

Colorado COVID-19 Community Testing

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Metro Denver Partnership for Health



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Metro Denver Partnership for Health



About the Metro Denver Partnership for Health

The Metro Denver Partnership for Health (MDPH) is a partnership of key stakeholders committed to improving health in metro Denver through regional collaboration and action.

MDPH is currently governed by the six local public health agencies serving the seven-county Denver metro area, including Adams, Arapahoe, Boulder, Broomfield, Denver, Douglas, and Jefferson counties. MDPH is a partnership between public health, health systems, Regional Accountable Entities, human services, and regional health alliances. MDPH works alongside regional leaders in behavioral health, environment, philanthropy, local government, education, and other areas to achieve its goals of promoting health and well-being across the region. MDPH's work impacts nearly 3 million Coloradans — 60% of the state's population — who live in this region.

In order to anticipate what happens next with COVID-19, MDPH began coordinating three workgroups in March 2020 to address how interested jurisdictions can prepare for their communities' public health needs when stay-at-home orders are lifted. The goal of these workgroups is to identify and inform strategies and action plans for how to mitigate increased spread of disease. Workgroups consist of local and statewide public health and health care stakeholders. Throughout the planning and development of these proposals, we ensured alignment with the governor's office and Colorado Department of Public Health and Environment by having representatives from those agencies on our workgroups.

MDPH is proposing a two-pronged system for improving our capacity to test community members in Colorado:

1. Utilize health systems' current capacity and infrastructure to reach out, screen, and test patients.
2. Partner with community groups, local public health agencies, and other stakeholders to refer people to testing. This may include targeting individuals who do not have a health care provider, are high-risk, or otherwise will not access testing through a traditional health care system.

This document outlines the second prong: best practices for expanding testing to patients who do not have an established health care provider or who have not accessed primary health care in the last 12 months. The first prong is outlined [here](#).

You are welcome to use this guide however you find useful, and we hope it helps promote consistent messages and guidance across Colorado.

Find more information on the collaborative at <https://colo.health/MDPH> or contact Nicole Steffens at steffensn@coloradohealthinstitute.org.



Introduction

In the face of the COVID-19 epidemic, getting people back to work, school, and other activities without overwhelming our health care system will take coordinated state and regional testing plans. The initial stay-at-home order is now over, with the state now in the “safer-at-home” mode. With this loosening of restrictions, rapidly identifying, testing, and isolating symptomatic individuals is a top priority for controlling the spread of illness and protecting against a “surge” in the health care system. Therefore, the ability of local agencies to quickly build, support, and sustain increased testing is vital. Increased testing capacity will also provide more information about the prevalence of the virus in our state and will help measure the effectiveness of prevention and control interventions to assist in making data-driven decisions.

This document is written for local public health departments, health care providers, and other organizations partnering to offer community-based COVID-19 testing. Its goal is to help local public health departments think through how Colorado’s [COVID-19 Test Site Operational Playbook](#) can be adapted to different circumstances to meet stated testing goals. It also addresses testing availability, staffing events, collaborating with partners, acquiring test supplies, choosing technology, and following up on test results. The final section of this manual illustrates how these components may be combined in different ways to reach various communities. The appendix walks local public health departments through planning for

a variety of populations and provides specific tools that might be useful in these scenarios. As much as possible, we encourage you to connect with others who have tried different models, and we recommend piloting different approaches to your work. A companion document, available on the Metro Denver Partnership for Health website, can be shared with community-based organizations seeking to make COVID-19 testing available in their communities.

Testing Goal

The Metro Denver Partnership for Health (MDPH) is working to support the governor and the state of Colorado in fulfilling its COVID-19 testing goal of 10,000 tests per day. Researchers at the Harvard Global Health Institute estimate the minimum number of daily tests needed nationwide is 500,000. Meeting this goal will be “essential to the nation’s ability to succeed with the planned phased opening of the economy and to stay open.” Using the [Harvard model](#), we predict a minimum of 8,655 tests a day are needed in the state of Colorado to meet this goal.¹ However, we urge all our stakeholders to test as many patients as possible to meet both the Harvard model and governor’s goal.

While the state is testing at 83% of the Harvard model’s goal, the seven-county metro Denver area is currently testing at 65% of the Harvard model goal. Weld, Larimer, and El Paso counties are testing at 72%, 79%, and 44% of goal, respectively. The following data are current as of May 28, 2020 and updated data are available via the links in the endnotes.

| Geography | Population | Tests/Day ² | Current Tests/Day ³ | | Additional Needed Tests/Day |
|--------------------------------------|------------------|------------------------|--------------------------------|--------------------|-----------------------------|
| | | | Average Tests | Percentage of Goal | |
| Colorado | 5,694,311 | 8,655 | 7,153 | 83% | 1,502 |
| Metro Denver Seven County Population | 3,197,879 | 4,860 | 3,162 | 65% | 1,698 |
| Adams | 511,469 | 777 | 484 | 62% | 293 |
| Arapahoe | 651,345 | 990 | 603 | 61% | 387 |
| Boulder | 325,480 | 495 | 376 | 76% | 119 |
| Broomfield | 69,453 | 106 | 69 | 65% | 37 |
| Denver | 717,796 | 1,091 | 861 | 79% | 230 |
| Douglas | 342,847 | 521 | 269 | 52% | 252 |
| Jefferson | 579,489 | 880 | 500 | 57% | 380 |
| Weld | 314,250 | 478 | 346 | 72% | 132 |
| Larimer | 350,362 | 533 | 421 | 79% | 112 |
| El Paso | 714,398 | 1,086 | 476 | 44% | 610 |

Note: Most but not all laboratories report to CDPHE.

Strategy

To accomplish the goal of increased testing capacity for community members who may not have a medical home or who otherwise may not be tested with their health care provider, we propose the following:

1. Support health care partner testing

Many of our health care partners have stepped up to provide testing for the community, prioritized for our frontline and critical infrastructure workers. Of those already testing at some level or who are willing to test, we know that supplies, staffing, logistics, marketing, billing, and other factors have gotten in the way of these locations increasing or even reaching their capacity. Support from local public health and CDPHE may be crucial for increasing the overall testing capacity through our health care partners.

2. Support testing by community-based organizations

Community-based organizations (businesses, educational institutions, faith communities, etc.) that are willing and able to conduct testing on site are key to increasing county testing capacity. Logistical and staffing support coordinated through local public health agencies (LPHAs) may significantly impact the success of these efforts.

3. Support or conduct population and/or outbreak testing

Support for testing by health care and community organizations may not be able to achieve the total number of tests, nor needed foci on specific populations in each county. Local public health may be able to fill gaps by monitoring testing rates, for example by geography/neighborhood, race/ethnicity, or place of work, and supporting or conducting targeted population and/or outbreak testing. These efforts may be smaller-scale, on-site testing operations for certain priority populations, such as through encampment

outreach efforts, or larger efforts such as conducting testing on populations in congregate residential situations. Please see the following sections for more information on identifying populations to be tested.

Population Identification

The community-based testing focus in this manual is especially geared toward reaching priority populations through mobile testing and targeted marketing. These populations could be identified through public health outbreak data, contact

tracing data, heat map data, through community partnerships, or CDPHE’s symptom tracker data.

We suggest and enumerate target populations for testing, including:

- Unhoused populations;
- People residing in long-term care, assisted living facilities, and supportive living environments such as group homes;
- Medicaid populations, especially those who have not seen a primary care provider in more than a year;
- Uninsured populations.

| Geography | Total Population | Unhoused Populations ⁴ | | | Long-Term Care Facilities ⁵ | | Insurance | |
|-----------------|------------------|-----------------------------------|----------------------|-------------|--|---------------|-----------------------|------------------------|
| | | Emergency Shelters | Transitional Housing | Unsheltered | Number | Licensed Beds | Medicaid ⁶ | Uninsured ⁷ |
| Colorado | 5,694,311 | N/A | N/A | N/A | 1,078 | 47,207 | 1,261,364 | 370,130 (6.5%) |
| Metro Denver | 3,197,879 | 2,996 | 1,678 | 946 | 604 | 26,819 | 647,964 | 182,242 (5.7%) |
| Adams | 511,469 | 297 | 47 | 139 | 71 | 3,743 | 138,548 | 46,544 (9.1%) |
| Arapahoe | 651,345 | 138 | 39 | 51 | 181 | 6,383 | 135,622 | 44,943 (6.9%) |
| Boulder | 325,480 | 411 | 159 | 53 | 49 | 3,043 | 50,036 | 17,250 (5.3%) |
| Broomfield | 69,453 | 12 | 0 | 18 | 1 | 210 | 7,065 | 3,681 (5.3%) |
| Denver | 717,796 | 2,119 | 1,235 | 554 | 86 | 5,192 | 197,400 | 43,786 (6.1%) |
| Douglas | 342,847 | 7 | 0 | 7 | 49 | 1,972 | 27,164 | 10,971 (3.2%) |
| Jefferson | 579,489 | 112 | 198 | 124 | 167 | 6,276 | 92,129 | 15,067 (2.6%) |
| Weld | 314,250 | 130 | 22 | 16 | 36 | 1,849 | 66,909 | 12,884 (4.1%) |
| Larimer | 350,362 | 264 | 6 | 162 | 49 | 2,859 | 62,483 | 33,985 (9.7%) |
| El Paso | 714,398 | N/A* | N/A* | N/A* | 101 | 5,179 | 180,422 | 40,006 (5.6%) |

* Data unavailable at time of publication

Additionally, LPHAs can partner with their community to identify strategies to reach populations, including:

- Medically vulnerable (people over age 60, isolated seniors, individuals with intellectual and physical disabilities requiring support with activities of daily living, individuals with chronic conditions and immunocompromised health status, and individuals with complex behavioral health needs) in each county, per data supplied by [Center for Improving Value in Health Care](#);
- New Americans (immigrants and refugees);
- People who are undocumented;
- People of color who are disproportionately impacted by COVID
- People who are detained or incarcerated (jails and detention facilities);
- Colorado tribes and tribal organizations;
- Individuals that work in essential industries who may not have adequate protections and supports such as personal protective equipment, dangerous job conditions, low wages, and no sick leave.

Note on Priority Populations

The MDPH Containment Workgroup has been creating a [plan for identifying strategies for priority populations](#). Our goal is to develop a set of collective strategies to prevent transmission among populations with the most COVID-19 morbidity and mortality risk. Preventing COVID-19 transmission among priority populations requires strategic testing, case investigation, contact tracing and mitigation, and resource coordination. A “one-size-fits all” approach to COVID-19 prevention and mitigation does not work. Populations need tailored strategies to prevent outbreaks to address the disproportionate impacts this disease is having on them.

LPHAs will undoubtedly begin to resume typical public health functions, such as: routine immunizations, syringe access programming, family planning, cancer and cardiovascular

screening, non-COVID-19 outbreak management (Hepatitis A, food-borne outbreaks, etc.), well-child visits, food inspection, Women, Infants and Children (WIC) programming, and home visitation. As this work resumes, LPHAs will regain access to a number of priority populations. LPHAs can then consider whether to integrate these public health functions with COVID-19 testing.

In addition to these strategies, each agency should consider the following recommendations.

Leveraging Partnerships and Developing/Strengthening Relationships

Below are channels for communication and outreach to groups who may help implement targeted outreach testing of identified key populations. Each metro LPHA should include its Health Equity Workgroup representative(s) in identifying COVID-19 response strategies, including engagement with testing sites, to ensure adequate and appropriate testing among priority populations.

Example partnerships and communications include:

- Community-based organization (CBO) partnerships, including faith-based organizations and promotoras;
- Business partnerships, including grocery stores and other essential services;
- Mass media messaging through regional and state leadership, including messaging from trusted community leaders;
- 2-1-1 listing of available testing locations statewide;
- Education facilities and leadership;
- Health care provider, e.g., Federally Qualified Health Center (FQHC), outreach.

We encourage people to follow the [Colorado Department of Public Health and Environment guidelines](#) for a public health response inclusive of populations with limited English proficiency.

We suggest that public health professionals use information and resources that:

- Assure that public health testing events are equitable and inclusive, and results are shared in a manner that patients understand;
- Include all populations in disease control measures;
- Represent all populations in data collection, which is used for programmatic and policy development and decision making;
- Provide unified and consistent educational messaging across organizations.

Marketing Guidance for Test Sites

The following are some tips and lessons learned for reaching out to your target audience to advertise your testing location. Please see the Marketing and Outreach Planner in the appendix.

- Ensure culturally appropriate messages are being utilized. Engage targeted media outlets in messaging around COVID-19.
- Unless walk-up testing is available, consider providing testing location dates/times only to patients with appointments.
- Direct people with health insurance to first call their health care provider, 2-1-1, or other likely system.
- Indicate:
 - The number to call to schedule an appointment,
 - That an appointment is required,
 - Testing is available regardless of immigration and insurance status.
- For organizations without existing marketing resources, we recommend using [Canva](#) – a free, web-based platform with an easy-to-use interface. There are a variety of templates for creating flyers, posters, and social media posts.

Note on Consent

In order to develop and maintain trust within communities, it is important that they are provided with accurate information about how testing information can be used. If an agency is entering testing information into an electronic health record (EHR), they would follow usual documentation practices, e.g., Patient Rights and Responsibilities, Notice of Privacy Practices (NOPP). Normally patients are required to sign an acknowledgement for the NOPP, but that has been temporarily waived due to COVID-19, and an agency can instead document that the NOPP was made available to the patient.

It is important to understand CDPHE is not a HIPAA entity. Its privacy notice is described [here](#). CDPHE can share test results for public health purposes, including sharing with local public health agencies for follow-up on positive test results. If an agency is collecting specimens on behalf of CDPHE and data are not going into an electronic medical record, the First Assistant Attorney General, Jennifer Weaver wrote, “I am not aware of any legal requirement to document consent prior to a COVID-19 test ... That said, although not required, it seems simple enough to have staff confirm and check a box, e.g., on the lab consent form, that the individual is present for and consents to COVID-19 testing.”

You can find examples of consent information provided to individual patients embedded [within different protocols found in the Library of Community-based Testing Protocols](#).

Staffing

CDPHE’s [COVID-19 Test Site Operation Playbook](#) outlines roles that may be applicable to testing events. The following table lists roles and related Personal protective equipment (PPE) requirements LPHAs may consider when planning events. These PPE requirements are based on experiences to date, primarily using nasopharyngeal swabs for Polymerase chain reaction (PCR) testing.

Because registration and swabbing processes should be considered part of the “hot zone” and require full PPE, having staff familiar with PPE



| Role Title | Role Description | PPE and Precautions |
|---|---|--|
| Traffic Control | Direct people throughout the drive-through process | Mask and remain at least 6 ft. from patient |
| Check In- Appointments made in advance; verification only | Greet patient, verify that the patient has an appointment, and ensure their ID matches the name on the gallon bag | Mask and gloves |
| Check In – When no appointment is made in advance | Greet patient, verify patient has required symptoms (if only testing patients who are symptomatic), and collect needed information for EMR and/or CDPHE lab sheet | Mask, gloves, face shield, and gown – change gloves if corrections cannot be made without window being rolled down |
| Assistant to the Tester | Assist the tester in collection of the specimen. Prepare for sample and packaging of sample. | Full PPE |
| Tester | Collect the specimen (Instructions for collecting nasopharyngeal swabs are here) | Full PPE – change gloves and sleeve covers between every patient. Apron if needed. |
| Runner | Bring labels from clerical to check-in person making corrections | Mask and remain 6 ft. from patient |
| Clerical | Make corrections in system and print new labels | None needed |
| Site Coordinator | Coordinate all activities prior to and during the event | Depends on needs on test day |

donning and doffing may be safest. Though not required, we generally recommend medical staff collect nasopharyngeal (NP) swabs. NP swabs are more complicated to collect than oropharyngeal (OP) swabs (OP swabs are aerosol generating). Ideally, supplies would be available to take a NP swab. As different tests become available (such as self-swabs or sputum tests), non-clinical staff members might be used to supervise sample collection. Additional staffing support is available from other local public health staff and community partners, especially those already engaged in work such as communicable disease testing and tracing. Requests for staffing support from CDPHE can be made [here](#).

We also recommend the site coordinator or other team member is designated to learn about the community being tested. Incorporating knowledge of community awareness, attitudes, and behaviors related to COVID-19 may be critical in creating successful testing strategies. For instance, communities with undocumented immigrants may be especially sensitive to contact tracing work. Working with trusted community leaders, e.g., CBO staff, could create more community trust in the process and results.

Please also consider how this work weaves in with population support services. In some cases, the health care staff would obtain the swab, with case workers or navigators being on hand to facilitate support needs such as coordinating respite shelter services for symptomatic or medically vulnerable participants as they await their lab results. Additional support services could include bringing masks, hand sanitizer, or educational materials to the event. For any testing events you plan, you can use the **Staffing Needs table** in the appendix.

Test Supplies

Public health entities and health care organizations are eligible to submit a “[Community Test Site and Resource Request](#)” to the CDPHE, which can provide testing methodology, tests, swabs, and PPE, as well as additional supports.

Once the request is made, CDPHE will reach out to the contact listed in the request form to assess capacity and coordinate logistics for resources. They can send a courier (courier

manager is Patrick Belou), use FedEx to deliver, or supplies can be picked up. You can text or call 303.815.7220 to arrange a courier for pick-up or shipping.

Resources are coordinated by Peter Davis, who will be in communication with the site once the request is made. Samples will require refrigeration with frozen cold packs ONLY, not real ice. More detailed instructions are available [here](#). CDPHE will treat the first order of testing supplies as a pilot and reach back out to the site to adjust future orders as needed.

Based on the guidance from the Infectious Disease Society of America (IDSA), the MDPH Community Testing Workgroup does not currently support serology testing outside its use in population surveillance studies. IDSA notes there are a multitude of different antibody tests for COVID-19 with variable performance.

Tests vary in the viral antigen(s) they target, e.g., nucleoprotein (N protein) or spike protein (S protein). It is not yet clear which antibody responses, if any, are protective or sustained. A “positive” test is difficult to interpret because the performance of these tests is not well known. For some assays both sensitivity and specificity may be poor, or at the very least undefined. Some FDA-authorized COVID-19 antibody tests are estimated to have 96-98% specificity, which would mean that a positive test result is more likely a false-positive result than a true positive result if the prevalence or pretest probability is 5% or less.”⁸ For these reasons, until serology testing is more developed, this workgroup only recommends PCR testing for individuals.

To submit a community test site resource request, please click [here](#).

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Technology Support

Colorado has made significant strides in considering how to implement regional social health information exchanges (SHIE). COVID-19 testing is one example of how health, human

services, and community partners are each needed to identify populations, test them, and support them while they wait for and receive testing results. Consistent with SHIE functionality, some of the optimal interoperability needed to address COVID-19 community testing includes:

- Having a common location where patients can list their symptoms and essentially receive a referral for testing, such as the Colorado [Symptom Tracker](#).
- Having one place where information about real-time testing availability is updated and available to a broad network of users, including health care, social service, community partner, and individual care seekers, such as [2-1-1](#).
- Testing needs to be reported to a central location to track progress toward testing goals, such as [CDPHE](#), or CORHIO Patient Care 360 Public Health Dashboard.
- When people are being tested outside of health care systems, a community-based method of tracking patients who are tested is needed. For example, Mobile Intelligence (MI) Clinic (also known as HANDI), a mobile data collection tool developed by [Countermind](#) (see callout box), Redcap, or portable electronic medical record (EMR) technology can be used.
- Also consider developing technology for contact tracing and any implications for overlap with testing technology.
- In cases where a trusted CBO or service provider will provide case management, such as homeless outreach workers, having verbal consent to share data can be indicated on the patient testing request form.

Option to use HANDI

This tool can be used on an iPad to link to a patient's pre-registration and to a health system's EHR for billing and reporting results to the patient and the state. The app can temporarily store data offline if it is not possible to connect to internet at the test site.

Contact information

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While not all aspects of this system can be built in time for meeting all the COVID-19 community testing needs, we are working to leverage existing technology.

Follow-Up

An overall flow of information from testing to patient notification is linked [here](#). A one-page patient testing request form will accompany each sample in electronic or paper form. This request form includes basic contact information, symptom information, and collector information. This form is generated by CDPHE when the site makes the Community Test Site and Resource Request. On the lab sheet, the box "Patient consents to having results reported directly to them," must be checked if CDPHE will directly report results to patients. The requesting organization should verbally arrange with CDPHE, which will report results to the patient. Options include:

- A collaborating CBO;
- The health care system collecting samples; or
- CDPHE.

Any of the above can request access to a LabOnline account through CDPHE, following instructions linked [here](#). While CDPHE communicates results within 48-72 hours, those with LabOnline access could make the call as soon as sample results are available, often within 24 hours. Health systems and LPHAs also have access to the CEDRS database, so the list of positive patients could also be pulled from there. When being tested, patients should be given a phone number of a LPHA, CBO or health care organization they can call in case a patient does not get a call with test results. When a patient calls, the organization can find results in LabOnline or follow-up with CDPHE if needed.

While it is not necessary to enter patient information into a health system's EHR, it is advisable to have an independent record of the patients who were tested, e.g., through an EHR or a secure spreadsheet. Instead of manually filling out a patient testing request form for each patient, an organization can obtain a spreadsheet format from CDPHE and fill in the information

electronically. The Excel file can then be dropped in CDPHE's electronic drop box while the specimens are delivered to the lab. Some organizations are using something called the HANDI, described previously, that scans an identification card and fills in some of the Excel spreadsheet fields.

Testing Scenarios

Now that different facets of community COVID-19 testing have been reviewed individually, this section describes how these individual components have been combined for different circumstances. A Visio diagram of this overall flow is provided [here](#). These testing scenarios were developed largely within the current constraints of testing, including the PCR test and limited access to rapid testing. Again, these scenarios are specific applications of the [COVID-19 Test Site Operational Playbook](#). The

following scenarios are highlighted in the table below and specific protocols for some of these scenarios are available from the links to the [Library of Community-Based Testing Protocols](#). Testing scenarios may include:

- CBO-hosted events, e.g., food pantry testing events;
- Homebound individual testing;
- Health care system patient and public drive-up testing;
- Congregate shelter testing;
- Long-term care facilities;
- [Essential services and outbreak testing](#);
- Testing people sleeping outdoors.



Scenario Highlights

| Scenario | Staffing | Scheduling | Supplies | Technology | Communication | Follow-Up |
|---|--|--|--|---|--|---|
| CBO Partnership Testing | CBO staff screen and schedule Health professionals/LPHA collect specimen | CBO asks patient's symptoms and gives participant a testing time, no electronic scheduling | Request supplies from CDPHE | HANDI tool, CDPHE Redcap technology, CDPHE Lab form Receive verbal consent for testing | Advertising through newsletters, CBO outlets 2-1-1 | CDPHE call center follows up Patients told to wait for CDPHE call, and given LPHA back-up number if results not received |
| Homebound Individual Testing | LPHA screens, schedules Supporting health care system collects specimens | LPHA schedules | Request supplies from CDPHE | HANDI tool, CDPHE Redcap technology | Advertising via mass media | LPHA does call outs |
| Health Care Testing for Patients and Public | Health system personnel screen, schedule, and collect specimens | Health system personnel review screener and schedule; patients can be invited from state Symptom Tracker | Own supplies Request supplies from CDPHE | EMR | Advertising through EMR patient portal, patient emails/ letters 2-1-1 | Health care system makes call outs |
| Congregate Shelters | Shelter staff provide trusted face for screening LPHA or health system screens and collects specimens | To be arranged with shelter | CDPHE | HANDI tool, CDPHE Redcap technology, EMR | Shelter staff provide info through fliers, word of mouth | Partnering homeless service provider gives results on site |
| Long-Term Care Facilities (LTCF) | Contact CDPHE for ongoing guidance | | | | | |
| Essential Services Testing | LPHA supports employer in coordinating staff | Employer schedules | Employer supplies or request supplies from CDPHE | HANDI tool, Redcap technology | Business partnerships conducting symptom screening | Employer or partnering health care organization/LPHA |
| Unsheltered Individuals | Trusted community partner locates, screens individuals LPHA or health agency collects specimens | LPHA creates a plan/map for each day | Request supplies from CDPHE | HANDI tool, Redcap technology | Advertising through trusted channels | Street outreach team |

Appendices

| Appendix Overview | | |
|------------------------------|--------------------------------|---|
| Section | Tool | Use case |
| County-Level Planning | County Overview Worksheet | Creating an overall strategic plan for meeting county testing goals, especially among priority populations. |
| | Population Planning Worksheet | Analyzing high-risk population data and identifying available resources for testing |
| Testing Event Planning | Testing Event Worksheet | High-level testing event planning |
| | Supplies Checklist | Identifying needed supplies and who will supply |
| | Staffing Needs | Identifying staff roles, needed PPE, organization to provide, and individuals |
| Communication and Technology | Marketing and Outreach Planner | Identifying target audiences, communication channels to reach, and point of accountability |
| | Technology Use Planner | Identifying which technologies will be used for different processes |

Recommendations for appendix use:

- The “County Level Planning” worksheets are used for overall strategic planning by LPHAs:
 - The “County Overview Worksheet” is provided to help identify and enumerate populations that should be tested. It is an overall project management document, allowing a county to document who is leading the testing for each population, e.g., community partners, individual in a specific organization, along with when and how often that population will be tested. The “Scenario Template” column allows you to indicate if any previously described scenarios or MDPH [Library of Community-Based Testing Protocols](#) are applicable to that population. Worksheets with pre-filled population data for each of the MDPH counties are linked [here](#).
 - The “Population Planning Worksheet” allows the user to record more detailed background information and plans for testing each population. There should be one of these worksheets for each row of the County Overview Worksheet.
- The “Testing Event Planning” worksheets are to be used by LPHAs who are conducting or partnering with others to conduct actual testing events:
 - The “Testing Event Worksheet” allows the user to record various decisions that need to be made and communicated when setting up a testing event.
 - The “Supplies Checklist” is simply a checklist adapted from the COVID-19 Test Site Operational Playbook.
 - The “Staffing Needs” worksheet provides a list of roles that might be applicable to a testing event, allowing the user to customize to a specific testing event.
- Among the “Communication and Technology” worksheets,
 - The “Marketing and Outreach Planner” worksheet is a place to document how testing events will be advertised.
 - The “Technology Use Planner” helps the user think through how technology will be used for different aspects of the testing event.

County-Level Planning

| County Overview Worksheet | | | |
|---------------------------|--|------------------|--|
| County Name | | Date | |
| Daily Test Goal | | Current Capacity | |

| High Risk Population | Approximate Population Size | Who is Leading? | Scenario Template | When/How Often? |
|---|-----------------------------|-----------------|-------------------|-----------------|
| CDPHE Tracker Tool | | | | |
| Public Health Outbreak Data | | | | |
| Sheltered Unhoused | | | | |
| Unsheltered/Unhoused | | | | |
| Long-Term Care Facilities | | | | |
| Uninsured | | | | |
| Medically Vulnerable | | | | |
| Medicaid Without PCP | | | | |
| Essential Service Workers | | | | |
| Detained or Incarcerated | | | | |
| New Americans (Immigrants and Refugees) | | | | |
| Undocumented | | | | |
| Colorado Tribes and Tribal Organizations | | | | |
| Other Vulnerable or High Risk (Homebound) | | | | |

| Population Planning Worksheet | |
|---|------|
| County name | Date |
| Target population (link to county overview) | |
| Epidemiology of disease | |
| Partner organizations in hot spots or priority populations, including CBOs, LTCFs, shelters, etc. | |
| Scenario similarities | |
| Supplies available to offer test sites | |
| Staffing available for testing | |
| Technology that could be used for testing | |

Testing Event Planning

| Testing Event Worksheet | | | |
|-------------------------|--------|-----------------------|-------|
| County Name | | Testing location | |
| Organization 1 | | Organization 2 | |
| Testing Date | | Testing time | |
| Appointment Required | Yes No | Schedule set by | |
| Symptoms Required | Yes No | Prioritization method | |
| Cost of Testing | | Insurance taken | |
| Staffing Provided By | | Technology used | |
| Supplies sourced from | | Lab | |
| Target Audience | | Communication channel | |
| Contact Name | Role | Phone | Email |
| | | | |
| | | | |
| | | | |

Site Planning Tools

| Supplies Checklist | | | |
|--------------------------|-------------------------|-------|-----------|
| Item | Point of accountability | Notes | Acquired? |
| Disposable gloves | | | |
| N95 respirators | | | |
| Patient masks | | | |
| Disposable shoe covers | | | |
| Goggles/face shields | | | |
| Tyvek suits or gowns | | | |
| Traffic cones | | | |
| Tables | | | |
| Chairs | | | |
| Pop-up tents | | | |
| Clip boards | | | |
| Pens | | | |
| Labels | | | |
| Biohazard bags | | | |
| Gallon-size zip-top bags | | | |
| Disinfectant wipes | | | |
| Bleach | | | |
| Thermometers | | | |

| Supplies Checklist | | | |
|--|-------------------------|-------|-----------|
| Item | Point of accountability | Notes | Acquired? |
| Sharps containers | | | |
| Vehicle | | | |
| Tablet or device for screening | | | |
| Biohazard waste bins | | | |
| Large biohazard waste bags | | | |
| Dry erase markers | | | |
| Trauma shears or tin snips | | | |
| Refrigerator or cooler | | | |
| Biohazard pick-up | | | |
| Waste management or dumpster | | | |
| Restroom | | | |
| Public information officer for media | | | |
| EMT presence or arrangement | | | |
| Language services | | | |
| Local law enforcement (LEO) | | | |
| Dry erase board or signage | | | |
| Review of flyers/ materials by marketing | | | |
| PPE not available from CDPHE | | | |

| Staffing Needs | | | | |
|---|--|--|--------------|-----------|
| Role Title | Role Description | PPE and Precautions | Organization | Person(s) |
| Traffic Control | Direct people throughout the drive-through process | Mask and remain at least 6 ft. from patient | | |
| Check In - When appointments are made in advance | Greet patient, verify that the patient has an appointment, and ensure their ID matches the name on the gallon bag | Mask and gloves | | |
| Check In – When no appointment is made in advance | Greet patient, verify patient has required symptoms (if only testing asymptomatic patients), and collect needed information for EMR and/or CDPHE lab sheet | Mask, gloves, face shield, and gown – change gloves if corrections cannot be made without window being rolled down | | |
| Assistant to the Tester | Assist the tester in collection of the specimen. Prepare for sample and packaging of sample. | Full PPE | | |
| Tester | Collect the specimen (Instructions for collecting nasopharyngeal swabs are here) | Full PPE – change gloves and sleeve covers between every patient. Apron if needed. | | |
| Runner | Bring labels from clerical to check-in person making corrections | Mask and remain 6 ft. from patient | | |
| Clerical | Make corrections in system and print new labels | None needed | | |
| Site Coordinator | Coordinate all activities prior to and during the event | Depends on needs on test day | | |

Communication & Technology

| Marketing and Outreach Planner | | |
|--------------------------------|---|---|
| Target Audience | Communication Channels | Notes |
| Ex: food pantry customers | Ex: Distribute a flyer with weekly delivery | Ex: Flyer will be distributed in multiple languages |
| | | |
| | | |
| | | |
| | | |

| Technology Use Planner | |
|--|-----------------|
| Process | Technology Used |
| How will patients register for testing? | |
| How will patients be screened? | |
| How will patients be checked in for testing? | |
| How will patients provide consent? | |
| How will patients learn their results? | |

Endnotes

¹Jha AK, Tsai T, Jacobson B. Why we need at least 500,000 tests per day to open the economy — and stay open. April 18, 2020. Harvard Global Health Institute, <https://globalepidemics.org/2020/04/18/why-we-need-500000-tests-per-day-to-open-the-economy-and-stay-open/>, accessed 5/29/2020

²Based on the Harvard model

³State tests as of 5/7/20 [current] and county-level tests by day three-day average 5/26/20-5/28/20 [current]

⁴A Snapshot of Homelessness in the Colorado Balance of State Continuum of Care, 2019, Accessed 5/8/20

⁵Report of LTCF supplied 5/8/20 by Matt Haynes, HCPF. A current list of LTCFs is being updated here

⁶<https://www.colorado.gov/pacific/hcpf/county-fact-sheets>

⁷<https://www.coloradohealthinstitute.org/research/2019-colorado-health-access-survey-health-insurance-coverage>

⁸IDSA COVID-19 Antibody Testing Primer, Updated: May 4, 2020



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