Distribution to States

The distribution of COVID-19 vaccines across the country has required intense coordination, with the process from producing to administering doses of the vaccine involving multiple steps and pathways. Every week the CDC allocates doses of each vaccine to jurisdictions, which include states, tribal nations, and U.S. territories. 48 hours after allocation, jurisdictions order vaccines based on how many they will be able to administer. After receiving the order, the federal government ships the vaccines. Minnesota has vaccines shipped to regional hubs like local public health agencies and large hospitals which then administer them or distribute them further to smaller hospitals and clinics in their area. Finally, the vaccines are administered to the public based on state eligibility guidelines.

There are a few exceptions where states are not in charge of local allocation. In early February, 2021, the Federal Retail Pharmacy Program was launched to distribute vaccines directly to large retail pharmacies like Walgreens and CVS.⁴ While jurisdictions get input into which pharmacies are involved, the goal of the program is to increase vaccine accessibility while decreasing the logistical burdens on state and local officials.⁵ Therefore, the national government takes on more of the coordination, and the doses are in addition to each jurisdiction's weekly allotment. Another instance of vaccines being distributed directly from the national government is through FEMA mass vaccination sites. One such site was established at the Minnesota State

¹ Minnesota Department of Health, "Vaccine Distribution and Administration," COVID-19 Updates and Information - State of Minnesota, March 12, 2021, https://mn.gov/covid19/vaccine/distribution/index.jsp.

² Minnesota Department of Health, "Vaccine Distribution and Administration."

³ Minnesota Department of Health, "Vaccine Distribution and Administration."

⁴ CDC, "COVID-19 Vaccination Federal Retail Pharmacy Partnership Program," Centers for Disease Control and Prevention, April 12, 2021, https://www.cdc.gov/vaccines/covid-19/retail-pharmacy-program/index.html.

⁵ CDC, "COVID-19 Vaccination Federal Retail Pharmacy Partnership Program."

Fairgrounds, and while the state helped determine its location the doses administered don't count against Minnesota's weekly allotment.⁶

The various pathways through which vaccines are distributed from the national level to individuals in Minnesota are summarized in Figure 1 below.

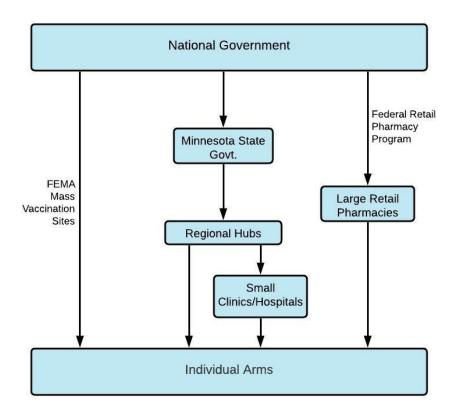


Figure 1. COVID-19 Vaccine Distribution Pathways for Minnesota

Local Distribution in Minnesota

Once they've received doses from the national government, much of the inner-jurisdiction distribution is left up to local authorities. The CDC regularly updates eligibility recommendations, but states choose who gets the vaccine.⁷ Minnesota followed many of the

⁶ Walker Orenstein, "Coronavirus in Minnesota: Mass Vaccination Site Coming to State Fairgrounds," MinnPost, April 5, 2021, https://www.minnpost.com/health/2021/04/the-daily-coronavirus-update-mass-vaccination-site-coming-to-minnesota-state-fairgrounds/.

⁷ Berkeley Lovelace Jr, "CDC Expands Covid Vaccination Guidelines to Everyone 65 and Older," CNBC (CNBC, January 12, 2021),

https://www.cnbc.com/2021/01/12/covid-vaccine-trump-administration-to-expand-eligibility-to-everyone-65-and-older.html.

CDC's recommendations, prioritizing health care personnel and vulnerable populations while supply was limited.⁸ Throughout early 2021, different groups gained eligibility until March 30th when the state opened up vaccines to all residents over 16 years old.⁹

Minnesota's regional health care coalitions are at the center of its vaccine rollout. The state is divided into eight independent coalitions consisting of health care providers and public health officials. ¹⁰ St. Paul falls within the Metro Health and Medical Preparedness Coalition which is made up of county and city agencies from the Twin Cities area. ¹¹ However, the city of St. Paul does not have a representative organization in the coalition because, after merging with Ramsey County Public Health in 1997, it doesn't have an independent municipal health department. ¹² The eight regional coalitions work with providers to determine vaccine need and distribution capabilities and then advocate for supply from the state before it confirms its weekly orders with the CDC. ¹³ By allowing for input from a variety of levels, agencies, and providers, this network of coalitions helps identify and fill any gaps in distribution.

In addition to relying on private vaccine providers, there have been a few important collaborations between Minnesota's public and private sectors. Minnesota is one of several states participating in the Vaccine Community Connectors pilot initiative which partners health insurers with state and local officials to help people schedule vaccine appointments. ¹⁴ Starting in February, Minnesotans could sign up for vaccine availability and eligibility information online or

⁸ Minnesota Department of Health, "Who's Getting Vaccinated?," COVID-19 Updates and Information - State of Minnesota, April 6, 2021, https://mn.gov/covid19/vaccine/whos-getting-vaccinated/index.jsp.

⁹ Minnesota Department of Health, "Who's Getting Vaccinated?".

¹⁰ Jeremy Olson, "Minnesota's Regional Health Care Coalitions Are Key to Dispersing Vaccine," StarTribune, February 16, 2021.

https://www.startribune.com/minnesota-s-regional-health-care-coalitions-are-key-to-dispersing-vaccine/600023509/?refresh=true ¹¹ Metro Health & Medical Preparedness Coalition, "Public Health," The Metro Health & Medical Preparedness Coalition, accessed April 21, 2021, https://www.metrohealthready.org/our-coalition/public-health/.

¹² Ramsey County, "Public Health," Ramsey County, September 16, 2016,

https://www.ramseycounty.us/your-government/departments/health-and-wellness/public-health.

¹³ Jeremy Olson, "Minnesota's Regional Health Care Coalitions."

¹⁴ Katie Greene et al., ". Building Public-Private Partnerships to Support Efficient and Equitable COVID-19 Vaccine Distribution," April 2021.

over the phone.¹⁵ By combining the analytic expertise and logistical support of health insurance plans with public health leadership, the Vaccine Community Connector program intended to decrease confusion and increase vaccination rates.¹⁶

In Minnesota, another important instance of cooperation between private and public groups has focused on tracking vaccinations by race and ethnicity. In early March of 2021, the governor announced a first of its kind partnership between the state and the Minnesota Electronic Health Record (EHR) system.¹⁷ The EHR consortium consists of 11 of the largest health systems in Minnesota, which all have vast patient records.¹⁸ By combining the state's immunization data with EHR demographic data this partnership has helped public health officials track and address vaccine inequities, especially in minority communities.¹⁹ Aggregate information on vaccination rates by race and ethnicity is then published on the state's public vaccine data dashboard, providing an important level of accountability.

St. Paul Minority Outreach

The EHR consortium data quickly revealed that minority groups weren't receiving the vaccine as fast as white people, which was especially concerning given that people of color have higher COVID mortality risks.²⁰ There are a variety of factors that contribute to these disparities

¹⁵ Dana Thiede, "Sign up for Minnesota Vaccine Connector, Be Notified When You're Eligible," kare11.com, February 18, 2021, https://www.kare11.com/article/news/health/coronavirus/sign-up-for-minnesota-vaccine-connector-find-out-when-and-where-you re-eligible/89-e98d66a2-9539-40ff-880d-4b392a18f639.

¹⁶ Susannah Luthi, "White House Taps Insurers to Boost Vaccinations among Vulnerable Communities," POLITICO (POLITICO, March 3, 2021), https://www.politico.com/news/2021/03/03/white-house-insurers-vaccinations-473101.

¹⁷ Office of Governor Tim Walz and Lt. Governor Peggy Flanagan, "Walz, Flanagan Announce Groundbreaking Partnership Between State of Minnesota, Health Care Systems on Race and Ethnicity Data Collection," Office of Governor Tim Walz and Lt. Governor Peggy Flanagan, March 5, 2021, https://mn.gov/governor/news/?id=1055-470649.

¹⁸ David Raths, "Minnesota's EHR Consortium Helps Inform Statewide Vaccine Equity Efforts," Healthcare Innovation, April 17, 2021,

https://www.hcinnovationgroup.com/analytics-ai/big-data/article/21218974/minnesotas-ehr-consortium-helps-inform-statewide-vaccine-equity-efforts.

¹⁹ Office of Governor Tim Walz, "Groundbreaking Partnership on Race and Ethnicity Data Collection"

²⁰ Jeremy Olson, "COVID-19 Vaccine Options Emerging to Address Inequity in Minnesota," *StarTribune*, April 2, 2021, David Raths, "Minnesota's EHR Consortium Helps Inform Statewide Vaccine Equity Efforts," Healthcare Innovation, April 17, 2021, https://www.hcinnovationgroup.com/analytics-ai/big-data/article/21218974/minnesotas-ehr-consortium-helps-inform-statewide-vaccine-equity-efforts.

in vaccination. As early as August, 2020, Minnesota public health officials were drawing attention to fear and mistrust of government among migrant and minority communities and the challenges it poses for equitable vaccine distribution.²¹ Even when minority groups are interested in getting vaccinated, there are other barriers that make it challenging. For instance, the vaccine connector has been difficult for some immigrants to use due to language and technology barriers, and people helping Latino immigrants sign up have noted that the optional demographic questions it asks have been off putting, especially for those who already don't trust the government.²² Once the state opened eligibility to all adults, it became more difficult to find vaccine appointments and many people began sharing tips and information through social media.²³ However, it can be harder for minority or immigrant communities to find these pages and explanations or to have the time to refresh websites and make calls until they find an opening.

At approximately 50% white, St. Paul is significantly more diverse than greater Minnesota, putting it at the center of vaccine equity discussions.²⁴ Public health officials' plans for reaching minority and immigrant communities in St. Paul have focused on collaborations with community organizations. In early March, 2021, the Minnesota Department of Health began a pilot initiative to supply vaccines to small pharmacies.²⁵ The state and Ramsey County Public Health agreed to send doses to Phalen Family Pharmacy in St. Paul's Hmong Village Shopping

²¹ Nathan Crawford, "COVID Vaccination Planning with Five Pilot Jurisdictions," September 2, 2020.

²² Joey Peters, "Minnesota's COVID-19 Vaccine Connector Failing to Connect with Latinos.," Sahan Journal, February 26, 2021, https://sahanjournal.com/coronavirus/minnesota-covid-vaccine-connector-latino/.

²³ James Walsh, "Competition among Minnesotans for Vaccine Shots Heats Up," *StarTribune*, March 26, 2021, https://www.startribune.com/competition-among-minnesotans-for-vaccine-shots-heats-up/600039219/.

²⁴ City of St. Paul, "Race and Ethnicity," Saint Paul, Minnesota, March 5, 2021, https://www.stpaul.gov/books/race-and-ethnicity.

²⁵ Gia Vang, "Hmong Community Vaccination Clinic Opens after Concerns over Vaccine Inequity," Karell, March 10, 2021,

https://www.kare11.com/article/news/health/coronavirus/hmong-community-covid-vaccines-phalen-family-pharmacy/89-19bb5182-0fae-4b4e-a905-36e07bcecbc3.

Center.²⁶ With many elders not fluent in English, public health experts and doctors familiar with the Hmong community argued that large retail pharmacies and health care centers wouldn't be able to reach people effectively.²⁷ Phalen Pharmacy, on the other hand, is smaller and in a familiar location for many Hmong and South Asian people, making it a more appealing and comfortable place for them to get vaccinated. After Phalen Pharmacy received vaccines, various groups stepped in to spread information and provide volunteers, including the Hmong Medical Association, Hmong churches, and other community leaders.²⁸ While typically the pharmacy only had the personnel to administer 10 doses daily,²⁹ these partnerships have helped develop vaccination events that were able to administer 200 vaccines in one day.³⁰ As of April 18th, 2021, Phalen Pharmacy had received 1,897 vaccine doses, 100% of which were administered within seven days of receipt.³¹ For reference, 40,016 doses were administered across Ramsey County the week of April 11th.³² So, while Phalen Pharmacy has been able to increase the doses it administers and administer all of the doses it receives, as a smaller pharmacy this number is still a very small portion of county totals.

Other targeted vaccine efforts were established to reach St. Paul and Minneosta's Muslim community. Imam's from St. Paul and across the state joined members of the Somali Medical Association of America to televise themselves getting vaccinated at the end of March.³³ With some vaccine hesitancy in the Somali and Muslim communities, they hoped this event would

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²⁶ Frederick Melo, "Volunteers and Phalen Family Pharmacy Team up for COVID Vaccination Clinics at Hmong Village," Twin Cities Pioneer Press, March 8, 2021,

https://www.twincities.com/2021/03/08/covid-vaccination-clinic-hmong-village-st-paul-phalen-family-pharmacy/.

²⁷ Joey Peters, "COVID-19 Vaccine Drive Makes First Stop at Hmong Village in St. Paul.," Sahan Journal, March 2, 2021, https://sahanjournal.com/coronavirus/hmong-covid-19-vaccine-drive/.

²⁸ Joey Peters, "COVID-19 Vaccine Drive."

²⁹ Frederick Melo, "COVID Vaccination Clinics at Hmong Village."

³⁰ Joey Peters, "COVID-19 Vaccine Drive."

³¹ State of Minnesota, "COVID-19 Vaccine Data," Minnesota COVID-19 Response, April 26, 2021, https://mn.gov/covid19/vaccine/data/index.jsp.

³² State of Minnesota, "COVID-19 Vaccine Data."

³³ Joey Peters, "Minnesota Imams Lead by Example-and the Qur'an-to Battle Vaccine Hesitancy.," Sahan Journal, March 31, 2021, https://sahanjournal.com/coronavirus/minnesota-imams-vaccination-event/.

raise awareness and encourage others to get vaccinated.³⁴ Public health officials especially wanted to reach Muslims before Ramadan so that people wouldn't be dealing with side effects while fasting and to protect the community as they gathered to pray.³⁵ To accomplish this, Ramsey County Public Health established vaccine drives at two mosques in St. Paul that offered a combined 800 doses on April 9th, 2021.³⁶ Those 800 doses were close to 20% of the 4,256 doses administered or distributed by Ramsey County that week,³⁷ although between all providers about 46,000 doses were administered in Ramsey County.³⁸ While the health department is administering a relatively small proportion of the total doses given in the county, these numbers show their focus on targeted, equitable outreach.

Ramsey County Public Health also utilized mobile vaccine clinics to reach minority communities. Minnesota Immunization Networking Initiative (MINI) clinics were originally established to distribute flu shots, but Ramsey County partnered with health care providers to use them for the COVID vaccine.³⁹ The mobile clinics have been set up at locations including St. Paul's Mexican Consulate, public housing units, and churches.⁴⁰ M Health Fairview, one of the healthcare partners providing staffing and supplies, estimated that each MINI clinic pop-up event could provide up to 400 doses.⁴¹ Near the end of April, the state created more mobile units by retrofitting six old city buses that can each provide 150 vaccines daily.⁴² Both the MINI clinics

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³⁴ Joey Peters, "Imams Lead by Example."

³⁵ Joey Peters, "Mosques Will Be Full during Ramadan. Vaccination Campaign Aims to Protect Muslims from COVID," MPR News (MPR News, April 8, 2021),

https://www.mprnews.org/story/2021/04/08/mosques-will-be-full-during-ramadan-vaccination-campaign-aims-to-protect-muslim s-from-covid.

³⁶ Joey Peters, "Mosques Will Be Full."

³⁷ St. Paul- Ramsey County Public Health, "Ramsey County COVID-19 Vaccine Dashboard," Ramsey County, April 26, 2021, https://data.ramseycounty.us/stories/s/v3gu-4zh7.

³⁸ State of Minnesota, "COVID-19 Vaccine Data."

³⁹ Frederick Melo, "Once Geared toward Flu Shots, Mobile Vaccination Clinics Meet the Least Vaxxed Where They Live, Work and Worship," Twin Cities Pioneer Press, March 22, 2021,

https://www.twincities.com/2021/03/22/mobile-vaccination-clinics-meet-underserved-where-they-live-work-worship/.

⁴⁰ Frederick Melo, "Mobile Vaccination Clinics Meet the Least Vaxxed".

⁴¹ M Health Fairview, "Community COVID-19 Vaccination Equity Strategies," 2021.

⁴² Christopher Snowbeck and Joe Carlson, *StarTribune*, April 20, 2021,

https://www.startribune.com/minnesota-deploys-modified-buses-for-mobile-vaccination-clinics/600048104/.

and buses bring the vaccines into specific community locations, helping meet people where they are and offering an easy way to get vaccinated. This kind of targeted outreach has been key to ensuring the success of a wide range of public health efforts, and will ideally help reduce vaccine disparities.⁴³

While some of these equity efforts are newer than others and it can be hard to track the impact of each one individually, there are some indicators of where St. Paul and Minnesota's vaccine disparities are currently at. Figure 2 shows how the percent of people ages 15 or older vaccinated in Minnesota by race has changed over time. As of April 24th, 2021, the most recent data in Figure 2, the percent of white Minnesotans who had received one vaccine was still the highest of all racial and ethnic groups.⁴⁴

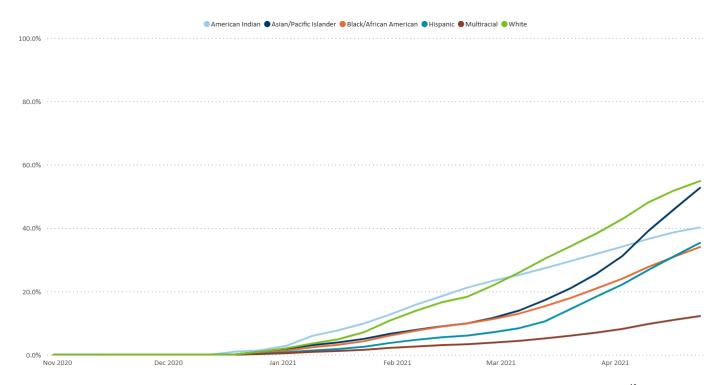


Figure 2. Percent 15+ Year Olds with at Least One COVID Vaccine by Race over Time in Minnesota⁴⁵

⁴³ Frederick Melo, "Mobile Vaccination Clinics Meet the Least Vaxxed"

⁴⁴ State of Minnesota, "COVID-19 Vaccine Data."

⁴⁵ State of Minnesota, "COVID-19 Vaccine Data."

Between April 3rd, just after all adults became eligible, and April 24th, the differences between the percent of white people with one vaccine and Asian/Pacific Islander people with one vaccine and between white and hispanic people had narrowed, but the gap between white people and Black/African Americans had widened.⁴⁶

Figure 3 shows the vaccines administered by Ramsey County Public Health by race and ethnicity compared to population demographics as of April 24th, 2021.

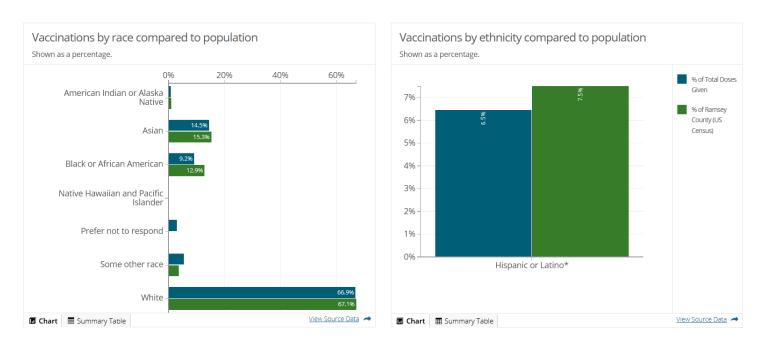


Figure 3. Vaccinations Administered by Ramsey County by Race and Ethnicity Compared to Population⁴⁷

As these graphs show, the percent of vaccines going to minority populations still lagged compared to their proportion of the county population, but the difference was larger for Black/African Americans and Hispanics than it was for Asian/Pacific Islanders. ⁴⁸ This data does not represent total vaccinations in Ramsey County however, and given that the county public health department is more focused on targeted vaccine events than other distributors like

⁴⁶ State of Minnesota, "COVID-19 Vaccine Data."

⁴⁷ St. Paul- Ramsey County Public Health, "Ramsey County COVID-19 Vaccine Dashboard."

⁴⁸St. Paul- Ramsey County Public Health, "Ramsey County COVID-19 Vaccine Dashboard."

pharmacies, it's possible the disparities in Ramsey County are greater than they appear in Figure 3. However, compared to other counties in the country with similar social vulnerability (a CDC measurement based on factors including socioeconomic status, transportation, and race), Ramsey County had above average total vaccination rates with about 31% of residents vaccinated as of April 27th, 2021.⁴⁹

Takeaways

The effort to produce, approve, and distribute the COVID vaccine has taken many players. While the national government has had much of the control over approval and initial distribution of the vaccines to jurisdictions, the jurisdictions themselves determine most of the logistics within their boundaries. Minnesota has relied on both regional public health officials and the private sector to coordinate vaccine distribution and tracking. With much of the state's immigrant and minority populations in St. Paul, the city has worked towards vaccine equity through innovative partnerships with community organizations, religious leaders, and providers. Recent numbers show that while Ramsey County may be ahead of vaccinations compared to similar counties across the country, disparities are still prevalent at the county and state level. Going forward, it will be important for officials to use their partnerships to continue to track inequities and determine which equity outreach programs are succeeding and where there is room for improvement.

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⁴⁹ The New York Times, "See How the Vaccine Rollout Is Going in Your County and State," The New York Times (The New York Times, December 17, 2020), https://www.nytimes.com/interactive/2020/us/covid-19-vaccine-doses.html#vulnerable.

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