DocuSign Envelope ID: AABA7964-2528-4EEE-ABD7-A0375F982E44

AMENDATORY AGREEMENT

This **AMENDATORY AGREEMENT** is made between the **CITY AND COUNTY OF DENVER**, a home rule and municipal corporation of the State of Colorado (the "City") and **DENVER HEALTH AND HOSPITAL AUTHORITY**, a body corporate and political subdivision of the State of Colorado, with an address of 777 Bannock Street, MC 0278, Denver, Colorado 80204 (the "Consultant"), jointly ("the Parties").

RECITALS:

WHEREAS, the Mayor declared a state of local disaster emergency on March 12, 2020, pursuant to C.R.S. 24-33.5-701, *et seq.*, brought on by the spread of COVID-19, the Governor of the State of Colorado declared a Disaster Emergency (D 2020 003) dated March 11, 2020, as amended, on the same basis, and the President of the United States issued a Declaration of Emergency on March 13, 2020, as amended, due to the COVID-19 crisis;

WHEREAS, the City awarded the Agreement to the Consultant by the City through a sole source selection process in accordance with its rules and procedures;

WHEREAS, the Parties entered into an Agreement dated December 11, 2020, (the "Agreement") to perform, and complete all of the services and produce all the deliverables set forth on Exhibit A, the Scope of Work and Budget, to the City's satisfaction.

WHEREAS, to respond to the COVID-19 crisis in the City and County of Denver, Colorado, and pursuant to the declarations of emergency described above, the City wishes to retain Consultant to provide emergency disease containment services due to the COVID-19 pandemic outbreak.

WHEREAS, the City wishes such services to be performed on an expedited, emergency basis.

WHEREAS, the Parties wish to amend the Agreement to increase the maximum contract amount, update paragraph 19-No Employment of Illegal Aliens, update paragraph 22-No Discrimination of Employment, and amend the scope of work and budget.

NOW THEREFORE, in consideration of the premises and the Parties' mutual covenants and obligations, the Parties agree as follows:

1. Section 3 of the Agreement entitled "**<u>TERM:</u>**" is hereby deleted in its entirety and replaced with:

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"**3**. **<u>TERM</u>:** The Agreement will commence on **March 9, 2020,** and will expire on **December 31, 2023** (the "Term"). The term of this Agreement may be extended by the City under the same terms and conditions by a written amendment to this Agreement. Subject to the Executive Director's prior written authorization, the Consultant shall complete any work in progress as of the expiration date and the Term of the Agreement will extend until the work is completed or earlier terminated by the Executive Director.**"**

2. Section 19 of the Agreement entitled "**<u>NO EMPLOYMENT OF ILLEGAL ALIENS TO PERFORM WORK UNDER THE AGREEMENT:</u>**" is hereby deleted in its entirety and replaced with:

"19. <u>NO EMPLOYMENT OF WORKERS WITHOUT AUTHORIZATION TO PERFORM WORK UNDER THE AGREEMENT</u>:

a. This Agreement is subject to Division 5 of Article IV of Chapter 20 of the Denver Revised Municipal Code, and any amendments (the "Certification Ordinance").

b. The Consultant certifies that:

(1) At the time of its execution of this Agreement, it does not knowingly employ or contract with a worker without authorization who will perform work under this Agreement, nor will it knowingly employ or contract with a worker without authorization to perform work under this Agreement in the future.

(2) It will participate in the E-Verify Program, as defined in § 8-17.5-101(3.7), C.R.S., and confirm the employment eligibility of all employees who are newly hired for employment to perform work under this Agreement.

(3) It will not enter into a contract with a subconsultant or subcontractor that fails to certify to the Consultant that it shall not knowingly employ or contract with a worker without authorization to perform work under this Agreement.

(4) It is prohibited from using the E-Verify Program procedures to undertake pre-employment screening of job applicants while performing its obligations under this Agreement, and it is required to comply with any and all federal requirements related to use of the E-Verify Program including, by way of example, all program requirements related to employee notification and preservation of employee rights.

(5) If it obtains actual knowledge that a subconsultant or subcontractor performing work under this Agreement knowingly employs or contracts with a worker without

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authorization, it will notify such subconsultant or subcontractor and the City within three (3) days. The Consultant shall also terminate such subconsultant or subcontractor if within three (3) days after such notice the subconsultant or subcontractor does not stop employing or contracting with the worker without authorization, unless during the three-day period the subconsultant or subcontractor provides information to establish that the subconsultant or subcontractor has not knowingly employed or contracted with a worker without authorization.

(6) It will comply with a reasonable request made in the course of an investigation by the Colorado Department of Labor and Employment under authority of § 8-17.5-102(5), C.R.S., or the City Auditor, under authority of D.R.M.C. 20-90.3.

c. The Consultant is liable for any violations as provided in the Certification Ordinance. If the Consultant violates any provision of this section or the Certification Ordinance, the City may terminate this Agreement for a breach of the Agreement. If this Agreement is so terminated, the Consultant shall be liable for actual and consequential damages to the City. Any termination of a contract due to a violation of this section or the Certification Ordinance may also, at the discretion of the City, constitute grounds for disqualifying the Consultant from submitting bids or proposals for future contracts with the City."

3. Section 22 of the Agreement entitled "**NO DISCRIMINATION IN EMPLOYMENT**" is hereby deleted in its entirety and replaced with:

"22. NO DISCRIMINATION IN EMPLOYMENT: In connection with the performance of work under the Agreement, the Consultant may not refuse to hire, discharge, promote, demote, or discriminate in matters of compensation against any person otherwise qualified, solely because of race, color, religion, national origin, ethnicity, citizenship, immigration status, gender, age, sexual orientation, gender identity, gender expression, marital status, source of income, military status, protective hairstyle, or disability. The Consultant shall insert the foregoing provision in all subcontracts."

4. **Exhibit A** is hereby deleted in its entirety and replaced with **Exhibit A-1, Scope of Work and Budget**, attached and incorporated by reference herein. All references in the original Agreement to **Exhibit A** are changed to **Exhibit A-1**.

5. As herein amended, the Agreement is affirmed and ratified in each and every particular.

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6. This Amendatory Agreement will not be effective or binding on the City until it has been fully executed by all required signatories of the City and County of Denver, and if required by Charter, approved by the City Council.

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Contract Control Number: ENVHL-202264759-01 [202056318-01]
Contractor Name: DENVER HEALTH AND HOSPITAL AUTHORITY

IN WITNESS WHEREOF, the parties have set their hands and affixed their seals at Denver, Colorado as of:

SEAL

CITY AND COUNTY OF DENVER:

ATTEST:

By: ______________________________

____

APPROVED AS TO FORM:

Attorney for the City and County of Denver

By: ______________________________

REGISTERED AND COUNTERSIGNED:

By: ______________________________

By: ______________________________

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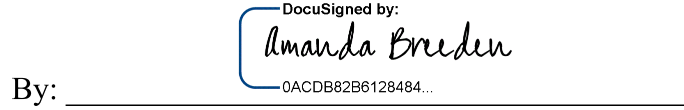
Contract Control Number: ENVHL-202264759-01 [202056318-01]
Contractor Name: DENVER HEALTH AND HOSPITAL AUTHORITY



By: ______________________________

Name: Amanda Breeden
(please print)

Title: Director, SPARO
(please print)

ATTEST: [if required]

By: ______________________________

Name: ______________________________
(please print)

Title: ______________________________
(please print)

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Exhibit A-1

Scope of Work

Denver Health and Hospital Authority (DHHA) will assist the City and County of Denver's Department of Public Health and Environment (DDPHE) by providing personnel, services, and supplies necessary to perform critical containment activities, such as disease surveillance, case investigation, contact tracing, and testing, based on jurisdictional needs.

A. PHEP Funding (Project A)

a. DHHA shall support the City and County of Denver's ability to effectively respond to a range of public health threats, including infectious diseases, natural disasters, and biological, chemical, nuclear, and radiological events.

B. PHEP COVID Supplemental (Project B)

a. DPH shall support the City and County of Denver response to COVID-19.
   i. Improving COVID Testing Rates (Project B.1a)
   ii. Case Investigation (Project B.2)

C. ELC COVID (Project C)

a. DHHA shall support the City and County of Denver response to COVID-19 by providing personnel, services, and supplies to perform critical containment activities, such as disease surveillance, case investigation, and testing. As mutually agreed, DPH shall support the City and County of Denver in completing the CDPHE ELC Scope of Work.
   i. Epidemiology services (**Project C.1**)
   ii. Resource and Care Coordinator (**Project C.2**)
   iii. Case Investigation Supervisor (**Project C.3)**
   iv. Community testing (**Project C.4**)
   v. Immunization (**Project C.5a**)
   vi. NurseLine (**Project F)**
   vii. Case Management (**Project C.6**)

D. Coronavirus Relief Fund - CRF (Project D)

a. DHHA shall support the City and County of Denver response to COVID-19 by providing personnel, services, and supplies to perform case investigations and patient assistance. In addition, DPH shall create an electronic form using DocuSign, that will be used to enroll DPS students in our vaccination program.
   i. Case Investigations (**Project D.1**)
   ii. DocuSign (**Project D.1**)
   iii. Enhanced Patient Support (**Project D.1**)
   iv. Nurseline (**Project F)**

E. PHEP Epidemiologists (Project E)

a. DHHA shall provide support for navigator or epidemiology personnel at DDPHE and shall conduct epidemiological investigations or support individuals who are isolated as a result of COVID-19.

F. Citywide COVID SRF – Nurseline (Project F)

a. DHHA will provide NurseLine support for the City's COVID-19 testing efforts, including providing results of COVID-19 tests and providing health advice and recommendations for care.

G. COVID On-Call Services

a. Contractor will be asked by DPHE to perform additional COVID on-call services related to testing, immunization, epidemiological services, and other COVID-related activities in response to the evolving COVID situation. Subject to the terms of the Agreement and as directed, Contractor shall develop a scope of work and budget for each additional COVID on-call service that is requested by DDPHE. Upon review and approval of that SOW and budget, DDPHE will provide a notice to proceed to the Contractor, encumbering the additional funding for those services.

Reporting

Category	Description	Completion Date
PHEP	Emergency Preparedness	June 30, 2021
PHEP COVID Supplemental	COVID response support	March 15,2021
ELC COVID	COVID personnel support, testing, and tracing	December 19, 2022
Coronavirus Relief Fund	COVID response	December 31, 2020
PHEP Epidemiologists	COVID epidemiological investigations	March 15, 2021
Citywide COVID SRF	COVID response support	December 31, 2020
COVID On-Call Services	TBD	TBD

Term: This agreement is for the period September 20, 2022 through December 31, 2023

Budget: The total award is $2,985,700 for committed and defined services and not to exceed an additional $5,000,000 for on-call services, for a total of $7,985,700.

Category	Description	Amount
PHEP	Emergency Preparedness (Project A)	**$247,960**
PHEP COVID Supplemental	COVID response support COVID testing (Project B.1b) Case Investigation (Project B.2)	**$84,000** 50,000 34,000
ELC COVID	Testing and contact tracing (Project C) Epidemiology services Resource & Care Coord. Case Investigation Supervisor Community testing Immunization (Project C.5b) NurseLine – Pepsi Operations (Project F) Nurseline – Community Testing (Project F) Case Management	**$2,004,411** 90,000 82,534 99,996 461,981 202,804 130,000 310,000 627,096
Coronavirus Relief Fund (CARES funding)	COVID response Case Investigations (Project D.1) DocuSign (Project D.1b) Enhanced Patient Support (Project D.2) Nurseline – Pepsi Center support	**$416,000** 100,000 92,600 112,400 111,000 (Incl $100,000 Flat Fee)

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Category	Description	Amount
PHEP Epidemiologists	COVID epidemiological investigations	**$101,829**
Citywide COVID SRF	Nurseline (Project F)	**$131,500 (Incl $83,250 flat fee & $46,000 start up)**
COVID On-Call Services	TBD	**Not to exceed $5,000,000**
	Total	**$7,985,700 (not to exceed)**

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Project A

Activity	Due Date	Reference
Review and update DPH COOP Plan, and submit to DDPHE	3/1/2021	
Participate in the HCC HVA	12/31/2020	NCR Regional SOW PA-1
Per mutually agreed workplan, assist with facilitating the 2020-21 CPG Survey with regional LPHAs	6/1/2021	NCR Regional SOW PA-2
Per mutually agreed workplan, assist with including the following entities at a minimum in the Regional TEPW: Hospitals, EMS, Emergency Management Organizations, LPHA's.	6/1/2021	NCR Regional SOW SA-3-1
Per mutually agreed workplan, assist DDPHE with planning for the next four year mulityear cycle by including the following: Annual HPP HCC Training and Exercise Plan	6/1/2021	NCR Regional SOW SA-3-2
Per mutually agreed workplan, assist DDPHE with including the following entities in the update of the Regional MYTEP: Hospitals, EMS, Emergency Management Organizations, LPHA's.	6/1/2021	NCR Regional SOW O1-SA-4-1
Per mutually agreed workplan, assist with development of the training plan, exercise plan, integration of the HPP HCC Training and Exercise Plan, and additional elements in the Regional MYTEP template.	12/31/2020	NCR Regional SOW O1-SA-4-2
Per mutually agreed workplan, assist with the planning of the Regional Pandemic Influenza Functional Exercise, or respond to a real world event, with HCC Readiness and Response Coordinator	6/1/2021	NCR Regional SOW O1-PA-6
Per mutually agreed workplan, assist with the planning for the 2021 Statewide Full Scale Exercise or response to a real world event.	6/1/2021	NCR Regional SOW O1-PA-7
Per mutually agreed workplan, assist with the development of a NCR Regional Volunteer Management Annex.	6/1/2021	NCR Regional SOW O1-PA-12
Per mutually agreed workplan, assist with organizing the Regional Pandemic Influenza Functional Exercise or real world event response efforts with LPHA Staff and the HCC Readiness and Response Coordinator.	12/31/2020	NCR Regional SOW O3-PA-1
Participate in quarterly redundant communication drills conducted by CDPHE (expectation is participation at DOC or other assigned site)	6/1/2021	NCR Regional SOW O3-PA-2
Participate in two of four IMATS drills and DDPHE-provided training.	6/1/2021	NCR Regional SOW O3-PA-4

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Per mutually agreed workplan, assist with test/drill of a minimum of two areas in Denver's MCM Distribution Plans.	6/1/2021	NCR Regional SOW O3-PA-5
Per mutually agreed workplan, participate in the Regional ESF#8 Training and Exercise Planning Workshop.	12/31/2020	LPHA SOW O1-PA-2
Per mutually agreed workplan, assist with identifying issues impacting high-risk populations.	6/1/2021	LPHA SOW O1-PA-4
Per mutually agreed workplan, assist with engaging AFN community groups	6/1/2021	LPHA SOW O1-PA-5
Per mutually agreed workplan, assist with integrating opportunities for community engagement identified in FY20-21 into the 2021 Full Scale Exercise planning, or a real world event.	6/1/2021	LPHA SOW O1-PA-6
Maintain access to the following trained personnel: a.Staff that monitor routine jurisdictional surveillance b.Staff that monitor epidemiological investigation systems, and c.Staff that support surge requirements in response to threats.	6/1/2021	LPHA SOW O1-PA-12-1
Conduct a minimum of two (2) HAN Communication Drills with objectives and after-action review of areas for improvement.	6/1/2021	LPHA SOW O3-PA-4
Continue efforts with DDPHE to develop a Denver Behavioral Health Response plan. Include resources, activation processes, and any related administrative information, such as costs and policies.	6/1/2021	N/A
All epi deliverables	As identified in EPI SOW	EPI SOW

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Improving COVID Testing Rates among Vulnerable Populations – A Qualitative Study

Term: This project has a budget and timeline from 04/01/2020 through 12/31/2020. Should funds remain, and by mutual agreement with DDPHE, the project will continue into 2021 via a no cost extension. The original funding source for this project ends 3/15/2021. The no cost extension would also end no later than 3/15/2021.

Background and Scope: The ability of local agencies to quickly build, support, and sustain increased testing for severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) is vital to any reopening plan and protecting against a "surge" in the health care system. In partnership with the Metro Denver Partnership for Health (MDPH) Denver Health is helping identify best practices for expanding testing in our communities to support the Governor and the State of Colorado in fulfilling its COVID-19 testing goal of 10,000 tests per day. Applying the Harvard Global Health Institute estimate of the minimum number of daily tests needed nationwide, we predict 8,655 tests a day are needed in the state of Colorado. The seven-county metro Denver/Boulder area is currently testing at 58% of that goal, needing to fill a gap of nearly 3,000 tests/day.

Geography	Population	Tests/Day1[1]	Current tests per day2[2]		Additional needed tests/day
			Avg tests	% of Goal	
Colorado	5,694,311	8,655	5,392	62%	3,263
Metro Denver Seven County Population	3,197,879	6,957	4,039	58%	2,918
Adams	511,469	777	442	57%	335
Arapahoe	651,345	990	678	68%	312
Boulder	325,480	495	219	44%	276
Broomfield	69,453	106	50	47%	56
Denver	717,796	1091	965	88%	126
Douglas	342,847	521	265	51%	256
Jefferson	579,489	880	455	52%	425

Note: most but not all laboratories report to CDPHE

While supply chains to provide testing are less of a challenge, a new challenge is emerging: public demand for the tests, especially among the populations who are at increased risk of exposure, morbidity and mortality. For instance, in a recent testing event at a Denver homeless shelter, over 200 people

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were approached to recruit 52 people for testing. In that sample, 27% of the population had positive PCR tests and 65% were asymptomatic. In later shelter testing events, approximately half of the population declined testing. In a different population, after publicizing free testing to 1200 people associated with a local food pantry, only 16 signed up for testing after personal outreach was done.

Because SARS-CoV-2 has more devastating effects among people with chronic conditions where racial, ethnic and economic disparities are already well established, COVID morbidity and mortality disparities exist, but with a dramatic twist. Because the highly contagious virus impacts essential service workers[3] and those served by those workers, i.e., everyone, equitable population testing and containment is refreshingly in everyone's true self-interest. Though we have some morbidity and mortality rates by different subgroups, data for testing rates is pending. Because time is of the essence, as we wait for those data to emerge, we need to simultaneously learn what prevents and would facilitate testing uptake.

Early news snippets suggested some communities felt they were not susceptible to the virus; distrust of the medical system, the political system, and media, or concerns about deportation may also influence testing rates. People being offered tests have indicated concerns about the pain of testing, confusion around what actually constitutes a "test," i.e., whether that is a symptom screener or PCR test. People may fear stigma from positive tests, e.g., exclusion from work, shelters, or other freedoms. Equitable testing and containment strategies will be hampered without a more thorough understanding of these issues.

The goal of the work proposed here is to use qualitative methods to identify conceptual domains that impact testing uptake, as well as concrete strategies for increasing SARS-CoV-2 testing rates among most at-risk populations, including refugees, African American/Black populations,[4] LatinX[5] populations and people experiencing homelessness.[6]

Objectives:

1. Using grounded theory, identify what hinders and could improve testing among different populations.
2. Recognizing the role of community leaders in diffusing communications and innovations, describe potential roles appropriate for community partners in the context of increasing testing, and the reimbursement, if any, needed to provide that support.

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[3] https://jamanetwork.com/journals/jamainternalmedicine/fullarticle/2765826
[4] https://coronavirus.jhu.edu/data/racial-data-transparency
[5] https://jamanetwork.com/journals/jamainternalmedicine/fullarticle/2765826
[6] In Denver, case rates of COVID-19 among persons experiencing homelessness (PEH) are currently at approximately 11 cases per 1,000 persons experiencing homelessness (PEH), while hospitalizations among PEH are approximately 4.5/1,000 persons. PEH case rates are higher than those for residents in any Denver neighborhood, indicating that the homeless population is already disproportionately affected and at risk for worsening illness and outbreaks

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Draft Key Informant Questions

1. What is your organization's view of COVID and COVID testing?
2. What types of things are people saying about COVID testing in the community?
3. What barriers are there to people getting tested?
4. What do you think facilities people getting tested? Why do you think some people in the community get tested, while others don't?
5. What strategies could be used to increase testing in your community?
6. What role, if any, is there for CBOs or individual community leaders in improving test rates?

Draft Focus Group Questions

Special note: This formative work focus primarily on testing for COVID in community as opposed to testing at a health care provider's office?

Knowledge (What do people know about various aspects of COVID?)

How is it transmitted?

How does the disease manifest itself (e.g., asymptomatic, mild, severe illness sometimes requiring hospitalization)?

Who appears to be most at risk for COVID?

What are ways to avoid infection?

What do people know about the difference between the nasal/throat swab and the serology/blood test? How are they different?

Do people know anyone who has been diagnosed with COVID?

Awareness of recommendations regarding testing for the coronavirus

What have people read or heard about the need for testing?

Where can people go if they want to be tested?

Frame: Testing is more widely available now than previously. It may soon be the case that people will be encouraged to test even if they have no symptoms.

Attitudes toward testing

What do people think about current recommendations that people are tested only if they are experiencing symptoms?

What would people think about a recommendation that everyone should be tested?

Who should be tested?

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Why would people want to be tested? What are benefits of having a test for the people who choose to be tested?

Why would people choose not to be tested? What are costs associated with being tested?

Facilitators to testing

What would need to be in place to encourage testing among people who might benefit from being tested?

What circumstances make testing easier for people, more likely?

Barriers to testing

What would prevent people from being tested?

What circumstances make testing more difficult for people,less likely?

Recommendations for testing

What should testing in your community look like? What would you expect to see? Where should testing in community take place? Who should be involved? At what times and places should testing be available?

What things should a community testing program avoid doing in order to be effective and acceptable?

Where do people currently get information about COVID? Who are trusted sources of information? Who are preferred sources of information?

Overall recommendations related to testing for COVID?

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Title: **42042920-05 Improve Testing Qualitative Study**
Sponsor: **DDPHE**
PI: **Judy Shlay**
GM: **20-0331**

			4/1/2020 - 12/31/2020 Year 1
Salary			822
Fringe			241
		Total Senior/Key Personnel	**1,063**
Salary			26,197
Fringe			7,675
		Total Other Personnel	**33,872**
		Total Salaries	27,019
		Total Fringe Benefits	7,916
		Total Salaries & Benefits	**34,935**
Printing			1,300
Supplies-Office/Admin			75
Other Support Services	Translation/Transcription Services		6,500
Temporary Services	Temp Services Focus Group/Consult/Graphic Design		4,840
Participant Stipends/Incentive			2,350
		Total Other Costs	**15,065**
		MODIFIED TOTAL DIRECT COSTS LESS SUBS	**50,000**
		TOTAL DIRECT COSTS	**50,000**
		TOTAL PROJECT COSTS	**50,000**

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Project B.2

COVID - Case Investigation Lead Funding

Term: This project has a budget and timeline through 12/31/2020. Should funds remain, and by mutual agreement with DDPHE, the project will continue into 2021 via a no cost extension. The original funding source for this project ends 3/15/2021. The no cost extension would also end no later than 3/15/2021.

Background and Scope: SUDDEN CHANGE IN SITUATION NECESSITATING FUNDING: 100% of an epidemiologist position was funded under the CCD/Denver Health and Hospital Authority Operating Agreement Section B6. By mutual agreement the effort has been spent on the COVID-19 response since early March 2020. Due to unanticipated COVID-19 related changes in City and County of Denver anticipated revenues, the B6 section of was, with little warning, zeroed out in mid-June, effective July 1 2020. Loss of this funding effectively eliminates funding for the current Case Investigation Task Force Lead (Allison Seidel) of the Epidemiology Response Team of the Joint DDPHE/DPH Public Health & Environment Department Operations Center (PHEDOC). Case Investigation (CI) is the linchpin of COVID-19 isolation of cases and contact tracing, testing and quarantine. It is also how the city and state maintain situation awareness of who is being infected, and whether they may be part of localized outbreaks. Thus loss of this function immediately cripples the effectiveness of "flatten the curve" efforts as well as future planning.

NEED FOR POSITION: In the Incident Command Structure the Case Investigation Task Force lead supervises two subunits (Staffing and Data Support) of approximately 40 people on any particular day (while also training and maintaining on-call many more part-time case investigators). Allison Seidel, in particularly, has been critical to standing up and refining the systems necessary to field up to a score of investigators daily (most working remotely), provide them with information needed to perform interviews, issue orders electronically to confirmed cases, upload all information into DPH databases, and smooth transfer of information to DDPHE/DOC like daily case counts, deaths, hospitalizations, orders issued and other time-critical functions. She has also been the major Denver participant in efforts to roll out regional or statewide systems to improve both case investigation and contact tracing in the metro Denver area. Failure to maintain Allison Seidel's work and knowledge in these specialized activities would result in an inevitable backlog in current case investigation efforts and a degradation of future planned changes.

It is possible that Ms. Seidel might temporarily rotate to other ICS positions in the Epidemiology response, while her knowledge and experience in CI would remain available to the PHEDOC ongoing.

Budget:

$26,296 Salary
$ 7,704 Fringe
$34,000 Total

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Project C.1

COVID-19 Epidemiologists

We are interested in hiring 2 MPH-students or MPH-graduate level epidemiologists to join the Epidemiology, Disease Investigation and Preparedness team at Denver Public Health for at least a 6 month minimum term. We currently have only 8 total epidemiologists in the Division and 4 (including a manager) who are dedicated full-time to the COVID-19 response. All 4 of our epidemiologists are managing and overseeing key functions of the response, namely: case and contact investigations; data systems, processes, and data quality; monitoring trends (including external data); outbreak response; and epidemiologic analyses. Having additional staff with training and experience in data management, epidemiological and statistical analyses and outbreak response will improve our efficiency and thoroughness of understanding, informing and responding to the COVID-19 epidemic in Denver city and county.

The epidemiologists would be fully integrated with the epidemiology team and supervised by the Epidemiology Manager and the Team Lead of the work assignment. Immediate needs that would be fulfilled by additional epidemiology staff would include, but are not limited to the following:

- Under the supervision of the DPH outbreak lead, working with DDPHE directly to help respond to outbreaks; ensure the completeness and quality of data for outbreak line lists; conduct epidemiologic analyses to describe the extent of outbreaks and monitor outbreak trends and evaluate the impact of public health administrative, environmental and personal control measures on transmission; and ensure accurate and timely reporting to CDPHE, including updating the Colorado Electronic Disease Reporting System (CEDRS).
- Under the supervision of the DPH case and contact and DPH data management leads, provide data management and analytic support to ensure the completeness and integrity of data for COVID 19 cases, hospitalization and deaths in Denver city and county. This would include routinely conducting analyses to identify missing, inconsistent and nonsensical data and updating data accordingly.
- Under the supervision of the DPH Epidemiology and Surveillance Director, conduct epidemiologic analyses to better understand the COVID 19 epidemic in Denver. Activities would include data management, developing protocols with complete analytic plans, and conducting analyses using statistical software to meet objectives. This would include in-depth analyses to understand outbreaks in specific populations; sociodemographic trends over time; and risk factors for severe illness and death. Analyses would be prioritized based on needs of the EOC and DOC.
- Assist with updating and managing the public facing webpage that provides key information on COVID 19 cases, hospitalizations and deaths in Denver; COVID 19 laboratory testing and positivity in Denver; ED and hospitalizations related to COVID 19 symptoms and diagnoses in Denver; and additional metrics.

Budget
$55.80 hour ($45/hour plus 24% temp agency mark-up) per person
$90,000 total request for two Epidemiologists

Project C.2

COVID -19 Resource and Care Coordinator

The resource coordinator will be responsible for being the point person for resource coordination within Denver Public Health. This staff person will be responsible for identifying process, distribution methods and obtaining resources for residents of Denver who have contracted COVID-19 or their contacts. This person will work closely with the City of Denver, Denver Human Services, 211 and local public health departments to ensure collaborative allocation of resources necessary to safely isolate in place. This role will serve as a coordinator of services in partnership with a working team who is uplifting the work.

Essential functions

- Working with the case investigators to identify most commonly identified resource needs in Denver county
- Measure and report on resource need completion rates
- Identify process for immediate gathering and distributing of urgent resources
- Establish distribution method for resources both short and long term
- Work in partnership with organizations to link patients to the correct and current information to meet their needs
- Develop materials to train volunteers on how to connect patients to resources
- Work with medical team to ensure that medical resources are available for persons in need
- Distribute and manage cross cultural/Multilanguage communications and education for successful isolation
- Work with social work team and patient navigators to connect persons to enrollment and a medical home
- Track metrics associated to COVID resource response and ensure successful delivery completion.

Budget

$39.68 hour ($32/hour plus 24% temp agency mark-up)
$82,534 total request for Resource and Care Coordinator

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Project C.3

COVID - Case Investigation Lead Funding

Background and Scope: SUDDEN CHANGE IN SITUATION NECESSITATING FUNDING: 100% of an epidemiologist position was funded under the CCD/Denver Health and Hospital Authority Operating Agreement Section B6. By mutual agreement the effort has been spent on the COVID-19 response since early March 2020. Due to unanticipated COVID-19 related changes in City and County of Denver anticipated revenues, the B6 section of was, with little warning, zeroed out in mid-June, effective July 1 2020. Loss of this funding effectively eliminates funding for the current Case Investigation Task Force Lead (Allison Seidel) of the Epidemiology Response Team of the Joint DDPHE/DPH Public Health & Environment Department Operations Center (PHEDOC). Case Investigation (CI) is the linchpin of COVID-19 isolation of cases and contact tracing, testing and quarantine. It is also how the city and state maintain situation awareness of who is being infected, and whether they may be part of localized outbreaks. Thus loss of this function immediately cripples the effectiveness of "flatten the curve" efforts as well as future planning.

NEED FOR POSITION: In the Incident Command Structure the Case Investigation Task Force lead supervises two subunits (Staffing and Data Support) of approximately 40 people on any particular day (while also training and maintaining on-call many more part-time case investigators). Allison Seidel, in particularly, has been critical to standing up and refining the systems necessary to field up to a score of investigators daily (most working remotely), provide them with information needed to perform interviews, issue orders electronically to confirmed cases, upload all information into DPH databases, and smooth transfer of information to DDPHE/DOC like daily case counts, deaths, hospitalizations, orders issued and other time-critical functions. She has also been the major Denver participant in efforts to roll out regional or statewide systems to improve both case investigation and contact tracing in the metro Denver area. Failure to maintain Allison Seidel's work and knowledge in these specialized activities would result in an inevitable backlog in current case investigation efforts and a degradation of future planned changes.

It is possible that Ms. Seidel might temporarily rotate to other ICS positions in the Epidemiology response, while her knowledge and experience in CI would remain available to the PHEDOC ongoing.

Budget:

$77,832 Salary
$22,164 Fringe
$99,996 Total

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Project C.4

TESTING IN SHELTERS AND THROUGH COMMUNITY ORGANIZATIONS

SARAH ROWAN, MD, KAREN WENDEL, MD, TRACY SCOTT, MSW,
SARAH STELLA, MD, DENVER PUBLIC HEALTH AND DENVER HEALTH

Project Summary

Offering free COVID-19 testing for individuals in lower income communities including those experiencing homelessness has been identified as a high priority in Denver. At present, testing is available in healthcare settings and in limited capacity for symptomatic individuals in some homeless shelters. To increase testing among vulnerable communities, free, low-barrier testing options are needed for housed individuals, and universal testing is needed for persons experiencing homelessness and utilizing congregate settings.

Denver Public Health (DPH) has partnered with Denver Department of Public Health and Environment (DDPHE) and the Denver Joint Task Force for COVID-19 in persons experiencing homelessness in the City and County of Denver to develop a plan to offer free, universal COVID-19 screening at homeless shelters and expanded access to free testing for symptomatic individuals through community-based organizations (CBOs). This plan draws upon the experience of the DPH HIV/Sexually Transmitted Infections/Viral Hepatitis outreach testing team, the Denver Health Ambulatory Care Services COVID-19 testing team, and the collective knowledge of area homeless service providers. Testing materials are provided by the Colorado Department of Public Health and Environment (CDPHE) and tests are run at the CDPHE public health laboratory. Results notification is performed by CDPHE in conjunction with DPH and local agencies, and case investigations and contact tracing are performed by DPH and DDPHE.

Capacity to safely isolate individuals with suspected and PCR-confirmed COVID-19 identified in congregate settings is critical for implementation of testing programs for individuals experiencing homelessness. Temporary housing options for isolation or cohorting are needed for individuals experiencing symptoms of COVID-19, those diagnosed with COVID-19, and those residing in congregate settings and at higher risk for complications of COVID-19. If housing options are insufficient to meet these needs, high volume COVID-19 screening will be deferred.

The basic operational protocol for testing involves the following components:

- Scheduled community testing events at congregate shelters and other locations serving target populations
- Host facilities promote the event and organize flow
- DPH partners with host site on core elements of testing protocol
- Core protocol elements include safe outdoor site set-up, client education, symptom screening and triage for symptomatic individuals, registration and consent, specimen collection, and specimen transport
- CDPHE runs the tests, enters results into LabOnline, and notifies clients of test results within 24-

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72 hours

- DPH provides a client call-in results line as a back-up for test result notification for difficult to reach clients and clients with communication barriers
- The Homeless Management Information System (HMIS) is also employed to inform shelter staff and clients of test results
- Results are communicated to shelters and other settings as needed to optimize public health and in conformance with HIPAA
- Testing staff are trained in use of personal protective equipment (PPE) and specimen collection

- The number of clients tested weekly will depend on capacity for testing stations, availability of DPH and host site personnel, and CDPHE lab capacity. Additional personnel from the Denver Health labor pool, DDPHE, contracted healthcare agencies, and the Colorado National Guard will likely be needed to support basic operations. With adequate space and personnel, we estimate capacity to test up to 100- 200 individuals per day and 400-600 individuals per week, allowing us to screen all persons regardless of symptoms (universal screening) who utilize participating shelters in 3-4 weeks. Universal screening will also be considered for shelter staff and PEH who do not utilize shelters. As per public health standards, individuals in these settings who test negative would be retested in 14 days as long as community transmission continues. Frequency of testing events at partnering community-based organizations will be based on confirmed community case rates as well as reported clusters of persons with COVID- associated symptoms. Partnerships with community-based organizations will be informed by civic leaders. The proposed program will support facility staff in maintaining protocols and resources to test symptomatic individuals and new clients between universal screening events.

Specific Aims

Goals: Identify people with COVID-19 in need of medical care and prevent COVID-19 transmission

Objectives of expanded testing in congregate shelters

1) Facilitate isolation of those who are infected either via cohorting within a shelter or in another location (activated respite or alternative care site) to minimize ongoing transmission
2) Identify infections and infection rates among staff to decrease transmission
3) Provide targeted support and assistance for ongoing testing of symptomatic or new clients between universal testing events
4) Facilitate early detection of COVID-19 clusters and interrupt transmission.
5) Develop action plans to decrease transmission for shelters with a high proportion of positive cases
6) Develop evidence-based population health strategies for patients experiencing homelessness
7) Gain early insight into prevalence of COVID-19 among individuals in congregate shelters
8) Use data gained to advocate for resources to expand screening and testing capacity for persons experiencing homelessness, and isolation/quarantine of those with COVID-19

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Objectives of community-based testing through community organizations

1) Increase availability of diagnostic testing among lower income communities who might not access testing in healthcare settings
2) Promote earlier access to medical care for individuals with COVID-19 who are experiencing worsening or severe symptoms
3) Prevent transmission of COVID-19 in family, work, and community settings
4) Identify outbreaks in community settings
5) Link clients to needed supports to ensure voluntary isolation is feasible for individuals with COVID-19 in highly affected, lower income neighborhoods and households

Approach

1. Universal Testing in Shelters

DPH and DDPHE propose an implementation plan for universal COVID-19 testing of PEH utilizing day shelters and overnight shelters. The general structure will involve the public health testing team partnering with shelter staff to screen all persons currently residing in shelters, screen new clients upon entry to the facility, rescreen every 14 days, and support diagnostic testing for individuals who develop symptoms between universal screening events. Persons with positive COVID-19 test results, symptoms highly suggestive of COVID-19, or conditions that put them at elevated risk for severe COVID-19 disease will be transported to activated respite, protective action sites, or alternative care sites. Test specimens will be processed and run at the CDPHE state laboratory with results entered in the LabOnline database. Test results will be communicated directly to clients and to host facilities serving participating clients. Potential partnering agencies providing services for PEH are listed in Table 3 below.

2. Testing with Community-based Organizations

To reach individuals who may have contracted COVID-19 but may not access testing at the fixed testing sites in Denver, we propose partnering with key community and civic leaders to offer testing events in conjunction with community-based organizations (CBOs), businesses, and governmental agencies. At this time, these events will be designed to offer testing for individuals experiencing symptoms of COVID-19. If certain neighborhoods or communities are noted to have particularly high COVID-19 incidence rates, testing could be made available to asymptomatic individuals as well at these events if advised by CDC, state, or local public health agencies. The events could involve prescheduled testing appointments or a “walk-up” approach. Testing events using the scheduled, drive-through model will be informed by the CDPHE Operational Testing Playbook. The hosting agencies will work with the testing team to determine the dates and times of the events and to promote the events. The overall testing protocol will be similar to the protocol employed at shelters in terms of registration and consent, symptom assessment, specimen collection, laboratory processing, and results notification. Potential partnering agencies are listed in Table 4.

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3. Street Outreach Testing

The Denver COVID-19 Joint Taskforce data reports that there are approximately 2,500 individuals experiencing homelessness who do not utilize shelters. While some of these individuals may be reached through partnering CBOs, holding unaffiliated testing events in outdoor spaces frequented by individuals experiencing homelessness will be another means of offering free testing for PEH. The approach of universal screening versus symptomatic testing will be determined by local epidemiology and public health guidance. Dates and locations of these events will be informed by local agencies working with PEH including the Denver Street Outreach Collaborative.

4. Prioritization of Testing Activities

Testing capacity under this proposal ranges from 100-200 tests/day with 400 to 600 tests/week. Testing events will be prioritized by community or facility disease rates and available logistical support for testing events and resources for patient support.

Universal screening at shelters will be prioritized as described in Figure 3. Ongoing evaluation and revision of prioritization schematic will be based on real time evaluation of testing event COVID-19 incidence. In this way limited testing capacity will be focused on community testing needs in a prioritized and data driven process guided by a continuous quality improvement framework.

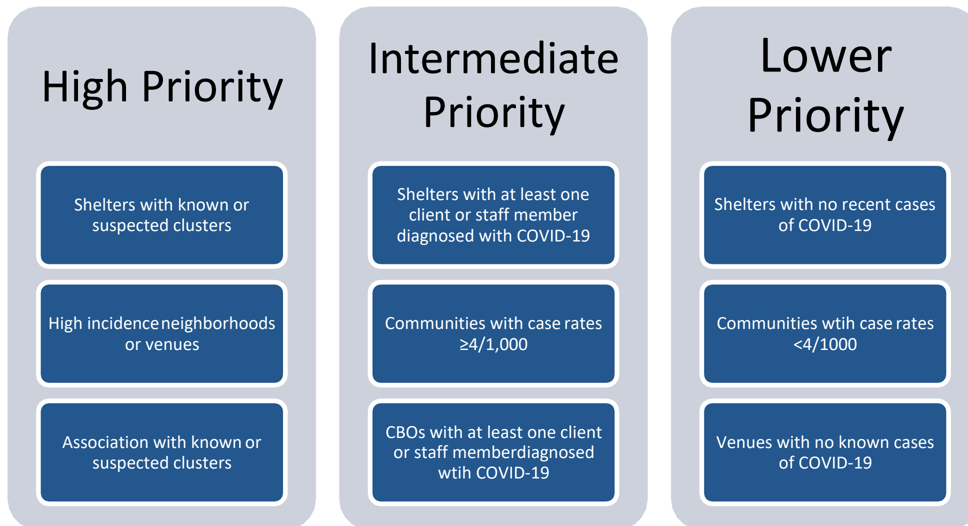

Figure 3. Prioritization of Shelters and Community Sites for COVID-19 Testing

5. Follow-up

The protocols in this proposal employ the CDPHE model for Community Testing (see Appendix). CDPHE provides test kits, runs samples, and enters results in LabOnline, the CDPHE laboratory results database. CDPHE protocol involves notifying individuals of test results within 24-72 hours. Ability to prevent transmission will be greatly enhanced if results are conveyed within 24 hours. CDPHE does not currently provide a contact number for clients to call if they have not received results so DPH or other test team leads will provide a contact number for clients to call if they have not received their test results from

CDPHE by 72 hours. Shelters will coordinate with CDPHE to receive test results for their clients and assist with notifying clients of results as authorized by DDPHE due to the public health urgency of the current epidemic.

6. Training

Infection Prevention All individuals involved with community-based testing for COVID-19 must be trained on the appropriate use of personal protective equipment (PPE). This “just-in-time” training will involve watching training videos and in-person observations and sign-offs for donning and doffing of PPE. Ideally, on-site donning and doffing will be observed by team members to optimize technique. Appropriate sterilization of equipment and materials and changing of PPE during testing sessions will be done in compliance with CDPHE, DDPHE, DPH, and CDC guidance.

Specimen Collection Training for specimen collection (nasopharyngeal, nasal mid-turbinate, and/or anterior nares) will be done by DH nursing and physician staff with in–facility monitored performance and evaluation by a skilled trainer prior to unsupervised field collection.

7. Strategic Planning and Program Evaluation

To inform program activities and ensure that activities are aligned with the above prioritization matrix, we will collaborate with DPH and DDPHE epidemiology and infectious disease teams to create weekly reports of COVID-19 activity that include rates in shelters, locations of clusters in shelters and community settings, and heat maps of disease activity. The reports will be reviewed with the Denver COVID-19 Joint Task Force, DPH and DDPHE epidemiology and infectious disease teams working on outbreak investigations, and representatives from local agencies. For program evaluation, the core DPH-DDPHE community testing team will meet regularly to review the yield of testing in each venue and address previously unforeseen implementation challenges.

8. Testing Capacity and Staffing Estimates

Inputs

Testing Rates: CDPHE drive-up testing rate = 11 tests/hour; ~5 min/person/test

Denver Health drive-up testing rate = 25 tests/hour; ~5 min/person/test

St. Francis pilot testing event testing = ~15 tests/hour; ~10 min/person/test

Numbers vary due to protocols (capacity for preregistration) and staffing

Assumptions

10 min/person/test = 6 tests/hour per testing unit (1 unit = registration, symptom screening, and sample collection)

6 tests/testing unit/hour X 3 testing units = 18 tests/hour

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Projected Testing Volumes

Shelter Testing = 6 hours of testing/day plus 1 hour for set-up and 1 hour for clean-up and transport of samples to CDPHE laboratory.

18 tests/hour X 6 testing hours = 108 tests/day (assuming 3 testing units)

CBO Testing Events = 3 hours of testing plus 1 hour for set-up and 1 hour for clean-up and transport of samples to CDPHE laboratory.

18 tests/hour X 3 testing hours = 54 tests/event (assuming 3 testing units)

Street Outreach Testing Events = Insufficient data to make estimate as limitations may be primarily in client recruitment to the testing process.

All estimates reflect the ideal state and will be affected by many internal and external factors. Internal factors impacting testing volume include registration processes for new and previously registered clients. Pre-screening and scheduling clients will also facilitate quicker testing times, though will not be appropriate for all settings. Regarding external factors, policies in shelters and other facilities that determine whether testing is considered "opt-in" or "opt-out" will greatly affecting testing uptake. The use of incentives is another factor that will lead to variation in testing uptake.

Estimated Staffing Needs

Table 1. Personnel Needed at Testing Events

Assignment	Number Needed Per Testing Unit	Number Needed for 3 Testing Units
Organizational Flow, Crowd Control	Facility Staff (3)	Facility Staff (3-5)
Registration	1-2	3-6
Screening for Symptoms and High Risk Conditions, Temperature Check	1-2	3
Specimen Collection	1	3
Medical Triage and Transport Coordinator for Clients with Symptoms or High Risk Conditions*	1	1-2
Event Coordinator	1	1-2
Total	**4-7**	**10-16**

*****May not be necessary for housed populations for whom transportation to other facilities is not needed

9. Testing Schedule Scenarios

Scenario 1. Full DPH staffing support at each testing event, host staff in supportive roles

	Monday	Tuesday	Wednesday	Thursday	Friday
Testing Type	Shelter	Shelter	Shelter	CBO*	CBO
Tests Run	108	108	108	20-54	20-54
Staff Needed (min)	10	10	10	4-10	4-10

**tests and staffing at CBO-based events depend on expected volume and scheduled vs walk-up approach*

Scenario 2. Scale-up using DPH staff at each testing event and expanded roles for host site staff

	Monday	Tuesday	Wednesday	Thursday	Friday
Testing Type	Shelter CBO/Street Outreach	Shelter CBO	Shelter CBO/Street Outreach	Shelter CBO	Shelter CBO
Tests Run	150	150	150	150	150
Staff Needed (min)	15	15	15	15	15

Scenario 3. Scale-up using DPH staff at each event, expanded roles for host site staff, contract healthcare staff, and/or DHS, Colorado National Guard

	Monday	Tuesday	Wednesday	Thursday	Friday
Testing Type	Shelter CBO CBO/Street Outreach	Shelter CBO CBO	Shelter CBO CBO/Street Outreach	Shelter CBO CBO	Shelter CBO CBO
Tests Run	200	200	200	200	200
Staff Needed (min)	20	20	20	20	20

Additional COVID-19 tests run will range from approximately **350 per week to 1,000 per week**. The low end of the testing range could be lower if testing uptake is low.

Timeline

The timeline will depend on evidence of ongoing community transmission. Assuming adequate personnel, space, and client uptake, most people experiencing homelessness in Denver could be screened for COVID-19 in 2-4 weeks. Subsequent testing cycles would ideally be initiated after the first cycles were completed to offer repeat testing every 14 days to individuals who previously tested negative for COVID-19 but remained at elevated risk for acquiring it. Numbers of individuals in need of repeat screening would depend on initial prevalence of infection and degree of ongoing transmission in

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Denver. (See Table 3) Between-event testing would be offered for new clients at shelters in accordance with the prioritization strategy described above.

TABLE 2. PROTOCOL FOR UNIVERSAL TESTING IN SHELTERS

Station	Description	Staff and Materials
Set-up	○ Test outdoors ○ Determine hours with shelter ○ Arrange stations ○ Determine waiting area for transportation to activated respite, protective action, or alternate care site ○ Place signs ○ Clean surfaces ○ Designate Hot, Warm, Cold Zones	○ Tables ○ Chairs ○ Signs ○ Trash cans ○ Wipes ○ PPE
Registration	○ Offer a mask and hand sanitizer ○ Collect registration information ○ Verify ID ○ Review testing process, consent to treat, privacy practices ○ Verbal or signed consent ○ Complete top of CDPHE Lab Form	○ 2-3 staff ○ Paper forms ○ Pens ○ Laptop, jetpack ○ Handi tool ○ Wipes ○ Trash can ○ PPE
Screening	○ Symptom questionnaire and score ○ Assessment of high risk conditions ○ Check temperature ○ Complete CDPHE form and place in specimen bag ○ Write label and place on test tube	○ 2-3 staff ○ Thermometers ○ Forms ○ Pens ○ Wipes ○ Trash can
Specimen Collection	○ Collect sample ○ Place in bag ○ Place in cooler	○ Test kits ○ Wipes ○ Trash can ○ Cooler ○ Tissues
Medical Triage and Follow-up	○ Review symptom score ○ Direct client to speak with RN if symptom score ≥2 or high risk/high needs for possible activated respite, protective action, or alternate care site ○ Review plan for result notification	○ Seating
Specimen Transport to CDPHE Lab	• DPH, DDPHE, or CDPHE staff	

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Table 3. Denver Congregate Shelter Facilities and Estimations of Population at Risk

Facility	Capacity	Population	Recent Utilization	5% Pos.	25% Pos.	60% Pos.	Symptomatic Screening in place	Suspect Cluster
National Western Complex	765	Men	682-698 (690)	35	173	414	CCH Door screening	X
Coliseum	300	Women and transgender	140-160 (150)	8	38	90	CCH Door screening	x
Salvation Army-Cross Roads	300	Men	249 to 280 (average 261)	13	65	156	?	x
Salvation Army- 48th Ave	250	Men	129 to 216 (average 178)	9	45	107	?	
Catholic Charities	99	Families, women, vets	77 to 89 (average 84)					
Samaritan House-Program beds				4	21	50	?	
Delores Project	36	Women and transgender	38 (38)	5	10	22	?	
Urban Peak	36	Youth	21 to 26 (average 24)	1	6	15	?	x
St. Francis Center	N/A	All	447 to 644 (average 584)	29	146	350	?	X
The Gathering Place	N/A	Women and transgender	75 to 123 (average 102)	5	26	61		
Denver Rescue Mission (meals only)	N/A	All for breakfast and lunch, men only for dinner	148 to 252 (average 190)	10	48	114	?	x
TOTAL			**2386**	**119**	**578**	**1379**		

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Table 4. Examples of Potential Partners for Community-based Testing Events

Organization	Population Served	Neighborhood	Existing Relationships
Harm Reduction Action Center	People who use drugs, PEH		DPH, DDPHE
Hope Communities	Immigrant Communities		DDPHE/City of Denver
Adult Probations	Justice-involved, some PEH		DPH, DDPHE
Denver Housing Authority	Low income individuals		DDPHE
Mexican Consulate	Latinx communities		DPH
MHCD – Dahlia Campus	Adults, children, and families (PEH, substance use, PEH, mental health)		
Denver Indian Health and Family Services	American Indian and Alaskan Native adults, children, and families		DDPHE/City of Denver, DPH
Servicios de La Raza	Latinx communities		DDPHE/City of Denver
Center for Work Education and Employment	Low income, single parent families		DDPHE/City of Denver
Women's Bean Project	Women (formerly incarcerated, low income, unemployed)		DDPHE/City of Denver
Businesses	All communities		DDPHE/City of Denver
CCH- Vocational Services	Veterans and all people who are or have experienced homelessness		DPH, CCH
Second Change Center, Inc	Formerly incarcerated individuals		DPH
The Empowerment Program	Women (formerly incarcerated, substance use, homeless)		DPH
It Takes a Village	People of color		DPH
Sisters of Color	Women of color		DPH
Center for African American Health	African American individuals and families		DPH
Inner City Parish	Low income individuals and families. PEH, food insecurity		DPH
MetroCaring	Low income individuals and families, food insecurity		DPH
CREA Results	Latinx communities		DPH
Mile High Health Alliance	Denver-based health, human, and social organizations		DPH, DDPHE

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Table 5. Alternative Accommodation Options for PEH

FACILITIES TO COHORT INDIVIDUALS WITH COVID-19, COVID-19 SYMPTOMS, OR AT HIGH RISK FOR COMPLICATIONS

Option	Status	Population	Services
Activated Respite -motel rooms	Active	COVID-19+ or symptomatic and awaiting test results Asymptomatic or mild illness/low risk/low needs	24/7 on site support services Medical care, behavioral health care, medicines, MAT
Protective Action Units -motel rooms	Active	Not sick/COVID-19 negative/high risk for complications if they contracted COVID-19	Medical care, behavioral health care, case management, transition planning
Alternative Care Sites -group care facility -serves larges volume of patients -prevent hospital admissions	Not Active	Moderate illness and/or high needs	Supervised care Medical care, behavioral health care, medicines, MAT, case management, transition planning
Auxiliary Shelters -de-crowding of existing shelters	Active	Not sick/ COVID-19 negative or unknown/not high needs	

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Title: **42xxxx20 COVID-19 Outreach Testing**
Sponsor: **DDPHE**
PI: **Sarah Rowan**
GM: **20-0331**

			Year 1
Salary			987
Fringe			289
		Total Senior/Key Personnel	**1,276**
Salary			288,009
Fringe			84,384
		Total Other Personnel	**372,393**
		Total Salaries	288,996
		Total Fringe Benefits	84,673
		Total Salaries & Benefits	**373,669**
Domestic Travel			5,086
		Total Travel	**5,086**
Printing			5,000
Education Materials			1,080
Supplies-Medical			3,000
Minor Furniture/Equip-Nonmed ($150-$4,999/item)			6,000
Communication			500
Other Expense	Rental		2,000
Other Support Services	Translation/Graphic Design/Online Marketing		30,000
Temporary Services	Temp staffing of outreach events		35,646
		Total Other Costs	**83,226**
		MODIFIED TOTAL DIRECT COSTS LESS SUBS	**461,981**
		TOTAL DIRECT COSTS	**461,981**
		TOTAL PROJECT COSTS	**461,981**

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CDPHE Community Test Site Protocol

Communicating with CDPHE

- Health system or Public Health will fill in the "Community Test Site and Resource Request" to receive tests, swabs, PPE. Current contact is Maren Moorehead, Cell: 303.883.0506 maren.moorehead@state.co.us
- Once you make the request, CDPHE will reach out to the contact listed in the request form to assess capacity and coordinate logistics for resources.
  - They can send courier, fed ex to deliver or someone can pick up supplies. Patrick Belou is the Courier manager
  - Samples need refrigeration, different swabs need different types of transportation media, but Peter Davis is the resource person and will be in communication as needed- he can also tell you about how health system can get results for sharing
- You do not have to enter patient information into a health care system's Electronic Health Record
- Trained (health) personnel can collect the supplies, and sites don't need to document qualification of staff
- A provider order is not required- but the site is expected to follow prioritization tiers, e.g., people with symptoms and frontline essential workers
- Supplies are ordered for about 5 days. The first order is a pilot- CDPHE would outreach back to site and adjust future orders as needed.
- There is a one-page FAQ in different languages that can be distributed to patients being tested

LabOnline

- There will be a one-page "patient testing request form" for each test kit. It asks about basic contact information and COVID symptoms. There are also lines for the person collecting the sample to record their name and date.
- After completing the Community Test Site and Resource Request, CDPHE will pre-populate a patient testing request form template with the testing site name, and establish the 'customer' in their database to pull results. This form needs to be prepopulated to correspond with who will do call outs. The group taking the samples, CDPHE or a CBO could be prepopulated on the form and do the call outs. To get the results a CBO would need to request access to LabOnline for results communication. It takes some paperwork to get LabOnline access, but it is available.
- After the sample is received, CDPHE will put the lab into LabOnline, or the group taking samples can enter the sample into LabOnline themselves.
- CDPHE communicates results within 48-72 hour, but samples are often resulted in <24 hours. If another group will do the follow-up (they are set up as a "report to" client in LabOnline) they can see results as soon as they are run.
- Health systems/ Public Health has access to CEDRS database and we could pull list from CEDRS for follow-up

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DENVER PUBLIC HEALTH COVID-19 REGISTRATION FORM

Staff assisting completion of registration form___________________________ DATE__________/__________/__________

DEMOGRAPHIC INFORMATION

Last Name ____ First Name ____
Middle Initial _________

Name you'd like to be called _________________________________ Pronouns: He/Him She/Her They/Them
(Please specify) _______________________

Date of Birth___________/___________/___________ Age ________________ Sex Assigned At Birth ◻ Female ◻ Male ◻ Intersex

Current Gender ◻ Woman ◻ Man ◻ Transgender ◻ Another gender (please specify) ______________________________

Address ____

Street / Apartment Number City State Zip Code

Phone ( )_________-___________◻ Home ◻ Work ◻ Cell May We Text ◻ No ◻ Yes

E-Mail____@ ◻ gmail ◻ hotmail ◻ yahoo other ___________________________

Race (mark all that apply) ◻ American Indian or Alaska Native ◻ Black or African American ◻ White or Caucasian

◻ Asian ◻ Native Hawaiian ◻ Other Pacific Islander

Ethnicity □ Hispanic/Latino □ Non-Hispanic/Latino **Marital Status** □ Single □ Married □ Separated □ Divorced □ Other ________________

Veteran □ No □ Yes **Country of Birth** □ U.S. □ Other ____

CONSENT FOR SERVICES

<u>Information about COVID-19 testing:</u> This test looks for genetic material from the COVID-19 virus in your body. It is the most accurate FDA approved testing available at this time. It does not tell you if you have had the COVID 19 infection in the past. These results may not be 100% correct. Sometimes the test result shows you do not have COVID-19 when you do. Sometimes the test shows you have the sickness when you do not. Depending upon the results of these tests, follow-up recommendations may be given. A person receiving the COVID-19 test has the right to request FDA information about each test.

<u>Confidentiality and privacy of Protected Health Information (PHI):</u> Your information collected today will be entered into the Denver Health electronic medical record system. State and national laws and guidelines protect medical records. Medical records may be released with a person's consent or as required by law. COVID-19 test results are reported to CDPHE as required by state law. A person receiving a positive COVID-19 test may receive follow-up communication from the state or local health departments. By signing below or giving verbal consent I authorize this COVID-19 testing unit to conduct collection and testing for COVID-19.

<u>Grievance procedure:</u> A person receiving a test has the right to file a grievance if they believe they have been treated unjustly or unfairly in any way. A copy of this organization's standard grievance procedure can be made available upon request.

<u>Consent for confidential testing:</u>

***I understand the information on this form and my questions have been addressed. I agree to be tested for COVID-19*.**

Signature:____ **Date:**___________/___________/

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COVID -19 Immunization Program – Infrastructure Support

Project Summary

On March 13th, the US declared a national emergency in response to the COVID-19 pandemic, and on March 26th stay-at-home orders were enacted across the country. This effort to decrease the burden of COVID-19 transmission decreased face-to-face medical visits resulting in significant reductions in vaccine administrations. The CDC recently quantified this decrease in a report documenting approximately 3,000,000 dose reductions in non-influenza vaccines administered from January 6th to April 13th.[1] Disruptions in vaccination put communities at risk of vaccine-preventable diseases.

There is a need for a coordinated effort to prevent outbreaks of vaccine-preventable diseases such as measles, pertussis, and influenza at the same time that we are managing COVID-19. Higher rates of influenza and other respiratory viruses are seen during the fall months. The Colorado Department of Public Health and Environment (CDPHE) issued a health advisory outlining the importance of ensuring availability and access to the influenza vaccine, preventing this additional burden on hospital systems as they continue to deal with COVID-19.[2] The advisory also cites national survey data suggesting that more adults plan to receive the influenza vaccine this season compared to previous season, calling for early planning, use of a variety of approaches to vaccine delivery, and recommended target populations.[2] Additionally, increased access to Medicaid providers is needed as Medicaid enrollment numbers continue to grow as a result of job losses during the pandemic.[3]

This section of the proposal focuses on building the infrastructure to implement strategies to protect the Denver community from vaccine-preventable diseases and prepare for COVID-19 vaccination provision when available. The objectives of the section of the proposal are to:

1. Engage and build a taskforce of stakeholders to assess need and establish the structure to improve access to all vaccinations for children and adults;
2. Develop approach to educate the community on the importance of remaining up-to-date on vaccinations and provide information for where to obtain vaccines;
3. Establish all the processes and procedures required to successfully vaccinate children and adults.

This plan draws upon the experience of Denver Public Health's (DPH) Immunization Program, which through its outreach program brings all recommended vaccines to adults and children in alternative and convenient settings. Denver's In-School Immunization Program (ISIP) has provided all required and recommended vaccines to children at select Denver Public Schools (DPS). The outreach program has also provided influenza vaccines to adults in various locations such as shelters and workplaces, and has actively participated in the Hepatitis A vaccination efforts during Denver's Hepatitis A outbreak.

The timeline for proposed activities is July 1, 2020-December 31, 2020. Planning will begin in July with engaging stakeholders who will consult on the communications plan and the list of target populations and locations for outreach clinics. The Project Coordinator will work create standard processes for all engagement to support the outreach clinics. The infrastructure implemented will provide the foundation for providing the COVID-19 vaccine when it becomes available for distribution.

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Background

A report from the CDC shows a significant reduction in non-influenza vaccines administered from January 6th to April 13th following stay-at-home orders.[1] This is problematic, as vaccinations are one of the most effective methods to prevent the spread of infectious diseases.[4] Rates of morbidity and mortality from vaccine-preventable diseases have significantly declined since the availability of vaccines.[5] The concept of herd immunity is an important factor in the effectiveness of vaccines in preventing the spread of disease. Along with recommendations from the Center for Disease Control and the Advisory Committee on Immunization Practices, school vaccination requirements contribute to vaccine coverage rates and prevention of vaccine-preventable diseases.[6,7] However, obstacles such as inconvenient clinic hours, healthcare access, and cost lead to communities being under-immunized and leave communities vulnerable to outbreaks of diseases.[5,8] The COVID-19 pandemic has contributed to these obstacles to obtaining vaccines when provider offices and immunization clinics closed due to stay-at-home orders enacted across the country.

Colorado is experiencing this overall decrease in vaccines administered (Figure 1), and in Denver County (Figure 2), there has been a decrease in pertussis and measles-containing vaccines administered to 4-6 year olds compared to 2019.

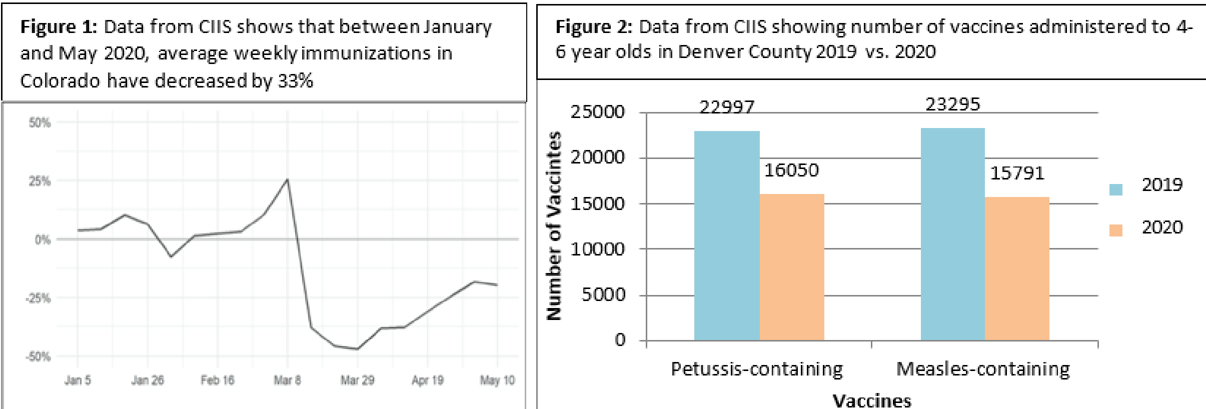

Figure 1: Data from CIIS shows that between January and May 2020, average weekly immunizations in Colorado have decreased by 33%

Figure 2: Data from CIIS showing number of vaccines administered to 4-6 year olds in Denver County 2019 vs. 2020

Nationwide outbreaks of measles in recent years have been a result of under-vaccinated communities. To achieve herd immunity, vaccination rates for childhood vaccinations (DTaP, IPV, HIB, MMR, Pneumococcal, and Varicella) must reach 95%, and the vaccination rate of Td/Tdap must reach 80%.[9] Colorado and Denver County are among the lowest vaccination rates in the country. During the 2018/2019 school year, the vaccination rate for the MMR vaccine among kindergarteners in Denver County was 83.7%, well below the goal of 95% coverage. While work has been done to increase vaccination rates since the 2018/2019 school year, the decreases in vaccines administered since the start of the pandemic have likely stalled progress. It is therefore important to implement efforts such as marketing campaigns, reminder/recall, and outreach vaccination clinics to ensure the community is aware of the problem, the importance of remaining up-to-date on vaccines, as well as where to get vaccinated.

Reminder/recall is a cost-effective strategy for identifying children who are missing recommended vaccines and recalling them to their medical homes to get up-to-date.[10] Pragmatic trials in Colorado have demonstrated its efficacy for adolescents at Denver School-Based Health Clinics, as well as for preschoolers at private practices.[11] Collaborative reminder/recall, in which local public health partners

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with practices or other stakeholders to jointly promote vaccination messaging, increases effectiveness and is cost-effective on large scales.[12] It is estimated that this initiative costs $0.17 per message per child in Colorado.[13] In 2019, CDPHE offered to conduct either a centralized reminder/recall or provide counties with information to conduct their own. A centralized approach was used in Denver County where CDPHE sent letters to households with 4-6 year olds due for their second dose of MMR. Although some letters were returned due to incorrect addresses, 5% of those who received letters got vaccinated. This effort will be implemented again and will be supplemented by additional reminders from providers and DPS.

Outbreaks of vaccine-preventable diseases disproportionately affect people who use substances or experience homelessness.[15] Every year, the outreach program provides influenza vaccines to vulnerable adult populations such as persons experiencing homelessness (PEH) and who live in centers receiving treatment for substance abuse. In 2019, Hepatitis A outbreaks occurred nationwide. The affected population in Denver reflected the trend, with 75% identifying as people experiencing homelessness and 59% identifying as people who use substances. Outreach vaccination clinics in Denver County were implemented on a large scale to vaccinate hard to reach populations such as PEH, those in the criminal justice system, who use drugs (PWUD) or are receiving treatment for substance abuse. Vaccines were administered at shelters and in locations throughout the community where PEH were known to congregate. These efforts were successful in providing vaccines to those most vulnerable and fostered strategic community partnerships. Among the targeted populations, there was an 83% increase in the Hepatitis A vaccine saturation rate. This demonstrates the opportunity to also increase the influenza vaccination rate. Processes from the Hepatitis A intervention will be adapted for this proposal to develop the infrastructure needed to vaccinate those in vulnerable populations with the influenza vaccine.

These strategies in conjunction with a marketing campaign will increase the infrastructure needed to build community outreach efforts to administer vaccines which will help keep our community healthy.

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Strategies

Goal: Create the infrastructure to increase safe delivery and access to vaccines for adults and children in Denver County to prevent outbreaks of vaccine-preventable diseases such as measles, pertussis, and influenza, that can also be used to implement wide spread COVID-19 vaccination when available.

Engage Stakeholders

- Build a taskforce of stakeholders including Denver Department of Public Health and Environment (DDPHE), Denver area Health Systems, DPS, community healthcare providers, community based organizations, faith-based community, organizations who work with vulnerable populations, businesses, and the CDPHE Immunization team
- Discuss the infrastructure needed to educate and inform the community and improve access to all vaccinations for children and influenza vaccination for adults
- Engage community ambassador organizations to promote vaccinations
- Assess Denver County vaccination rates to determine areas with the greatest need
- Use the frameworks developed to support COVID-19 vaccination delivery

Educate

- Create a communications plan utilizing various media channels and communication strategies such as targeted ads, social media and earned media
  - Highlight the importance of children and adults are up-to-date on all immunizations
  - Communicate that clinics are open and providing care that is safe and in accordance with current COVID-19 regulations
  - Train community ambassador organizations to promote the importance of flu vaccination in the 2020/2021 flu season using developed talking points
  - Develop process to disseminate vaccine promotions in organizations' communication materials and messaging
  - Develop process to disseminate outreach vaccination clinic locations and information

Increase Access to Vaccines

Children

- Develop process to implement reminder/recall, which identifies children who are missing recommended vaccines and recall them to their medical homes to get up-to-date
- Develop the structure for outreach teams to conduct school clinics for children using Denver's In-School Immunization Program (ISIP)
  - All children are eligible to participate, irrespective of insurance status
  - Target schools based CDPHE's School and Child Care Immunization Data to identify schools with low vaccination rates (particularly with low measles vaccination rates), and then identify day care centers that feed into those schools and offer vaccinations at those centers

Vulnerable Adults and Families

- Establish the infrastructure to implement outreach and drive-through clinics to provide influenza vaccine through service organizations working with vulnerable populations
  - PEH: Colorado Coalition for the Homeless and shelters

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- PWUD: Harm Reduction Action Center, syringe access sites, substance treatment providers, and Emergency Departments
- Worksites for occupations that have low health insurance coverage such as construction sites, restaurants, and hotels
- Persons involved in the criminal justice system
- Uninsured: host clinics in areas with high rates of uninsured such as Southwest Denver, North Park Hill, and Montbello
  - Utilize city agencies (e.g., Parks and Rec) to serve as locations for clinics

Implementation of Strategies

Engage Stakeholders

During the planning period, relevant stakeholders will be identified that work with target populations such as schools, PEH, PWUD, and persons in the criminal justice system. We will convene meetings to discuss the needs in the community, best practices, and will provide feedback on locations to hold vaccination clinics. Meetings will be held regularly to gather feedback and discuss progress on marketing, reminder/recall, and outreach vaccination clinic strategies.

Educate

A marketing campaign is needed to educate the community and drive people to get vaccinated. The plan would include a digital marketing campaign and other strategies to target areas around schools with low compliance rates. Ads will direct to a landing page with educational information and locations (i.e., outreach, public health, and community health clinics) to obtain vaccines.

In addition to the marketing campaign there is a need for print materials to be distributed at locations such as day care centers, schools, shelters, and others to promote outreach vaccination clinics should people at these locations need additional resources.

To achieve widespread uptake of the influenza vaccine it is critical for public health to partner with community organizations to support messaging on the importance of getting the influenza vaccine and facilitate the community obtaining the vaccine. The current focus is to work to achieve high levels of influenza vaccination uptake, with future endeavors focused on the COVID-19 vaccine if and when it is ready for widespread dissemination. In the case a community partner is interested or has a population focus on childhood vaccines, we will assess if able to support expanded vaccine promotion.

Partnerships are also required to help with planning and dissemination of information on access to flu vaccine for people in the community. While health systems and retail pharmacies have resources to support influenza vaccine promotion and administration, many people are unable to access those services. It is necessary to implement alternative locations for flu vaccine access. To achieve this requires partnerships with community organizations that can act as community ambassadors to engage and support their constituents' health. This work can be part of formal and informal networks used by the organizations to engage community.

Increase Access to Vaccines

Infrastructure is required to build outreach teams that support clinics for children and adults. The structure of these teams will be developed which will include one Registered Nurse (RN), two Health Care Partners (HCP), and one administrative staff member. The structure will support up to six outreach teams to adequately staff outreach clinics (i.e., ISIP and flu clinics).

Reminder/Recall for Children

Subject matter experts and the Adult & Child Consortium for Health Outcomes Research & Delivery Science will be consulted for best practices. The group of stakeholders would determine a target population (e.g., 4-6 year olds in Denver not up-to-date on their second measles vaccine) and a standard message for letters, auto dialers, or text messages. Because research shows that reminder/recall initiatives conducted centrally are more effective, CDPHE would pull the list of children due for vaccines through the Colorado Immunization Information System (CIIS) and would send communication to those families. Should communication bounce back due to incorrect addresses or phone numbers, the list could be cross-checked with information from DPS, which should be more current.

In-School Immunization Program

According to the 2019/2020 CDPHE School and Child Care Immunization Data, there are 84 schools with MMR vaccination rates below 95%. Work will be conducted to develop the infrastructure needed to implement ISIP at these schools with low vaccination rates.

DPS is planning a variety of approaches to the 2020/2021 school year including remote learning one or two days a week or a staggered cohort-based schedule to decrease the number of people in the school and promote social distancing. To accommodate different cohorts of students throughout the week, ISIP outreach teams would develop infrastructure to schedule up to two clinic days per school.

Outreach Vaccination Clinics for Adults and Families

To reach vulnerable adults and families, we will partner with organizations serving populations such as PEH (e.g., Colorado Coalition for the Homeless), who use drugs (e.g., Harm Reduction Action Center), and are in the criminal justice system. The structure will be developed to have clinics held at shelters, syringe access sites, clinics that provide treatment for substance abuse (e.g., Denver Community Addictions Rehabilitation and Evaluation Services, Mile High Behavioral Health, Stout Street Foundation), and for programs that support persons involved in the criminal justice system. Outreach will be provided through community testing sites offered within Denver. Processes will be developed to conduct clinics in conjunction with our community ambassador organizations.

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Title: **COVID IMM Infrastructure**
Sponsor: **DDPHE**
PI: **Judy Shlay**
GM: **TBD**

			Year 1
Salary			24,654
Fringe			7,224
		Total Senior/Key Personnel	**31,878**
Salary			67,409
Fringe			19,750
		Total Other Personnel	**87,159**
		Total Salaries	92,063
		Total Fringe Benefits	26,974
		Total Salaries & Benefits	**119,037**
Vendor(s)	DPS Paraprofessionals		12,600
Printing	Flyers, handouts, posters		8,000
Advertising Services	Online marketing campaign		60,000
Other Support Services	Translation		3,167
		Total Other Costs	**83,767**
		MODIFIED TOTAL DIRECT COSTS LESS SUBS	**202,804**
		TOTAL DIRECT COSTS	**202,804**
		TOTAL PROJECT COSTS	**202,804**

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Improving access to information and social support with home visitation services for patients and families significantly impacted by the COVID-19 pandemic

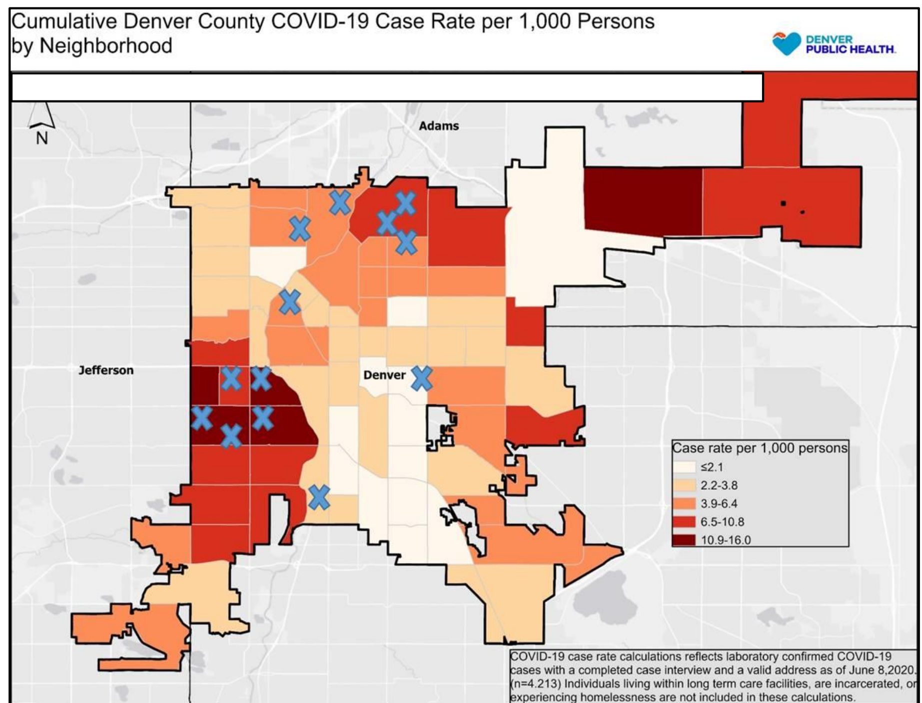
This proposal includes an approach to partner with community based organizations, engaging the communities most at risk for contracting COVID-19, and connecting them to services that will address both their medical and social needs to reduce the disproportionate rates of COVID-19 infection. This high level overview is a synopsis of the proposed work.

Reason for Action

- The COVID-19 pandemic has amplified the negative impact of systemic racism on health outcomes in communities of color within the City and County of Denver.
- The need is urgent to expand resources for care for patients experiencing systemic racism, including the negative impact of anti-immigration policies on health-seeking behavior among immigrants.
- The ability to provide trusted information, resources, and access to care in a way that is compassionate, respectful, culturally connected and language congruent is critical for reducing the number of cases and deaths from COVID-19.

Overview

The exacerbation of systemic racism has directly led to patients who identify as Black needing hospitalization and dying at double the rate as compared to the number of Black persons represented among people living in Denver County. Patients who identify as Latinx are markedly overrepresented among individuals hospitalized with COVID-19 and experience delays in presenting to care with devastating consequences. Additionally, patients identifying as Latinx more often report that they do not have a primary care provider and are not able to isolate safely at home. Patients who identify as Asian are also hospitalized at a higher proportion compared to the population of people identifying as Asian in Denver County.



The neighborhoods most affected by COVID-19 are the same neighborhoods that have high poverty rates and high numbers of foreign-born individuals. Many of these areas have been subjected to redlining (i.e. systematic denial or reduction in services such as banking, insurance, food availability and health care) as noted in the map above. There can be no clearer picture of how racism has negatively impacted our communities of color in the context of this pandemic.

The multiple socioeconomic and cultural factors that influence COVID-19 outcomes are complex and may include:

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- Immigration concerns, overcrowded multigenerational living conditions, reliance on public transportation, work in low-wage industries, language barriers, and more
- High burden of underlying pre-existing medical conditions (such as diabetes and obesity)
- Poor access to care due to lack of insurance and/or experiencing negative bias when seeking care

Objectives

1) Improve access to essential health information in neighborhoods most affected by COVID-19. Partner with community-based organizations that employ trusted community health workers to promote up to date information on COVID-19.
2) Provide home medical visits to patients with COVID-19. Assess the need for a higher level of care, risk for complications related to COVID-19, and to facilitate rapid linkage to primary care and medical monitoring. Home visits will also serve to identify medical needs in family members as well as provide linkage to care for non-COVID-19 conditions, and medication refills.
3) Improve access to resources and healthcare. Identify needs and supply those needs in a culturally responsive way.
4) Align public health systems, practitioner learning and development structures and outcome based approaches to address the social determinants of health derived from systemic racism and racial bias.

Strategy

- ***PARTNER***
  - DPH will partner with community-based organizations that employ community health workers to expand the reach of COVID-19 related information and assess resource needs in a way that is culture and language concordant
  - DPH will partner with existing outreach community COVID-19 testing programs and organizations who are culturally connected to community-specific resources and/or provide access to resources (e.g. housing, food, immigration)
  - DPH will partner with and create an external review panel of stakeholders recommended by the Racial Equity Council to evaluate progress on the program and its alignment with broader strategies to reduce structural racism across Denver County

- ***ENGAGE***
  - Community health workers will be empowered to engage individuals in Denver County to:
    - Share messaging on COVID-19 testing, care, latest information on treatment, and progress toward a vaccine, prioritizing neighborhoods with a high number of COVID-19 cases
    - Assess resource needs and identify individuals with remediable social challenges and access to healthcare needs
    - Perform a structured health history and check vital signs with immediate real time support from a DPH nurse/MD to assist with triage
  - Community health workers will reach individuals through various means including in-person visits, zoom, and public settings such as churches, grocery stores, and schools

- ***CONNECT***
  - Individuals with social challenges will receive support from a social worker
  - Individuals with healthcare needs will be offered support with health insurance enrollment, making a primary care visit appointment, and/or receiving a home visitation from a nurse and community health worker.

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  - DPH will provide individuals newly diagnosed with COVID-19 and their families with a home visitation from a community health worker to assess resource and health needs for both COVID-19 and non-COVID-19 conditions
  - DPH will provide individuals with newly diagnosed COVID-19 who are at high risk for complications with a nurse/community health worker home visit followed by immediate linkage to a primary care provider
  - DPH will evaluate the number of patients reached by community health workers as well as the number of patients connected to resources and healthcare. Through weekly meetings, we will listen to patients and community based organizations gaining direct feedback on how to further improve this program to meet community needs

Measuring Impact/Accountability

- Number of patients and household members seen with COVID-19, stratified by self-reported race and ethnicity
  - Comparison will be performed with the overall cohort of patients who have been diagnosed with COVID-19 in Denver County
- Proportion of patients linked to a telehealth visit/follow-up
- Proportion enrolled in health insurance or discounted health services program such as the Denver Health Financial Assistance Program
- Proportion retained in care with a primary care provider at 6 months
- Proportion hospitalized
- Patient acceptance and satisfaction with the program, including assessment of perceived stigma and bias.
- Progress reports will be submitted monthly by the medical director to the Racial Equity Council and external review committee
  - Recommendations from the review committees for changes to the program will be implemented before the next reporting period

Personnel and Supplies needed

- Medical Director to oversee project and provide consultative services to care teams
- Care teams consisting of 2 nurses, 2 care coordinators and community health workers
- Community health workers who will provide essential outreach to priority populations and partnership with care teams
- Social worker, enrollment specialists to assist with linkage to care and a staff assistant to coordinate patient visits
- An epidemiologist to assess impact
- Media and marketing consultants to assist with designing culturally appropriate messaging
- Procurement of PPE for patients
- Supplies to support home medical monitoring including pulse oximetry, smart phones to allow for telehealth visits
- Support for external review committee consisting of at least 3-5 members

Budget

Estimated budget is $ 630,000 dollars over 6 months, details found on following page.

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4204292002 COVID-19 Enhanced Pt Support

Sponsor: **DDPHE**

PI: **Michelle Haas**

GM: **20-0331**

		Year 1
Salary		63,688
Fringe		18,660
	Total Senior/Key Personnel	**82,348**
Salary		208,759
Fringe		61,167
	Total Other Personnel	**269,926**
	Total Salaries	272,447
	Total Fringe Benefits	79,827
	Total Salaries & Benefits	**352,274**
Domestic Travel		1,450
	Total Travel	**1,450**
Vendor(s)	PR Marketing Consultant	10,000
Printing		5,000
Supplies-Medical		20,000
Communication		860
Postage/Express Mail/Airborne		32,500
Temporary Se	Community Health Worker	156,000
Data & Compu	Zoom Acc	3,600
Other Expense	Vehicle Rental	26,400
Other Support	Graphics, Translation, Marketing Campaign	19,012
	Total Other Costs	**273,372**
	MODIFIED TOTAL DIRECT COSTS LESS SUBS	**627,096**
	TOTAL DIRECT COSTS	**627,096**
	TOTAL PROJECT COSTS	**627,096**

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Project D.1

COVID -19 Case Investigators

The Denver COVID-19 Case Investigator is responsible for calling people with COVID-19, identifying and collecting contact details of household members and other contacts, and connecting cases and household contacts to varying services (including social support structures, testing, clinical care, etc.). The COVID-19 Case Investigator will provide education about isolation and quarantine procedures for cases and household contacts. The Case Investigator will work with the Denver team to ensure data collection is complete and ensuring cases and household contacts and resource needs are passed off to the appropriate team members.

The position is a non-benefited contract position.

Budget

$31 hour ($25/hour plus 24% temp agency mark-up)
20-40 hours week x 18 weeks = 720 estimated hours
5 Case Investigators = 3,600 estimated hours
$100,000 ceiling amount for case investigators

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Denver Public Health Immunization Project

DocuSign Funding /Scope of Work

Project Overview:

In March of this year, stay-at-home orders due to the COVID-19 pandemic caused face-to-face medical visits to decrease, resulting in significant reductions in vaccine administrations. To combat the decline in vaccinations given, Denver Public Health's (DPH) Immunization Program has received funding which will allow us to significantly increase our immunization outreach efforts in the community. This coordinated effort will increase vaccine coverage rates and help to prevent outbreaks of diseases such as measles, pertussis, and influenza at the same time we are managing COVID-19. The two main focuses of this program are to increase the number childhood vaccines given and to increase availability and uptake of flu vaccine in the Denver area.

Priority #1: Use DocuSign to enroll students at DPS electronically

Children at Denver Public Schools (DPS) are one of the priority populations for this project. DPS and DPH have partnered on Denver's In-School Immunization Program (ISIP) for 10 years to bring school-located vaccine clinics to schools struggling with low vaccination compliance rates and families with limited access to services. To date, ISIP has administered 28,000 vaccines. The majority of families who participate in ISIP are insured by Medicaid or are uninsured. The program is at no cost to families, and parents never receive a bill as we utilize federally funded vaccines from the Vaccines for Children program. Through funding we received to uplift our immunization outreach efforts we are able to increase the number of schools where our program is offered from 12 to 83, serving nearly 30,000 children. As DPS has started the school year remotely and COVID -19 continues impact in classroom learning we are unable to distribute paper enrollment forms in person as we did in prior years. DocuSign is an electronic platform that allows parents to enroll and consent online to having their children participate in our program. The DPH Immunization Program is requesting $18,167.5 for the development of the DocuSign electronic consent form and an additional $4,930 for 850 additional DocuSign forms to expand the program (the total forms available for parents to use will be 5850). Making our consent forms more accessible via the DocuSign electronic consent will allow us to ensure all families have the opportunity to enroll their students in this convenient, safe venue for vaccine services, creating a positive impact on the health of the community.

Priority #2: Train Community Ambassadors

To achieve widespread uptake of the influenza vaccine in Denver we recognize the importance of partnering with community organizations who are able to support messaging of the importance of flu vaccination. With the assistance of the Denver Metro Partnership for Health we requested funding for 4 community partner stipends to engage community ambassadors organizations to help promote the importance of flu vaccination and to assist in developing sustainable relationships that can be utilized to promote COVID-19 immunization efforts once a vaccine is ready to be disseminated. We request $13,642 to provide training to these community ambassadors and ambassador organizations thought

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Denver Public Health staff. Training will include training on messaging, motivational interviewing, and general vaccine education.

Priority #3: Health Information campaign to create awareness of flu outreach clinics

We have contracted with Merrit & Grace who specialize in health information campaigns for this outreach project and request additional funding to increase advertising on social media, transit ads, and advertising through neighborhood newsletters. Additionally, we will be able to develop video advertising to use on social media, Entrevision, and Educa, DPS's Radio and TV station for parents. We request $49,860.5 to increase our media campaign efforts in Denver communities that are underserved and $2000 for additional flyers and signage to distribute.

Priority #4: Incentives

From our years of experience of offering outreach clinics we understand that incentives can increase participation and vaccine uptake. Incentives can be meaningful and as we are encouraging people to practice hand hygiene and social distancing we are requesting funding of $4000 to purchase hand sanitizer and personal masks to hand out at immunization outreach clinic.

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October 7, 2020

Enhanced Patient Support

Revised request for Patient Assistance and Communications Funding

This is a revised request seeking funding to contribute to the COVID-19 Enhanced Patient Support work by Denver Public Health. Two primary areas of work have identified a greater budgetary needs than originally requested and we ask for your consideration on meeting them. The two areas of need are a Patient Assistance Fund and Communications, they are both overviewed below.

Patient Assistance fund request: $100,000

This fund would be monitored by the COVID-19 Enhanced Patient Support program Social Worker and would be available to meet the urgent needs of patients who are at risk while affected by COVID-19. Areas of need that could be covered by this fund could include but not limited to:

- Medically related transportation
- Medically related phone services (e.g. Tele-health)
- Copays for medical visits
- Medication coverage
- Nutritional support delivery to COVID-19 affected persons

Communications Support request: $12,400

The Enhanced Patient Support team is developing COVID-19 health education documents and program overview documents that require translation in order to successfully reach their intended audiences. The communications support funds would be used to cover the cost of the following:

- Translation of COVID-19 Health education materials
- Development of home visit materials designed to reach prioritized populations

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Project E

COVID-19 Epidemiologists

Term: This project has a budget and timeline through 03/15/2021.

We are interested in hiring 2 MPH-students or MPH-graduate level epidemiologists to join the Epidemiology, Disease Investigation and Preparedness team at Denver Public Health for at least a 6 month minimum term. We currently have only 8 total epidemiologists in the Division and 4 (including a manager) who are dedicated full-time to the COVID-19 response. All 4 of our epidemiologists are managing and overseeing key functions of the response, namely: case and contact investigations; data systems, processes, and data quality; monitoring trends (including external data); outbreak response; and epidemiologic analyses. Having additional staff with training and experience in data management, epidemiological and statistical analyses and outbreak response will improve our efficiency and thoroughness of understanding, informing and responding to the COVID-19 epidemic in Denver city and county.

The epidemiologists would be fully integrated with the epidemiology team and supervised by the Epidemiology Manager and the Team Lead of the work assignment. Immediate needs that would be fulfilled by additional epidemiology staff would include, but are not limited to the following:

- Under the supervision of the DPH outbreak lead, working with DDPHE directly to help respond to outbreaks; ensure the completeness and quality of data for outbreak line lists; conduct epidemiologic analyses to describe the extent of outbreaks and monitor outbreak trends and evaluate the impact of public health administrative, environmental and personal control measures on transmission; and ensure accurate and timely reporting to CDPHE, including updating the Colorado Electronic Disease Reporting System (CEDRS).
- Under the supervision of the DPH case and contact and DPH data management leads, provide data management and analytic support to ensure the completeness and integrity of data for COVID 19 cases, hospitalization and deaths in Denver city and county. This would include routinely conducting analyses to identify missing, inconsistent and nonsensical data and updating data accordingly.
- Under the supervision of the DPH Epidemiology and Surveillance Director, conduct epidemiologic analyses to better understand the COVID 19 epidemic in Denver. Activities would include data management, developing protocols with complete analytic plans, and conducting analyses using statistical software to meet objectives. This would include in-depth analyses to understand outbreaks in specific populations; sociodemographic trends over time; and risk factors for severe illness and death. Analyses would be prioritized based on needs of the EOC and DOC.
- Assist with updating and managing the public facing webpage that provides key information on COVID 19 cases, hospitalizations and deaths in Denver; COVID 19 laboratory testing and positivity in Denver; ED and hospitalizations related to COVID 19 symptoms and diagnoses in Denver; and additional metrics.

Budget

$55.80 hour ($45/hour plus 24% temp agency mark-up) per person

$101,829 total request for two Epidemiologists

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Project F

Services provided:

The Denver Health and Hospital Authority (DHHA) will provide NurseLine (DHNL) support for the City's COVID-19 testing efforts, including providing results of COVID-19 tests and providing health advice and recommendations for care. The terms of this Scope of Work are valid from May 22, 2020 through June 1, 2021. DHNL support includes, but is not limited to:

1. Looking up patient COVID-19 test results in the City's designated internal or third-party system (such as LabCorp Beacon) and providing a verbal and/or emailed results notification to the patient;

2. Providing health advice and recommendations for care related to a patient's COVID-19 test results and/or symptoms;

3. Escalating customer service issues, complex medical questions, or necessitated retest scenarios to the designated medical advisor for the City's testing efforts.

DHHA will provide the requested services under the same standards and parameters as it provides other DNHL services as agreed upon in the City and County of Denver agreement. The DNHL will be available to callers 24/7 from May 22, 2020 through 7PM July 17, 2020. Effective July 20, 2020 through July 31, 2021, the hours will be reduced to limited hours of operation as agreed upon by the City and DHHA. Since the requested services relate directly to COVID-19 pandemic response, they will be invoiced and accounted for separately than other DHNL services subject to other contracts or agreements.

The City will facilitate access to patient COVID-19 test results and coordinate login access and any needed training or technical support with third party test vendors or providers from May 22, 2020 through 7pm October 23, 2020. After October 23, 2020 results will no longer be provided by DHNL and the operations will be limited to Nurse Triage for symptomatic patients

DHHA will follow its standard protocols and protections regarding patient PII and other obligations regarding patient privacy and data protection.

Rates and Billing:
The rates and billing vary by the time periods outlined below:

1. **6/5/2020 – 7/31/2020 ($130,000):**
   For the time period of 6/5/2020-7/17/2020, billing is a cost/per call model at a rate of $16.34/call that is handled by a Registered Nurse (RN) and a rate of $6.42/call that is handled by an Health Information Aide (HIA).
   For the time period of 7/18/2020 -7/31/2020 a flat fee of $50,000 is billed for all calls handled by HIAs and a rate of $16.34 per call for calls handled by an RN.

2. **8/1/2020 – 8/31/2020 ($131,500)**:
   Start-up costs of $46,000, a flat fee of $83,250 for all calls handled by an HIA, and a rate of $16.34 for all calls handled by an RN.

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3. **9/1/2020 – 9/30/2020 ($111,000)**:
   A flat fee of $100,000 for all calls handled by an HIA and a cost of $16.34/call handled by an RN.

4. **10/1/2020-6/1/2020 ($310,000)**:
   For the time period of 10/1/2020 – 10/23/2020, a flat fee of $54,842 for all calls handled by an HIA and a rate of $16.34 for calls handled by an RN, not to exceed $100,000.
   For the time period 10/23/2020 – 6/1/2021 a rate of $16.34/call for calls handled by an RN not to exceed $210,000.

DHHA will invoice the City regarding the described COVID-19 DHNL services. The invoice must identify the number of COVID-19 testing-related DHNL calls by type of staff member (RN or HIA). Invoices should be submitted to the City's designated point of contact via email: laura.dunwoody@denvergov.org