

Evaluating the COVID-19 Primary Care Vaccination Program

MAY 2022



COLORADO
Department of Public
Health & Environment



COLORADO HEALTH INSTITUTE
Informing Strategy. Advancing Health.

Evaluating the COVID-19 Primary Care Vaccination Program

Contents

- 3 Program Overview
- 4 Who Participated?
- 6 Funding Allocated
- 7 Impact on Colorado's COVID-19 Vaccine Infrastructure
- 11 Keys to Success: The COPCPVax Approach

Acknowledgments

Spencer Budd and Emily Santich, lead authors

Nina Bastian, Alex Caldwell, Chrissy Esposito, and Joe Hanel contributed to this report.

The COPCPVax program was administered by CHI in collaboration with the Colorado Department of Public Health & Environment. CHI appreciates CDPHE's support and partnership on this initiative.

Thank you to the COPCPVax Advisors for their help creating and implementing an equitable, impactful, and sustainable program.

Phyllis Albritton, Colorado Safety Net Collaborative

Ryan Biehle, Colorado Academy of Family Physicians

Ellen Brilliant, American Academy of Pediatrics, Colorado Chapter

Paige Brophy, Colorado Medical Society

Perry Dickinson, University of Colorado, Department of Family Medicine

Allyson Gottsman, University of Colorado, Department of Family Medicine

Holly Kingsbury, Colorado Community Health Network

Paul Melinkovich, Pediatric Consultant

Stephanie Wasserman, Immunize Colorado

Finally, we thank the many primary care leaders, community partners, advocates, and others who informed this program and made it a success.



Program Overview

The COVID-19 Primary Care Vaccination Program (COPCPVax) was designed with a few underlying principles. First, the COVID-19 vaccines are safe, effective, and provide life-saving protection against COVID-19. They are the best tool available to Colorado for reducing the threat of COVID-19.

Second, primary care providers (PCPs) in Colorado have direct, meaningful relationships with patients. They work hard to cultivate and maintain these relationships and are a safe and trusted place to discuss the benefits and risks of COVID-19 vaccines. PCPs are trusted messengers to those who may be undecided about whether to get vaccinated and can communicate directly to their patients in ways that may be more effective than other outreach strategies.

Third, PCPs have experience with routine immunizations and are an important presence in underserved communities throughout the state. As Dr. Aaron Shupp stated when the program was [announced](#), “It’s far easier for patients to get their vaccine right here [in the clinic] today, once we’ve had that conversation and our clinic can use this grant funding provided by this new program to get every patient who wants to get the shot vaccinated.”

The COPCPVax program provided vital resources and assistance to **374 primary care provider clinics** to increase providers’ capacity to vaccinate Coloradans against COVID-19. To support PCPs in making the COVID-19 vaccine available to their communities, the COPCPVax program invested **\$16.8 million** in primary care infrastructure, including storage units, data systems, and personnel.

The COPCPVax program was funded by the Colorado Department of Public Health and

Key Takeaways

- The COVID-19 Primary Care Vaccination program provided nearly **\$17 million** in funding to **374 primary care provider clinics** to increase providers’ capacity to vaccinate Coloradans against COVID-19.
- Program funding helped **121 primary care provider clinics** enroll as COVID-19 vaccine providers.
- Sites participating in the program provided **272,566 COVID-19 vaccinations** to eligible Coloradans over the five-month program period. That’s the equivalent of first, second, and booster doses for nearly **91,000 Coloradans**.
- Program funding provided much-needed financial support to provider clinics serving underserved populations. Almost **one-third (31%)** of clinics receiving funding are part of Colorado’s health care safety net, such as federally qualified health centers, rural health clinics, or school-based health centers.

Environment (CDPHE) and administered by the Colorado Health Institute (CHI). The program provided primary care practices \$60,000 to \$120,000 per clinic to support administration of

COVID-19 vaccines, depending on the size of each primary care clinic.

- Clinics with one to three PCPs were eligible for up to \$60,000;
- Clinics with four to eight PCPs were eligible for up to \$90,000;
- Clinics with nine or more PCPs were eligible for up to \$120,000.

The COPCPVax program aimed to reach smaller practices with fewer than 500 clinicians across all clinics within a single provider network. A practice is defined as an organization that applied on behalf of one or more clinics. Practices with 500 or more clinicians across all clinics were invited to apply on behalf of clinics in their provider network that serve high-need populations and would benefit from additional resources for vaccination efforts.

The program ran from September 2, 2021 through January 31, 2022.

Funding was distributed in three phases:

Phase I

Amount per clinic: \$25,000

Eligibility: Each clinic received this initial grant payment when they completed their enrollment in the COVID-19 vaccination program with CDPHE and placed an initial order for COVID-19 vaccines.

Phase II

Amount per clinic: \$5,000

Eligibility: Clinics that were not already enrolled as a COVID-19 vaccine provider when the program started on September 2, 2021 received this additional payment to cover costs associated with enrolling.

Phase III

Amount: \$50 per COVID-19 vaccine administered and documented in the Colorado Immunization Information System (CIIS), up to each clinic's maximum funding amount.

Eligibility: Every clinic received this Phase III payment for COVID-19 doses administered to non-Medicaid enrolled patients between September 2, 2021 and January 31, 2022.

Who Participated?

Participant Characteristics

The COPCPVax program helped many small clinics across the state increase their capacity for delivering the COVID-19 vaccine to individuals within their communities.

According to data submitted by clinics on their applications to the COPCPVax program, more than 150 participating clinics (41%) had three or fewer PCPs, and 78% of clinics in the program had fewer than nine providers.

Table 1. Number of PCPs Per Clinical Site

1-3 PCPs	152	41%
4-8 PCPs	141	38%
9 or more PCPs	81	22%
TOTAL	374	100%*

*Percentages do not sum to 100% due to rounding

The majority (60%) of these clinics serve 5,000 or fewer patients. Only 15% serve more than 10,000 patients.

The 374 participating clinics represent 248 different practices. Most practices (203, 82%) applied as a single location (see Table 2). Of the 45 practices that applied on behalf of multiple clinics, most (40, 89%) applied on behalf of six or fewer clinics.

Table 2. Practices By Associated Number of Clinics

1 Clinic	203	82%
2-3 Clinics	27	11%
4-6 Clinics	13	5%
7-9 Clinics	3	1%
10+ Clinics	2	1%
TOTAL	248	100%

Clinic Types

The program reached a wide array of practice types, including many clinics in Colorado's health care safety net, the network of clinics and providers that care for the state's most vulnerable residents:

- 70 federally qualified health centers (FQHCs)
- 24 rural health clinics (RHCs)
- 23 school-based health centers
- 16 community health centers
- 15 safety net clinics
- 12 migrant or refugee health centers
- 1 mobile free clinic
- 1 STI/HIV clinic

Almost one third (31%) of participating clinics fall into at least one of these categories.

Most clinics (72%) serve both children and adults. Nearly one in five (19%) serve only children.

Geographic Location

Clinics that participated in the COPCPVax program treat patients in disproportionately vulnerable areas of the state. Of the 374 clinics participating in the program, 132 (35%) are located in an area in the top 25% of the state for social vulnerability, as measured by the [Social Vulnerability Index](#) (see Figure 2).

The Social Vulnerability Index (SVI) uses U.S. census data to identify communities that may need support before, during, or after a hazardous event such as natural or human-caused disasters or disease outbreaks. The SVI determines the social vulnerability of every census tract using 15 social factors such as poverty, lack of vehicle access, and crowded housing.

Socially vulnerable populations are especially at risk during public health emergencies because of factors like socioeconomic status, household composition, minority status, or housing type and transportation; these can include persons

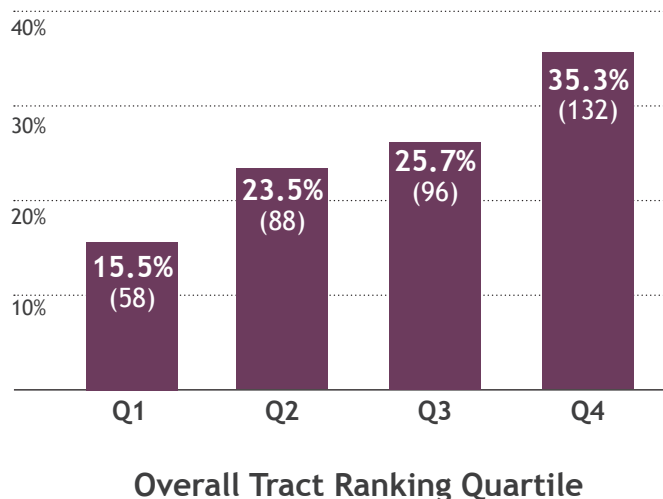
who have special needs, such as, but not limited to, people without vehicles, people with disabilities, older adults, and people with limited English proficiency.

Many clinics participating in the program serve areas of high social vulnerability. More than one-third of participating clinics are located in an area in quartile four of the SVI, meaning an area ranking in the top 25% of the state for social vulnerability. Nearly another 100 clinics are ranked in quartile three, meaning they are located in an area more socially vulnerable than 50% of the state. Only 16% of clinics are located in quartile one, the areas of the state classified by the index as the least vulnerable.

Figure 2. Clinical Sites by Social Vulnerability Index Quartiles

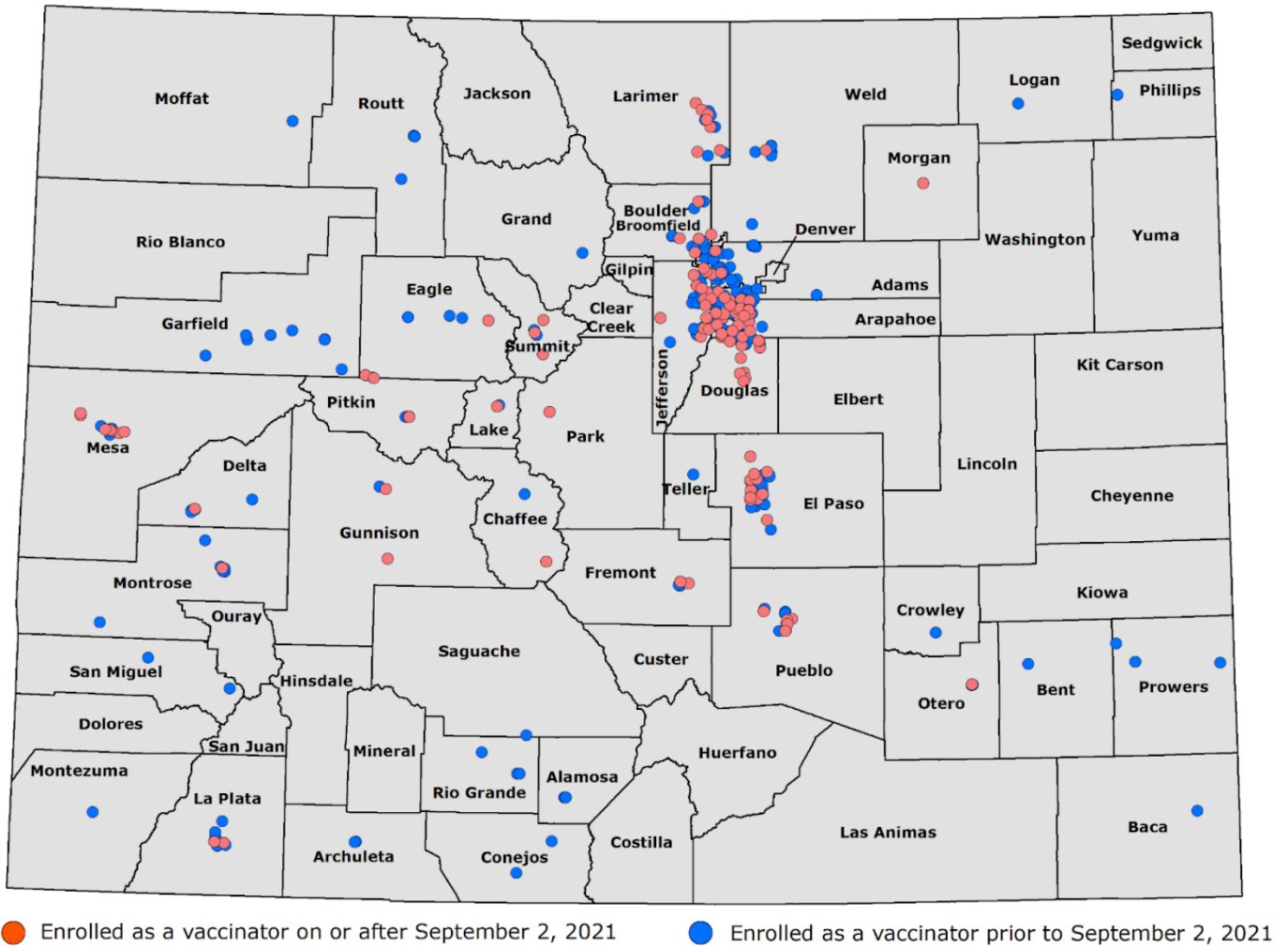
Percent (Number) of Clinics by SVI Quartiles

SVI quartiles are based on the overall SVI ranking at the census tract level. The higher quartiles indicate a higher SVI ranking.



Nearly one-third (30%) of clinics participating in the program were located outside of Colorado's Front Range – reaching from the southeast to the northwest (see Map 1). Forty-three of Colorado's 64 counties had at least one clinic participate in the program.

Map 1. COPCPVax Participating Clinics by Location



Funding Allocated

Participating clinics used COPCPVax funding to support costs for personnel, staff training, infrastructure, technology, and supplies related to COVID-19 vaccine administration. Clinics received a total of \$16.8 million in funding. On average, each clinic received \$44,844.


All 374 clinics received a Phase I payment of \$25,000 upon completing enrollment as a COVID-19 vaccine provider with CDPHE and placement of their first order of COVID-19 vaccines to reimburse for expenses related to enrollment and vaccine administration. About

a third of those clinics (121, 32%) were not yet enrolled in the COVID vaccination program and received an additional \$5,000 for enrolling as a COVID-19 vaccine provider between September 2, 2021 and January 31, 2022.

In Phase III of the program, clinics received an additional \$50 per COVID-19 vaccination administered and documented in CIIS. Grantees earned a total of \$7.4 million in Phase III payments, an average of \$19,819 per clinic. Thirty-eight clinics administered enough COVID-19 vaccines to maximize their grant funding as described in the funding maximum amounts on page 4.*

* Estimates for Phase III payments are based on the number of COVID-19 shots administered and recorded between September 2, 2021 and January 31, 2022. Exact Phase III payment amounts are being calculated as of April 2022.

Table 3. Program Funding by Phase

Phase I-II	
\$9.4 million	
Phase III	
\$7.4 million	
TOTAL	
\$16.8 million	

Impact on Colorado's COVID-19 Vaccine Infrastructure

100+ more primary care clinics are now providing the COVID-19 vaccine.

Thanks to funding and technical support from the COPCPVax program, **121 new primary care clinics** enrolled as COVID-19 vaccine providers. This represents a 6.5% increase in the number of clinics administering the COVID-19 vaccine in Colorado. This means more than 100 new clinics are now able to provide the vaccine to their patients in the primary care setting, either as part of a regular visit or a vaccination-specific appointment. Many of these clinics are also working to vaccinate their communities through stand-alone vaccination events.

Grant program funding and technical support enabled small clinics to enroll that otherwise may not have done so due to administrative and financial barriers associated with enrollment. A majority (52%) of the newly enrolled clinics have three or fewer PCPs. Almost nine in 10 (89%) newly enrolled clinics have eight or fewer PCPs.

Twenty-two clinics in rural counties enrolled as COVID-19 vaccine providers with support from the COPCPVax program (see Map 1). Of the 121 clinics participating in the COPCPVax program that were newly enrolled as COVID-19

vaccinators, 31 are located outside the Front Range.

Forty-one of the 121 newly enrolled clinics were already enrolled in the Vaccines for Children (VFC) program, which provides vaccines at no cost for children who are uninsured, underinsured, on Medicaid or Medicaid eligible, and/or Alaskan Native/American Indian. In total, 211 of the 374 participating clinics were enrolled in the VFC program prior to joining the COPCPVax program.

Primary care clinics are now better equipped to acquire, store, and administer the COVID-19 vaccine and support and train their staff.

This funding not only supported immediate staffing needs but also investments in equipment, technology, and infrastructure needed to increase the number of clinics providing vaccinations to individuals within their communities.

The COVID-19 pandemic has strained the health care system, and many practices have experienced severe staffing shortages and turnover. The COPCPVax program provided clinics with funding to support personnel involved in patient outreach and engagement, scheduling, marketing, ordering, administration, and reporting related to the COVID-19 vaccine. Funding also supported staff training and development related to COVID-19 vaccine administration and reporting. Clinics also used funding to staff COVID-19 vaccine clinics outside of regular business hours to increase the access and availability of the vaccine.

With COPCPVax funding, clinical sites invested in vaccine storage and infrastructure to support vaccine administration. Some sites used the funding for minor building modifications, such as rewiring a room to accommodate a vaccine storage unit. Many clinical sites purchased vaccine storage equipment and technology needed to acquire, administer, and report on the COVID-19 vaccine. These investments in infrastructure, capacity, and training set up these practices to continue to administer COVID-19 vaccinations and other routine immunizations in the future.

COPCPVax-funded clinics administered more than 270,000 vaccines.

Clinics participating in the COPCPVax program administered **272,566 COVID-19 vaccine doses** from September 2, 2021 through January 31, 2022. That’s the equivalent of first, second, and booster doses for **nearly 91,000 Coloradans** (90,855).

This is also equivalent to an estimated 1.8 percentage point increase in Colorado’s vaccination rate.* COPCPVax clinics delivered nearly one of every 10 immunizations delivered in the state during the grant period.

The program’s investment in resources to help new clinics enroll as vaccinators may have led to additional vaccinations. Over **14,500 COVID-19 vaccine doses** were provided by the 121 newly enrolled providers receiving funding from the COPCPVax program. That investment will continue to pay dividends in the future as those providers continue to vaccinate their communities.

A majority of Coloradans receiving a vaccination from a COPCPVax-funded provider (56%) were white, non-Hispanic individuals. That is slightly lower than the white, non-Hispanic population as a percentage of the total state population (65%, according to [CDPHE](#) data). More than three in 10

(34%) individuals receiving a vaccination through the program were either non-white or Hispanic. Ten percent were of unknown race or ethnicity.

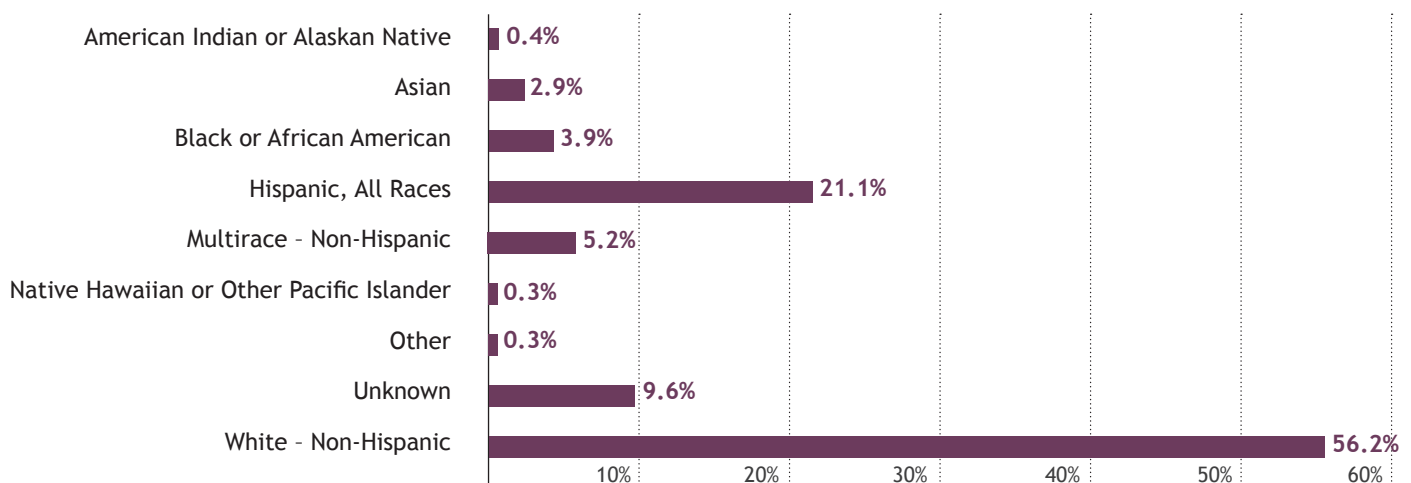
In anticipation of children ages 5-11 becoming eligible for the Pfizer vaccine in the fall of 2021, CHI worked with program advisors, CDPHE, and the Colorado Department of Health Care Policy & Financing (HCPF) to identify and enroll pediatric clinics in the program. More than 100 (110) pediatric clinics participated in the program, 33 of which were not already enrolled as COVID-19 vaccinators prior to participating in the COPCPVax

Table 4. Age of Coloradans Vaccinated by COPCPVax-Funded Providers

Age Group	Percent of Patients
5-9	15.4%
10-19	16.4%
20-29	9.2%
30-39	12.1%
40-49	11.9%
50-59	12.0%
60-69	12.1%
70-79	7.2%
80+	3.8%

program. Fifteen percent of Coloradans vaccinated by a participating clinic were under age 10 (see Table 4). The Pfizer vaccine became available to children ages 5-11 in November 2021.

Figure 1. Race and Ethnicity of Coloradans Vaccinated at COPCPVax-funded providers



* This high-level estimate is included to illustrate program impact. Individual-level data needed to calculate a more precise estimate were not available for this report. For this illustrative estimate, CHI assumed full vaccination requires two primary doses and one booster. Because of that assumption, CHI used the age 12+ population for calculating impact on the vaccination rate, because that is the population eligible for a booster dose at the time of this report.



Of the more than 272,000 COVID-19 doses administered, more than half were first (28%) and second (26%) doses going to newly vaccinated individuals. The remainder (46%) were booster doses. Some adults had already received a first and second dose prior to the start of the program in September.

COPCPVax-funded providers administered almost 86,000 vaccines to Health First Colorado members.

Across the country, Medicaid enrollees are being vaccinated against COVID-19 at [lower rates](#) than the overall population. Medicaid, which in Colorado is called Health First Colorado, serves a lower-income and disproportionately non-white population. It is also a vital source of coverage for people with disabilities, pregnant people, and – along with Child Health Plan *Plus* – children. The program’s importance for these populations and the disparity in vaccination rates make outreach and vaccine access priorities for health equity.

Health First Colorado members received 85,939 COVID-19 doses, or nearly one-third (32%) of the total doses administered under the program. Over 3,500 (3,610) of those doses were administered by providers who enrolled as vaccinators with support from the COPCPVax program.

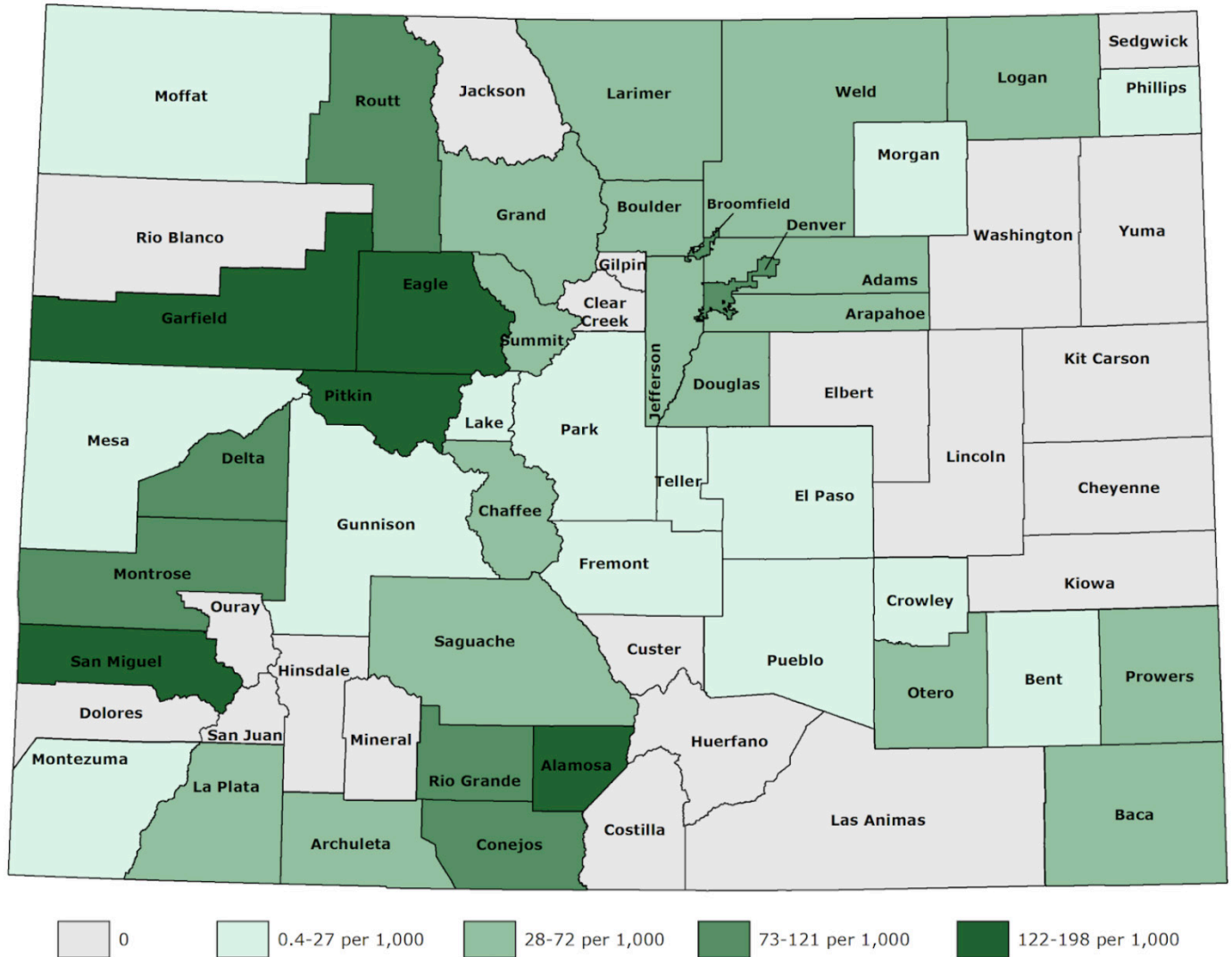
Medicaid-enrolled providers were not eligible for the \$50/dose payment for COVID-19 vaccines administered to Health First Colorado members due to Centers for Medicare & Medicaid Services (CMS) regulation [42 CFR § 447.15](#) “Acceptance of State payment as payment in full.” The COPCPVax program paid a \$50 per vaccine grant payment for COVID-19 vaccines administered to patients not enrolled in Health First Colorado.

COPCPVax-funded providers administered thousands of COVID-19 vaccines in rural areas and in counties with low vaccination rates.

Clinics participating in the COPCPVax program administered 46,046 doses in rural counties. A total of 13,814 doses were administered in counties with the [lowest vaccination rates](#) (60% or less of the population 5 and older immunized with one or more doses of any COVID-19 vaccine as of March 2022).

Adjusting for population size, clinics in several counties along the Western Slope and in the San Luis Valley vaccinated the most Coloradans. Clinics in Garfield, Eagle, Pitkin, San Miguel, and Alamosa counties provided more than 122 vaccinations per 1,000 residents (see Map 2).

Map 2. COVID-19 Vaccinations Administered Through COPCPVax Program by County per 1,000 Residents



Keys to Success: The COPCPVax Approach

The efforts of Colorado's primary care providers to vaccinate their patients were central to the success of the COPCPVax program. Grant funding lowered the barriers to providing COVID-19 vaccinations, but without their action there would be no program impact to report.

Several additional factors were critical to the COPCPVax program's success and should be considered for inclusion in future grant programs:

1. Engage program advisors.

CHI convened a regular meeting of program advisors to provide strategic direction and provider outreach. In the early stages of the program, the advisors met weekly to provide insight and effort to market the program to PCPs. For example, the group identified communities with large populations and relatively low vaccination rates, such as El Paso, Mesa, and Pueblo counties, as priority outreach areas. Advisors contacted clinics in those counties with whom they had existing relationships to invite them to apply to the program.

Advisors also recommended targeting high-volume Medicaid providers and high-need communities such as metro-area school-based health centers, citing inequities in vaccination rates.

During later stages of the program, advisors provided feedback on documentation requirements and budgetary considerations, shared challenges providers in their network were facing to getting enrolled as COVID-19 vaccine providers, and recommended a change to the application deadline to accommodate the newly available pediatric COVID-19 vaccine. Advisors also worked with HCPF to invite pediatric clinics to apply to the program.

2. Provide personalized technical assistance to grantees.

CHI and CDPHE simplified and streamlined communication with providers by setting up

dedicated email inboxes to provide technical assistance related to the grant program and COVID-19 vaccine provider enrollment. The CHI and CDPHE COPCPVax teams worked together to answer grantee questions about provider enrollment, vaccine ordering, and understanding grant requirements and payment schedules.

The CHI technical support team sent thousands of emails to clinics covering a wide range of issues. For issues that required escalation beyond email, the CHI team reached out via phone. For grantees with questions regarding requirements, real-time conversations were the most effective way to provide information or confirm their understanding of the program rules.

3. Provide flexible funding.

The program allowed participants some flexibility to determine their area of greatest funding need in order to vaccinate their patients, such as a vaccine storage unit; supplies, materials, and technology; or personnel time for training and vaccination-related activities.

This flexibility allowed clinics not already enrolled as COVID-19 vaccine providers to invest in things like a CDPHE-approved vaccine storage unit and vaccine administration and storage training for their staff. Clinics that had already enrolled could use the funding to invest in technology to schedule and track immunizations or for the time and material expense needed to set up additional community vaccination clinics.

4. Standardized invoice review processes and streamlined reporting requirements.

Grantees were asked to submit a short invoice form documenting that their funding was spent on allowable expenses. Many of the invoices submitted by grantees had issues that required them to be corrected and resubmitted. To efficiently manage the resubmission process, CDPHE reviewed all invoices to identify common issues; created standard language for each issue that staff could then use to communicate directly to each provider; and held office hours to give providers an opportunity for direct technical assistance on revising their invoices.

Finally, Phase III payments reimbursed clinics for COVID-19 vaccines administered without

imposing additional reporting requirements. Clinics received this payment as long as they met the requirement of reporting those vaccinations to CDPHE through CIIS. Using this data as the deliverable for determining payment amounts reduced provider reporting burden without compromising the accuracy of the payment amount.

The Road Ahead

Colorado's investment in primary care provider vaccination capacity will pay dividends well into the future. These investments directly support activities outlined in Colorado's [Roadmap to Moving Forward](#), which details the state's plan for the next chapter in managing COVID-19.

Investment by the state through the COPCPVax program in Colorado's primary care workforce comes at a time when it has been overstretched for two years. The investment also supports Colorado's efforts to shift COVID-19 immunization efforts from state and local public health

agencies' emergency response to the health care system, which treats every other disease and condition.

This investment also supports vaccination efforts for hard-to-reach communities. There is a high level of [trust](#) in our health care providers to provide accurate and data-driven information. With COVID-19 vaccine authorization for young children six months through 4 years old on the horizon, [pediatricians](#) remain parents' most trusted source of information on the vaccine for children.

Our PCPs are essential partners to ensure public health readiness and to normalize COVID-19 patient care in traditional medical settings – two critical steps outlined in the state's February 2022 [transition plan](#).

Questions? *Learn more about the COPCPVax program [here](#). For any questions about the program please contact cdphe_covidvax@state.co.us.*



COLORADO
Department of Public
Health & Environment

