

ELC ENHANCING DETECTION: COLORADO TESTING PLAN

2020 Overarching Jurisdictional SARS-COV-2 Testing Strategy

Jurisdiction:	Colorado
Population Size:	5,758,736

1. Describe the overarching testing strategy in your state or jurisdiction.

Overall: In order to contain the spread of the virus and stop future outbreaks, based on public health guidance, Colorado plans to maintain a 1 positive to 10 negative diagnostic test ratio over a rolling 7 day period by July 1. This ratio allows for flexibility and scaling based on current circumstances. Until that target is met, Colorado's plan is to scale up testing to 10,000/day between our State Public Health Laboratory (State Lab) and commercial labs. As the flu season in the fall and winter approach Colorado plans to scale up testing in excess of 17,000 tests per day.

Due to supply constraints to date (reagents and swabs), Colorado has been unable to meet these goals, though we are close to being able to test approximately 2% of our population per month. Over the last 2 weeks, Colorado has run 3000-5000 tests per day (CO pop = 5,758,736 * 2% = 115,174/month or 3,839/day).

Currently, Colorado's state lab has the capacity to run approximately 2,000-3,000 tests per day and we estimate private sector labs in Colorado have the capacity to run over 10,000 tests per day. Colorado is using a combination of diagnostic testing platforms across the public and private sector in order to maximize the testing capacity in our state and prevent outbreaks among the most vulnerable populations. The state lab and the private sector has massively expanded the workforce and laboratory capacity for COVID testing to position Colorado to meet its testing goals.

a) At Colorado's state laboratory, we use the platform. We have been able to borrow King Fisher extraction platforms from CDC Fort Collins allowing us to significantly increase the throughput of the lab. We have 2 King Fisher machines on order from . We have entered into a partnership with Colorado State University to test 25 of the largest and most at-risk senior living facilities. The state lab will conduct similar work at an additional 25 residential care facilities, in order to prevent outbreaks. Our state lab has dramatically expanded staffing in order to run tests with a 24 hour turnaround time, 7 days a week. Over the last 2 months, tests run at the state lab have grown from only 100 per day to nearly 2000 per day thanks to expanded work force and more efficient processes. We have distributed rapid point of care Abbott Alere ID Now machines to more than a dozen remote sites across Colorado for rapid testing in underserved rural communities. We have also distributed one of these machines for outbreak response to our state prison system and tribal communities.

Colorado's Health Care systems are using all testing platforms currently available in Colorado to meet testing demand. National Jewish uses the platform. The UCHealth System relies primarily on the

ELC ENHANCING DETECTION: COLORADO TESTING PLAN

Cobas 6800 platform. Children's Hospital Colorado and Denver Health rely on the Abbott m2000 platform. Centura utilizes the Cephied System and sends many samples to LabCorp. The Banner System in Colorado has the Diasorin System and is investigating moving a Panther system from their facilities in Arizona into Colorado. Most health systems augment their testing capabilities with tests run at private labs like LabCorp and Quest. We are encouraging health systems to take the lead in testing their own patients and procuring their reagents. The state is supporting health systems efforts to procure the appropriate reagents and supplies by contacting companies and asking them to prioritize supply for Colorado. Since not all health systems have the same capacity for testing, many health systems rely upon contracts with their partners to meet their local demand, maximizing the use of the capacity in Colorado's private sector. Health systems are also offering testing in primary care sites and clinics. The state has partnered with local public health and community health centers to set up more than 40 community testing sites across Colorado. These sites provide testing for anyone that is symptomatic and anyone who is a health care or other critical infrastructure worker.

b) The State's testing plans prioritizes testing vulnerable populations in long term care facilities, prisons, homeless shelters as well as community testing sites across Colorado. The backbone of Colorado's mass testing efforts are community test sites. As a local control state, we are partnering with local public health agencies and their health care partners across the state. We support more than 40 sites run by local public health agencies and their partners with swab kits, personal protective equipment, technical assistance and laboratory testing capacity at the state lab. Additionally, we have been working closely with health care partners who have set up their own testing sites (e.g. Children's Hospital Colorado, Centura, and National Jewish). We have also helped retail partners, such as Kroger and Walmart, to set up other community testing sites by helping them identify partners and providing other assistance. Through a partnership with Colorado State University (CSU), the state will be able to test all staff and residents of more than 50 senior living facilities and other long term care facilities across Colorado. This partnership will conduct nearly 100,000 tests over an eight week period. The state also plans to test residents and staff at the residential and congregate care facilities that are run by the state. The Colorado Department of Human Services (DHS) has begun testing staff and residents at the Veterans Living Center at Fitzsimmons, the Colorado Mental Health Institute at Fort Logan (state hospital for Mental illness) and the Wheat Ridge Regional Center for people with intellectual and developmental disabilities. DHS is conducting weekly testing of staff and residents at these facilities and will expand efforts to other facilities in the next week.

c) Colorado is interested in using serology to understand the extent of the spread of the virus. This strategy includes utilizing commercially available serological tests that have an EUA from FDA, and laboratory developed tests that have been developed by our academic research institutions. While Serology testing in Colorado remains limited through some private facilities, Colorado plans to scale up serology testing over the next 2-3 months. Colorado's serological testing strategy seeks to 1) establish and maintain a robust surveillance and serosurvey program to inform models and enable targeted policy interventions that support local surveillance, a longitudinal study, detecting racial and socioeconomic disparities, and surveilling exposure in correctional facilities, assisted living facilities, schools and among healthcare workers, first responders and other essential workforces (15,000 tests/month for 12

ELC ENHANCING DETECTION: COLORADO TESTING PLAN

months), 2) develop and scale effective protocols that use serology to protect vulnerable populations and aid in quarantine decisions through pilot projects to determine efficacy of monitoring for seroconversion among vulnerable settings (5,000 tests for pilot programs and up to 250,000 tests/month based on efficacy), and 3) strategically prepare and scale capacity if the science indicates antibody status can be useful in reducing infection rates, informing lifestyle choices and managing risk in workforces and at risk populations (up to 800,000 tests/month over 12 months, weighted toward fall 2021).

d) Colorado has established a variety of mechanisms to communicate with the broader testing community to offer guidance, technical assistance and resources such as volunteers and test kits. The Colorado Department of Public Health and Environment hosts daily calls with local public health agencies to discuss their needs and to align on testing strategy. In addition, the state participates in the testing committee of the Metro Denver partnership for Health, a group of the 8 largest local public health agencies that are working together to develop testing strategies across the state. The state updates its guidance on testing and containment regularly, communicating with local partners via the Health Alert Network. We also post guidance, case count and outbreak data on our COVID-19 website at <https://covid19.colorado.gov/>. Communication with local agencies, the media and the public, is coordinated through the Joint information center which includes representatives from all state agencies.

It is important to note that not all facilities that offer diagnostic and serological testing services in Colorado are represented below. The facilities listed below are those that we have active partnerships with or have received data from through an Electronic Laboratory Reporting data feed.

ELC ENHANCING DETECTION: COLORADO TESTING PLAN

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*	300,000	309,000	327,000	345,000	360,000	525,000	525,000	525,000	3,216,000
Serology	0	0	0	0	15,000	15,000	15,000	15,000	60,000
TOTAL	300,000	309,000	327,000	345,000	375,000	540,000	540,000	540,000	

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	Daily serologic throughput	Platforms or devices used (list all)	Specific at-risk populations targeted (list all)
National Jewish	Hospitals or clinical facility	National Jewish	500	100		In-patients, general public with physician order
Denver Health	Hospitals or clinical facility	Denver Health	500	0		In-patients, general public with physician order
Children's Hospital Colorado	Hospitals or clinical facility	Children's Hospital Colorado	500	0		Symptomatic community providers, EMS healthcare workers, and children and their caregivers with physician order

ELC ENHANCING DETECTION: COLORADO TESTING PLAN

Name of testing entity	Testing venue (select from drop down)	Performing Lab (if different from testing entity)	Daily diagnostic throughput	Daily serologic throughput	Platforms or devices used (list all)	Specific at-risk populations targeted (list all)
UCHealth Anschutz	Hospitals or clinical facility	UCHealth Anschutz	500	100		Symptomatic ambulatory patients, as well as patients undergoing a medically necessary surgery or designated procedure that is high-risk for aerosol generation
Pagosa Springs Medical Center	Hospitals or clinical facility	Private Lab (Lab Corp or Quest)	50	0		General public, symptomatic only, High risk public (persons over 60 years of age, immunocompromised), Key personnel (healthcare workers, first responders, critical infrastructure)
STRIDE Community Health Center: North Aurora Family Health Service Center	Federally Qualified Health Center	Private Lab (Lab Corp or Quest)	100	100		General public, asymptomatic and symptomatic
STRIDE Community Health Center: Aurora Health & Wellness Plaza	Federally Qualified Health Center	Private Lab (Lab Corp or Quest)	100	0		General public, asymptomatic and symptomatic
STRIDE Community Health Center: Convenient Care at South Aurora Family Health Services	Federally Qualified Health Center	Private Lab (Lab Corp or Quest)	50	0		General public, asymptomatic and symptomatic

ELC ENHANCING DETECTION: COLORADO TESTING PLAN

Name of testing entity	Testing venue (select from drop down)	Performing Lab (if different from testing entity)	Daily diagnostic throughput	Daily serologic throughput	Platforms or devices used (list all)	Specific at-risk populations targeted (list all)
Valley Wide Health Systems: Bent County	Hospitals or clinical facility	Private Lab (Lab Corp or Quest)	50	0		General public, symptomatic only
Chaffee County Public Health, Salida or First Street Family Health	Public health lab	State Lab	50	0		General public, symptomatic only
Clear Creek Resource Center	Community-based	State Lab	50	0		Clear Creek county residents and anyone who works in the county
Centennial Family Health Center	Hospitals or clinical facility	Private Lab (Lab Corp or Quest)	50	0		General public, symptomatic only
Custer County Public Health	Public health lab	State Lab	50	0		General public, symptomatic only
Delta County Public Health	Public health lab	State Lab	50	0		General public, symptomatic only
Peak Vista Community Health Centers	Federally Qualified Health Center	Private Lab (Lab Corp or Quest)	50	0		General public, symptomatic only

ELC ENHANCING DETECTION: COLORADO TESTING PLAN

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Fremont County Department of Public Health & Environment	Public health lab	State Lab	50	0		General public, symptomatic only. High risk public (persons over 60 years of age, immunocompromised). Key personnel (healthcare workers, first responders, critical infrastructure).
Grand County Mobile Testing	Community-based	State Lab	50	0		General public, asymptomatic and symptomatic
Gunnison Community Testing Site	Community-based	State Lab	50	0		General public, asymptomatic and symptomatic
Lake City Area Medical Center	Hospitals or clinical facility	Private Lab (Lab Corp or Quest)	50	0		General public, asymptomatic and symptomatic
Spanish Peaks Regional Health Center	Hospitals or clinical facility	Private Lab (Lab Corp or Quest)	50	0		In-patients and healthcare workers
STRIDE Community Health Center: Jeffco Family Health Services Center	Federally Qualified Health Center	Private Lab (Lab Corp or Quest)	100	100		General public, asymptomatic and symptomatic

ELC ENHANCING DETECTION: COLORADO TESTING PLAN

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Weisbrod Memorial County Hospital	Hospitals or clinical facility	Private Lab (Lab Corp or Quest)	50	0		General public, symptomatic only, High risk public (persons over 60 years of age, immunocompromised), Key personnel (healthcare workers, first responders, critical infrastructure)
Kit Carson County Department of Public Health and Environment	Public health lab	State Lab	50	0		General public, asymptomatic and symptomatic. Patients with symptoms, who have a primary care physician, should request a Doctor's note. Drive through site is open to the public.
Larimer County Health Department	Public health lab	State Lab	50	0		General public, symptomatic only
Mt. San Rafael Hospital	Hospitals or clinical facility	Private Lab (Lab Corp or Quest)	50	0		General public, symptomatic only, High risk public (person over 60 years of age, immunocompromised), Key personnel (healthcare workers, first responders, critical infrastructure)
Mercy Regional Medical Center	Hospitals or clinical facility	Private Lab (Lab Corp or Quest)	50	0		General public, symptomatic only

ELC ENHANCING DETECTION: COLORADO TESTING PLAN

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Mesa County Fair Grounds	Community-based	State Lab	50	0		General public, symptomatic only
Mineral County Health Department	Public health lab	State Lab	50	0		General public, symptomatic only
Moffat County Community Drive Thru Testing Clinic	Drive-thru testing site	State Lab	50	0		General public, symptomatic only
Valley Wide Health Systems: Otero County	Hospitals or clinical facility	Private Lab (Lab Corp or Quest)	50	0		General public, symptomatic only
Arkansas Valley Regional Medical Center	Hospitals or clinical facility	Private Lab (Lab Corp or Quest)	50	0		General public, symptomatic only
Arkansas Valley Family Practice	Hospitals or clinical facility	Private Lab (Lab Corp or Quest)	50	0		Patients from Arkansas Valley Family Practice

ELC ENHANCING DETECTION: COLORADO TESTING PLAN

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Melissa Memorial Hospital	Hospitals or clinical facility	Private Lab (Lab Corp or Quest)	50	0		General public, symptomatic only
Routt County drive through clinic	Drive-thru testing site	State Lab	50	0		General public, symptomatic only
San Juan County Public Health	Public health lab	State Lab	50	0		General public, symptomatic only
Wray Community District Hospital	Hospitals or clinical facility	Private Lab (Lab Corp or Quest)	50	0		General public, symptomatic only
Clinica Family Health	Hospitals or clinical facility	Private Lab (Lab Corp or Quest)	50	0		General public, symptomatic only
Rocky Mountain Family Practice	Hospitals or clinical facility	Private Lab (Lab Corp or Quest)	50	0		General public, symptomatic only

ELC ENHANCING DETECTION: COLORADO TESTING PLAN

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St. Vincent Hospital	Hospitals or clinical facility	Private Lab (Lab Corp or Quest)	50	0		General public, symptomatic or with physician order
Woodland Park Community Testing Drive Thru	Drive-thru testing site	State Lab	50	0		General public, symptomatic only
Southwest Health System	Hospitals or clinical facility	Private Lab (Lab Corp or Quest)	50	0		General public, symptomatic only
High Plains Community Health Center	Federally Qualified Health Center	Private Lab (Lab Corp or Quest)	50	0		General public, symptomatic only
NORTHGLENN HEIGHTS ASSISTED LIVING COMMUNITY	Other	Colorado State University	59	0		Residents of Skilled Nursing Facility, Assisted Living Residence, Intermediate care facilities and similar

ELC ENHANCING DETECTION: COLORADO TESTING PLAN

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ATRIA WESTMINSTER	Other	Colorado State University	51	0		Residents of Skilled Nursing Facility, Assisted Living Residence, Intermediate care facilities and similar
PARK REGENCY LOVELAND	Other	Colorado State University	44	0		Residents of Skilled Nursing Facility, Assisted Living Residence, Intermediate care facilities and similar
NEW MERCER COMMONS	Other	Colorado State University	41	0		Residents of Skilled Nursing Facility, Assisted Living Residence, Intermediate care facilities and similar
LIFE CARE CENTER OF WESTMINSTER	Other	Colorado State University	29	0		Residents of Skilled Nursing Facility, Assisted Living Residence, Intermediate care facilities and similar
SPRING CREEK HEALTH CARE CENTER	Other	Colorado State University	29	0		Residents of Skilled Nursing Facility, Assisted Living Residence, Intermediate care facilities and similar
RIVERDALE REHAB AND CARE	Other	Colorado State University	28	0		Residents of Skilled Nursing Facility, Assisted Living Residence, Intermediate care facilities and similar

ELC ENHANCING DETECTION: COLORADO TESTING PLAN

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COMMUNITY OF BRIGHTON						
SUNRISE OF WESTMINSTER	Other	Colorado State University	37	0		Residents of Skilled Nursing Facility, Assisted Living Residence, Intermediate care facilities and similar
COLLINWOOD ASSISTED LIVING	Other	Colorado State University	37	0		Residents of Skilled Nursing Facility, Assisted Living Residence, Intermediate care facilities and similar
BROOKDALE MARIANA BUTTE	Other	Colorado State University	36	0		Residents of Skilled Nursing Facility, Assisted Living Residence, Intermediate care facilities and similar
GRACE POINTE CONTINUING CARE SENIOR CAMPUS ASSISTED	Other	Colorado State University	36	0		Residents of Skilled Nursing Facility, Assisted Living Residence, Intermediate care facilities and similar

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GOOD SAMARITAN SOCIETY -- LOVELAND VILLAGE	Other	Colorado State University	25	0		Residents of Skilled Nursing Facility, Assisted Living Residence, Intermediate care facilities and similar
WINDSOR HEALTHCARE CENTER	Other	Colorado State University	25	0		Residents of Skilled Nursing Facility, Assisted Living Residence, Intermediate care facilities and similar
PARK FOREST CARE CENTER, INC.	Other	Colorado State University	25	0		Residents of Skilled Nursing Facility, Assisted Living Residence, Intermediate care facilities and similar
ALPINE LIVING CENTER	Other	Colorado State University	24	0		Residents of Skilled Nursing Facility, Assisted Living Residence, Intermediate care facilities and similar
CROSSROADS AT NORTHGLENN ALF	Other	Colorado State University	34	0		Residents of Skilled Nursing Facility, Assisted Living Residence, Intermediate care facilities and similar
KEYSTONE PLACE AT LEGACY RIDGE ASSISTED LIVING	Other	Colorado State University	34	0		Residents of Skilled Nursing Facility, Assisted Living Residence, Intermediate care facilities and similar

ELC ENHANCING DETECTION: COLORADO TESTING PLAN

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COLUMBINE WEST HEALTH AND REHAB FACILITY	Other	Colorado State University	24	0		Residents of Skilled Nursing Facility, Assisted Living Residence, Intermediate care facilities and similar
SIERRA VISTA HEALTHCARE CENTER	Other	Colorado State University	24	0		Residents of Skilled Nursing Facility, Assisted Living Residence, Intermediate care facilities and similar
MORNINGSTAR OF FORT COLLINS	Other	Colorado State University	33	0		Residents of Skilled Nursing Facility, Assisted Living Residence, Intermediate care facilities and similar
CENTER AT NORTHRIDGE, LLC, THE	Other	Colorado State University	23	0		Residents of Skilled Nursing Facility, Assisted Living Residence, Intermediate care facilities and similar
REHABILITATION AND NURSING CENTER OF THE ROCKIES	Other	Colorado State University	23	0		Residents of Skilled Nursing Facility, Assisted Living Residence, Intermediate care facilities and similar
BONAVENTURE OF THORNTON LLC	Other	Colorado State University	33	0		Residents of Skilled Nursing Facility, Assisted Living Residence, Intermediate care facilities and similar

ELC ENHANCING DETECTION: COLORADO TESTING PLAN

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CENTRE AVE HEALTH & REHAB	Other	Colorado State University	22	0		Residents of Skilled Nursing Facility, Assisted Living Residence, Intermediate care facilities and similar
PUEBLO CENTER	Other	State Lab	35	0		Residents of Skilled Nursing Facility, Assisted Living Residence, Intermediate care facilities and similar
LARCHWOOD INNS	Other	State Lab	31	0		Residents of Skilled Nursing Facility, Assisted Living Residence, Intermediate care facilities and similar
ROCK CANYON RESPIRATORY AND REHABILITATION CENTER	Other	State Lab	34	0		Residents of Skilled Nursing Facility, Assisted Living Residence, Intermediate care facilities and similar
PARKMOOR VILLAGE HEALTHCARE CENTER	Other	State Lab	30	0		Residents of Skilled Nursing Facility, Assisted Living Residence, Intermediate care facilities and similar
LIFE CARE CENTER OF EVERGREEN	Other	State Lab	29	0		Residents of Skilled Nursing Facility, Assisted Living Residence, Intermediate care facilities and similar

ELC ENHANCING DETECTION: COLORADO TESTING PLAN

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ELMS HAVEN CENTER	Other	State Lab	58	0		Residents of Skilled Nursing Facility, Assisted Living Residence, Intermediate care facilities and similar
LIFE CARE CENTER OF PUEBLO	Other	State Lab	45	0		Residents of Skilled Nursing Facility, Assisted Living Residence, Intermediate care facilities and similar
UNIVERSITY PARK CARE CENTER	Other	State Lab	43	0		Residents of Skilled Nursing Facility, Assisted Living Residence, Intermediate care facilities and similar
BEAR CREEK CENTER	Other	State Lab	43	0		Residents of Skilled Nursing Facility, Assisted Living Residence, Intermediate care facilities and similar
BETHANY NURSING & REHAB CENTER	Other	State Lab	41	0		Residents of Skilled Nursing Facility, Assisted Living Residence, Intermediate care facilities and similar
VILLAS AT SUNNY ACRES, THE	Other	State Lab	38	0		Residents of Skilled Nursing Facility, Assisted Living Residence, Intermediate care facilities and similar
CHEYENNE MOUNTAIN CENTER	Other	State Lab	38	0		Residents of Skilled Nursing Facility, Assisted Living Residence, Intermediate care facilities and similar

ELC ENHANCING DETECTION: COLORADO TESTING PLAN

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SUITES PARKER, THE	Other	State Lab	37	0		Residents of Skilled Nursing Facility, Assisted Living Residence, Intermediate care facilities and similar
BROOKDALE AURORA	Other	State Lab	65	0		Residents of Skilled Nursing Facility, Assisted Living Residence, Intermediate care facilities and similar
COMMONS OF HILLTOP, THE	Other	State Lab	64	0		Residents of Skilled Nursing Facility, Assisted Living Residence, Intermediate care facilities and similar
ATRIA ENGLEWOOD	Other	State Lab	61	0		Residents of Skilled Nursing Facility, Assisted Living Residence, Intermediate care facilities and similar
PORTER PLACE INC	Other	State Lab	60	0		Residents of Skilled Nursing Facility, Assisted Living Residence, Intermediate care facilities and similar
OAKSHIRE COMMONS	Other	State Lab	52	0		Residents of Skilled Nursing Facility, Assisted Living Residence, Intermediate care facilities and similar
SPRINGBROOKE RETIREMENT AND ASSISTED LIVING	Other	State Lab	52	0		Residents of Skilled Nursing Facility, Assisted Living Residence, Intermediate care facilities and similar

ELC ENHANCING DETECTION: COLORADO TESTING PLAN

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MANORCARE HEALTH SERVICES - BOULDER	Other	State Lab	36	0		Residents of Skilled Nursing Facility, Assisted Living Residence, Intermediate care facilities and similar
GARDENS AT COLUMBINE, THE	Other	State Lab	51	0		Residents of Skilled Nursing Facility, Assisted Living Residence, Intermediate care facilities and similar
RALSTON CREEK NEIGHBORHOOD	Other	State Lab	50	0		Residents of Skilled Nursing Facility, Assisted Living Residence, Intermediate care facilities and similar
PINE GROVE CROSSING	Other	State Lab	53	0		Residents of Skilled Nursing Facility, Assisted Living Residence, Intermediate care facilities and similar
BROOKDALE SKYLINE-ALR	Other	State Lab	50	0		Residents of Skilled Nursing Facility, Assisted Living Residence, Intermediate care facilities and similar
BEAR CREEK SENIOR LIVING	Other	State Lab	47	0		Residents of Skilled Nursing Facility, Assisted Living Residence, Intermediate care facilities and similar
LIFE CARE CENTER OF COLORADO SPRINGS	Other	State Lab	29	0		Residents of Skilled Nursing Facility, Assisted Living Residence, Intermediate care facilities and similar

ELC ENHANCING DETECTION: COLORADO TESTING PLAN

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LEGACY VILLAGE OF CASTLE PINES LLC	Other	State Lab	41	0		Residents of Skilled Nursing Facility, Assisted Living Residence, Intermediate care facilities and similar
BROOKSIDE INN	Other	State Lab	29	0		Residents of Skilled Nursing Facility, Assisted Living Residence, Intermediate care facilities and similar
LIFE CARE CENTER OF STONEGATE	Other	State Lab	29	0		Residents of Skilled Nursing Facility, Assisted Living Residence, Intermediate care facilities and similar
SUNNY VISTA LIVING CENTER	Other	State Lab	28	0		Residents of Skilled Nursing Facility, Assisted Living Residence, Intermediate care facilities and similar
POINT OF THE PINES GARDENS ASSISTED LIVING	Other	State Lab	40	0		Residents of Skilled Nursing Facility, Assisted Living Residence, Intermediate care facilities and similar
JACKSON CREEK SENIOR LIVING	Other	State Lab	38	0		Residents of Skilled Nursing Facility, Assisted Living Residence, Intermediate care facilities and similar
MOUNT ST FRANCIS NURSING CENTER	Other	State Lab	26	0		Residents of Skilled Nursing Facility, Assisted Living Residence, Intermediate care facilities and similar

ELC ENHANCING DETECTION: COLORADO TESTING PLAN

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BONAVENTURE OF COLORADO SPRINGS	Other	State Lab	37	0		Residents of Skilled Nursing Facility, Assisted Living Residence, Intermediate care facilities and similar
VIEWPOINTE	Other	State Lab	37	0		Residents of Skilled Nursing Facility, Assisted Living Residence, Intermediate care facilities and similar
MELODY LIVING OF COLORADO SPRINGS	Other	State Lab	35	0		Residents of Skilled Nursing Facility, Assisted Living Residence, Intermediate care facilities and similar
Centura CHPG Church Ranch Primary Care	Hospitals or clinical facility	Private Lab (Lab Corp or Quest)	25	0		General public, symptomatic only
Centura CHPG Golden Primary Care	Hospitals or clinical facility	Private Lab (Lab Corp or Quest)	25	0		General public, symptomatic only
Centura CHPG Southlands Primary Care	Hospitals or clinical facility	Private Lab (Lab Corp or Quest)	25	0		General public, symptomatic only

ELC ENHANCING DETECTION: COLORADO TESTING PLAN

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Centura Penrose St. Francis Primary Care	Hospitals or clinical facility	Private Lab (Lab Corp or Quest)	25	0		General public, symptomatic only
Centura CHPG Primary Care	Hospitals or clinical facility	Private Lab (Lab Corp or Quest)	25	0		General public, symptomatic only
Centura Center for Occupational Medicine	Hospitals or clinical facility	Private Lab (Lab Corp or Quest)	25	0		General public, symptomatic only
Centura Pueblo Outlook Building	Hospitals or clinical facility	Private Lab (Lab Corp or Quest)	25	0		General public, symptomatic only
Centura Mercy Family Medicine – Three Springs	Hospitals or clinical facility	Private Lab (Lab Corp or Quest)	25	0		General public, symptomatic only

ELC ENHANCING DETECTION: COLORADO TESTING PLAN

2020 Direct Expansion of SARS-COV-2 Testing by Health Departments

2. Describe your public health department's direct impact on testing expansion in your jurisdiction.

Colorado is implementing a holistic strategy for COVID-19 suppression that addresses testing, surveillance, isolation/quarantine support and contact tracing and working to aggressively ramp up each of these components. These functions are being coordinated through the COVID-19 Outbreak Response and Coordination Center (CORCC), which will provide the surveillance, response, and health expertise while partnering with key stakeholder groups, businesses, community leaders and innovators to provide subject matter expertise and policy guidance.

a) The state has worked in collaboration with local public health agencies to rapidly expand mass testing efforts. As a local control state, we are partnering with local public health agencies and their health care partners across the state. We support more than 40 sites and have set a goal to have at least one testing site in each of Colorado's 64 counties. The state supports local public health agencies and their partners at community testing sites by providing swab kits, personal protective equipment, technical assistance and laboratory testing capacity. We have also contracted with other local private labs to supply additional laboratory capacity. Colorado expects to finalize agreements with local labs and health care partners to provide several thousand tests per day worth of additional capacity for community testing sites and testing of vulnerable populations.

As our state public health laboratory, Colorado is rapidly working to identify and organize staff and procure supplies, equipment and technology that will maximize our ability to strategically contain outbreaks. This includes expanding our capacity to perform diagnostic COVID-19 tests. At the beginning of March, the State Public Health Laboratory was performing 160 COVID-19 tests/day. With the addition of staff, equipment, reagents, supplies and swabs, that capacity has increased 1150% to 2000 tests/day. To fully realize the goals of the CORCC, the State Lab needs to further expand capacity to be able to analyze 3000 tests/day and turn-around results within 24 hours to aid rapid response to outbreak response. We can only do so with stable and predictable access to equipment, supplies, tests and staff. Below are some of the key additional resources needed (not all resources listed below):

--Equipment: two (2) KingFisher Flex automated extraction system, two (2) BioFire FilmArray Torch System (12 tests per run) and two (2) Abbott m2000 high throughput automated instrument for molecular testing (470 tests per day)

--Swab kits: 240,000/month for six months

--Supplies: Kingfisher Flex and MagNa Pure Extraction Reagents - 240,000/month for six months and ThermoFisher (Taqman) Detection Reagents - 240,000/month for six months

--Rapid Tests: Abbott Alere ID Now Tests - 3000/month for six months

ELC ENHANCING DETECTION: COLORADO TESTING PLAN

--Staff: 189 staff to serve as lab techs, analysts, instrumentation specialists, biosafety specialists, logistics coordinators, lead scientists, operations, data managers, communications, data entry techs, call center staff, community testing coordinators, vulnerable population liaisons, technology leads, and public health testing team staff.

b) Colorado's testing plan specifically focuses on six vulnerable populations: long-term care facilities, correctional facilities, homeless shelters, critical infrastructure facilities, schools and Tribal nations.

Colorado is conducting weekly surveillance testing of vulnerable populations and the staff who serve them in order to prevent outbreaks. Through a partnership with Colorado State University (CSU), the state will be able to test all staff and residents of more than 50 senior living facilities and other long term care facilities across Colorado. This partnership will conduct nearly 100,000 tests over an eight week period.

The state also plans to test residents and staff at the residential and congregate care facilities that are run by the state. The Colorado Department of Human Services (DHS) has begun testing staff and residents at the Veterans Living Center at Fitzsimmons, the Colorado Mental Health Institute at Fort Logan (state hospital for Mental illness) and the Wheat Ridge Regional Center for people with intellectual and developmental disabilities. DHS is conducting weekly testing of staff and residents at these facilities and will expand efforts to other facilities in the next week. The Colorado prisons system has also begun to expand testing, quickly responding to outbreaks and prioritizing testing of workers. The state is working closely with homeless advocates, local public health and health care partners to develop a more comprehensive strategy to test people experiencing homelessness and contain the spread in this population.

In responding to outbreaks, the CORCC has established three key goals that focus on speed and agility in our response so we can quickly target outbreaks while easing social distancing policy for the general population including 1) reporting of every cluster within the six vulnerable populations within 24 hours, 2) every cluster will have people and supplies deployed within 12 hours, and 3) 100% of facilities with clusters will have response plans completed.

c) The Colorado Department of Public Health and Environment (CDPHE) continues to work to overcome barriers to efficient testing through a number of methods. CDPHE has a robust effort to quantify testing supply needs in the public and private sectors and track supplies that are received from the federal government and other suppliers. These efforts have repeatedly identified testing supplies as the major limiting factor in scaling up testing and utilizing capacity.

ELC ENHANCING DETECTION: COLORADO TESTING PLAN

First, the Department continues to explore alternative sources of testing supplies. Since the supplies that can be provided to Colorado through FEMA and the IRR have been unable to meet Colorado's testing needs to date, Colorado has sought partnerships for swabs, testing reagents and personal protective equipment from non-traditional suppliers both domestically and internationally. Thanks to support from the Federal government and these additional supplies, Colorado has been able to offer testing to all symptomatic individuals, as well as first responders and health care workers.

Within the CDPHE Budget Office, a dedicated COVID-19 fiscal and procurement program is being established to solely focus on the budget, fiscal, contracting and procurement needs of the response. This team has a direct line to executive leadership and the Governor's Office so they can quickly address any barriers to securing the resources needed.

The Colorado Public Health Laboratory (state lab) has worked to validate additional methods of sample collection and extraction in order to overcome supply chain issues. The state laboratory has now validated the use of anterior nasal swabs using a self collection protocol. They have also worked to validate swabs that were 3D printed. When extraction reagents were scarce, they have investigated boil prep methodologies to eliminate the need for a formal extraction method. The state lab will continue to work to break down supply chain issues by investigating alternative sample collection methods.

Additionally, the CORCC Testing and Logistics Unit will monitor supply chains, coordinate procurement, build and maintain testing response caches and deploy resources. The Unit coordinates with the State Lab to maintain surge capacity for 10,000 tests, mobile testing units as well as Public Health Testing Teams that can be deployed when outbreaks are identified in any of the six vulnerable populations. Initially, these teams were staffed by our Colorado National Guard and are now being transferred to Public Health to ensure sustainability. The Public Health Testing Teams will also provide testing supplies, PPE and guidance to minimize further spread. The CORCC will mitigate barriers to efficient testing including underutilization of assets and supply-chain difficulties, through daily intelligence flowing into and out of the Outbreak Fusion Center.

d) The state lab plans to scale up the use of serology testing for surveillance purposes over the next 2-3 months. The state lab plans to use its existing Abbott serology platform and purchase the SARS-CoV-2 assays. Colorado's serological testing strategy seeks to 1) establish and maintain a robust surveillance and serosurvey program to inform models and enable targeted policy interventions that support local surveillance, a longitudinal study, detecting racial and socioeconomic disparities, and surveilling exposure in correctional facilities, assisted living facilities, schools and among healthcare workers, first responders and other essential workforces (15,000 tests/month for 12 months), 2) develop and scale effective protocols that use serology to protect vulnerable populations and aid in quarantine decisions through pilot projects to determine efficacy of monitoring for seroconversion among vulnerable settings (5,000 tests for pilot programs and up to 250,000 tests/month based on efficacy), and 3) strategically prepare and scale capacity if the science indicates antibody status can be useful in reducing infection

ELC ENHANCING DETECTION: COLORADO TESTING PLAN

rates, informing lifestyle choices and managing risk in workforces and at risk populations (up to 800,000 tests/month over 12 months, weighted toward fall 2021).

e) The State lab will focus its resources on surveillance for vulnerable populations as well as testing for populations without a traditional payer source (e.g. uninsured Coloradans).

While we encourage community test sites to bill private insurance, Medicare or Medicaid for the cost of the tests, the state lab will run tests for those patients who are uninsured at no cost to the patient.

The State lab will be the primary laboratory providing testing for vulnerable populations and the staff who serve them in order to prevent outbreaks. Along with Colorado State University, the state lab will provide testing for staff and residents in more than 50 senior living facilities. The state lab will also test residents and staff at the residential and congregate care facilities that are run by the state, including the Veterans Living Centers, the Colorado Mental Health Institutes, and the Regional Centers for people with intellectual and developmental disabilities. The State lab is also conducting testing for Colorado's prison system quickly responding to outbreaks and prioritizing testing of workers.

In terms of testing, Colorado is using a combination of strategies to maximize long-term success and sustainability by 1) scaling up community testing sites to ensure the public has equitable access to testing across the state, 2) building long term testing capacity and maximizing access by utilizing health care system infrastructure to the fullest extent and 3) establishing ongoing long term surveillance and isolation support programs in coordination with local governments, the private sector, and other entities.

f) The Colorado Department of Public Health and Environment (CDPHE) and its sister agencies are expediting and streamlining procurement and on-boarding of new staff. For example, within the CDPHE Budget Office, a dedicated COVID-19 fiscal and procurement program is being established to solely focus on the budget, fiscal, contracting and procurement needs of the response. This team has a direct line to executive leadership and the Governor's Office so they can quickly address any barriers to securing the resources needed. Additionally, members of the CORCC will continue to work with the Colorado Department of Public Safety to procure necessary testing supplies under the emergency declaration.

CDPHE has already placed orders for many of the pieces of equipment listed above in (a) and below in table 2. The Department has already posted additional positions and is utilizing detailees from other agencies to fill gaps until permanent staff can be hired. The Department is also working with the Governor's office and state controller to modify existing spending authority and obtain the fiscal waivers necessary to expedite the hiring of staff, purchasing of equipment and supplies necessary to meet testing and containment goals.

ELC ENHANCING DETECTION: COLORADO TESTING PLAN

ELC ENHANCING DETECTION: COLORADO TESTING PLAN

Table #2: Planned expansion of 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 testing levels	0	94	95	0	0	0	0	0	189
FOR DIAGNOSTIC TESTING									
How many additional* testing equipment/devices are needed to meet planned testing levels? (provide an estimated number, and include platform details in narrative above)	0	0	6	0	0	0	0	0	6
Volume of additional swabs needed to meet planned testing levels ⁺⁺	240,000	240,000	240,000	240,000	240,000	240,000	240,000	240,000	1,920,000
Volume of additional media (VTM, MTM, saline, etc.) needed to meet planned testing levels ⁺⁺	240,000	240,000	240,000	240,000	240,000	240,000	240,000	240,000	1,920,000
Volume of additional reagents needed to meet planned testing levels, by testing unit and platform (i.e. 100K/day - panther; 100k/day - Thermofisher)	480,000	480,000	480,000	480,000	480,000	480,000	480,000	480,000	3,840,000
FOR SEROLOGIC TESTING									

ELC ENHANCING DETECTION: COLORADO TESTING PLAN

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	0	0	0	0	0	0	0	0	0
Volume of additional reagents needed to meet planned testing levels, by testing unit and platform (i.e. 100K/day - panther; 100k/day - Thermofisher)	0	0	0	0	15,000 - Abbott	15,000 - Abbott	15,000 - Abbott	15,000 - Abbott	45,000

* 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.