

# REACHing for Health Equity: Heart Disease and Vaccines

February 22, 2023

**iREACH**

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**AIM**

Association of  
Immunization  
Managers

# Agenda

- Effects of COVID and Influenza on Cardiac Risk in Minority Populations, Dr. Adrian Messerli
- Heart Disease and Immunizations, Lisa Jacques-Carroll
- Combating Heart Disease in the Community, Healthy Savannah
- Q and A
- Resources

# Today's Panel



Dr. Adrian Messerli



Lisa Jacques-Carroll



Dr. Elsie Smalls



Nichele Hoskins



Armand Turner



Leslie Walker

# Effects of COVID and Influenza on Cardiac Risk in Minority Populations

Adrian Messerli, MD

Professor Of Medicine



# COVID and the Heart: It Spares No One

## **CLOTS, INFLAMMATION, ARRHYTHMIAS**

- Myocarditis (inflammation on the heart → scarring of the heart)
- Pericarditis (inflammation of the heart lining)
- Rhythm disturbances
- Heart attacks (increase in blood clots)
  - Heart attack increase has been most prominent in young adults, ages 25-44

## Heart-disease risk soars after COVID — even with a mild case

- Massive VA study, comprised of >150,000 veterans
- Followed for at least a year after diagnosis
- Risk of heart failure increased by 72%
- 8% increase in the rate of heart attacks; 247% increase in the rate of heart inflammation

## Long COVID and the Heart

- Experts aren't exactly sure how long COVID might affect your long-term health.
- COVID-19 mostly affects your lungs, but for a small number of people it can also affect the heart.
  - Myocarditis associated with heart scarring

## COVID19 and Increased Mortality in African Americans

- Disproportionally higher infection and mortality rates in African–Americans compared to other races
  - Michigan: 43% of deaths were African–Americans, who represent 14% of the state’s population
  - Illinois: 36% of deaths were African–Americans 14%, who represent 14% of the population
- African Americans with COVID-19 are nearly three times as likely to require hospitalization than white people with the disease
  - Greater risk factors
  - May also be more exposed to contagion
    - Infection rate is more than 3-fold higher than that in predominantly white counties
  - Medical bias/ apprehension



## Vaccine is Best Defense for Black Americans with Heart Disease

- In December 2020, the National Medical Association (NMA), a professional society of Black U.S. doctors committed to health equality and justice, endorsed the FDA's emergency authorization of vaccines
- Per CDC data across 36 states (for which a total vaccination rate could be calculated by race/ethnicity as of July 11, 2022) 87% of Asian, 67% of Hispanic, and 64% of White people had received at least one COVID-19 vaccine dose, higher than the rate for African American people (59%)
- The gap has been narrowing over time.

## Hispanic and Asian Populations Also vulnerable

- Experienced a  $\approx 20\%$  relative increase in heart disease deaths
- The non-Hispanic White population experienced a 2% relative increase in heart disease deaths

Wadhwa et al. Racial and Ethnic Disparities in Heart and Cerebrovascular Disease Deaths During the COVID-19 Pandemic in the United States. *Circulation*. May 2021.

## Association of Influenza Vaccination With Cardiovascular Risk

- A large study has confirmed that seasonal influenza vaccination does lower cardiovascular mortality in those at underlying risk (patients 65 or older)
  - Heart failure (6.2%) and heart attacks (5.7%)
- There is a persistent **racial disparity** in immunization rates between white and African- Americans (AA).

# Heart Disease and Immunizations

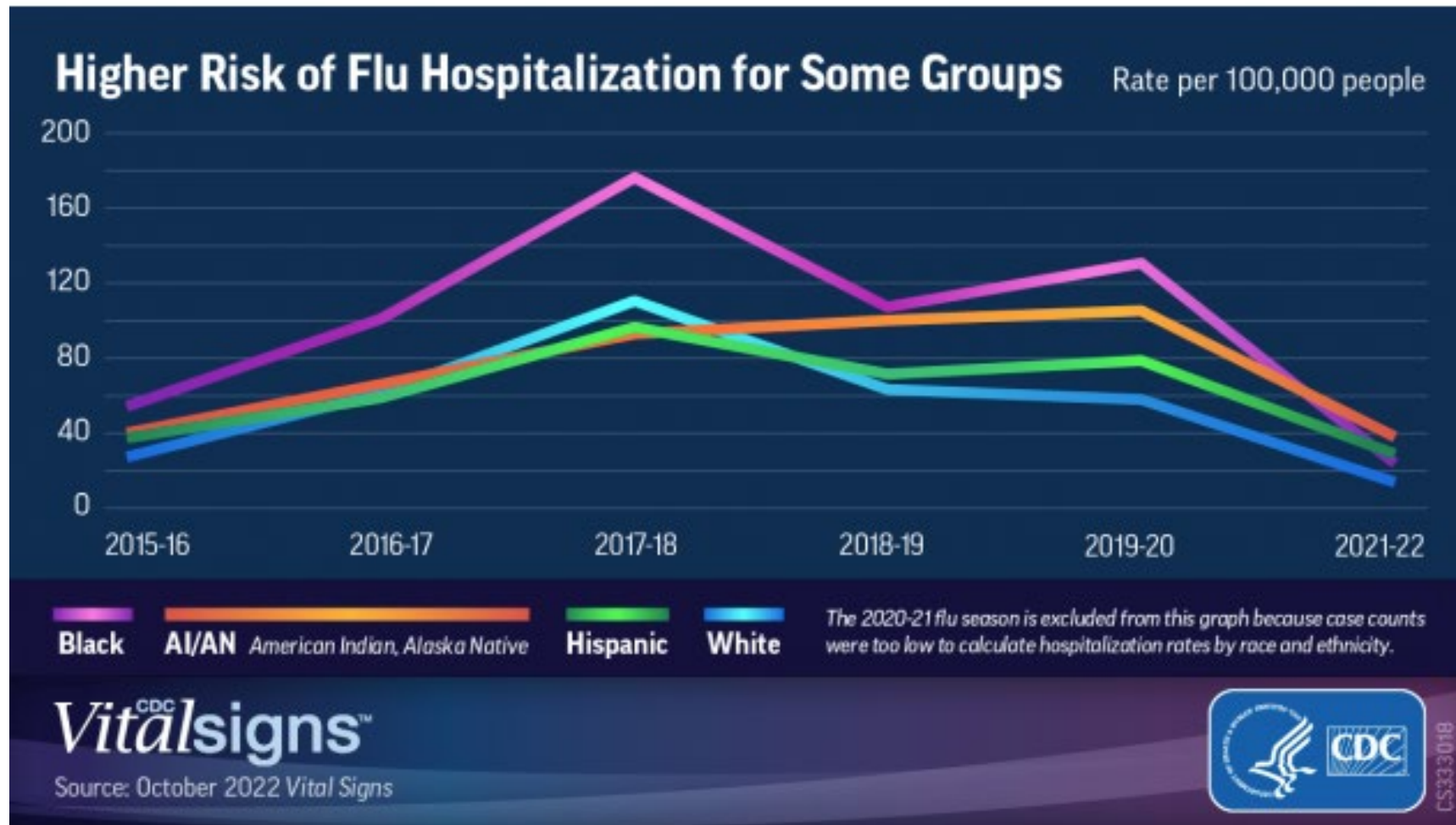
Lisa Jacques-Carroll, Public Health Consultant, AIM, iREACH project

# Heart disease and the risk from flu and COVID-19 disease

- People with heart disease are at a higher risk of complications from both COVID-19 disease and flu disease.
- People with heart disease are 6 times more likely to have a heart attack within 7 days of flu infection.
- Even a mild case of COVID-19 can increase a person's risk for cardiovascular problems for at least a year after their initial infection.
- Some racial and ethnic minority groups are disproportionately affected by heart disease and other chronic diseases, which increases their risk of complications from flu and COVID-19 disease.

<https://www.nfid.org/infectious-diseases/flu-and-chronic-health-conditions/> and <https://www.nature.com/articles/s41591-022-01689-3> and [https://www.cdc.gov/nchs/hus/spotlight/HeartDiseaseSpotlight\\_2019\\_0404.pdf](https://www.cdc.gov/nchs/hus/spotlight/HeartDiseaseSpotlight_2019_0404.pdf)

# Flu hospitalizations by race/ethnicity



<https://www.cdc.gov/mmwr/volumes/71/wr/mm7143e1.htm>

# Risk for COVID-19 infection, hospitalization, and death by race/ethnicity

Rate ratios compared to White, Non-Hispanic persons	American Indian or Alaska Native, Non-Hispanic persons	Asian, Non-Hispanic persons	Black or African American, Non-Hispanic persons	Hispanic or Latino persons
Cases <sup>1</sup>	1.6x	0.8x	1.1x	1.5x
Hospitalization <sup>2</sup>	2.5x	0.7x	2.1x	1.8x
Death <sup>3, 4</sup>	2.0x	0.8x	1.6x	1.7x

<https://www.cdc.gov/coronavirus/2019-ncov/covid-data/investigations-discovery/hospitalization-death-by-race-ethnicity.html>

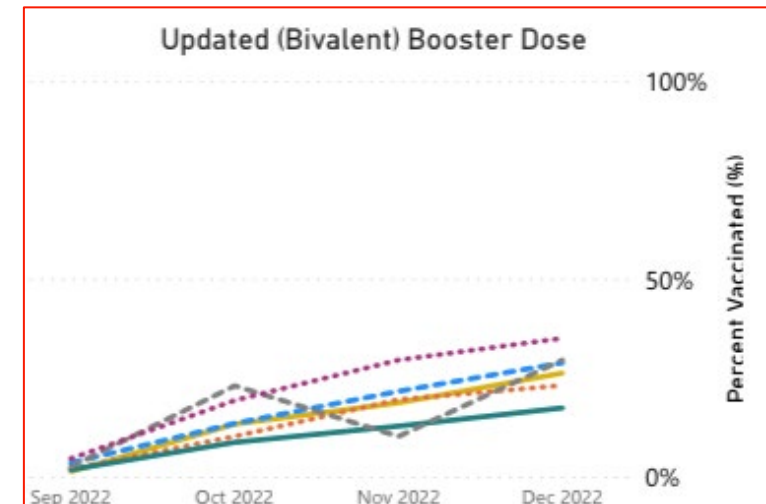
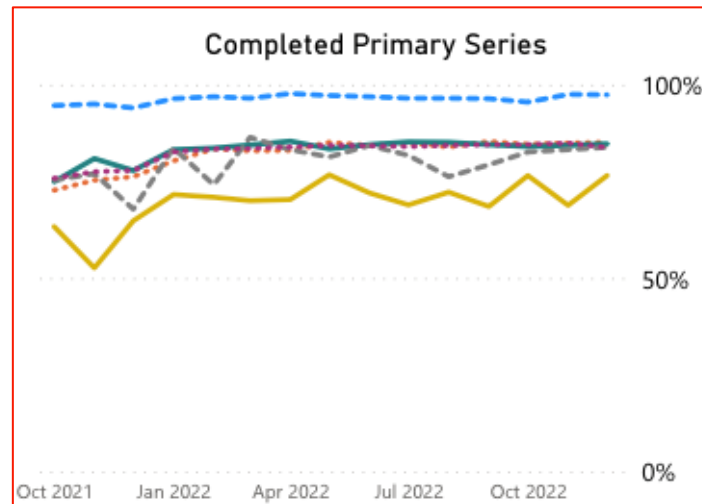
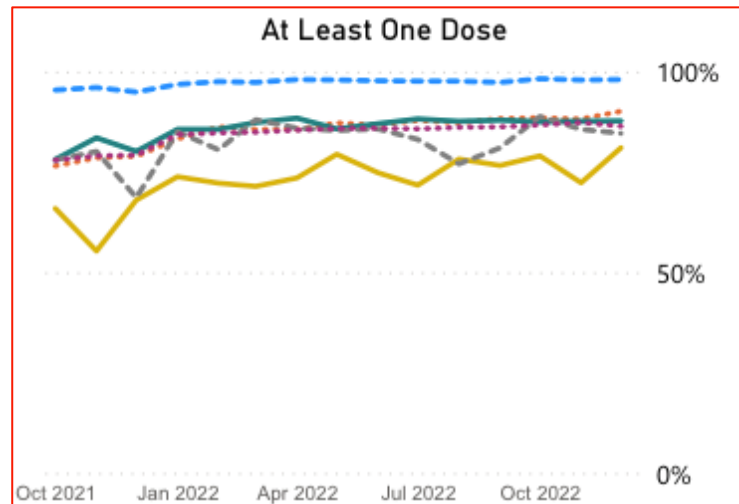
Adults with heart disease are recommended to receive all routine adult vaccinations, based on age/eligibility. In particular, COVID-19, pneumococcal, influenza, Tdap, MMR, varicella, shingles, and hepatitis B vaccines.

Vaccine	Pregnancy	Immuno-compromised (excluding HIV infection)	HIV infection CD4 count		Asplenia, complement deficiencies	End-stage renal disease, or on hemodialysis	Heart or lung disease; alcoholism <sup>a</sup>	Chronic liver disease	Diabetes	Healthcare personnel <sup>b</sup>	Men who have sex with men
			<15% or <200mm <sup>3</sup>	≥15% and ≥200mm <sup>3</sup>							
<a href="#">COVID-19</a> <sup>i</sup>		See <a href="#">notes</a>									
<a href="#">IIV4</a> <sup>i</sup> or <a href="#">RIV4</a>				1 dose annually							
or <a href="#">LAIV4</a> <sup>i</sup>		Contraindicated				Precaution				or 1 dose annually	
<a href="#">Tdap</a> or <a href="#">Td</a> <sup>i</sup>	1 dose Tdap each pregnancy			1 dose Tdap, then Td or Tdap booster every 10 yrs							
<a href="#">MMR</a> <sup>i</sup>	Contraindicated*	Contraindicated			1 or 2 doses depending on indication						
<a href="#">VAR</a> <sup>i</sup>	Contraindicated*	Contraindicated			2 doses						
<a href="#">RZV</a> <sup>i</sup>		2 doses at age	Contraindicated or not recommended—vaccine should not be administered. *Vaccinate after pregnancy.		2 doses at age ≥50 yrs						
<a href="#">HPV</a> <sup>i</sup>	Not Recommended*	3 doses through age 26 yrs		2 or 3 doses through age 26 years depending on age at initial vaccination or condition							
<a href="#">Pneumococcal (PCV15, PCV20, PPSV23)</a> <sup>i</sup>				1 dose PCV15 followed by PPSV23 OR 1 dose PCV20 (see <a href="#">notes</a> )							
<a href="#">HepA</a> <sup>i</sup>				2, 3, or 4 doses depending on vaccine							
<a href="#">HepB</a> <sup>i</sup>	3 doses (see <a href="#">notes</a> )			2, 3, or 4 doses depending on vaccine or condition							
<a href="#">MenACWY</a> <sup>i</sup>		1 or 2 doses depending on indication, see <a href="#">notes</a>		for booster recommendations							
<a href="#">MenB</a> <sup>i</sup>	Precaution	2 or 3 doses		depending on	vaccine and indication, see <a href="#">notes</a> for booster recommendations						
<a href="#">Hib</a> <sup>i</sup>		3 doses HSCT <sup>c</sup> recipients only		1 dose							



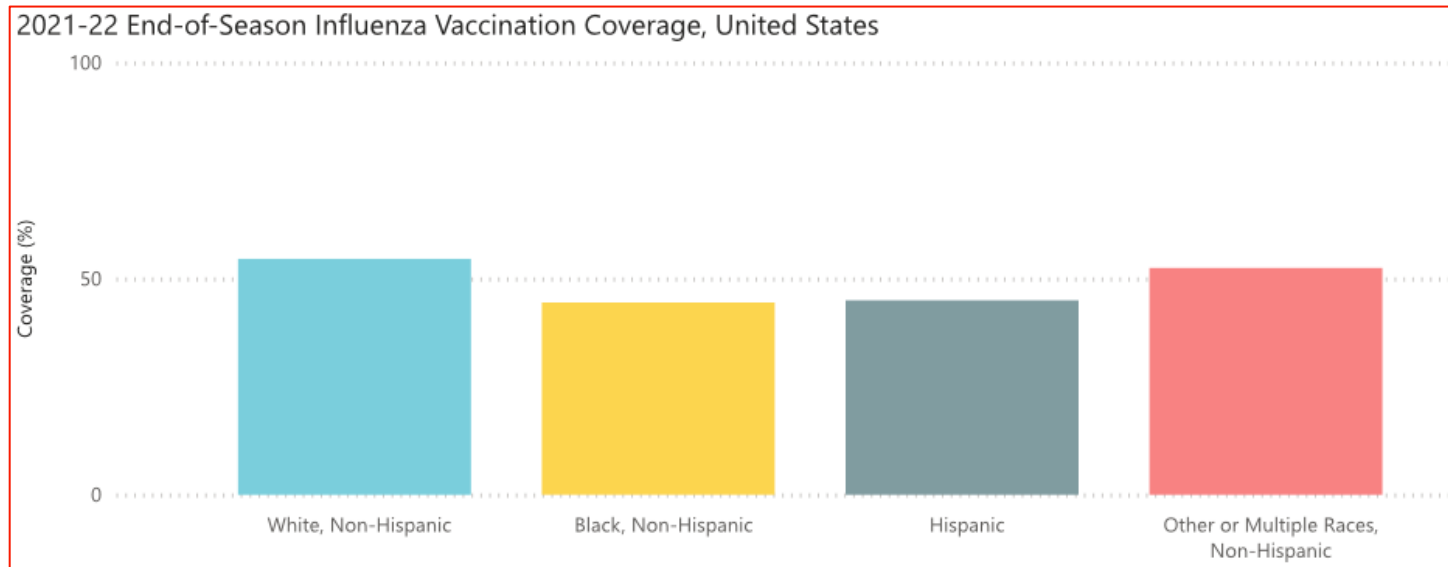
# COVID-19 vaccination coverage by race/ethnicity

	AI/AN, NH	Asian, NH	Black, NH	Hispanic/Latino	NHOPI, NH	White, NH
At Least One Dose	81.0%	98.0%	90.1%	87.7%	84.6%	86.4%
Completed Primary Series	76.5%	97.4%	85.1%	84.7%	83.8%	83.8%
Updated (Bivalent) Booster Dose Among Adults with a Completed Primary Series	26.1%	28.7%	23.0%	17.3%	29.4%	34.9%



# Flu vaccination coverage by race/ethnicity

Flu vaccination coverage (Nov 27, 2022 – Dec 31, 2022)

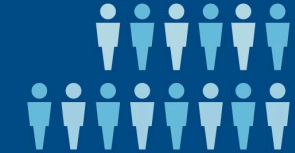


Race/Ethnicity	Flu Coverage
<b>Overall</b>	<b>45.9%</b>
AI/AN	33.3%
Asian	49.6%
Black	37.8%
Hispanic	32.0%
Multiple races	36.4%
Pac. Islander/Nat. Hawaiian	32.6%
White	52.1%

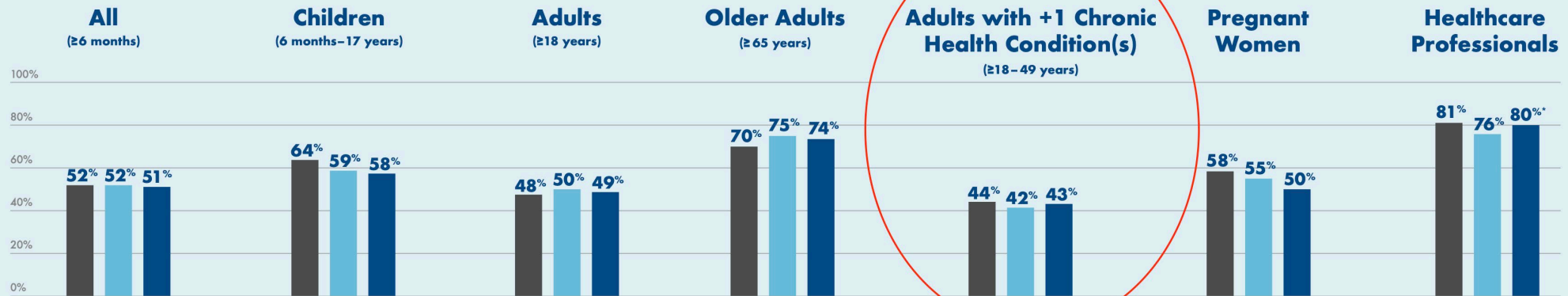
<https://www.cdc.gov/flu/fluview/interactive-general-population.htm>

# Flu vaccination coverage by population

## Influenza Vaccination Coverage by Population



■ 2019-2020 season ■ 2020-2021 season ■ 2021-2022 season



Receipt of ≥1 dose of influenza vaccine during the season

While overall 2021-2022 flu vaccination coverage remained similar to previous seasons, there were notable decreases among children and pregnant women.

Source: Centers for Disease Control and Prevention (CDC)  
\*Unpublished CDC data

**Vaccination is the best way to protect against flu and potentially serious complications.**  
Visit [www.nfid.org/flu](http://www.nfid.org/flu) to learn more about how you can help #FightFlu.



# Heart disease and vaccines

- Heart disease can make it harder for someone to fight off certain diseases or make it more likely that they will have serious complications.
- Immunization provides the best protection against vaccine-preventable diseases.
- Vaccines are one of the safest ways for someone to protect their health, even if they are taking prescription medications.
- Vaccine side effects are usually mild and go away on their own. Serious side effects are very rare.
- Some vaccine-preventable diseases, like the flu, can increase the risk of another heart attack.

<https://www.cdc.gov/vaccines/adults/rec-vac/health-conditions/heart-disease.html>

# Combating Heart Disease in the Community

Healthy Savannah: Dr. Elsie Smalls, Nichele Hoskins, Armand Turner, and Leslie Walker

# Resources on heart disease and vaccines

PEOPLE WITH HEART DISEASE ARE  
**6X** MORE LIKELY  
TO HAVE A HEART ATTACK WITHIN  
7 DAYS OF FLU INFECTION

**FLU IS NOT A GAME**  
LEARN MORE AT [WWW.NFID.ORG](http://WWW.NFID.ORG)

National Foundation for Infectious Diseases

The infographic features a dark blue background with a white dotted grid. On the right, there is a pixelated heart icon. The text is in white and yellow, with '6X' being the largest and most prominent element.

I got my annual flu vaccine  
to #ShowUp for myself  
and my family

National Foundation for Infectious Diseases  
[www.nfid.org/flu](http://www.nfid.org/flu)  
#ShowUp #FightFlu

The advertisement shows a diverse group of people, including a man, a woman, a young girl, and a baby, smiling. The background has a pattern of concentric circles in shades of red and orange. The text is in a clean, sans-serif font.

"I have heart disease.  
I take extra steps to protect my  
health, including getting  
vaccinated."

**DON'T WAIT.  
VACCINATE!**

CDC

The advertisement features a close-up portrait of an older Black woman with short grey hair, wearing a dark blazer over a white top. The background is a gradient of purple and white. The CDC logo is in the bottom right corner.

<https://www.cdc.gov/vaccines/adults/rec-vac/health-conditions/heart-disease.html> and <https://www.nfid.org/infectious-diseases/flu-and-chronic-health-conditions/>

# Resources on heart disease and vaccines

## Healthy Savannah Healthy Walks Guide and Facebook Live



### Let the Good Vibes Flow Staying Active and Connected Through Community Walk & Roll Programs



This guide explores how to create community walk and rolls centered on inclusivity and social connectedness. The method is inspired by [Healthy Savannah](#) who started organizing community walks as a way to stay connected during the COVID-19 pandemic. What began as casual outings around Chatham County, Georgia turned into regular community walks that are livestreamed to online audiences. The premise is simple: choose a location, invite community members, and go for a walk. The benefits are not only about physical fitness, but are about connecting with one another and exploring the places where we live, work, and play. Healthy Savannah developed a solid method – now it's time to see what a walk and roll program can look like in your community!

### MAKING TIME TO CONNECT

Spending time with friends and family is one the many ways we take care of ourselves. We laugh over weekly potluck dinners, meet up at the local sports bar to cheer on our favorite team, and send inside jokes to group texts. Other times we organize group bike rides, play pick-up soccer in the park, and start impromptu dance parties at the family barbecue. And sometimes, we go for a walk. For some, walking can mean a chance to get fresh air and stretch. For others, it's about connecting with their neighborhood. For those who move around using other modes, like a scooter or a wheelchair, this time might involve more rolling than walking. Whichever way we move, the enjoyment we get spending time together remains the same.



[Healthy Walks Guide FINAL.pdf](#)

<https://www.facebook.com/healthysav/videos/1543398929404814/>

# Poll

1. How satisfied were you with the content presented today?
2. Was there something new you learned today that will help you in your work?  
**Yes/no and add comments in chat box**
3. Is there anything else you would have liked to hear discussed during today's session?  
**Place comments in chat box**



# Upcoming from iREACH

Please join us **Wednesday March 22 at 2 pm ET** for the next REACHing for Health Equity Webinar: **Kidney Disease and vaccines**

The first episode of the iREACH limited series podcast will be released **March 15th!**