

# LINKING INTENT AND BEHAVIOR:

## Shifts in COVID-19 Vaccine Acceptance in Detroit Over Time

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# The Disparate Impact of COVID-19 in Detroit

Black Detroiters' are **1.5x** as likely to contract and **1.6x** as likely to die from COVID as White residents

Latino Detroiters are **1.3x** as likely to contract COVID as Whites

Black residents are **2x** as likely to know someone who had COVID and **4x** as likely to know someone who died from COVID as Whites

(DMACS Wave 9, May 28 - June 11)

## Detroit COVID-19 Case & Death Counts and Rates\*

	Cases	Cases per Million	Deaths	Deaths per Million
<b>White</b>	8,050	86,181	299	3,201
<b>Black</b>	67,563	125,171	2,772	5,136
<b>Latino**</b>	5,811	113,352	108	2,103

Source: Michigan Disease Surveillance System and Vital Records

\* Cases and deaths to date (through May 1, 2022)

\*\* Author calculations. State data does not capture Latino by race

# Documenting and Explaining Vaccine Hesitancy

Disparities in infection and death haven't translated to greater willingness to vaccinate

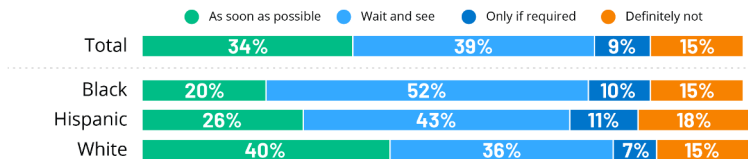
Vaccination limited by barriers of:

- Mistrust of government
- Mistreatment by healthcare providers
- Access

Vaccine acceptance is dynamic, not static

## Republicans and Black Americans More Likely to Be Hesitant About Getting COVID-19 Vaccine

Percent of the public who fall in each group by COVID-19 vaccine enthusiasm:

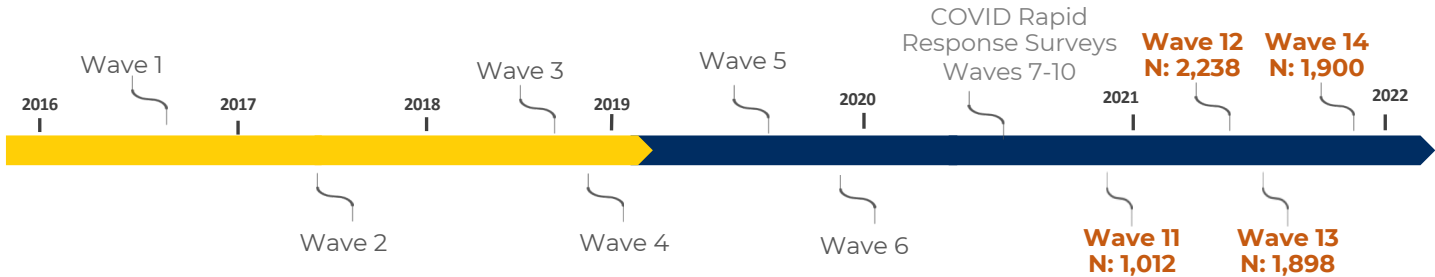


Source: KFF COVID-19 Vaccine Monitor: December 2020

# Research Questions

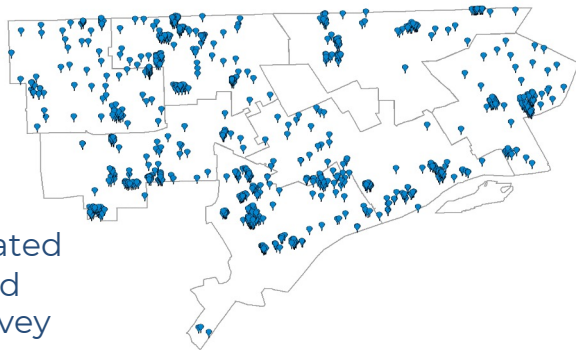
1. How have trends in COVID-19 vaccine acceptance changed over time in Detroit?
2. How do Detroiters' intentions to vaccinate relate to actual vaccine uptake?
3. Were particular subgroups of Detroiters more likely to change their minds about receiving a COVID-19 vaccine than other groups?

# Detroit Metro Area Communities Study



# Survey Methodology

- Random, address based sample of Detroit households
- Survey panel recruited by mail, invited to subsequent waves by email, text, phone
  - Offer incentives for completing surveys
- Invite existing panelists to subsequent surveys
- Survey available in English, Spanish, Bangla, and Arabic
- Survey results are weighted to match the estimated distributions on gender, age, race, education, and income based on the American Community Survey (ACS)
- COVID data collected in collaboration with Michigan CEAL: Communities Conquering COVID (MICEAL)
  - Community-based participatory research approach engaged a steering committee of community leaders across four counties



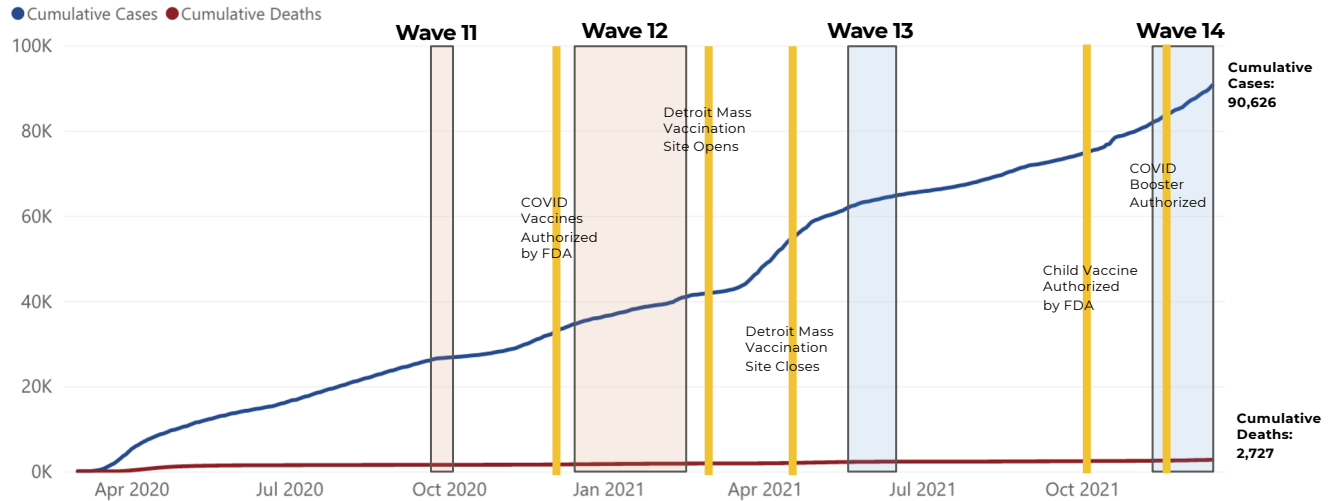
# Data

	Wave 11	Wave 12*	Wave 13	Wave 14
Dates	10/14/20-10/28/20	1/6/21-3/5/21	6/2/21-7/9/21	11/3/21-12/15/21
Sample Size	1,012	2,238	1,898	1,900
Response Rate	62.0%	20.2% (72.8%)	70.5%	71.0%
Survey Completion Mode				
Computer	14%	26%	18%	19%
Mobile Device	75%	60%	68%	68%
By Phone w/ Interviewer	11%	12%	14%	13%

\*Wave 12 was a refreshment sample.

# COVID-19 in Detroit

Cumulative Confirmed Cases and Deaths among Confirmed Cases by Date



Source: Michigan Disease Surveillance System and Vital Records



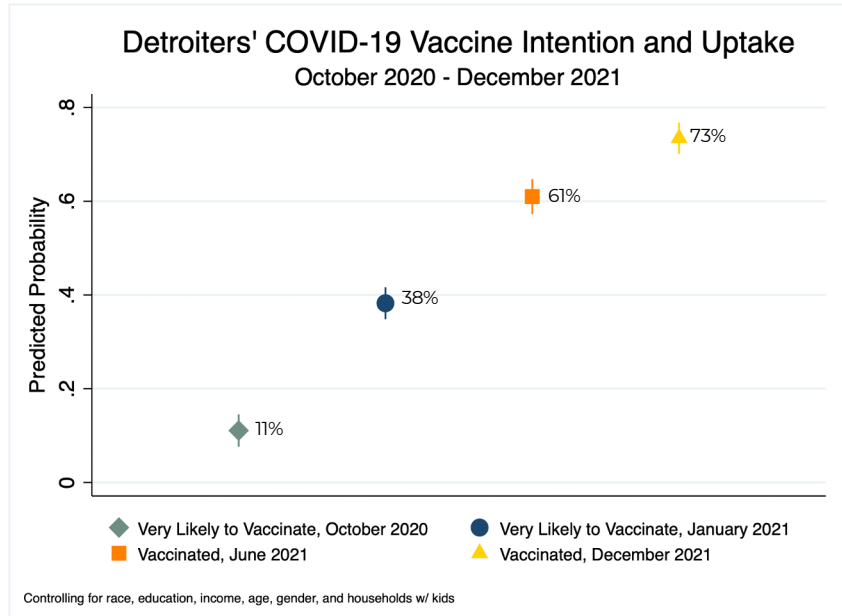
# COVID-19 Vaccination in Detroit



(Photo credit: Detroit Free Press)

# Vaccine Acceptance Over Time

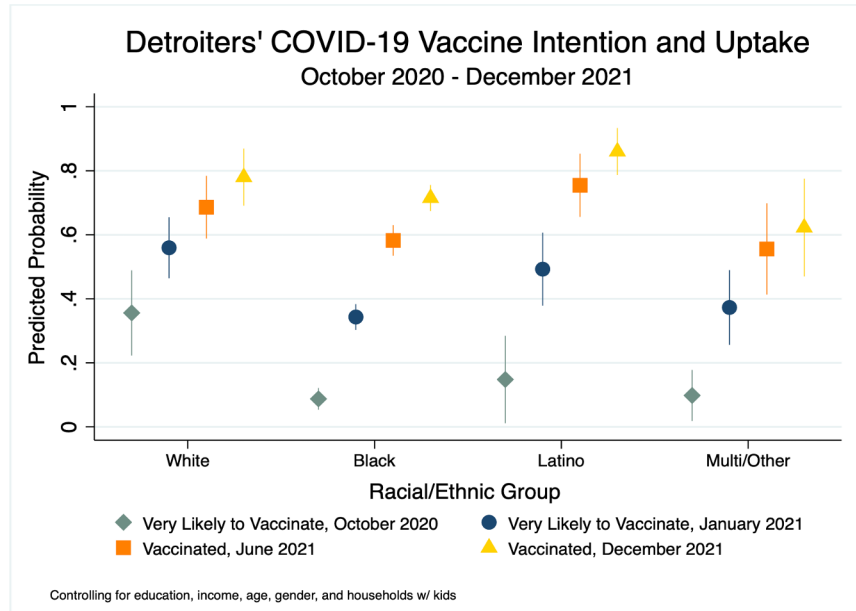
Detroiters' acceptance of the COVID-19 vaccine—in terms of their intention to vaccinate and actual receipt of the vaccine—increased substantially over time



# Vaccine Acceptance Over Time

Acceptance of the COVID-19 vaccine increased generally across racial/ethnic groups

The gap in vaccine acceptance between White and non-White residents was eliminated between October 2020 and December 2021



# Who Fulfilled Their Intention to Vaccinate?



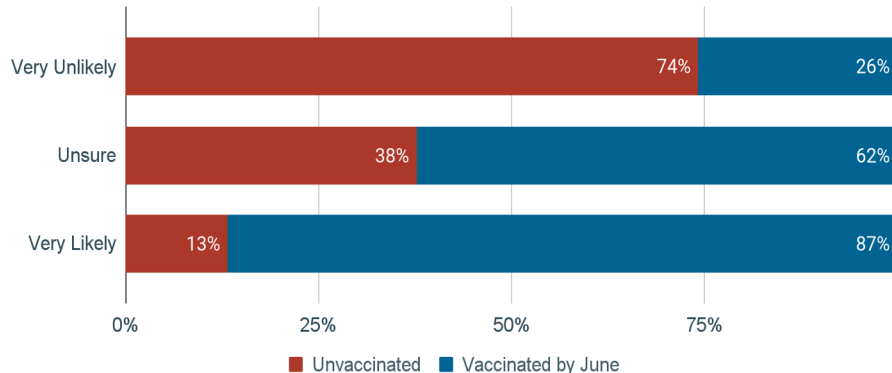
# Vaccine Intention and Behavior

January - June 2021

**26%** of residents who said they were very unlikely to vaccinate against COVID in January had been vaccinated by June

**13%** of residents who reported they were very likely to vaccinate in January remained unvaccinated over that same period

Detroiters' June 2021 Vaccination by Prior Intention to Vaccinate



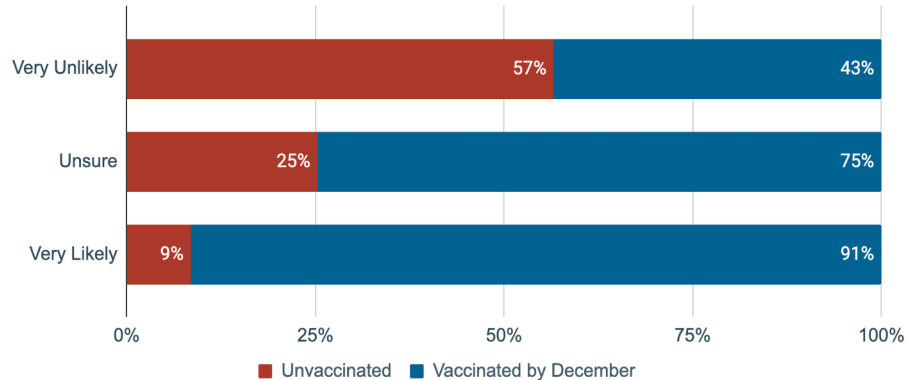
# Vaccine Intention and Behavior

January - December 2021

By December, **43%** of residents who said they were very unlikely to vaccinate against COVID had been vaccinated

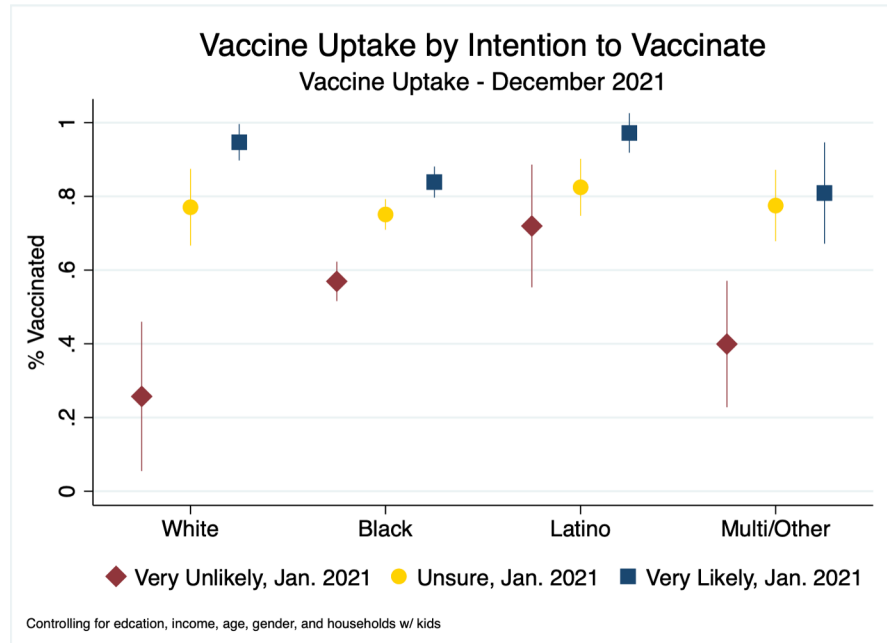
Just **9%** of residents who reported they were very likely to vaccinate in January remained unvaccinated

**Detroiters' December 2021 Vaccination by Prior Intention to Vaccinate**



# Differences in Fulfilling Vaccine Intentions

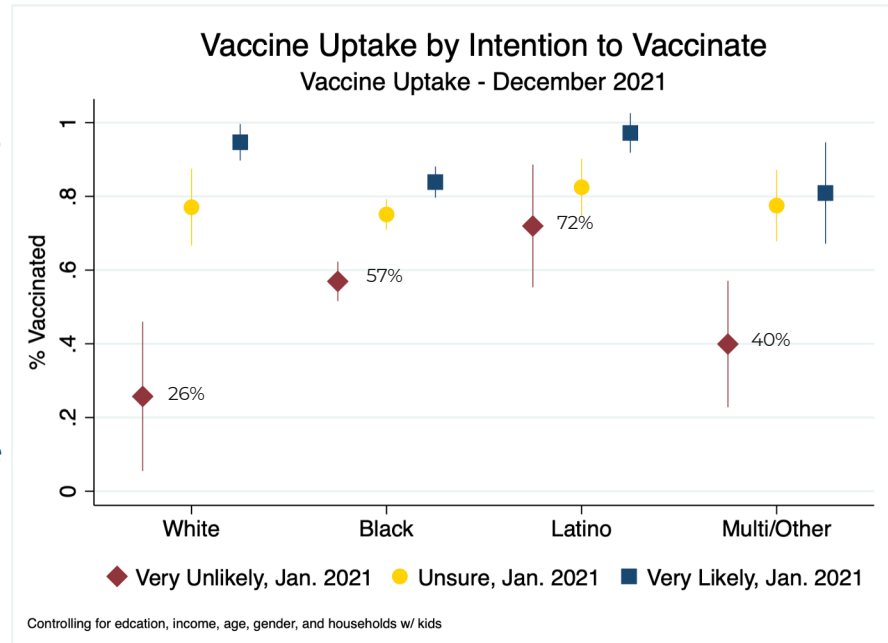
Intention to vaccinate is a strong predictor of actual vaccination



# Differences in Fulfilling Vaccine Intentions

White Detroiters who said in January they were unlikely to vaccinate were significantly less likely to actually get vaccinated by December

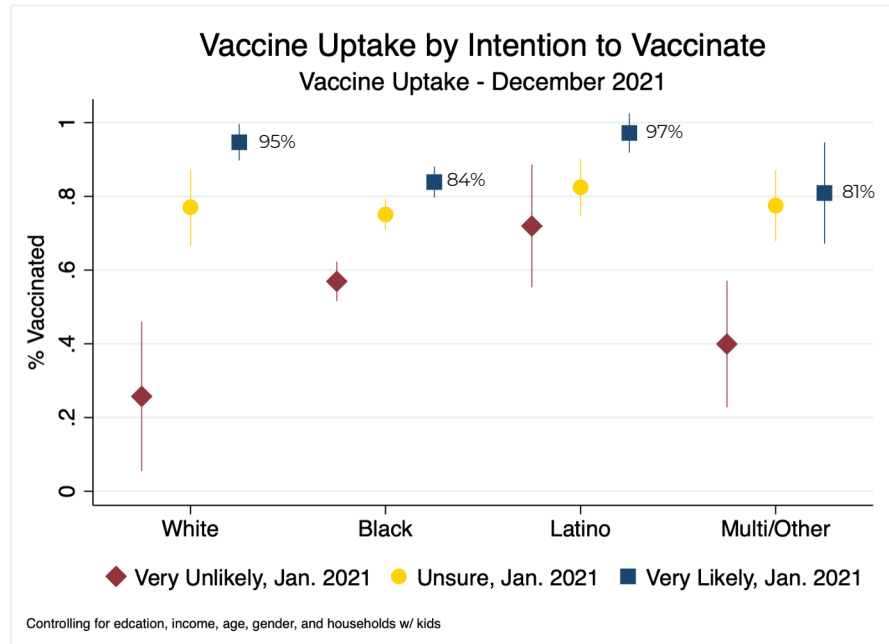
More than half of Black and Latino respondents who were unlikely to vaccinate actually got vaccinated





# Differences in Fulfilling Vaccine Intentions

White and Latino respondents who said they were likely to vaccinate in January were more likely to have vaccinated by December than Black respondents who similarly intended to vaccinate



# Who Changed Their Mind About Vaccination?



(Photo credit: Detroit Free Press)

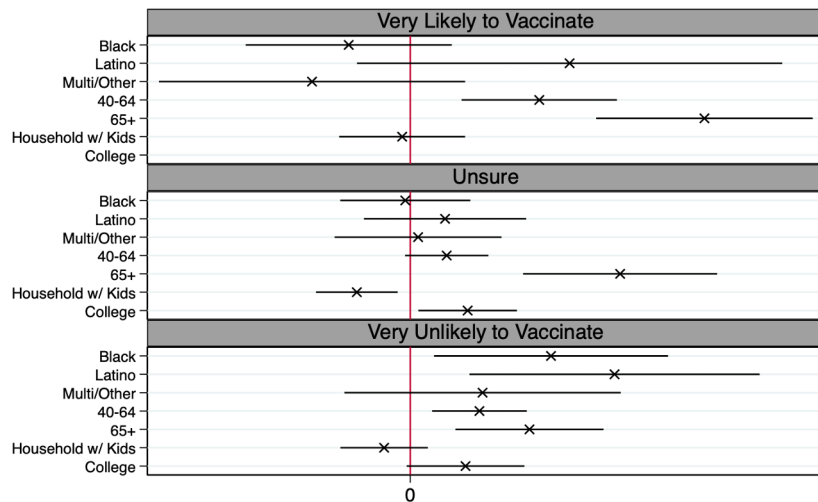
# Subgroup Differences in Fulfilling Vaccine Intentions

Younger adults (under age 40) were significantly less likely to get vaccinated regardless of intention

Seniors who were very likely to vaccinate had **2x** the odds of actually being vaccinated compared to younger adults

Seniors who were unsure if they would vaccinate or unlikely to vaccinate had **10x** and **27x** the odds, respectively, of vaccinating compared to those under 40

Predictors of Vaccination by Prior Likelihood  
January 2021 Intention to December 2021 Vaccine Receipt



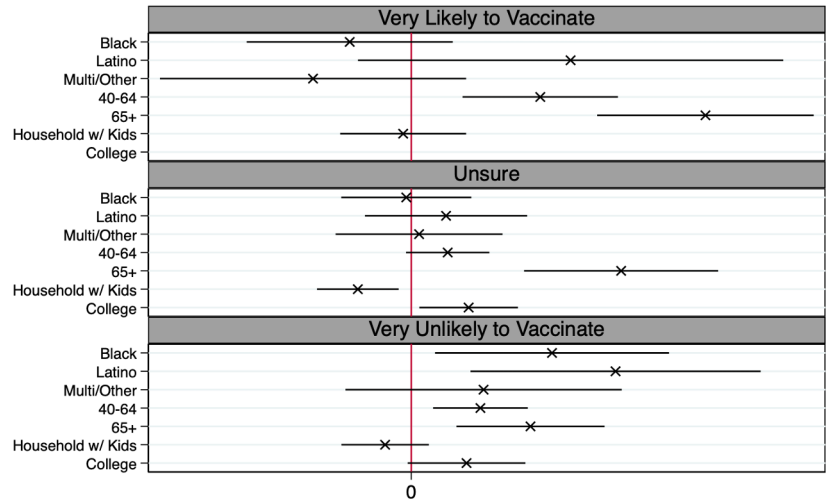
Nonsignificant coefficients for gender and income omitted

# Subgroup Differences in Fulfilling Vaccine Intentions

Respondents with a college degree who were unsure about or unlikely to vaccinate in January were **2x** as likely as those with lower levels of education to get vaccinated by December

Detroiters living with children who were unsure about vaccinating in January were **half** as likely as those without kids to get vaccinated by December

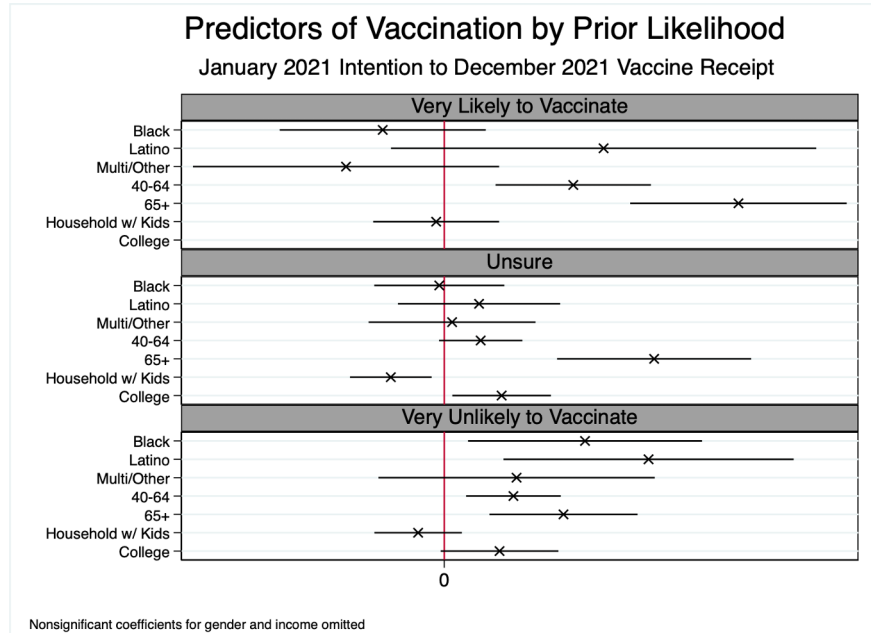
Predictors of Vaccination by Prior Likelihood  
January 2021 Intention to December 2021 Vaccine Receipt



Nonsignificant coefficients for gender and income omitted

# Subgroup Differences in Fulfilling Vaccine Intentions

Black and Latino Detroiters who said they were unlikely to get vaccinated in January were **5x** and **9x** as likely to vaccinate by December than White Detroiters who were similarly hesitant to be vaccinated



# Key Takeaways

- Vaccine acceptance in Detroit has increased over time and across racial groups
- Intention to vaccinate is a strong predictor of actual vaccine behavior
- However, many residents changed their mind about vaccination over time:
  - Nearly half who said they were unlikely to vaccinate received at least one dose of a COVID vaccine in the following 12 months
  - Roughly 1-in-10 respondents who had been very willing to vaccinate skipped vaccination
- Vaccine resistant White residents were less likely to change their minds than residents of color
- Age and presence of children were some of the strongest predictors of whose behavior did not match their prior stated intent

# Thank You!

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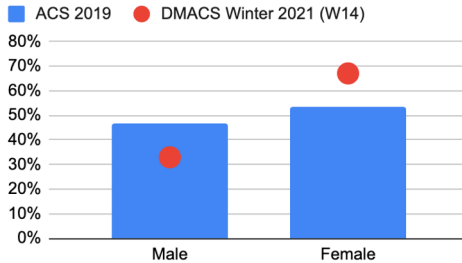
DMACS is funded in part through a collaboration with Michigan CEAL: Communities Conquering COVID. MI CEAL is a member of the Community Engagement Alliance Against COVID-19 Disparities initiative funded by the National Institutes of Health (1 OT2 HL 156812).

Additional funding for DMACS provided by grants from the Knight Foundation, The Ballmer Group, and Poverty Solutions.

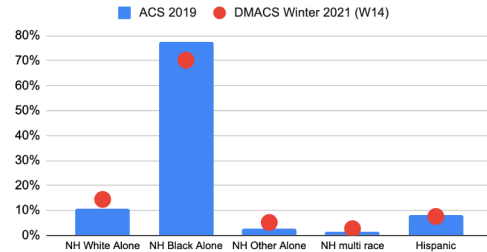


# Demographics of DMACS Sample

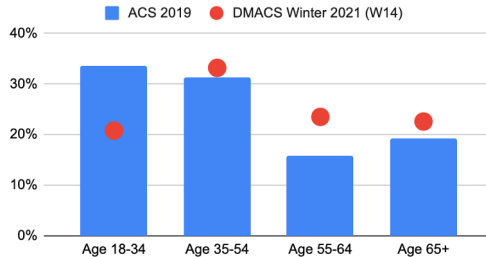
## Gender



## Race/Ethnicity



## Age



## Education

