



California COVID-19
Testing Task Force

The State of California's Submission

Emerging Issues (E) Project: Funding for the Enhanced Detection, Response, Surveillance, and Prevention of SARS-COV-2 Supported through the Paycheck Protection Program and Health Care Enhancement Act of 2020

May-June 2020

Background

This plan is required by the Paycheck Protection Program and Health Care Enhancement Act of 2020, PL 116-139. "Provided further, That not later than 30 days after the date of enactment of this Act, the Governor or designee of each State, locality, territory... receiving funds pursuant to this Act shall submit to the Secretary its plan for SARS-COV-2 testing, including goals for the remainder of calendar year 2020, to include:

1. the number of tests needed, month-by-month, to include diagnostic, serological, and other tests, as appropriate;
2. month-by-month estimates of laboratory and testing capacity, including related to workforce, equipment and supplies, and available tests; and
3. a description of how the State, locality, territory... will use its resources for testing, including as it relates to easing any SARS-COV-2 community mitigation policies."

Section 1: Describe the overarching testing strategy in your state

State plans for testing of SARS-CoV-2 should explicitly detail how a minimum of 2% of the state's population will be tested each month beginning immediately; as well as plans to increase that number by Fall 2020. Please provide the requested information to illustrate the specific details of your jurisdiction-wide SARS-CoV-2 testing plan. The jurisdictional strategy should address the following topics: (2,000 word limit)

- A. *How you will maximize the use of testing platforms (with an indication of which ones are high throughput), venues, and expanded workforce across your jurisdiction (e.g. public health labs, private, hospital, commercial, academic, etc.) to rapidly scale testing to accommodate an increased demand for SARS-CoV-2 tests, including utilizing point-of-care or other rapid result testing for local outbreaks?*
- B. *Detail your approach to provide testing at non-traditional laboratory sites (e.g., retail sites, community centers, residential medical facilities, or pharmacies).*
- C. *Describe your strategy for serology testing, if applicable.*



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D. Describe how you will communicate, collaborate and coordinate with the broad testing community within your state to ensure alignment in approach and progress toward jurisdictional goals. Plan should include regular outreach to testing partners to monitor test kits, supply, and reagent inventory and staffing levels.

The state of California is taking a multi-pronged approach to increasing availability and access for SARS-CoV-2 testing. In less than two months since late March, daily volumes of PCR testing in California have increased from 2,000 tests / day to a current peak of ~67,000 tests / day. The state currently has capacity to support testing of 4-5% of the overall population monthly, with additional initiatives in place to further expand testing volumes to support reopening. Maintaining and expanding capacity for testing requires resources, leadership, and active collaboration across stakeholders.

The state of California follows a comprehensive approach and has developed a fully-integrated testing plan that aims to optimize end-to-end testing workflows, including:

1. Providing expanded access to testing, in accordance with the regularly updated and broadening state testing guidelines, and designing tailored testing solutions for various populations based on their needs (including testing for high-risk and vulnerable populations);
2. Establishing a statewide network of sample collection sites that supports equitable access to testing across populations and geographies;
3. Optimizing capacity for sample processing and improving turnaround time for COVID-19 testing, including by maximizing use of available high-throughput testing platforms at California labs and ensuring adequate workforce to meet current and future testing needs; and
4. Supporting timely and accurate reporting of test results and integrating testing with contact tracing.

Given high testing needs, California is considering potential strategies to make costs of testing sustainable. I include considering new, cost efficient testing options, facilitating connections between local testing sites and labs, piloting new approaches to test processing (e.g., sample pooling).

To execute this plan, the state has launched a multi-stakeholder collaboration (referred to as Testing Task Force “TTF”) comprising public sector, private sector, and academic partners that take a comprehensive view on testing and actively collaborate with all involved stakeholders, including elected officials, local public health officers, industry associations, manufacturers, health systems, and other entities.

Question A.



To facilitate access to reliable, timely, and accurate specimen processing, the state has taken the following actions:

1. Gathered full information about capacity for COVID-19 testing in California, including all types of lab equipment and testing platforms potentially available for testing.
2. Identified labs that meet criteria for testing readiness, including CLIA licensure, registration with California Laboratory Field Services, ability to process FDA EUA RT-PCR tests as well as ability to report test processing outputs through CalREDIE, the statewide system for electronic disease reporting and surveillance. Total capacity of labs that meet all readiness criteria exceeds 120k PCR tests / day.
3. Identified high-throughput labs across public health, academic, and commercial sectors and set up regular communication with lab directors to optimize utilization of available resources and identify opportunities to expand testing.
4. For testing platforms that account for majority of available capacity (including Roche 6800 and 8800 Cobas machines, Hologic Panther, Abbott m2000, Thermo Fisher, and BD platforms), established ongoing outreach to manufacturers to understand availability of supplies and connect labs that are facing supply shortages to manufacturers.
5. Gathered information about lab operations, including working hours, workforce, and potential opportunities to redirect additional equipment capacity to COVID-19 testing as needed.
6. Launched a new Lab Testing Metrics App (an application that interacts with all Covid-19 testing labs across the state) to enhance reporting and proactively identify supply shortages, staffing needs as well as other bottlenecks that can potentially limit capacity for testing. The app allows labs to provide daily testing data and report supply shortages. Testing data is being reconciled with CalREDIE daily.
7. Launched sample pooling pilot with Stanford Hospital and Clinics, aiming to utilize scarce resources for test processing more efficiently and potentially to lower testing costs. Pilot results are expected to become available in early June. Once sample pooling protocols are validated, the state will issue guidelines to support broader utilization of this approach across labs.

Information gathered through these efforts allowed the state of California to identify testing platforms that are critical for scaling capacity statewide (e.g., Hologic Panther), establish infrastructure and create transparency across the system in order to manage risks (e.g., workforce and supply shortages), and prepare to scale testing volumes across various types of needs. To maximize the use of testing platforms, the state of California actively orchestrates how test processing capacity is used across testing needs and use cases, including fixed capacity for community-based testing, mobile testing solutions for rural areas, end-to-end testing



solutions for congregate settings as well as surge capacity for outbreak response and contact tracing.

Question B.

To meet future testing needs and provide equitable access to testing, the state of California advances multiple initiatives that expand specimen collection capacity beyond traditional sites (e.g., hospitals, federally qualified health centers, urgent care centers) and expand testing capacity beyond traditional public health laboratories (e.g., expand to include other new labs, commercial, clinical, ensure these additional labs are lined to CalREIDIE and using the Lab Testing Metrics App, and authorized under lab field services to conduct diagnostic testing).

Approach to expanding the network of collection sites is informed by several guiding principles, including:

- **Proximity** - The testing network needs to ensure that every Californian can reach a collection site within 30 minutes in urban areas and within 60 minutes in rural areas
- **Equity** - Populations in various living situations (e.g., long-term care facilities) should have equitable access to collection sites including
 - Correctional facilities;
 - Rural California
 - Primary language other than English
 - Strategically placed collection sites to serve underserved communities.
- **Appropriate prioritization** - Expansion of sample collection capacity should initially prioritize addressing the frequent testing needs of high-priority populations, according to the state testing guidance: [Interim Updated Guidance for Testing Prioritization](https://testing.covid19.ca.gov/wp-content/uploads/sites/332/2020/05/Interim-Updated-Guidance-for-Testing-Prioritization.pdf) (PDF) (testing.covid19.ca.gov/wp-content/uploads/sites/332/2020/05/Interim-Updated-Guidance-for-Testing-Prioritization.pdf).

Approach to expanding testing capacity is informed by additional guiding principles, including:

- **Cost efficiency** - Testing capacity should be expanded via the most cost-efficient option where possible (e.g., prioritize increasing existing site capacity over establishing new sites)
- **Technology** – Developing partnerships with academic institutions to provide high-throughput laboratory testing and connections to research and development.



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Appropriate prioritization – Public health laboratories and clinical laboratories with rapid turn-around times test the highest-priority, urgent specimens for faster disease control decisions while high-throughput labs provide regular testing for routine specimens.

Based on these guiding principles and identified testing needs, the state of California is planning to actively support the following types of collection sites:

- **Community-based collection sites in non-rural areas**, including 78 OptumServe sites and 14 Verily sites that are already available and have capacity to collect up to 17k specimens daily. This network utilizes public spaces (e.g., schools, theaters, county fairs, etc.), focusing primarily on underserved communities across the state. The network will be further expanded based on utilization and unmet demand for testing that are being monitored at a county level.

The state has launched a publicly available directory of all community-based sites that supports search by location and includes links to schedule appointments: [Map of COVID-19 Testing Sites in California](#)

(arcgis.com/apps/Nearby/index.html?appid=43118dc0d5d348d8ab20a81967a15401)

- **Shared fixed sites and mobile solutions for rural areas**, including 4 sites confirmed for launch in rural areas (in partnership with OptumServe) and mobile solutions to be deployed with Verily in 12 additional rural counties.
- **Rapid and mobile point of care solutions for outbreak response**, including pop-up collection sites, emergency departments and collaborations with public health labs to ensure appropriate outbreak investigation and response.

Collection sites for exposed populations identified through contact tracing, including potential options to make specimen collection easily accessible in pharmacies (with rapid processing in local high-throughput labs) as well as home-based collection solutions (to reduce healthcare worker exposure).

To rapidly scale sample collection across all types of sites, the state of California is centrally procuring different types of swabs, viral transport media, and sample collections kits (including approved alternatives) which are made available across the state through the existing Medical and Health Operational Area Coordinators (MHOACs) that have first-hand understanding of local needs and are best positioned to allocate limited supplies within their operating areas.

In addition, the state is leveraging local workforce to scale sample collection, including

Engaging local workforce at new collection sites (e.g., OptumServe and Verily) to ensure sites are operating at maximum capacity

Allowing pharmacists to order and collect specimens for authorized COVID-19 tests. [Order Waiving Restrictions on Pharmacists Ordering and Collecting Specimens for COVID-19 Tests](#) (PDF) (dca.ca.gov/licensees/pharmacists_covid19_tests.pdf)



Exploring option to engage providers in adjacent professions (e.g., EMT/EMS) to support specimen collection at congregate settings

Redirecting state workforce toward high-priority needs related to testing and contact tracing (e.g., staffing to actively trace and contact exposed populations).

Question C.

Understanding the need for speedy, cost-efficient, and readily accessible testing, the state is pursuing the following actions:

1. Evaluating alternative testing options, including various options for serological testing. In addition to expanding capacity for PCR testing, the state completed an in-depth assessment of serologic testing. CDPH and the TTF have released guidelines for specific appropriate indications for serologic test utilization by clinical providers and laboratories. Based on what is currently known about serology tests, the state is pursuing use of these tests in the following situations:
 - a. Determine prevalence: Surveillance studies to determine population-level estimates of exposure to SARS-CoV-2 (i.e., prevalence) in a community, typically through a serologic survey
 - b. Identify convalescent plasma donors: Identification of individuals who have recovered from SARS-CoV-2 infection (viral RNA negative) and are SARS-CoV-2 serology positive and can potentially donate plasma
 - c. Identify a false negative PCR result: In cases with high clinical suspicion for COVID-19 and negative SARS CoV-2 viral RNA test, a positive serology test would provide support for recent or prior SARS-CoV-2 infection
2. Making serologic testing available for providers and labs across the state. In April 2020, the state has procured and made available to local labs and providers 1.5 million serology testing kits for Abbott Architect and Alinity platforms.

The state of California will continue in-depth assessment of new testing options, including point of care and various types of serology tests (antigen and antibody). Given limited opportunities to replace PCR with serology testing in the near-term, the state is evaluating alternate PCR processing methodologies to conserve PCR tests (e.g., specimen pooling). Academic labs in the state are in the process of validating a methodology and may be able to apply the techniques to broader testing of asymptomatic populations in the future.



Question D.

In this time of uncertainty and rapidly changing circumstances, the state has made efforts to create open and transparent lines of communication with all relevant stakeholders, including general public, elected officials, county public health officers and emergency response teams, provider community, industry associations (e.g., California Hospital Association, California Association of Healthcare Facilities), and others.

Existing communication efforts include:

1. Testing Task force website: repository of all communication and public materials (e.g., CDPH guidelines, TTF newsletters) as they pertain to SARS-CoV-2 testing
2. Regular webinars for local, state, and federal elected officials: provide an update on efforts underway and answer questions
3. Regular webinars for county health officers: provide an update on centrally-driven distribution of supplies and collection efforts and tracking of county testing metrics
4. Strategic planning sessions with county public health officers, emergency response teams, and testing site coordinators
5. Weekly working sessions and briefings with lab directors and health system leaders.
6. Coordination of state-wide network of 30 public health laboratories to provide guidance and assess critical needs.
7. Test Matching to link requests from local health jurisdictions to testing resources in commercial, clinical, academic and public health labs.

In addition to managing statewide communication efforts, the Task Force actively supports communication at a local level, including community outreach guides for local stakeholders and communication toolkits to promote appropriate utilization of testing sites.

In addition to regular communication, the state is making investments in enhanced reporting and data transparency, including:

1. New Lab Testing Metrics App that supports daily information exchange with labs, gathering accurate information about testing volumes and supply shortages
2. Statewide and county-level testing dashboards that serve as a single source of truth about testing volumes
3. Additional dashboards available to selected stakeholders – e.g. testing site utilization dashboards with aggregated profiles of tested populations; supply distribution updates, etc.

Regular reporting informs state outreach efforts and has clear connection to state and local decision making. For example, decisions to expand collection sites' capacity are based on regular utilization monitoring and feedback from counties. Decisions to engage non-traditional



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testing laboratories are based on needs to rapidly scale testing to accommodate increased demand. Overall, the state provides significant autonomy to counties to define and implement solutions that address local needs while establishing effective state-level oversight to ensure appropriate utilization of state and federal resources, equitable access, and focus on cost-effective solutions.



Section 2: Describe your public health departments direct impact on testing expansion in your jurisdiction

The narrative response should address the following topics: (2,000 word limit)

- A. Describe how the health departments will directly expand testing capacity through their public health labs, contracts, partnerships, and other arrangements (e.g. adding testing capacity in local health departments, contracting with new labs, partnering with academic and community-based organizations, establishing drive-thru testing sites, etc.). Provide specifics about planned expansions of existing capacity, including procurement of new testing equipment or device platforms.
- B. How testing needs of vulnerable and at-risk populations will be prioritized, including the elderly, disabled, those living in congregate settings including nursing homes and prisons, racial and ethnic minorities, healthcare workers, and among persons experiencing homelessness.
- C. How barriers to efficient testing will be identified and overcome, including those related to underutilization of available assets and supply-chain difficulties, and considerations with end-to-end logistics of testing (from sample collection to reporting to public health and CDC).
- D. Describe the strategy for serology testing through the public health labs, if applicable, including specific platforms intended to be used.
- E. Describe the health department's plan for resource utilization and how the jurisdiction will manage testing and alignment with SARS-COV-2 community mitigation policies, including sentinel surveillance for vulnerable populations.
- F. Describe the health department's plan to expedite and streamline procurement, hiring, and on-boarding of new staff. Should include planned steps and ability for the jurisdiction to acquire supplies, reagents, test kits, collection materials required for expanding testing indicated in table #2 (below).

The California Department of Public Health (CDPH) is leading the state-wide effort to scale capacity for testing and address testing needs in California. CDPH actively collaborates with other state departments (e.g., California Department of Corrections and Rehabilitations, California Department of State Hospitals, etc.) as well as multiple private and public stakeholders. In addition, CDPH works in close collaboration with the Governor's Office, launching testing efforts that are needed to support plans for state reopening and easing of social distancing measures.



Question A.

California's 58 counties and 61 Local Health Jurisdictions (LHJ) function autonomously to protect public health and work in partnership with one another and with CDPH. Each LHJ has an appointed Local Health Officer who holds broad jurisdictional authority to protect public health by any means necessary under California statute and regulations. The California Department of Public Health maintains close collaborations with LHJs and has taken several measures to increase capacity for sample collection, test processing, and reporting at local, regional, and state levels.

California's network of 30 public health laboratories serve as the front-line testing capacity for emerging diseases and outbreaks. Providing standardized supplies, reagents and instruments to the public health laboratories significantly improves their capacity, throughput, timeliness and consistency of results. Assisting the public health laboratories to build robust electronic data transmission methods also improves state and local understanding of disease prevalence.

The establishment of a statewide network of specimen collection sites by the Testing Task Force enabled LHJs to expand testing capacity for specific populations, prioritize testing in underserved communities and for vulnerable populations as well as design tailored solutions for essential workers. Efforts to expand capacity for sample collection include:

1. Partnering with OptumServe and Verily to setup 100+ new collection sites with total additional capacity of ~17K PCR tests/day (additional capacity expansion will be considered and approved by the state based on unmet needs and resource utilization across counties)
 - a. OptumServe and Verily are providing end-to-end solutions, from sample collection supplies to contracting with commercial labs for test processing to reporting individual test results
 - b. Both partners secure workforce for sample collection sites, leveraging local resources and delivering required training and onboarding
 - c. The vendors are also responsible for logistics for transporting specimens to their partner labs
 - d. The state (CDPH and the Governor's Office of Emergency Services or OES) provides ongoing oversight, makes decisions about capacity expansion or resource reallocation based on site performance, facilitates community outreach at a local level, as needed to ensure appropriate site utilization.
2. Providing access to testing for populations in rural areas, including through mobile sites
 - a. CDPH has leveraged partnership with OptumServe to open 6 testing sites shared by rural counties. CDPH led geospatial modelling to identify site locations that would make testing accessible for people living in remote rural areas.



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- b. CDPH and OES are launching a new partnership with Verily to set up mobile testing units that would cover 12 rural counties and enable the population in these areas to access testing without having to travel long distances
3. Procuring and distributing collection supplies (e.g., swabs, viral transport media)
 - a. Active outreach to suppliers (including multiple local partners), coordination of supply needs with FEMA, and efforts to explore multiple alternative supply options (e.g., 3D printed swabs) helped the CDPH secure significant volumes of supplies to cover initial needs post reopening (1.4M of 2.0M swabs received to date have been distributed, additional ~12M swabs are confirmed for delivery). Additional efforts and resources are needed to secure supplies through end of 2020.
 - b. Distribution to counties is organized leveraging the existing emergency response coordination infrastructure led by CDPH and OES. By leveraging the existing infrastructure of the Medical and Health Coordination Center (MHCC), the state streamlines ordering and distribution, ensures equitable availability, and tracks ongoing and changing demand for supplies over time.

To ensure sufficient capacity for testing, the state is playing an active role in validating the overall lab capacity, expanding capacity of public health labs available for COVID-19 testing, and facilitating connections between other labs, testing sites, and populations that need testing. State initiatives to scale testing include:

1. Identifying high-throughput labs (e.g., public health, academic and commercial) and optimizing end-to-end testing workflows based on geographic proximity, lab capabilities (e.g., billing, specimen transportation), turnaround time. Specific examples of optimized end-to-end testing facilitated by CDPH include:
 - a. Expanding existing capacity of public health labs by addressing supply shortages and operational bottlenecks
 - i. Assistance with supply procurement through agencies and vendors.
 - ii. Procurement of new testing equipment or device platforms.
 1. All public health labs are recommended to have at least one molecular test platform compatible with the CDC EUA and at least one semi- or fully-automated serology test platform.
 - iii. Support for electronic laboratory reporting through the Lab Testing Metrics app, and construction of interfaces for data transmission.
 1. All public health labs are recommended to have a Laboratory Information Management System (LIMS) and a web portal for electronic test order and result.



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- iv. Support for public health lab workforce through weekly meetings and training opportunities.
 - b. Partnering with academic labs (e.g., Stanford, USCF, UCLA) and supporting their efforts to serve as processing hubs for the neighboring testing locations (e.g., community-based sites)
 - c. Initiating contracts with commercial labs that offer end-to-end testing solutions and have significant available capacity
 - d. Actively collaborating with national labs (e.g., Quest, Labcorp) to ensure effective utilization of their capacity
 - e. Partnering with labs that offer advanced capabilities and services (e.g., genome sequencing with CZ BioHub)
2. Procuring selected testing supplies for high-throughput platforms (e.g., Abbott m2000 and Alinity) and actively collaborating with manufacturers to coordinate supply availability (e.g., Roche, Hologic, Thermo Fisher).

Identifying opportunities to further expand lab capacity and validate testing readiness for commercial and research labs that currently don't perform COVID-19 testing (including plans to repurpose research lab capacity for COVID-19 testing).

Question B.

Given the limited availability of diagnostic tests in March 2020, the California Department of Public Health set forth guidance for public health officials, health care providers, and laboratories for determining prioritization of specific groups for PCR molecular testing. As testing capacity rapidly expanded across California, the state guidance was updated to support expanded testing. Based on these guidelines, CDPH has recommended several tiers of prioritization:

1. Tier 1: Testing of the most vulnerable populations (e.g., hospitalized patients, symptomatic and asymptomatic healthcare workers, first responders and social service workers, persons over the age of 65 or any age with underlying medical conditions at risk for more severe COVID 19 illness, individuals identified through contact tracing, workers and residents of congregate settings, other essential workers)
2. Tier 2: Testing of broader populations that are lower risk and asymptomatic
3. Community surveillance: Surveillance testing of asymptomatic persons as part of community or regional surveillance programs.

To support testing in line with these guidelines, some of the measures taken include:



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1. Prioritizing underserved communities and equitable access to testing when placing new collection sites (e.g., in partnership with OptumServe and Verily)
2. Arranging for healthcare workers, essential employees, and other high-priority populations to be tested at new collection sites (e.g., OptumServe, Verily)
3. Setting up tailored solutions for testing of vulnerable populations in congregate settings, examples include:
 - a. Offering a statewide testing model for SNF workers, including options for onsite sample collection and rapid point-of-care processing in case of outbreaks. We have provided a comprehensive list of testing labs and vendors across California on the [Testing Task Force](https://testing.covid19.ca.gov) website (testing.covid19.ca.gov), who are ready to provide end-to-end scalable testing for employers including SNF, correctional facilities, etc. and provide link.
 - b. Facilitating onsite access to testing for correction facilities' workers and inmates
 - c. Opening special collection sites for homeless populations (with culturally competent trained staff, walk-in availability, additional support resources)
4. Offering financial assistance to selected populations where insurance coverage is not feasible (e.g., coverage of testing costs for uninsured populations if they are sampled at OptumServe sites or other settings)

In addition, CDPH labs and LHJ public health labs will continue playing a central role in responding to outbreaks, including securing surge capacity for sample collection and using public health lab capabilities for test processing and outbreak investigation.

Question C.

The Testing Task Force identified three main areas of improvement in the end-to-end logistics of testing. To address these gaps in the testing infrastructure, the state is taking the following measures:

1. Matching labs to collection sites based on a match-making model: this is aimed to reduce underutilization of capacity in some high throughput labs and ensure access to testing for healthcare facilities with low throughput or supply constrained labs. The model matches high throughput labs to collection sites in the neighboring areas.
2. Procuring supplies centrally and using a robust distribution model to ensure areas of high demand have sufficient supplies while inventory is not being held in other parts of the state.
3. Tracking and reporting testing, supply distribution, site utilization, and other performance metrics frequently and transparently through regularly published dashboards and reports at a state and county level. In addition, the state has enhanced data collection efforts and



launched a “Lab Metrics App” that is collecting lab level data on processing and planned upgrades to the central test tracking system (CaREDIE)

Question D.

CDPH released guidelines that limit the use of serologic testing in the state to a few use cases, including surveillance studies to determine COVID-19 prevalence, identification of convalescent plasma donors, identification of false negative PCR test results when clinical suspicion is high for COVID 19, and indicating prior COVID-19 infection. [CDPH COVID-19 Serology Testing Guidelines](https://www.cdph.ca.gov/Programs/CID/DCDC/Pages/Imz/Pages/Serology-Testing-Indications-5-5-2020.aspx) (PDF) ([testing.covid19.ca.gov/wp-content/uploads/sites/332/2020/05/Serology-Testing-Indications-5-5-2020.pdf](https://www.cdph.ca.gov/Programs/CID/DCDC/Pages/Imz/Pages/Serology-Testing-Indications-5-5-2020.aspx)). CDPH has setup a working group of experts with scientific and commercial understanding of serology to stay updated on the developments in the space and refresh guidelines as appropriate as new information or tests become available.

Public health labs are expected to conduct serologic testing for epidemiological studies as well as plasma donation screening. Platforms to be used include the Abbott Architect and Alinity, Diasorin Liasion, Bio-Rad EVOLIS, Dynex DS2, and various semi-automated instruments. Utilization of serology testing for diagnostic purposes or to support return-to-work decisions is not recommended according to the state guidelines.

Question E.

In addition to the efforts that are being implemented in collaboration with partners, CDPH is taking a more direct role in critical areas. These areas will be the focus for resource utilization:

1. CDPH is making investment in reporting infrastructure, establishing new tools and augmenting existing systems to measure testing volumes daily and at a granular level (e.g., county level dashboards, lab level dashboard). Insights from these reports inform decisions to redeploy resources and focus efforts to de-bottleneck testing on important geographies and vulnerable populations.
2. CDPH is engaging with local jurisdictions to ensure they have sufficient testing capacity to meet the current target of 1.5 tests per day per 1000 people, one of the metrics required for reopening.
3. CDPH is focused on serving vulnerable populations. The department is creating guidance on testing frequency and working with relevant departments and local authorities to ensure availability and access to testing

For example, for SNF workers and residents, CDPH issues guidance to all facilities on how to implement a testing plan including baseline, surveillance and targeted testing; identifying a statewide testing model; evaluating options for onsite sample collection and looking for solutions to provide rapid point-of-care testing in case of an outbreak.



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4. CDPH will be conducting population-based surveillance to understand population level trends in prevalence by, region and statewide. This surveillance will be conducted in partnership with Emory University as part of a national prevalence monitoring effort.
5. CDPH is leading efforts to integrate testing, genomic sequencing and contact tracing, ensuring availability of “fast track” testing options for individuals identified through contact tracing as well as appropriate follow-up with care and social support, to the extent these resources are available.

Question F.

In parallel to supporting the community mitigation and surveillance testing plans, measures are being taken to creating lab capacity, procure supplies, and augment the workforce. Planned measures include:

1. Exploring local workforce options to strengthen and expand sample collection capabilities. OptumServe is preferentially employing local workforce. We are linking local employers to lab list on the [Testing Task Force](https://testing.covid19.ca.gov) website (testing.covid19.ca.gov).
2. Procuring and distributing swabs, viral transport media, and collection kits. A multi-stakeholder group focused on supplies is tracking supplies available for distribution and projecting future needs to inform potential shortfalls and place orders ahead of time.
3. Working with labs to have an ongoing understanding of what reagents are short in supply and connecting them with appropriate manufacturers. CDPH is also prepared to recommend that the state purchase critical supplies of reagents directly if appropriate.
4. Tracking test processing needs and availability of equipment throughput to support testing demand. CDPH is also prepared to recommend the state purchase equipment on behalf of labs or enter contracts with national labs to create capacity.
5. Working with the state and local authorities to create a contact tracing workforce of 10,000 people, as part of phase one, for identifying potentially exposed populations for rapid testing. The state estimates that we could need a total of 20,000 contact tracers.
6. Rapid procurement, hiring, and on-boarding of new contact tracing staff will be accomplished through contract agencies.
7. Ability of the jurisdiction to acquire supplies, reagents, test kits and collection materials required for expanding testing is dependent on federal supply.



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Please note: Methodology is indicated in footnotes

Section One: Tables

Table 1a: Number of individuals planned to be tested, by month

BY MONTH:	May-20	Jun-20	Jul-20	Aug-20	Sep-20	Oct-20	Nov-20	Dec-20	TOTAL
Diagnostics* ¹	1,350,000	1,800,000							3,150,000
Serology ²	250,000	575,000							825,000
TOTAL	1,600,000	2,375,000	0	0	0	0	0	0	

*Each jurisdiction is expected to expand testing to reach a minimum of 2% of the jurisdictional population.

Table 1b: Planned expansion of testing jurisdiction-wide

Name of testing entity	Testing venue (select from drop down)	Performing Lab (if different from testing entity)	Daily diagnostic throughput ³	Daily serologic throughput ⁴	Platforms or devices used (list all)	Specific at-risk populations targeted (list all)
OptumServe (Specimen collection)	Community-based	Quest	12,500	0	Roche 8800	Healthcare and safety workers, racial and ethnic minorities, other populations
Verily (Physical, mobile, Specimen collection)	Drive-thru testing site	Quest	8,000	0	Roche 8800	Healthcare and safety workers, racial and ethnic minorities, other populations
						Healthcare and safety workers, racial and

¹ Diagnostic tests for May reflect actuals up to 5/17, rest of May estimated by assuming average growth (~ 3% per day) achieved in May sustains through the month. Diagnostic tests for June estimated at 60,000 tests/ day for 3 weeks and 80,000 tests/ day for 1 week.

² Serology tests for May reflect actuals up to 5/16, rest of May estimated by assuming average tests completed per day (~8000/ day) in May sustains through the month. Serology tests for June estimated assuming 5% growth day over day.

³ Daily diagnostic throughput for collection sites reflects existing and known planned capacity expansion (e.g. expansion of 15 OptumServe sites, 6 new OptumServe sites, 6 new Verily mobile sites). Daily diagnostic throughput for labs reflects testing volumes on peak day between 5/12 and 5/19.

⁴ Daily serologic throughput for labs reflects testing volumes on peak day between 5/12 and 5/19.



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						ethnic minorities, other populations
Adventist	Hospital or clinical facility		500	40	Abbot ARCHITECT i1000, Abbott ID Now, BD Max, Cepheid GeneXpert	Patients
Cedars-Sinai Hospital Lab	Hospital or clinical facility		350	1,100	Abbot ARCHITECT i2000, Abbott ID Now, BD Max, Thermo Fisher ABI 7500 FastDX	Patients
Dignity	Hospital or clinical facility		550		Abbott ID Now, BD Max, BioFire FilmArray, Cepheid GeneXpert, Abbott m2000	Patients
KorvaLabs	Commercial or private lab		12,000			Healthcare and safety workers, other essential workers, SNF, other populations
Labcorp	Commercial or private lab		5,300	3,500		
Providence	Hospital or clinical facility		1,250		Abbott ID Now, Cepheid GeneXpert, BioFire FilmArray, Hologic Panther, BD Max	Patients
Quest	Commercial or private lab		19,000	3,900		
Southern California Permanente Medical Group	Hospital or clinical facility		2,750		Abbott ID Now, Roche Cobas 6800	Patients
Scripps	Hospital or clinical facility		500		Hologic Panther, BD Max, GenMark ePlex, Hologic Panther Fusion, Dynex DS2, Thermo Fisher ABI 7500 FastDX	Patients



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Sharp Memorial Hospital	Hospital or clinical facility		750		Abbott m2000, Luminex Aries, Cepheid GeneXpert, DiaSorin LIAISON MDX, Roche Cobas 6800	Patients
Stanford	Hospital or clinical facility		980	330	Qiagen EZ1, QIA Symphony SP, Hologic Panther Fusion, Cepheid GeneXpert, Hologic Panther, Mesa Accula	Patients
Sutter	Hospital or clinical facility		980		Abbott ID Now, Cepheid GeneXpert, DiaSorin LIAISON MDX, DiaSorin Simplexa COVID-19 Direct Assay, Hologic Panther, Hologic Panther Fusion, Roche Cobas 6800, BioFire FilmArray	Patients
Kaiser Permanente Berkeley (Regional Laboratory)	Hospital or clinical facility		2,200		Cepheid GeneXpert, Roche Cobas 8800	Patients
UC Davis	Hospital or clinical facility		280	50	Roche Cobas 6800, Thermo Fisher ABI 7500, GenMark ePlex, BD Max	Patients
UC Irvine	Hospital or clinical facility		320	70	DiaSorin Simplexa COVID-19 Direct Assay, DiaSorin LIAISON MDX, Cepheid GeneXpert, GenMark ePlex, Abbott m2000	Patients
UCLA	Hospital or clinical facility		350	230	Cepheid GeneXpert, DiaSorin Simplexa COVID-19 Direct Assay, Hologic Panther Fusion, QIAGEN QIAstat-Dx Analyzer, QIAstat-Dx Respiratory SARS-CoV-2 Panel assay	Patients



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UCSD	Hospital or clinical facility		1,000	380	Abbott ID Now, Abbott m2000, GenMark ePlex, Luminex Aries, Roche Cobas 6800	Patients
UCSF	Hospital or clinical facility		1,100	35	Abbott m2000, DiaSorin LIAISON MDX, GenMark ePlex, Hologic Panther Fusion, Abbott ID Now	Patients
USC	Hospital or clinical facility		400	190	Roche Cobas 6800, Cepheid GeneXpert, Qiacube, Thermo Fisher Quantstudio	Patients
Westpac Labs	Commercial or private lab		2,600	400	Roche Cobas 6800	
Los Angeles County PHL	Public health lab		577	TBD	BioFire FilmArray, Cepheid GeneXpert, Abbott ID Now, Abbott m2000, Hologic Panther Fusion, EasyMag, MagNA Pure Compact, MagNA Pure 2.0, QIacube, Qiagen EZ1, Thermo Fisher ABI 7500 FastDX, Thermo Fisher Quantstudio, Abbot ARCHITECT i1000, DiaSorin LIAISON XL, Dynex DSX	Patients, outbreaks, contacts, SNFs, healthcare and safety workers, racial and ethnic minorities, other populations, surveillance
San Diego County PHL	Public health lab		550	TBD	Cepheid GeneXpert, Abbott m2000, MagNA Pure Compact 24, Qiagen EZ1, Thermo Fisher ABI 7500 FastDX, Abbot ARCHITECT i1000, DiaSorin LIAISON XL	Patients, outbreaks, contacts, SNFs, healthcare and safety workers, racial and ethnic minorities, other populations, surveillance
Orange County PHL	Public health lab		398	TBD	BioFire FilmArray, Cepheid GeneXpert, Hologic Panther, EasyMag, QIacube, Qiagen EZ1, Thermo Fisher ABI 7500 FastDX, Abbot ARCHITECT i1000, Dynex DS2	Patients, outbreaks, contacts, SNFs, healthcare and safety workers, racial and ethnic minorities, other populations, surveillance



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San Francisco County PHL	Public health lab		375	TBD	Cepheid GeneXpert, Abbott m2000, Hologic Panther, QIAcube, Qiagen EZ1, MagNA Pure Compact, Thermo Fisher ABI 7500 FastDX, Thermo Fisher Quantstudio, Roche LightCycler 480, Abbot ARCHITECT i1000	Patients, outbreaks, contacts, SNFs, healthcare and safety workers, racial and ethnic minorities, other populations, surveillance
Sonoma County PHL	Public health lab		282	TBD	Cepheid GeneXpert, QIAcube, MagNA Pure Compact, Thermo Fisher ABI 7500 FastDX, Diasorin Liasion	Patients, outbreaks, contacts, SNFs, healthcare and safety workers, racial and ethnic minorities, other populations, surveillance
Ventura County PHL	Public health lab		282	TBD	Abbott ID Now, Cepheid GeneXpert, Hologic Panther, QIAcube, Thermo Fisher ABI 7500 FastDX, Bio-Rad EVOLIS, Bio-Rad BioPlex 2200	Patients, outbreaks, contacts, SNFs, healthcare and safety workers, racial and ethnic minorities, other populations, surveillance
CDPH Viral and Rickettsial Disease Laboratory (VRDL)	Public health lab		229	TBD	Cepheid GeneXpert, BioFire FilmArray, Abbott ID Now, EasyMag, Qiagen EZ1, MagNA Pure 2.0, MagMax, KingFisher, Thermo Fisher ABI 7500 FastDX	Patients, outbreaks, contacts, SNFs, healthcare and safety workers, racial and ethnic minorities, other populations, surveillance
Napa-Solano-Yolo-Marin County PHL	Public health lab		223	TBD	Cepheid GeneXpert, MagNA Pure Compact, KingFisher, Thermo Fisher ABI 7500 FastDX, Roche LightCycler 480, BD MAX, Bio-Rad EVOLIS	Patients, outbreaks, contacts, SNFs, healthcare and safety workers, racial and ethnic minorities, other populations, surveillance
Santa Clara County PHL	Public health lab		208		Cepheid GeneXpert, QIAcube, Qiagen EZ1, MagNA Pure Compact, Thermo Fisher ABI 7500 FastDX	Patients, outbreaks, contacts, SNFs, healthcare and safety workers, racial and ethnic minorities, other populations, surveillance



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Sacramento County PHL	Public health lab		190	TBD	Cepheid GeneXpert, Hologic Panther, QIAcube, MagNA Pure Compact, Thermo Fisher ABI 7500 FastDX, Bio-Rad BioPlex 2200	Patients, outbreaks, contacts, SNFs, healthcare and safety workers, racial and ethnic minorities, other populations, surveillance
Alameda County PHL	Public health lab		188	TBD	Cepheid GeneXpert, Abbott ID NOW, Abbott m2000, MagNA Pure Compact, Thermo Fisher ABI 7500 FastDX, Dynex DS2	Patients, outbreaks, contacts, SNFs, healthcare and safety workers, racial and ethnic minorities, other populations, surveillance
Monterey County PHL	Public health lab		182		Cepheid GeneXpert, Abbott ID Now, QIAcube, King Fisher, Thermo Fisher ABI 7500 FastDX, Roche LightCycler 480	Patients, outbreaks, contacts, SNFs, healthcare and safety workers, racial and ethnic minorities, other populations, surveillance
San Joaquin County PHL	Public health lab		159	TBD	Cepheid GeneXpert, Hologic Panther, MagNA Pure 2.0, Thermo Fisher ABI 7500 FastDX, Bio-Rad EVOLIS	Patients, outbreaks, contacts, SNFs, healthcare and safety workers, racial and ethnic minorities, other populations, surveillance
San Bernardino County PHL	Public health lab		148	TBD	Cepheid GeneXpert, Hologic Panther, MagNA Pure Compact, Thermo Fisher ABI 7500 FastDX, Bio-Rad EVOLIS	Patients, outbreaks, contacts, SNFs, healthcare and safety workers, racial and ethnic minorities, other populations, surveillance
Contra Costa County PHL	Public health lab		133	TBD	Cepheid GeneXpert, Hologic Panther, QIAcube, Qiagen EZ1, Thermo Fisher ABI 7500 FastDX, Abbot ARCHITECT i1000	Patients, outbreaks, contacts, SNFs, healthcare and safety workers, racial and ethnic minorities, other populations, surveillance



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San Luis Obispo County PHL	Public health lab		112	TBD	BioFire Film Array, Cepheid GeneXpert, Hologic Panther, QIAcube, Thermo Fisher ABI 7500 FastDX	Patients, outbreaks, contacts, SNFs, healthcare and safety workers, racial and ethnic minorities, other populations, surveillance
Riverside County PHL	Public health lab		108	TBD	Cepheid GeneXpert, Abbott ID NOW, Roche Cobas 6800, Hologic Panther, MagNA Pure 2.0, Thermo Fisher ABI 7500 FastDX, Roche LightCycler 480, Bio-Rad EVOLIS	Patients, outbreaks, contacts, SNFs, healthcare and safety workers, racial and ethnic minorities, other populations, surveillance
Tulare County PHL	Public health lab		107		Cepheid GeneXpert, Abbott ID NOW, QIAcube, Qiagen EZ1, MagNA Pure Compact, Thermo Fisher ABI 7500 FastDX	Patients, outbreaks, contacts, SNFs, healthcare and safety workers, racial and ethnic minorities, other populations, surveillance
Humboldt County PHL	Public health lab		91		Cepheid GeneXpert, Abbott ID NOW, QIAcube, MagNA Pure Compact, QIAcube, Thermo Fisher ABI 7500 FastDX	Patients, outbreaks, contacts, SNFs, healthcare and safety workers, racial and ethnic minorities, other populations, surveillance
Long Beach City PHL	Public health lab		85		Hologic Panther, Thermo Fisher ABI 7500 FastDX	Patients, outbreaks, contacts, SNFs, healthcare and safety workers, racial and ethnic minorities, other populations, surveillance
Shasta County PHL	Public health lab		78		Cepheid GeneXpert, Abbott ID NOW, Hologic Panther, MagNA Pure Compact, Thermo Fisher ABI 7500 FastDX	Patients, outbreaks, contacts, SNFs, healthcare and safety workers, racial and ethnic minorities, other populations, surveillance



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Fresno County PHL	Public health lab		66	TBD	Cepheid GeneXpert, QIAcube, Thermo Fisher ABI 7500 FastDX, BD MAX	Patients, outbreaks, contacts, SNFs, healthcare and safety workers, racial and ethnic minorities, other populations, surveillance
San Mateo County PHL	Public health lab		58	TBD	Cepheid GeneXpert, Hologic Panther, QIAcube, Thermo Fisher ABI 7500 FastDX, Bio-Rad EVOLIS	Patients, outbreaks, contacts, SNFs, healthcare and safety workers, racial and ethnic minorities, other populations, surveillance
Imperial County PHL	Public health lab		57	TBD	Cepheid GeneXpert, Abbott ID NOW, BD MAX, Dynex DS2	Patients, outbreaks, contacts, SNFs, healthcare and safety workers, racial and ethnic minorities, other populations, surveillance
Butte County PHL	Public health lab		25	TBD	Cepheid GeneXpert, Abbott ID NOW, Hologic Panther, Qiagen EZ1, Thermo Fisher ABI 7500 FastDX	Patients, outbreaks, contacts, SNFs, healthcare and safety workers, racial and ethnic minorities, other populations, surveillance
Kern County PHL	Public health lab		25	TBD	Cepheid GeneXpert, Abbott ID NOW, Hologic Panther	Patients, outbreaks, contacts, SNFs, healthcare and safety workers, racial and ethnic minorities, other populations, surveillance
Santa Barbara County PHL	Public health lab		25	TBD	Abbott ID Now	Patients, outbreaks, contacts, SNFs, healthcare and safety workers, racial and ethnic minorities, other populations, surveillance
Kings County PHL	Public health lab		10	TBD	Cepheid GeneXpert	Patients, outbreaks, contacts, SNFs, healthcare and safety



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						workers, racial and ethnic minorities, other populations, surveillance
Madera County PHL	Public health lab		10	TBD	Cepheid GeneXpert	Patients, outbreaks, contacts, SNFs, healthcare and safety workers, racial and ethnic minorities, other populations, surveillance
Merced County PHL	Public health lab		10	TBD	Cepheid GeneXpert	Patients, outbreaks, contacts, SNFs, healthcare and safety workers, racial and ethnic minorities, other populations, surveillance
Other labs ⁵			7,829	1,971	Varies by lab	Other labs ⁶

⁵ “Other labs” include all CA labs beyond those listed by name. This includes commercial, academic, hospital, and public health labs.



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Section Two: Tables

Table 1a: Planned expansion of diagnostic testing driven by public health departments

BY MONTH:	May-20	Jun-20	Jul-20	Aug-20	Sep-20	Oct-20	Nov-20	Dec-20	TOTAL
Number of additional* staff to meet planned diagnostic and serologic testing levels	<i>No additional staff needed</i>	<i>No additional staff needed</i>							0
How many additional* testing equipment/devices are needed to meet planned testing levels? (provide an estimated number, and include platform details in narrative above)	<i>No additional equipment needed</i>	1 high-throughput molecular instrument for CDPH-VRDL (Hologic Panther or Roche Cobas) Applied Biosystems 7500 Fast Dx Real Time PCR Instrument (w/ control tower) – 6 High-throughput extraction instruments - 6							0
Volume of additional swabs needed to meet planned testing levels ⁷	1,350,000	1,800,000							3,150,000
Volume of additional media (VTM, MTM, saline, etc.) needed to	1,350,000	1,800,000							3,150,000

⁷ Excludes 250,000 swabs received from FEMA



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meet planned testing levels ⁺⁺⁸									
Volume of additional reagents needed to meet planned testing levels, by testing unit and platform (i.e. 100K/day - Hologic panther; 100k/day - Thermofisher)	<p>Tests for our 15 installed Roche Cobas (1.5-2M tests/month)</p> <p>New Aptima kits for the 163 Hologic Panthers installed in California (1-1.5M tests/month)</p> <p>Additional Cepheid GeneXpert tests for 41 machines (100K tests/month)</p> <p>Qiagen RNeasy Mini Kits (100K kits/month)</p> <p>Abbot ID Now Kits – 1,800 kits/month</p>	<p>Tests for our 15 installed Roche Cobas (1.5-2M tests/month)</p> <p>New Aptima kits for the 163 Hologic Panthers installed in California (1-1.5M tests/month)</p> <p>Additional Cepheid GeneXpert tests for 41 machines (100K tests/month)</p> <p>Qiagen RNeasy Mini Kits (100K kits/month)</p> <p>Abbot ID Now Kits – 1,800 kits / month</p>							

* Report new monthly additions only, not cumulative levels

⁺⁺ For May and June, only include needs beyond the supplies provided by FEMA. Report new monthly additions only, not cumulative levels.

⁸ Excludes 125,000 VTM received from FEMA



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Table 1b: Planned expansion of serologic testing driven by public health departments

BY MONTH:	May-20	Jun-20	Jul-20	Aug-20	Sep-20	Oct-20	Nov-20	Dec-20	TOTAL
Number of additional* equipment and devices to meet planned testing levels	No additional equipment needed	1 high-throughput serology instrument for CDPH-VRDL (Abbott Architect) 12 serology instruments for public health labs							0
Volume of additional reagents needed to meet planned testing levels, by testing unit and platform (i.e. 100K/day - Hologic panther; 100k/day - Thermofisher)	<i>No additional reagents needed</i>	<i>No additional reagents needed</i>							

* Report new monthly additions only, not cumulative levels

** For May and June, only include needs beyond the supplies provided by FEMA. Report new monthly additions only, not cumulative levels.