



# Using a Novel Partnership to Measure Vaccine Uptake in Populations of Interest

Miriam Muscoplat | MIIC Manager

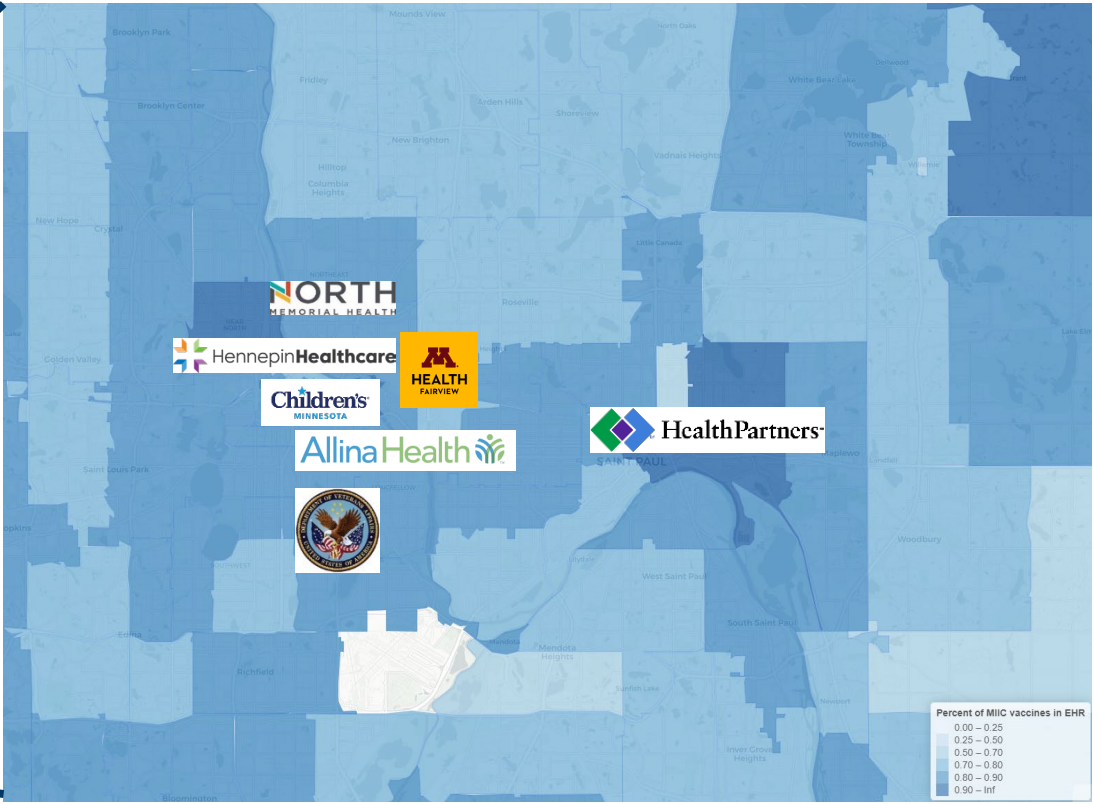
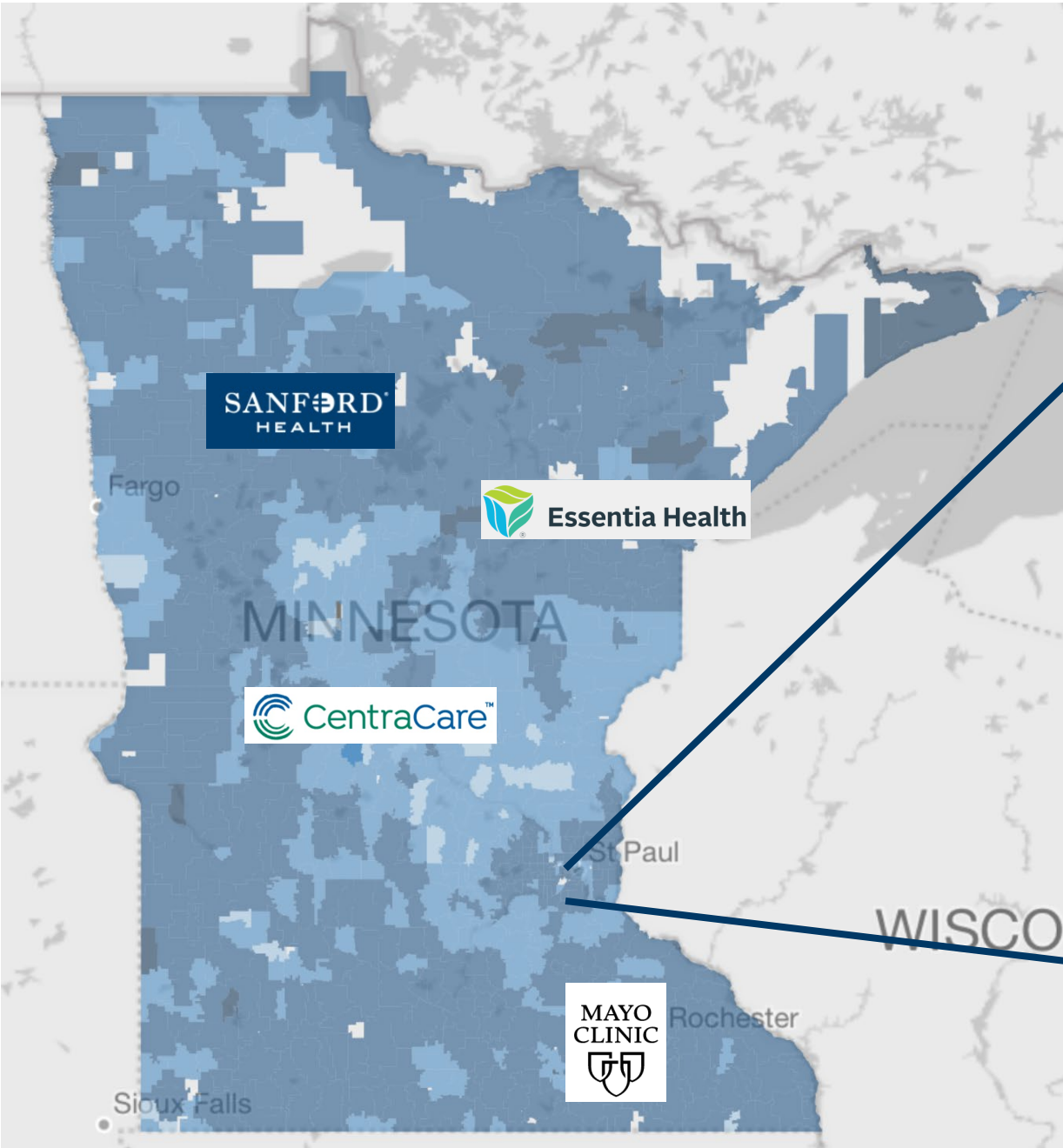
- Background and Partnership
- Data Sharing Process
- Outcomes and Data Use

# Background and Partnership

# Minnesota EHR Consortium

- Collaboration of Health Systems across Minnesota, including Minneapolis VA
- Mission: to improve health by informing policy and practice through data-driven collaboration among members of Minnesota's health care community.
- Vision: Our vision is to be the leading research network collaborating across Minnesota to equitably improve health outcomes.
- Key Principles:
  - Prioritize privacy through a distributed data model
  - Voluntary Collaboration
  - Good governance through our Governance Board
  - Adaptable and nimble

# Participating Sites (COVID-19 Vaccine Project)



- Initiation
- Contract
  - Duties
    - Data Sharing timelines
    - Work towards a shared data model between the systems to streamline the process
    - Demonstration projects to further move the needle on EHRC work
  - Timeline: Through June 2024
  - Funding
    - CoAg Supplement 3
    - \$2.7M

# Process

# Hashed Identifiers

## Minnesota Immunization Information Connection

f_name	l_name	dob	sex	race	phone
Joan	Smith	8/20/1965			612 781-5544

f_l_dob_sex	f_l_dob_race	f_l_dob	f_phone
joansmith08201965	joansmith08201965	Joansmith08201965	joan6127815544

hash function

hash1	hash2	hash3	hash4
j3r8	j2w4	j9s3	j4x8

## Health System

mrn	f_name	l_name	dob	sex	race	phone
00256	Joan	Smith	8/20/1956			612 781-5544

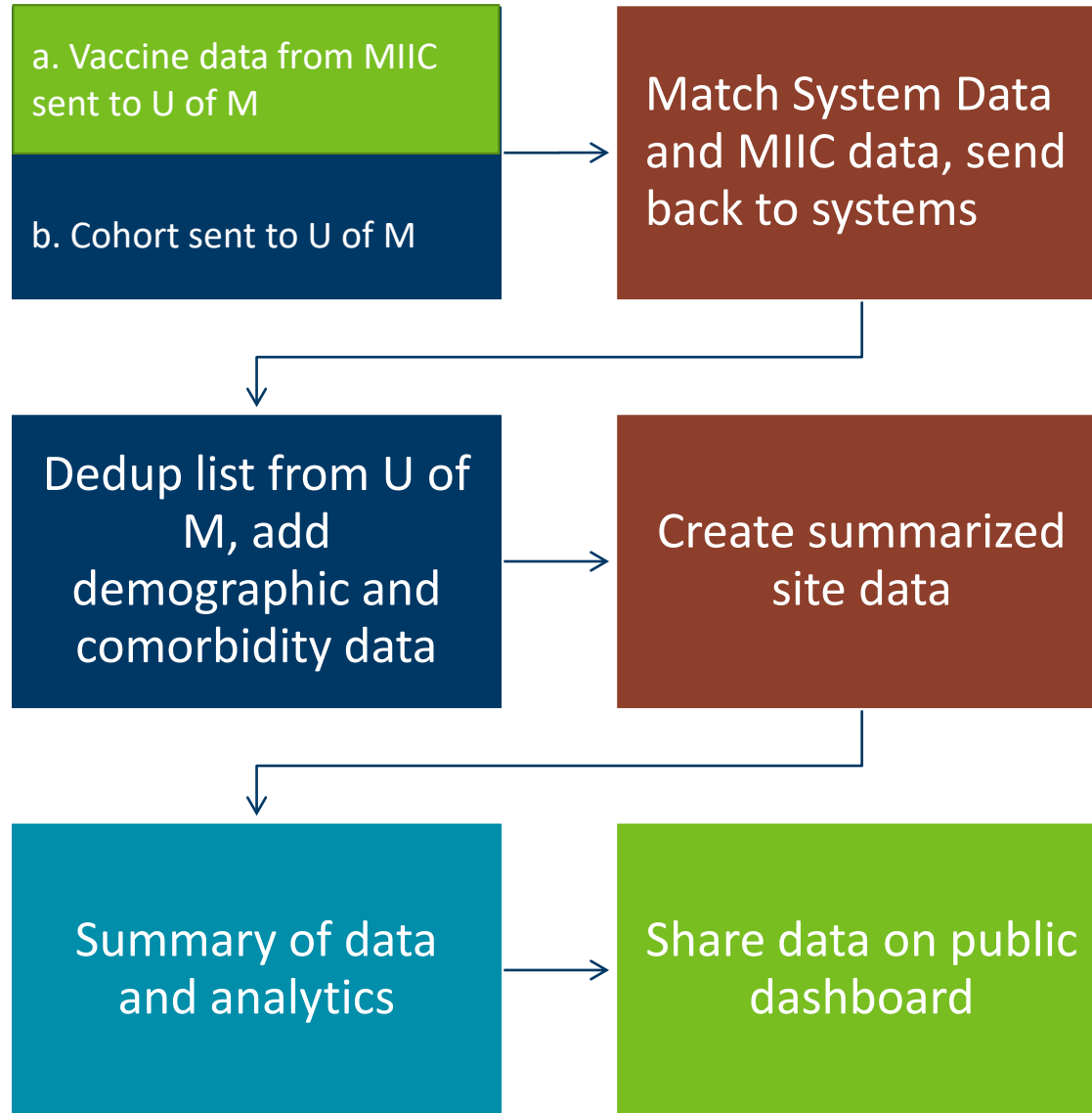
mrn	f_l_dob_sex	f_l_dob_race	f_l_dob	f_phone
00256	joansmit08201965	joansmit08201965	joansmit08201965	joan6127815544

hash function

hash1	hash2	hash3	hash4
j3r8	j2w4	j9s3	j4x8

Hashes simplified for display purposes





# Outcomes and Data Use

## Minnesota EHR Consortium: COVID-19 Project, Vaccines

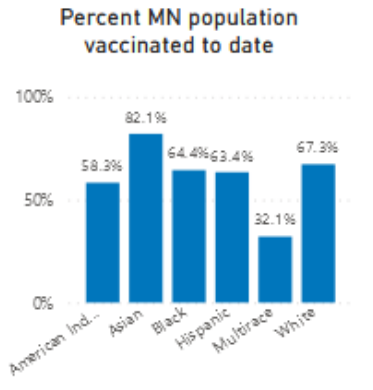
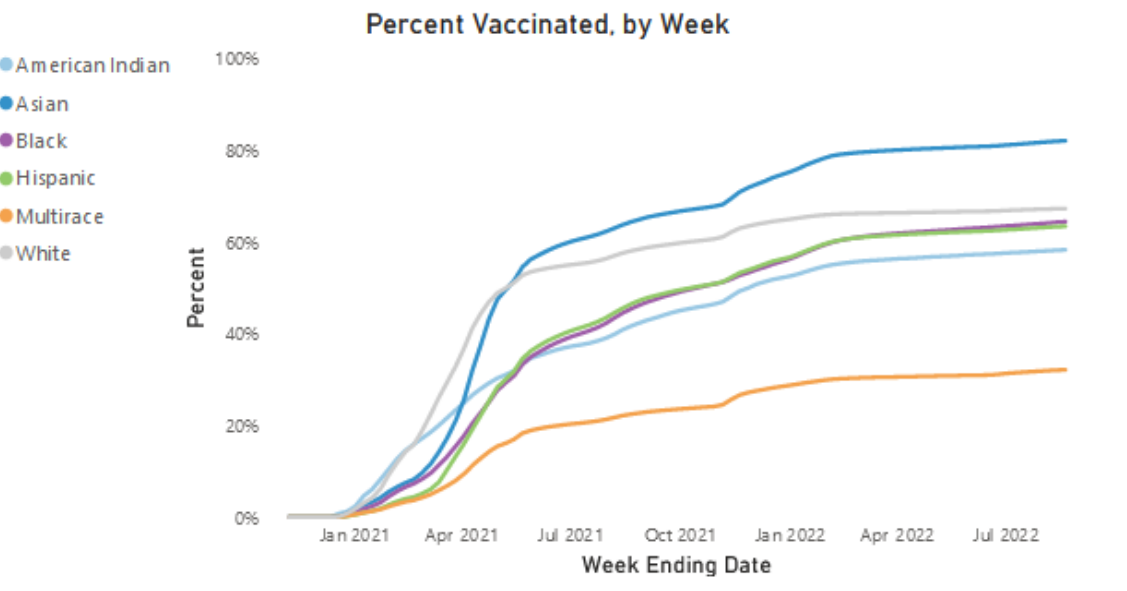
- Category**
- Total
  - Race/Ethnicity
  - Gender
  - Income
  - Urban/Rural
  - Physical health

- Attribute**
- Select all
  - American Indian
  - Asian
  - Black
  - Hispanic
  - Multirace
  - White

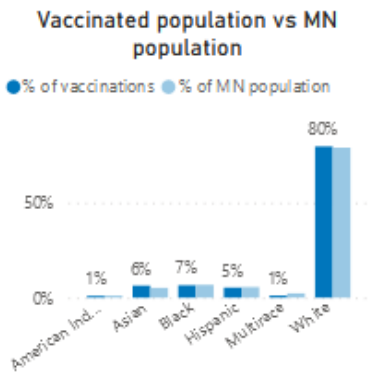
Reset page

Up to date	2nd Booster	1st Booster	Completed vaccine series	<b>At least one vaccine dose</b>	Cumulative	<b>Percent</b>	Disparities		
<b>Total</b>	Total, adj.*	Ages 75+	Ages 65-74	Ages 45-64	Ages 25-44	Ages 19-24	Ages 12-18	Ages 5-11	Ages 1-4

Hold CTRL while selecting to group multiple age categories together.  
 \*Adjusted so results are age-neutral. All denominators are for the entire population, including those under age 12.  
 For disparities, values greater than 0 = over-represented, values less than 0 = under-represented compared to MN population.  
 ^Weekly percents are the number vaccinated in a given week divided by the number of people not already vaccinated in a given group.



Note: Due to differences in tabulation between health systems and the U.S. Census Bureau, multirace is likely under-reported.



## Minnesota EHR Consortium: COVID-19 Project, Vaccines

**Population**

- Medicaid
- Homelessness
- Homelessness region
- Incarceration

**Category**

- Total
- Age
- Race/Ethnicity
- Gender
- Language
- Interpreter
- Smoking
- SUD
- Physical health

**Attribute**

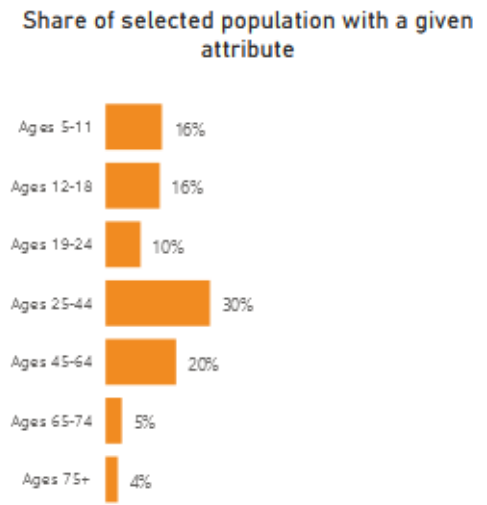
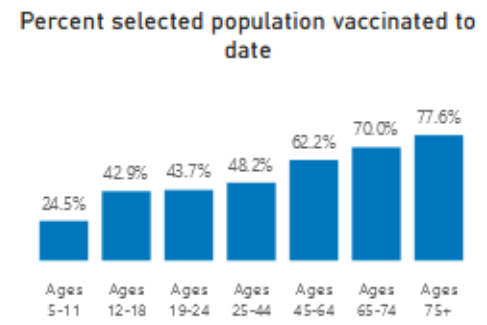
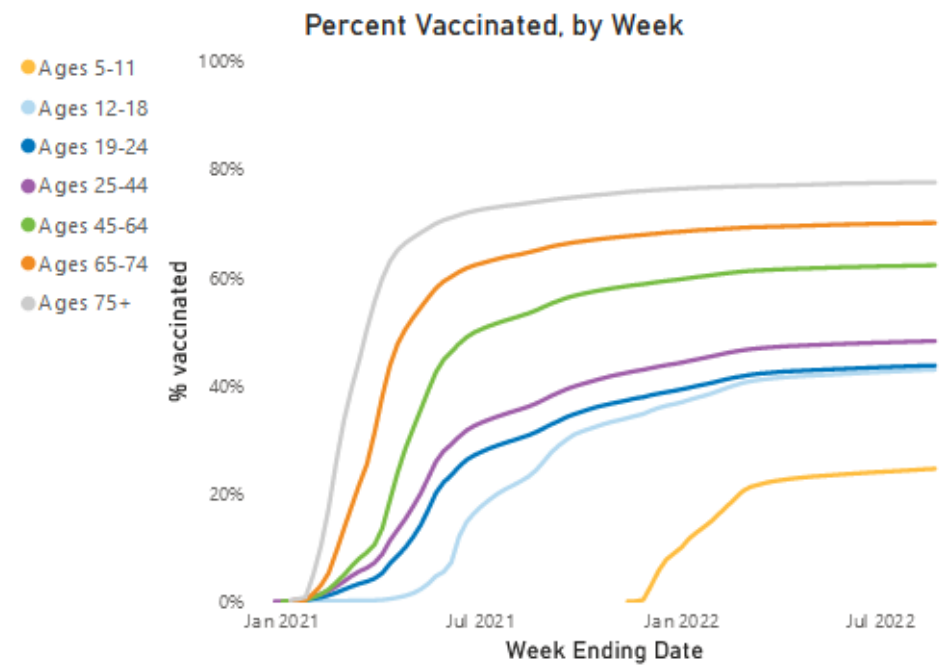
- Select all
- Ages 5-11
- Ages 12-18
- Ages 19-24
- Ages 25-44
- Ages 45-64
- Ages 65-74
- Ages 75+

[Reset page](#)

Up to date   2nd Booster   1st Booster   **Completed vaccine series**   At least one vaccine dose   Cumulative   Percent

Medicaid

Note: A selection must be made above for the data to display correctly. Remove a selection by clicking the box again to see all population options on the page.



# State of Minnesota Dashboard

**Race and Ethnicity** Summary Who's Getting Vaccinated Boosters/Additional Doses **Race/Ethnicity** Equity Distribution Vaccines Administered

[Reset filter](#)

**View by people with:**

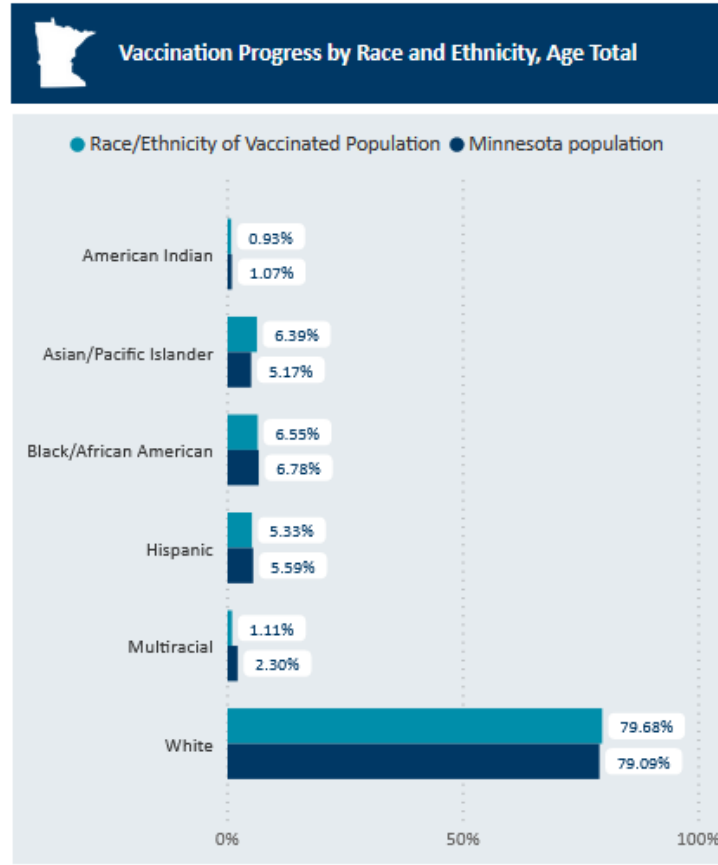
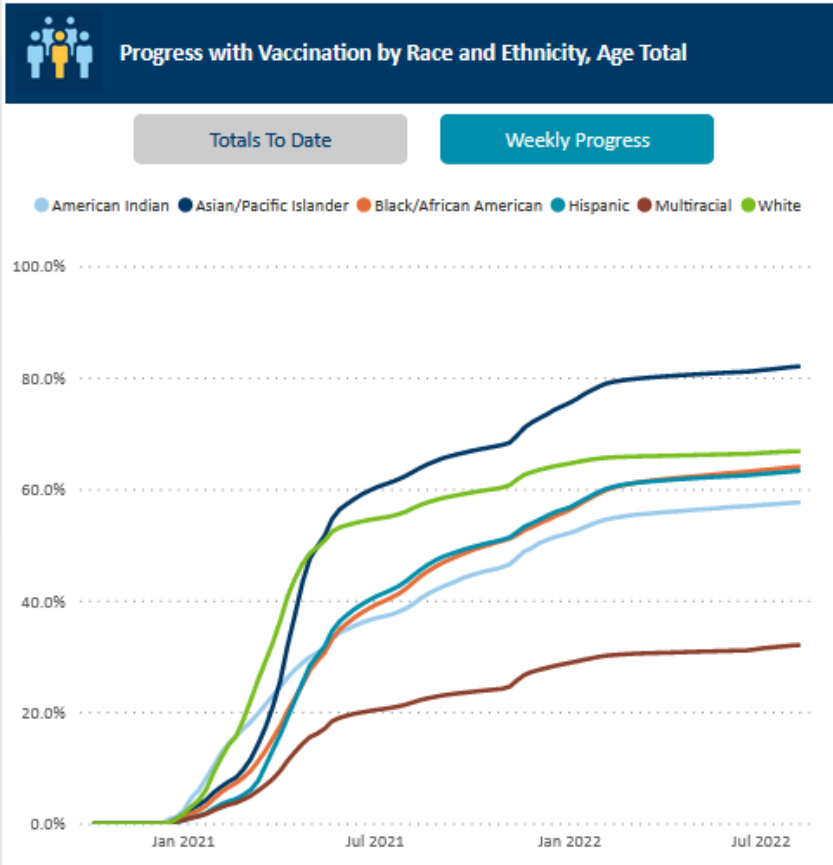
- At least one vaccine dose
- Completed vaccine series
- Up to date vaccine doses

**View by age group:**

- 1-4
- 5+
- 5-11
- 12+
- 12-18
- 19-44
- 45-64
- 65+
- Total

The race/ethnicity data provided on this dashboard accounts for 90% of the people who have a COVID-19 immunization record with MDH. It also includes immunizations from VA records which are not included in immunization records with MDH. For the remaining records, race/ethnicity data is not available, unknown, or missing. This percentage may vary slightly for each age demographic.

Data reported as of: 8/6/2022  
Updated bi-weekly on Friday.



[View additional information about COVID-19 cases by Race/Ethnicity](#)

# Future Work

# So Much Potential!

- Projects
  - HPV infection and immunization
  - High risk conditions and immunization recommendations
  - Endless non-immunization opportunity
- Funding
  - Working to identify other partners in the agency to diversify funding and projects

# Thank You!

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- Shearer RD, Vickery KD, Bodurtha P, Drawz PE, Johnson S, Jeruzal J, Waring S, Chamberlain AM, Kharbanda AB, Leopold J, Harrison B, Hiler H, Khazanchi R, Rossom R, Margolis KL, Rai NK, Muscoplat MH, Yu Y, Dudley RA, Klyn NAM, Winkelman T NA. COVID-19 Vaccination Of People Experiencing Homelessness And Incarceration In Minnesota. Health Aff (Millwood). 2022 Jun;41(6):846-852. doi: 10.1377/hlthaff.2021.02030. PubMed PMID: 35666963.
- Winkelman TNA, Margolis KL, Waring S, Bodurtha PJ, Khazanchi R, Gildemeister S, Mink PJ, DeSilva M, Murray AM, Rai N, Sonier J, Neely C, Johnson SG, Chamberlain AM, Yu Y, McFarling LM, Dudley RA, Drawz PE. Minnesota Electronic Health Record Consortium COVID-19 Project: Informing Pandemic Response Through Statewide Collaboration Using Observational Data. Public Health Reports. 2022;137(2):263-271. doi:10.1177/00333549211061317
- Winkelman TNA, Rai NK, Bodurtha PJ, Chamberlain AM, DeSilva M, Jeruzal J, Johnson SG, Kharbanda A, Klyn N, Mink PJ, Muscoplat M, Waring S, Yu Y, Drawz PE. Trends in COVID-19 Vaccine Administration and Effectiveness Through October 2021. JAMA Netw Open. 2022;5(3):e225018. doi: 10.1001/jamanetworkopen.2022.5018. PubMed PMID: 35357452; PubMed Central PMCID: PMC8972031.
- Drawz PE, DeSilva M, Bodurtha P, Benitez GV, Murray A, Chamberlain AM, Dudley RA, Waring S, Kharbanda AB, Murphy D, Muscoplat MH, Melendez V, Margolis KL, McFarling L, Lupu R, Winkelman TNA, Johnson SG. Effectiveness of BNT162b2 and mRNA-1273 Second Doses and Boosters for SARS-CoV-2 infection and SARS-CoV-2 Related Hospitalizations: A Statewide Report from the Minnesota Electronic Health Record Consortium. Clin Infect Dis. 2022 Feb 7; . doi: 10.1093/cid/ciac110. PubMed Central PMCID: PMC8903410.
- Khazanchi R, Spaulding AB, Bodurtha PJ, Neely C, Winkelman TNA. Trends in Pediatric Viral Symptoms, Influenza Testing, and SARS-CoV-2 Testing From a Statewide Electronic Health Record Consortium, January 2017 to July 2021. Academic Pediatrics. 2021 Nov-Dec;21(8):1420-1425. doi: 10.1016/j.acap.2021.08.008.

# Land Acknowledgement

Every community owes its existence and vitality to generations from around the world who contributed their hopes, dreams, and energy to making the history that led to this moment. Some were brought here against their will, some were drawn to leave their distant homes in hope of a better life, and some have lived on this land for more generations than can be counted. Truth and acknowledgment are critical to building mutual respect and connection across all barriers of heritage and difference.

We begin this effort to acknowledge what has been buried by honoring the truth. We are standing on the ancestral lands of the Dakota people. We want to acknowledge the Dakota, the Ojibwe, the Ho Chunk, and the other nations of people who also called this place home. We pay respects to their elders past and present. Please take a moment to consider the treaties made by the Tribal nations that entitle non-Native people to live and work on traditional Native lands. Consider the many legacies of violence, displacement, migration, and settlement that bring us together here today. Please join us in uncovering such truths at any and all public events.\*

\*This is the acknowledgment given in the USDAC Honor Native Land Guide – edited to reflect this space by Shannon Geshick, MTAG, Executive Director Minnesota Indian Affairs Council