CITY OF LONG BEACH

**Memorandum**

Date: October 17, 2023

To: Mayor and Members of the City Council

From: Thomas B. Modica, City Manager

Subject: **COVID-19 After-Action Report and Improvement Plan**

Attached you will find the COVID-19 After-Action Report and Improvement Plan developed by the Long Beach Health and Human Services Department.

The report includes the following:

- Incident Summary
  - Timeline of major events during the COVID-19 response
  - Major Strengths
  - Primary Areas for Improvement
  - Conclusion
- Incident Overview
- Methodology
- Analysis of Capabilities
- Improvement Plan (Appendix A)

If you have any questions, please contact Kelly Colopy, Director of Health and Human Services, at Kelly.Colopy@longbeach.gov.

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**COVID-19**

# AFTER-ACTION REPORT

## & IMPROVEMENT PLAN

August 7, 2023

LONG BEACH HEALTH & HUMAN SERVICES

# INCIDENT SUMMARY

On December 31, 2019, the World Health Organization (WHO) was informed of cases of pneumonia of unknown cause in Wuhan, China. On January 7, 2020, Chinese authorities isolated a novel coronavirus as the causative agent of the outbreak and the Center for Disease Control and Prevention (CDC) established a 2019-nCoV Incident Management Team. On January 20, 2020, the CDC confirmed the first laboratory confirmed case of COVID-19 in the US. On January 27, 2020, the Department of Health and Human Services (Health Department) activated the Department Operations Center (DOC) at Level III (lowest level) to monitor the novel (new) coronavirus that was first detected in Wuhan, China. The disease was quickly detected across the globe, including in the United States. At the time, community transmission was limited. The rapidly evolving situation and guidance changed almost daily, and sometimes hourly. On March 2, 2020, the Health Department hosted a briefing for the City's All Hazards Incident Management Team (AHIMT), which consisted of personnel from the Fire Department, Police Department, and the Health Department. On the morning of the briefing the Health Department requested the mobilization and deployment of the AHIMT, which was the first component in a series of events that would be used to mitigate the coming emergency to the City of Long Beach.

Below is a timeline of major events during the COVID-19 response:

- **December 31, 2019:** WHO informed of cases of pneumonia of unknown cause in Wuhan, China
- **January 27,2020:** The Health Department activated their DOC at a Level III to monitor the nCoV (novel coronavirus) situation and sent out the first situation report to various stakeholders
- **January 30, 2020**: WHO declared nCoV a Public Health Emergency of International Concern
- **February 6, 2020:** The Health Department received the first list of returned travelers from Wuhan, China. CDC and state guidance for returned travelers was to conduct passive surveillance to ensure they were properly quarantining and asymptomatic
- **February 11, 2020:** WHO announced the official name for the disease, COVID-19
- **March 2, 2020:** The Health DOC became fully activated at level I. California State University Long Beach (CSULB) activated their Emergency Operations Center (EOC) at Level III. The Public Health Lab was approved to conduct testing of COVID-19 on specimens. The City's AHIMT was activated for the response

- **March 4, 2020:** Governor Newsom declared a state of emergency, allowing for broader authority to address the pandemic. The City declared and proclaimed a local and city emergency. City EOC became fully activated at Level I
- **March 10, 2020:** First three cases of travel associated COVID-19 in Long Beach
- **March 11, 2020:** WHO declared COVID-19 a pandemic
- **March 13, 2020:** President declared the ongoing Coronavirus Disease 2019 (COVID-19) pandemic of sufficient severity and magnitude to warrant an emergency declaration for the nation
- **March 14, 2020:** First community spread case of COVID-19 in Long Beach
- **March 16, 2020:** Long Beach Unified School District (LBUSD) closes through the academic year
- **March 17, 2020:** Disaster Preparedness hosted a Community Partners Briefing on Novel Coronavirus
- **March 19, 2020:** Health Department announced the Safer at Home order, further restricting and limiting gathering among people to slow the spread of COVID-19
- **March 23, 2020:** The City reports the first fatal case of COVID-19
- **April 6, 2020:** The Rapid Assessment Clinic was operational at the Long Beach Community College Pacific Coast Campus (LBCC PCC) site with support from the Medical Reserve Corp and CERT
- **April 9, 2020:** The City announced it had developed a system to connect providers with personal protective equipment (PPE), as well as a way for people to donate goods and services and access to facial coverings through an online exchange platform
- **April 10, 2020:** The City's first drive-thru testing site was operational at the LBCC PCC site with support from the National Guard
- **April 18, 2020:** With the demand for testing, test sites expanded capacity and opened a new drive-thru site at Cabrillo that was supported by the Long Beach Fire Department (LBFD) lifeguards
- **April 19, 2020:** LBFD implemented a newly created Mobile Assessment Team (MAT) specifically assigned to transport individuals with confirmed positive results or positive screenings of COVID-19
- **April 23, 2020:** Established a Long-Term Care Facility response team to mitigate spread of COVID-19 among high-risk residents at staff
- **May 1, 2020:** COVID-19 Case Investigation and Contract Tracing teams expanded to 50 people as cases continued to increase
- **June 16, 2020:** The City announced that all Long Beach residents can receive COVID-19 testing, regardless of symptoms, at three City-operated testing sites
- **August 31, 2020:** The Health Department announced it had conducted 100,000 COVID-19 tests at City-administered sites, meeting a critical need of the COVID-19 pandemic and far exceeding the State's requirement
- **November 12, 2020:** The City announced it is offering free combination flu and COVID-19 tests at City-run testing locations to help prevent the spread of COVID-19 and keep the community safe during flu season

- **December 18, 2020:** First vaccines given in the city with a Press Conference at MemorialCare Long Beach Medical Center
- **December 23, 2020:** First shipment of vaccine received at the Health Department
- **December 31, 2020:** The City announced it had reached a milestone with more than half a million tests for COVID-19 administered in the city since the pandemic began
- **January 4, 2021:** First vaccines administered by the Health Department to frontline staff
- **January 11, 2021**: Vaccinations expanded to Healthcare workers according to the California Department of Public Health (CDPH) tiers
- **January 19, 2021**: Mass vaccination site at Convention Center operational with support from National Guard, travel nurses, Special Events office, and the AHIMT; announced rollout of VaxLB
- **February 4, 2021:** The Health Department conducted the first vaccine clinic as part of an outreach program that vaccinates people in high-risk neighborhoods via small, community-based clinics. This first clinic, serving primarily Spanish-speaking adults 65 and older, took place at Silverado Park on the Westside and provided 500 doses of vaccine. Spanish-speaking staff were onsite to assist community members and address questions
- **February 26, 2021**: The Health Department launched the COVID-19 data dashboard
- **March 3, 2021:** The Health Department rolled out two new mobile vaccination teams/ vehicles to administer vaccinations to homebound residents and individuals in neighborhoods with the highest coronavirus case rates to reduce the effects of COVID-19
- **May 13, 2021:** The City began vaccinating those ages 12 and older
- **May 24, 2021:** The City began offering evening COVID-19 vaccination clinics
- **June 28, 2021:** Delta variant found in Long Beach
- **July 8, 2021:** Vaccination milestone: 70% of adults received at least one dose of vaccine
- **July 31, 2021:** City demobilized the mass vaccination site at the Convention Center and the National Guard demobilized from the vaccination mission
- **August 17, 2021:** City began offering third vaccine dose for immunocompromised individuals
- **September 17, 2021:** Long Beach reached 1,000 COVID-19 fatalities. Health Department published one of the first studies on post-acute sequelae of SARS-CoV-2 infections among adults in MMWR.
- **September 18, 2021:** The Food and Drug Administration (FDA) announced the Emergency Use Authorization (EUA) for a booster of Pfizer's COVID-19 vaccine for those 65+ and those at high risk of severe COVID-19 who have received that vaccine more than six months ago

- **September 20, 2021:** Health Department created a COVID-19 School Response Team to help mitigate the spread of COVID-19 at K12 schools, ECEs/Daycares, institutes of higher education, and youth sports
- **September 24, 2021:** City began administering Pfizer boosters for people ages 65 and older and those 18-64 with underlying medical conditions
- **October 22, 2021:** City began administering Moderna boosters for people ages 65 and older and those 18-64 with underlying health conditions, as well as Johnson & Johnson's boosters for everyone ages 18 and older
- **November 4, 2021:** Health Department began offering the COVID-19 vaccine to children from 5 to 11 years old
- **November 16, 2021**: Health Department began offering COVID-19 vaccine boosters to all people 18 years old and older
- **December 6, 2021:** First case of the omicron variant detected in Long Beach
- **December 17, 2021**: Health Department began offering COVID-19 boosters for 16- and 17-year-olds.
- **January 11, 2022**: Health Department began offering COVID-19 boosters for 12- to 15-year-olds and third doses to 5- to 11- year-old immuno-compromised children
- **January 18, 2022:** The City run sites see the highest number of tests conducted in a single day with support from a new deployment from the National Guard
- **January 28, 2022:** First case of Omicron sub-variant BA.2 found in Long Beach
- **February 28, 2022:** The National Guard deployment demobilized for this testing mission
- **March 29, 2022:** City began offering second boosters for those ages 50 and older, people 12 years of age and older who are immunocompromised, and people 18 years of age and older who received Johnson & Johnson as their primary dose and first booster

## Major Strengths

The major strengths identified during this response are as follows:

- Strong relationships and collaboration with City departments
- Support and trust from City leadership
- Prior training and preparedness planning
- Flexibility and adaptability of the City team
- Quick shift to hybrid and telecommute
- Embedding of TI within the All-Hazards Incident Management Team (AHIMT)
- Clear communication within the response team
- Quick availability of resources and emergency purchasing

## Primary Areas for Improvement

Throughout the incident, several opportunities for improving the ability of the LBDHHS and City to respond to COVID-19 were identified. The primary areas for improvement, including recommendations, are as follows:

- More ICS and response training
- Better education and implementation of the Disaster Service Worker (DSW) Program
- Putting the right people in the right roles, regardless of rank
- Clarifying authority of subject matter experts (SME)
- Delegation of Authority for AHIMT
- Streamline internal and external communication to one source
- Depth in positions / continuity of operations / succession planning
- Better resource tracking, especially for personnel
- Emotional support and mental health resources for longer responses
- More cohesive hybrid work integration
- Update tech and software
- Metrics on ending an emergency/demobilization
- Clearly define relationship between IMT, EOC, and JIC

### Conclusion

Due to the limited public health workforce, support from the AHIMT was critical in assisting the Health Department and City with information gathering, contingency planning, operationalizing plans, and the heavy logistical lift. Despite limited resources and constantly evolving information, the citywide response to COVID-19 was a successful endeavor in mitigating the effects of COVID-19 on the community. The City pivoted quickly and often to ensure an equitably and accessible response. Through the end of May 2022, the City conducted more than one million tests, administered over 334,000 vaccines, established a local distribution site, data dashboard, conducted more than 33,927 case investigations and 3,441 contact investigations and provided guidance and assisted in outbreak management and control in over 202 businesses, 187 Long-Term Care facilities, and 307 Schools/Daycares. Improvements will include additional emergency response trainings and exercises, as well as reviewing and assessing current city plans, and making updates based on findings.

## INCIDENT OVERVIEW

| | |
|---|---|
| **Incident Name** | 2019 nCoV/ COVID-19 |
| **Incident Period/Duration** | January 27, 2020-Ongoing<br>Feedback collected through May 17, 2022 |

| | |
|---|---|
| **Incident Name** | 2019 nCoV/ COVID-19 |
| **Scope** | This After-Action Report and Improvement Plan are limited to the City of Long Beach's response to COVID-19. |
| **Focus Area(s)** | Prevention, Protection, Mitigation, and Response |
| **Capabilities** | PHEP Capability 1: Community Preparedness<br>PHEP Capability 2: Community Recovery<br>PHEP Capability 3: Emergency Operations Coordination<br>PHEP Capability 4: Emergency Public Information and Warning<br>PHEP Capability 5: Fatality Management<br>PHEP Capability 6: Information Sharing<br>PHEP Capability 7: Mass Care and Sheltering<br>PHEP Capability 8: Medical Countermeasures Dispensing and Administration<br>PHEP Capability 9: Medical Material Management and Distribution<br>PHEP Capability 10: Medical Surge<br>PHEP Capability 11: Nonpharmaceutical Interventions<br>PHEP Capability 12: Public Health Laboratory Testing<br>PHEP Capability 13: Public Health Surveillance and Epidemiological Investigation<br>PHEP Capability 14: Responder Safety and Health<br>PHEP Capability 15: Volunteer Management |
| **Objectives** | • Monitor the current and changing situation and provide the most current scientific and public health guidance to healthcare providers and city stakeholders<br>• Maintain a robust epidemiologic surveillance to ensure data driven decision making<br>• Maintain "once voice" messaging with response partners to ensure the public receive timely and consistent information<br>• Assess the healthcare community's level of preparedness and surge capacity<br>• Receive and distribute medical countermeasures to support testing, vaccination, and personal safety throughout the city<br>• Secure adequate staffing to support the public health infrastructure<br>• Manage resources at a level to meet protection objectives while maintaining fiscal accountability<br>• Provide safe worksite locations for city employees, volunteers, and deployed state assets.<br>• Provide safe, equitable, and accessible environments for members of the public being tested or vaccinated for Covid-19. |
| **Threat or Hazard** | Public Health Emergency, Global Pandemic of Novel Coronavirus |

| | |
|---|---|
| **Incident Name** | 2019 nCoV/ COVID-19 |
| **Scenario** | In the winter of 2019, an outbreak of pneumonia of an unknown origin associated with a large live animal market was reported in Wuhan, China. Efforts were made to contain the novel virus, but it rapidly spread across the globe and was declared a pandemic by the WHO on March 11, 2020. The COVID-19 (formerly known as 2019 nCov) disease caused a massive influx of cases, hospitalizations, and deaths, resulting in a significant strain on the healthcare delivery systems as well as the public health infrastructure. A response of this magnitude required a coordinated multidisciplinary effort from every department within the City of Long Beach to mitigate the severity of this disease. |
| **Sponsor** | Long Beach Department of Health and Human Services (LBDHHS)<br>City of Long Beach<br>California Department of Public Health (CDPH)<br>Centers for Disease Control and Prevention (CDC) |
| **Participating Organizations** | City of Long Beach |
| **Point of Contact** | Gabriela Hurtado<br>(562) 570-4115<br>3861 Worsham Ave.<br>Long Beach, CA 90808<br><br>Diane Brown<br>(562) 570-4779<br>3861 Worsham Ave.<br>Long Beach, CA 90808 |

# METHODOLOGY

Although the response to COVID-19 continues, this report is intended to be a tool to identify the City of Long Beach's strengths during the response, as well as areas for improvement, from the start of the pandemic through May 2022. The approach taken to gather feedback included anonymous electronic surveys and in-person debriefs. The electronic survey was sent to all city employees who had a role in the pandemic, but not necessarily in a leadership capacity. In-person group debriefs were conducted with those who were part of the City's All Hazards Incident Management Team (AHIMT) and Joint Information Center (JIC). Virtual group debriefs were conducted with those who were part of the Emergency Operations Center (EOC) Policy Group, and those who were part of the Health Department's Department Operations Center (DOC). Objectives were compiled from the various situation reports that were developed throughout the duration of the response. All feedback was reviewed and compiled into the corresponding objectives.

## Assumptions

- This report does not focus on any one individual, program, or division. Rather, the report attempts to focus on strengths and opportunities for improvement applicable across the entire City of Long Beach. None of this report is intended to find fault or construe blame.
- Results found in this report are based on individual recollections of what occurred, when, why, and how. The authors have attempted to present information objectively, but also recognize individuals' perceptions were, in many cases, just as important as reality. Those engaged in this process were always encouraged to share their story from their personal perspective.
- The narratives in this report are a result of those interviewed and the documentation reviewed and are not inclusive of every involved department/group/individual.

# ANALYSIS OF CAPABILITIES

Aligning exercise objectives and capabilities provides a consistent taxonomy for evaluation that transcends individual exercises to support preparedness reporting and trend analysis. Table 1 includes the exercise objectives, aligned capabilities, and performance ratings for each capability as observed during the exercise and determined by the evaluation team.

| Objective | Capability | Performed without Challenges (P) | Performed with Some Challenges (S) | Performed with Major Challenges (M) | Unable to be Performed (U) |
|---|---|---|---|---|---|
| **Obj 1:** Monitor the current and changing situation and provide the most current scientific and public health guidance to healthcare providers and city stakeholders | ***PHEP Capability 1****: Community Preparedness*<br>***PHEP Capability 3****: Emergency Operations Coordination*<br>***PHEP Capability 4****: Emergency Public Information and Warning*<br>***PHEP Capability 6****: Information Sharing*<br>***PHEP Capability 9****: Medical Material Management and Distribution* | | S | | |
| **Obj 2:** Receive and distribute medical countermeasures to support testing, vaccination, and personal safety throughout the city | ***PHEP Capability 8****: Medical Countermeasures Dispensing and Administration*<br>***PHEP Capability 9****: Medical Material Management and Distribution* | | S | | |
| **Obj 3:** Manage resources at a level to meet protection objectives while maintaining fiscal accountability | ***PHEP Capability 3****: Emergency Operations Coordination*<br>***PHEP Capability 9****: Medical Material Management and Distribution* | | S | | |

| Objective | Capability | Performed without Challenges (P) | Performed with Some Challenges (S) | Performed with Major Challenges (M) | Unable to be Performed (U) |
|---|---|---|---|---|---|
| **Obj 4:** Assess the healthcare community's level of preparedness and surge capacity | ***PHEP Capability 10**: Medical Surge* | | | M | |
| **Obj 5:** Maintain a robust epidemiologic surveillance to ensure data driven decision making | ***PHEP Capability 13**: Public Health Surveillance and Epidemiological Investigation* ***PHEP Capability 12**: Public Health Laboratory Testing* | | | M | |
| **Obj 6**: Provide safe worksite locations for city employees, volunteers, and deployed state assets. | ***PHEP Capability 11**: Nonpharmaceutical Interventions* ***PHEP Capability 14**: Responder Safety and Health* ***PHEP Capability 15**: Volunteer Management* | | S | | |
| **Obj 7**: Secure adequate staffing to support the public health infrastructure | ***PHEP Capability 13**: Public Health Surveillance and Epidemiological Investigation* ***PHEP Capability 14**: Responder Safety and Health* ***PHEP Capability 15**: Volunteer Management* | | | M | |

Table 1. Summary of Core Capability Performance

## Ratings Definitions:

**Performed without Challenges (P):** The targets and critical tasks associated with the capability were completed in a manner that achieved the objective(s) and did not negatively impact the performance of other activities. Performance of this activity did not contribute to additional health and/or safety risks for the public or for emergency workers, and it was conducted in accordance with applicable plans, policies, procedures, regulations, and laws.

**Performed with Some Challenges (S):** The targets and critical tasks associated with the capability were completed in a manner that achieved the objective(s) and did not negatively impact the performance of other activities. Performance of this activity did not contribute to additional health and/or safety risks for the public or for emergency workers, and it was conducted in accordance with applicable plans, policies, procedures, regulations, and laws. However, opportunities to enhance effectiveness and/or efficiency were identified.

**Performed with Major Challenges (M):** The targets and critical tasks associated with the capability were completed in a manner that achieved the objective(s), but some or all of the following were observed: demonstrated performance had a negative impact on the performance of other activities; contributed to additional health and/or safety risks for the public or for emergency workers; and/or was not conducted in accordance with applicable plans, policies, procedures, regulations, and laws.

**Unable to be Performed (U):** The targets and critical tasks associated with the capability were not performed in a manner that achieved the objective(s).

The following sections provide an overview of the performance related to each exercise objective and associated capability, highlighting strengths and areas for improvement.

## Objective 1: Monitor the current and changing situation and provide the most current scientific and public health guidance to healthcare providers and city stakeholders

The strengths and areas for improvement for each objective aligned to these capabilities are described in this section.

- PHEP Capability 1: Community Preparedness
- PHEP Capability 3: Emergency Operations Coordination
- PHEP Capability 4: Emergency Public Information and Warning
- PHEP Capability 6: Information Sharing
- PHEP Capability 9: Medical Material Management and Distribution

### Strengths

The partial capability level can be attributed to the following strengths:

**Strength 1:** Relationships built previously through training and exercising together

**Strength 2:** Support and trust from City leadership

**Strength 3:** Ability to pivot quickly and frequently

**Strength 4:** Forecasting and contingency planning

### Areas for Improvement

The following areas require improvement to achieve the full capability level:

**Area for Improvement 1:** Some components of ICS not used or followed at the EOC and/or at DOCs (such as chain of command, with some staff not feeling enabled to speak up, and lack of an organizational chart)

**Reference:** City Emergency Operations Plan

**Analysis:** Gaps in use of ICS may be due to lack of ICS training.

**Area for Improvement 2:** Staff did not follow City policies and plans once the IMT and/or EOC were activated.

**Reference:** City Emergency Operations Plan, City Municipal Code

**Analysis:** While there are Citywide plans that denote processes for response activations, key staff did not use or were not aware of these plans, resulting in time/effort use to create processes to follow or responding in ways that did not align with plans and City policies. Additionally, existing plans may not describe activation of IMT, and plans may not take into consideration other City guidance (e.g., municipal code).

**Area for Improvement 3:** A need for more robust technology that is quickly and easily set up for staff.

**Reference:** City Emergency Operations, City Crisis Communication Plan

**Analysis:** While technological support for various operations of the incident were adequately supported, there were gaps and challenges in some areas. Some examples include workflows that were paper driven, lack of equipment for staff (for those on site and working from home), and variability in equipment/technology resources by department. Additionally, technology may not have been optimized at key locations (e.g., EOC, DOCs, the JIC).

**Area for Improvement 4:** Challenges with Emergency Operations Center activation and continued operations.

**Reference:** City Emergency Operations Plan

**Analysis:** The EOC was activated following initial operation of the IMT. There is a lack of clarity in plans on the order and process of activations when an IMT is involved that may have delayed or otherwise impacted activation of the EOC. Eventual transition from the IMT to the EOC resulted in delays with information sharing and approvals. Additionally, work in the EOC at times felt political, which hindered successful operations, while some staff questioned the ability of EOC (initial authority, sharing plans, assigning roles, designating processes, technological capabilities, etc.) to respond quickly to such a robust operation.

**Area for Improvement 5:** Challenges with units sharing information within the operation in a way that supported timely public information.

**Reference:** City Crisis Communication Plan

**Analysis:** At times, there was a struggle to find the balance between getting timely, informative information out to the public and retaining sensitive or private information that was not ready or appropriate for release. Some staff noted that there seemed to be a lack of trust between teams around how information would be used (e.g., how epidemiological information and data would be used by the JIC).

**Area for Improvement 6:** Difficulty getting reliable, accurate information needed to make decisions and challenges with communication between teams.

**Reference:** City Emergency Operations Plan

**Analysis:** At times, a lack of information and/or changing information created stress and a lack of situational awareness for those in the field or otherwise outside of the EOC. There were also challenges when communicating to units about tasks; for example, staff reported difficulties with communication within the Health DOC.

**Area for Improvement 7:** Lack of clarity on approval authority.

**Reference:** City Emergency Operations Plan

**Analysis:** At times, it was unclear who the subject matter experts (SMEs) were for specific issues/topics and who had final approval authority on messaging and operational decision.

## Objective 2: Receive and distribute medical countermeasures to support testing, vaccination, and personal safety throughout the city

The strengths and areas for improvement for each objective aligned to these capabilities are described in this section.

- PHEP Capability 8: Medical Countermeasures Dispensing and Administration
- PHEP Capability 9: Medical Material Management and Distribution
- PHEP Capability 12: Public Health Laboratory Testing
- PHEP Capability 14: Responder Safety and Health

### Strengths

The partial capability level can be attributed to the following strengths:

**Strength 1:** Quick operationalization of the health warehouse

**Strength 2:** Grant funding and previously established medical/health systems assisted with obtaining resources

**Strength 3:** Quick rollout of accessible vaccination and testing sites

**Strength 4:** Early planning and projections

**Strength 5:** Quick ramp up and adaptability of logistics

### Areas for Improvement

The following areas require improvement to achieve the full capability level:

**Area for Improvement 1:** Insufficient public health laboratory capacity

**Reference:** N/A

**Analysis:** The Health Department's public health laboratory lacked sufficient supply, equipment, and personnel to ramp up to meet the demand for testing. Supplies needed for testing were difficult to obtain but were made available later from the state. When more testing supplies were made available, newly purchased lab equipment could not increase testing capacity because of a lack of trained personnel, as well as limitations on who was qualified to conduct the analysis.

**Area for Improvement 2:** Lack of understanding of organizational structure and roles.

**Reference:** City Emergency Operations Plan, LBDHHS All-Hazards Plan

**Analysis:** Although there were assigned positions, lack of ICS training and understanding of positions resulted in people not staying in their lanes and being pulled in multiple directions. Feedback from IMT included that those onsite assigned to a logistical position worked as operations, and personnel often didn't complete assignments when they were pulled elsewhere. There was also a disconnect between IMT, EOC, and Financial Management in terms of who was requesting what and through which avenue. This made visibility of resources difficult.

**Area for Improvement 3:** Lack of autonomy in vaccine allocation and state vaccination system.

**Reference:** California Public Health and Medical Emergency Operations Manual

**Analysis:** CDPH transitioned vaccine allocations to a third-party administrator (TPA), Blue Shield. This transition caused confusion about how vaccine allocations were determined and was not in accordance with the State's Emergency Operations Manual or Medical Health Operational Area Coordination (MHOAC) mutual processes that local jurisdictions have trained and exercised on. The TPA often left jurisdictions without enough vaccine, causing jurisdictions to have to borrow from each other. With this transition, the TPA also brought in Accenture to oversee the State's vaccination system, MyTurn. However, local jurisdictions were not able to enter their information into the system or set up vaccination clinics on their own. This resulted in what became known as the MyTurn Mayhem Monday, where the Accenture team erroneously released 3,200 vaccine appointments for the Convention Center Mass Vaccination site instead of the few hundred that had been indicated.

## Objective 3: Manage resources at a level to meet protection objectives while maintaining fiscal accountability

The strengths and areas for improvement for each objective aligned to these capabilities are described in this section.

- PHEP Capability 3: Emergency Operations Coordination
- PHEP Capability 9: Medical Material Management and Distribution

### Strengths

The partial capability level can be attributed to the following strengths:

**Strength 1:** Grant funding and previously established medical/health systems assisted with obtaining resources

**Strength 2:** Finance Section pulled in quickly and established portal to streamline purchases and resource requests

**Strength 3:** Prioritized local businesses for food, supplies, and hotels for isolation and quarantine to support the local economy

**Strength 4:** Due to previous training and exercises, established shelters for people experiencing homelessness utilizing the City's Mass Care and Shelter Plan

### Areas for Improvement

The following areas require improvement to achieve the full capability level:

**Area for Improvement 1:** A lack of processes for purchases during an emergency, particularly with high-cost items or purchases that had to be made quickly.

**Reference:** City Emergency Operations Plan, City Purchasing Guidelines

**Analysis:** Not having a citywide process for purchases, lack of ass needed contracts, awareness of processes by all staff, and not having a repository of existing vendors to be used in emergencies resulted in challenges with purchasing items needed for the response, and for being able to control costs.

**Area for Improvement 2:** Lack of visibility into what resources were available

**Reference:** City Emergency Operations Plan

**Analysis:** The IMT and EOC resource unit expressed that it was difficult to track and understand the number of resources that were available given the changes of tasks and capacity on a daily basis. Additional feedback indicated that the resource unit needs never aligned with what was available. The different resource request processes also made it difficult to track state assets, reassigned personnel, supplies, and equipment. In the early days of the pandemic, there was no clear and easy way to make purchases until the procurement portal was set-up.

## Objective 4: Assess the healthcare community's level of preparedness and surge capacity

The strengths and areas for improvement for each objective aligned to these capabilities are described in this section.

- PHEP Capability 10: Medical Surge

### Strengths

The partial capability level can be attributed to the following strengths:

**Strength 1:** Pre-established relationships with the medical and health sector allowed for visibility through direct communication and through information sharing from MHOAC partners

**Strength 2:** Robust and timely hospital data from the state helped with tracking hospital trends and capacity

**Strength 3:** Pre-staged equipment deployed quickly to assist the hospitals

### Areas for Improvement

The following areas require improvement to achieve the full capability level:

**Area for Improvement 1:** More health emergency preparedness and response training needed in the healthcare sector

**Reference:** N/A

**Analysis:** As cases quickly increased in skilled nursing facilities (SNFs) and long-term care facilities (LTCFs), these spaces became hot spots for outbreaks, putting residents and staff at high risk for severe illness and death. SNFs and LTCFs did not seem to have contingency plans in place for either large outbreaks or decompression of a facility. This caused a lot of resources to be directed to outbreak management of facilities.

**Area for Improvement 2:** Duplication of efforts when gathering information from the healthcare sector

**Reference:** N/A

**Analysis:** In the early stages of the response, multiple people and different departments and agencies were all reaching out to the hospitals to gather information. This was due to a lack of understanding of established roles within the medical and health system (MHOAC/LAC EMS), as well as not following the ICS structure.

## Objective 5: Maintain a robust epidemiologic surveillance to ensure data driven decision making

The strengths and areas for improvement for each objective aligned to these capabilities are described in this section.

- PHEP Capability 13: Public Health Surveillance and Epidemiological Investigation
- PHEP Capability 12: Public Health Laboratory Testing

### Strengths

The partial capability level can be attributed to the following strengths:

**Strength 1:** Data was thorough and shared with the appropriate personnel to help with decision making

**Strength 2:** Data made available to the public was transparent and timely

**Strength 3:** Integrated automated processes and streamlined workflows to improve efficiency

**Strength 4:** Developed capacity to handle large data sets

### Areas for Improvement

The following areas require improvement to achieve the full capability level:

**Area for Improvement 1:** Information from the Health Department required to make decisions were delayed in some circumstances.

**Reference:** City Emergency Operations Plan, LBDHHS All-Hazard Plan

**Analysis:** Staff from the EOC, IMT, and the JIC noted delays in their ability to make timely decisions or act due to gaps in information from the Health Department early on in the response.

**Area for Improvement 2:** Insufficient personnel to meet the demand for contact tracing, case investigation, and data analysis, and not enough data scientists trained on the data dashboard.

**Reference:** N/A

**Analysis:** The epidemiologists and communicable disease investigators became quickly overwhelmed with the number of cases coming in. There was a constant demand for data, but multiple places for where data was kept. The EOC data group was established with business system specialists and data scientists from IMT and the Technology and Innovation (TID) and Health Departments. The EOC data group established the data dashboard to assist with public facing data. However, there were not enough personnel trained on the backend of the dashboard and when these staff were unavailable, it caused a bottleneck. Reassigned City staff took time to train, which took the SMEs away from their critical work.

## Objective 6: Provide safe worksite locations for city employees, volunteers, and deployed state assets.

The strengths and areas for improvement for each objective aligned to these capabilities are described in this section.

- PHEP Capability 11: Nonpharmaceutical Interventions
- PHEP Capability 14: Responder Safety and Health
- PHEP Capability 15: Volunteer Management

### Strengths

The partial capability level can be attributed to the following strengths:

**Strength 1:** Frontline staff were provided the proper protective equipment for onsite operations

**Strength 2:** Safety of personnel and the public was prioritized with the utmost importance, including the set-up of isolation areas for staff and people experiencing homelessness at local hotels

**Strength 3:** Quick pivot to allowing for telecommuting and hybrid work

### Areas for Improvement

The following areas require improvement to achieve the full capability level:

**Area for Improvement 1:** Challenges with transition to staff working from home and hybrid work.

**Reference:** City Telecommuting Policy (final version pending)

**Analysis:** While it was necessary for some staff responding to the incident to change their worksite, working from home for all or some portion of the response, there were challenges to facilitating work-from-home options, such as technology and equipment issues. Some Departments were better equipped to transition staff to hybrid or work-from-home situations.

**Area for Improvement 2:** Lack of space that facilitated coordinated efforts while keeping staff safe, based on recommendations for distancing staff.

**Reference:** City Telecommuting Policy

**Analysis:** Due to the need for space and distancing staff, some coordinated efforts may have been compromised. For example, the Call Center, which is part of the JIC, had to be moved to a remote location because of space configurations/limitations, which made it more difficult for Call Center staff to be integrated into JIC operations.

**Area for Improvement 3:** Challenges with fit testing and lack of understanding of who was considered frontline staff

**Reference:** City Aerosolized Transmissible Disease (ATD) Policy

**Analysis:** Many personnel were given respirators that were not fit tested due to limited fit testing capacity and addition of personnel deployed by the state. When PPE was in limited supply, it was unclear who was considered frontline and how that determination was made. This issue was also raised during the vaccination roll out.

## Objective 7: Secure adequate staffing to support the public health infrastructure

The strengths and areas for improvement for each objective aligned to these capabilities are described in this section.

- PHEP Capability 13: Public Health Surveillance and Epidemiological Investigation
- PHEP Capability 14: Responder Safety and Health
- PHEP Capability 15: Volunteer Management

### Strengths

The partial capability level can be attributed to the following strengths:

**Strength 1:** City departments mobilized personnel quickly to assist with the response; specifically, LBFD reassigned Lifeguards to support testing and vaccination efforts

**Strength 2:** The State made assets available to request and expanded scopes of practice to assist with staffing

**Strength 3:** Just-in-time-training for staff re-assigned to new positions, such as call-center staff and case investigations/contact tracing

**Strength 4:** Integration of practices such as mental health check-in meetings for some departments/divisions

### Areas for Improvement

The following areas require improvement to achieve the full capability level:

**Area for Improvement 1:** Lack of clarity about and ability to successfully use the Disaster Service Worker (DSW) program, which resulted in understaffing and burnout for key operations.

**Reference:** DSW Policy

**Analysis:** Activation of the DSW program did not go as anticipated. While City staff must take an oath to be DSWs upon hire, they may not understand or realize the specifics of the policy. Challenges with the DSW program resulted in staff not willing

to be reassigned to roles in the response operation, in addition to other challenges (e.g., fear/anxiety amid a global pandemic, childcare issues, staff/family illness, a dearth of skills needed to fill specific roles).

**Area for Improvement 2:** Lack of staffing for key operations and/or no depth for certain positions.

**Reference:** City Emergency Operations Plan, DSW Policy

**Analysis:** City staff assigned to the operation had to deal with burnout, working long hours, union negotiations, and feeling unappreciated due to lack of staffing. This was a result of various factors, including challenges in implementing the DSW program, lack of understanding of scope and responsibilities, a slow hiring process when bringing on new staff, and general anxiety/fear by staff in response to a global pandemic with many unknowns. There were also challenges in hiring contracted temporary personnel for surge support due to proposition L. There were staff assigned to different positions that may not have been the right fit for the position due to a lack of training yet were placed there due to rank. This included lack of adequately trained personnel with the right qualifications in the EOC. Many supervisors or managers in the EOC had little to no training on emergency response or EOC functions. Feedback collected also included the desire for personnel not to be in uniform when activated to ensure all personnel are seen as equals. Additionally, if reassigned staff did not work out well in a particular area, it was difficult to bring in different staff as replacements. It would be useful if reassignments were more thoughtful and intentional and were based on skills assessed prior to activation of the DSW Policy.

**Area for Improvement 3:** Lack of support for staff, such as mental health resources.

**Reference:** Emergency Operations Plan

**Analysis:** With a shortage of staff, leading to staff feeling overworked and unappreciated, supports such as integration of mental health services and resources may have been beneficial to overall operations.

**Area for Improvement 4:** Lack of clarity for continued City operations.

**Reference:** Department Continuity of Operations Plans

**Analysis:** As the pandemic evolved, there was a need for continued operations of critical services. However, some staff responsible for these operations were assigned to COVID-19 response and had to complete tasks for their reassigned position in addition to their day-to-day role due to a lack of redundancy, resulting in staff feeling overworked and burned out, or tasks not being completed.

**Area for Improvement 5:** Lack of expertise for key roles needed to be filled by staff.

**Reference:** City Emergency Operations Plan, Epidemiology Emergency Response, City Staff Hiring Processes

**Analysis:** With the evolving needs of the pandemic, there arose a need for technical expertise/specialty for key areas due to not having staff with the expertise, or staff with the necessary expertise not being available because they were already in another role. Examples include staff working in epidemiology, clinics, data analysis, and technology. In some cases, roles or positions for the type of support required were not needed prior to the pandemic. Once positions or roles were established, it was difficult to hire staff (e.g., slow hiring/on-boarding process). Additionally, salaried staff assigned to the EOC were not compensated for their long hours, which may impact future incidents as salaried staff may not be willing to commit to responding to EOC activation.

# Appendix A: IMPROVEMENT PLAN

| Objective | Issue/Area for Improvement | Corrective Action | Capability Element | Primary Responsible Organization | Organization POC | Start Date | Completion Date |
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| Objective 1: Monitor and Provide Guidance | 1: Some components of ICS not used or followed at the EOC and/or at DOCs | Review ICS trainings with staff **annually** | | Disaster Preparedness; Health Department | | | |
| Objective 1: Monitor and Provide Guidance | 2: Staff did not follow City policies and plans once the IMT and/or EOC were activated | Summary of updated plans sent out to all staff **annuall**y with a request of records that they have read through the plans for accountability<br><br>Exercises/simulations of plans and review of policies to be done at least once annually | | Disaster Preparedness | | | |
| Objective 1: Monitor and Provide Guidance | 3: A need for more robust technology that is quickly and easily set up for staff | Stockpiles with inventory of emergency tech items needed, updated annually to ensure quality when activated<br><br>Create a general plan for set up for staff, when activated | | TID; Disaster Preparedness | | | |

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| | | Staff be trained on tech use | | | | | |
| Objective 1: Monitor and Provide Guidance | 4: Challenges with Emergency Operations Center activation and continued operations | Discuss with EOC about future activations and find a resolution / agreement to streamline operations for continued operations | | Disaster Preparedness | | | |
| Objective 1: Monitor and Provide Guidance | 5: Challenges with units sharing information within the operation in a way that supported timely public information | Reiterating HIPPA, creating basic information sharing protocols, and identifying information that is sensitive in debriefs to ensure everyone is on the same page<br><br>Addressing lack of trust by explaining the importance of why certain information can or cannot be shared, approval of messages should be reviewed by SME. | | Health Department; CM-Public Affairs | | | |
| Objective 1: Monitor and Provide Guidance | 6: Difficulty getting reliable, accurate information needed to make decisions and challenges with communication between teams | Identify SMEs early on and coordinate with PIOs on a template of information that may be requested and establish the frequency of updates needed. | | Health Department; CM-Public Affairs | | | |
| Objective 1: Monitor and Provide Guidance | 7: Lack of clarity on approval authority | Identify SMEs early in the response activation and determine the level of authority of SMEs or any | | CM-Public Affairs; Health Department | | | |

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| | | necessary approval processes. | | | | | |
| Objective 2: Receive and distribute medical countermeasures | 1: Insufficient public health lab capacity | Identify qualified lab technicians from Medical Reserve Corps that can be activated, to increase lab capacity as needed.<br><br>Cross train lab personnel to ensure there are multiple people who can process specimens properly. | | Health Department; Human Resources | | | |
| Objective 2: Receive and distribute medical countermeasures | 2: Lack of understanding of organizational structure and roles | Ensure all personnel involved in the response are briefed and information flows up and down, including organizational charts. | | Disaster Preparedness; Health Department | | | |
| Objective 2: Receive and distribute medical countermeasures | 1: Lack of autonomy in vaccine allocation and state vaccination system. | Continue to provide feedback to CDPH on lessons learned from the response and follow state EOM. | | Health Department; CDPH | | | |
| Objective 3: Manage resources | 1: A lack of processes for purchases during an emergency, particularly with high-cost items or purchases that had to be made quickly | Creating an emergency purchasing process and train personnel on allowable purchases and authorities needed for emergency purchases.<br><br>Establish emergency index codes and GL strings. | | Financial Management; Disaster Preparedness | | | |

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| Objective 3: Manage resources | 2: Lack of visibility into what resources were available | Identifying current inventory/services/stockpiles throughout the city.<br><br>Create a city-wide resource tracking system across to ensure transparency with resource availability | | Financial Management; Disaster Preparedness | | | |
| Objective 4: Assess healthcare community's capacity | 1: More health emergency preparedness and response training needed in the healthcare sector | Provide training opportunities to healthcare providers on the public health system and structure and work with providers on emergency plans.<br><br>Check with providers on an annual basis that new staff are trained on these emergency plans. | | Health Department | | | |
| Objective 4: Assess healthcare community's capacity | 2: Duplication of efforts when gathering information from the healthcare sector | Train staff across departments and agencies about established roles within the medical and health systems | | Health Department; Disaster Preparedness | | | |
| Objective 5: Epidemiologic surveillance | 1: Information from Health required to make decisions were delayed in some circumstances | Improve communications between staff from EOC, IMT, and JIT with the best, updated information at the time and ensure all involved understand roles and responsibilities to help | | Health Department; Disaster Preparedness | | | |

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| | | understand the need for information. | | | | | |
| Objective 5: Epidemiologic surveillance | 2: Insufficient personnel to meet the demand for contact tracing, case investigation, and data analysis, and not enough data scientists trained on the data dashboard | Cross train staff on contact tracing, case investigation, and data analysis skills.<br><br>Identify key staff who can lead a data dashboard and ensure cross training on programing and coding.<br><br>Utilize Medical Reserves Corps and other volunteer resources to meet the demands | | Health Department; Human Resources; TID | | | |
| Objective 6: Safe worksite locations | 1: Challenges with transition to staff working from home and hybrid work | HR identifying and reiterating expectations of WFH/Hybrid work model<br><br>Identifying roles and responsibilities that would allow for WFH options and providing support for roles and responsibilities that could not WFH (i.e., warehouse and clinics) | | Human Resources | | | |
| Objective 6: Safe worksite locations | 2: Lack of space that facilitated coordinated efforts while keeping staff safe based on recommendations for distancing staff | Identifying multiple office and conference room spaces to allow key staff to operate, considering limitations of distancing<br><br>Add redundancies for technology in the EOC and | | Disaster Preparedness; Human Resources: TID | | | |

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| | | identify a backup EOC location | | | | | |
| Objective 6: Safe worksite locations | 3: Challenges with fit testing and understanding of who was considered frontline staff | In coordination with City Safety and Occupational Health, work with departments to identify staff who need fit testing.<br><br>Develop the ability to do fit testing at a large-scale during emergency responses, including purchasing equipment and cross training staff to conduct the fitting. | | Human Resources | | | |
| Objective 7: Secure adequate staffing | 1: Lack of clarity about and ability to successfully use the Disaster Service Worker (DSW) program, which resulted in understaffing and burnout for key operations | Explain the importance of DSW during onboarding and hiring process and reenforce it when emergency is activated. Consider holding an annual exercise or training on the DSW expectations.<br><br>Ensure HR personnel are aware of the authorities they have to enforce the DSW program. | | Human Resources; City Attorney | | | |
| Objective 7: Secure adequate staffing | 2: Lack of staffing for key operations and/or no depth for certain positions | Identify key roles/positions for emergency response, specifically the EOC, that may need to be expanded during an emergency. List skillsets for each position and note City positions with similar skillsets. Ensure the | | Human Resources; Health Department; Disaster Preparedness | | | |

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| | | corresponding training is assigned<br><br>As needed contracts for contracted temporary personnel need to be discussed to find resolutions regarding proposition L | | | | | |
| Objective 7: Secure adequate staffing | 3: Lack of support for staff, such as mental health resources | Identify a couple of mental health, crisis counseling trained staff to oversee staff mental health wellbeing OR<br><br>Create a Mental Health Support Staff committee to be activated during emergency response | | Human Resources; Disaster Preparedness | | | |
| Objective 7: Secure adequate staffing | 4: Lack of clarity for continued City operations | Identify core roles and responsibilities to ensure COOP. | | All | | | |
| Objective 7: Secure adequate staffing | 5: Lack of expertise for key roles needed to be filled by staff | Create an emergency hiring process to fulfill gaps in staffing and competitive pay rates | | Human Resources | | | |

This IP is developed specifically for the City of Long Beach as a result of the response to COVID-19 from January 2020 through May 2022.

# APPENDIX B: EXERCISE PARTICIPANTS

| Participating Organizations |
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| **Federal** |
| ASPR |
| CDC |
| FEMA |
| **State** |
| CalOES |
| CDPH |
| EMSA |
| Government Operations Agency |
| **Local** |
| Los Angeles County |
| California State University Long Beach |
| Long Beach City College |
| West Coast University |
| Long Beach Unified School District |