

Miami-Dade's COVID-19 vaccination rate is very high. Here's why you might be skeptical

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A patient prepares to be vaccinated at the Miami-Dade County COVID-19 Community-Based Testing & Vaccination Site at Tropical Park. Miami Dade is doing better than any Florida county when it comes to getting shots in arms to protect against COVID-19, according to the state health department. About 91% of Miami-Dade residents age 12 and older have received at least one dose on Wednesday, October 6, 2021. AL DIAZ
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No Florida county is as well-protected against COVID-19 as Miami-Dade, where 94% of residents 12 and older had received at least one dose of vaccine as of Oct. 28.

At least that's the percentage the state health department [tells the public](#).

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Behind the scenes, the agency collects vaccine rates for each of Miami-Dade's 80 ZIP codes and distributes the information to local officials for pandemic response planning.

But a Miami Herald and el Nuevo Herald analysis of the Florida Department of Health's ZIP code data for Miami-Dade suggests that the state-reported rate is exaggerated.

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As of Friday, 24 Miami-Dade ZIP codes logged a mathematically impossible vaccination rate of greater than 100% of eligible residents (those over 12) who have received at least one dose, according to the Herald's analysis, which combined population estimates from the U.S. Census Bureau with the health department's vaccination data for the county.

The Herald's reporting supports what many already suspect about Miami-Dade's overall vaccination rate: that it is likely inflated, distorted by the many people who move through the region, as visitors or migrants or "vaccine tourists," and avail themselves of Florida's open-door policy that anyone who has a reason to be in the state can get the jab.

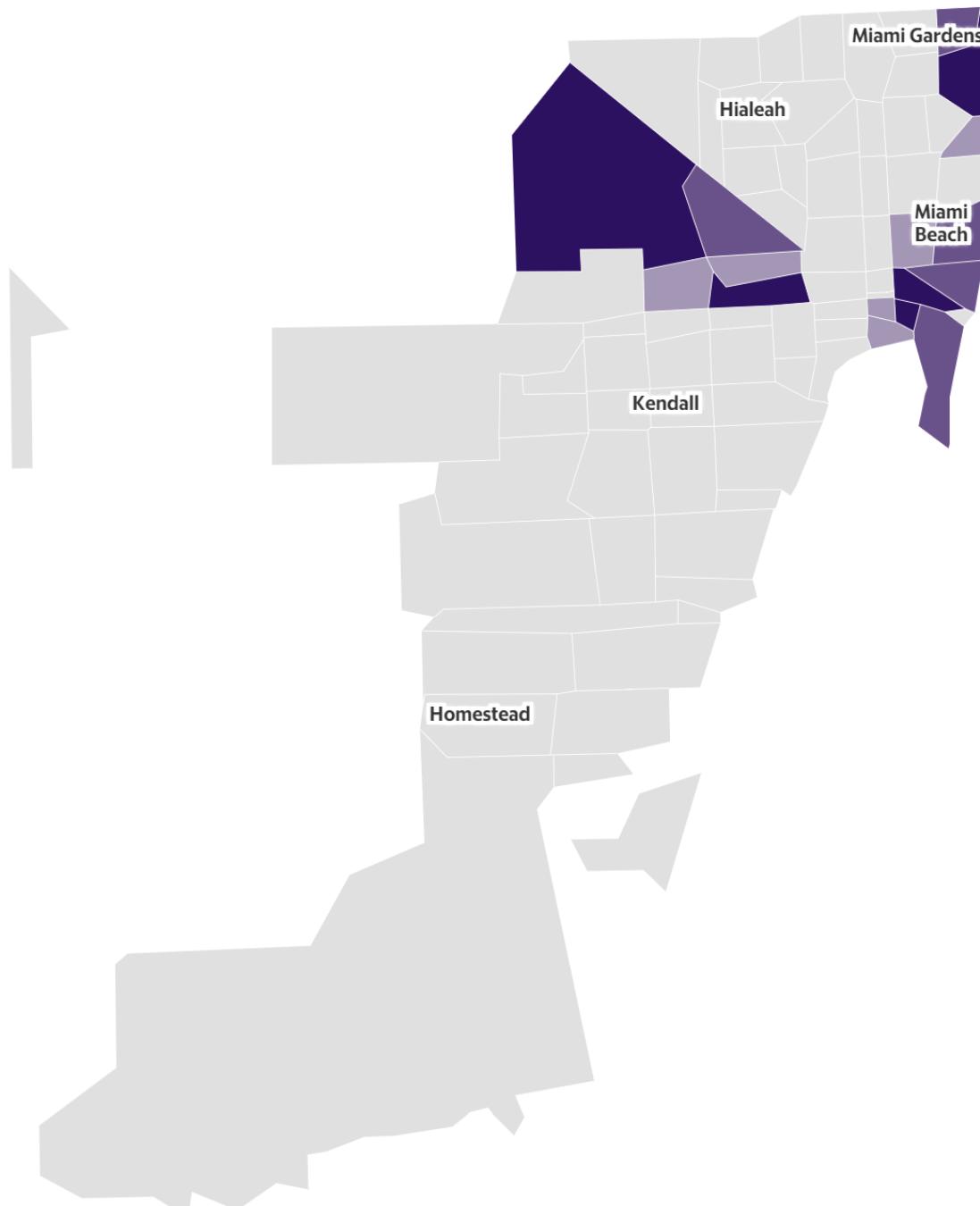
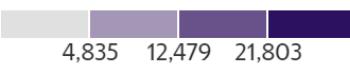
AREAS WHERE OFFICIAL VACCINATION RATES ARE ARTIFICIALLY HIGH

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People removed from total



Percent of total population information was calculated using population estimates by ZCTA from the American Community Survey, five-year estimates. In the 17 ZIP codes where the number of people vaccinated exceeded the number of residents eligible for a dose, the Herald adjusted the doses to reflect 100% of the eligible population. ZIP Code shape files do not show Biscayne Bay.

The vaccination rate is more than just another skewed COVID-19 data point. Florida gathers and shares the data to help guide pandemic response planning — a purpose for which some local officials say the information is useless. It's also a talking point in arguments that go: "X percent of people got vaccinated and still the virus is spreading. So how effective really is the vaccine?"

"The vaccine rates have become meaningless, certainly in our county," said Dan Gelber, Miami Beach mayor. "They've become wholly unreliable, and anybody who is celebrating our vaccination rate is making a mistake."

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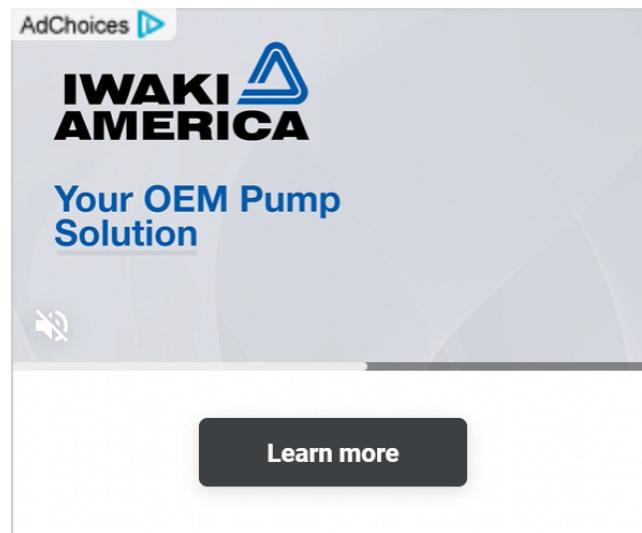


Weesam Khoury, communications director for the health department, refused to answer questions about the agency's ZIP code data for Miami-Dade.

"These data are for response planning purposes only," she said in an email of the ZIP code breakdown, "and are considered confidential and exempt from public disclosure."

County and city officials are supposed to use the data to assess vaccination patterns, identify pockets where vaccines aren't being used, and direct resources to vulnerable communities.

But Miami-Dade Mayor Daniella Levine Cava said her administration wants more information than the health department has been providing.



"We know that the Department of Health, which is our partner, isn't always tracking as much as we would like," Levine Cava said. "We would like to have more robust state reporting just in general. So we've done what we can at the local level to complement the state data."

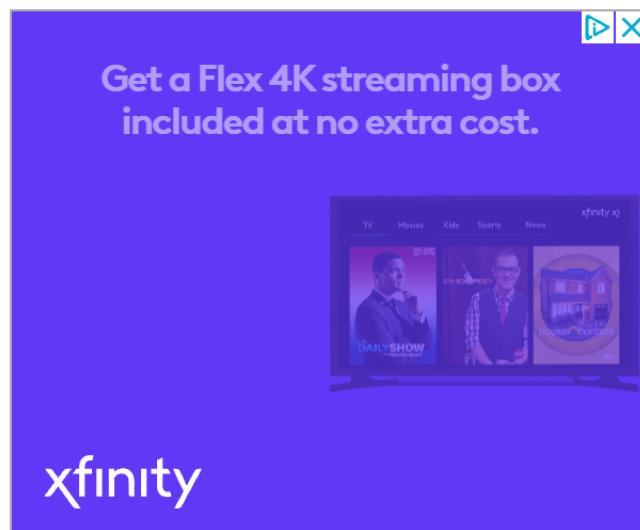
NO VALID ADDRESS

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The Herald found that although healthcare providers are required by law to report vaccination data to Florida's health department within 24 hours of administering a dose — including the name, address, age, gender and race of individuals who received a shot — one of Miami-Dade's biggest vaccine providers said it could not validate the local addresses reported by people who used a passport as ID.

That provider, NOMI Health, said vaccination sites at Miami International Airport and Dolphin Mall in Sweetwater saw a jump in people using passports as ID in June, after Florida opened vaccine eligibility to anyone who had a reason to be in the state.

The health department's data suggest that in ZIP code 33122, where Miami International Airport is located, about 3,866% of eligible residents — or 6,263 people — have received at least one dose. Only 162 people who reside in that ZIP code are eligible.



There are 24 Miami-Dade ZIP codes where the share of eligible residents who have received at least one dose reportedly exceeds 100%. A smaller number of ZIP codes — 17 in Miami-Dade — have a fully vaccinated rate that is higher than 100% of the

eligible population, according to the health department's data.

See how we got the numbers

For those ZIP codes, the Herald, in consultation with experts, adjusted the data to the highest possible rate — the total population eligible for the vaccine (those 12 and older) in each ZIP code. Doing so capped the rate in those 17 ZIP codes at 100% of the eligible population.

Jason Salemi, an epidemiologist with the University of South Florida, said that while this method does not account for population underestimates and assumes every eligible resident has been vaccinated, it's still a sensible way to suggest a vaccination rate closer to reality.

The Herald's approach "makes sense as a simple strategy to adjust," Salemi said.



To calculate the Miami-Dade vaccination rate, the health department divides the total number of people vaccinated by the county's eligible population. The total number of people vaccinated in the agency's calculation includes all those who reported a valid Miami-Dade ZIP code plus others whose ZIP code was "unknown or not Miami-Dade County's ZIP code," said Olga Connor, a health department

spokeswoman, by email in April.



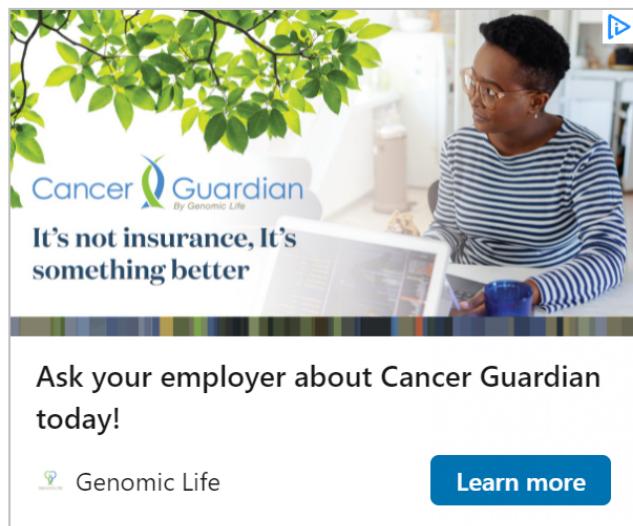
Motorists line up for the vaccine at Hard Rock Stadium in Miami Gardens, Florida, on Monday, April 12, 2021.
Daniel A. Varela *DVARELA@MIAMIHERALD.COM*

Connor would not clarify the statement when asked to by the Herald in October. But the agency's method, which includes 27,401 individuals who are not associated with a Miami-Dade ZIP code, produces a fully vaccinated rate — meaning two doses of the Pfizer-BioNTech or Moderna vaccine or one of the Johnson & Johnson — of 82% of Miami-Dade residents 12 and older, which is likely an overestimate.

The Herald's method — which considers only individuals with a known Miami-Dade

The Herald's method — which considers only individuals with a known Miami-Dade ZIP code — suggests that about 78% of eligible residents are fully vaccinated.

The county's overall vaccination rate, including children not eligible for the vaccines but who can still transmit the disease, is closer to 68%, according to the Herald's calculations. The health department does not publish a fully vaccinated rate for Miami-Dade, neither by eligible age nor by total population.



A RISE IN PASSPORTS FOR ID

Though the department considers the ZIP code data confidential, the Herald obtained copies through local officials who receive the information once a week. The data include a warning — “It can ONLY be used for public health planning” — and a disclaimer explaining that self-reported information and population underestimates may cause errors in some ZIP code rates.

The Herald had been receiving the data each week from Miami-Dade emergency management officials since April. But in October, after reporters asked the Department of Health about the data, county officials stopped providing the reports, citing an email from the local health department reiterating that the information is confidential and exempt from public disclosure.

Khoury, the state health department spokeswoman, refused to say what percentage of Miami-Dade's fully vaccinated residents have a valid ZIP code of residence. Khoury said the health department works to correct errors in the data, but that

vaccine providers are required to verify the address of everyone who receives a shot.

"If an individual traveled to Miami-Dade County and was vaccinated, vaccination providers have the responsibility to ensure accurate residential data are recorded," Khoury said in an email. "However, when possible, in cases where location of vaccination is recorded rather than location of residence, the department works to allocate that data to the appropriate county or state."



NOMI Health, a Utah-based company, operates testing and vaccination sites at Tropical Park, Dolphin Mall, Miami International Airport and other locations under contract with Miami-Dade. NOMI also received two contracts worth \$46 million from Florida to run COVID-19 testing and vaccine sites throughout the state from February through June.

Though workers check photo identification to confirm an individual's identity when getting vaccinated, NOMI said they had no way of validating the residency of many who received a shot at Miami International Airport and Dolphin Mall.

"Once eligibility in the state was expanded to include anyone who had reason to be in Florida, we saw a significant jump in passports as IDs with no way to validate the self-reported address," Ron Goncalves, general manager of Florida operations for NOMI, said in a prepared statement. "Many of those people used the ZIP code of the venue [if known] — we saw a similar trend at Dolphin Mall, another site that saw a

higher proportion of international patients.”

NOMI Health partnered with Miami-Dade to host pop-up clinics at the airport’s Terminal D and a bus stop and taxi waiting area just outside the terminal during two weeks in May and June. The company reported administering nearly 5,000 doses of the Pfizer vaccine at the pop-up clinics.

It’s not clear how many people have used passports as ID when getting vaccinated, but the health department analyzes the vaccine data submitted by providers such as NOMI Health and checks the addresses and ZIP codes to ensure they are counted in the appropriate county, Khoury said.



Khoury emphasized that the vaccination rate data are “provisional” and will “continue to be quality checked” by the agency.

‘A BIG QUESTION’

Like other states, Florida’s vaccine data originate with the doctors, nurses, pharmacists, paramedics and other healthcare professionals who administer the shots. The information they gather on individuals who receive a vaccine is uploaded to the state’s immunization database, called FloridaSHOTS.

But just because the data are collected in a state database does not mean that biostatisticians, epidemiologists and other public health experts know what it means yet.

For academic researchers whose job it is to analyze such data and use the numbers to help government agencies control the pandemic, Miami-Dade's reported vaccination rate by ZIP code is puzzling.

"There's a big question here about why, exactly, are some of those numbers as far off as they are," said Thomas Hladish, a researcher and disease modeler with the University of Florida's Emerging Pathogens Institute, who reviewed the county vaccination data at the Herald's request.

Hladish said the data probably reflects a number of people from outside Miami-Dade who are getting vaccinated in the county.

Elena Cyrus, an infectious disease epidemiologist with the University of Central Florida who lives in Miami, said the dynamics of Florida, and particularly Miami-Dade, make it challenging to report perfect vaccination data.

South Florida is a travel and immigration destination and a transit hub to Latin America and the Caribbean, Cyrus said, and many who immigrate to Miami-Dade may stay temporarily before moving elsewhere or returning home.

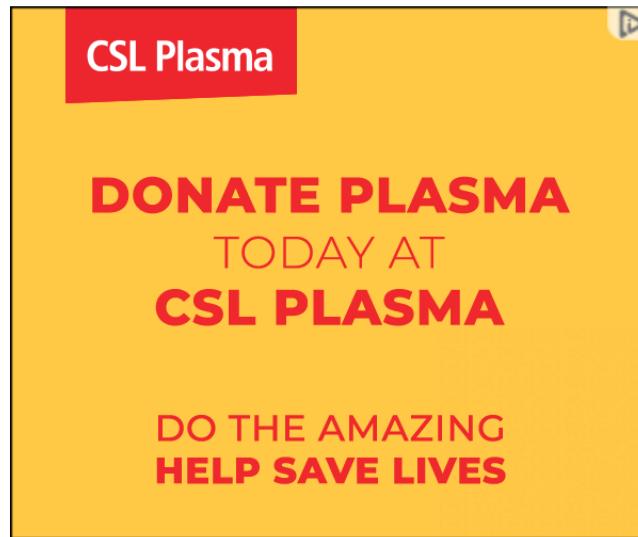


Many local residents are also foreign born and may have relatives from outside the United States whom they may host for limited periods, she said.

Those dynamics impact more than vaccination rates, Cyrus said. They affect all of the COVID-19 data collected and reported for Miami-Dade.

“In some sense, you see infection rates and prevalence and incidence are just as inflated as the vaccination rates,” she said, “because you expect that same migratory population to have the same sort of effect.”

Cyrus said South Florida’s migratory dynamics can even affect our assessment of COVID-19 deaths — considered the most accurate data on the pandemic. When an individual tests positive for the disease in Florida and then returns to their home country and doesn’t survive, that death escapes detection.

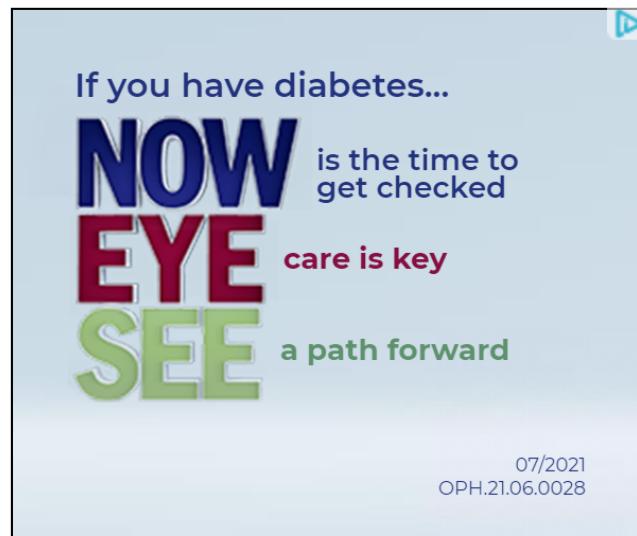


“They call it ‘statistical immortality’,” Cyrus said. “That’s a mortality that’s lost in our system and we don’t know how to code it.”

Cyrus said public health experts do not expect pandemic data to be crystal clear yet. That will take time. At best, she said, the data may help policy makers identify trends.

“Think of a man walking with a blindfold, which is what we were at the beginning of the pandemic, and slowly it’s being lifted,” Cyrus said. “You have some visibility but not all of it. That will come with trying a few years down the line.”

'EVERYONE AROUND ME IS CLEAR'



Local public officials want the data to inform their COVID-19 response policies today, not months or years from now, and they say the information creates a false sense of security instead.

Gelber, the Miami Beach mayor, said he used to report the vaccination rate for the city's three ZIP codes each week via a pre-recorded video addressed to residents. But Gelber said he stopped relaying the vaccination rate weeks ago because he thought that it was sending the wrong message.

"If people saw the number of unvaccinated was high, maybe they would urge family and coworkers to get vaccinated," he said. "But when they see a 90% vaccination rate, they think 'I can go do anything because everyone around me is clear'."

Miami-Dade's mayor, Levine Cava, said anyone who feels they can skip getting vaccinated based on the county's high vaccination rate is missing the bigger picture. The county is [still reporting](#) about 2,100 confirmed cases a week, and as of Oct. 28 there were still about 240 COVID-positive inpatients in Miami-Dade hospitals.

"It doesn't tell us anything really meaningful in terms of an individual risk," she said of the vaccination rate.

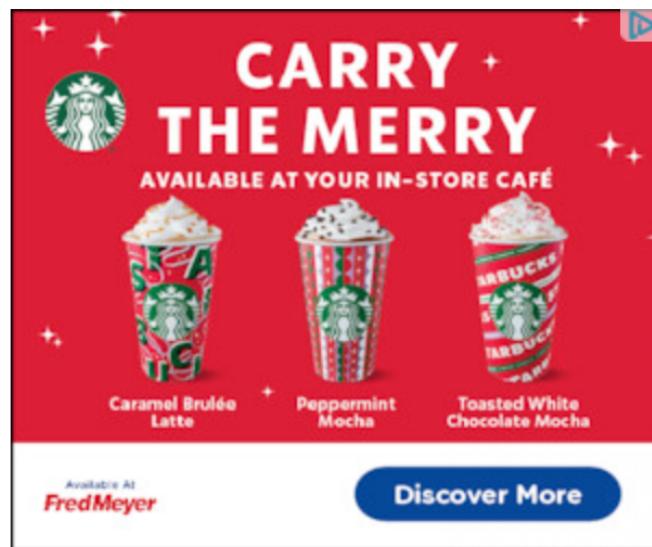
Those who are working to stem the spread of the virus by getting shots in arms also don't have time to wait for experts to understand the data, said Hladish, the UF research scientist.

Vaccine drives prioritize the number of people inoculated not perfection in data gathering — although practices probably vary from a pharmacy to a FEMA site to a temporary kiosk at the airport.

"It's not really supposed to be totally up to the discretion of the person with the syringe in their hand, but it often is," Hladish said. "This is something they feel quite passionate about, and they want to get as many people vaccinated as possible."

That's the correct approach for public health workers and policy makers, said Mary Jo Trepka, an epidemiologist with Florida International University who has reviewed the health department's vaccination data for Miami-Dade

Trepka said she also believes the health department's vaccination rates for Miami-Dade are "improbable, particularly because they're quite a bit higher than Broward and Palm Beach County, and I have no reason to think they should be that much higher."



But, she said, "How are you going to fix it? If we have an international traveler here, what are we going to do about that? It's good that they're vaccinated. Or a snowbird. It's a great thing they got vaccinated."