

IDPH COVID-19 VACCINE UPTAKE:

A Community Assessment of
Covid-19 Vaccination Disparities in
Twelve Communities



REGION 9 NORTH

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OVERVIEW OF THE COMMUNITY ASSESSMENT AND PROJECT PARTNERS

This report provides an analysis and evaluation of the current COVID-19 vaccination rates in 12 communities in the Chicagoland area. It documents the results of the community assessment for the first phase of the YMCA of Metropolitan Chicago's (the Y) initiative to increase COVID-19 vaccine confidence and uptake in the specified target areas. It also makes recommendations for building trust and knowledge toward prevention, testing, and treatment. Funding for this project was made possible by the Office of Disease Control, through the Illinois Department of Public Health (IDPH).

COVID-19 is a virus that can spread very quickly through close interaction with infected people that is mainly transmitted by coughing or sneezing.¹ The first case was reported in China in 2019, and has since spread worldwide and caused a global pandemic.² The first case in Chicago was recorded on March 8, 2020.³

¹ Yüce, Meral, et al. "Diagnosis —A Review of Current Methods." *Biosensors and Bioelectronics*, vol. 172, Elsevier BV, Jan. 2021, p. 112752. *Crossref*, <https://doi.org/10.1016/j.bios.2020.112752>.

² Wong, George N. et al. "Modeling Dynamics in Illinois Under Nonpharmaceutical Interventions." *Physical review. X* 10.4 (2020): 041033–. Web.

³ All executive orders related to issued by the State of Illinois Governor J. B. Pritzker are listed here: <https://www2.illinois.gov/government/executive-orders>. The timeline of mitigation in Illinois is summarized at https://en.wikipedia.org/wiki/_pandemic_in_Illinois#Government_response

When infected, symptoms include coughing, high fever, vomiting, and diarrhea. Acute respiratory distress syndrome (ARDS) occurs in more severe cases. Less common symptoms are headache, body aches, nausea, and phlegm production. However, in many cases, individuals are asymptomatic. Detection of asymptomatic cases is important to prevent the spread of COVID-19.⁴

Once an individual is infected with COVID-19, immunity wanes over time, allowing for re-infection. For maximum protection, vaccination and regular boosters are recommended.⁵

The rapid roll-out of the vaccine and the fear of possible side effects have led to hesitation about the vaccine. The thought that insufficient time was spent developing the vaccine has triggered distrust and reluctance toward the vaccine. Infection and hospitalization of vaccinated people has contributed to vaccine hesitancy.⁶ The fact that the virus can mutate very quickly has made it difficult to measure the effectiveness of vaccines during studies.⁷

Despite the increase in vaccine availability and vaccine providers in Illinois, demographic inequalities in vaccination have been observed in the population. With funding from the Illinois Department of Public Health (IDPH), the Y launched a one-year project in 12 zip codes located in Suburban Cook County, Will County, and Lake County to identify driving factors behind vaccination rate disparities and develop interventions to address those disparities.

⁴ Pradhan, Madhulika, et al. "Clinical Presentation and Detection Methods." *Journal of Immunoassay and Immunochemistry*, vol. 43, no. 1, Informa UK Limited, Aug. 2021. *Crossref*, <https://doi.org/10.1080/15321819.2021.1951291>.

⁵ Brüssow, Harald. "COVID-19: Vaccination Problems." *Environmental Microbiology*, vol. 23, no. 6, Wiley, May 2021, pp. 2878–90. *Crossref*, <https://doi.org/10.1111/1462-2920.15549>.

⁶ Hamilton K, Hagger MS. The Vaccination Concerns in Scale (VaCCS): Development and validation. *PLoS One*. 2022 Mar 14;17(3):e0264784. doi: 10.1371/journal.pone.0264784. PMID: 35286331; PMCID: PMC8920277.

⁷ Li, Maochen, et al. "Vaccine Development: Milestones, Lesõm, <https://doi.org/10.1038/s41392-022-00996-y>.

The Y has been a community partner since 1858. The Y serves over 200,000 individuals annually in Greater Chicagoland, as well as MI and WI. Their mission is to strengthen community by connecting people to their purpose, potential, and each other. Their work centers around youth development and academic readiness, building healthy communities, healthy living and fitness, violence prevention, and ensuring essential services, such as healthcare access, housing, food, and employment are open to all. With funds from the IDPH, the Y is embarking on a one-year project in 12 suburban Chicago cities/zip codes (map below) to advance COVID-19 vaccination uptake. With this work, the Y aims to:

- Understand why some areas have low vaccination rates, while other community areas have higher rates
- Develop and implement community-led COVID-19 transmission strategies
- Understand other top health-equity related issues within target communities
- Aid in development of a strong network of resources for individuals surrounding COVID-19 and common health issues in these communities

The Social Consult is an Executive Coaching and Consulting firm dedicated to the continuous growth and well-being of people and organizations. The Social Consult is reimagining success as humane and aims to set a standard where organizations and people grow together. The Social Consult served as an Evaluation Partner, providing support to the Y and ensuring the successful completion of a wide scale community assessment of all 12 zip codes.

Overall, 12 suburban Chicago zip codes were examined as a part of the community assessment process. These zip codes were identified by the Illinois Department of Public Health as having lower vaccination rates than others in the state. They fall in two regions– Region 9 and Region 10. The zip codes in Region 10 fell in two clustered areas. For this reason, Region 10 has been further divided into South and West subregions by the Y. This project aims to increase vaccine confidence and vaccination rates by better understanding the target communities

REGION 9

1. Great Lakes
2. Mundelein
3. Round Lake
4. Waukegan

REGION 10 WEST

5. Des Plaines
6. Elmwood Park
7. Niles
8. Riverside

REGION 10 SOUTH

9. Matteson
10. Park Forest
11. Richton Park
12. Steger



STRENGTHS AND LIMITATIONS OF THE COMMUNITY ASSESSMENT

A strength of this community assessment includes the partnership between The Social Consult and the Y. Additionally, other community partners supported our efforts including, the Alliance for Human Services, Kids Above All, Family Services of Lake County, Joliet Area South Suburban Chapter of Delta Sigma Theta, Boys and Girls Club of Waukegan, Waukegan Public Library, Steger South Chicago Heights Public Library, District 63 Family Resource Center, and Members from the North, South, and West Community Health Equity Networks.

Limitations of these activities include poor town hall attendance. There were also accessibility restraints in the Great Lakes community, in part due to it largely being a secured Navy base. Additionally, the assessment was time-restricted and would typically occur over a longer span of time. A community assessment of 12 municipalities would typically occur over a longer period. Lastly, Community Health Equity Network (CHEN) members in Region 9 North decided they did not want data collection to take place via survey, making data collection more labor-intensive.





METHODS USED TO GATHER INFORMATION

The community assessment began with the development of the Y's Community Health Equity Network (CHEN). The CHEN is an external body of community leaders and members responsible for guiding the direction of COVID-19 vaccination uptake strategies and initiatives.

There were a total of two CHEN meetings held, where community representatives served to inform the Y and The Social Consult on how to best assess their community. The first CHEN meeting was an introductory meeting. The Y presented information about the project while The Social Consult presented information about their practices and methodology and facilitated a discussion around ways to best assess and understand their communities.

Next, a gap analysis exploring the vaccination rate disparities within the 12 target zip codes was completed. The full gap analysis can be found in Appendix B. Once the gap analysis was completed. The Social Consult presented the findings of the analysis to the CHEN and led a discussion with CHEN members related to additional data collection and the best methods to assess the community. Following the CHEN meeting, The Social Consult evaluated the feedback from the CHEN and formulated a data collection plan while integrating the CHEN's feedback.

For Region 9 North, a town hall was planned, with a second town hall meeting planned specifically for Spanish-speaking community members. Additionally, to address the possible lack of participants, a secondary plan to conduct interviews in the community was formulated. Training was conducted by the Social Consult with the Y team on the use of Appreciative Inquiry for the purposes of conducting interviews. Appreciative Inquiry is a change management method that focuses on identifying what is working sufficiently and analyzing why it is working sufficiently.⁸ It helps understand the best approaches, design strategic plans, and build momentum for large-scale initiatives into the future.⁹

The Social Consult then began to develop interview and town hall questions using appreciative inquiry methodology. The town hall format was developed using the Art of Hosting and World Cafe format. The World Cafe format is a creative way to share knowledge by creating collaborative dialogue around essential questions.¹⁰ These conversations are held in informal cafe settings with small groups to problem solve.¹¹ Interview and town hall questions were then developed and sent to CHEN members for feedback. Feedback was then integrated into the data collection tools.

The initial town hall for Region 9 was held, however, community members did not attend. In order to collect data, the Social Consult and the Y team used an emergent strategy, allowing them to pivot and still conduct interviews and poll community members, which mainly consisted of parents picking up their children at the town hall site and staff at the community center. The revised method was successful in collecting data and it was decided that the data collection tools would be updated to reflect the revised data collection process. In addition, the Y and Social Consult, decided to conduct 1:1 interviews for the remainder of the data collection process.

⁸ <https://positivepsychology.com/appreciative-inquiry/#appreciative-inquiry>

⁹ <https://www.investopedia.com/terms/a/appreciative-inquiry.asp>

¹⁰ <https://artofhosting.org/what-is-aoh/methods/world-cafe/>

¹¹ <https://involve.org.uk/resources/methods/world-cafe>

DATA COLLECTION FELL INTO THREE CATEGORIES:

1 Access Questions

Yes or No questions developed to assess the community's access to the vaccination and personal protective equipment

2 Poll Questions

Yes or No questions created to quickly capture valuable insight about trusted sources of information regarding COVID-19

3 Interview Questions

Guided questions developed to assess the community member's feelings, thoughts, and perceptions about COVID-19, COVID-19 immunizations and boosters, and other community related health matters

The Social Consult and the Y team went into the community and visited locations that community members would frequent in order to collect additional data. Additionally, the teams reached out to their community networks and were able to get connected with community members to interview. There were a total of 10 data collectors conducting surveys, polls, and interviews between the Y and the Social Consult teams, including community partners.

In this assessment, vaccination data from the IDPH was analyzed. Poll and access question responses were also analyzed for trends. Interviews were analyzed using the narrative analysis and thematic analysis methodology. Narrative analysis is used to understand how participants construct stories and narratives from their personal experiences.^{12,13} Thematic analysis, one of the most popular qualitative analyses, is a method of searching a dataset for responses that contain repeating patterns.¹⁴

¹² <https://www.sciencedirect.com/topics/social-sciences/narrative-analysis>

¹³ <https://delvetool.com/blog/narrativeanalysis>

¹⁴ <https://www.sciencedirect.com/topics/social-sciences/thematic-analysis>

The table below summarizes direct data collection that occurred broken down by target community.

DATA COLLECTION COUNT

Table 1. Data Collection Count Region 9

REGION	INTERVIEWS	POLLS	SURVEYS	ACCESS QUESTIONS	TOTAL DATA POINTS
Mundelein	3	3	N/A	3	9
Great Lakes	1	1	N/A	1	3
Round Lake	9	6	N/A	5	20
Waukegan	16	22	N/A	18	56
TOTAL	29	32	N/A	27	88

Note 1: Surveys were not distributed to the North Region as recommended by North Region CHEN

Note 2: Access to the Great Lakes community was limited

¹² <https://www.sciencedirect.com/topics/social-sciences/narrative-analysis>

¹³ <https://delvetool.com/blog/narrativeanalysis>

¹⁴ <https://www.sciencedirect.com/topics/social-sciences/thematic-analysis>



BRIEF DESCRIPTION OF COMMUNITIES

Targetted communities in Region 9 include 4 zip codes in north/northwest of Chicago located in Mundelein, Round Lake, Great Lakes and Waukegan. For maps and detailed community level data on vaccination, transmission, testing as well as demographics, languages spoken, socio-economic status, and political affiliation, see Appendix A.

Located north of Chicago in Lake County, Mundelein has grown from a small agricultural enclave to a large town and commercial settlement.¹⁵ This village, referred to as the heart of Lake County, has redefined itself in recent years by providing amenities and services to support businesses and residents.¹⁶ Over time, population growth has been observed due to the city's development in the fields of economy and business.¹⁷ The total population of Mundelein is 72,139.¹⁸

Round Lake is part of Lake County and located north of Chicago.¹⁹ There was a significant increase in the population when service members returning from World War II moved to Round Lake.²¹ The total population of Round Lake is 110,986.²²

¹⁵<https://www.mundelein.org/government/boards-commissions-and-committees/mundelein-historical-commission#:~:text=As%2>

¹⁶<https://www.mundelein.org/business/community-overview>

¹⁷<https://www.mundelein.org/government/boards-commissions-and-committees/mundelein-historical-commission>

¹⁸IDPH EVA database

¹⁹<https://data.census.gov/profile?g=1600000US1766027>

²¹hndlakeil.gov/pview.aspx?id=20710&catid=0

²²IDPH EVA database

The Navy's largest training installation and Navy's only Boot Camp are located in Great Lakes.²³ It is in South Lake County, which is north of Chicago.²⁴ A large part of the population consists of the members of military and their relatives.²⁵ The total population of Great Lakes is 13,987.²⁶

Waukegan is located on the north side of Chicago in Lake County. The historical city is an important industrial center and the tenth most populated city in Illinois.²⁷ Demographics have changed overtime with immigrants from England, Germany, Ireland, and Canada giving way to new groups coming from Poland, Slovenia, Lithuania, Sweden, Finland, Croatia, and Armenia. During the WWI, the African American population grew, reaching 17% today.^{28/29} Starting in the 1920s, Puerto Ricans were among the first Hispanics/Latinos to settle in Waukegan. Immigrants from Mexico began settling in the area in the 1930s. They make up the largest group of Hispanics/Latinos in Waukegan today. The Hispanic/Latino population increased significantly in the 1960s and today makes up half of the population of Waukegan. The total population of Waukegan is 120,646.³⁰

Social Vulnerability

Social vulnerability is the possible negative result of stress on communities due to external threats to human health. The Social Vulnerability Index (SVI) aids officials in determining who may need disaster relief.³¹ The SVI score includes socioeconomic status, household composition, disability, minority status, language, housing type, and transportation. The score ranges from zero to one; zero is associated with the lowest community vulnerability, and one with the highest vulnerability.³²

Targeted zip codes in Mundelein and Round Lake have an SVI of 0.3258, which would be considered a low score based on the SVI Index's scoring system. That means the community is more likely to be financially and socially stable after a disaster. Target zip codes in Great Lakes and Waukegan SVI are 0.5766. This SVI score would be considered above average based on the SVI Index's scoring system. A high score indicates that this community is more likely to be affected negatively after a disaster. Great Lakes and Waukegan are more at risk post the COVID-19 crisis than Mundelein and Round Lake.

²³<https://cnrma.cnrc.navy.mil/Installations/NAVSTA-Great-Lakes/>

²⁴<https://www.mapquest.com/us/illinois/great-lakes-il-283586211>

²⁵<https://www.bootcamp.navy.mil/>

²⁶IDPH EVA database

²⁷<https://data.census.gov/profile?g=0400000US17>

²⁸<https://www.waukeganparks.org/birthday/>

²⁹<http://www.encyclopedia.chicagohistory.org/pages/1328.html>

³⁰IDPH EVA database

³¹<https://www.atsdr.cdc.gov/placeandhealth/svi/index.html>

³²https://www.atsdr.cdc.gov/placeandhealth/svi/fact_sheet/fact_sheet.html



RESULTS SUMMARY

Results are derived from an analysis of the data collected and are organized by key findings in the categories and subcategories of:

RATES

Testing and Transmission of COVID-19, Targets, Vaccination Rates, Boosters

ACCESS

Access to Personal Protective Equipment, Access to Information

THOUGHTS, FEELINGS, AND PERCEPTIONS

COVID-19 Impact, Feelings about COVID-19 Vaccinations, Feelings about COVID-19 Vaccination Requirements, Factors Leading to Decisions about Being Vaccinated/Unvaccinated, Vaccinated/Unvaccinated Community Member Divide

OTHER TOP HEALTH CONDITIONS

In total, 88 data points were collected and analyzed. This Summary of Findings does not include the totality of findings; however, it presents critical results imperative to the objectives of the assessment. Each finding will consist of key points and a brief narrative; data sets and graphs are also presented periodically. Quotes from participants are included in each area. Additional detail about interview data can be found in Appendix C. Recommendations can be found in the recommendation section.

RATES

Testing and Transmission

Rates by Zip Code, Age, Ethnicity ([See Appendix A](#))

- Based on a seven-day rolling window, average test positivity rates show Round Lake highest at 11.1%, followed by Mundelein at 10.7%, Waukegan 10%, and Great Lakes 3.3%³³
- Data about community transmission rates are limited.³⁴ Available information can be found in appendix A.

“There are not enough studies on how boosters will impact my baby”

– Pregnant Waukegan
Community Member

Vaccination Rates

- A longitudinal analysis using IDPH Equitable Vaccine Administration Database shows vaccination rates in Mundelein, Waukegan, and Round Lake have steadily increased over time. Currently, fully vaccinated rates are 75.2% in Mundelein, 66.3% in Round Lake, and 64% in Waukegan.
- Great Lakes’ fully vaccinated rate is critically low at 6.6% (It is believed that this rate is inaccurate as it is a majority Navy base).

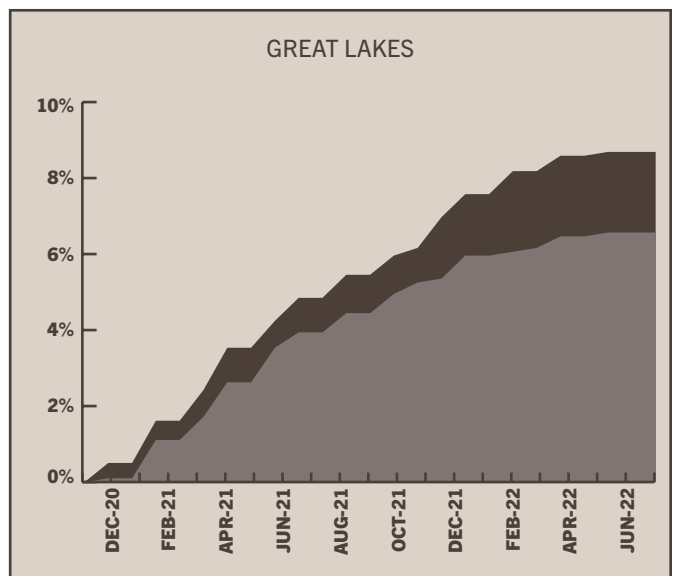
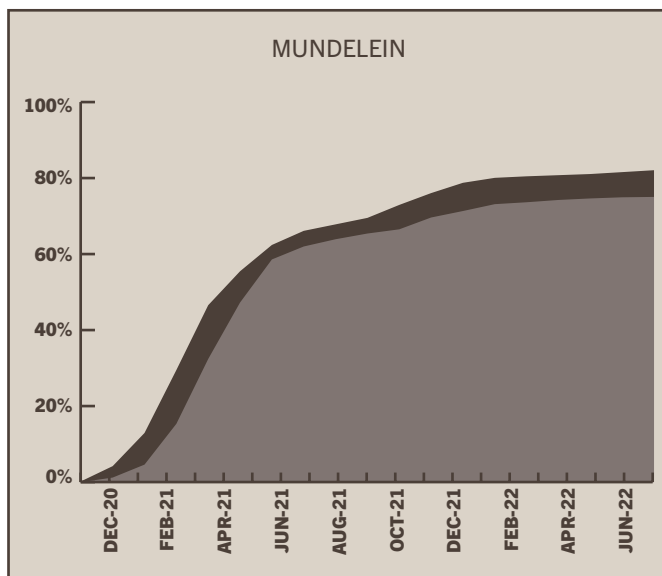
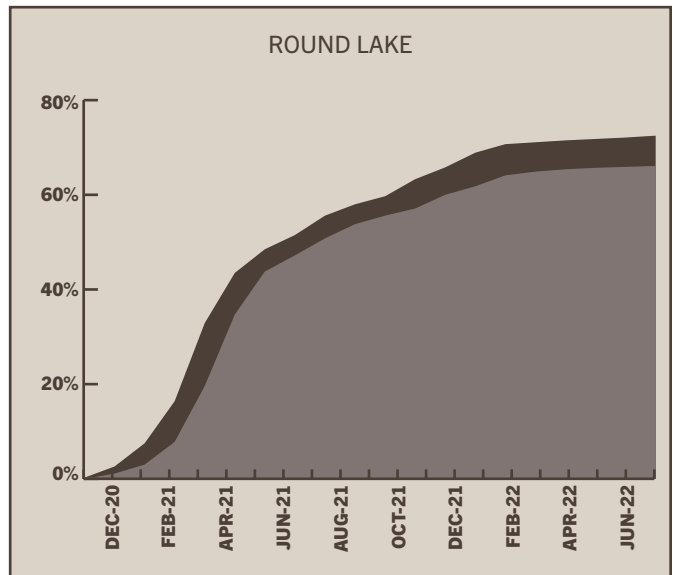
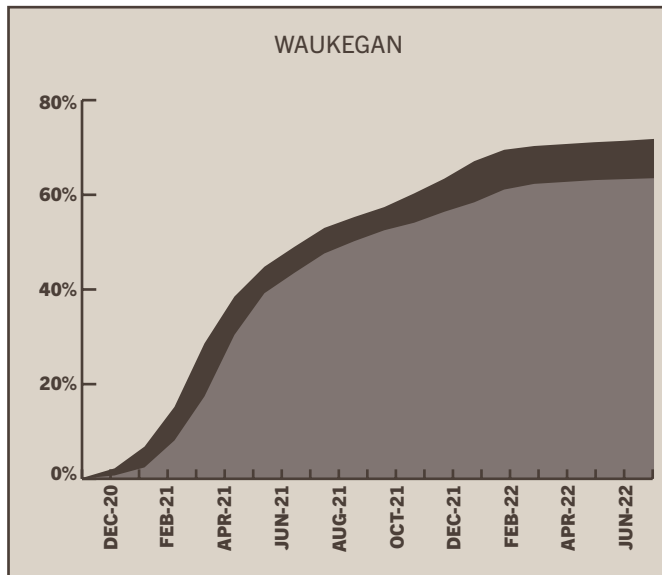
³³<https://covid19response-lakecountyiil.hub.arcgis.com/>

³⁴<https://covid19response-lakecountyiil.hub.arcgis.com/>

COVID-19 Vaccination Rates Over Time

■ 1 DOSE VACCINATED

■ FULLY VACCINATED



Targets

- When compared to other regional municipalities, combined vaccination rates between Mundelein, Waukegan, Great Lakes, and Round Lake fall behind by 18,000 community members.

Boosters

- A significant amount of fully-vaccinated community members reported receiving their boosters.
- One partially vaccinated participant stated that they did not receive their boosters because the booster was unavailable.
- A phenomenon was found where it was noted that in at least four instances, individuals who had boosters or the COVID-19 vaccination were hesitant about getting additional boosters due to fear or concern that the ongoing series would have a negative impact on their bodies.
- According to IDPH's data, 44.1% of the targeted communities in Region 9 North have boosters; this rate is significantly lower than participants' self-reports.

ACCESS

Access to Personal Protective Equipment

- Approximately 33% of the poll respondents in the North Region do not have access to COVID-19 at-home tests.
- Approximately 19% of the poll respondents in the North Region do not have access to masks.
- Approximately 15% of the poll respondents in the North do not have access to hand sanitizer.
- All but one poll respondent without access to at-home tests, masks, and hand sanitizer were Waukegan Community Members.

“If something new comes up, yes, I would like to”

– Round Lake Community
Member on Receiving
Additional Information

Access to Information

- 23% of poll respondents in the North are unaware of the IDPH or Center for Disease Control’s (CDC) Facebook, Instagram, or Tik Tok pages.
- 72% of polled community members indicated they would visit IDPH’s or the CDC’s Facebook, Instagram, or Tik Tok pages.
- Doctors were overwhelmingly the top source for trusted information and boosters for community members.
- Responses related to interest in receiving additional information were mixed.
 - When participants answered no, they often reported being overwhelmed with information, “No, I’ve had enough of this.”
- Community members stated that they receive COVID-19 vaccination information and boosters from doctors, news, and pharmacies.

Region 9 Top Trust and Receipt of Information



THOUGHTS, FEELINGS, AND PERCEPTIONS

COVID-19 Impact

- The most common impact themes that came up in interview were work-related, including a decrease in wages, loss of jobs, and other financial impacts.
- Community members reported that the COVID pandemic impacted their physical and mental health due to a lack of activity, fear, and isolation.
 - A community member stated that COVID-19 and its impact has been “traumatizing.”
 - A participant noted that COVID-19 left her and her family in fear due to her husband’s three comorbid health conditions.
 - A compelling statement was made by a participant when they disclosed that they were managing substance use and attending anonymous meetings until the pandemic. He reported relapsing due to a lack of meetings.
- Death/Illness showed up in participant responses six times.
- Negative impact on social well-being was a common theme.
 - Adults reported a negative impact on their social well-being a total of four times.
 - Children’s social well-being was reported as affected by not being able to attend in-person school.
- During the quarantine, increased family time was stated as a positive impact.
- At least three participants indicated that COVID-19 did not impact their lives.

“We’ve been restricted; we had to ration food due to low income”
– North Region
Community Member



Feelings about COVID-19 Vaccinations

- Overall, community members supported COVID-19 vaccinations. However, there were unfavorable responses to the vaccination.
 - Positive Perception
 - Made participants feel safe
 - “Greater good”
 - Protect their families
 - Would not contract COVID-19
 - Negative Perceptions
 - “Unconstitutional”
 - A community member expressed not being happy with being forced to get vaccinated for their employer and stated they “avoided it as much as possible.”
 - At least three participants stated that they experienced side effects and became ill after the Covid-19 vaccine.

Feelings about COVID-19 Vaccination Requirements

- Some participants supported COVID-19 vaccination requirements while others did not.
 - Negative Perceptions
 - Should be a personal decision
 - Positive Perceptions
 - Safety of the overall community

Factors Leading to Decisions about Being Vaccinated/Unvaccinated

- Vaccinated
 - Decisions around being vaccinated were primarily made for participants' safety and to ensure they would not contract COVID-19.
 - Family protection
 - It was required
 - Stopping the risk of spread and the risk of death
- Unvaccinated
 - Ineffective.
 - Healthy enough to fight COVID-19
 - A compelling story was told by an unvaccinated community member who stated they decided not to be vaccinated because her father was vaccinated without his permission while hospitalized.

Vaccinated vs. Unvaccinated Community Member Divide

There was a slight division between vaccinated and unvaccinated participants.

- Both vaccinated and unvaccinated individuals had concern for those who made different choices than they did.
- The concern and messaging from vaccinated individuals were about the vaccination's positive outcomes and how it could positively impact the health of unvaccinated community members by keeping them safe from COVID-19.
- Unvaccinated participants wanted to voice that they see being unvaccinated as safe and that they prefer their decision to be respected.
- A vaccinated community member who respected the decision of unvaccinated community members as a personal choice suggested, "Wear a mask because it is safer than not."

OTHER TOP HEALTH CONDITIONS

- Top three other health conditions are
 - Mental Health Disorders
 - Obesity
 - Diabetes

RECOMMENDATIONS FOR INCREASING VACCINE CONFIDENCE AND UPTAKE

- 1 Focus on educating community members related to the safety of COVID-19 boosters, directly addressing the fear around them
- 2 Develop a virtual community hub space on the YMCA Chicago's website, where community members can easily access information about COVID-19 vaccination and boosters. The space should include interactive information such as videos, quizzes, and links to partner resources (potentially medical professionals, IDPH, and the CDC) and social media accounts. Additionally, add honest conversations from actual community members to the hub.
- 3 Distribute at-home tests in targeted North zip codes, with specific focus on Waukegan.
- 4 Recruit medical professionals to serve as community spokespeople providing reliable and trustworthy information on COVID-19.
- 5 Facilitate and create an open space for ongoing communication between vaccinated and unvaccinated community members.
- 6 Create a campaign with actual community members, sharing why they chose to get vaccinated and appealing to those currently unvaccinated.
- 7 Lessen apprehensiveness in unvaccinated individuals by being supportive of their stances and open to hearing their rationale before offering education.
- 8 Share information about the adverse history of medical research when educating community members about the process of COVID vaccine development. Confront the history that has caused mistrust and discuss how things are being done differently.
- 9 Advocate for free and affordable COVID-19 vaccinations.

- 10 Determine methods to obtain accurate vaccination and testing data from Great Lakes.
- 11 To build off the increasing rates of booster vaccination within the target communities, create interventions that encourage those getting their boosters to bring their friends and family who may not be fully vaccinated with them.
- 12 Incorporate communication methods that reach non-English speaking populations (including Spanish and Slavic) in Region 9 target communities, with a particular focus in Waukegan. Establish relationships with Slavic community leaders.
- 13 Focus vaccination outreach efforts on those with low income and lower educational attainment as they are more likely to be unvaccinated.
- 14 Engage in vaccination outreach at unemployment and cash benefit offices to reach community members who may be more likely to be unvaccinated.
- 15 Develop interventions in the Great Lakes and Waukegan communities to close the largest community vaccination gap.
- 16 Across all target communities, develop interventions that increase vaccination for the white and 18-49 year old populations to close the largest demographic vaccination gaps.
- 17 In Waukegan, prioritize vaccination efforts for the Black population who face an elevated death rate in Lake County and low vaccination rates.
- 18 In Mundelein, prioritize vaccination interventions for the Asian, Hispanic/Latino, and Female populations.
- 19 Increase access to testing in the western part of Mundelein and southern part of Round Lake.

RECOMMENDATIONS FOR ADDRESSING OTHER HEALTH ISSUES

- 20** Address the Mental Health Impact of COVID-19 on community members by developing a COVID-19 mental health impact assessment and offering mental health interventions to affected community members.
- 21** Work with health care partners, funders, and CHEN members to develop interventions related to diabetes and obesity and build capacity for this work.
- 22** Develop interventions that assess and address the impact of COVID-19 on the social-emotional well-being of youth.



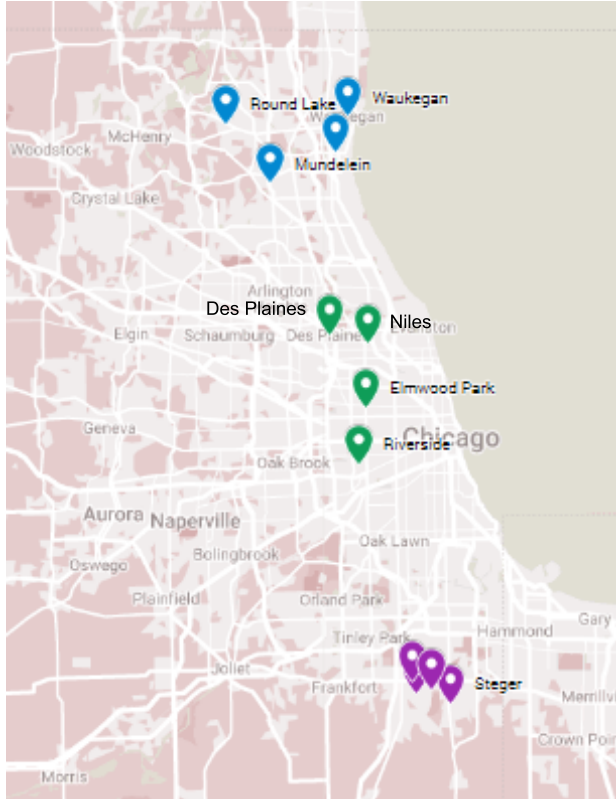


CONCLUSION

Although 23% of poll respondents in the North Region believe the pandemic is over, information from trusted sources such as the CDC and IDPH states differently. The information in this summary is intended to be used to drive immediate action, with the ultimate objective of keeping our communities safe. Although sample size was limited, a rich collection of information was gathered via survey and by meeting with participants face to face. It is our hope that CHEN members will use the data in this report to advise the Y such that the most needed and effective-interventions can be implemented. The aim of these interventions is to increase vaccine confidence and vaccine uptake.

APPENDIX A: COMMUNITY DATA

Target zip codes identified by IDPH in Region 9 and Region 10 fall in the 12 communities shown below.

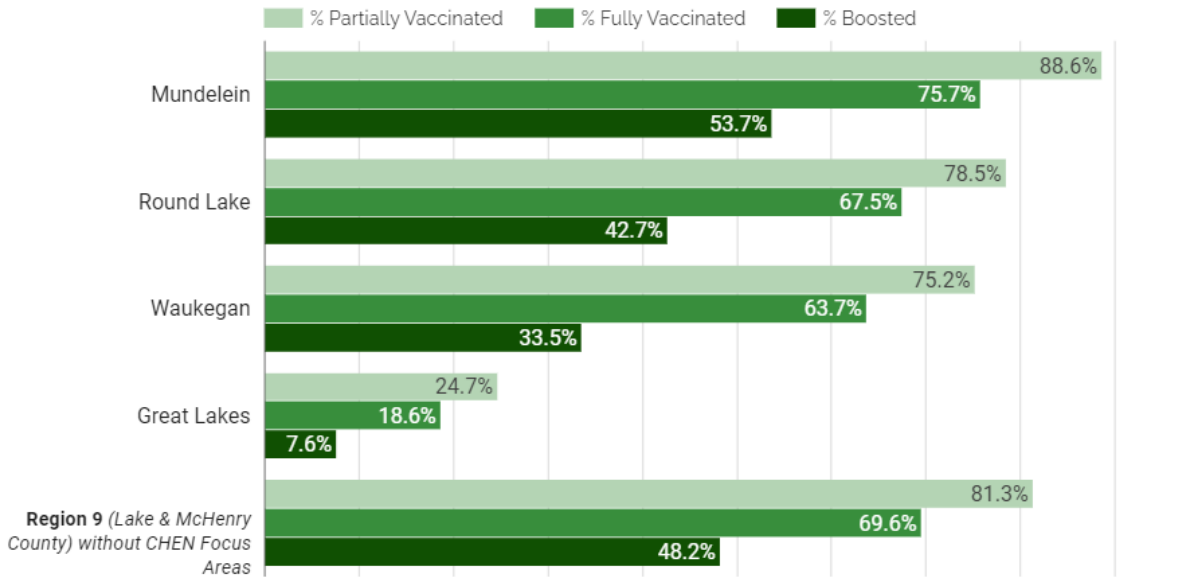


Vaccination rates

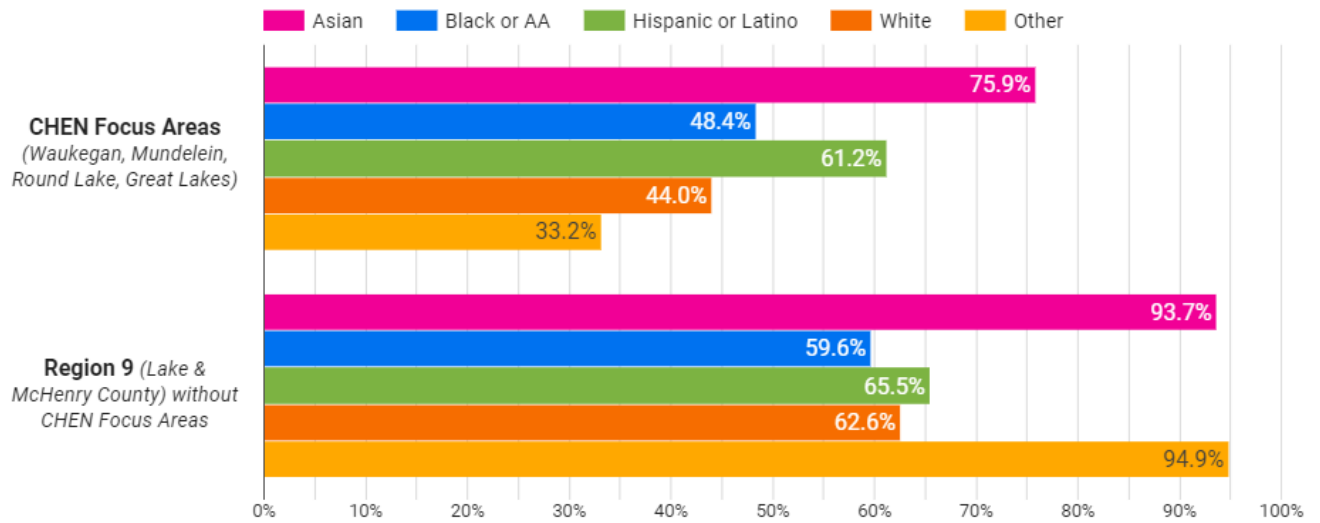
In Region 9, the lowest rates of vaccination are for the communities of Great Lakes at 18.6% fully vaccinated and Waukegan with 63.7% fully vaccinated. Within the Great Lakes community sits a Naval Base, which may impact the accuracy of these values. The highest vaccination rates are for Mundelein, with 75.7% of residents fully vaccinated, which is higher than the region overall.

The race/ethnicity with the lowest vaccination rates is the “Other” population at 33.2%, which accounts for individuals identifying as multiple races and racial identities not listed below. Another group with low vaccination rates is the Black population at 48.4% compared to 59.6% of the Region 9 population without our target sites.

COVID-19 Vaccination Rates



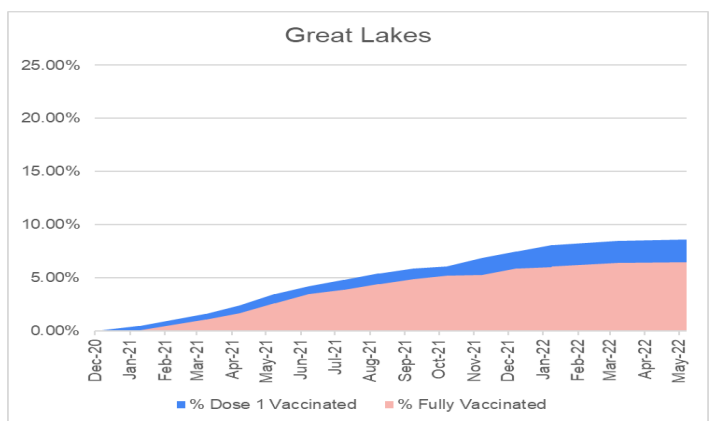
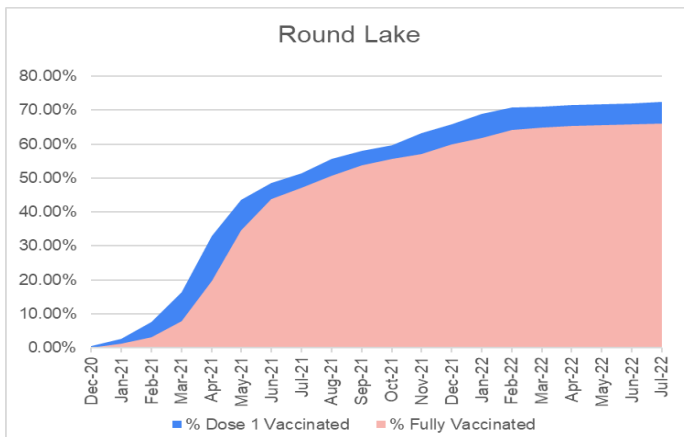
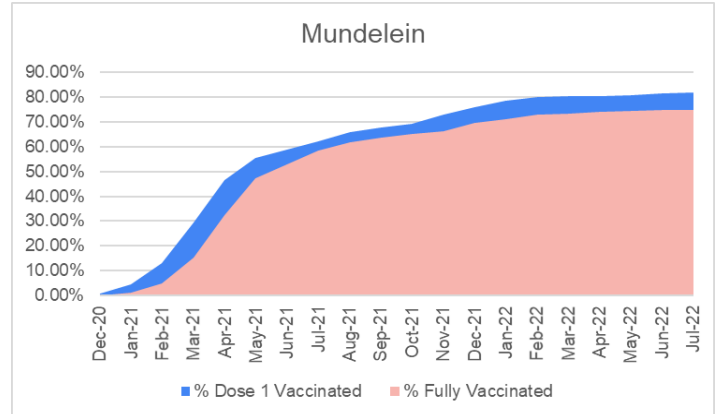
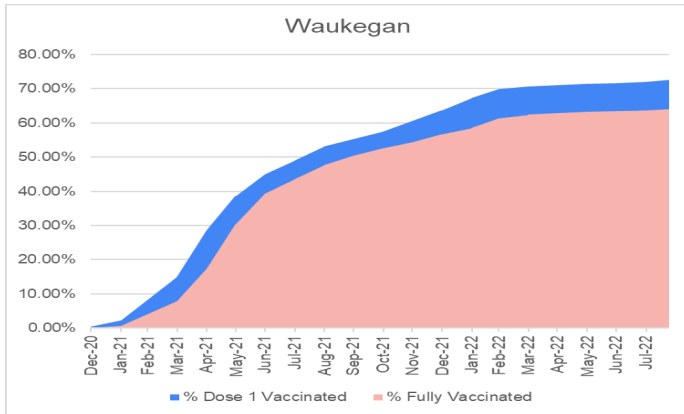
Fully Vaccinated Rate by Race/Ethnicity



Longitudinal Analysis of Vaccination Rates

Rates of full vaccination in the target communities over time can be seen in the graphs below. Across each community, fully vaccinated rates have increased, with noticeable spikes in the onset of vaccine roll-out as well as smaller spikes between November 2021 and January 2022.

Region 9



Changes in vaccination rates across demographic populations for the target communities from October 2022 to January 2022 were also analyzed. Increases and decreases in vaccination rates as provided in the table below are not directly related to any intervention efforts. In fact, some changes may be tied to data clean-up (particularly, decreasing rates). It is important to note the limitations of the analysis when reviewing the findings.

In the Y's target communities within Region 9, the largest increases in vaccination rates came from the Asian population, particularly increasing in boosted

rates. In fact, all racial/ethnic groups with sufficient data to be included in analysis were found to have some of the highest increases in boosted rates. The same trend continued across age groups, with the 65 and older group having the highest rates of increased vaccination in the boosted category. The lowest increases were found in the 18-49 year old, the "Other" (includes multiracial and races not listed here), and the Black/African American populations. The 0-4 population also showed limited increases, but data for this population is limited and should be noted. It is possible that interventions which encourage those getting their boosters to bring their friends and family may be effective.

Changes in Vaccination Rates since October 2022 by Race/Ethnicity

The following table shows January 2023 vaccination rates for each race/ethnicity with a comparison to the rate that was first pulled at the beginning of October 2022. **The changes indicated below are not directly related to the actions/interventions of the YMCA team.** They may be related to a variety of factors including data cleanup/validation from IDPH and increased vaccination response to other factors/motivations.

While these changes can not be correlated to YMCA efforts, it may show signs of where efforts may be working or alternative strategies could be put in place.

	Asian	Black or AA	Hispanic or Latino	White	Other
Fully Vaccinated	75.9% ↑ 0.41%	48.4% ↓ -0.05%	61.2% ↓ -0.97%	44.0% ↓ -0.33%	33.2% ↓ -0.89%
Partially Vaccinated	84.1% ↑ 0.97%	53.9% ↑ 0.50%	67.4% ↑ 0.34%	47.4% ↑ 0.36%	40.8% ↓ -0.86%
Boosted	54.3% ↑ 2.05%	24.4% ↑ 0.98%	28.0% ↑ 0.68%	29.4% ↑ 1.15%	10.5% ↑ 0.22%

Changes in Vaccination Rates since October 2022 by Age

The following table shows January 2023 vaccination rates for each age group with a comparison to the rate that was first pulled at the beginning of October 2022. **The changes indicated below are not directly related to the actions/interventions of the YMCA team.** They may be related to a variety of factors including data cleanup/validation from IDPH and increased vaccination response to other factors/motivations.

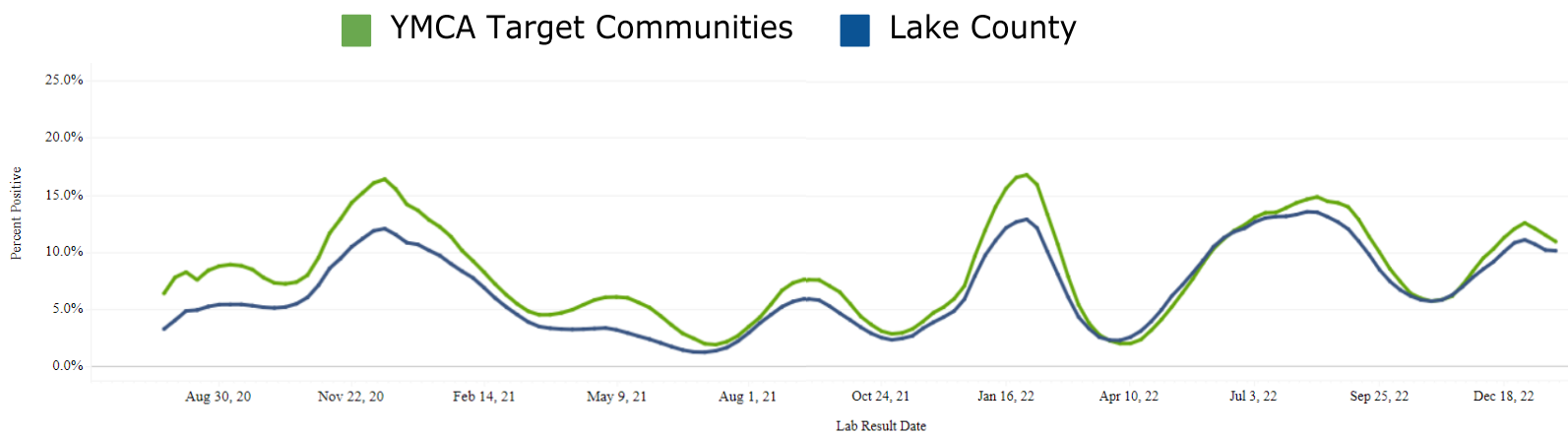
While these changes can not be correlated to YMCA efforts, it may show signs of where efforts may be working or alternative strategies could be put in place.

	0-4	5-11	12-17	18-49	50-64	65+
Fully Vaccinated	1.6% ↑ 1.17%	26.7% ↑ 0.03%	51.3% ↓ -0.14%	46.8% ↓ -0.10%	67.6% ↓ -0.13%	83.8% ↓ -0.21%
Partially Vaccinated	6.7% ↑ 1.02%	30.0% ↑ 0.06%	55.5% ↓ -0.18%	52.2% ↓ -0.03%	73.3% ↑ 0.12%	91.4% ↑ 0.41%
Boosted	0.0% 0.00%	4.2% ↑ 0.47%	17.8% ↑ 0.48%	21.8% ↑ 0.46%	46.1% ↑ 1.21%	71.0% ↑ 3.31%

Transmission and Testing Data

COVID-19 test positivity rate for the Y's target communities compared to Lake County are shown in Figure 15. While Region 9 includes both Lake and McHenry counties, all four target zip codes fall within Lake County. Apart from a brief period in Spring 2022, the 7-day rolling average test positivity rate for the Y's target communities were above the Lake County average throughout the pandemic. The data presented below indicates that the communities with lower than average vaccination rates had higher than average COVID-19 positivity rates throughout the course of the pandemic.

Figure 15: COVID-19 Test Positivity Rate (7-day Rolling Average)



Data Source: Illinois National Electronic Disease Surveillance System (I-NEDDS), Retrieved from Lake County Department of Public Health (<https://covid19response-lakecountyil.hub.arcgis.com/>).

*Data presented from March 12, 2020 - January 23, 2023.

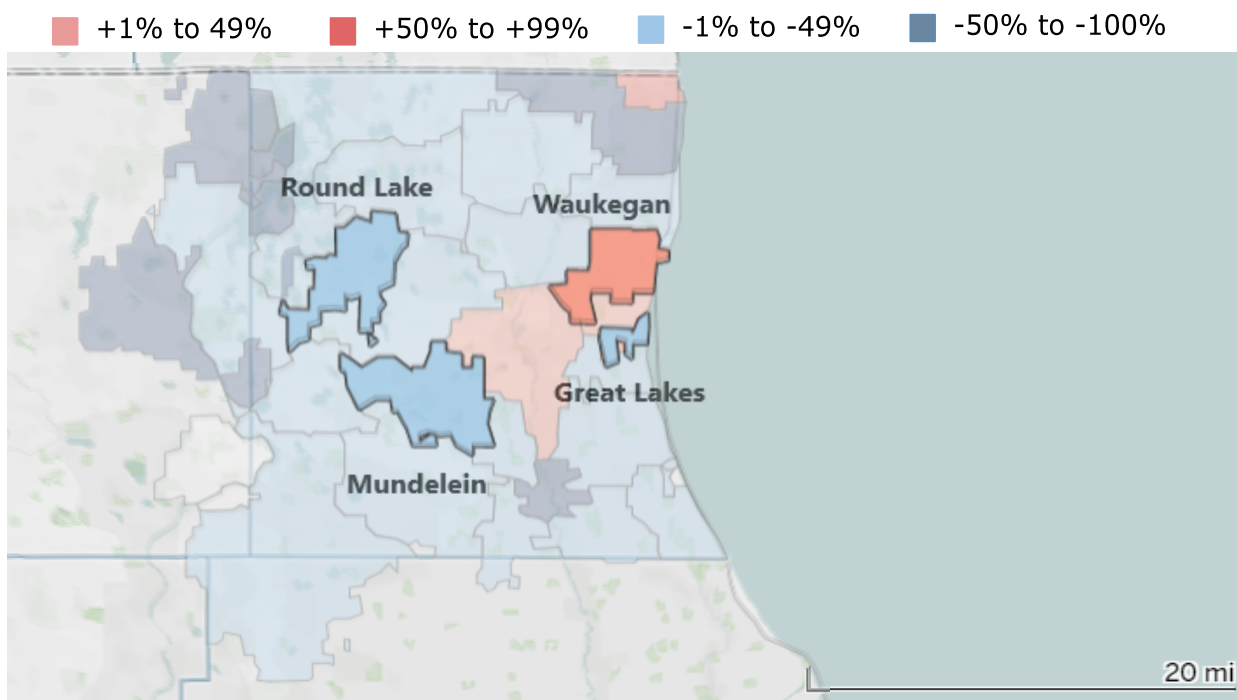
The Lake County Department of Public Health's Coronavirus DataHub also houses information on the demographic breakdown of cases and deaths in the county.⁷ The COVID-19 age-adjusted prevalence rate per 100,000 people for the Hispanic/Latino population is double that of white residents. For the Black population, the age-adjusted prevalence is over 1.5 times that of white residents. Moreover, the death rate per 100,000 residents in Lake County is highest for Black residents at 228. For white residents, this rate is 218, and for Hispanic/Latino residents, this rate is 157. While not specific to the Y's target communities, these disproportionalities across the county have equity implications and may be a place of focus for intervention efforts.

The map below shows the percent change in COVID-19 prevalence per 100,000 residents throughout Lake County. The Y's target communities are bolded and

⁷ Additional detail for Lake County can be found here: <https://covid19response-lakecountyil.hub.arcgis.com/>

labeled to show their specific percent change between the last 14 days compared to the 14 days before that (time period 12/26/22-1/23/23). All target communities but Waukegan have had decreases in prevalence during that time period. Waukegan experienced an increase of 12%, while Round Lake decreased by 30%, Mundelein decreased 40%, and Great Lakes decreased by 27%.

Map 1: COVID-19 Percent Change in Prevalence per 100,000 residents (14-day Rolling Average)



Data Source: Illinois National Electronic Disease Surveillance System (I-NEDDS), Retrieved from Lake County Department of Public Health (<https://covid19response-lakecountyil.hub.arcgis.com/>).

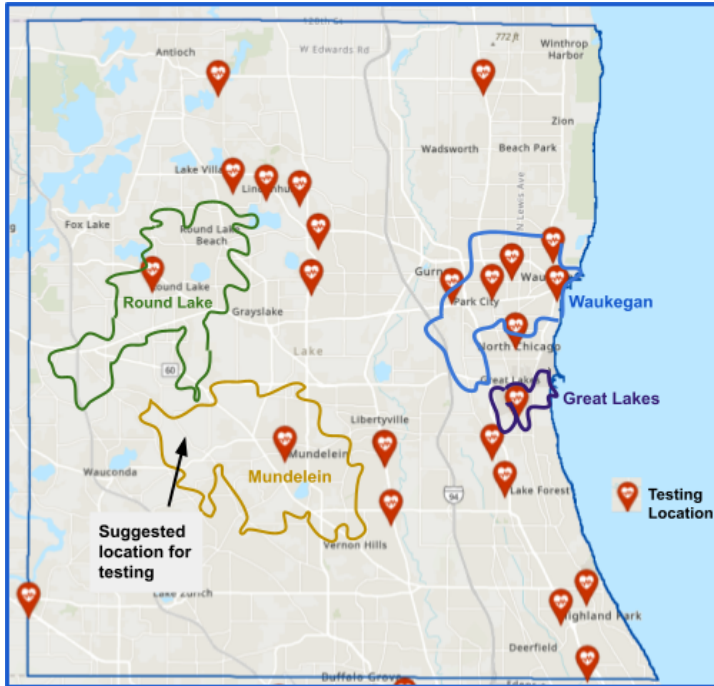
*Data presented for the period from December 26th - January 23, 2023.

** Prevalence per 100,000 residents allows for comparison across zipcodes as it accounts for population size. Percent change compares the most recent two weeks to the two weeks prior to that. Negative percent change indicates fewer cases in the most recent set of two weeks, and positive percent change indicates more cases.

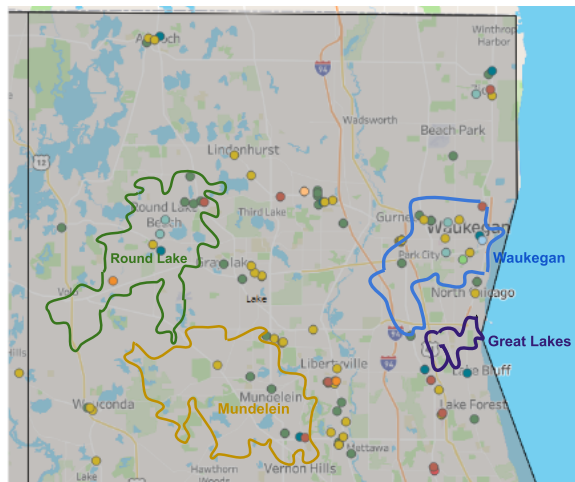
Map 2 displays the current COVID-19 testing locations in Lake County as provided by the Lake County Health Department. The Y's target communities are outlined and labeled. Apart from Waukegan, which has several testing locations within its zip code boundary, the Y's target sites have limited access to testing locations within the boundaries of their zip codes. While Great Lakes and Round Lake appear to have increased access just outside their boundaries, Mundelein residents may have to travel further to reach testing locations as there appear to be only three sites nearby. A suggestion for a location to add testing resources is included on Map 2.

Map 3 shows the locations of COVID-19 vaccine enrolled providers as presented by the IDPH Equitable Vaccine Administration (EVA) Dashboard. There are similar gaps in coverage in the areas south of Round Lake and in the western half of Mundelein which may cause issues in accessibility for residents.

Map 2: COVID-19 Testing Locations in Lake County



Map 3: COVID-19 Vaccine Enrolled Providers in Lake County



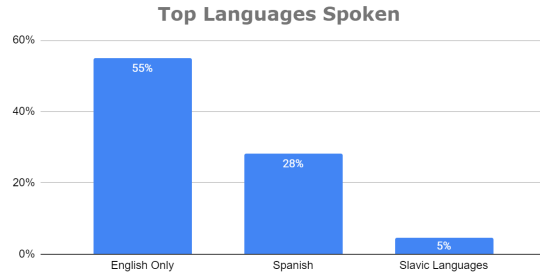
Race, Ethnicity, & Language - Region 9

Mundelein

Race and Ethnicity, 2016-2020

	Mundelein	
	Count	Percent
White (Non-Hispanic)	16,457	52.1
Hispanic or Latino (of Any Race)	10,415	33.0
Black (Non-Hispanic)	473	1.5
Asian (Non-Hispanic)	3,388	10.7
Other/Multiple Races (Non-Hispanic)	841	2.7

Source: 2016-2020 American Community Survey five-year estimates.

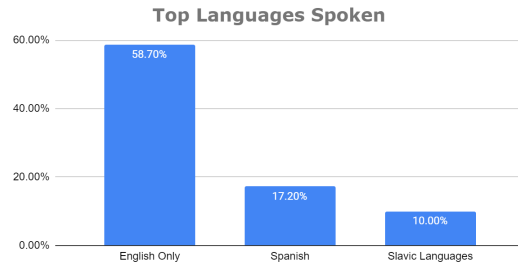


Round Lake

Race and Ethnicity, 2016-2020

	Round Lake	
	Count	Percent
White (Non-Hispanic)	9,805	53.8
Hispanic or Latino (of Any Race)	4,103	22.5
Black (Non-Hispanic)	1,506	8.3
Asian (Non-Hispanic)	2,152	11.8
Other/Multiple Races (Non-Hispanic)	669	3.7

Source: 2016-2020 American Community Survey five-year estimates.

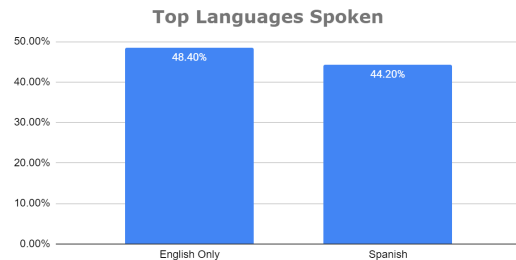


Waukegan

Race and Ethnicity, 2016-2020

	Waukegan	
	Count	Percent
White (Non-Hispanic)	16,707	19.2
Hispanic or Latino (of Any Race)	45,239	51.9
Black (Non-Hispanic)	17,106	19.6
Asian (Non-Hispanic)	5,256	6.0
Other/Multiple Races (Non-Hispanic)	2,849	3.3

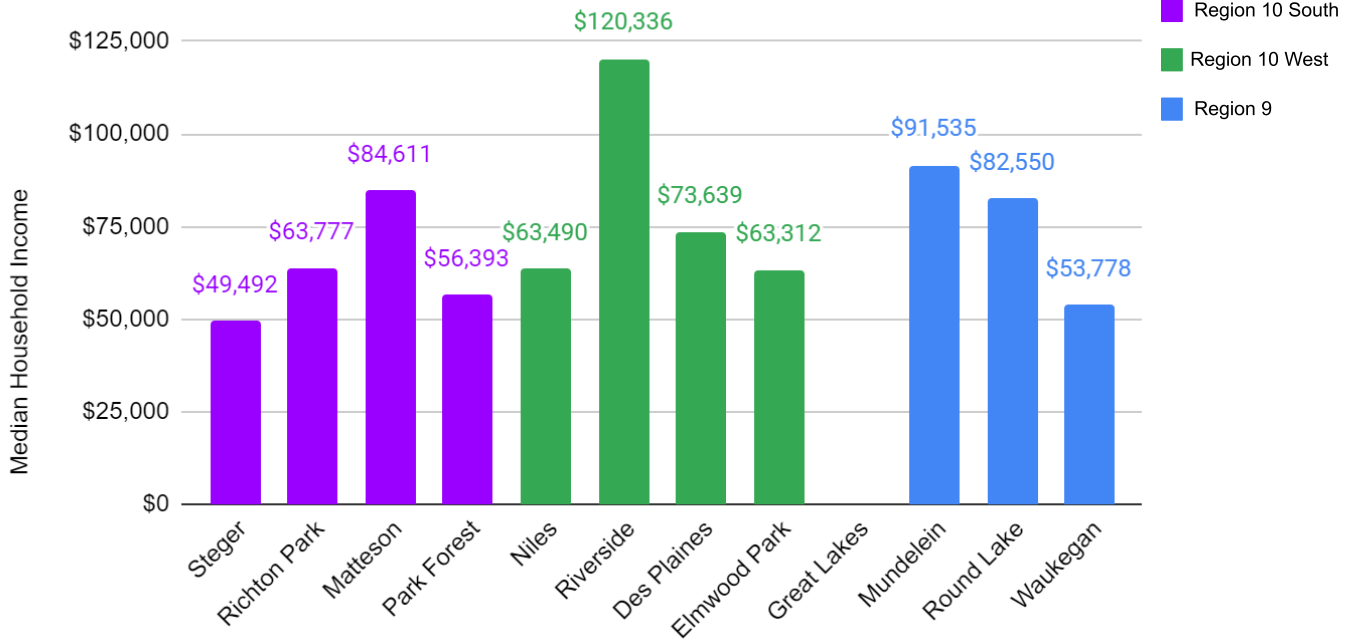
Source: 2016-2020 American Community Survey five-year estimates.



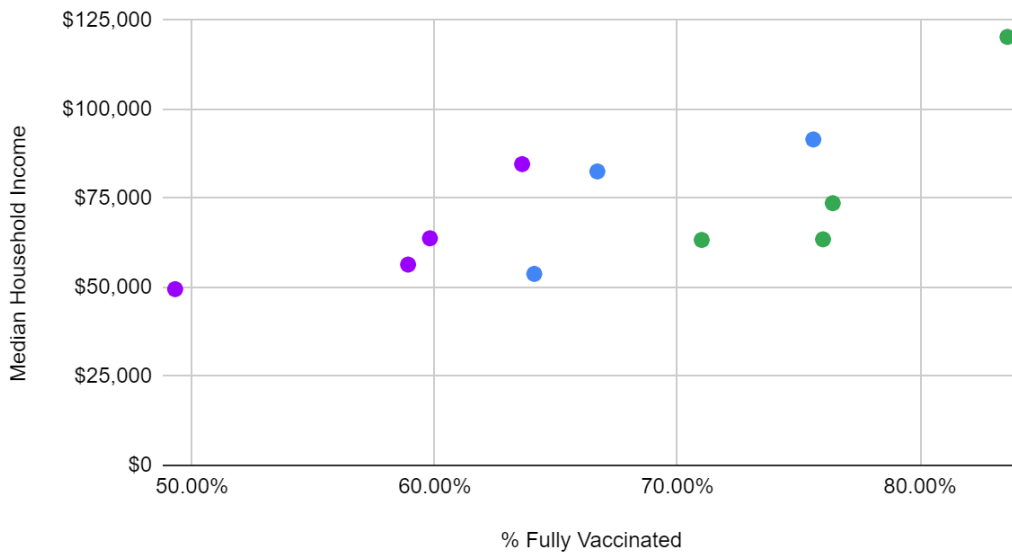
Socio-Economic Measures

Socioeconomic data for all the Y's target communities are presented below. Generally, vaccination rates are higher for target communities with higher median household income and are lower for communities with lower median household income.

Median Household Income

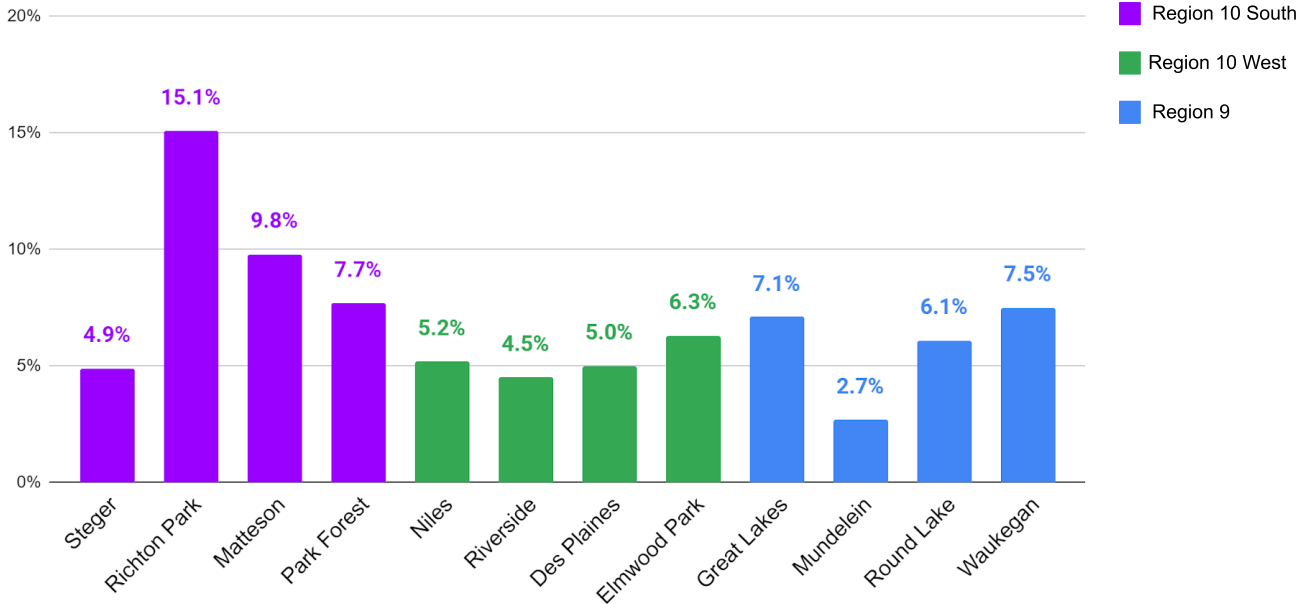


Median Household Income vs. Vaccination Rate



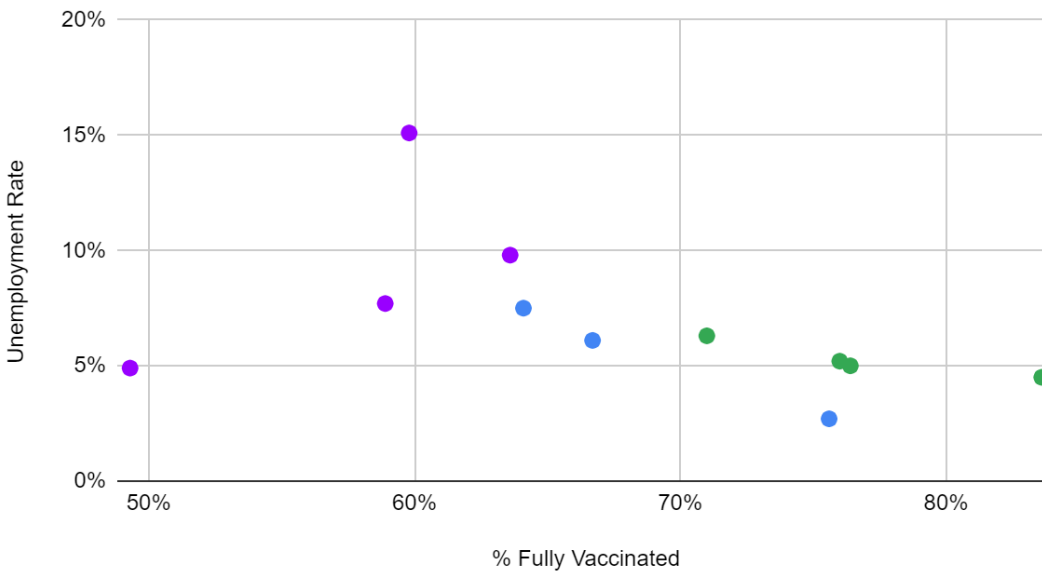
Vaccination rates were found to be generally lower for target communities with higher unemployment rates and higher for communities with lower unemployment rates.

Unemployment Rate



Data source: U.S. Census Bureau, American Community Survey 5-year estimates, 2017-2021

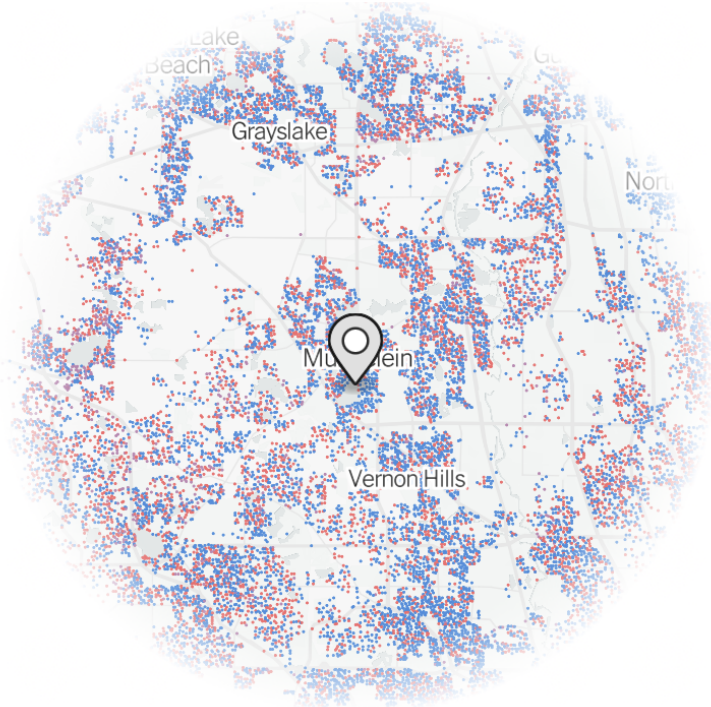
Unemployment Rate vs. Vaccination Rate



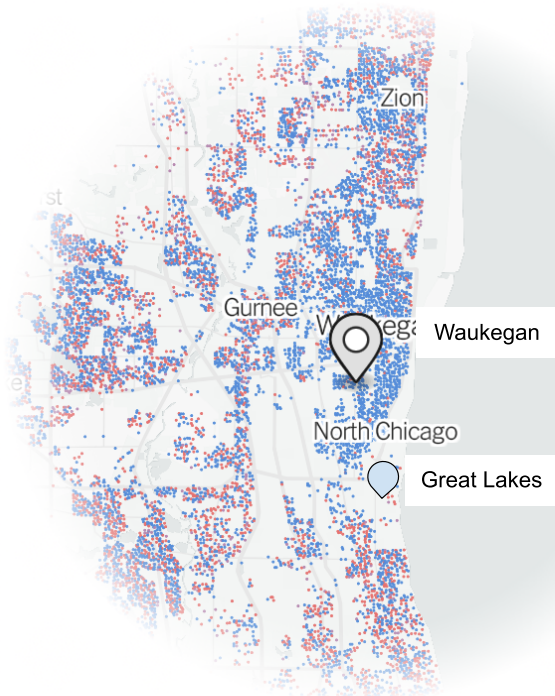
Data source: U.S. Census Bureau, American Community Survey 5-year estimates, 2017-2021 and Illinois Department of Public Health Equitable Vaccine Administration Dashboard

Political Affiliation of Closest 1000 residents to Target Communities

Mundelein: 21% Republican, 77% Democrat, 2% independent

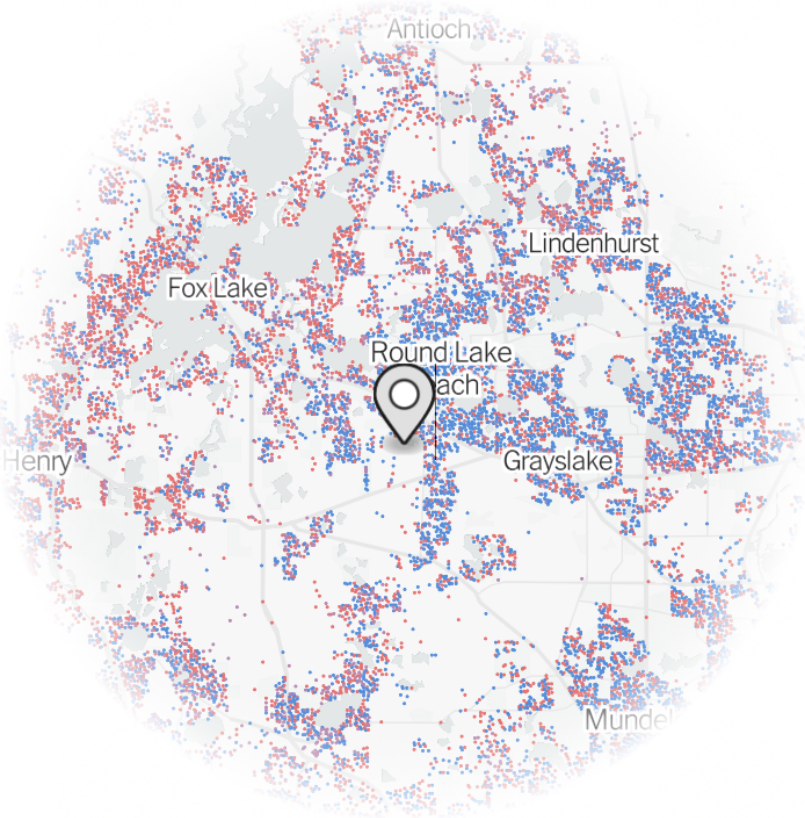


Waukegan/Great Lakes: 5% Republican, 95% Democrat



Source: "Do you live in a political bubble?" The New York Times, May 3, 2021, <https://www.nytimes.com/interactive/2021/04/30/opinion/politics/bubble-politics.html>

Round Lake: 20% Republican, 79% Democrat, 1% Independent



Source: "Do you live in a political bubble?" The New York Times, May 3, 2021, <https://www.nytimes.com/interactive/2021/04/30/opinion/politics/bubble-politics.html>

APPENDIX B: GAP ANALYSIS

Background & Methodology

As an initial phase of the assessment of the 12 communities, a gap analysis was conducted. The goal of the gap analysis was to identify populations within the selected communities that had below average rates of vaccination when compared to the overall region. The results of this analysis may serve as a launching point for strategy activation and intervention planning.

Using IDPH Equitable Vaccine Administrative (EVA) Dashboard, vaccination data was pulled for the select communities by using a zip code-level crosswalk with census tracts. The focus of the gaps analysis is for fully vaccinated individuals, or those who have received both doses of a two-dose series (Pfizer or Moderna), or one dose of a single-dose vaccine (Johnson & Johnson). Vaccination data broken down by race/ethnicity, age, and gender was used in this analysis. In order to determine whether a population was above, at, or below average with the rest of the region, control values for the vaccination rates were also pulled. These controls represent the overall region without the Y's target communities.

The "gap" or the number of people needed to be vaccinated in order to reach the regional averages was calculated for each population within the select communities. The gap was calculated by first taking the difference between the vaccination rates of the select communities and the overall region. The resulting rate was multiplied by the total population of the select community to determine how many people would need to be vaccinated to reach the average rate of the entire region.

Results

In Region 9, the populations with the largest discrepancy in fully vaccinated rates between the Y's target communities and the overall region were for white individuals and those between the ages of 18-49 (Figure 8a). The number of people needed to be vaccinated in those categories to meet the regional level are 42,728 and 30,365, respectively. While people aged 18-49 have lower than average vaccination rates across the country, the disparity for the white population in the Y's target communities poses a unique challenge as white adults have been shown to have above average rates of vaccination at the national level.⁸

⁸ The Kaiser Family Foundation COVID-19 Vaccine Monitor Poll was a nationally representative sampling poll conducted by KFF in July 2022. More information can be found by viewing the methodology here: www.kff.org/report-section/kff-covid-19-vaccine-monitor-july-2022-methodology/

Across the communities, the overall full vaccination rate was compared to the region rate. Of the Region 9 communities in which the Y worked, Waukegan and Great Lakes have the highest discrepancy and number of people needed to vaccinate to reach the regional rate at 7,129 and 7,124, respectively (Figure 9b). Round Lake has a smaller discrepancy of 2,279 individuals, and Mundelein was found to have above regional levels of fully vaccinated individuals. However, community-level demographic gaps analysis found several populations within each community where disparities exist.

Figure 9a: Region 9 Gap Analysis by demographics

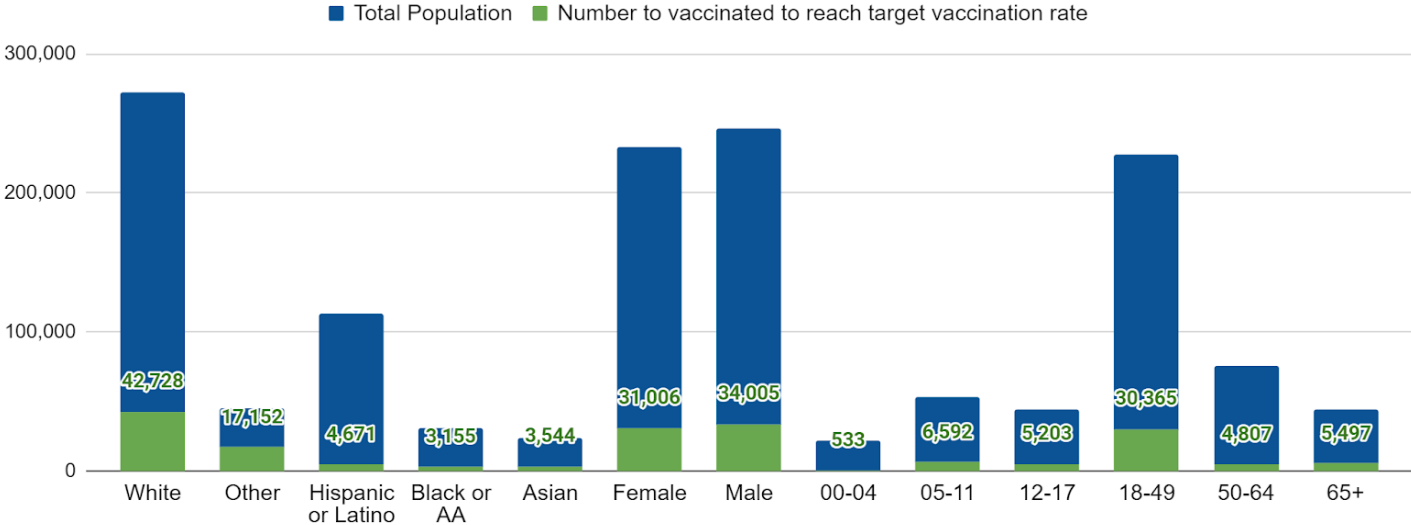
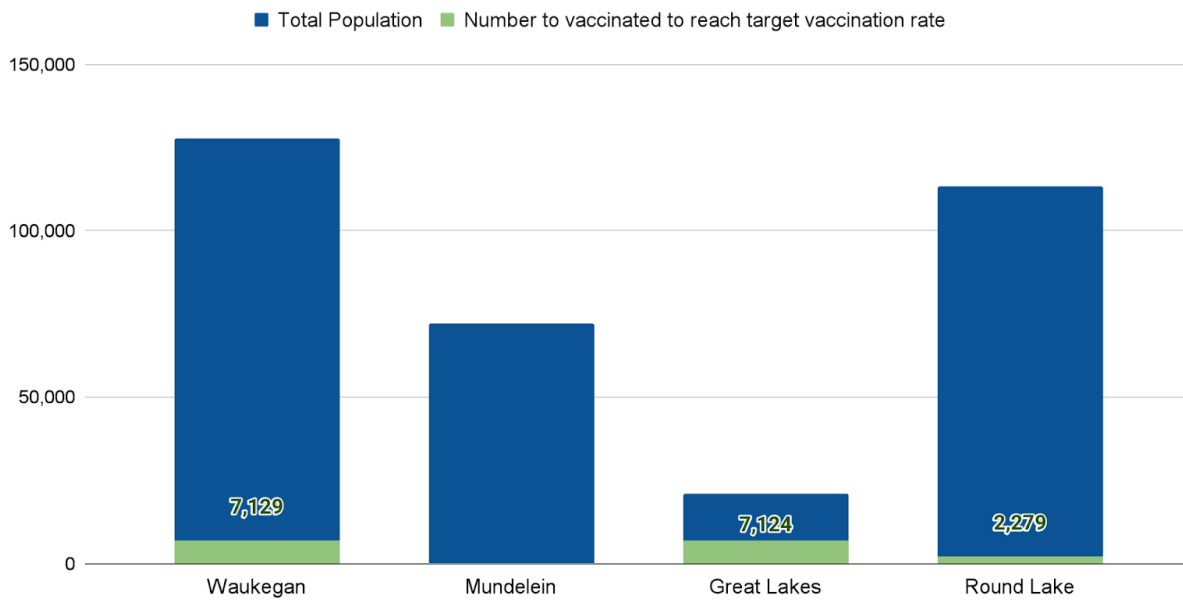
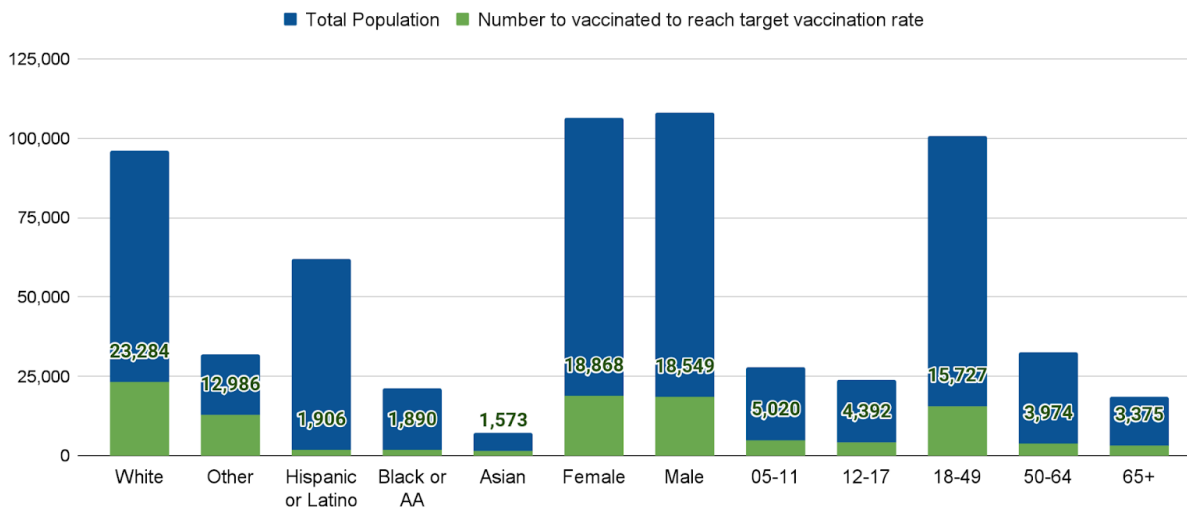


Figure 9b: Region 9 Gap Analysis by Community



At the community-level, there is some variation in the populations with the largest gaps. In Waukegan, the overall trend matches that of the combined community gaps analysis, with white and 18-49 year olds accounting for the largest gaps (Figure 9a).

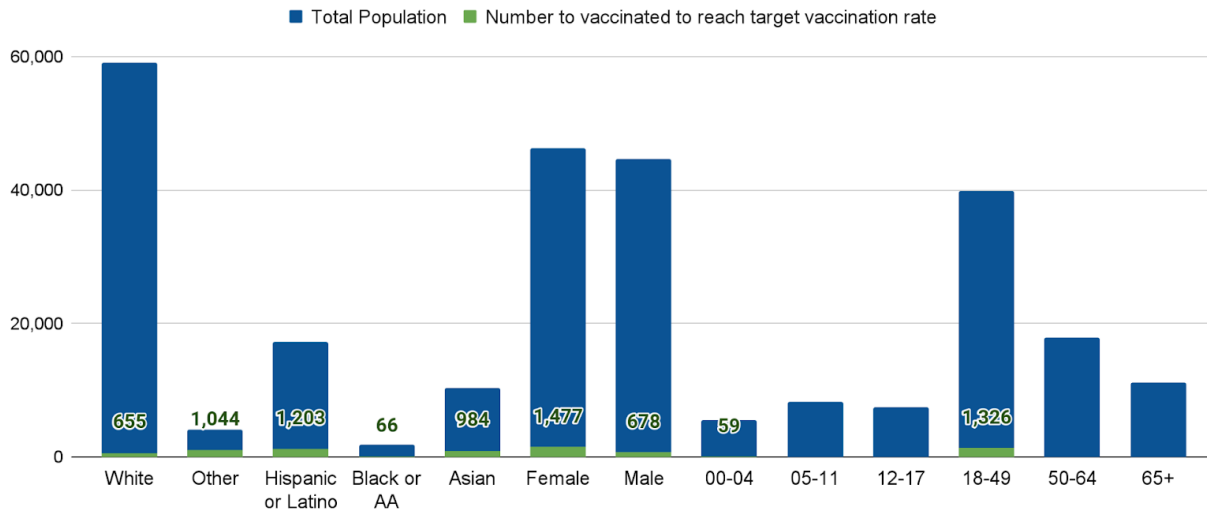
Figure 10a: Community-level Gap Analysis - Waukegan



In Mundelein, there are several populations where the Mundelein vaccination rate is higher than that of the regional average (Figure 9b). However, most populations show a lower rate. The populations with the largest gaps are the Hispanic/Latino group and 18-49 year old group, needing 1,203 and 1,326 people to be vaccinated

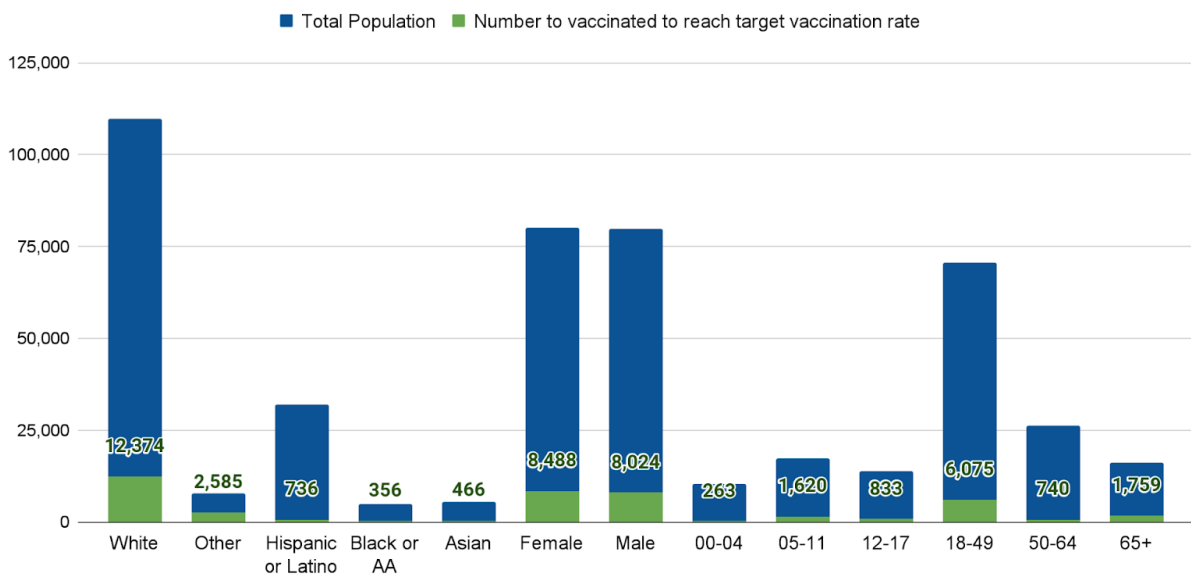
to match the average rate, respectively. Notably, the gap for the Asian population is also high at almost 1,000. Additionally, the gap for women in Mundelein is over double that of men.

Figure 10b: Community-level Gap Analysis - Mundelein



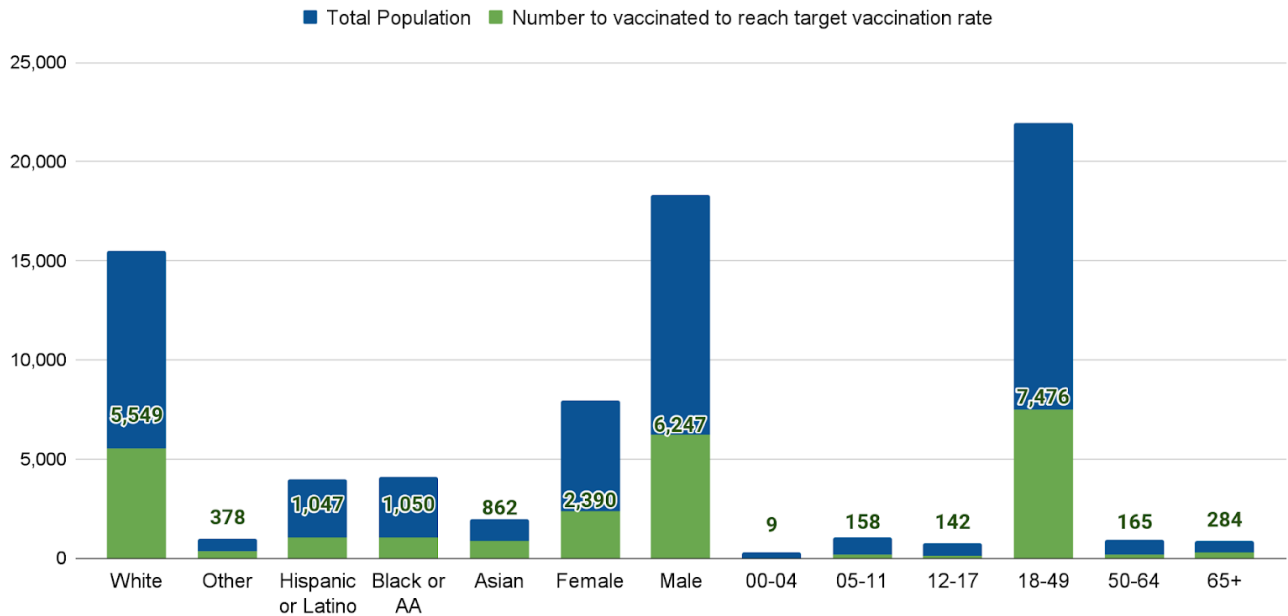
The gap analysis for Round Lake showed similar patterns as the other communities, with white and 18-49 year olds having the largest gap from the regional rate (Figure 9c).

Figure 10c: Community-level Gap Analysis - Round Lake



In Great Lakes, white and 18-49 year olds also showed the largest gaps from the regional rate (Figure 9d). Also notable is that men in Great Lakes have a gap that is almost three times that of women, though the population of men is also three times the size in the Great Lakes community.

Figure 10d: Community-level Gap Analysis - Great Lakes



Discussion

Region 9

The findings of the gaps analysis for Region 9 indicate that the largest disparity in vaccination coverage in the Y's target communities are for the white and 18-49 year old populations. While there are other population disparities across the communities, strategizing around how to increase vaccination uptake for white and 18-49 year-old community members may be an opportunity to maximize impact in closing of vaccination gaps.

At the community-level, Waukegan and Great Lakes may be areas to focus efforts, considering they showed the largest vaccination disparities. It is important to note that data limitations in the Great Lakes community may underestimate the amount of people vaccinated in this community. This does not indicate that the other communities should not engage in interventions,

however. Each of the communities had specific populations that showed vaccination gaps.

Within the communities, there were some outliers that indicate a community-specific approach may be needed. In Mundelein, while the largest gaps were for the white and 18-49 year old populations, there were also notably high gaps for the Hispanic/Latino, Asian, and female populations as well. Further research is needed to uncover motivations and reasoning behind the disparate rates, particularly as it relates to cultural differences and motivations related to fertility in women. It may be beneficial to initiate strategies in this community that target these additional populations to expand the reach of intervention efforts.

Area	Target population(s)	Geographic focus
Region 9 Overall	White and 18-49 year olds	Waukegan and Great Lakes
Mundelein	Asians, Hispanics/ Latinos, and women	

APPENDIX C : INTERVIEW THEMES

A thematic analysis found significant information reported through questions 1, 2, 3, 6, 7a, 7b, 8, and 9 for the North.

Categories	How has COVID-19 impacted your life?	How do you feel about COVID-19 vaccinations?	How do you feel about requirements to get vaccinated?	[IF VACCINATED] What has stopped or slowed you down from getting your booster(s)?	[IF VACCINATED] What do you wish unvaccinated people would understand?	[IF UNVACCINATED] What do you wish vaccinated people would understand?	What factors lead to your decision about being vaccinated/unvaccinated?	Are you interested in receiving information about the COVID-19 vaccination?	Response Count
Child Social Well Being Affected/Children/Unable to Attend School in Person	4								4
Death/Illness	4								6
Work/Financial Impact/Loss of Job	7								7
No Affect	3								3
Adult Social Well Being Effectuated	4								4
Had Reactions/sick from Covid-19 Vaccine		3							3
Negative Outlook on Covid-19 Vaccination		4							4
Personal Choice			4						4
Booster Hesitancy/Fear/Not Enough Research				4					4
Too Busy				2					2
Physical Health Impact					3				3
Positive Outcome of Vaccination					3				3
Understand Safety						5			5
Respect Their Decision						3			3
Safety-Risk of Life/Risk of Spread							8		8
Required							5		5
Interested in Receiving More Information								15	15
No Interest in Additional Information								13	13