in the Santa Monica Mountains and Northwest County (e.g., Calabasas, Porter Ranch) have high incomes and low case rates.

Cities and communities in Central and South LA (e.g., Downtown LA, South Gate) have relatively higher case rates and lower median household income.

Cumulative Age-Adjusted Rates for COVID-19 Cases by City/Community (as of June 06, 2022)*



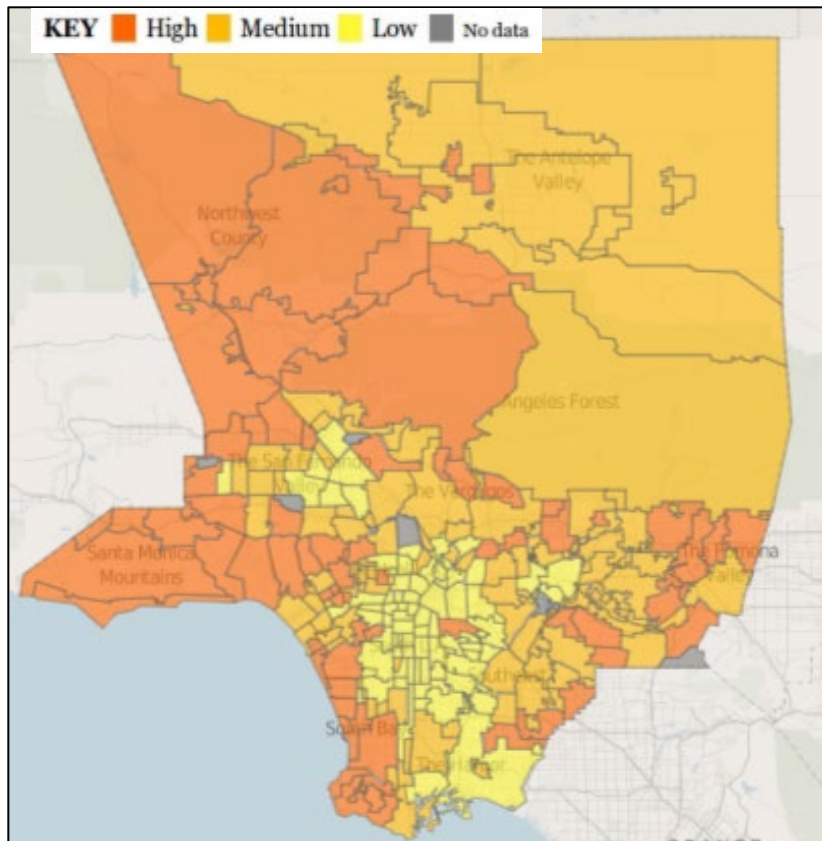
Sources: Epidemiology and Data Unit, ACDC, LAC DPH, June 6, 2022; Median Household Income, *LA Times*.

*Greyed out areas reflect communities with unstable cumulative rates

Disparities in Cumulative Hospitalizations From COVID-19 by City and Community in Los Angeles County

There is a clear inverse correlation between income and cumulative hospitalization rates. In cities and communities with higher median household income, cumulative adjusted hospitalization rates are generally lower.

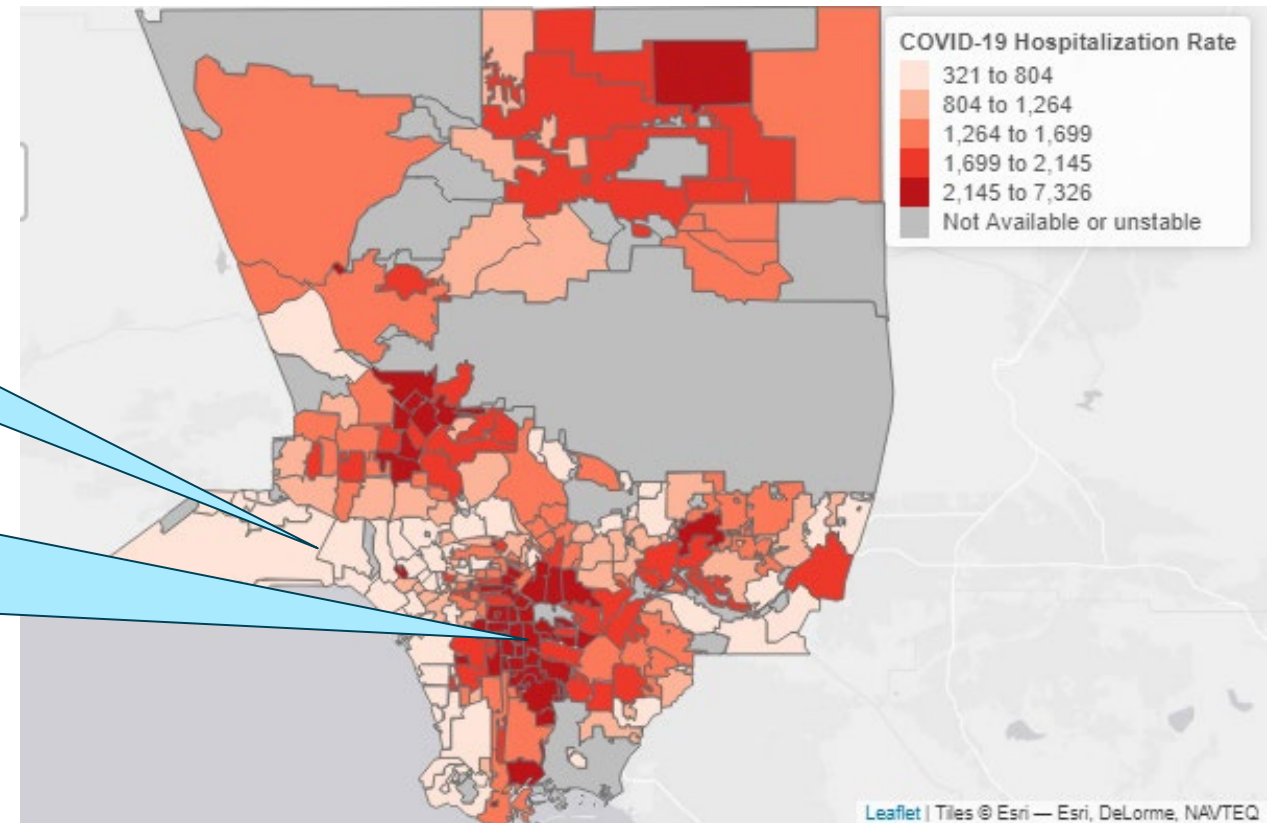
Median Household Income by Neighborhood



Cumulative Age-Adjusted Rates for COVID-19 Hospitalizations by City/Community (as of June 06, 2022)*

Cities and communities on the westside (e.g. Brentwood, Palisades, Malibu) have high incomes and low hospitalization rates.

Cities and communities in Central and South LA (e.g., Downtown LA, South Gate) have relatively higher hospitalization rates and lower median household income.



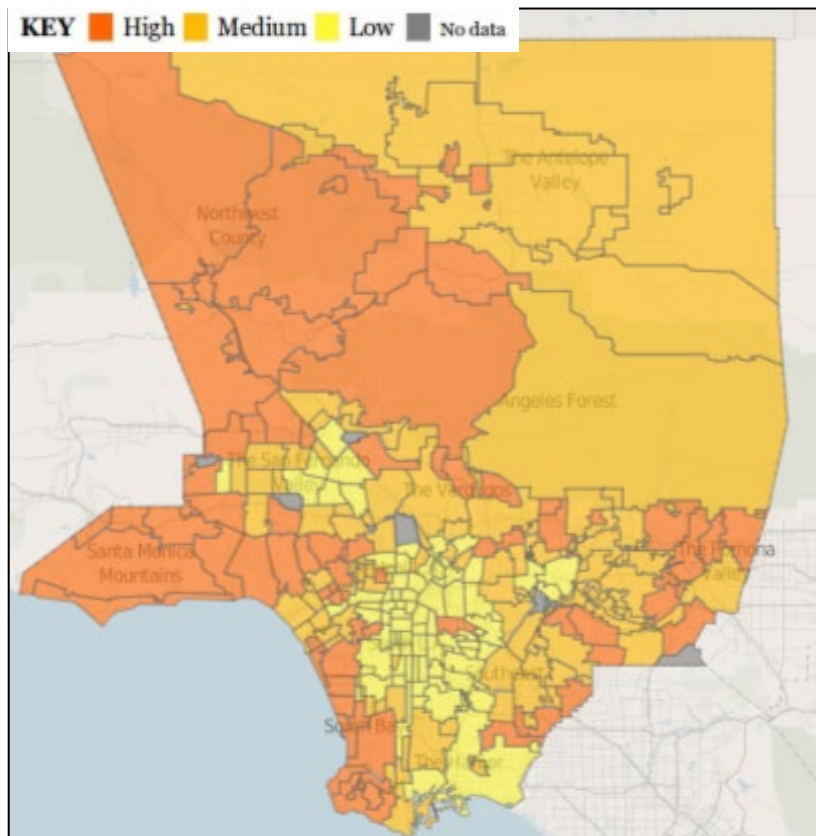
Sources: Epidemiology and Data Unit, ACDC, LAC DPH, June 6, 2022; Median Household Income, LA Times.

*Greyed out areas reflect communities with unstable cumulative rates

Disparities in Cumulative COVID-19 Deaths by City and Community in Los Angeles County

There is a clear inverse correlation between income and cumulative death rates. In cities and communities with higher median household income, cumulative adjusted death rates are generally lower.

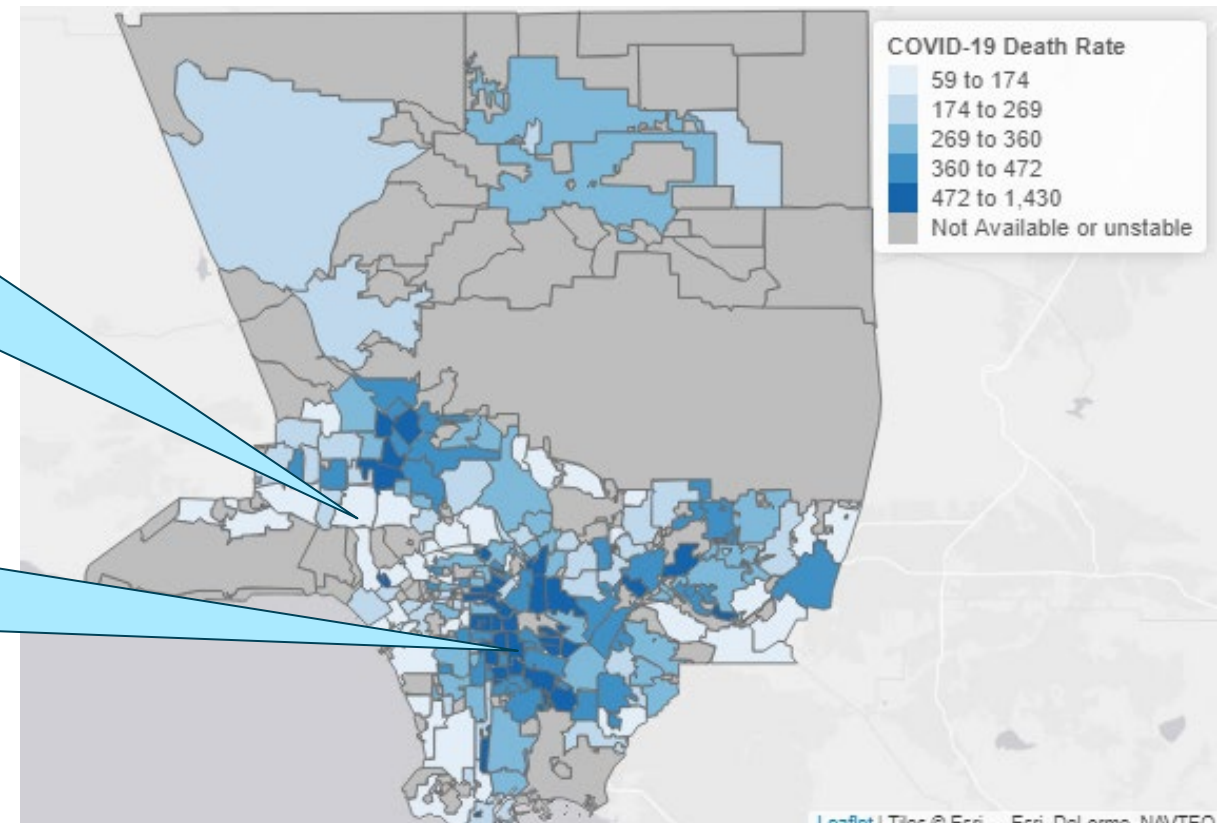
Median Household Income by Neighborhood



Cities and communities on the westside and in the San Fernando Valley (e.g., Brentwood, Encino, Sherman Oaks) have high incomes and low mortality rates.

Cities and communities in Central and South LA (e.g., Boyle Heights, Watts) have relatively higher mortality rates and lower median household income.

Cumulative Age-Adjusted Rates for COVID-19 Deaths by City/Community (as of June 06, 2022)*

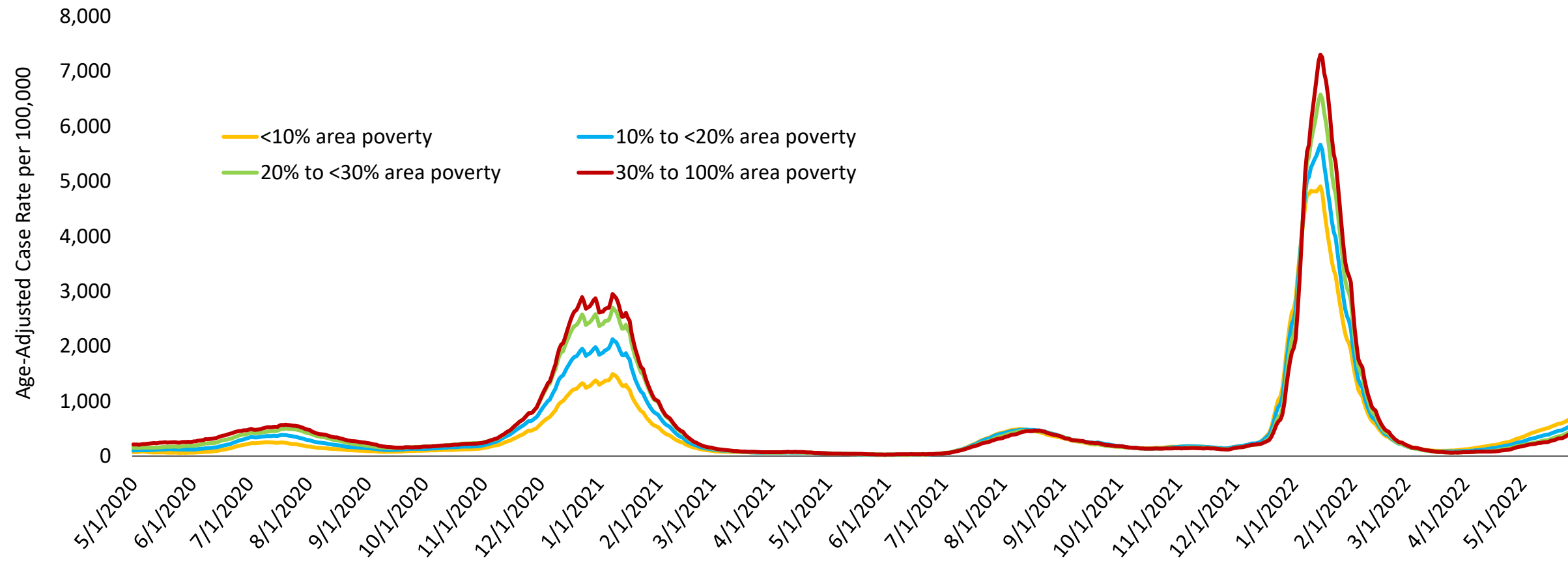


Sources: Epidemiology and Data Unit, ACDC, LAC DPH, June 6, 2022; Median Household Income, LA Times.

*Greyed out areas reflect communities with unstable cumulative rates

Disparities in COVID-19 Case Rates by Area Poverty in Los Angeles County

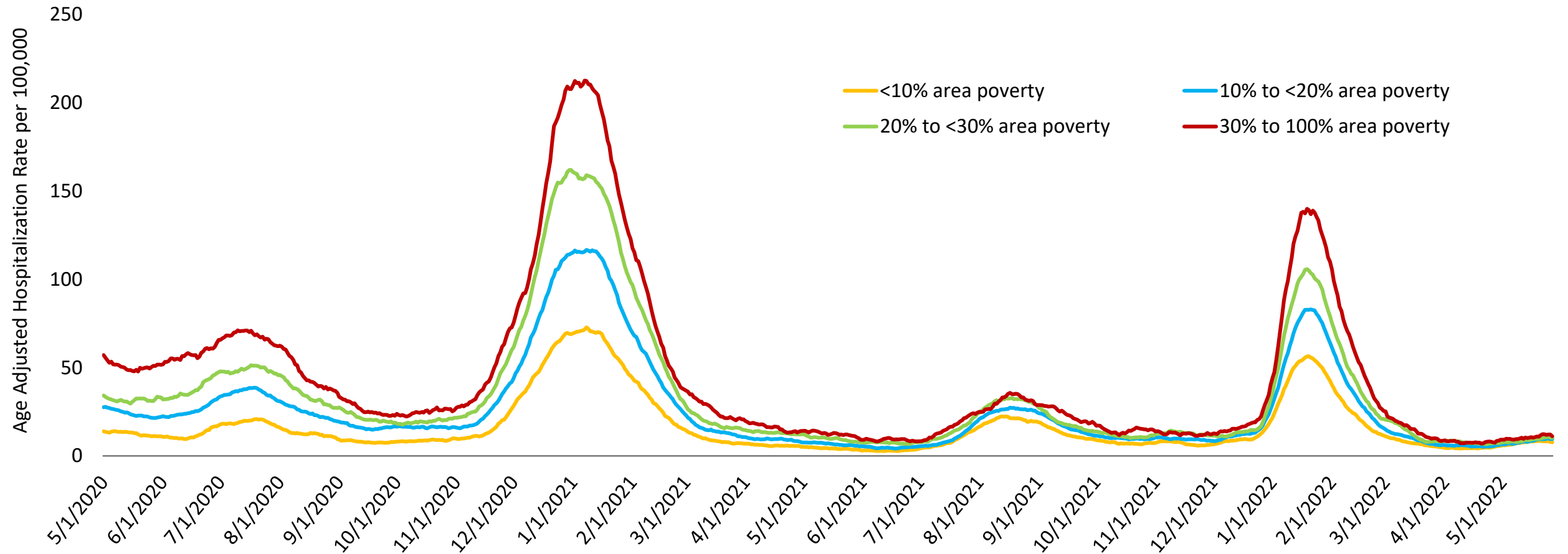
Disparities in case rates by area poverty became more pronounced during surges, with the lowest income areas having the highest case rate at the peak of both winter surges



Source: Epidemiology and Data Unit, ACDC, LAC DPH, June 8, 2022.

Disparities in COVID-19 Hospitalization Rates by Area Poverty in Los Angeles County

Disparities in hospitalization rates also become more pronounced during surges, with the lowest income areas having the highest hospitalization rate at the peak of both winter surges

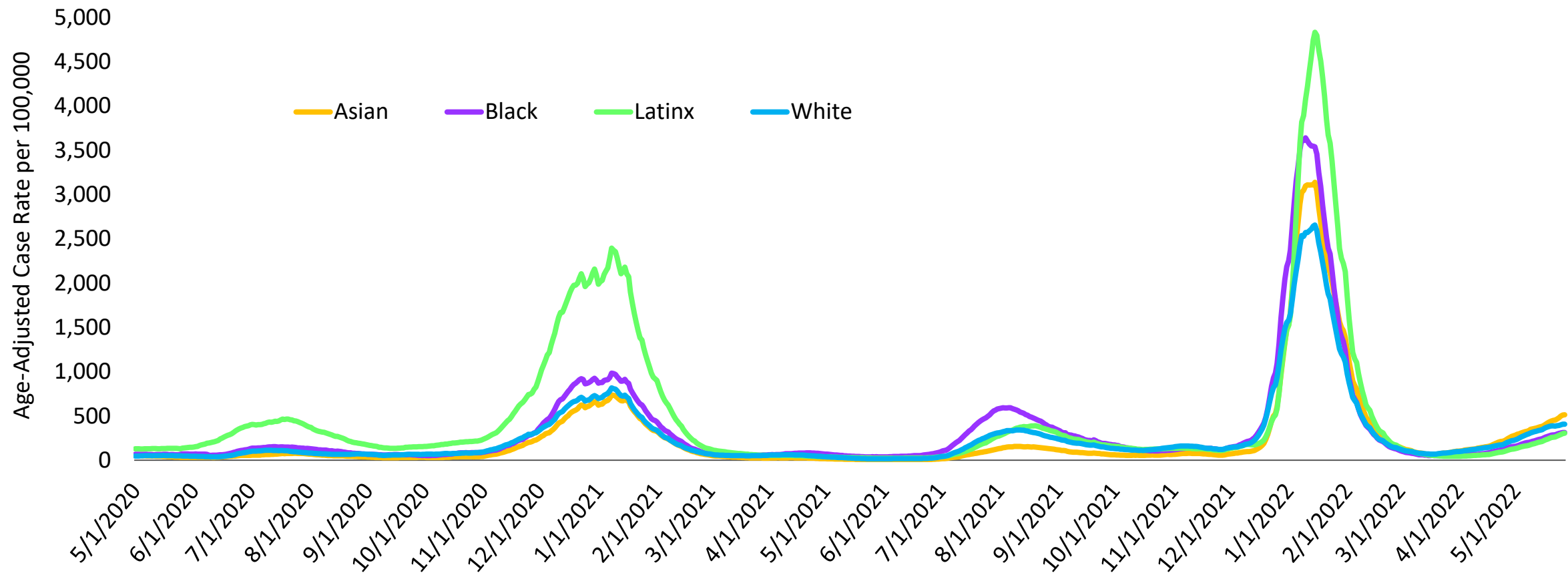


Source: Epidemiology and Data Unit, ACDC, LAC DPH, June 10, 2022.



Disparities by Race and Ethnicity: COVID-19 Case Rates in Los Angeles County

Racial and ethnic disparities in cases have persisted throughout the pandemic. Case rates were highest among Latinx residents during every surge except the summer 2021 surge, when case rates were highest among Black residents.

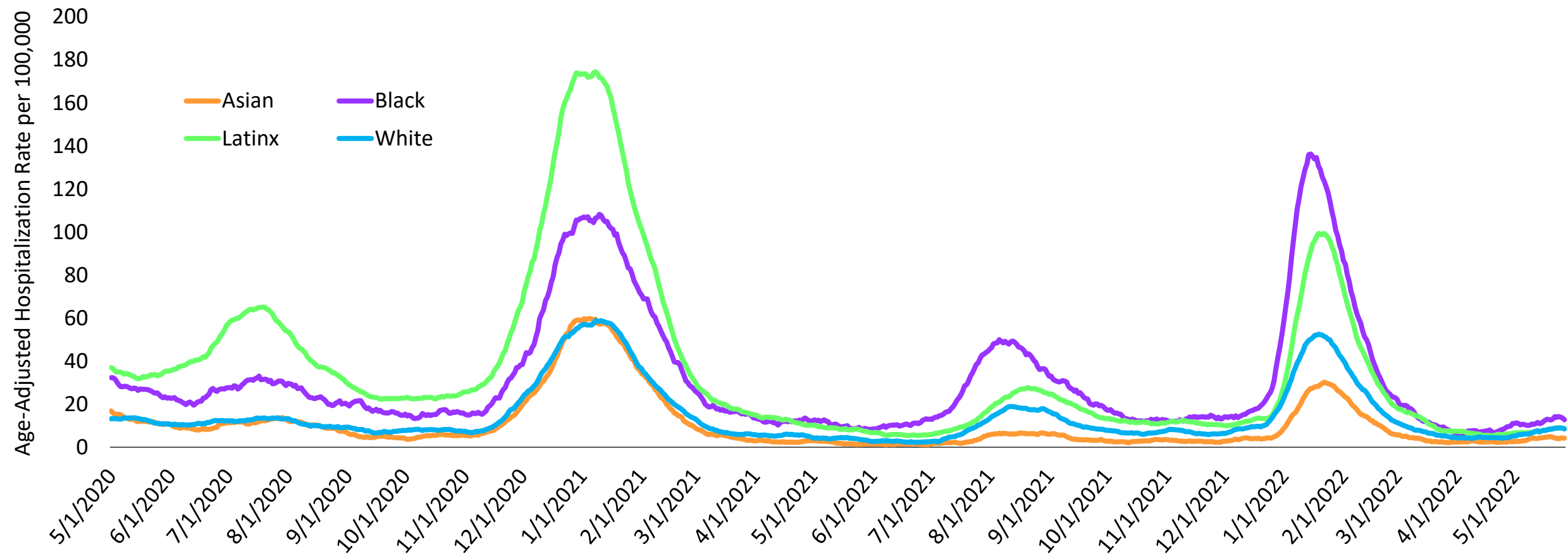


Source: Epidemiology and Data Unit, ACDC, LAC DPH, June 8, 2022.



Disparities by Race and Ethnicity: COVID-19 Hospitalization Rates in Los Angeles County

At the beginning of the pandemic, hospitalization rates were highest among Latinx residents. However, from Summer 2021 to present, hospitalization rates have been highest among Black residents.

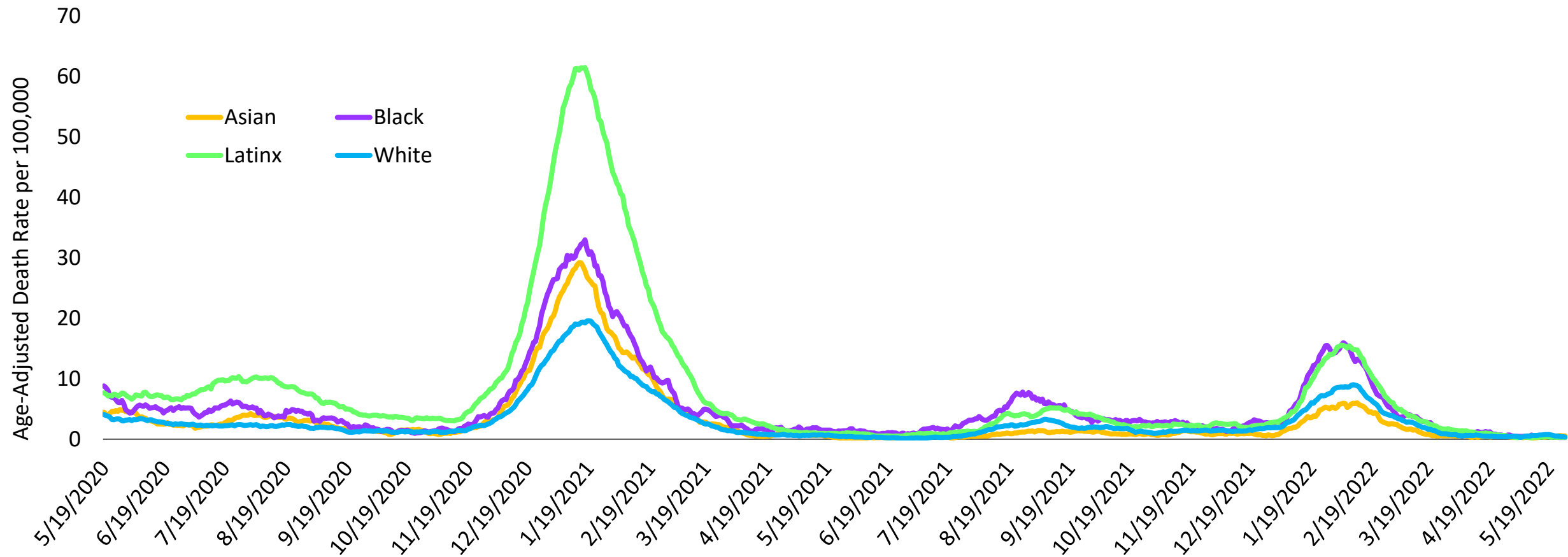


Source: Epidemiology and Data Unit, ACDC, LAC DPH, June 8, 2022.



Disparities by Race and Ethnicity: COVID-19 Death Rates in Los Angeles County

Death rates were highest among Latinx residents at the beginning of the pandemic and through the winter 2020-2021 surge. The pattern then shifted with death rates highest among Black residents during the summer 2021 surge. During the winter 2021-2022 surge, Black and Latinx residents both had the highest death rates.



Source: Epidemiology and Data Unit, ACDC, LAC DPH, June 8, 2022.



Disparities by Age

COVID-19 Cumulative Deaths and Death Rates in Los Angeles County

The majority (92%) of COVID-19 deaths in Los Angeles County occurred among individuals 50+ years old. The death rate among children (<18 years old) is essentially 0 per 100,000 individuals.

As of August 14, 2022

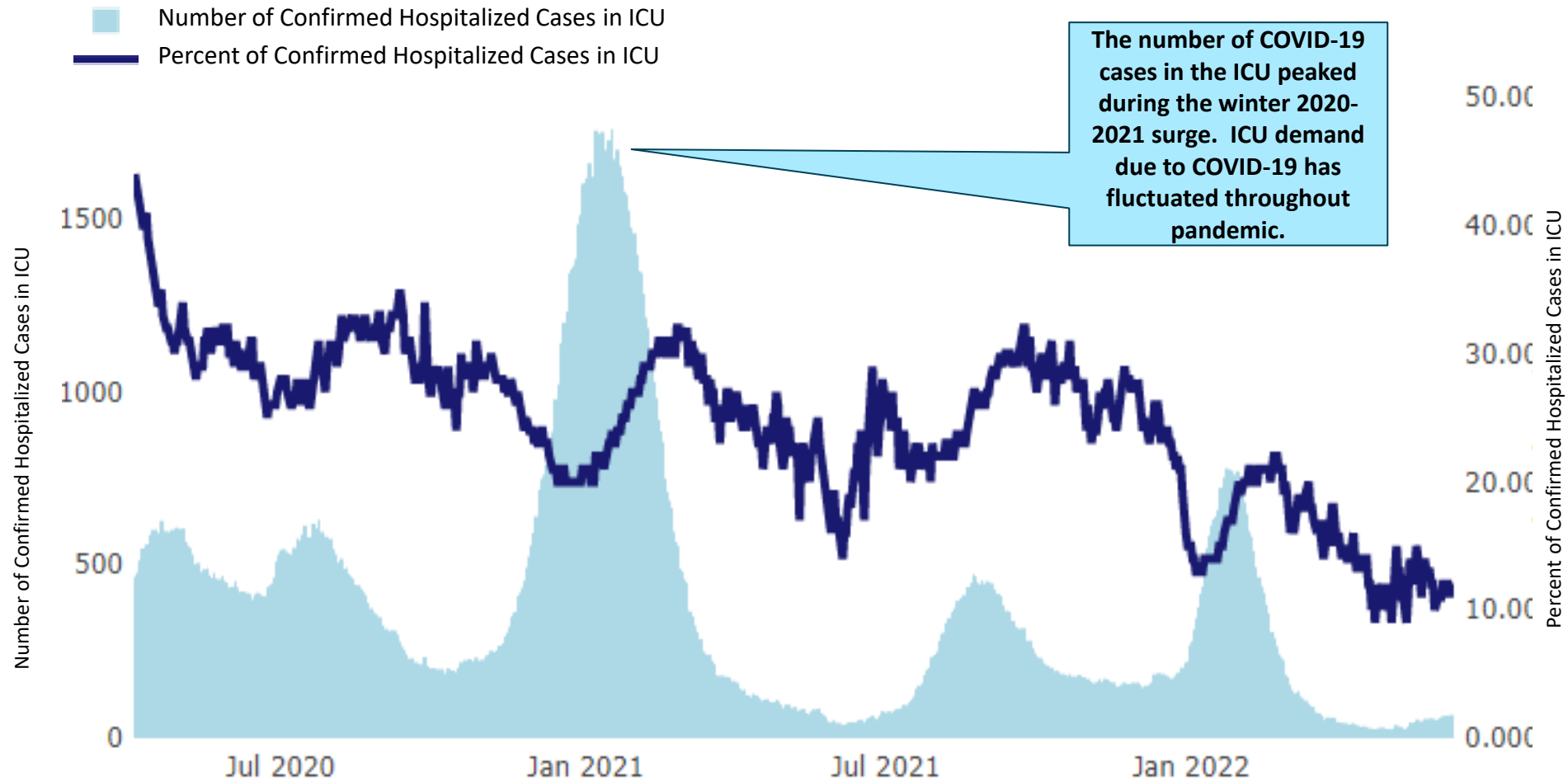
Age Group	Cumulative Deaths	% of Total Cumulative Deaths	Crude Death Rate (per 100,000)
<5 years old	2	0.0%	0
5 to 11 years old	4	0.0%	0
12 to 17 years old	7	0.0%	1
18 to 29 years old	236	0.8%	14
30 to 49 years old	2,234	7.2%	82
50 to 64 years old	6,485	20.8%	349
65 to 79 years old	10,497	33.6%	1127
80+ years old	11,748	37.6%	3483
Under Investigation	2	0.0%	N/A
Total	31,215	100%	-

Source: [COVID-19 Surveillance Dashboard, LAC DPH, August 16, 2022.](#)

Impact of the COVID-19 Pandemic: Regional Hospital Intensive Care Unit (ICU) Capacity

Intensive Care Unit (ICU) Capacity in All Hospitals in Los Angeles County During the COVID-19 Pandemic

Number and Percent of Confirmed COVID-19 Cases in Hospital ICUs in Los Angeles County (as June 9, 2022)



In both December 2020 and January 2021, ICU capacity in Southern California reached a reported 0%.

The number of COVID-19 cases in the ICU peaked during the winter 2020-2021 surge. ICU demand due to COVID-19 has fluctuated throughout pandemic.

Fewer hospitalizations and ICU patients may be attributable to the availability of vaccines and therapeutics as well as decreased severity of illness with some newer variants of the virus for some (but not all) individuals.

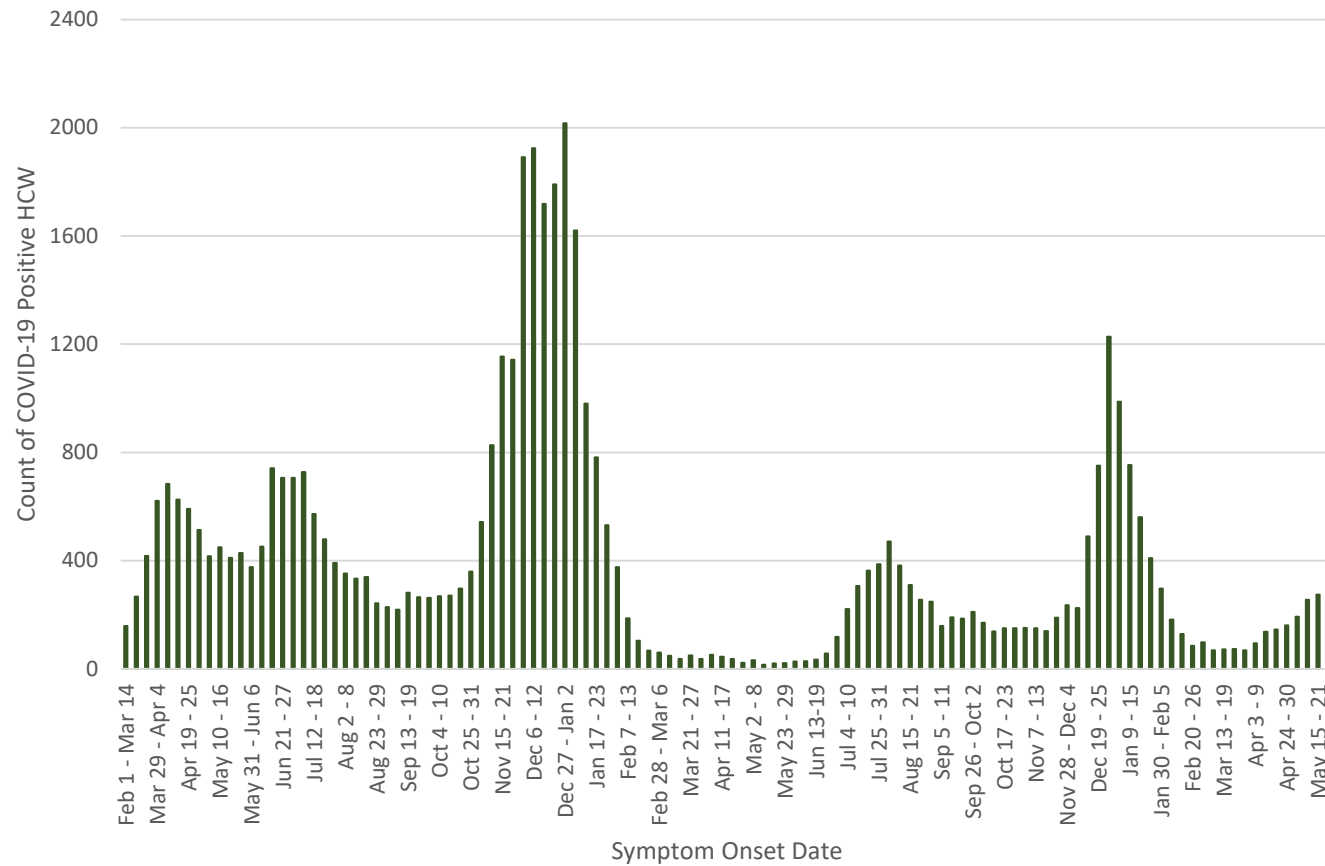
Sources: [ICU Capacity Drops to 0% in Southern California Region as Coronavirus Cases Soar, December 17 2020](#); [As COVID-19 Vaccine Rollout Continues, Residents Reminded to Stay Home to Stop the Spread of COVID-19; 258 New Deaths and 15,051 New Confirmed Cases of COVID-19 in Los Angeles County, January 15, 2021](#); [Tracking the Coronavirus in California Hospitals, July 15, 2022](#)) [LA County COVID-19 Surveillance Dashboard, June 9, 2022](#).



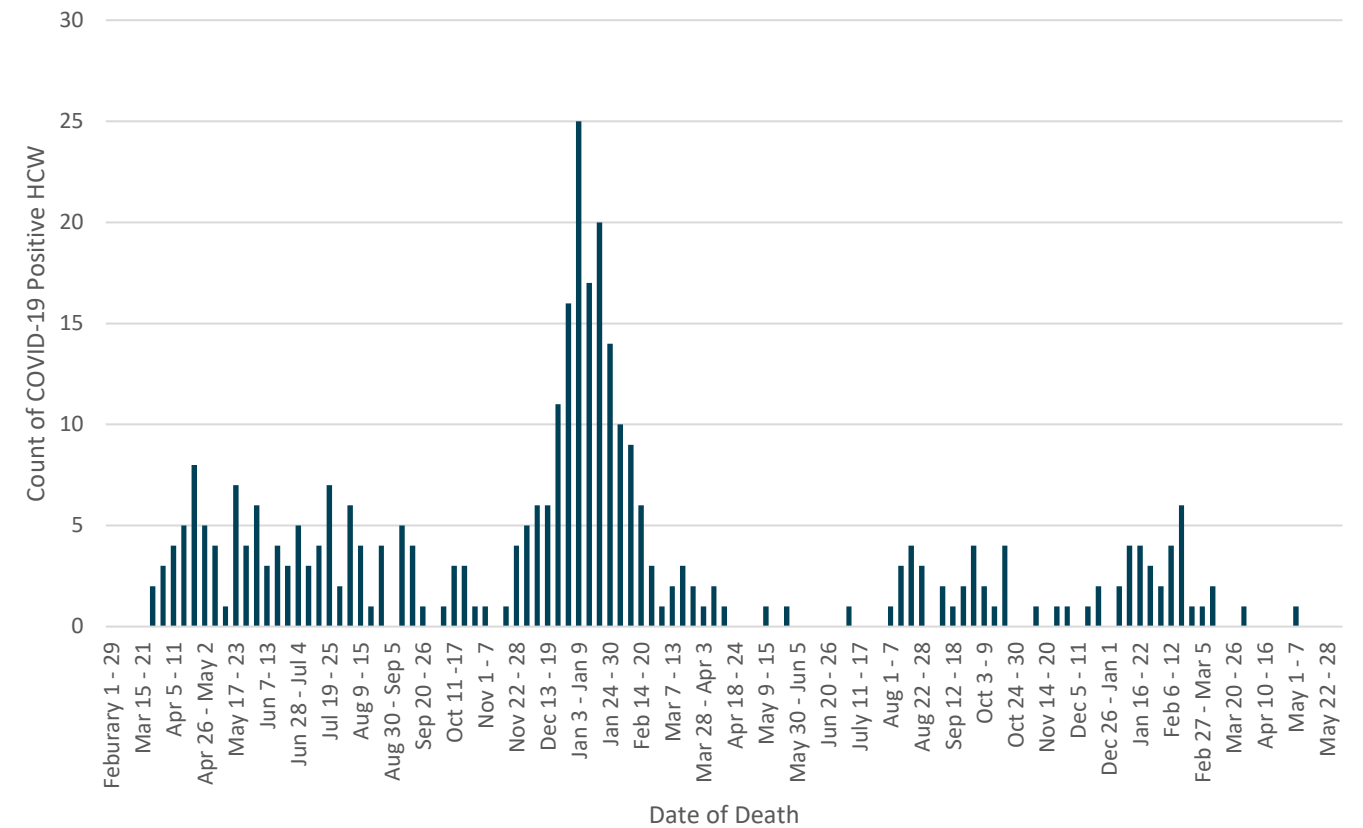
Impact of the COVID-19 Pandemic: Frontline Healthcare Workers

Healthcare Worker COVID-19 Cases and Deaths in Los Angeles County (as of June 3, 2022)

Date of Symptom Onset by Week for COVID-19 Positive Healthcare Worker Cases



Date of Death by Week for All COVID-19 Positive Healthcare Worker Cases



Impact of the COVID-19 Pandemic: People Experiencing Homelessness

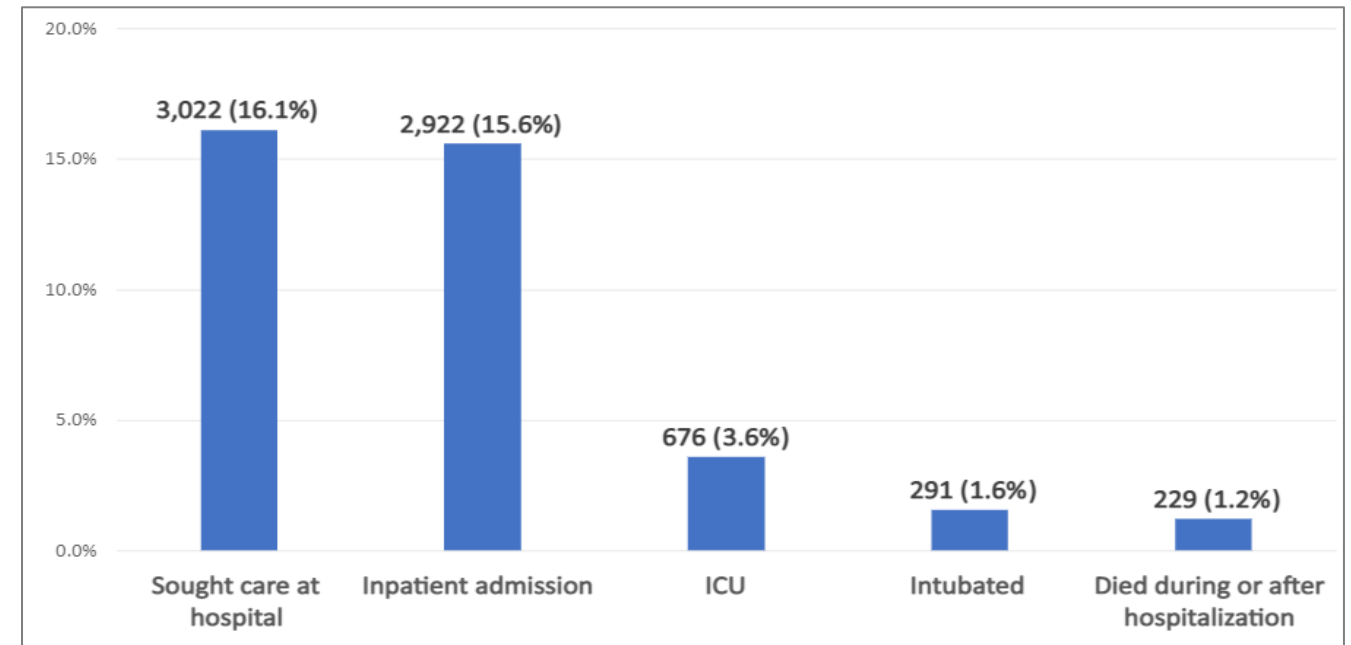
COVID-19 Impact on People Experiencing Homelessness (PEH) in Los Angeles County

As of June 4, 2022, had been a total of 18,824 COVID-19 cases and 6,866 hospitalizations among PEH. Considering the current estimate of the total PEH population is 63,706, there has been a disproportionate impact of COVID-19 on PEH.

COVID-19 Case Origination Among People Experiencing Homelessness (as of June 4, 2022)

Shelter status at time of suspected COVID-19 exposure	Cases		Deaths	
	Total	%	Total	%
SHELTERED	11,141	59%	155	44%
Emergency Shelters	4,811	43%	43	28%
Transitional Housing	1,391	12%	9	6%
Recuperative Care Centers	352	3%	17	11%
Single Room Occupancies	57	1%	1	1%
Hotels/Motels	465	4%	10	6%
Rehab/Sober Living Centers	472	4%	4	3%
Private Home (Couch Surfing)	1,569	14%	28	18%
Corrections	596	14%	1	1%
Other (Safe Havens, SNFs, Sheltered Unknown)	1,428	13%	42	27%
UNSHELTERED	4,278	23%	122	35%
Encampments	808	19%	17	14%
Streets/Parks/Transportation Metro Stations	1,223	29%	44	36%
Vehicles	1,207	28%	49	40%
Other (Abandoned buildings, Unsheltered Unknown)	1,040	24%	12	10%
UNKNOWN	3,405	18%	74	21%
Total PEH	18,824	100%	351	100%

COVID-19 Hospitalization Outcomes Among People Experiencing Homelessness for Cases with Episode Dates Through May 28, 2022

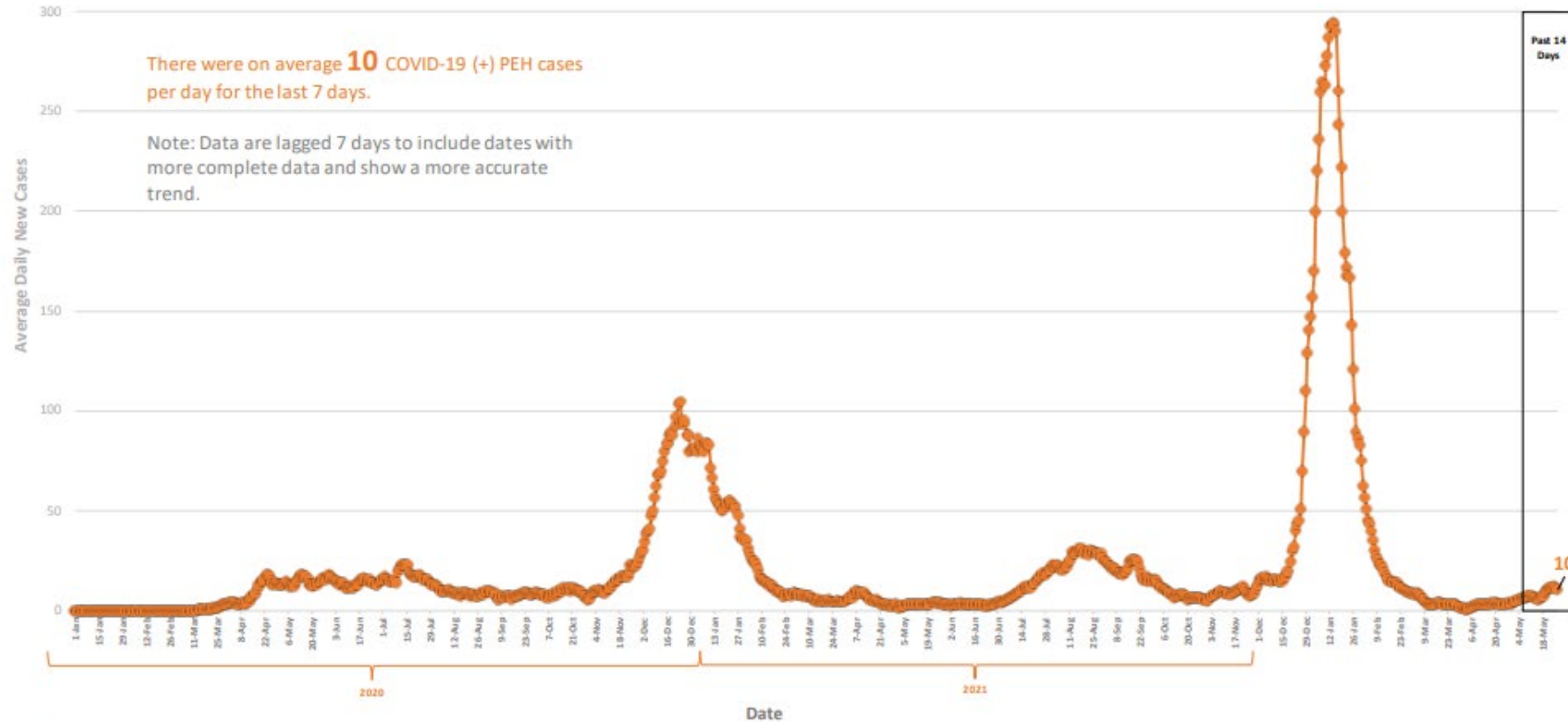


Source: [Summary Report of COVID-19 in People Experiencing Homelessness](#), LAC DPH, June 4, 2022; LAC DPH, June 10, 2022.
 Note: Potential under-reporting, particularly in this later stage of the pandemic with access at-home and free test kits

Impact on People Experiencing Homelessness in Los Angeles County: COVID-19 Cases



7-Day Rolling Averages for Daily Confirmed PEH Cases by Episode Date
(as of June 4, 2022)



Note:

1. We use a rolling 7-day average to smooth some of the fluctuations we see in the daily numbers due to reporting and processing lags that are a part of reportable disease surveillance.
2. Cases reported by Episode Date, which is the earliest existing value of: Date of Onset, Date of Diagnosis, Date of Death, Date Received, Specimen Collection Date. Number of daily cases will not match the number of newly reported Los Angeles County cases as episode date reflects date of underlying illness rather than date of report.
3. Data are subject to change for the current week due to reporting lags and pending investigations.
4. Numbers reported may vary slightly each week and may not be additive due to records occasionally being closed as false reports or other re-categorization changes based on investigation updates.

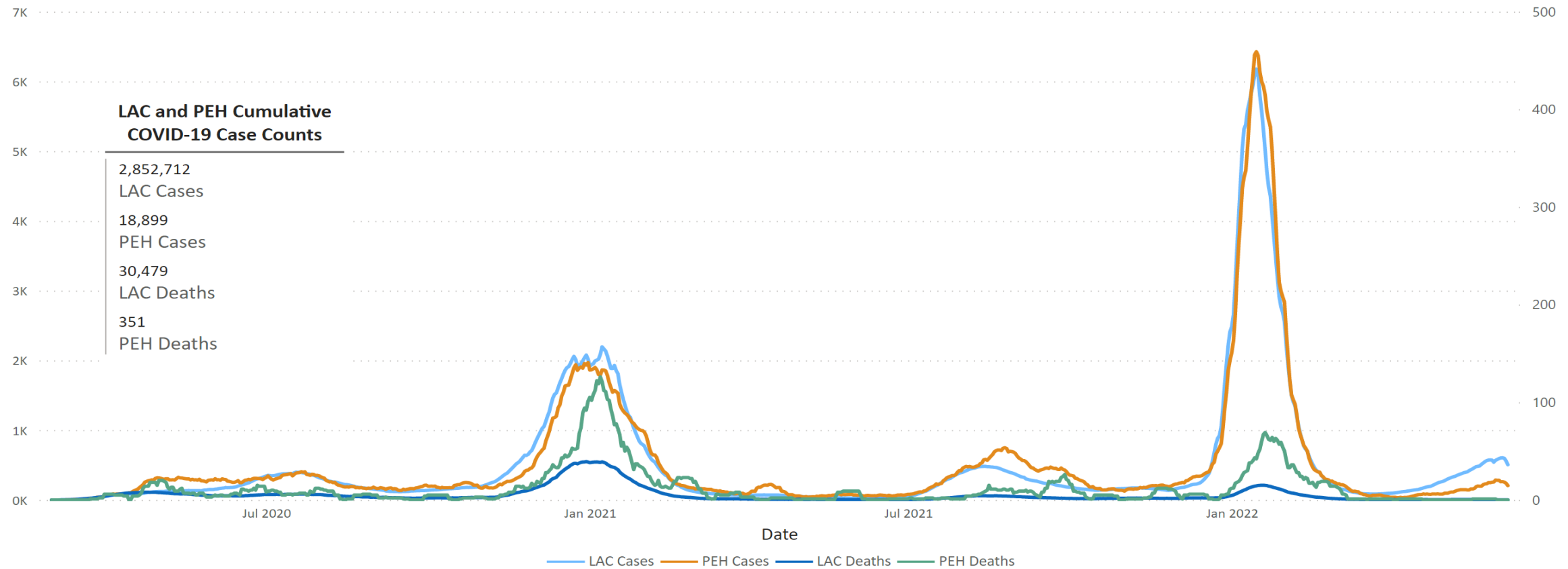
Source: [Summary Report of COVID-19 in People Experiencing Homelessness, LAC DPH, June 4, 2022.](#)

Note: LAHSA was designated by the Office of Emergency Management as the lead agency for people experiencing homelessness during the public health emergency. Los Angeles County Department of Health Services (DHS) Housing for Health (HFH) coordinates vaccination efforts among people experiencing homelessness; potential under reporting, particularly in this later stage of the pandemic with access at-home and free test kits



Impact on People Experiencing Homelessness in Los Angeles County: COVID-19 Deaths

14-Day Cumulative COVID-19 Cases and Deaths per 100,000 PEH and LAC General Population, Adjusted for Age (as of June 8, 2022)



1. Rates are 14-day cumulative age adjusted COVID-19 case and mortality rates per 100,000 population. Case rates are by date of episode; death rates are by date of death.
2. LAC population denominator estimated from 2018 Hedderson survey, excludes Pasadena and Long Beach.
3. PEH population denominator estimated from 2020 Point in Time Count of people experiencing homelessness, excludes Pasadena, Long Beach and Glendale.

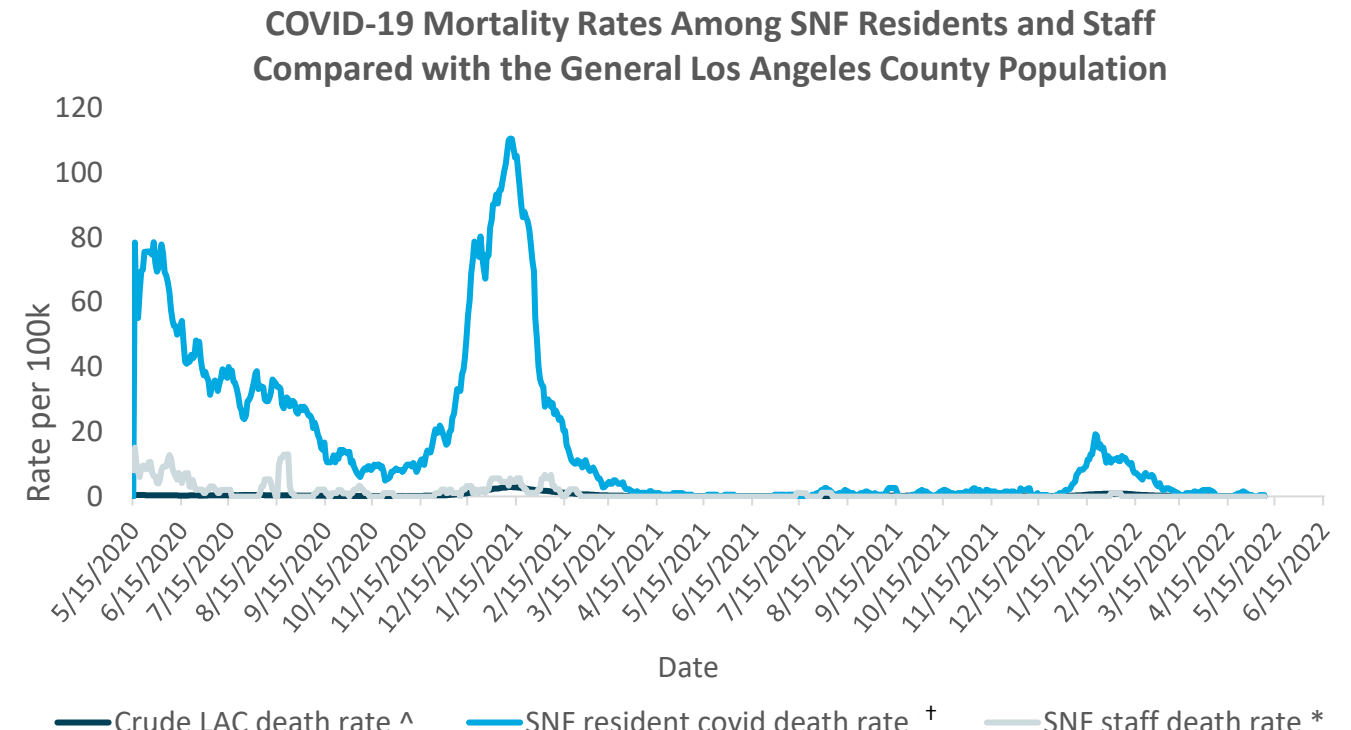
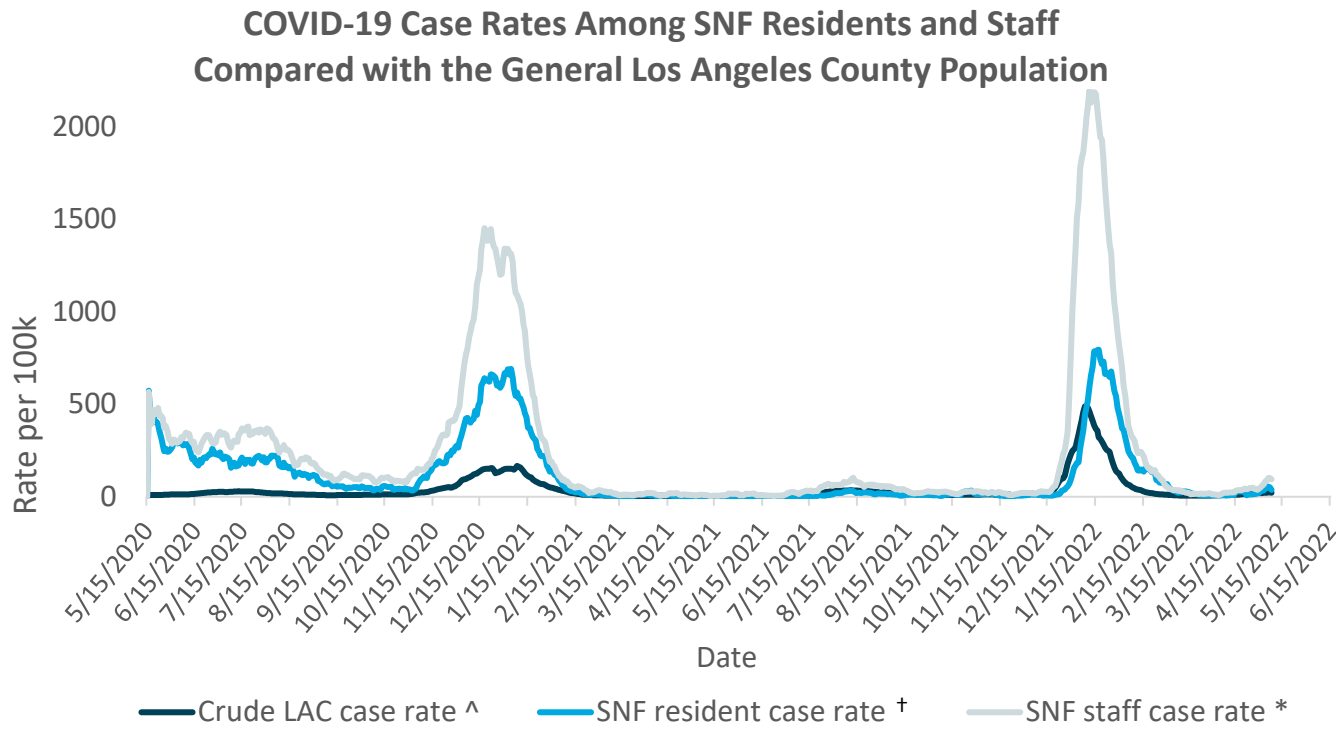
Source: LAC DPH, June 15, 2022.
 Note: LAHSA was designated by the Office of Emergency Management as the lead agency for people experiencing homelessness during the public health emergency. DHS HFH coordinates vaccination efforts among people experiencing homelessness; potential under reporting, particularly in this later stage of the pandemic with access at-home and free test kits.

Impact of the COVID-19 Pandemic: Skilled Nursing Facilities (SNFs)

SNFs: COVID-19 Cases and Deaths in Los Angeles County

SNFs v. the General Population

Consistent with national trends, Los Angeles County SNF residents and staff were disproportionately impacted by COVID-19. However, notably, mortality rates have significantly decreased since Los Angeles County's initial COVID-19 surge and the 2020/2021 winter surge.



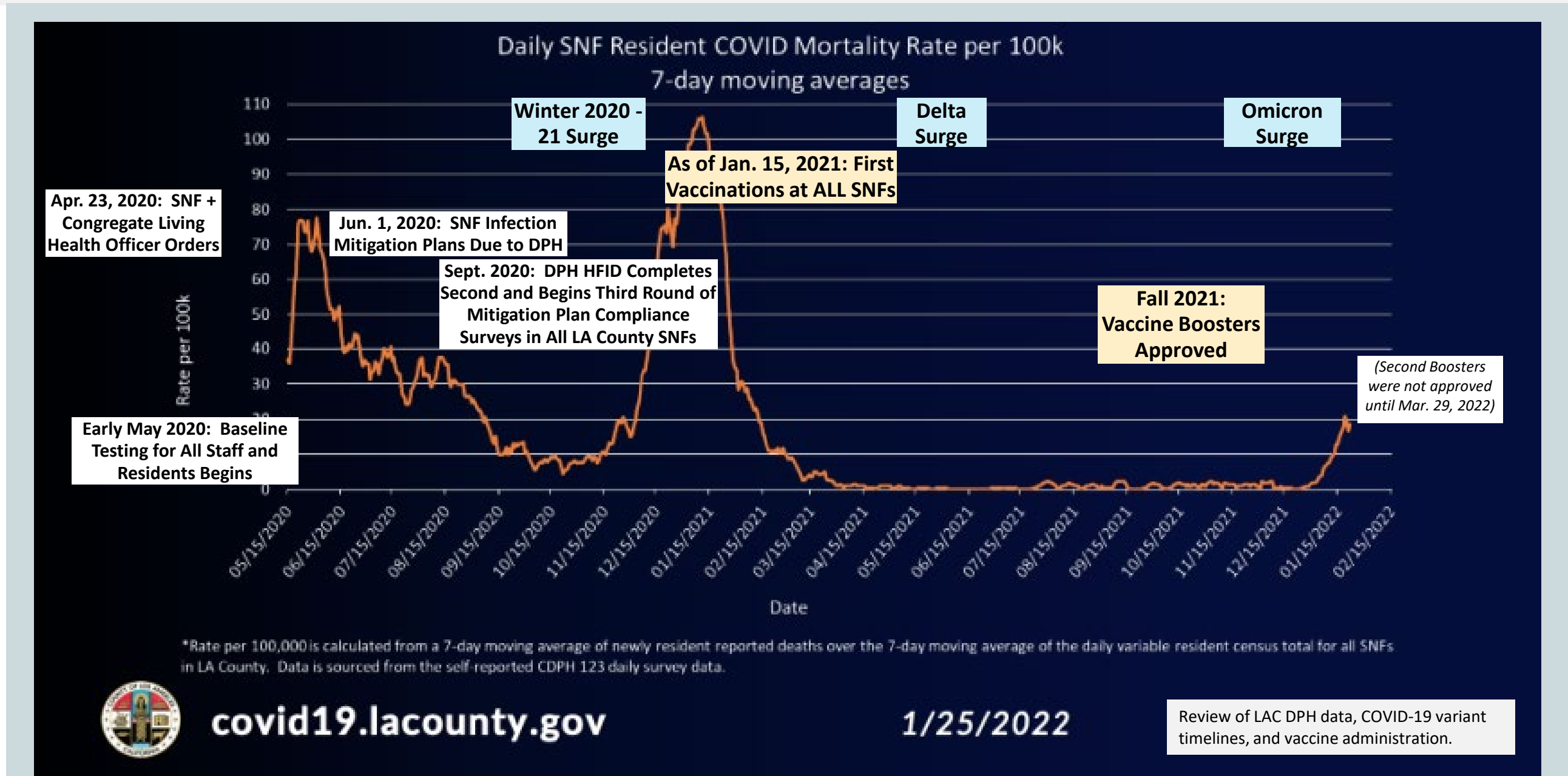
Source: COVID-19 Case Rates and Death Rates Among Residents of SNFs, Healthcare Outreach Unit, ACDC, LAC DPH, May 18, 2022.

^ Seven-day average crude LAC case and mortality rates are sourced from IRIS database case episode date and date of death, and data are reported from May 15, 2020 through May 8, 2022. Episode date is the earliest existing value of: Date of Onset, Date of Diagnosis, Date of Death, Date Received, Specimen Collection Date. The population rate is per 100,000 and sourced from LAC PEPS 2018 demography files and 2018 population estimates. Deaths are reported by date of death or date received if date of death is missing..

† National SNF resident case and mortality data is from the Center's for Medicare & Medicaid Services database for National CMS SNF survey (<https://data.cms.gov/covid-19/covid-19-nursing-home-data>) as of April 24, 2022 using weekly resident case confirmed COVID-19 data and number of occupied beds.

* Seven-day average crude LAC SNF case and mortality rates are sourced from the self-reported CDPH 123 daily survey and data are reported from May 15, 2020 through May 8, 2022. Dates reflect the date the positive result was reported to the individual or facility. The population rate is per 100,000 and sourced from resident census for all County jurisdiction SNFs – these are population statistics and not estimates. We cannot capture the ~1,500 new admissions per week that should be included in the exposed denominator, so the SNF rates are overestimates.

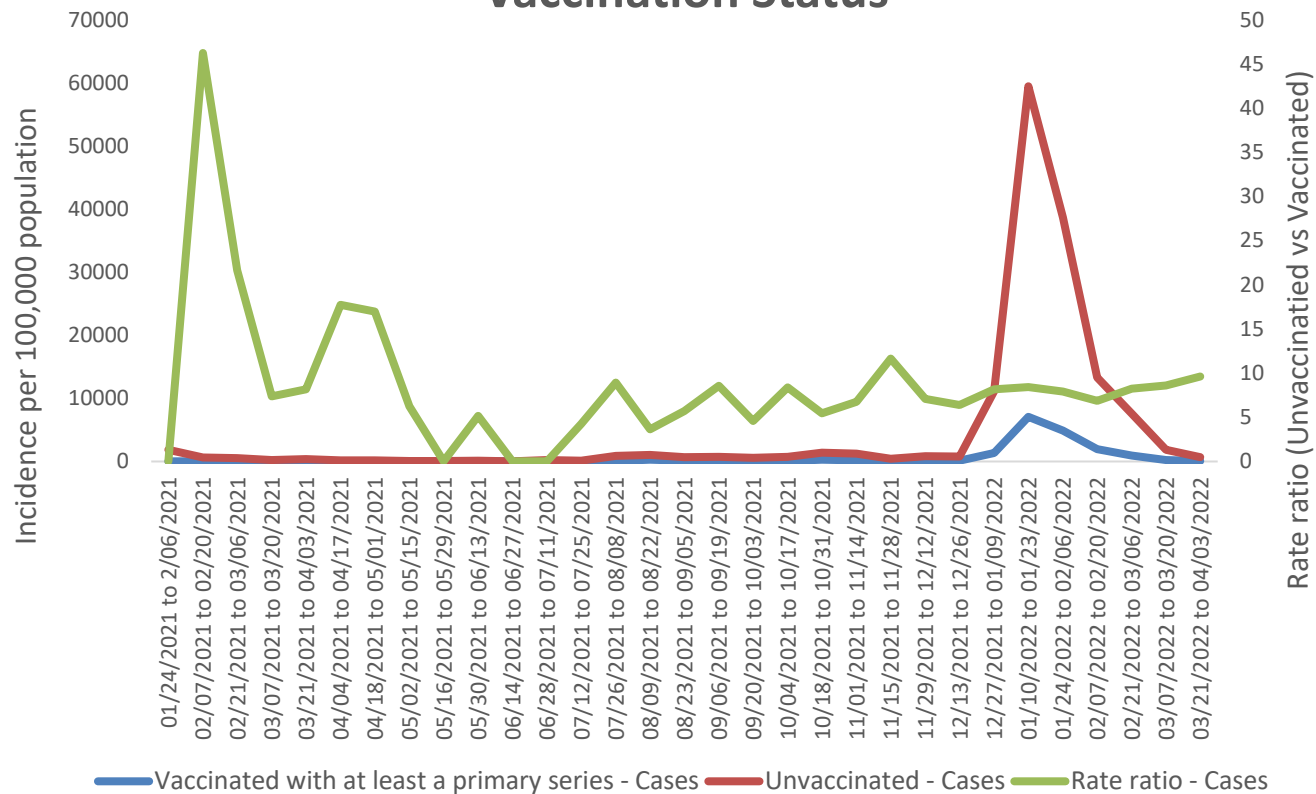
Impact of Vaccinations in SNFs



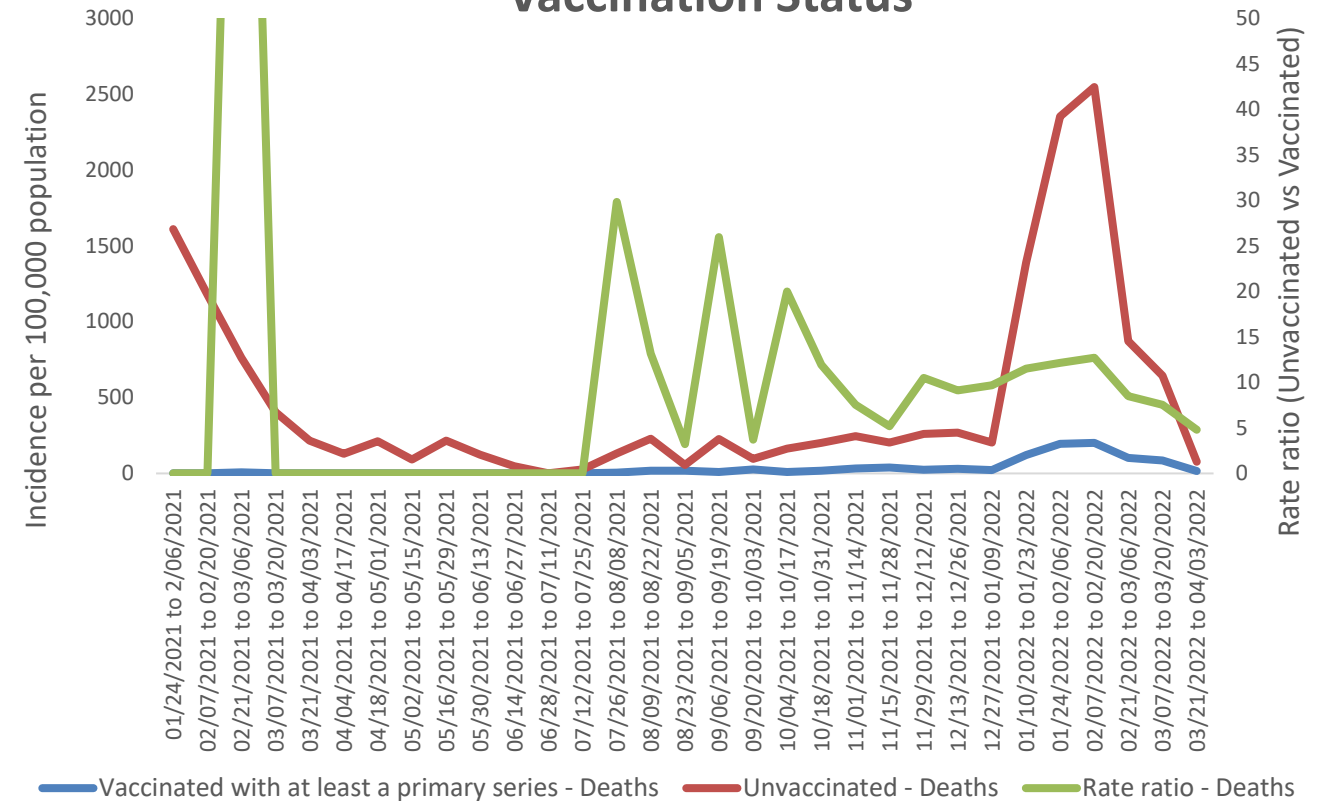
SNFs: Resident Cases and Deaths by Vaccination Status

Resident cases and deaths among the unvaccinated are consistently higher than those among the vaccinated. They spiked during the surge in winter 2021-2022, though the case and mortality rate ratio between unvaccinated v. vaccinated residents is now lower in comparison to early 2021 when the vaccine was first distributed.

Rates of COVID-19 Resident Cases by Vaccination Status



Rates of COVID-19 Resident Deaths by Vaccination Status



Source: COVID-19 Case Rates and Death Rates Among Residents of SNFs, Healthcare Outreach Unit, ACDC, LAC DPH, May 18, 2022.

Note: Rate ratio = unvaccinated incidence rate / vaccinated incidence rate

County of Los Angeles Department of Public Health "COVID-19 Response Interim Review" | Appendix F: Supporting Fact Pack

Impact of the COVID-19 Pandemic: County Correctional Facilities

COVID-19 Impact at Correctional Facilities in Los Angeles County

Overview

- As of May 31, 2022, a total of **8,824 lab confirmed COVID-19 cases among persons detained** at a correctional facility in the County. There have been a total of **3,332 lab confirmed COVID-19 cases among correctional facility staff** (including healthcare workers).
- County jail facilities **contributed 56% of lab confirmed COVID-19 cases in County correctional facilities**; notably, infections among persons housed in County jail facilities represented 41% of overall LA County correctional cases, but 64% of COVID-19-associated hospitalizations.
- Trends** in cases, deaths and hospitalizations **differed over time by population** (inmate/youth vs. correctional facility staff).

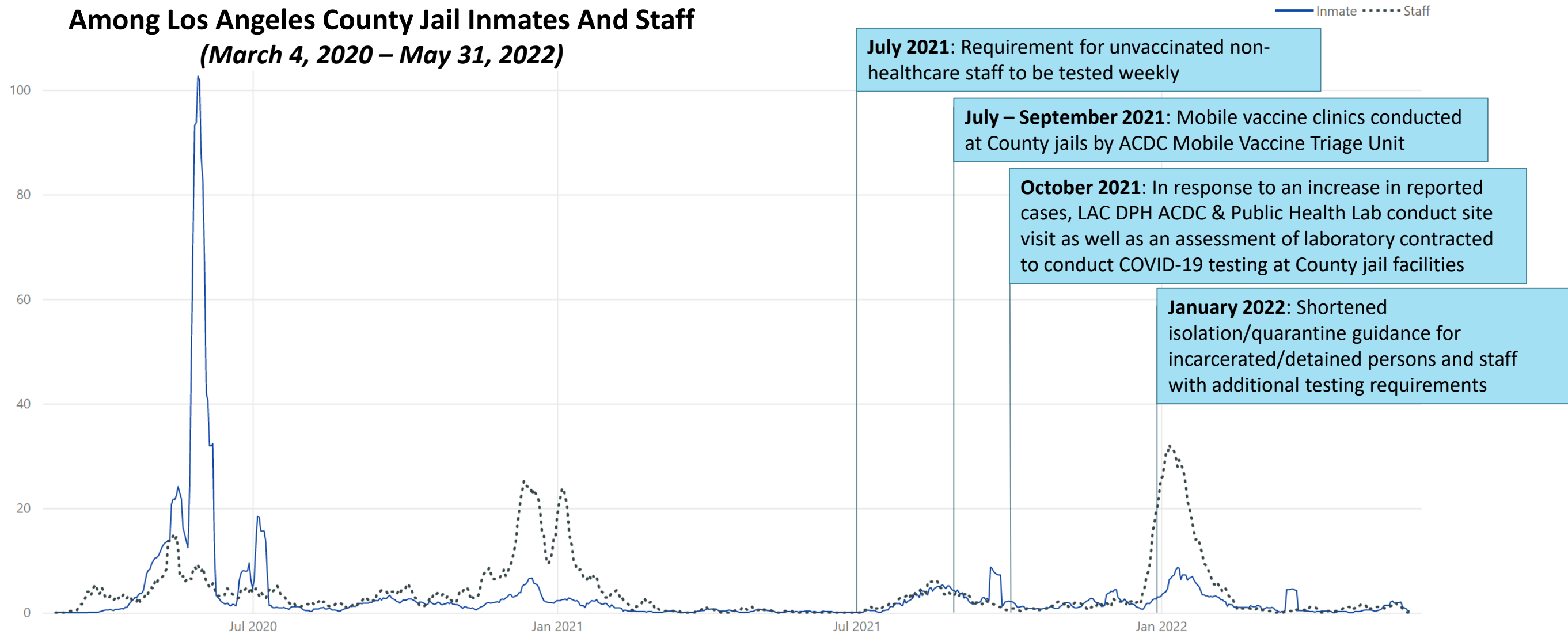
Correctional Facility COVID-19 Cases, Deaths, and Hospitalizations (As of May 31, 2022)

	Cases		Deaths		Hospitalizations		
	#	%	#	%	#	%	
Overall	12,056	100%	59	100%	481	100%	
Population							
Inmate	8,824	73%	50	85%	396	82%	
Staff	3,232	27%	9	15%	85	18%	
Facility Type							
Jails	6,695	56%	32	54%	361	75%	
Juvenile detention facilities	968	8%	0	0%	14	3%	
State prison & federal detention facilities	4,393	36%	27	46%	106	22%	
By Population and Facility Type							
Jails	Inmate	4,974	41%	24	41%	307	64%
	Staff	1,721	14%	8	14%	54	11%
Juvenile detention facilities	Inmate	390	3%	0	0%	2	0%
	Staff	578	5%	0	0%	12	2%
State prison & federal detention facilities	Inmate	3,460	29%	26	44%	87	18%
	Staff	933	8%	1	2%	19	4%

Source: DHS, June 22, 2022.

Correctional Facility COVID-19 Trends: 7-Day Case Rates and Key Events – Jails (as of May 31, 2022)

**COVID-19 Daily 7-day Case Rate Per 1,000
Among Los Angeles County Jail Inmates And Staff
(March 4, 2020 – May 31, 2022)**

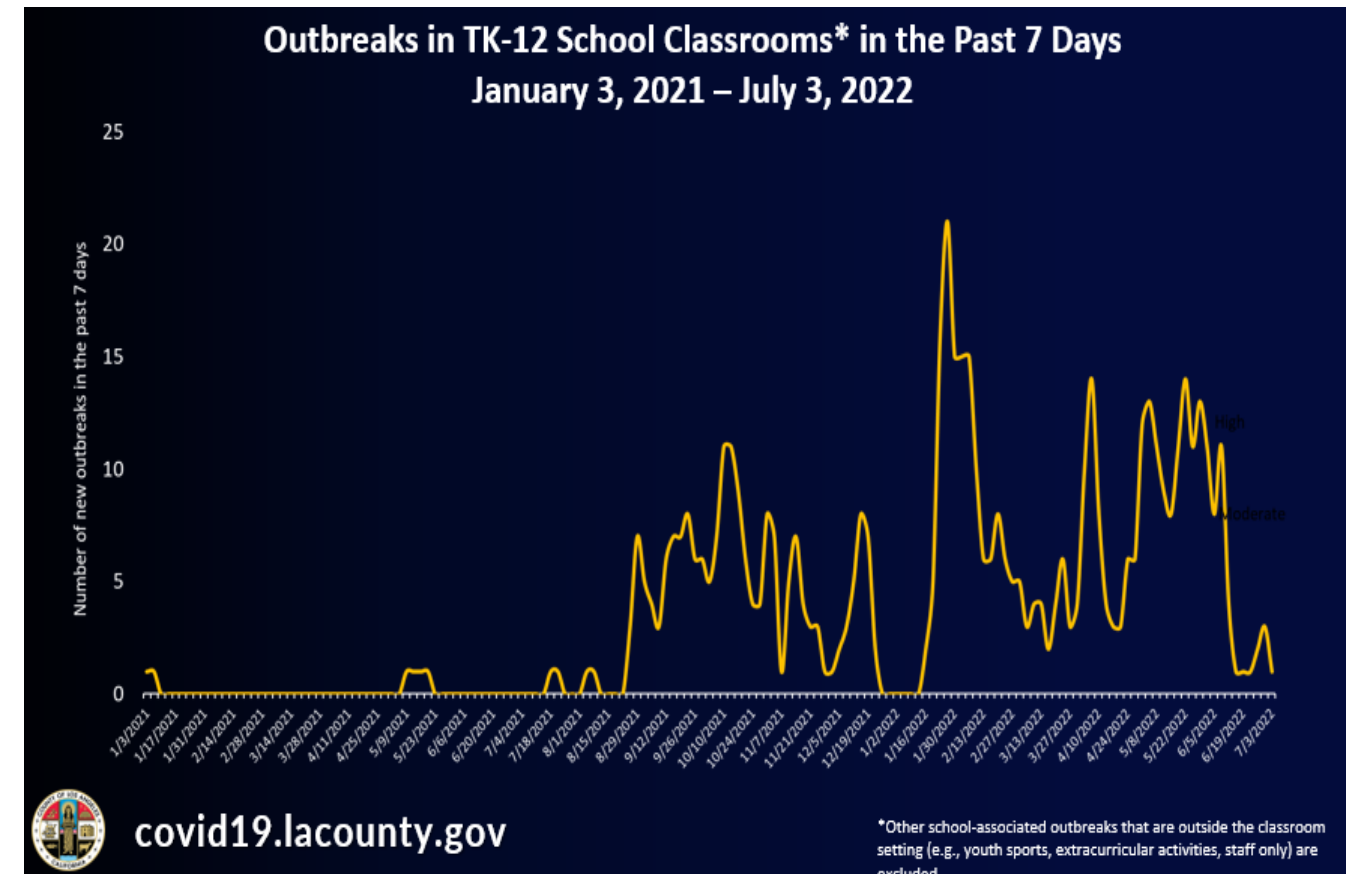
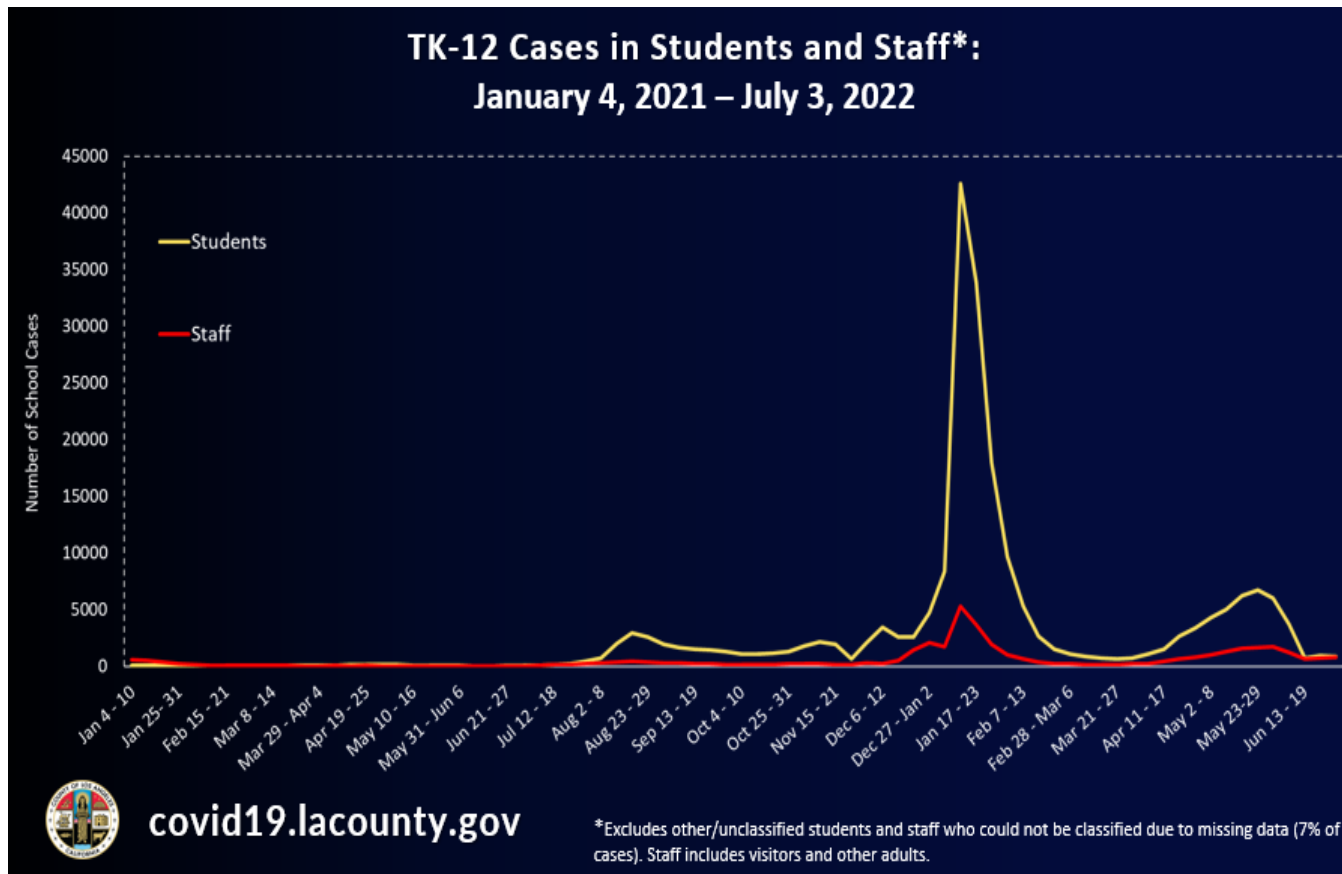


Source: DHS, June 22, 2022.

Impact of the COVID-19 Pandemic: TK-12 Schools

TK-12: COVID-19 Outbreak and Case Data in Los Angeles County

Cases among students and staff increased steadily across the second half of the 2021-2022 school year, though the number of outbreaks has fluctuated over a similar time period.

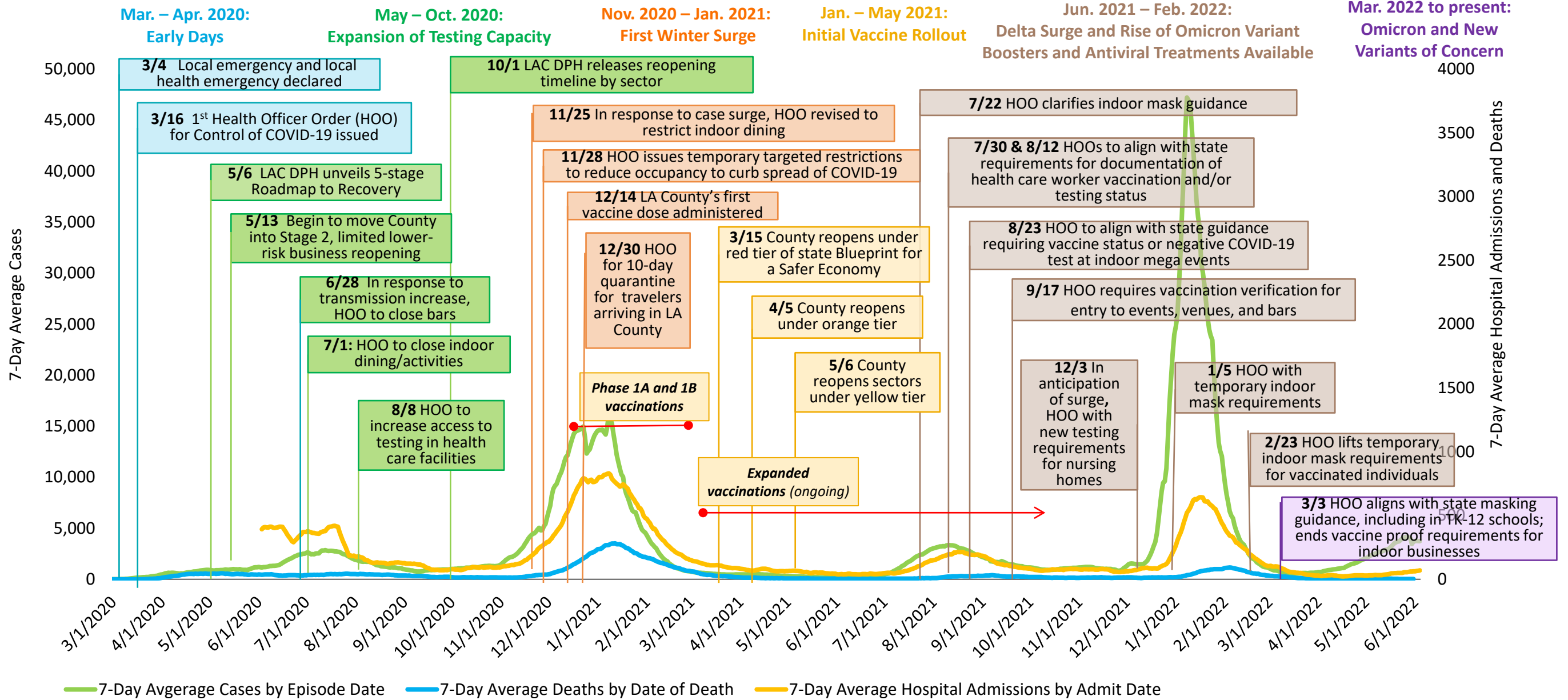


Source: LAC DPH, July 13, 2022.

LAC DPH Pandemic Response Strategies and Mitigation

LAC DPH Pandemic Response Strategies and Mitigation: Key Activities

Timeline of Representative County COVID-19 Mitigation Strategies and Response Actions



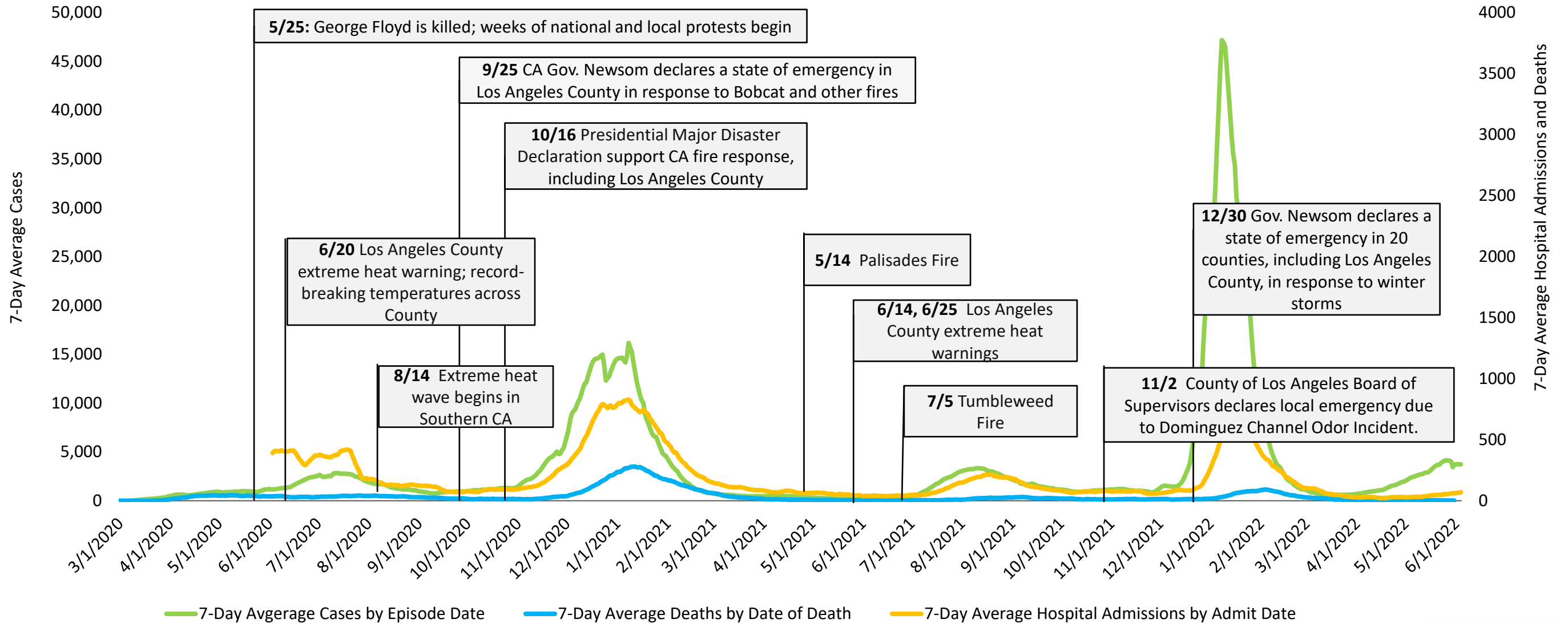
Sources: Review of LAC DPH Health Officer Orders and press releases; Los Angeles Times reporting; other Los Angeles County region news sources;. COVID-19 trend data source: Epidemiology and Data Unit, ACDC, LAC DPH, June 7, 2022.
 Notes: LAC DPH does not have hospital admission data from before June 2020. This image is simply intended as a visual timeline of selected key actions and does not include all actions. Given the constant evolution of the pandemic (variants, vaccine availability, therapeutics availability, etc.), it is difficult to discern the true efficacy of any specific action based on its timing.

*Data does not include Long Beach and Pasadena.
 **Represents data submitted to LAC DPH as of 6/7/22.



Timeline of Other Key Los Angeles County Events During COVID-19 Response

Many significant events, several requiring County and city emergency response coordination, notably occurred during the pandemic (among others):



Sources: Gov.CA.gov; LA Times and other LA news sources; Epidemiology and Data Unit, ACDC, LAC DPH, June 7, 2022. Note: LAC DPH does not have hospital admission data from before June 2020.

County of Los Angeles Department of Public Health "COVID-19 Response Interim Review" | Appendix F: Supporting Fact Pack



LAC DPH mobilized well before an official public health emergency was declared. It was engaged in the earliest U.S. screening efforts and began to advise the public of COVID-19 and safety measures in January 2020. In February 2020, LAC DPH developed a foundational COVID-19 response plan. Plans were adjusted regularly as new reopening guidance was released and the state and regional landscape evolved.

Select Early Public Communications

- **January 8, 2020:** LAC DPH Health Alert Network advises county healthcare providers of threat and information on reporting potential cases.
- **January 17, 2020:** LAC DPH partners with CDC to screen for COVID-19 at Los Angeles International Airport. Launches new resources for physicians.
- **January 26, 2020:** Following the confirmation of the first COVID-19* case in the County, Dr. Ferrer and Dr. Davis recommend steps to reduce transmission, including handwashing and staying home when ill. Press conference also included Chinese and Spanish language spokespeople.
- **February 8, 2020:** LAC DPH publishes a statement of facts for the public about the coronavirus and condemns discrimination against Asian residents.
- **March 4, 2020:** Following the declaration of a local health emergency, LAC DPH announced several initiatives and recommendations, including practicing social distancing strategies.
- **March 16, 2020:** LAC DPH Public Health Officer Order prohibits mass gatherings and requires social distancing.

Select Response Planning Documents

- **LAC DPH Response Plan (February 2020):** Established phased response, mission areas, objectives, and LAC DPH accountabilities.
- **Action Levels for Los Angeles County Response (March 2020):** Established four colored action levels for mitigating COVID-19 transmission based on positive cases and community transmission.
- **Guidance for the Allocation of Phase 1A Tier 1 COVID-19 Vaccine (December 2020):** Established initial guidance for the effective and equitable distribution of COVID-19 vaccines.
- **Booster Action Plan (September 2021):** Outlined major initiatives, LAC DPH leads, action steps, and deadlines for executing initiatives.
- **Planning for Winter Surge (November 2021):** Outlined data management, contact tracing, outbreak management, communication, and policy strategies, in addition to various protocol changes.
- **Winter and Omicron Variant Surge Plan (January 2022):** Detailed plan including response based on community transmission thresholds by area (e.g., TK-12, business sector, people experiencing homelessness).
- **Post-Surge Plan (2022):** Planning following the Omicron surge.

**Note, at the time, was referred to as a "novel coronavirus"; the official name of "COVID-19" was not issued by the World Health Organization until February 2020.*
Sources: Planning documents provided by LAC DPH; LAC DPH Press Releases; scan of press and media mentions and appearances.

Timeline of Notable Events Early in the COVID-19 Pandemic and LAC DPH Actions

- Dec. 31, 2019** - Wuhan Municipal Health Commission, China, reports a cluster of cases of pneumonia in Wuhan, Hubei Province.
- Jan. 7, 2020** – Chinese authorities identify and isolate a novel coronavirus as the source of the recent illness.
- Jan. 8, 2020** – The CDC issues a Health Advisory Alert about Outbreak of Pneumonia of Unknown Etiology in Wuhan, China.
- Jan. 8, 2020** – LAC DPH’s Los Angeles County Health Alert Network (LAHAN) publishes the CDC alert with precautionary recommendations and case reporting information for Los Angeles County and the cities of Long Beach and Pasadena.
- Jan. 17, 2020** – CDC announces passengers flying into LAX (as well as San Francisco International and JFK International airports) from Wuhan, China, will be screened for the virus. LAC DPH partners with CDC and LAX to identify potential cases and provide accommodations to quarantine or isolate individuals.
- Jan. 17, 2020** – LAC DPH LAHAN publishes the CDC’s Updated and Interim Guidance on the novel coronavirus as well as instructions for immediate public health reporting and a new “Resources for Providers” link on the LAC DPH website, including travel alert posters and a checklist for clinicians managing patients who may have what was then called “2019-nCoV.”
- Jan. 20, 2020** – CDC announces first U.S. laboratory-confirmed case of 2019-nCoV in the U.S.
- Jan. 26, 2020** - LAC DPH confirms its first case of 2019-nCoV in Los Angeles County in a nonresident traveler from China. LAC DPH holds a press conference and advises the public on safety measures and risk mitigation strategies and publishes basic safety practices on its website.
- Jan. 31, 2020** - The International Health Regulations Emergency Committee of the WHO declares the outbreak a “Public Health Emergency of International Concern.”
- Jan. 31, 2020** - U.S. Department of Health and Human Services (HHS) Secretary Alex Azar declares a Public Health Emergency (PHE), allowing flexibilities to aid the U.S. health care community in responding to the novel coronavirus.
- Feb. 7, 2020** – LAC DPH issues updated detailed guidance documents with facts about the new coronavirus and safety protocols for different sectors, such as colleges and universities.
- Feb. 8, 2020** – LAC DPH issues a public “Statement of Facts” about the novel coronavirus, addressing and condemning discrimination against Asian individuals and communities and outlining recommended safety practices for all Angelenos to follow related to respiratory illnesses.
- Feb. 11, 2020** - The WHO announces “COVID-19” as the official name for the disease caused by the novel coronavirus.
- Feb. 17, 2020** – LAC DPH issues a letter to the Los Angeles community highlighting aspects of the developing response, announcing a new county coronavirus website, directing people to LAC DPH’s social media accounts for the latest information, and highlighting the 2-1-1 call line for COVID-19 questions.
- Mar. 4, 2020** – Governor Newsom declares a State of Emergency within the state of California due to COVID-19, the second state in the country to do so (following Washington state).
- Mar. 4, 2020** – LAC DPH declares a Local Health Emergency and the Los Angeles County Board of Supervisors declares a Local Emergency within the County due to COVID-19.
- Mar. 5, 2020** – LAC DPH adds COVID-19 and SARS-CoV-2 to the required reportable disease list for health care providers, laboratories, and other mandated disease-reporting entities.
- Mar. 11, 2020** – The WHO officially declares COVID-19 a pandemic.
- Mar. 11, 2020** – LAC DPH reports the County’s first coronavirus death. Newsom urges the state’s residents to avoid large gatherings and sporting events.
- Mar. 13, 2020** – President Trump declares a National Emergency concerning the COVID-19 outbreak.
- Mar. 16, 2020** – In response to rapidly rising cases, LAC DPH orders the closure of bars, gyms, and entertainment centers, and restricts restaurants to take-out or delivery service. The Archdiocese of Los Angeles announces the suspension of in-person masses in an effort to help reduce public gatherings in response to COVID-19 cases. Multiple school districts, including LA Unified School District (LAUSD) and Culver City Unified School District, close schools and begin the transition to remote learning.
- Mar. 19, 2020** – Newsom issues a statewide stay-at-home order.
- Mar. 19, 2020** – LAC DPH issues a safer-at-home order, updating and expanding existing requirements to align with state directives.

The colors of the bars reflect the varying levels of government, with yellow representing international and federal, red representing state, and green representing LAC DPH.

Source: Manatt Health analysis.




LAC DPH Pandemic Response Strategies and Mitigation: Health Officer Orders and Compliance

LAC DPH Health Officer Orders Overview



FEDERAL (Centers for Disease Control & Prevention)
Issues guidance, not requirements, for use by states and local jurisdictions.



STATE (CA Department of Public Health)
Decides how to operationalize federal guidance; issues guidance(s) and/or order(s).



LOCAL (LA County Department of Public Health)
Follows state regulations and can choose to require additional safety modifications.

County Public Health Officer develops legally enforceable Health Officer Orders, which contain required measures and actions to protect public health. LAC DPH also prepared supporting protocols and guidance.

LAC DPH engaged sector partners to:

- Understand their questions and concerns
- Understand their employees' and customers' unique needs
- Identify strategies that would facilitate their compliance and keep their doors open
- Learn about the associations, partners, and other groups that they rely on and trust to receive information from

Strategies Used by LAC DPH to Engage Sectors:

- Tele-briefings
- Sector-specific conversations
- Dedicated staff liaisons
- Sector-specific e-mail communications
- Technical assistance and inspections

Source: Office of the Health Officer, LAC DPH, data as of June 1, 2022, LAC DPH, June 10, 2022.

Over 130 Health Officer Orders issued over the course of the pandemic to date (March 2020- October 2022)

- Each Health Officer Order has complementary materials and training to ensure a standardized approach to compliance enforcement.

COUNTY OF LOS ANGELES DEPARTMENT OF PUBLIC HEALTH
ORDER OF THE HEALTH OFFICER

RESPONDING TOGETHER AT WORK AND IN THE CC
POST WINTER SURGE COMMUNITY MONITORING AND CONTINUED F

Issue Date: **Wednesday, March 23, 2022**
Effective at 12:01am on **Friday, April 01, 2022**

Brief Highlights (Changes highlighted in yellow):

3/23/2022:

- Revised to align with the March 17, 2022 State Public Health Officer Order. Effective April 1, 2022, the requirement for pre-entry vaccine verification test result for attendees of Indoor Mega Events will be lifted and moved to...

3/3/2022:

- Revised to align with the February 28, 2022 State Public Health Officer Order. After March 11, the universal masking requirement of K-12 Schools terminate. Both CDPH and County Public Health continue to strongly re... these settings continue to mask while indoors until transmission rates ar...
- Masks continue to be required for indoor settings with higher risks for t... Transportation Hubs, All Healthcare Settings, including Long Term Care Facilities, Correctional Facilities and Detention Centers, Homeless Shelters.
- Masks are strongly recommended, but not required, for all persons, reg... other indoor public settings and businesses. Well-fitting medical mask KN95s, and KF94s) are highly recommended.
- In settings where masks are strongly recommended, businesses, venu... choose to require masking, regardless of vaccination status, by patro... workers as a strategy to reduce the risk of transmission at their site(s).
- Pre-entry vaccination or recent negative test verification for attendee... required, for Outdoor Mega Event operators.
- Pre-entry vaccination verification or recent negative test verification fo... recommended, but not required, for Bars, Breweries, Wineries, Distillerie...
- Employers are required to offer medical grade masks and respirators to e... and in contact with other workers, customers, or members of the publi... optional masking.
- In settings where pre-entry verification of vaccination or a negative COV... required, businesses, venue operators, and hosts may choose to req... COVID-19 vaccination, pre-entry verification of a negative COVID-19 vi... additional, important strategy to reduce transmission at their site(s), reg...
- As a reminder, no person can be prevented from wearing a mask as a cc... activity or entry into a business.
- Local government entities and businesses may continue to have add... infection control requirements.

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COUNTY OF LOS ANGELES DEPARTMENT OF PUBLIC HEALTH
ORDER OF THE HEALTH OFFICER

Protocol for K-12 Schools: Appendix T1

Recent Updates (Changes highlighted in yellow)

3/11/2022

- Beginning March 12, 2022 masks will be strongly recommended but not required indoors.
- Schools are required to offer upon request, for voluntary use, well-fitting medical masks and r... to school employees who work indoors and are in contact with others.
- Revisions to performing arts section to incorporate the lifting of indoor mask, physical distancing... testing requirements and the reclassification of these measures as strong recommendations.
- Removal of references to surge protocol now that County is in post-surge status.

The County of Los Angeles Department of Public Health (DPH) is adopting a staged approach, science and public health expertise, to enable schools serving students from transitional kindergarten through grade 12 to reopen safely. In addition to the conditions imposed on schools by the State Public Health and the California Department of Education, schools must also be in compliance with these re... student safety and infection control protocols.

Please note: This document may be updated as new information and resources become available. Go to ph.lacounty.gov/Coronavirus for updates to this document.

This document starts with a discussion of current provisions for on-campus education in Los Angeles County (LAC), followed by information about safety strategies specific to the school environment.

The TK-12 reopening checklist provides safety measures in five areas:

- Workplace policies and practices to protect employee and student health
- Measures to create distancing where feasible
- Measures to optimize infection control
- Communication with employees, students and families of students and the public
- Measures to ensure equitable access to critical services

These five key areas contain numerous strategies that your school may choose to implement as your facility develops a plan to provide a safe environment for all employees, students, and visitors. Although some preventive and protective measures are currently required in all schools and are clearly indicated as such in the following protocol, most measures are optional and voluntary. Nevertheless, it is still appropriate for schools to implement multiple layers of COVID-19 mitigation strategies while fully re-opening to limit cases and transmission on the school campus. Additional measures described in [Appendix T2: Exposure Management Plan for K-12 Schools](#) must also be implemented and are applicable to all on-site personnel. Further resources for TK-12 Schools can be found in the [TK-12 School COVID-19 Toolkit](#).

General Reopening Guidance for All Schools

At this time, all schools are permitted to reopen for all students in any grades TK – 12.

Note for childcare programs located in schools. Local Education Agencies (LEAs) and schools that offer day care services for children on school campuses should refer to DPH [Guidance for ECE Providers](#).

APPENDIX T-1: Reopening Protocol for K-12 Schools
Revised 3/11/2022
Page 1 of 15

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Public Health Acute Communicable Disease Control

COVID-19 Home COVID-19 Vaccine Guidance for the Public Orders and Protocols

Best Practices to Prevent COVID-19 Guidance for Mega Events

3/9/22: Updated to align with the revised County Health Officer Order. The revised Order strongly recommends, but no longer requires, indoor masking. Businesses may choose to maintain the indoor masking requirement. Businesses that permit optional indoor masking at their workites must continue to provide medical masks and respirators for voluntary use to employees who work indoors in close contact with others. Businesses that choose to maintain a universal indoor masking policy must provide medical masks to employees.

Menu **Page Updated 3-9-22** Introduction

On this page

- Best Practices and Requirements to Enhance Safety at Higher-Risk Settings
- Encourage indoor masking
- Summary of mask and testing/vaccination rules (table)
- Screen attendees
- Reduce crowding, especially indoors
- Ventilate
- Support handwashing
- Communicate

Best Practices for Businesses

General Guidance

- Offices
- Mega Events
- Smaller Events & Cultural Institutions
- Food and Beverages
- Personal Care Services
- Indoor Exercise
- Communities of Faith
- Responding to COVID-19 in the Workplace

Health Officer Orders and Protocols

As we enter this post surge phase with COVID-19, Los Angeles County (LAC) is utilizing both the Centers for Disease Control and Prevention (CDC) COVID-19 community monitoring impact measures and California SMARTER plan to guide the realignment of our local public health response to focus on reducing medically significant illness and minimizing strain on the healthcare system. See Los Angeles County Post-Surge Dashboard. The core community prevention strategies are in the areas of indoor masking, testing, vaccine verification, and ventilation. While some requirements may be lifted when the County is experiencing a low COVID-19 Community Level, which is an assessment of the impact of COVID-19 illness on health and healthcare systems, it is strongly recommended that businesses continue to follow best practices to protect staff and keep our COVID-19 community level low.

Below is a summary of requirements and best practices for businesses that host Mega Events to enhance safety for their workers, customers, and communities, and to lower the risk of COVID-19 transmission within their establishments. Mega Events include indoor events with more than 1,000 attendees and outdoor events with more than 10,000 attendees. Mega Events must follow the requirements of the LA County Health Officer Order. Examples of Mega Events include, but are not limited to conventions, conferences, expos, concerts, shows, sporting events, live entertainment, fairs, festivals, parades, amusement parks, marathons or endurance races and car shows. Operators that host smaller events should review and follow DPH Best Practice Guidance to Prevent COVID-19 in Smaller Events and Cultural Institutions.

Please be sure to read and follow the general guidance for businesses & employers.
The specific best practices below are intended to supplement the general guidance.

Source: Office of the Health Officer, LAC DPH, data as of June 1, 2022, LAC DPH, June 10, 2022.



Health Officer Order Compliance: LAC DPH Environmental Health Division (EH)

LAC DPH Environmental Health (EH) is authorized under state and local laws/regulations to protect the public's health and perform mandated services, including:

- Conducting inspections and investigations related to food, housing, drinking water, water pollution, land use, solid waste, and vector management
- Taking enforcement actions to ensure compliance with regulations
 - EH inspectors provide education to operators as the primary means to gain compliance whenever possible
 - When operators remain substantially out of compliance with COVID-19 safety protocols, EH may take one or more enforcement actions to protect the public's health



Since March 2020, EH has been delegated primary responsibility for ensuring compliance with the Health Officer Orders and related protocols.

Source: LAC DPH, June 10, 2022.

EH inspectors conduct site visits to ensure compliance with Health Officer Orders and applicable protocols, respond to complaints, or investigate reports of an outbreak.

- The primary purpose of each visit is to educate business operators on health officer order requirements with goal of ensuring compliance.
- If violations are observed:
 - Inspector issues report and provides compliance date by when they'll verify violations are corrected.
 - In the event an operator fails to correct violations after a revisit, EH can issue an administrative citation and LAC Code allows EH to charge for a revisit at a prescribed hourly rate.
- In the rare instance that a significant violation (those that increase the risk of spread of COVID-19 to employees and customers) occurs, an administrative citation and inspection report is issued which may result in a \$500 administrative citation being issued on the first visit.

- LAC DPH EH conducted **170,981 HOO investigations/reinspections** (as of March 6, 2022) and **6,428 outbreak investigations** (as of May 31, 2022).
- **Only 1,664 citations (<1% of total investigations and reinspections) have been issued to businesses**, highlighting the continued commitment to an education-first approach to compliance.
- By offering education and technical assistance regarding Health Officer Order and sector-specific COVID-19 safety measures rather than quickly issuing citations, Public Health has supported businesses already faced with challenges to remain open with improved workplace safety and reduced workplace exposures, which impact staffing levels.

Sources: LAC DPH, Environmental Health Division. "Enforcement Activities and Numbers since the beginning of the pandemic," data through March 18, 2022; HOO Investigations and Reinspections by Industry with Violations, April 1, 2020 – March 6, 2022; Outbreak Investigations by Industry with Violations, April 1, 2020 – May 31, 2022; Citations by Industry, August 29, 2020 – May 31, 2022.

COVID-19 Protocol Inspections by Industry (April 1, 2020 – March 6, 2022)

EH conducted over 170,000 site inspections in support of COVID-19 compliance in the first two years of the pandemic. Inspections were conducted in response to inbound complaints and on a randomized basis across all industries, as well as through previously scheduled public health inspections for business that require EH inspections as part of normal operations (e.g., food service). COVID-19 compliance inspections were paused in March 2022 as indoor masking and vaccination/negative test verification were not required in any setting.

Industry	Inspections	% Compliance
Outdoor Venue >10,000 Capacity	20	100%
Outdoor Recreation	4	100%
Indoor Venue > 1,000 Capacity	43	98%
Amusement and Water Park	67	94%
Outdoor Mega Event > 10,000 Capacity	13	92%
Construction	13	92%
Professional Sports	23	91%
Music, Television, and Film Production	62	90%
Warehouse, Manufacturing, and Logistics	1,138	86%
Government-Owned Property	172	84%
Unregulated Business	6,817	81%
Breweries, Wineries and Tasting Rooms	588	80%
Youth Sports and Adult Recreational Sports	172	78%
Day Camps, Child Care Centers, and Preschools	117	77%
Office Sites	1,000	76%
Cardrooms, Casinos, and Bingo	161	74%
Public and Private Schools	150	76%
Shopping Malls	466	75%

Industry	Inspections	% Compliance
Retail Sales	2,780	74%
Family Entertainment	469	73%
Bar	3,477	72%
Restaurant	97,630	70%
Hotel	3,287	70%
Personal Care	6,779	69%
Hair Salons and Barbershops	5,333	69%
Places of Worship	224	69%
Food Market Retail	28,836	68%
Museums, Zoos, Aquariums, and Galleries	47	66%
Institutes of Higher Learning and Trade Schools	19	63%
Food Wholesale	4,056	62%
Gyms and Fitness Centers	3,695	62%
Limited Services	482	62%
Garment Manufacturing	2,841	48%
Total	170,981	70%

Source: LAC DPH - HOO Investigations and Reinspections by Industry with Violations, April 1, 2020 – March 6, 2022. Industry categorization determined by LAC DPH.

Note: EH conducted regular protocol inspections as well as inspections triggered by complaints; certain industries had relatively lower compliance based on multiple inspections noting violations or continued non-compliance; number of inspections varied widely based on inspections triggered by complaints and the number of businesses or establishment per industry (i.e., the denominator).



COVID-19 Outbreak Investigations with Violations by Industry (April 1, 2020 – May 31, 2022)

EH also conducted COVID-19 outbreak investigations, including review of Health Officer Order compliance in the event of an outbreak..

Industry	Inspections	% Compliance
Museums, Zoos, Aquariums, and Galleries	4	100%
Amusement Park and Water Park	2	100%
Indoor Venue >1,000 Capacity	1	100%
Professional Sports	1	100%
Youth Sports and Adult Recreational Sports	13	85%
Music, Television, and Film Production	52	83%
Bar	17	76%
Day Camps, Child Care Centers, and Preschools	14	71%
Family Entertainment	7	71%
Institutes of Higher Learning and Trade Schools	3	67%
Construction	29	66%
Public and Private Schools	49	63%
Government Owned Property	216	61%
Personal Care	7	57%
Retail Sales	572	56%
Food Market Retail	1,058	56%
Restaurant	1,210	53%
Places of Worship	32	53%

Industry	Inspections	% Compliance
Limited Services	44	52%
Hotel	118	50%
Shopping Malls	8	50%
Breweries, Wineries, Tasting Rooms	2	50%
Office Sites	557	49%
Unregulated Business	990	45%
Hair Salons and Barbershops	7	43%
Warehouse, Manufacturing, and Logistics	1,060	41%
Gyms and Fitness Centers	5	40%
Food Wholesale	312	35%
Cardrooms, Casinos, and Bingo	3	33%
Garment Manufacturing	35	14%
Total	6,428	50%

Source: LAC DPH - Outbreak Investigations by Industry with Violations, April 1, 2020 – May 31, 2022. Industry categorization determined by LAC DPH.

COVID-19 Health Officer Order Citations by Industry (August 29, 2020 – May 31, 2022)

Less than 1% of EH inspections and reinspections resulted in an administrative citation. Citations were issued for significant violations.

Industry	Citations	%
Restaurants	724	44%
Gyms	336	20%
Personal Care	93	6%
Places of Worship	87	5%
Unregulated (Unclassified Facility)	77	5%
Hair Salons and Barbershops	62	4%
Food (Unpermitted)	44	3%
Food Markets	37	2%
Public and Private Schools (K-12)	36	2%
Family Entertainment	30	2%
Office Sites	19	1%
Hotels	18	1%
Street Vending Food (Unpermitted)	16	1%
Retail Sales	15	1%
Shopping Malls	13	1%
Warehouse Manufacturing Logistics	10	1%
Public Swimming Pool	9	1%
Breweries, Wineries, and Tasting Rooms	8	0.5%

Industry	Citations	%
Mobile Food (Permitted)	4	0.2%
Food Manufacturer	4	0.2%
Limited Services	4	0.2%
Body Art	3	0.2%
Garment Manufacturer	3	0.2%
Cardrooms, Casinos, and Bingo	3	0.2%
Food Warehouse	2	0.1%
Self-Service Laundry	2	0.1%
Museums, Zoos, and Aquariums	2	0.1%
Licensed Health Care Food Facility	1	0.1%
Boarding Homes	1	0.1%
Theater	1	0.1%
Total	1,664	100%

Source: LAC DPH - Citations by Industry, August 29, 2020 – May 31, 2022. Citation information is available on LAC DPH website. Industry categorization determined by LAC DPH.



LAC DPH Pandemic Response Strategies and Mitigation: Contact Tracing

Contact Tracing Activities

Summary of Activities

- In May 2020, LAC DPH published its contact tracing plan, which projected the need for ~2,500 additional staff to support case and contact interviews and institutional investigations.
- LAC DPH reassigned more than 400 LAC DPH staff to meet and requested 2,000 County personnel from the County Emergency Operations Center (EOC) and additional state and federal support to meet this need.
- Contact tracing workflows and training programs were implemented, and digital platforms and integration were enhanced. Beginning in September 2020, LAC DPH partnered with CBOs to advance contact tracing services in highly impacted communities (HPI+), under LAC DPH supervision. In addition to focusing on HPI+ communities, the Case and Contact interview Branch (CCIB) prioritized those aged 65+ and contacts identified through case interviews as potentially needing resources or additional support.
- LAC DPH greatly increased its contact tracing capabilities and surge capacity, although sheer volume has made the timeliest response more challenging (as the County experienced a 1,600% increase in reported cases in less than two years).
 - July 2020: LAC DPH followed up with 103,307 cases (94%) within one day of assignment.
 - May 2022: LAC DPH followed up with 1,732,119 cases (74.1%) within one day of assignment.

Cumulative Statistics (As of May 31, 2022)

Contact Tracing was modified during the Omicron surge due to high case volume

Cases	
Total Assigned Cases	2,420,295
% of Assigned Cases Interviewed	31%
Cases Sent to High-Risk Teams (e.g., jail, pregnancy) for Follow-Up	48,611
Cases Assigned for Vaccine Calls	978,781
Cases Requiring Vaccine Appointment Assistance	17,497
Contacts	
Total Assigned Contacts	550,197
% of Assigned Contacts Interviewed	47%
Average Contacts per Case Interviewed	2
Assigned Contacts for Vaccine Calls	54,876
Contacts Requiring Vaccine Appointment Assistance	2,035

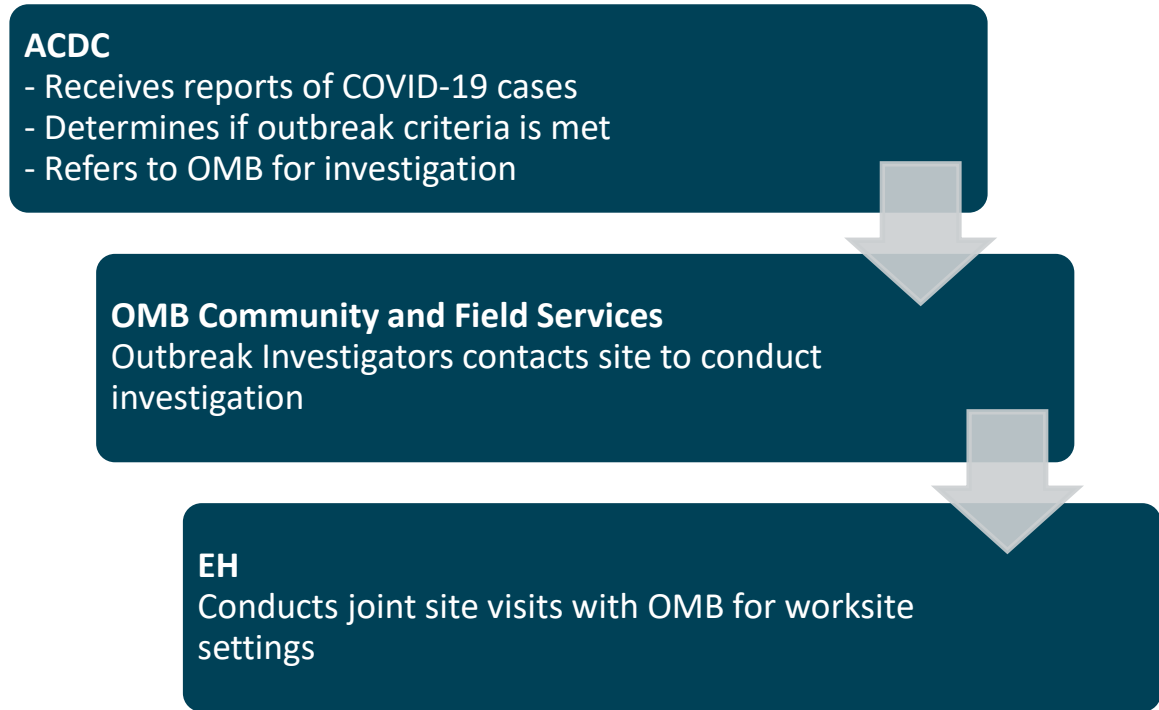
Sources: Contact Tracing: Summary of Efforts to Date, LAC DPH, July 7, 2020; Los Angeles County COVID-19 Case Processing and Interview Metrics, LAC DPH, July 20, 2020; Contact Tracing Dashboard, LAC DPH, May 10, 2022; Planning for Winter Surge, LAC DPH, November 24, 2021; Case and Contact Interview Branch (CCIB) Data Report prepared for Manatt, May 31, 2022; Division of Maternal, Child, and Adolescent Health, June 22, 2022.

LAC DPH Pandemic Response Strategies and Mitigation: Outbreak Management

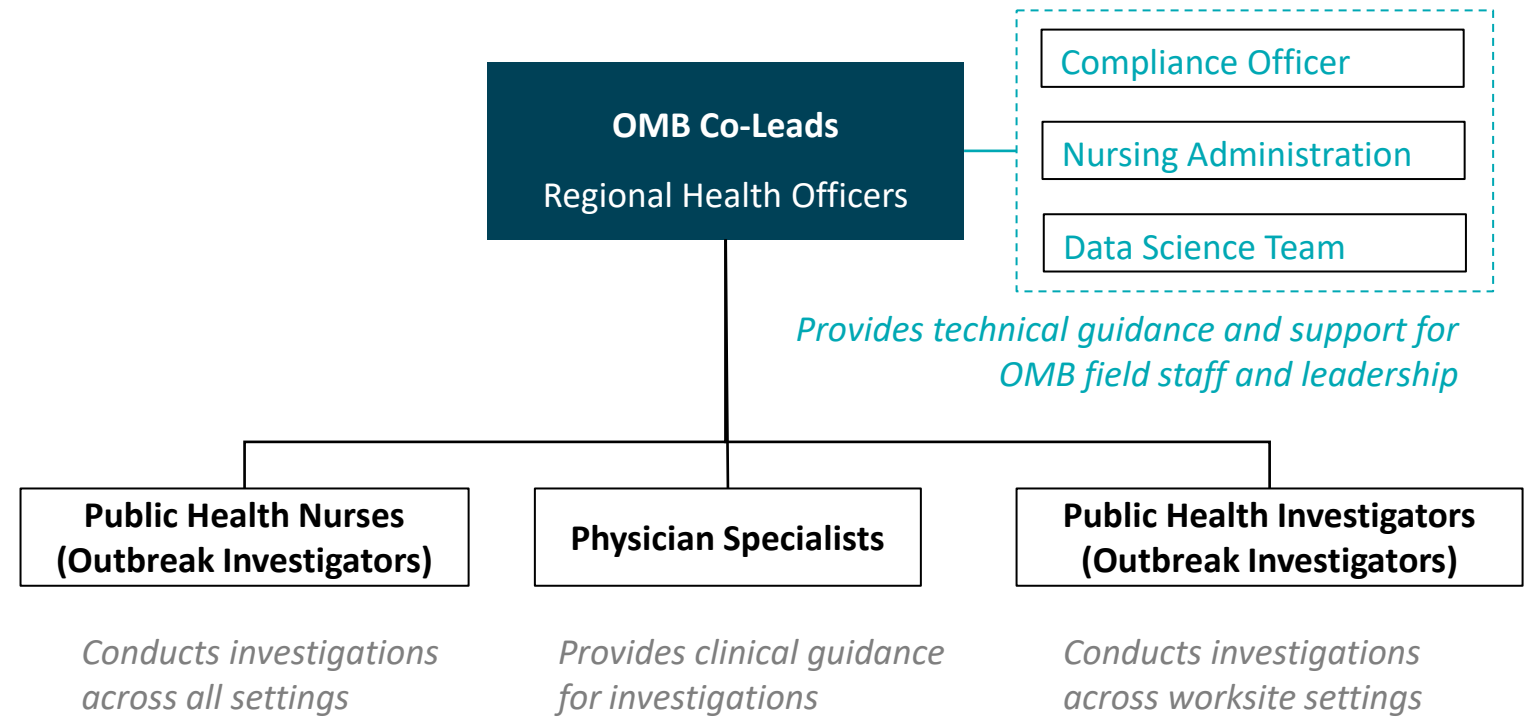
LAC DPH COVID-19 Outbreak Management Overview

The Outbreak Management Branch (OMB), Acute Communicable Disease Control (ACDC), and Environmental Health (EH) work together to manage outbreaks. OMB conducts outbreak investigations and provides clinical guidance across all settings following a referral from ACDC.

Outbreak Management Roles and Responsibilities



Outbreak Management Roles and Responsibilities



Source: LAC DPH, June 17, 2022.



LAC DPH COVID-19 Outbreak Management Settings, Successes, and Challenges

Outbreak Setting Examples

- Skilled Nursing Facilities (SNFs) and congregate residential settings
- Education sector
 - Early childcare education
 - Schools (TK-12)
 - Institutes of higher education
- Food-related settings
- Worksite settings
 - Transportation
 - Law enforcement
 - Professional sports
 - Places of worship

Successes

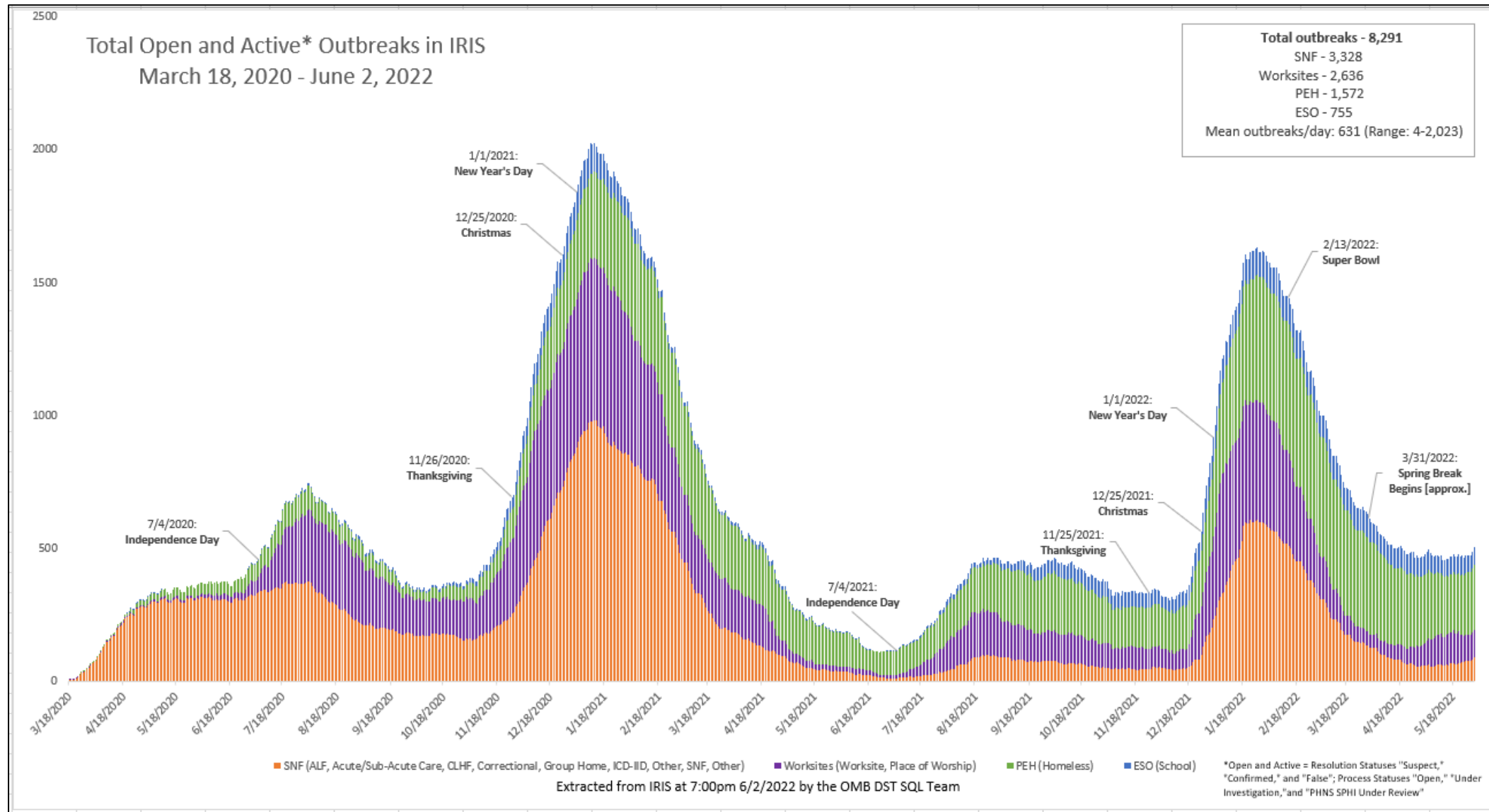
- Between March 2020 - March 2022, LAC DPH's Outbreak Management Branch (OMB) had managed nearly 6,000 outbreaks, avoiding an economic loss burden estimated to be over \$193M.
- As OMB became more established, staff gained specialized knowledge within different sectors, improving the effectiveness of public health communication with outbreak sites.
- Units within OMB (e.g., Nursing Administration and Data Science Team) provided critical support and training needs for OMB staff.
- Robust Data Science Team structure (approx. 100 staff) provided critical and timely data for daily operations.
- At its peak, OMB consisted of 500+ staff (permanent and temporary staff).

Challenges

- During periods of high transmission, the number of outbreaks rose sharply.
- The workload for OMB was challenging to predict and staff accordingly.

Source: LAC DPH, June 17, 2022.

COVID-19 Outbreak Trends in Los Angeles County by Sector



Source: Outbreak Management Branch, LAC DPH, June 2, 2022.



COVID-19 Outbreak Management in Los Angeles County

Observations by Sector



Outbreak Management

- **Managed 2,646 outbreaks** (March 2020 - June 2022)
- Conducted on-site visits to identify and correct deficiencies to mitigate the spread of COVID and make workplaces safe for County workers.

Partnerships Established

- Collaboration with **Los Angeles World Airports at Los Angeles International Airport** to provide active case/outbreak surveillance, outbreak prevention, and employee education
- Established a specialized OMB unit to work with County **Law Enforcement** agencies and provided education and resources.
- Collaborated with **CADPH Occupational Medicine Unit and Cal/OSHA** to provide coordinated input into occupational health and safety regulatory standards, to minimize discrepancies in regulations and facilitate workplace understanding and compliance with mandates.

Challenges

- Meeting heavy workloads during COVID-19 surges
- Ensuring operators and employers are following COVID-19 outbreak protocol requirements and providing timely information to LAC DPH to mitigate outbreaks

Source: LAC DPH.

Observations by Sector *(cont'd.)*



Skilled Nursing Facilities (SNF)

Outbreak Management

- **Managed 3,328 outbreaks** (March 2020 - June 2022)
- Direct in-person communication with facilities has provided valuable opportunities for education regarding COVID-19 and vaccines.

Partnerships Established

- Established connections with SNFs and other Long-Term Care/Congregate Facilities that will allow for continued communication and access to resources, which will continue to improve patient care.

Challenges

- Challenges with strict COVID-19 restrictions needed in SNF and congregate setting to protect vulnerable residents and workers; isolation has taken a significant toll on patients/residents and their families and staff
- Staff shortages at facilities during peaks of COVID-19 cases

Source: LAC DPH.

Observations by Sector *(cont'd.)*



Education (TK-12)

Outbreak Management

- **Managed 755 outbreaks** (March 2020 - June 2022)
- Worked with schools to manage outbreaks; moved from individual contact tracing to classrooms exposure approach. This was helpful for schools with limited resources to carry out contact tracing/notification, especially during the 2021-2022 winter surge.

Partnerships Established

- Engaged with schools and school districts, creating opportunities for schools and districts to share their unique concerns in a more holistic approach.

Challenges

- Managing concerns of superintendents with LAC LAC DPH protocols who were receiving pressures from parents and school staff, with sometimes conflicting objectives
- Communicating rapidly changing guidelines with schools
- Obtaining compliance with indoor masking requirements in certain districts or schools
- Managing outbreaks after relaxation of indoor masking mandate, which led to increased transmission inside and outside of school

Source: LAC DPH.

Observations by Sector *(cont'd.)*



People Experiencing Homelessness

Outbreak Management

- **Managed 1,572 outbreaks** (March 2020 - June 2022)
- Increased awareness, provided education, and connected sites to resources (e.g., vaccines, therapeutics).
- Connected shelters with resources (testing supplies, masks, vaccination events, therapeutics) during and after outbreak periods.

Partnerships Established

- Coordinated outbreak management efforts with other partners such as DHS, LAHSA, CARE(+) both for sheltered and unsheltered.
- Coordinated with shelter operators, EH, and Quarantine and Isolation to help with disease mitigation and prevention of spread.

Challenges

- Challenges with testing capacity (staffing, supplies) and compliance.
- Explanation of frequent guidance changes/updates with the housing sites and keeping them current with resources and expectations (i.e., testing, vaccination tracking, isolation and quarantine).
- Following guidelines to best protect the health of this high-risk population, while maintaining equitable access to work opportunities and critical services.

Source: LAC DPH.

LAC DPH Pandemic Response Strategies and Mitigation: Quarantine & Isolation Support

LAC DPH Isolation and Quarantine Orders

Isolation and quarantine help protect the public by preventing exposure to people who have or may have a contagious disease. California law grants the local health officer broad authority and distinct duties to protect the public's health, including the authority to issue isolation and quarantine orders:

- **Isolation** separates sick people with a contagious disease from people who are not sick.
- **Quarantine** separates and restricts the movement of people who were exposed to a contagious disease to see if they become sick.

Total isolation and quarantine orders issued to individuals (as of 4/12/2022):

- 1,242,750 Isolation Orders
- 205,466 Quarantine Orders

COUNTY OF LOS ANGELES DEPARTMENT OF PUBLIC HEALTH
ORDER OF THE HEALTH OFFICER

HEALTH OFFICER ORDER FOR THE CONTROL OF COVID-19
Public Health Emergency Isolation Order
Revised Order Issued: **May 18, 2022**
Effective as of 12:01am on Thursday, May 19, 2022
This Order supersedes the **March 16, 2022** Public Health Emergency Isolation Order.
This Order is in effect until rescinded by the Health Officer.

PLEASE READ THIS ENTIRE ORDER CAREFULLY.

Brief Highlights: (Changes highlighted in yellow):
5/18/2022:
• This Isolation Order is revised in response to changes in the April 6, 2022, State Public Health Officer Guidance for Local Health Jurisdictions on Isolation and Quarantine of the General Public.
• Changes the definition of a "close contact" to align with the new CDPH definition of: "someone sharing the same indoor airspace, e.g., home, clinic waiting room, airplane, etc., for a cumulative total of 15 minutes or more over a 24-hour period (for example, three individual 5-minute exposures for a total of 15 minutes) during an infected person's (laboratory-confirmed or clinical diagnosis) infectious period."

WHO IS REQUIRED TO FOLLOW THIS HEALTH OFFICER ORDER
All individuals, regardless of vaccination status, previous infection or lack of symptoms, who reside or work in the Los Angeles County Health Jurisdiction, who have tested positive for or been diagnosed with COVID-19 are required to isolate (separate) themselves from others and follow all instructions in this Order until it's safe for them to be around others. A person is considered to be diagnosed with COVID-19 based on one or both of the following criteria:
a) They received a positive viral test for COVID-19 and/or
b) A healthcare provider clinically suspects that they have COVID-19

WHAT YOU ARE REQUIRED TO DO IF YOU HAVE COVID-19
To prevent the spread of COVID-19, the County of Los Angeles Health Officer ("Health Officer") requires everyone who tests positive for or is diagnosed with COVID-19, regardless of vaccination status, previous infection, or lack of symptoms to immediately:
a) Self-isolate (stay in your home or another residence and away from others) for at least 5 days, see "Duration of Self-Isolation" details below, and
b) Wear a highly protective mask until your isolation ends. If you meet the criteria to leave isolation before 10 days, it is **strongly recommended** that you continue to wear a highly protective mask around others, especially indoors, for a total of 10 days after either the positive COVID-19 viral test or the first full day after your symptoms developed. The mask should be a well-fitting medical mask, a well-fitting respirator, or a well-fitting high-filtration reusable mask with a nose-wire (see ph.lacounty.gov/masks for details about masks with best protection), and

Health Officer Order for the Control of COVID-19: Public Health Emergency Isolation Order
Revised 5/18/22 Page 1 of 6

COUNTY OF LOS ANGELES DEPARTMENT OF PUBLIC HEALTH
ORDER OF THE HEALTH OFFICER

HEALTH OFFICER ORDER FOR THE CONTROL OF COVID-19
Public Health Emergency Quarantine Order
Revised Order Issued: **May 18, 2022**
Effective as of 12:01am on Thursday, May 19, 2022
This Order supersedes the **April 13, 2022** Public Health Emergency Quarantine Order.
This Order is in effect until rescinded by the Health Officer.

PLEASE READ THIS ENTIRE ORDER CAREFULLY.

Brief Highlights: (Changes highlighted in yellow):
5/18/2022:
• Clarified that asymptomatic persons who have been exposed to someone with COVID-19 (asymptomatic contacts) are exempt from quarantine, regardless of vaccination status. However, they are required to follow the requirements specified below; noted that some people who live or work in specified high-risk settings will have to follow the setting-specific requirements in relationship to work restrictions or work exclusions. Workers in other settings are required to follow Cal/OSHA work exclusions and/or return to work requirements.
• Noted exemption for COVID-19 testing for asymptomatic contacts who previously tested positive using a viral test for COVID-19 in the past 90 days and recovered, as long as they have no symptoms.
• Noted that all contacts, regardless of vaccination status, must wear a highly protective mask around others while indoors and when close to others while outdoors through Day 10.

PERSONS REQUIRED TO FOLLOW THIS HEALTH OFFICER ORDER
All individuals who reside or work in the Los Angeles County Health Jurisdiction who have been exposed to a person diagnosed with COVID-19 (close contacts), whether exempt from quarantine or not, are to follow the requirements of this Order specific to their situation and the instructions for quarantine, as indicated below.
This order does not apply to the management of exposed health care personnel working within the health care setting nor does it apply to the management of exposed Emergency Medical Service personnel working within the prehospital or healthcare setting. Exposed health care personnel should refer to [Work Restrictions for Asymptomatic HCP with Exposures](#). Emergency Medical Service personnel should refer to [Work Restrictions for Asymptomatic EMS Personnel with Exposures](#).
This order also does not apply to the management of exposed residents and, in terms of work restrictions or work exclusions, exposed staff in other specified high-risk settings. Exposed residents and staff in the following high-risk settings must follow the requirements specific to their setting:
• Long-term care centers
• Adult and Senior Care Facilities
• Homeless shelters
• Correctional facilities and Detention centers
• Cooling centers and emergency shelters

Health Officer Order for the Control of COVID-19: Public Health Emergency Quarantine Order
Revised 5/18/22 Page 1 of 5

Sources: [Quarantine and Isolation, CDC](#); CCIB HOO Unit, LAC DPH, data as of April 12, 2022; LAC DPH, June 10, 2022.

LAC DPH Pandemic Response Strategies and Mitigation: Personal Protective Equipment (PPE) Distribution

LAC DPH Personal Protective Equipment (PPE)

Distribution

LAC DPH gave 4,570 facilities over 116 million in PPE supplies, the majority of which went to SNFs. Many facilities were experiencing severe PPE shortages and requested emergency assistance from LAC DPH. LAC DPH has continuously worked to secure additional PPE from state and national stockpiles and supply chains and will continue to prioritize distribution to facilities in need.

Strategies to optimize PPE distribution and impact begin with implementation of an appropriate hierarchy of controls for occupational exposures, as shown below:

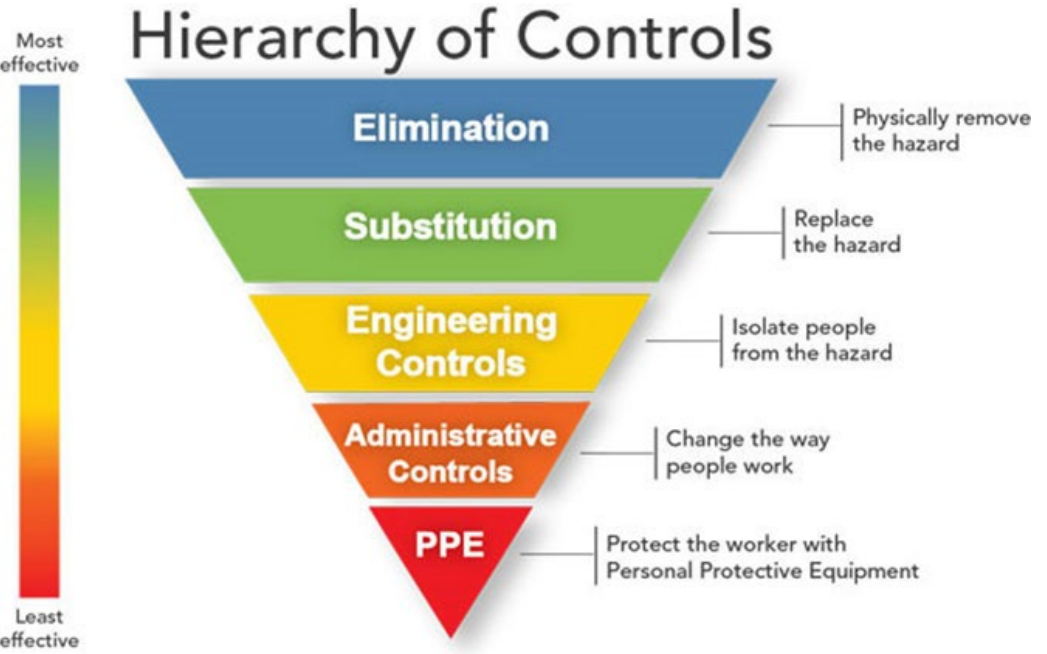


Image Source: National Institute for Occupational Safety and Health (NIOSH), <https://www.cdc.gov/niosh/topics/hierarchy/default.html>

PPE Distribution by Facility and Product (3/1/2020 – 10/10/2021)

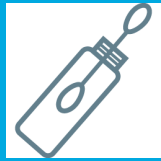
Facility Type	Facilities	PPE Distributed	% PPE Distributed
SNF	386	76,278,446	65%
Adult Residential Facility	2,945	11,318,213	10%
Intermediate Care Facility	261	9,777,876	8%
Congregate Care Facility	146	3,788,480	3%
Clinics	8	3,762,454	3%
Domestic Violence	38	2,737,542	2%
CBO	39	2,724,271	2%
Substance Use Disorder	351	2,552,058	2%
Gang Intervention and Outreach	28	1,986,603	2%
Homeless Shelters	285	1,088,113	1%
Miscellaneous Government Agencies	8	686,845	1%
Health Care Center	35	133,750	0.1%
African American Infant and Maternal Mortality	40	94,064	0.1%
Total	4,570	116,928,715	100%

Product	PPE Distributed	% PPE Distributed
Gloves	64,321,289	55%
N95 Masks	20,815,126	18%
Surgical Masks	19,411,271	17%
Gowns	7,667,177	7%
Face Shields	2,347,182	2%
Hand Sanitizer	1,795,700	2%
Cloth Masks	243,312	0.2%
Goggles	122,176	0.1%
Cap Bouffant	74,000	0.1%
Shoe Coverings	60,000	0.1%
Wipes	30,720	0.03%
Trash Can Liners	25,000	0.02%
Cover Alls	15,762	0.01%
Total	116,928,715	100%

Source: LAC DPH, June 8, 2022.



LAC DPH Pandemic Response Strategies and Mitigation: Community COVID-19 Testing Network (in Partnership with Department of Health Services)



Los Angeles County has implemented easily accessible, and broad-scale COVID-19 community testing, including walk-up, drive-up, and mobile pop-up models.

In April 2020, the Department of Health Services (DHS) created an interdisciplinary team to design, develop, and launch an extensive community testing program.

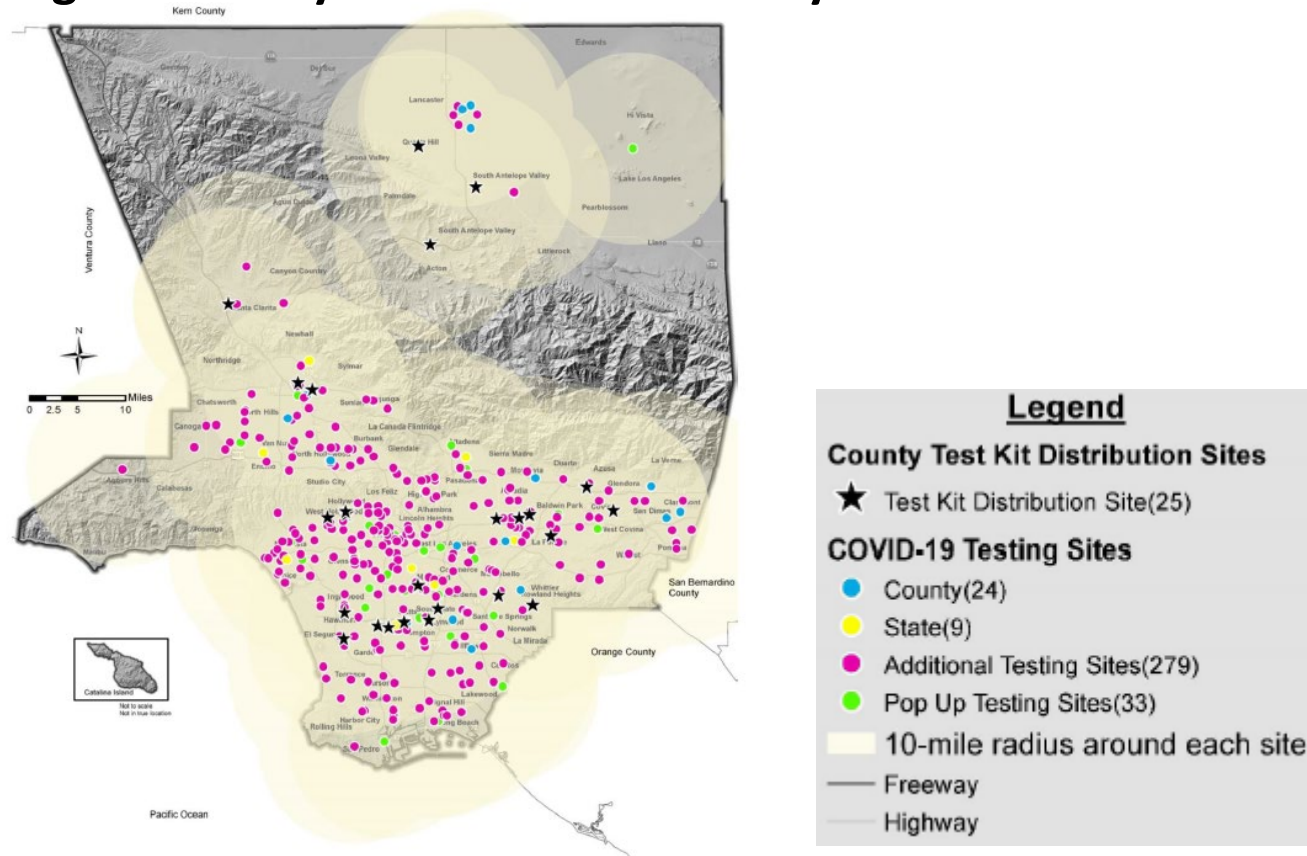
Involved over 279 partners, including: LAC DPH, Los Angeles County Board of Supervisor Offices, County CEO's Office, County Contracts and Grants and Finance, City of Los Angeles, local cities and municipalities, State of California, hospitals and clinics, retail pharmacies, independent testing companies

- **4,002,197 tests completed at community testing sites** (as of June 9, 2022)
- **125 sites were launched** over the course of the pandemic
- **66 sites currently in operation** (as of May 21, 2022):
 - 24 are County sites
 - 9 are State sites
 - 33 are pop-up testing sites
- Testing sites offer PCR and/or Antigen Covid-19 testing

Sources: LAC DPH, June 9, 2022; COVID-19 Community Testing Dashboard, DHS, May 26, 2022.

Over the course of the pandemic, 125 testing sites were launched in both large venues and smaller communities. Hours and locations varied to accommodate work hours and weekends.

Los Angeles County COVID-19 Community Test Sites

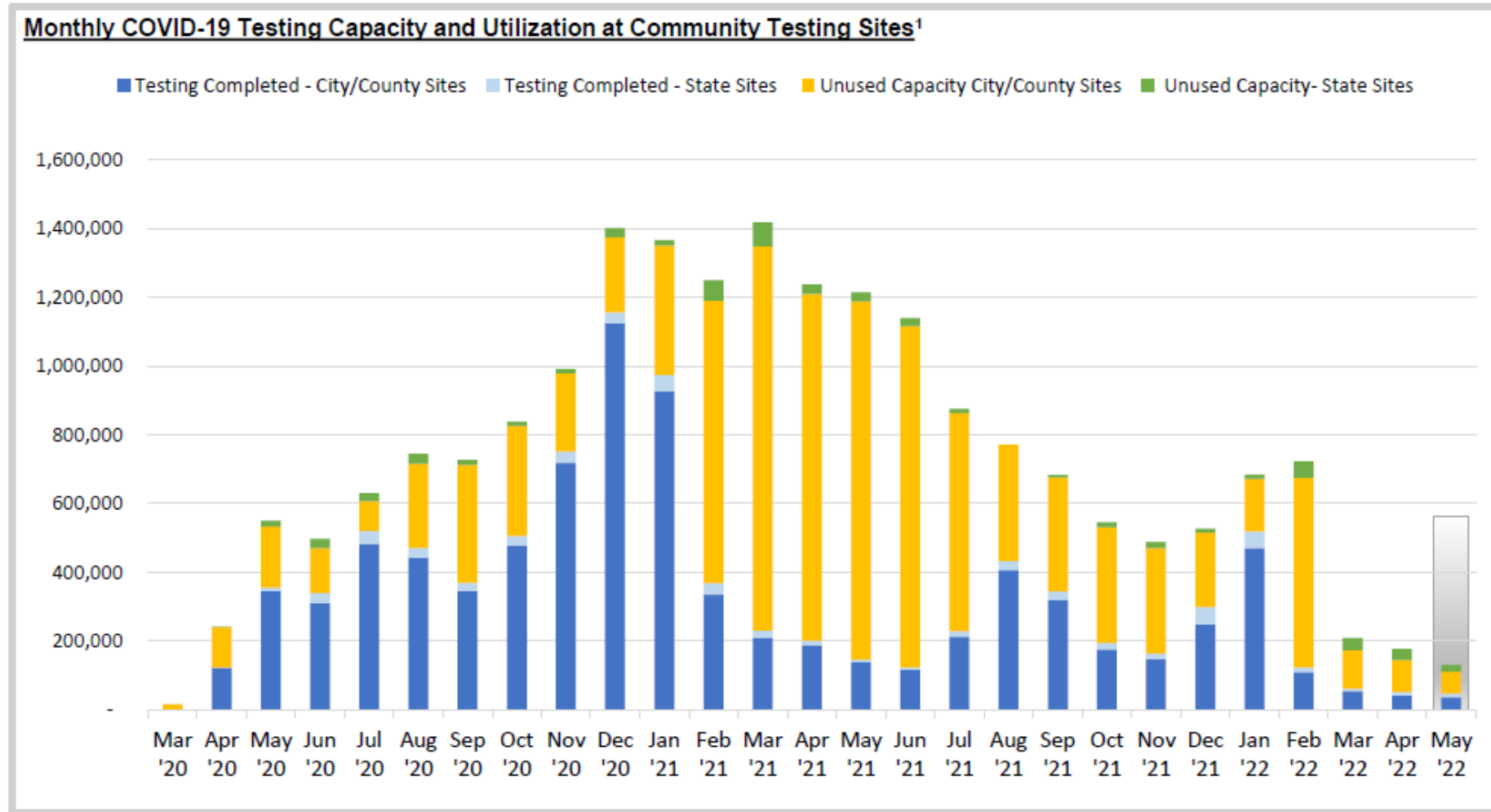


- Mobile pop-up units were developed to increase access to communities with high positivity rates and persons with mobility and/or transportation issues.
- Over time, testing sites were scaled back based on demand/need, greater availability of home test kits, and reduced federal funding. *(HRSA COVID-19 funding ended March 2022.)*
- Other testing programs beyond the Community Testing program were and continue to be in place, including health care facilities, schools, long term care facilities, and others.

Sources: DHS, June 9, 2022; COVID-19 Community Testing Dashboard, DHS, May 26, 2022.

Note: The map reflects all community testing sites as of 5/21/22. 10-mile radius is used as a proxy for the State’s expectation that at least 75% of a region’s population has a testing site within 30 minutes drive in urban areas and 60 minutes drive in rural areas.

Los Angeles County COVID-19 Community Testing Capacity Over Time



1. The graph reflects monthly testing volume and capacity at fixed/pop-up City, County, and State-supported COVID-19 community testing sites. From 2/6/22-2/28/22 testing volume and capacity at Federal COVID-19 community testing sites is captured under County Sites. Federal COVID-19 testing sites closed on 2/28/22. Additional testing volume and capacity for over 200 additional partner testing sites are not reflected. Unused capacity includes no shows and unscheduled appointments. The gray box corresponds to incomplete data. City closed all community testing sites on 12/4/21. This does not include the At-Home testing program and test kit distributions.

Sources: DHS, June 9, 2022; COVID-19 Community Testing Dashboard, DHS, May 26, 2022.



Los Angeles County Evolving COVID-19 Community Testing Strategies and Activities

In this new phase of the pandemic, Los Angeles County is moving COVID-19 testing beyond crisis mode and into standard health care services.

- **New strategic direction:**

- Focus County community testing operations on highest risk areas, high community transmission, and low vaccination zones
- Support expanded testing access through healthcare providers and health plans
- Provide at-home PCR COVID-19 testing kits for seniors and persons with disabilities unable to get to testing sites

- **New testing activities include:**

- Distribution of test kits at libraries with online and phone request process for ordering with curbside delivery
- Expansion of test kit distribution modality to other cities and municipalities
- LAC DHS – LAC DPH collaboration on Test-to-Treat modality
- Education on health insurance coverage for testing
- Updates to testing website to easily identify DHS' sites offering free testing to the uninsured

Sources: LAC DPH, June 9, 2022; COVID-19 Community Testing Dashboard, DHS, May 26, 2022.

Distribution of Antigen Test Kits in Los Angeles County

LAC DPH led the distribution of over 7 million over-the-counter (OTC) and Clinical Laboratory Improvement Amendments (CLIA)-waived antigen test kits and over 14 million tests across County organizations and facilities.

OTC COVID-19 Test Kit Orders

Organization/Facility Type	# Locations	Total Boxes Requested	Total Boxes Shipped	Total Tests Shipped
Charitable Feeding System	1	25,000	156,470	212,140
Children's Residential Facilities	31	1,725	1,705	3,410
CBOs	238	140,685	785,498	1,201,696
Corrections (Juvenile)	1	400	360	720
Community Care Facilities (LTC)	2	76,000	78,670	86,150
County Services	4	-	3,240	6,480
DCFS (Children's Residential Facilities)	1	45	855	14,000
DHS - County Fair	1	-	52,115	104,230
DPH Health Centers	13	-	17,840	33,520
DPH People Experiencing Homelessness Outbreak Investigators (OIs)	4	-	2,380	11,900
Early Childcare or Daycare Settings	12	114,860	195,228	258,216
Elected Officials	26	47,685	56,670	99,240
Faith-Based Organizations (FBOs)	119	22,840	114,516	168,732
Intermediate Care Facilities (ICFs)	223	-	8,095	23,780
County Library	47	6,267	38,280	60,960
Perinatal Services	5	-	10,080	20,160
PODs - Vaccine	1	31,500	87,984	142,704
Senior Centers	3	22,000	41,096	68,392
Schools - DPH sourced	8	-	46,620	93,240
Schools - ISD sourced	58	-	871,568	1,593,136
Schools - CDC sourced	187	-	401,404	752,208
Schools - State Allotment	78	-	1,295,370	2,176,020
Schools - State Allotment/Direct To Sector	1	-	2,260,024	4,520,048
SUD Congregate Settings (e.g., recovery bridge housing, residential)	54	6,689	47,533	71,366
SUD Outpatient Settings	35	3,053	26,217	41,334
Tribal Entity	1	-	696	1,392
Sub Total	1,154	498,749	6,600,514	11,765,174

OTC and CLIA-Waived COVID-19 Test Kit Orders

Organization/Facility Type	# Locations	Total Boxes Requested	Total Boxes Shipped	Total Tests Shipped
Homeless Shelters (HFH and DV shelters)	333	87,070	347,948	598,212
Clinics and Dialysis Centers	189	-	17,059	165,940
CMS - Medical Therapy Program	10	-	-	19,360
Congregate Living Health Facilities (CLHF)	133	131	1,320	37,365
DPH Staff (RTW)	1	6	6	240
Los Angeles International Airport	1	-	640	1,280
SNFs	361	-	62,111	1,775,280
Therapeutics	24	310	310	12,400
Vaccines For Children (VFC) Providers	65	-	12,938	42,140
Sub Total	1,117	87,517	442,332	2,652,217

Grand Total	
Total Tests Shipped	14,417,391
Total Boxes Shipped	7,042,846
Locations	2,271

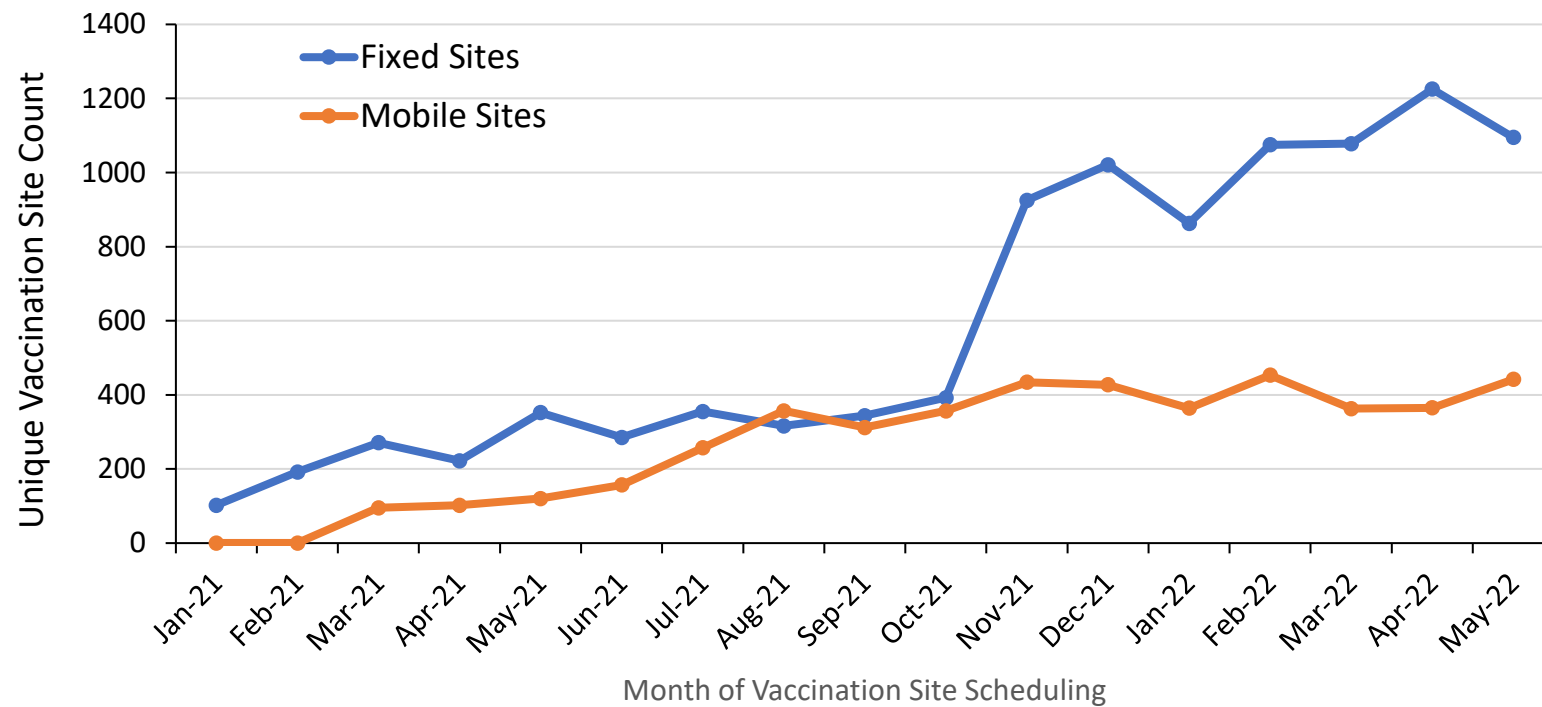
Sources: DHS, June 9, 2022; OTC + CLIA Waived Antigen Test Dashboard, LAC DPH, June 9, 2022.

LAC DPH Pandemic Response Strategies and Mitigation: COVID-19 Vaccination Networks

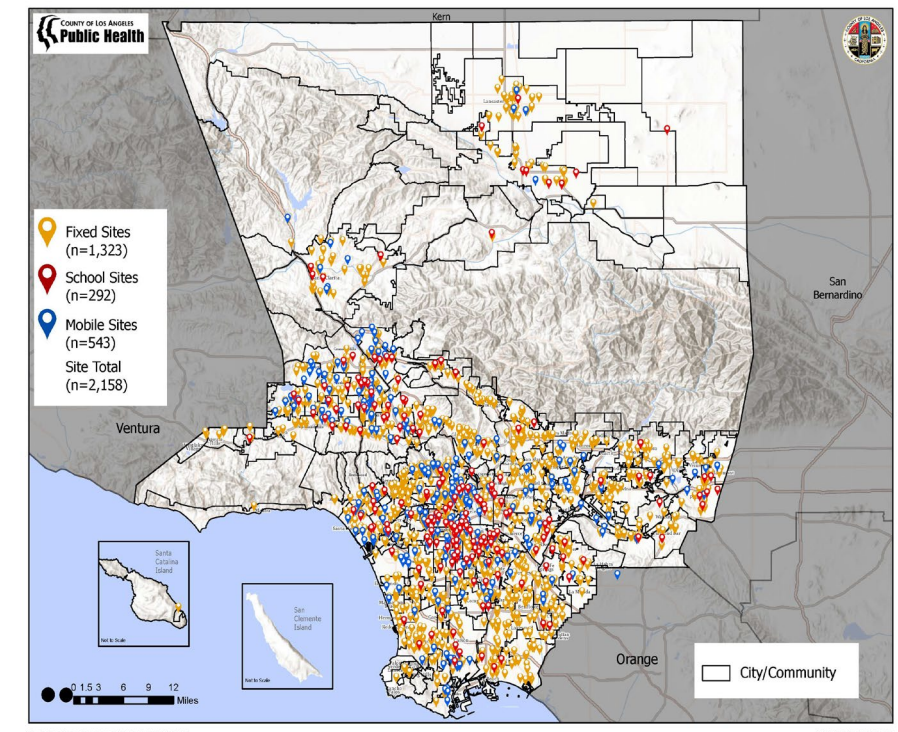
Vast, Distributed COVID-19 Vaccine Network in Los Angeles County (as of May 2022)

LAC DPH received its first limited vaccine doses in mid-December 2020 for frontline medical staff and residents and staff in nursing homes only. Approximately four weeks later, the County opened 5 “mega pod” vaccine distribution sites. Since January 2021, both mobile and fixed vaccination sites have increased significantly. There are over 500 mobile vaccination sites and over 1,300 fixed vaccination sites as of May 29, 2022.

Mobile and Fixed COVID-19 Vaccination Sites (January 2021 – May 2022)*



Number of Fixed, School, and Mobile COVID-19 Vaccination Sites (May 29, 2022)

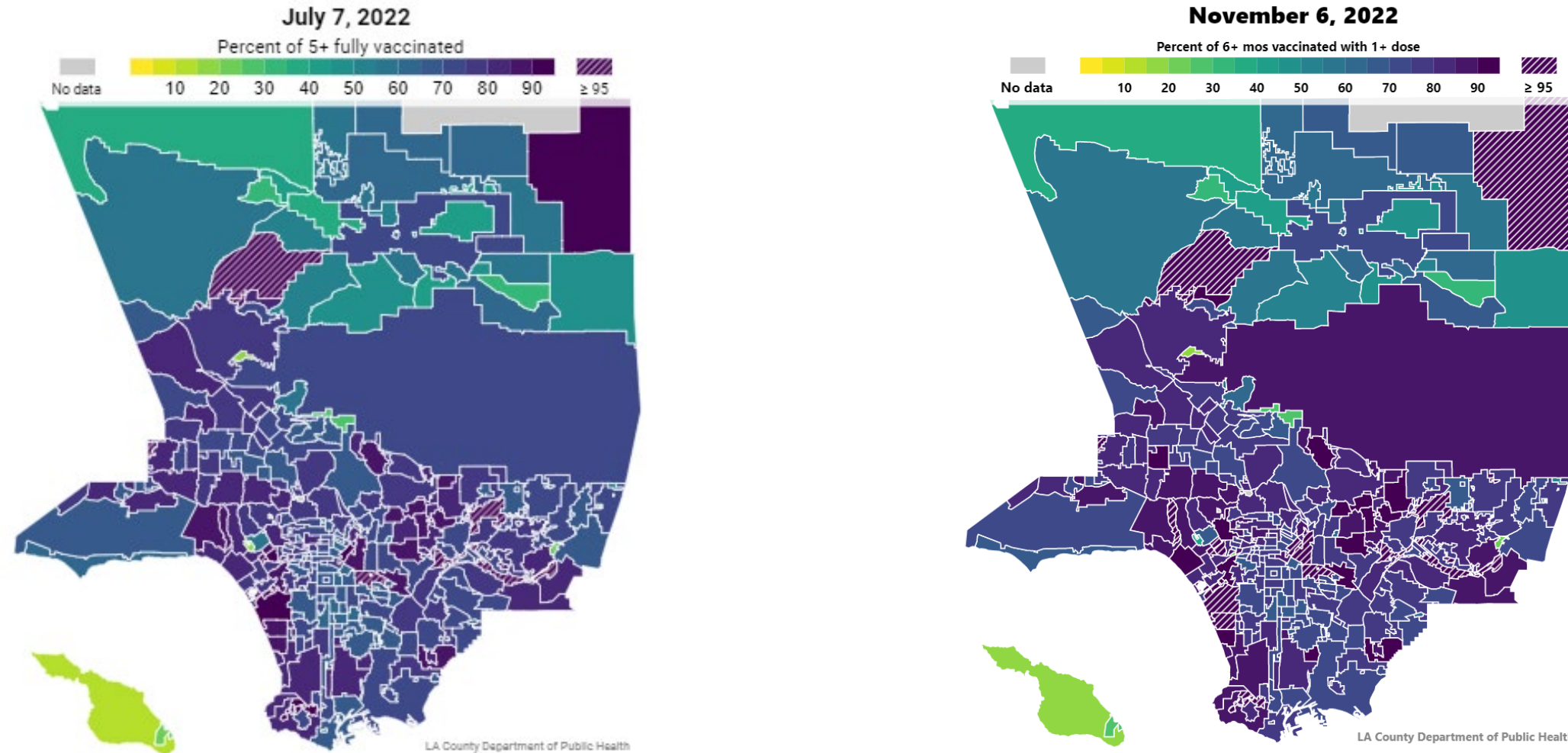


Source: COVID-19 Vaccine Data Team, Vaccine Preventable Disease Control Program, June 10, 2022.

*Graph data has not caught up with the data in the map (more fixed and mobile sites captured on the map)

COVID-19 Vaccination Status by City and Community in Los Angeles County

Percent of County Residents 5 Years and Older who are Fully Vaccinated against COVID-19 by City/Community (July 7, 2022 and November 5, 2022)



Source: [COVID-19 Vaccinations in LA County, LAC DPH, July 7, 2022 and November 6, 2022.](#)

Vaccination by Age Group in Los Angeles County (as of May 29, 2022)

Age Group	≥1 Dose	Fully Vaccinated	Vaccinated with 1+ Additional/Booster Dose	Vaccinated with 2+ Additional/Booster Doses
5-11	342,633 (38.2%)	294,904 (32.9%)	1,313 (0.1%)	General population not eligible
12-17	649,697 (86.0%)	590,891 (78.2%)	198,805 (26.3%)	General population not eligible
18-29	1,486,178 (83.2%)	1,317,462 (73.8%)	594,163 (33.3%)	General population not eligible
30-49	2,518,264 (86.5%)	2,283,105 (78.4%)	1,199,336 (41.2%)	General population not eligible
50-64	1,783,590 (89.1%)	1,637,694 (81.8%)	1,048,549 (52.4%)	190,392 (9.5%)
65+	1,373,016 (≥ 95%)	1,258,885 (91.6%)	926,257 (67.4%)	304,233 (22.1%)
Total	8,153,378	7,382,941	3,968,423	494,625

Source: COVID-19 Vaccine Data Team, Vaccine Preventable Disease Control Program, June 10, 2022.



COVID-19 Vaccination (1+ Dose) by Race, Ethnicity, and Age Group in Los Angeles County (as of May 29, 2022)

Race/Ethnicity	5-11	12-17	18-29	30-49	50-64	65+
American Indian/Alaska Native	53.0%	≥ 95%	≥ 95%	≥ 95%	74.6%	79.6%
Asian	62.0%	≥ 95%	≥ 95%	87.7%	87.1%	92.4%
Black/African American	22.7%	56.8%	52.3%	63.9%	70.3%	78.3%
Latinx	24.2%	70.8%	64.8%	68.8%	80.6%	90.9%
White	43.0%	82.3%	82.7%	81.2%	74.6%	90.9%

Source: COVID-19 Vaccine Data Team, Vaccine Preventable Disease Control Program, June 10, 2022; [COVID-19 Vaccinations in LA County, LAC DPH, May 29, 2022](#).



COVID-19 Full Vaccination by Race, Ethnicity, and Age Group in Los Angeles County (as of May 29, 2022)

Race/Ethnicity	5-11	12-17	18-29	30-49	50-64	65+
American Indian/Alaska Native	46.5%	87.9%	85.6%	87.6%	66.2%	68.2%
Asian	57.1%	94.6%	89.6%	82.1%	81.8%	86.0%
Black/African American	19.4%	51.4%	46.3%	58.7%	65.9%	73.5%
Latinx	19.9%	63.7%	57.7%	61.8%	73.1%	81.6%
White	39.0%	77.6%	74.9%	75.9%	70.8%	85.9%

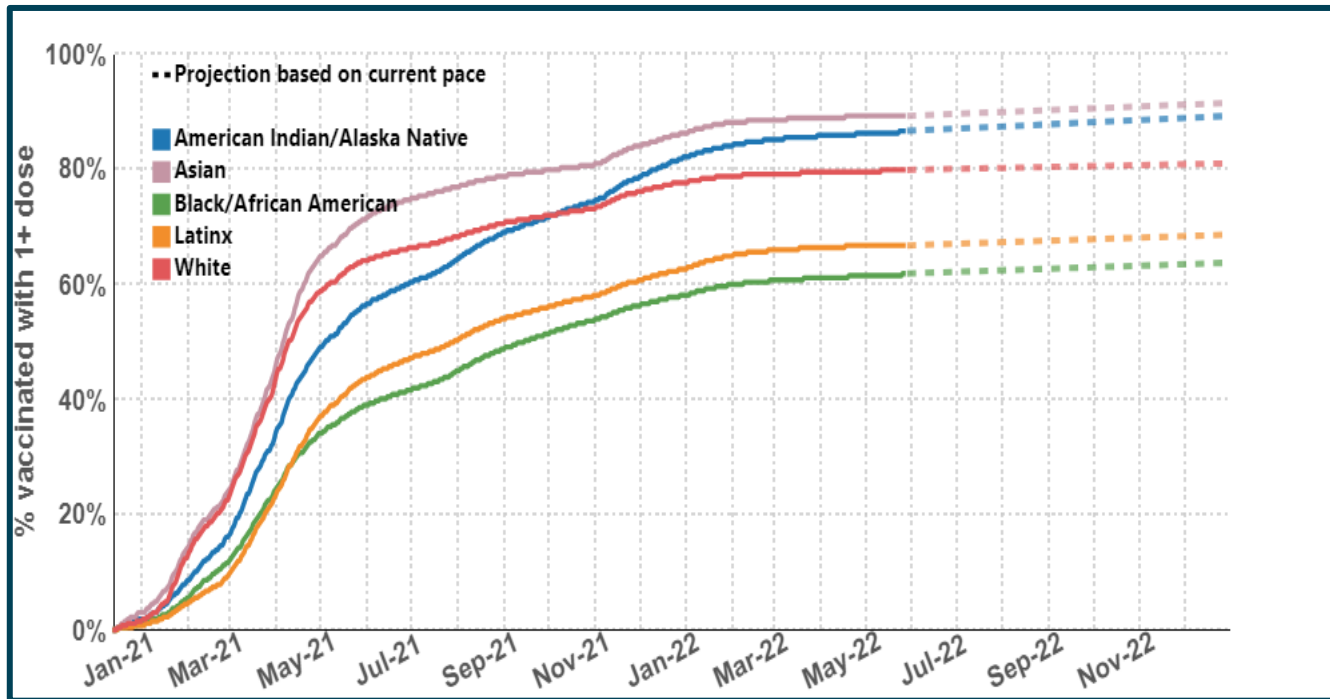
Source: COVID-19 Vaccine Data Team, Vaccine Preventable Disease Control Program, June 10, 2022; [COVID-19 Vaccinations in LA County, LAC DPH, May 29, 2022](#).

Los Angeles County Gaps in COVID-19 Vaccine Uptake by Race/Ethnicity

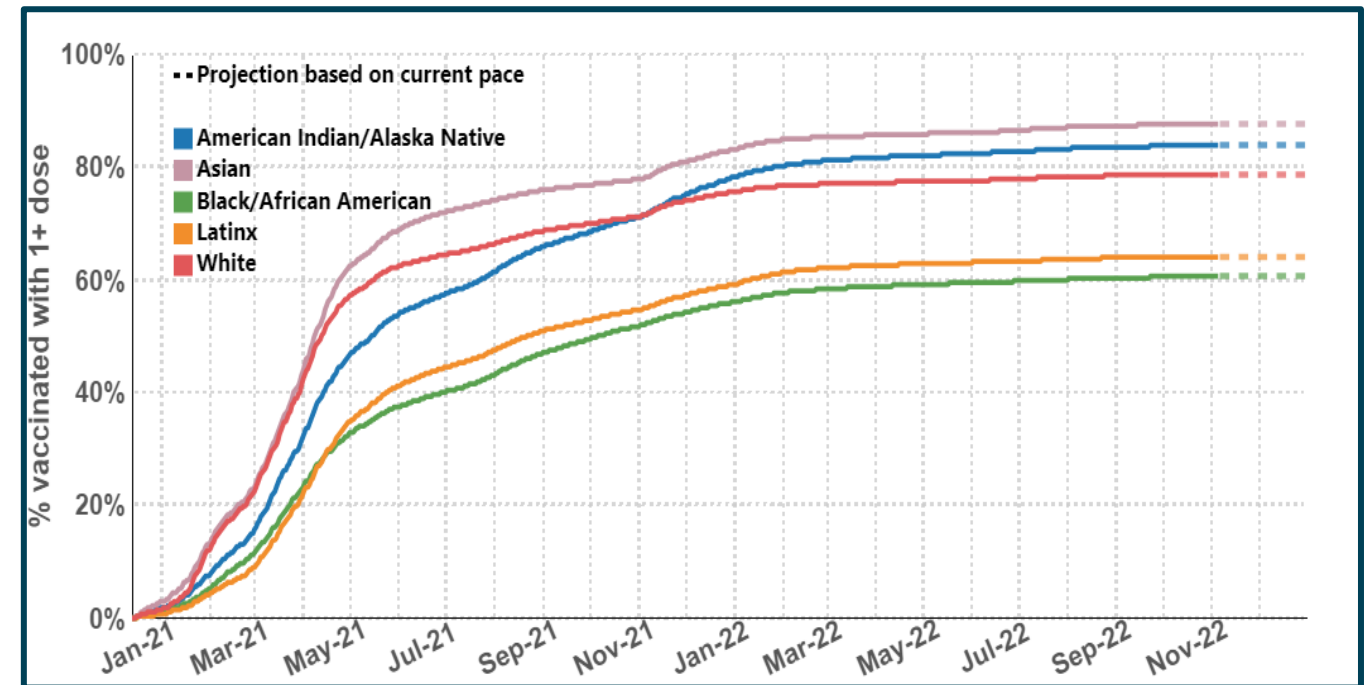
Despite steady increases in COVID-19 vaccination coverage across all racial and ethnic groups, there is a persistent gap in Black and Latinx rates as compared to White residents.

Percent of Los Angeles County Residents Age 5 Years and Older Vaccinated With 1+ COVID-19 Dose by Race/Ethnicity

as of May 29, 2022:



as of November 9, 2022:

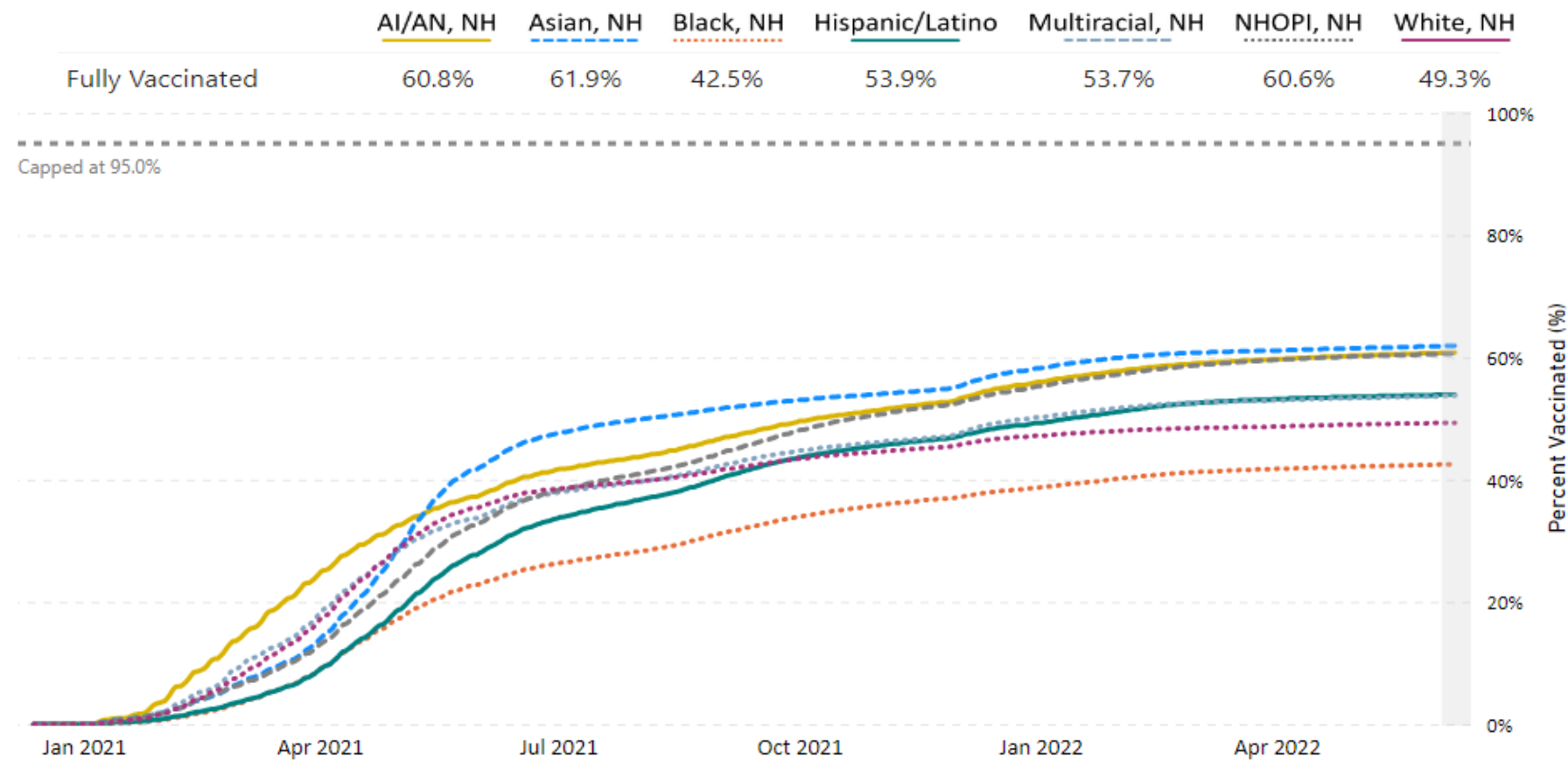


Source: COVID-19 Vaccine Data Team, Vaccine Preventable Disease Control Program, June 10, 2022; [COVID-19 Vaccinations in LA County, LAC DPH, May 29, 2022.](#)



National Gaps in COVID-19 Vaccine Uptake

Vaccine disparities persist nationally with some improvements. While Black Non-Hispanics (NH) maintain the lowest proportion of fully vaccinated individuals, Asian NH, Multiracial NH, and Hispanic/Latinos surpassed White NH persons over time.



Source: [Trends in Demographic Characteristics of People Receiving COVID-19 Vaccinations in the United States, CDC, June 8, 2022.](#)



COVID-19 Hospitalizations Among Vaccinated and Unvaccinated by Race / Ethnicity in Los Angeles County

Across all race / ethnicities, hospitalization rates are higher in unvaccinated residents compared to those fully vaccinated. However, vaccines are not equalizers. Disparities by race / ethnicity persist even among only fully vaccinated residents.

90-DAY AGE-ADJUSTED HOSPITALIZATION RATES BY RACE / ETHNICITY AND VACCINATION STATUS LOS ANGELES COUNTY (MAY 27 – AUGUST 25, 2022)

Per 100,000 residents

	Asian	Black	Latinx	White
Hospitalizations¹				
Fully Vaccinated	45.4	107.5	89.1	64.7
Unvaccinated	93.2	161.1	184.8	165.3

1 Hospitalization rates reflect the 90-day period ending 8/25/22.

Source: Epidemiology and Data Unit, ACDC, LAC DPH, November 18, 2022.

COVID-19 Hospitalizations and Deaths Among Vaccinated and Unvaccinated by Area Poverty in Los Angeles County

Across all area poverty groups, hospitalization and death rates are higher in unvaccinated residents compared to those fully vaccinated. However, vaccines are not equalizers. Disparities by area poverty persist even among only fully vaccinated residents.

90-DAY AGE-ADJUSTED HOSPITALIZATION AND DEATH RATES BY AREA POVERTY AND VACCINATION STATUS LOS ANGELES COUNTY (MAY 27 – AUGUST 25, 2022)

Per 100,000 residents

	<10% area poverty	10% to <20% area poverty	20% to <30% area poverty	30% to 100% area poverty
Hospitalizations¹				
Fully Vaccinated	61.0	75.0	89.0	95.2
Unvaccinated	78.0	239.4	537.6	915.4
Deaths²				
Fully Vaccinated	6.0	8.8	8.5	12.5
Unvaccinated	14.3	35.4	79.4	115.0

1 Hospitalization rates reflect the 90-day period ending 8/25/22.

2 Death rates reflect the 90-day period ending 8/25/22.

Source: Epidemiology and Data Unit, ACDC, LAC DPH, November 18, 2022..

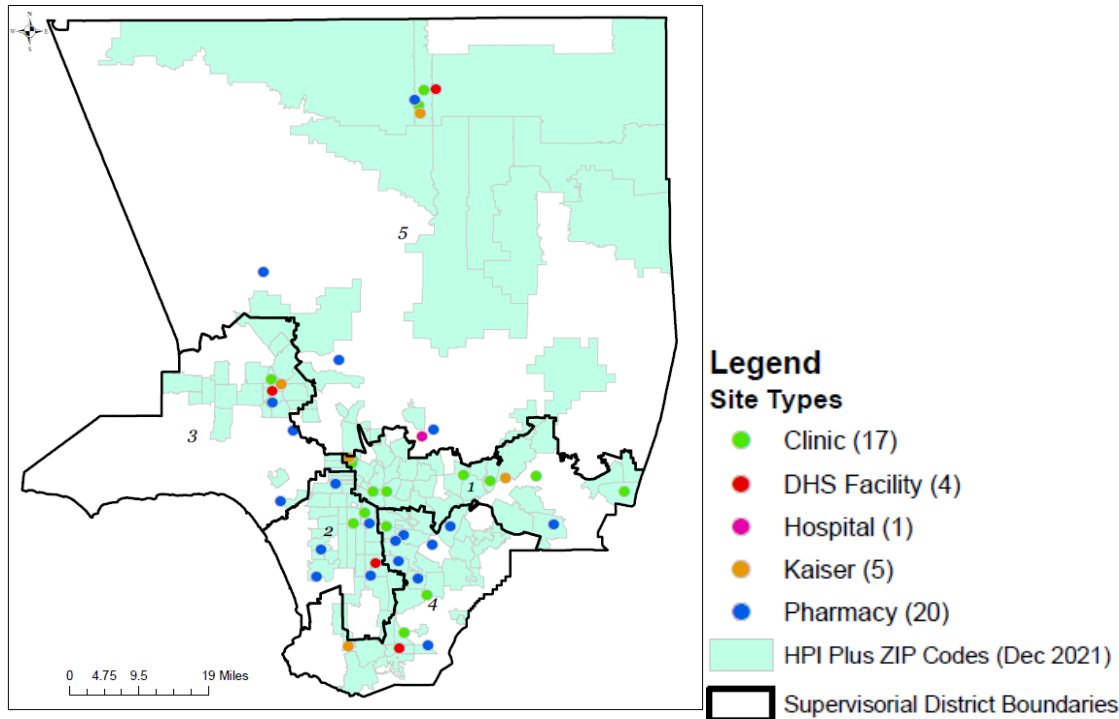


LAC DPH Pandemic Response Strategies and Mitigation: COVID-19 Therapeutics Network

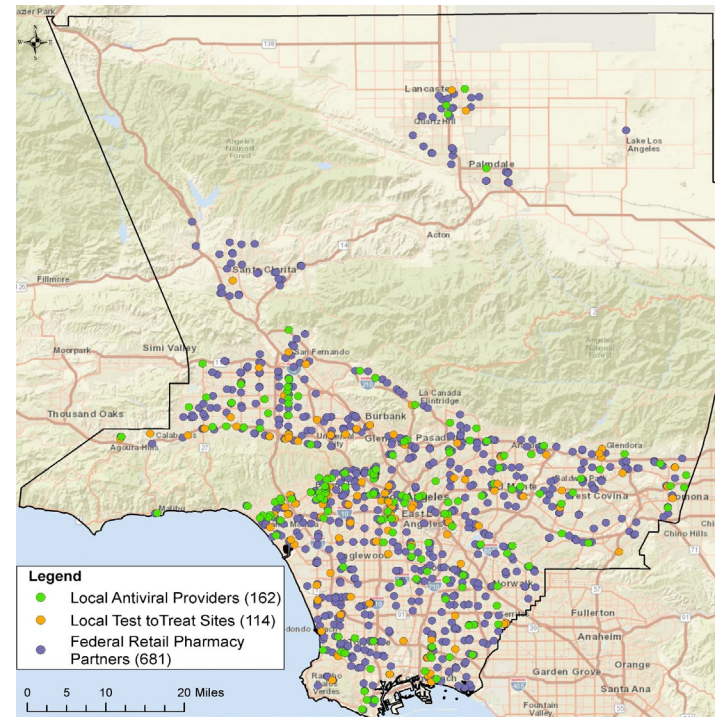
COVID-19 Monoclonal & Antiviral Therapy for Non-Hospitalized Patients in Los Angeles County

LAC DPH established and manages a network of antiviral therapeutic providers that has rapidly grown in size and distribution since oral therapeutics became available in January 2022. It currently consists of 957 sites.

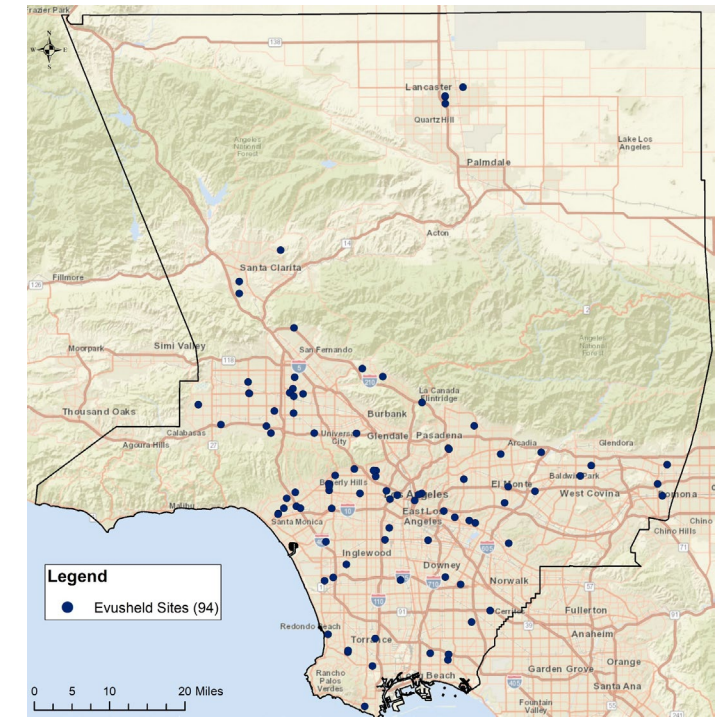
**Antiviral Therapeutic Providers
January 5, 2022**



**Antiviral Therapeutic Sites (957)
June 16, 2022**



**Evusheld* Sites (94)
June 16, 2022**



Sources: Antiviral Therapeutic Site Maps, June 1, 2022; Therapeutics Maps, LAC DPH, June 16, 2022.
* Pre-exposure prophylaxis for prevention of COVID-19



Focus on Education and Increasing Access About New COVID-19 Treatment Options

LAC DPH is focused on increasing access by raising public awareness about therapeutics and their availability.

Strategies include:

- Providing free telehealth services for any resident who tests positive for COVID-19. Residents who contact the LAC DPH call center are connected with a provider who assesses their eligibility before prescribing medication.
- Partnering with digital patient platform partner Healthvana to text those who test positive for COVID-19 at one of 241 testing sites located in hardest hit communities. Text messages contain information about their eligibility for therapeutics and directs them to the LAC DPH call center.
- Partnering with LAC DPH's Contact Tracing Unit to text those who test positive for COVID-19 and were reported to LAC DPH.
- Communication tools for partners and community to disseminate information on therapeutics and eligibility.

Source: LAC DPH, June 7, 2022.

LAC DPH Pandemic Response Strategies and Mitigation: Surveillance and Data Transparency

LAC DPH COVID-19 Surveillance: Tracking Metrics and Progress

LAC DPH developed new capabilities to track and publish indicators and recovery metrics throughout the pandemic. Currently, LAC DPH tracks metrics against CDC, state, and internal benchmarks, and regularly reports on notable changes through press releases and press briefings.

New COVID-19 Cases Per 100,000 people in the past 7 days	Indicators	Low	Medium	High
Fewer than 200	New COVID-19 admissions per 100,000 population (7-day total)	<10.0	10.0-19.9	≥20.0
	Percent of staffed inpatient beds occupied by COVID-19 patients (7-day average)	<10.0%	10.0-14.9%	≥15.0%
200 or more	New COVID-19 admissions per 100,000 population (7-day total)	NA	<10.0	≥10.0
	Percent of staffed inpatient beds occupied by COVID-19 patients (7-day average)	NA	<10.0%	≥10.0%

CDC Community Levels (Released March 2022, current national framework in use)

Preparedness Dashboard (as of 7/7/22)

Preparedness Actions	Needs Improvement	Adequate	Outstanding	LA County Current Values
Access to vaccines: Number of mobile vaccination sites per week	Less than 200	200-300	More than 300	704 (7/1/22 - 7/8/22)
Access to vaccines: Number of fixed vaccination sites	Less than 900	900-1,100	More than 1,100	1,059 (6/29/22 - 7/5/22)
Access to vaccines: Percentage of eligible homebound residents referred to DPH and vaccinated who received their vaccine within 2 weeks from date of referral	Less than 60%	60%-75%	More than 75%	92% (6/5/22 - 6/11/22)

Early Alert Signals Dashboard (as of 7/7/22)

Indicator Thresholds	Low Concern	Medium Concern	High Concern	LA County's Current Values
Percent of specimens sequenced that are identified as a new Variant of Concern (including subvariants) (based on the World Health Organization's designation) ¹ <i>Currently tracking: BA.4 and BA.5 combined</i>	< 10%	10%-20%	> 20%	40%
7-day average of the percent of Emergency Department (ED) encounters classified as coronavirus-related ²	< 5%	5%-10%	> 10%	8%
7-day cumulative age-adjusted case rate for the lowest income areas (30-100% area poverty) ³	< 100 per 100,000	100-200 per 100,000	> 200 per 100,000	255 per 100,000

Post-Surge Dashboard and Strategies

page last updated on 7/7/2022

LA COUNTY'S CURRENT CDC COMMUNITY LEVEL IS:

MEDIUM

VIEW LOS ANGELES COUNTY POST SURGE RESPONSE PLAN (PDF)

Los Angeles County Metrics

New Cases (per 100,000 people in last 7 days)	New COVID-19 admissions per 100,000 population (7-day total)	Proportion of staffed inpatient beds occupied by COVID-19 patients (7-day average)
387.07/100,000	8.4	4.4%

Case rate is calculated by the CDC and posted on the CDC Community Levels website. Hospitalization metrics are calculated using internal LA County data. Data was updated on July 7, 2022.

LA County Post-Surge Dashboard (as of 7/7/22)

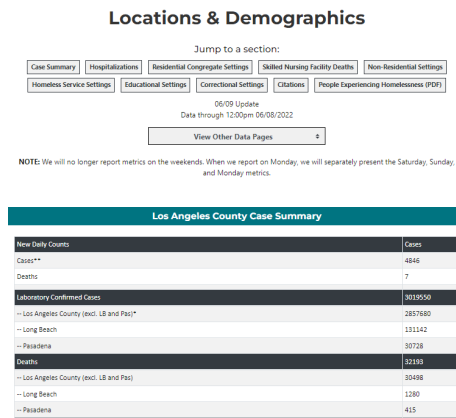
Sources: [Blueprint for a Safer Economy, CA LAC DPH, June 15, 2021](#); [COVID-19 County Check Tool: Understanding Community Transmission Levels in Your County, CDC, September 30, 2021](#); [CDC COVID-19 Community Levels, March 24, 2022](#); [LA County Post-Surge Dashboard and Strategies, July 7, 2022](#).



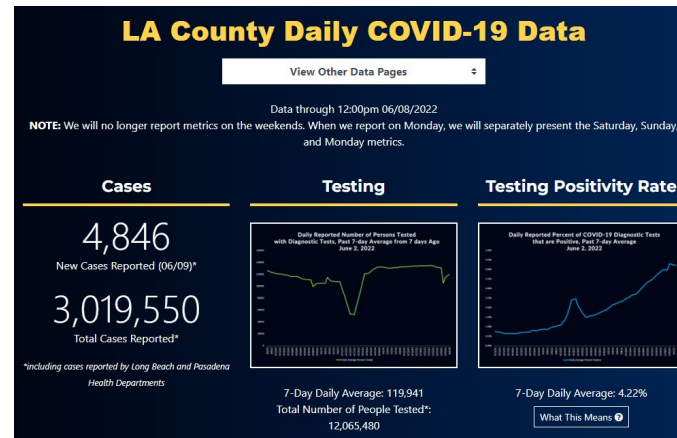
LAC DPH Surveillance: Examples of Dashboards in Use

LAC DPH maintains nine dashboards, including the post-surge dashboard and its sub dashboards pictured in the previous slide, that make a wide variety of COVID-19 data publicly available. Six additional dashboards are pictured below.

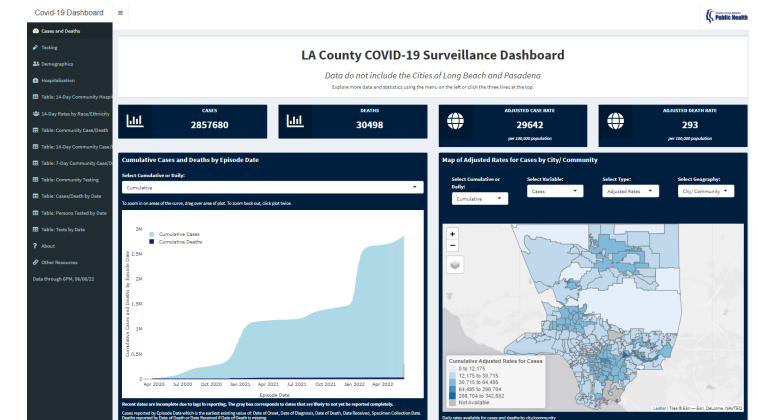
Locations & Demographics Dashboard: basic case, death, hospitalization, and outbreak



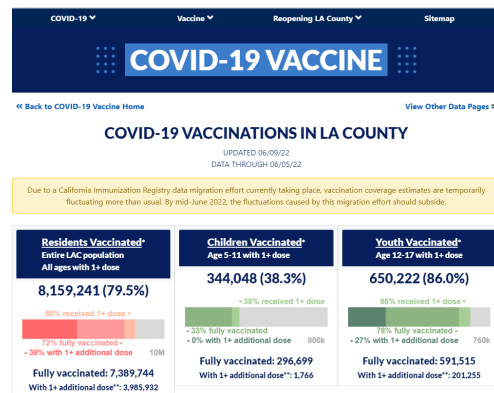
Daily COVID-19 Data Dashboard: overview graphs focused on testing, hospitalizations, and deaths



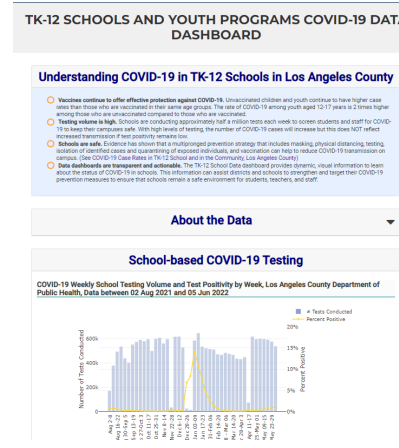
Surveillance Dashboard: detailed graphs, maps, and downloadable tables with case, testing, hospitalization, and death data



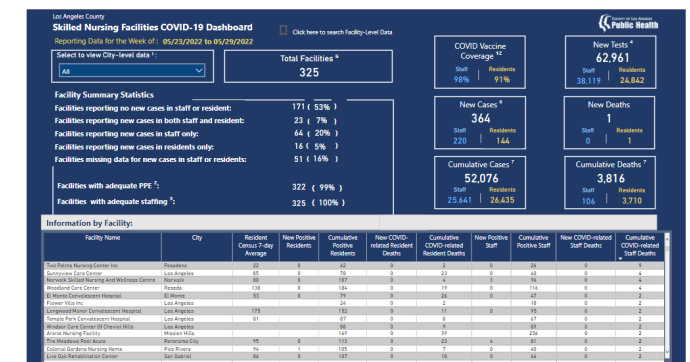
Vaccine Distribution Dashboard: detailed data on vaccine distribution by dose, age, geography, race/ethnicity, and school district



TK-12 School Dashboard: data on school testing, cases, and outbreaks



Skilled Nursing Facility (SNF) Dashboard: facility-level data on COVID in SNFs



Source: Epidemiology and Data Unit, ACDC, LAC DPH, June 10, 2022.



LAC DPH Pandemic Response Strategies and Mitigation: Protecting Populations who Live/Work in Settings That Could Put Them at Higher Risk*

**Or have underlying factors that could increase their risk of serve COVID-19 infection.*

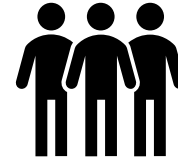
Summary: LAC DPH Special Efforts to Protect Populations at Higher Risk of Illness or Death from COVID-19



Essential & Low Wage Workers

See later slides on community engagement for more information

- Conducted outreach to workers via Public Health Councils in sectors hard hit by COVID-19, including garment manufacturing, food manufacturing, warehousing and logistics, restaurants, and grocery stores
- Prioritized site visits, outbreak investigation, and response in manufacturing and warehousing where outbreaks were more severe
- Prioritized food and agricultural workers in vaccine distribution by partnering with unions, trade organizations, CBOs, and employers in outreach
- Worked with the Board of Supervisors to enact legislation that ensures protection from retaliation, paid sick leave, and protected leave for vaccination



Disproportionately Impacted Communities

See later slides on community engagement for more information

- Contracted with CBOs to conduct over 600,000 outreach activities and reached over 4.1 million people in highly impacted census blocks
- Funded CBOs to provide culturally and linguistically appropriate outreach, engagement, education, linkages to services, and contact tracing



SNFs and Congregate Living Settings

See later slides on SNF testing, vaccination, and inspections for more information

- Required testing of all residents and staff starting in April 2020
- Developed extensive vaccine network and protocol, prioritizing fast distribution of COVID-19 vaccines to SNFs
- Provided technical assistance, education sessions and outbreak management support
- Ensured SNFs and congregate living settings had sufficient PPE and developed requirements for PPE use and community activities

Source: LAC DPH interviews as of June 30, 2022.

Summary: LAC DPH Special Efforts to Protect Populations at Higher Risk of Illness or Death from COVID-19 *(cont'd.)*



TK-12 Schools

See later slides on TK-12 and LACOE for more information

- Provided training and educational materials on COVID-19 exposure management and regular updates to prevent transmission and manage cases and outbreaks in schools
- Leveraged \$302M in CDC funding to support TK-12 testing programs for the 2021/2022 school year (funding extended to 2023), conducting over 21 million COVID-19 tests



People Experiencing Homelessness

See later slides on quarantine and isolation and vaccination efforts for more information

- Fielded 22,500 calls and placed 9,925 callers who were experiencing homelessness, in congregate living situations, or unable to safely quarantine or isolate at home.
- Provided hundreds of thousands of antigen tests to shelters
- Partnered with DHS Housing for Health (HFH) vaccine program which offered screening testing prior to vaccinations



Incarcerated

See earlier slides on correctional facilities for more information

- Required unvaccinated non-healthcare staff to be tested weekly
- Conducted mobile vaccine clinics at juvenile detention facilities and jails
- Conducted site visit and assessment of laboratory contracted to conduct COVID-19 testing at jail facilities

Source: LAC DPH interviews as of June 30, 2022.

LAC DPH Community Engagement: Outreach, Education, and Communication

LAC DPH took an equity-centered approach to inform its COVID-19 response, including funding and collaborating with CBOs on outreach, advocacy, vaccination, and housing initiatives to address disparities in disproportionately impacted communities.

Community Initiative	Approach	Impact
Community Health Worker Outreach Initiative (CHWOI)	<ul style="list-style-type: none"> Mobilize and train CHWs to provide education and outreach on COVID-19 and vaccinations. Expand LAC DPH CHWs teams Contract with CBOs with a track record of working in highly impacted communities with various outreach models (e.g., promotores, essential worker advocates). Utilize geographic information system (GIS) data to identify highly impacted census blocks and communities. 	<ul style="list-style-type: none"> Seventeen agencies and over 500 CHWs have been contracted to implement this work. Between May 2021 and June 2022, CHWs conducted 645,988 outreach activities and reached over 4.3 million people. Qualitative data available through outreach stories.
COVID-19 Ambassador Program	<ul style="list-style-type: none"> Engage community members as trusted voices capable of sharing accurate and updated information about COVID-19 and infection control. Ambassadors receive a certificate and branded materials. Make resources available in English and Spanish to ensure access by the greatest number of County residents (e.g., video modules, virtual town halls). 	<ul style="list-style-type: none"> As of July 13, 2022, 3,434 people (2,446 of which are County employees) have completed online training and received certificates <ul style="list-style-type: none"> After the program was updated on May 7, 2021 to include a Spanish option, 58 completed the Spanish training and received their certificates Data on outreach conducted is collected using the Ambassador Activity Log. Community Ambassadors report their activities and outreach efforts electronically. Narrative responses from Ambassadors demonstrate the impact of peer-to-peer education.
Education Sector Ambassador Programs	<ul style="list-style-type: none"> Parents, high school/middle school students, and early childhood education (ECE) providers attend COVID-19 education sessions to learn how to prevent transmission, emphasizing vaccination. Participants receive a certificate and stipend upon completion. 	<ul style="list-style-type: none"> For the period February 2021 through June 2022, cumulative totals of participants completing the Ambassador trainings in various languages are as follows: <ul style="list-style-type: none"> Parents (2,216 total): 1,404 (English), 796 (Spanish), 16 (Armenian) Students: 581 (English) ECE Providers (126 total): 94 (English), 32 (Spanish) <i>Note: Ambassador trainings for ECE providers launched May 2022</i> English and Spanish trainings for parents or ECE providers and English trainings for students will each continue into 2022/23 school year once per month.

Sources: COVID-19 Community Initiatives Summary; COVID-19 Community Investments Summary; LAC DPH, July 14, 2022.



LAC DPH Community Engagement: Outreach, Education, and Communication *(cont'd.)*

Community Initiative	Approach	Impact
COVID-19 Community Equity Fund (CEF)	<ul style="list-style-type: none"> ▪ Fund CBOs to provide culturally and linguistically appropriate <ul style="list-style-type: none"> – Outreach, engagement, and education – Linkages to services (e.g., testing, vaccination) ▪ Residents received direct linkages to testing and vaccination resources, support for quarantine and isolation housing, and referrals for medical care and social services ▪ Several organizations also assisted local schools with investigation & contact tracing 	<ul style="list-style-type: none"> ▪ As of June 30, 2022: <ul style="list-style-type: none"> – Allocated over \$35M in 36 contracted agencies (excludes 28 additional DHS-funded partners) and 430 CHWs. – 13,831 outreach events reached nearly 3.5M people and 7,921 service linkages were made. ▪ Quantitative data available through outcomes dashboard. Qualitative data available through quarterly narrative reports. ▪ CBO partners build organizational capacity through mentorship, training, and technical assistance.
Faith-Based Organizations (FBOs)	<ul style="list-style-type: none"> ▪ Partner with FBOs and liaise between FBOs and mobile vaccination clinics to maximize uptake via on-site mobile vaccination clinics, outreach (e.g., canvassing), vaccine education, and follow-up phone calls for second doses. 	<ul style="list-style-type: none"> ▪ As of June 30, 2022: <ul style="list-style-type: none"> – Partnered with 470 FBOs and coordinated 1,831 vaccine clinics, which vaccinated 65,378 people. – Distributed over 100,000 antigen tests. – Provided \$239,000 in funding to 49 FBOs through grassroots grants to assist with the cost of hosting vaccination clinics (other FBOs were able to support clinics without additional funding).
Grassroots Mini-Grant Program	<ul style="list-style-type: none"> ▪ Fund CBOs and FBOs to increase vaccination among the populations they serve ▪ Funded activities included mobile vaccination clinics, health events, school partnerships 	<ul style="list-style-type: none"> ▪ As of June 30, 2022, \$830,000 has been awarded to 255 CBOs and FBOs
Housing for Quarantine and Isolation (QI)	<ul style="list-style-type: none"> ▪ Provide isolation and quarantine housing and transportation for County residents diagnosed with or exposed to COVID-19. ▪ Accept referrals from health care providers via the QI Intake Call Center. 	<ul style="list-style-type: none"> • As of July 18, 2022, the DHS Housing for Health, in partnership with LAC DPH, is operating 2 QI Medical Shelters (15 in total were established and operated over the course of the pandemic), placed 9,702 individuals, and handled 23,179 calls.

Sources: COVID-19 Community Initiatives Summary; COVID-19 Community Investments Summary; COVID-19 Faith-Based Strategy, May 3, 2022; LAC DPH, June 1, 2022; Center for Health Equity, June 2, 2022.



LAC DPH Community Engagement: Outreach, Education, and Communication *(cont'd.)*

Community Initiative	Approach	Impact
Public Health Councils (PHC)	<ul style="list-style-type: none"> ▪ Ensure that low-wage workers in sectors hard hit by COVID-19 are protected by County Health Officer Orders* ▪ Reduce workplace transmission, keep businesses open, and help workers and community members stay safe. ▪ Support workers in forming Public Health Councils (PHCs), or worker committees, to conduct peer-to-peer education and improve health conditions on the job ▪ Prioritized sectors: garment and food manufacturing, warehousing and logistics, restaurants, and grocery stores ▪ Activities: <ul style="list-style-type: none"> – CBOs conduct outreach to and educate workers on COVID-19 safety, Health Officer Orders, COVID medicines, sick pay, and how to file complaints. – Health educators conduct outreach to and educate business owners. 	<ul style="list-style-type: none"> ▪ Impact in numbers (as of June 30, 2022) <ul style="list-style-type: none"> – 11 CBOs, worker centers, and trainers contracted – 54 PHCs formed and 487 meetings held – 71 CBO staff trained and certified – 11,109 workers and 2,081 employers received COVID-19 outreach and education – 2,079 workers received COVID vax/medicines/sick pay education at 47 high-risk worksite sessions – 38 mobile vaccine clinics provided at high-risk worksites and 690 workers vaccinated – 201,767 test kits and 53,800 masks distributed to CBOs serving low-wage workers – 46 complaints submitted to Environmental Health – 1 complaint of employer retaliation submitted to Department of Consumer and Business Affairs – 20 workers centers and CBOs receive weekly email updates with COVID-19 information and resources

Sources: Summary of “LACDPH COVID-19 Community Initiatives”; COVID-19 Community Investments Summary; Public Health Councils Program and Results, Public Health Councils Program, June 1, 2022; Public Health Councils Program, June 2, 2022; LAC DPH, July 13, 2022.

*For more information, see: Board of Supervisors Motion (<http://file.lacounty.gov/SDSInter/bos/supdocs/150434.pdf>) (November 10, 2020) and Attachment to Motion, including progress reports (<http://file.lacounty.gov/SDSInter/bos/supdocs/150465.pdf>) Miller, L. “The County of Los Angeles Board of Supervisors voted to establish the Public Health Councils in selected highly impacted business sectors,” Los Angeles Times (November 10, 2020). “Workers as Health Monitors: An Assessment of Los Angeles County’s Workplace Public Health Council Proposal,” UC Berkely Labor Center (July 21, 2020).

LAC DPH Community Engagement: Outreach, Education, and Communication *(cont'd.)*

Community Initiative	Approach	Impact
Communication	<ul style="list-style-type: none"> ▪ Issued press releases and guidance documents ▪ Launched an outreach resource hub for community and faith-based partners containing up-to-date talking points and other resources to promote COVID-19 vaccines ▪ Conducted telebriefings and town halls ▪ Published information on social media and the LAC DPH COVID-19 page 	<ul style="list-style-type: none"> ▪ Documents and press releases (as of June 2022) <ul style="list-style-type: none"> – >550 fact sheets, FAQs, guidance documents, tools, and pocket guides developed, updated, and disseminated – 616 distinct documents translated into up to 12 languages – 5,450 press releases – Responded to >36,000 inquiries from stakeholders (e.g., constituents, federal, state, and local officials, etc.) ▪ Telebriefings and townhalls (as of June 2022) <ul style="list-style-type: none"> – 600 weekly telebriefings with more than 40 different stakeholder groups and reached >160,000 people – 18 virtual town halls streamed live on social media with simultaneous translation and reached >1M people ▪ Social media and website metrics (as of June 2022) <ul style="list-style-type: none"> – 15,134,735 visits to the LAC DPH COVID-19 page – 9,225,900 visits to the LAC DPH VaccineLACounty page – 100 COVID-19-related DPH web pages with all public pages available in English and Spanish – Increase in LAC DPH Twitter followers from 17,768 in January 2020 to 135,463 in June 2022

Source: LAC DPH June 23, 2022.

COVID-19 Testing in Los Angeles County Health Care and Long-Term Care Facilities

LAC DPH supports ongoing testing in health care and long-term care facilities.

Venue	Tests Delivered since 12/11/21 and 5/12/22 Clinical Laboratory Improvement Amendments (CLIA)-Waived Tests*
SNF	1,444,174
Congregate living healthcare facilities (CLHF)	20,215
Clinics and dialysis centers	138,760
Community care facilities	86,150
Intermediate care facilities	11,900

Source: COVID-19 Case Rates and Death Rates Among Residents of Skilled Nursing Facilities, Healthcare Outreach Unit, ACDC, LAC DPH, May 18, 2022.

*The U.S. Food and Drug Administration (FDA) recently clarified that, when it grants an Emergency Use Authorization (EUA) for a point-of-care test, that test is deemed to be CLIA-waived. For the duration of the national emergency declaration for COVID-19, such tests can be performed in any patient care setting that operates under a CLIA Certificate of Waiver or Certificate of Compliance/Certificate of Accreditation.



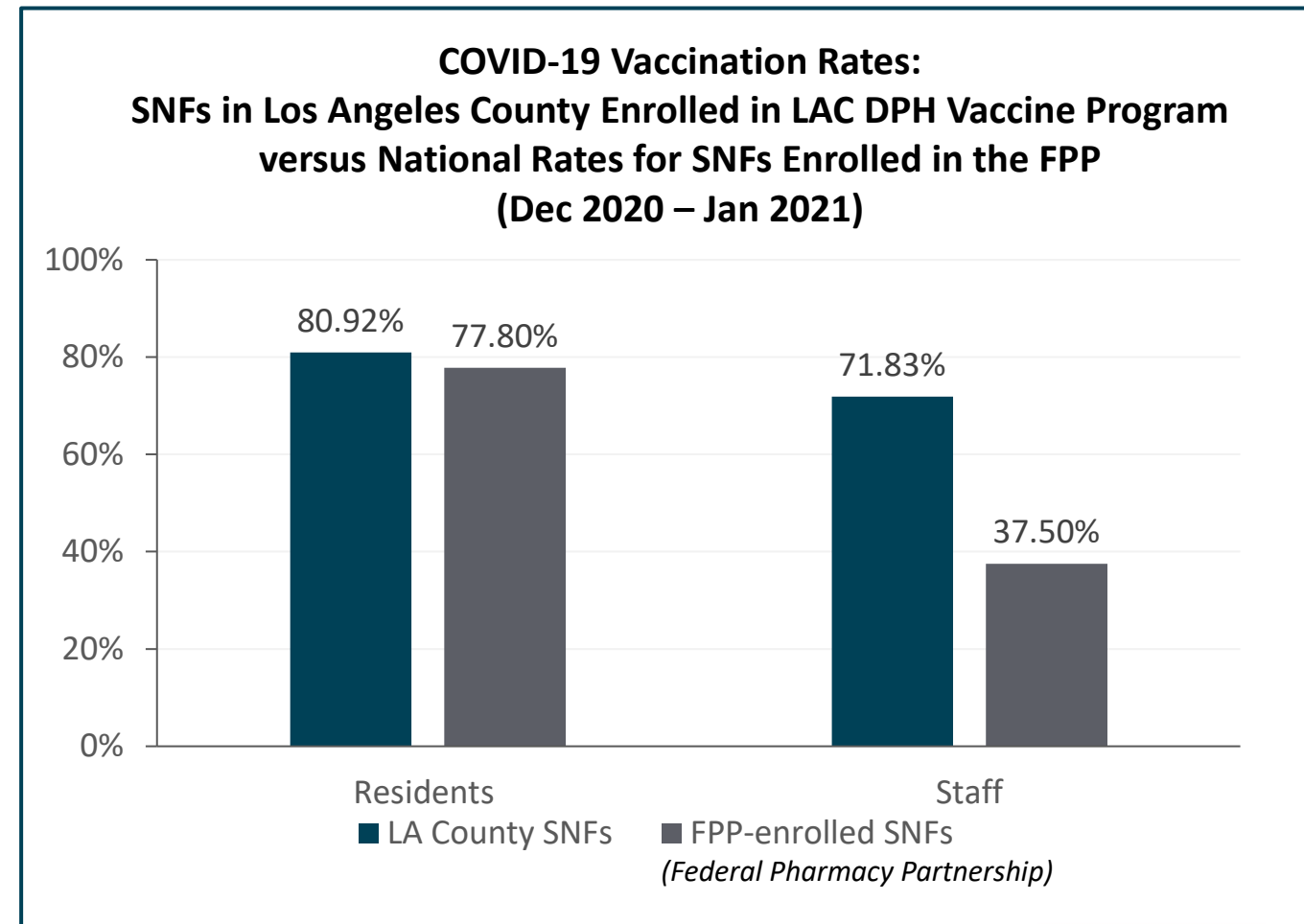
LAC DPH’s SNF vaccine program was rolled out more rapidly than the federal SNF vaccine program. The vaccination rates for both residents and staff in the LAC DPH-managed program also exceeded vaccination rates achieved through the federal program.

Overview

- **December 10, 2020:** LAC DPH determined a need to locally manage Los Angeles County’s SNF vaccine distribution effort to ensure rapid deployment.

 - LAC DPH initially enrolled all 340 SNFs and 3,500 congregate living facilities in the Federal Pharmacy Partnership (FPP) for Long-Term Care Program, a program coordinated by the CDC that was available to all states and counties (but participation was not required).
 - However, as a new program, FPP presented numerous operational issues. For example, FPP providers initially would not enter SNFs with outbreaks and could not leave vaccines onsite at SNFs. They also had limited vaccine allocations.
- **December 22, 2020:** LAC DPH began vaccine distribution, paired with weekly surveys to assess vaccine coverage among staff and residents. To support distribution, LAC DPH:

 - Facilitated enrollment of all 340 SNFs as COVID-19 vaccine providers;
 - Scheduled vaccine pickups from LAC DPH’s warehouse;
 - Leveraged internal and external partners to assist with clinic registration, vaccine administration, and offer technical assistance;
 - Developed a strike team to assist facilities who could not vaccinate their own staff and residents.
- **By January 15, 2021:** 1st dose vaccines had been distributed to all SNFs in the County



Source: COVID-19 Case Rates and Death Rates Among Residents of SNFs, Healthcare Outreach Unit, ACDC, LAC DPH, May 18, 2022. LAC DPH interviews.

Vaccination Rates at SNFs in Los Angeles County Compared to National Benchmarks

Vaccination rates among Los Angeles County SNF residents and staff exceed national benchmarks.

Population		Vaccination Rate (Total %)	Booster Rate (Total %, Not % Eligible)
Residents	U.S.^	88%	79%
	County*	91%	79%
Staff	U.S.^	89%	49%
	County*	97%	85%

Sources: COVID-19 Case Rates and Death Rates Among Residents of SNFs, Healthcare Outreach Unit, ACDC, LAC DPH, May 18, 2022; <https://www.cdc.gov/nhsn/covid19/ltc-vaccination-dashboard.html>.

^As of 3/27/22

*As of 5/1/22



LAC DPH's Health Facilities Inspection Division (HFID) enforces compliance of federal and state regulations for SNFs. HFID's COVID-19 Monitoring and Response Unit (CMRU) performs regular onsite visits to ensure compliance and monitors the County's SNF dashboard (Survey 123).

Partners and Collaboration

- **HFID Partners**
 - LAC DPH Outbreak Management Branch (OMB)
 - LAC DPH Acute Communicable Disease Control (ACDC)
 - California Department of Public Health (CDPH)
 - Department of Mental Health (DMH)
 - U.S. Department of Veterans Affairs (VA)
 - SNFs
- **HFID Collaborations**
 - Weekly and biweekly leadership meetings with ACDC and OMB
 - Weekly and ad-hoc meetings with ACDC and OMB to discuss high-concern facilities
 - Monthly congregate care licensing meetings with DPH, DMH, VA, and CDPH
 - Quarterly roundtable with SNF CEOs
 - Ongoing information sharing with CDPH HFID

COVID-19 Support

- **Monitoring dashboard triggers and additional metrics**
 - Dashboard Triggers: New outbreaks, current or anticipated staffing shortages, PPE shortages, and deaths
 - Additional Metrics: Hospitalizations, vaccination rates, facility cohorting and zoning, COVID-19 positivity rate among staff and residents
- **Administering educational programming**
 - “vSNF Collaborative” for SNFs with a subacute unit
 - Infection control assessment and response visits (119 on-site visits and 27 virtual visits completed over the last year)
 - “Ask an Infection Preventionist” weekly Q&A for SNFs
 - “Project First Line” (infection prevention education for non-SNF long-term care facilities)
 - Vaccine acceptance visits
 - SNF webinars and education

Sources: LAC DPH, June 1, 2022.

Transitional Kindergarten – 12th Grade (TK-12) Schools: Partnership with Los Angeles County Office of Education (LACOE)

LAC DPH collaborated closely with LACOE since the start of the pandemic, partnering on communications to the 80 Local Education Agencies (LEAs) in the County, data collection, and the planning and implementation of key strategic priorities.

Key Strategic Priorities and Activities

- **Distribution of Vaccines:** A critical priority shortly after authorization and release when demand was high and supply limited. Doses were prioritized for school staff based on several criteria (e.g., equity), school vaccine clinics were promoted in high priority areas (HPI+ areas), and vaccine information was developed for use by schools to educate their communities. By the end of the 2020/2021 school year, there were no major supply issues.
- **Support for COVID-19 Testing:** LAC DPH received \$302M in CDC funding to support TK-12 testing programs for the 2021/2022 school year (funding extended to 2023). Over 21 million COVID-19 tests have been conducted through school testing programs, and over 9 million over-the-counter COVID-19 tests have been distributed. LACOE was a formally funded (contracted) partner in facilitating distribution of testing resources to schools.
- **Case and Outbreak Management:** LAC DPH works with LACOE to provide training and training materials on exposure management to schools and provide updates on evolving guidance.
- **Administration of Mini-Grants:** Most recently, LACOE partnered with LAC DPH offering mini-grants to districts, schools, and classroom teachers to mitigate the impact of COVID-19 on student health, with emphasis on chronic absenteeism, childhood obesity, socioemotional well-being, and interruption of routine childhood immunization.
- **Education Sector Ambassador Programs:** Parents, high school/middle school students, and early childhood education providers attend COVID-19 education sessions to learn how to prevent COVID-19 transmission with emphasis on vaccination. The program mobilizes these trained ambassadors as trusted voices in the community to take an active role in educating and encouraging peers to practice COVID-19 safety measures. Participants receive a certificate and stipend upon completion.
- **Parent Action Leaders:** Train and deploy parents of K-12 students, during the 2022/23 school year, as family support workers in communities hardest hit by COVID-19, creating school-based teams each consisting of two school champions (teacher or school staff along with parent lead) and additional parents focused on COVID-19 prevention practices, vaccination, and general child/adolescent health and wellbeing concerns related to the pandemic. Team members receive stipends for their participation.

Source: LAC DPH, as of July 14, 2022.



LAC DPH launched an Isolation and Quarantine Housing Intake Call Center on March 23, 2020 to provide shelter for individuals and families who were exposed to COVID-19 and who are experiencing homelessness, in congregate living situations, or unable to safely quarantine or isolate at home.

Open 7 days a week, from 8am-8pm. As of June 8, 2022 the Call Center has received **22,500 calls** and placed **9,925 individuals**. The Call Center continues to screen and coordinate placement and procures transportation as needed.

Of total persons placed:

- **6,776** were experiencing **homelessness** with **64% confirmed positive** for COVID-19
- Others were unable to safely quarantine or isolate in their own homes due to:
 - Overcrowded living conditions,
 - Shared space with individuals at high risk of severe COVID-19 infection, and/or
 - Because they were unable to care for themselves safely at home

Of referrals not placed

The most common reasons that individuals referred by health care providers were not placed included :

- The individual:
 - Did not meet criteria for placement
 - Was not medically stable
 - Left against medical advice (AMA)
 - Refused placement
- Isolation and quarantine beds were not available

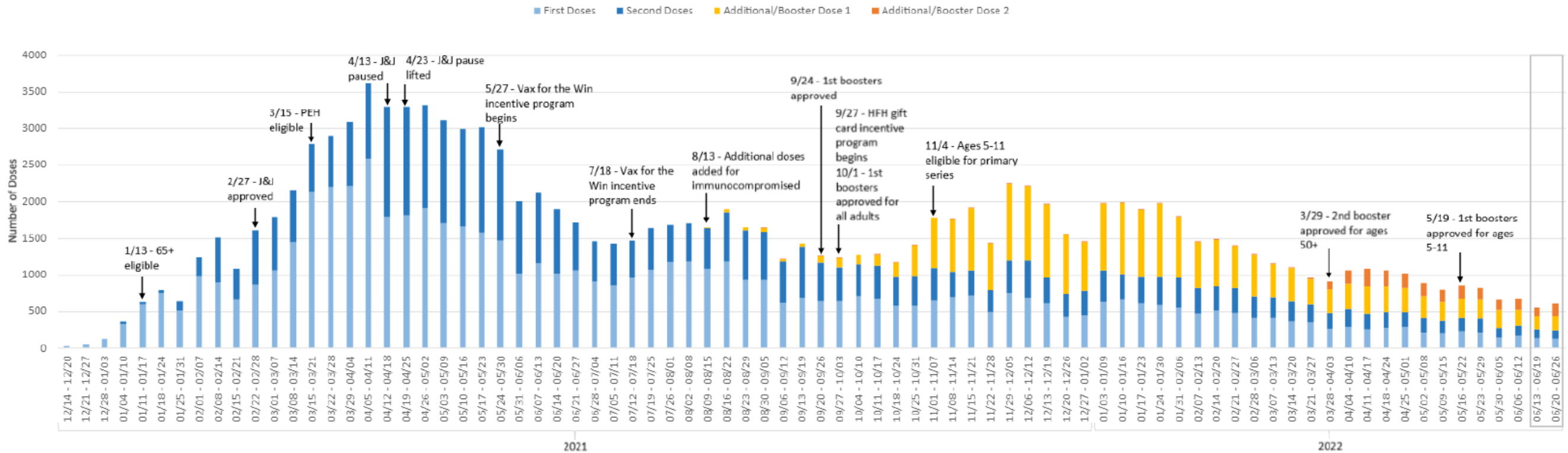
Note: Bed availability remains a challenge. Currently bed availability for quarantine and isolation support is 33 beds at the MLK Recuperative Center as of June 8, 2022. Additional beds are currently being sought as need continues for highly vulnerable populations.

Source: LAC DPH, as of June 10, 2022.

People Experiencing Homelessness in Los Angeles County: Vaccinations as of July 5, 2022

80% of people experiencing homelessness had received at least one vaccine dose as of June 2022, with nearly 70% of eligible individuals receiving the two-dose series within the recommended timeframe. Vaccinations peaked in the spring of 2021 when people experiencing homelessness became eligible for the vaccine (3/15) and again once boosters were approved.

First, Second, and Additional/Booster Vaccination Doses among People Experiencing Homelessness in LA County by Week



Source: LAC DPH, July 6, 2022.

- Includes first, second, and additional/booster doses administered to Los Angeles County residents experiencing homelessness, including the Los Angeles, Long Beach, Pasadena, and Glendale Continuums of Care (CoC) reported to CAIR.
- Additional Moderna/Pfizer doses administered (3+ doses) or Moderna/Pfizer/J&J booster doses administered by LAC providers on or after 8/13/2021 and ≥ 24 days after vaccination series completion. Immuno-compromised status of vaccine recipients cannot be currently validated for the additional doses administered. Per CDC guidance, people at increased risk of exposure to SARS-COV-2 (e.g. people experiencing homelessness) are eligible for a second booster.
- Homeless status determined by 1) match of CAIR vaccination records to HMIS active clients in the past year, 2) match of CAIR vaccination records to Housing for Health PEH vaccination records, and 3) CAIR address field keywords indicating homelessness according to address guidance distributed to PEH providers by LAC DPH.
- Data are subject to change. Doses reported for the most recent weeks reflect a reporting lag.
- Doses administered as early as August 2020 to PEH in Los Angeles County as part of vaccine clinical trials are also included in the time series charts. These doses are all displayed cumulatively at the week ending date of December 20th, 2020 throughout the report.



LAC DPH Pandemic Response Strategies and Mitigation: Healthcare Worker Protections

LAC DPH’s Acute Communicable Disease Control Program (ACDC) monitored healthcare worker cases and deaths, regularly updated guidance, held webinars for healthcare workers, responded to outbreaks, and prioritized healthcare worker vaccination.

Key Activities	Description
A. Monitoring and tracking healthcare worker cases and deaths	<ul style="list-style-type: none"> LAC DPH monitored the impact of COVID-19 on healthcare facilities and HCWs by tracking and analyzing data from case-patient interviews of HCWs.* Weekly (or bi-monthly during low transmission periods) reports to LAC DPH leadership and to the general public via the LAC DPH website. Report presents case count, demographics, healthcare worker role, facility type, hospitalizations and deaths.
B. Regularly updating guidance	<ul style="list-style-type: none"> Guidance documents for healthcare facilities (e.g., nursing home, outpatient clinic, congregate care facilities) are updated continuously with guidance from CDPH, CDC, Cal/OSHA, etc.
C. Educational and technical assistance webinars	<ul style="list-style-type: none"> Topics covered in webinars include COVID-19 science update, preventing transmission, correct use and re-use of PPE, vaccine questions and vaccine safety, and vaccine mandates.

Webinars for Healthcare Workers

Webinar	Frequency
Hospital infection control	Bimonthly*
Nursing home infection control	Bimonthly*
EMS	Weekly update on countywide EMSA call
Congregate care facilities	Quarterly

Source: Healthcare Outreach Unit, ACDC, LAC DPH, June 3, 2022. As part of its surveillance responsibilities, LAC DPH receives reports on COVID-19 cases and also conducts case interviews and investigations. Using this information, LAC DPH tracked occupational setting, occupational role, date of symptom onset, date last worked, known exposure, and if hospitalized for each HCW to understand the impact of COVID-19 on HCWs. For additional information: Hartman, S., et al. "Coronavirus Disease 2019 (COVID-19) Infections Among Healthcare Workers, Los Angeles County, February-May 2020," *Journal of Clinical Infectious Diseases*. (October 5, 2021).



Activities	Description
D. Responding to outbreaks	<ul style="list-style-type: none"> ▪ Outbreak detection utilized both active and passive surveillance: <ul style="list-style-type: none"> – Active: Healthcare worker report was utilized to identify healthcare facilities that had multiple cases within a short timeframe. – Passive: healthcare worker and facilities reported cases and patients reported cases – Upon identification of possible outbreak, LAC DPH interviewed healthcare facility leadership, obtained healthcare worker contacts and cases, provided guidance, and performed on-site outbreak response visits in some cases ▪ Consultative outbreak response aimed to prevent patient and staff exposures by giving evidence-based recommendations for mitigating risk <ul style="list-style-type: none"> – Visits performed by nurses, trained infection preventionists, and physicians – Consultative visits performed with facility leadership and infection preventionists (if applicable). – Follow-up email with recommendations was provided to facility staff.
E. Prioritizing healthcare worker vaccinations	<ul style="list-style-type: none"> ▪ Healthcare workers were the first group of workers to be vaccinated in December, 2020. LAC DPH distributed vaccines to hospitals and nursing homes to vaccinate their own staff. ▪ LAC DPH opened large drive-through vaccination PODs and on-boarded FQHCs and pharmacies to reach as many healthcare workers as possible quickly. ▪ Public Health Health Officer Orders (HOOs) required all healthcare workers, home health, home care and EMS <ul style="list-style-type: none"> – Receive COVID-19 initial vaccinations by September 1, 2021 – Receive COVID-19 booster dose by March 1, 2022

LAC DPH Consultative Visits

Note: Does not include CDPH regulatory visits or outbreak visits by the Outbreak Management Branch

Facility Type	Outbreak Response Performed, (January 2020 – Present)
EMS	399
Acute care hospitals	128
Skilled Nursing Facilities (SNFs)	119 <i>(over the past 12 months)</i>
Ambulatory care settings (clinics and dialysis centers)	289

Source: Healthcare Outreach Unit, ACDC, LAC DPH, June 3, 2022.

LAC DPH Pandemic Workforce Deployment

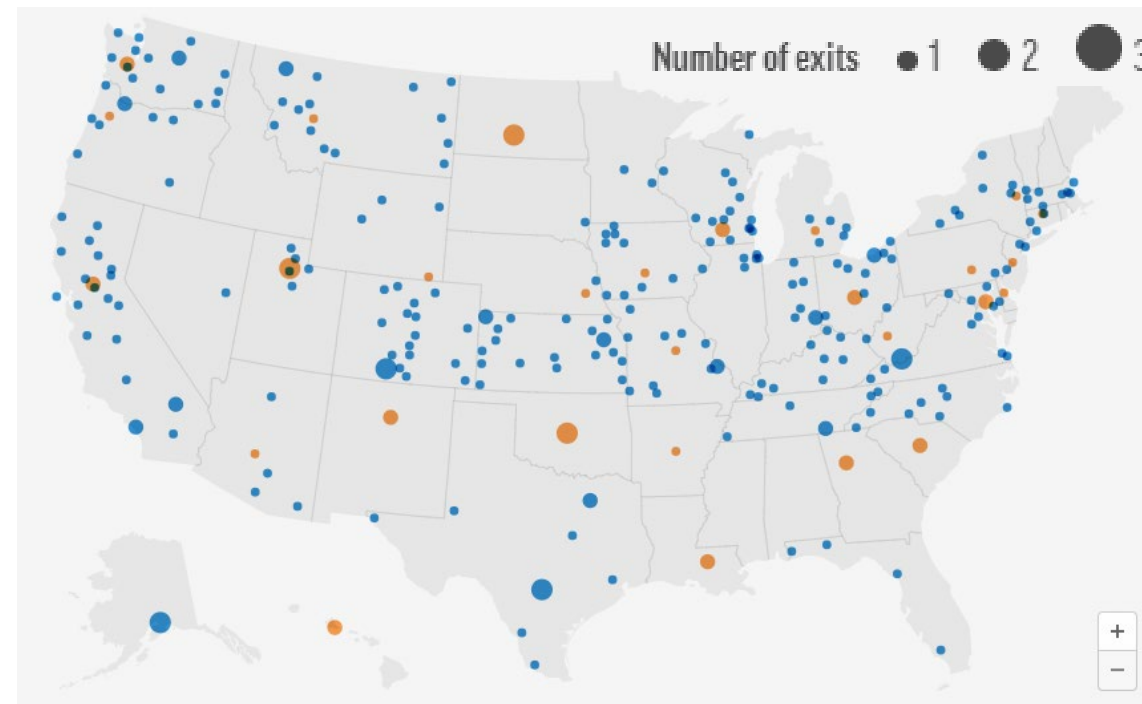
LAC DPH Demonstrated Committed Leadership Amid National Turnover

LAC DPH leadership was stable and consistent in contrast to significant turnover among state and local public health department leaders across the country.

Concerning Trends

- Exacerbated pre-pandemic turnover attributed to low compensation and limited opportunities for career advancement
- Underfunding and understaffing during the public health emergency
- Ongoing threats to the physical safety of public health leaders as public scrutiny and criticism increase
- Increasing state and local limitations on public health powers in at least 32 states
- Short-term federal relief funding without sustainable, long-term increases to public health funding

Between April 2020 and September 2021, AP and KHN reported that over 300 state and local public health department leaders resigned, retired or were fired. There was no senior leadership turnover reported in the County during the review period.



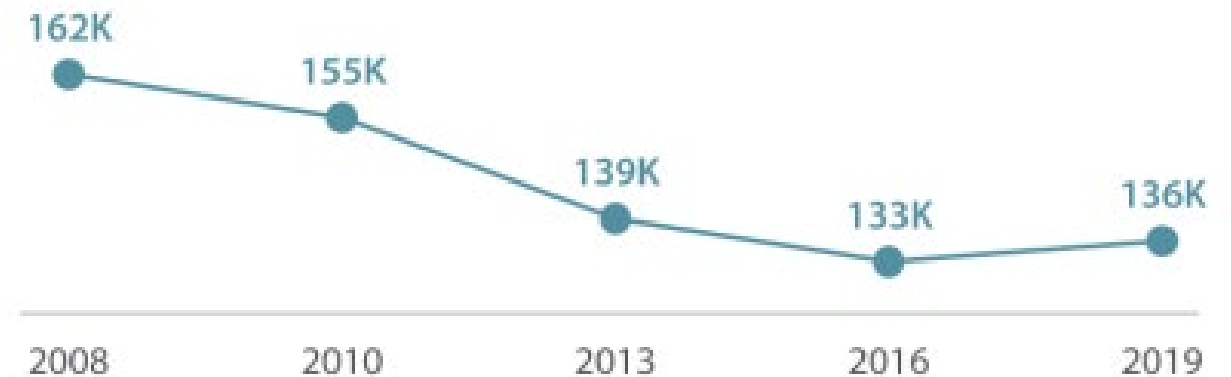
Sources: [Why Public Health Faces a Crisis Across the U.S., NY Times, October 18, 2021](#); [Most states have cut back public health powers amid pandemic; AP, September 15, 2021](#); [A Multilevel Workforce Study on Drivers of Turnover and Training Needs in State Health Departments: Do Leadership and Staff Agree?, JPHMP, January/February 2021](#).

Prior to the pandemic, public health was underfunded. During the pandemic, the funding gap exacerbated the squeeze on workforce and resources.

Key National Statistics

- **9 in 10 Americans** live in jurisdictions with stagnant or reduced budgets for public health preparedness and response activities
- **2 in 3 local health departments (LHDs)** report experiencing stagnant or reduced funding
- **64% LHDs** had to redeploy non-preparedness and response staff in emergency response activities

The total number of full-time equivalents employed by LHDs has not recovered from repeated cuts



Source: [More Than 9 in 10 Americans Are Endangered by the Underfunding of Local Public Health](#), NACCHO, August 27, 2020

Source: [More Than 9 in 10 Americans Are Endangered by the Underfunding of Local Public Health](#), NACCHO, August 27, 2020.

Ongoing Workforce Needs Across Los Angeles County's Health Services-Related Departments

In October 2021, the Board of Supervisors asked LAC DPH/DMH/DHS to report on current vacancies and their impact on access to care, services, and caseloads. On January 21, 2022, LAC DPH/DMH/DHS submitted the following findings:

- After a hiring freeze between March 31, 2020, and October 5, 2021, LAC DPH/DMH/DHS reported higher vacancy rates when compared to other County departments.
- LAC DPH reported significantly higher vacancy rates when compared to DHS, exacerbated by the high proportion (59%) of positions subject to the hiring freeze and over 75% participation in the ICS.
- Key effects of LAC DPH vacancies on access to care, services, and caseloads include:
 - Reduced capacity to test and treat TB in a timely manner and ensure compliance with HOOs;
 - Reduced business office capacity resulting in longer clinic wait times (in-person and telephone); and
 - Overtime for employees supporting testing, vaccination, and administrative activities.

County Department Vacancy Data

LAC Department	% Positions Subject to the Hiring Freeze	Vacancy Rates as of December 6, 2021
LAC DPH	59%	21.8%
DMH	32%	21.1%
DHS	11%	15.5%
Average Across All County Departments	N/A	12.4%

Sources: Motion: Rebuilding a County Workforce That Can Respond to the County's Complex Healthcare Needs, Board of Supervisors, October 19, 2021; Report Back: Rebuilding a County Workforce That Can Respond to the County's Complex Healthcare Needs, Board of Supervisors, January 21, 2022; Human Resources, March 11, 2022.



LAC DPH Staffing Summary (as of February 9, 2022)

Over 80% of LAC DPH staff were redeployed or volunteered to support COVID-19 efforts and supplemented by over 2,800 contract, volunteer (disaster service workers), and seasonal workers.¹

Current LAC DPH Employees*

Staff Type	# of Employees
Clinical ²	1,311
Full Time	1,095
Part Time	216
Non-Clinical ³	2,984
Full Time	2,804
Part Time	180
Total	4,295

Other LAC DPH Staff*

Staff Type	# of Employees
Contract Agency Staff	2,213
Volunteers (includes <u>disaster service workers</u>)	249
LA County Temporary Seasonal Staff	396
Total	2,858

Ongoing Strategies to Address Workforce Needs and Develop Pipelines

- Recruitment strategies:
 - Posted job listings.
 - Developed internal hiring unit to expedite hiring process (4-5 weeks) with onboarding in specific emergency response areas in week 5.
- Repurposed existing County staff to COVID-19 response roles within LAC DPH (i.e., disaster service workers – e.g., library staff worked as contact tracers when libraries were closed)
- Hired temporary seasonal County staff to leverage temporary COVID-19 funding and assigned internal support staff into COVID-19-related emergency functions; temporary staff will continue until workforce need changes or funding expires
- Used County personnel contracts to hire contract staff, including nurses, doctors, epidemiologists, research analysts, and logistics support
- Worked closely with organizations and schools to recruit volunteers (onboarded 249 volunteers for our various COVID-19-related efforts)

Source: Human Resources, February 9, 2022.

*LAC DPH employees are actual full- or part-time employees; LAC DPH staff are contracted or temporary workers who are hired or brought on based on need

¹ Number of reassigned LAC DPH employees reflects a subset of the >75% of LAC DPH employees who participated in the ICS; most LAC DPH employees were not formally reassigned but took on additional ICS functions.

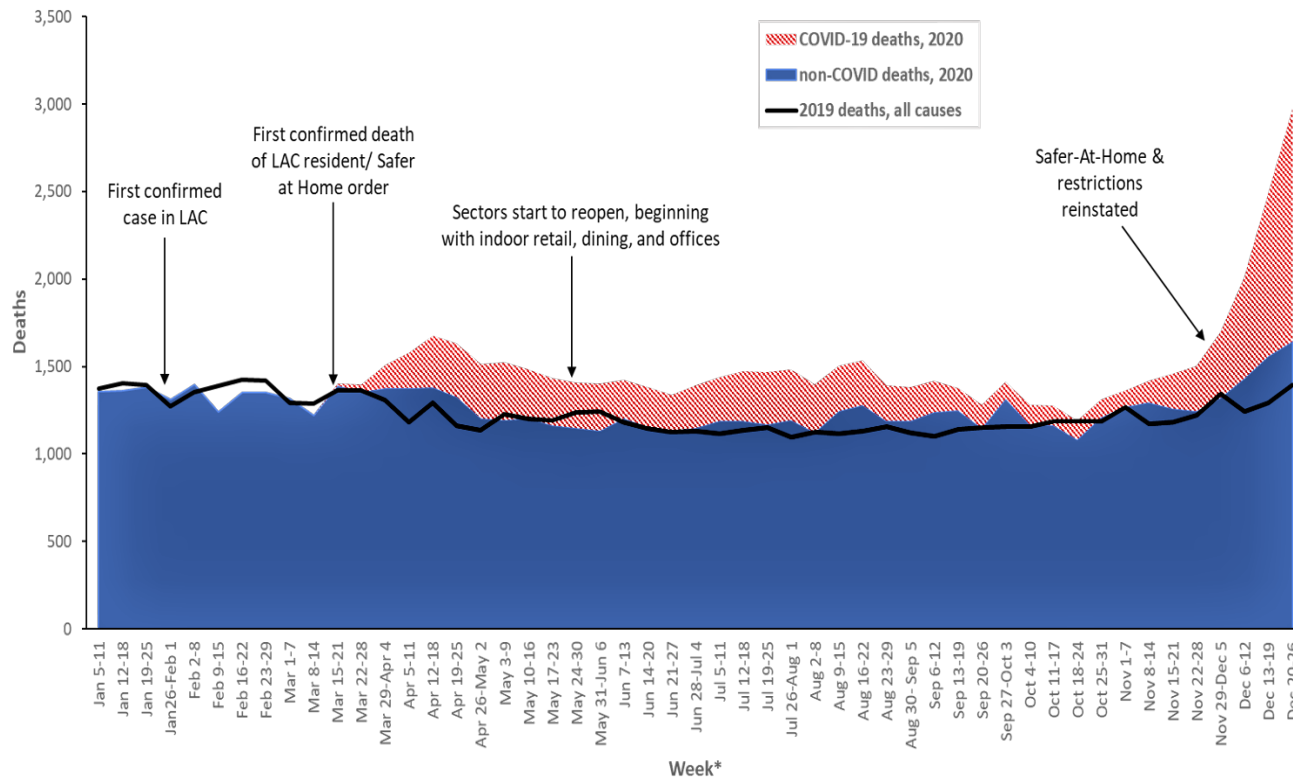
² Includes providers supporting public health prevention efforts, health facilities, and vaccine dispensaries.

³ Includes non-clinical staff supporting public health programs within the department (e.g., Substance Abuse Prevention and Control (SAPC), nutrition).

Rise of Other Public Health Issues During the COVID-19 Pandemic

Los Angeles County witnessed increases in deaths across a wide range of other health conditions during the COVID-19 pandemic such as coronary heart disease, stroke, diabetes, and drug overdose (see table below).

Weekly Los Angeles County Deaths (2020 v. 2019)



Leading Causes of Death (2020 v. 2019)

Causes of Death	2020			2019			% Change in Deaths
	Rank	Deaths	AAMR	Rank	Deaths	AAMR	
Coronary Heart Disease	1	12,207	105.7	1	11,075	97.4	10.2%
COVID-19	2	11,101	97.5	--	--	--	--
Alzheimer's Disease	3	4,978	43.5	2	4,433	39.1	12.3%
Stroke	4	4,026	35.5	3	3,786	33.9	6.3%
Diabetes Mellitus	5	3,527	31.0	4	2,978	26.7	18.4%
COPD	6	2,775	24.6	5	2,821	25.6	-1.6%
Lung Cancer	7	2,334	20.5	6	2,373	21.7	-1.6%
Pneumonia/Influenza	8	2,140	18.9	7	1,815	16.2	17.9%
Drug Overdose	9	1,954	18.2	16	1,208	11.2	61.8%
Hypertension	10	1,747	15.1	8	1,537	13.6	13.7%
Colorectal Cancer	14	1,427	12.4	9	1,454	13.0	-1.9%
Liver Disease/Cirrhosis	11	1,610	14.0	10	1,417	12.3	13.6%

AAMR age-adjusted mortality rate; COPD chronic obstructive pulmonary disease

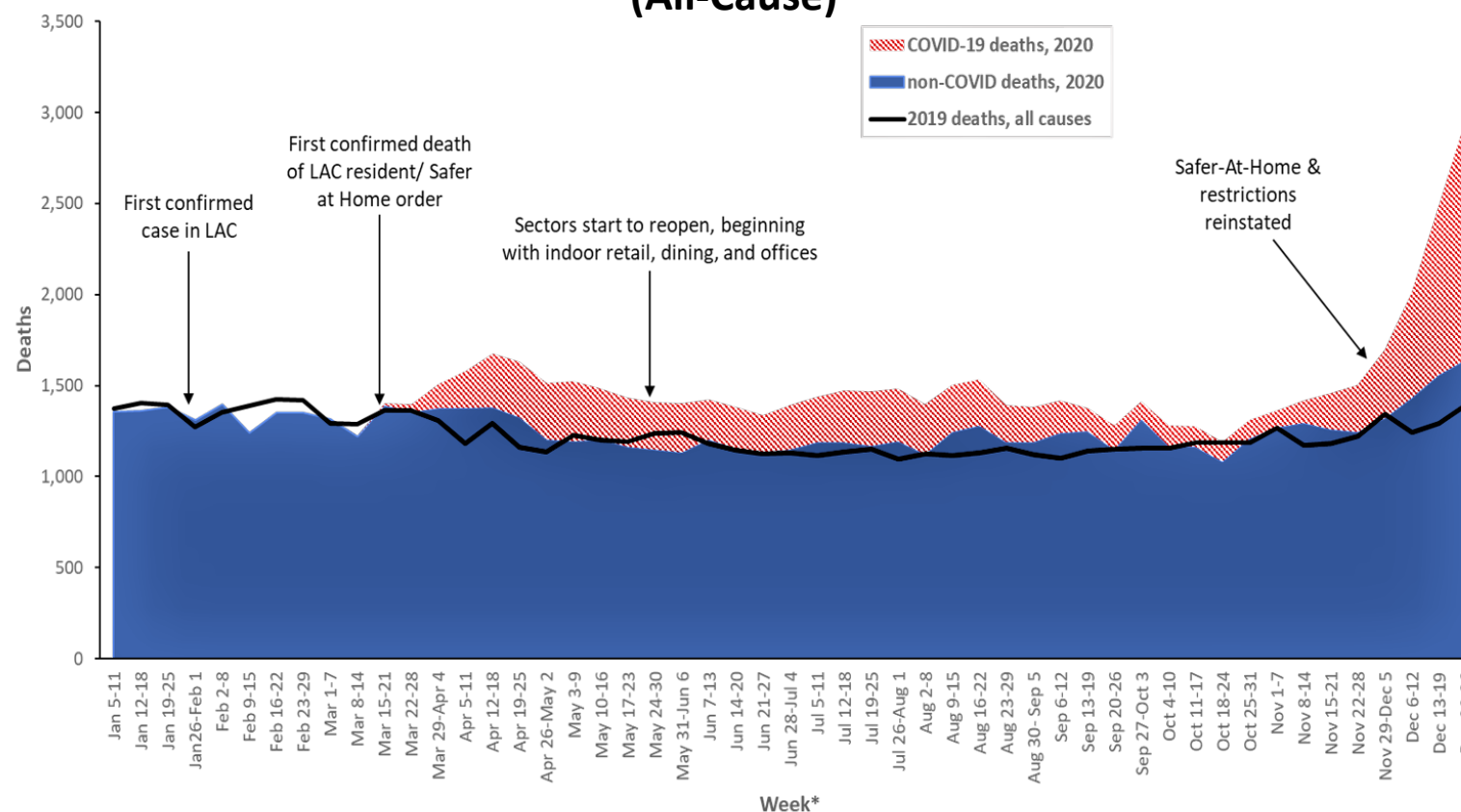
Leading causes of death are tabulated from the underlying cause of death field on the death certificate, only. As such, the number of COVID-19 deaths may differ from what has been previously reported by LAC Department of Public Health's Acute and Communicable Disease Control program. See Appendix A for more details.

Source: Mortality in Los Angeles County, 2020: Provisional Report, Office of Health Assessment and Epidemiology, LAC DPH, May 2022.

Substantial Increase in Deaths in Los Angeles County Between 2019 and 2020

Los Angeles County deaths due to COVID-19 quickly exceeded all-cause deaths in the previous year as the pandemic worsened.

Weekly County Deaths in 2020 (COVID-19 and non-COVID) and 2019 (All-Cause)



Sources: Mortality in Los Angeles County, 2020: Provisional Report, Office of Health Assessment and Epidemiology, LAC DPH, May 2022



LAC DPH Pandemic Response Funding

LAC DPH COVID-19-Related Grant Funding: Overview (as of November 2022)

LAC DPH was allocated approximately \$2 billion in multi-year grants to support COVID-19-related expenditures, including infrastructure, workforce development, and core laboratory funding.* The majority of ICS funding was allocated directly to the County from the federal government.

COVID-19-Related Funding Allocated to LAC DPH Through June 2023 by Funding Source

Funding Allocated by:	Allocated Funds
Federal	\$1,430,616,075
County	\$433,925,509**
State	\$143,188,181
Total Allocated	\$2,007,729,765
Funds available through 6/2023	\$1,846,276,793
Funds available to be spent after 7/2023	\$161,452,972

COVID-19-Related Funding Allocated to LAC DPH Through June 2023 by Allocating Entity

Allocating Entity	Allocated Funds
CDC	\$1,417,620,635
Chief Executive Office (CEO)	\$433,925,509**
California Department of Public Health (CDPH)	\$87,417,156
California Department of Health Care Services (DHCS)	\$55,271,025
Health Resources and Services Administration (HRSA)	\$12,432,940
U.S. Department of Agriculture (USDA)	\$562,500
State Legislation	\$500,000
Total	\$2,007,729,765
Funds available through 6/2023	\$1,846,276,793
Funds available to be spent after 7/2023	\$161,452,972

Source: ICS Budget and Funding Allocation analysis; November 2022.
 Note: An estimate of how LAC DPH’s allocation compares to other County departments is not available.
 *Grant allocation March 2020 through June 2023.
 **Allocations to LAC DPH from federal CARES and ARP Act Coronavirus Relief Funds paid to County of Los Angeles.



LAC DPH COVID-19-Related Grant Funding: Legislative Funding Sources (as of November 2022)

Most funding originated from the Consolidated Appropriations Act (CAA), ARP and CARES.

Legislative Funding Sources	Allocated Funds
American Rescue Plan (ARP) Act of 2021	\$773,509,319
Consolidated Appropriations Act (CAA) of 2021	\$718,804,662
Paycheck Protection Program and Health Care Enhancement Act (PPPHEA)	\$290,906,031
Coronavirus Aid, Relief, and Economic Security (CARES) Act of 2020	\$230,891,607
Coronavirus Preparedness and Response Supplemental Appropriations Act of 2020	\$29,234,121
Prevention and Public Health Funds	\$3,321,525
7 U.S.C. 7517 – Gus Schumacher Nutrition Incentive Grant Program	\$562,500
CA Assembly Bill 86	\$500,000
Total	\$2,007,729,765
Funds available through 6/2023	\$1,846,276,793
Funds available to be spent after 7/2023	\$161,452,972

Source: ICS Budget and Funding Allocation analysis; November 2022..

LAC DPH COVID-19-Related Grant Funding: Federal Grant Allocation (as of November 2022)

Of the \$3.3 B in CARES and ARP funding that Los Angeles County received from the federal government and allocated to its COVID-19-related expenditures, approximately 13% was allocated to LAC DPH.

Federal Funding Sources	Amount Allocated to the County	Amount Allocated by the County to DPH	% Allocated to DPH
CARES (Enacted March 2020)	\$1,415 M	\$206 M	15%
ARP (Enacted March 2021)	\$1,950 M	Tranche 1 (July 2021): \$71 M Tranche 2 (Sept. 2022): \$156 M	12%
Total	\$3,365 M	\$434 M	13%

Sources: LAC DPH, November 2022; LA County CARES: Report to the Board of Supervisors on CARES Act Funding Allocations and Outcomes, March 10, 2021; The American Rescue Plan Act, LA County CEO; Assistance for State, Local, and Tribal Governments, U.S. Department of the Treasury.; County of Los Angeles Board of Supervisors Letter, "Approval of Phase Two of the American Rescue Plan Local Fiscal Recovery Funds Spending Plan", September 13, 2022.