

Maternal Immunization: Opportunities and Challenges

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CONFLICT OF INTEREST STATEMENT

Laura Riley, MD, FACOG

- Consultant to Pfizer x1 re: RSV vaccine VRPAC presentation
- Consultant to GSK x1 re: CMV vaccine
- Education for Medscape on CMV disease
- Writer, Up to Date

Ashanda Saint-Jean, MD, FACOG

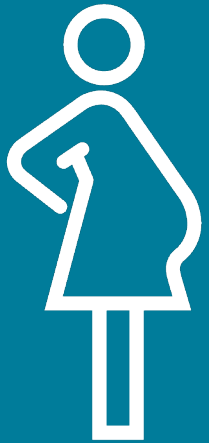
No Conflicts

LEARNING OBJECTIVES

1. Describe the benefits of Tdap, influenza, COVID-19, and RSV vaccination during pregnancy for both pregnant people and their infants.
2. Discuss current CDC and ACOG recommendations for vaccination during pregnancy, with a focus on Tdap, influenza, COVID-19, and RSV vaccines.
3. Discuss the current vaccination coverage for Tdap, influenza, and COVID-19 among pregnant people in the United States.
4. Review challenges of implementing maternal vaccination programs.
5. Explore opportunities for improving maternal immunization rates.

THE BENEFITS OF MATERNAL IMMUNIZATION

RATIONALE FOR MATERNAL IMMUNIZATION



Pregnancy is associated with an *increased risk* of **infection-related** morbidity, mortality, and adverse pregnancy outcomes

RATIONALE FOR MATERNAL IMMUNIZATION



Early infancy is characterized by
“Gap Immunity”

RATIONALE FOR MATERNAL IMMUNIZATION



Vaccine induced immunity protects both the birthing person and the infant

Vaccination during pregnancy promotes life-long health and well-being

Equitable vaccination achieves parity in maternal and infant outcomes

MATERNAL IMMUNIZATION RECOMMENDATIONS

VACCINES ROUTINELY RECOMMENDED DURING PREGNANCY

1. Influenza vaccine
2. Tdap vaccine
3. COVID-19 vaccine
4. RSV vaccine



INFLUENZA VACCINATION RECOMMENDATIONS

ACOG recommends that individuals who are or will be pregnant during influenza season receive an inactivated or recombinant influenza vaccine as soon as it is available

Can be administered at the same time as other recommended vaccines during pregnancy (Tdap, COVID-19, RSV).

Timing is irrespective of trimester in pregnancy and should not be delayed to the third trimester

TDAP VACCINATION RECOMMENDATIONS

Tdap vaccination should be administered between 27-36 weeks in every pregnancy

Can be offered prior to 26 weeks if local outbreak or for exposure prophylaxis

Can be offered postpartum if never received Tdap as an adult

Can be administered at the same time as other maternal vaccines

COVID-19 VACCINATION RECOMMENDATIONS

ACOG recommends that all pregnant individuals receive a COVID-19 vaccine or vaccine series.

Pregnant individuals should stay up to date with recommended COVID-19 vaccines

Can be administered at the same time as other maternal vaccines

RSV VACCINATION RECOMMENDATIONS

ACOG recommends a single dose of Pfizer's RSV vaccine (Abrysvo) for pregnant individuals between 32 0/7 and 36 6/7 weeks of gestation, using seasonal administration.

Clinicians should counsel patients about the maternal RSV vaccine and the monoclonal antibody, nirsevimab

Can be administered at the same time as other maternal vaccines

MATERNAL IMMUNIZATION RATES

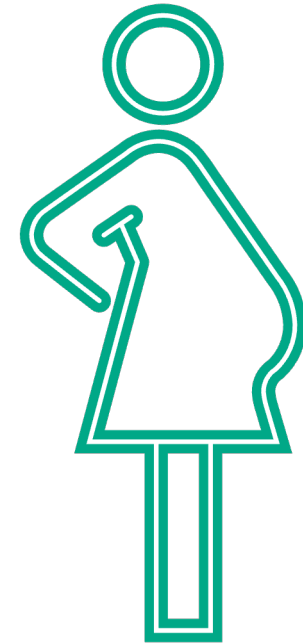
DECLINING MATERNAL VACCINATION COVERAGE RATES

Influenza and Tdap vaccination rates have declined overall in the last several years

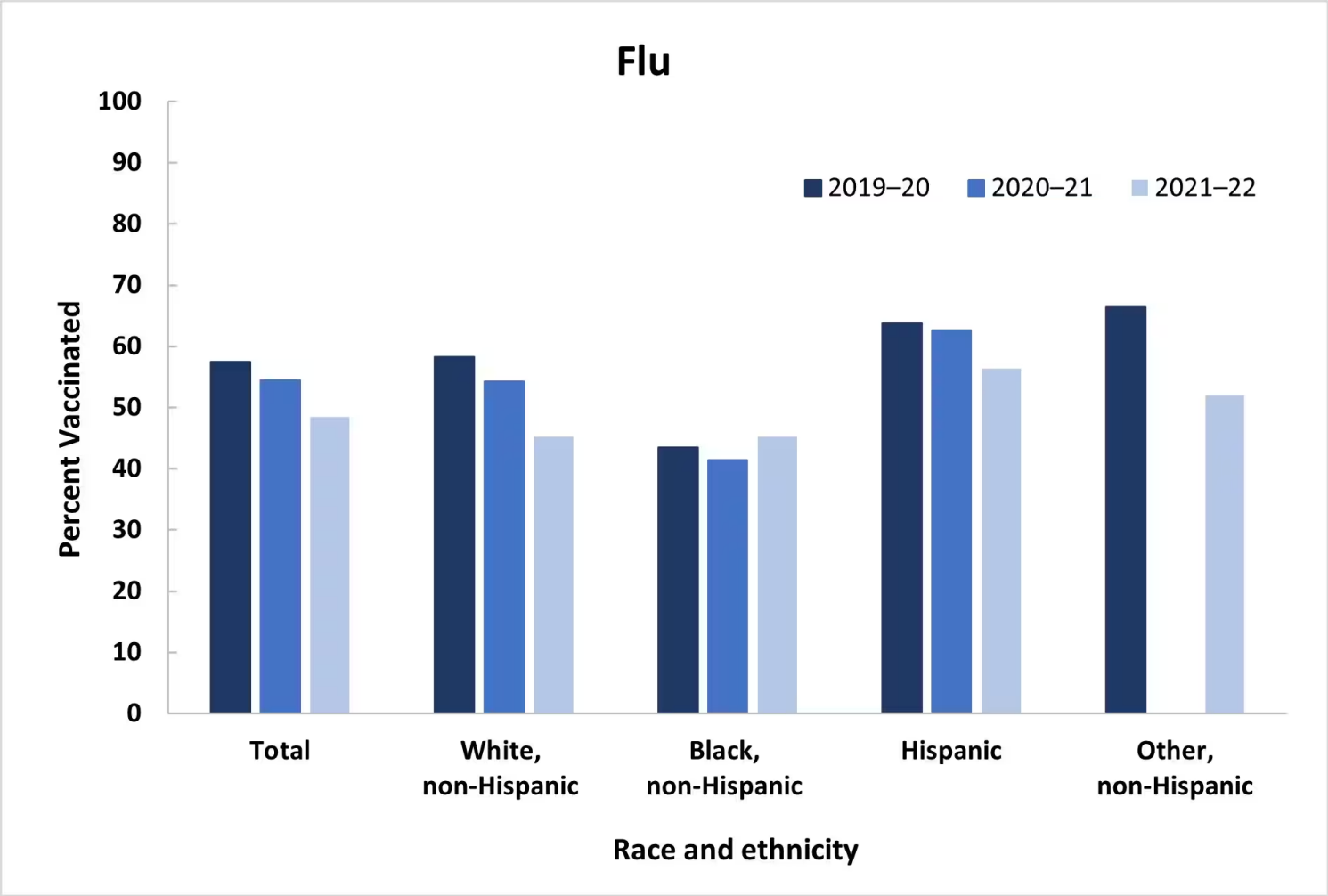
COVID-19 vaccination rates remain low

RSV vaccination rates were low for the initial 2023-24 season

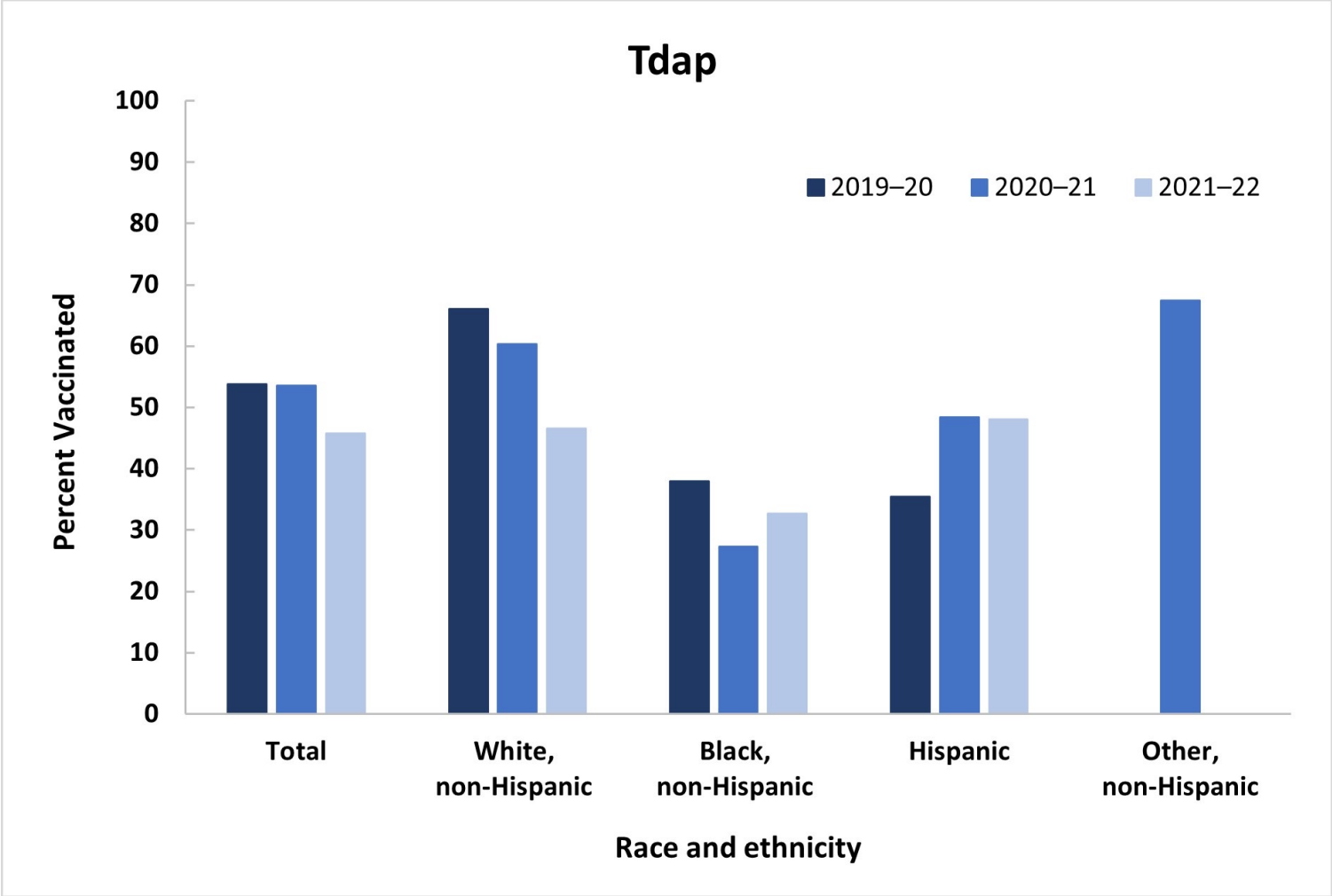
Disparities persist among difference race/ethnicities



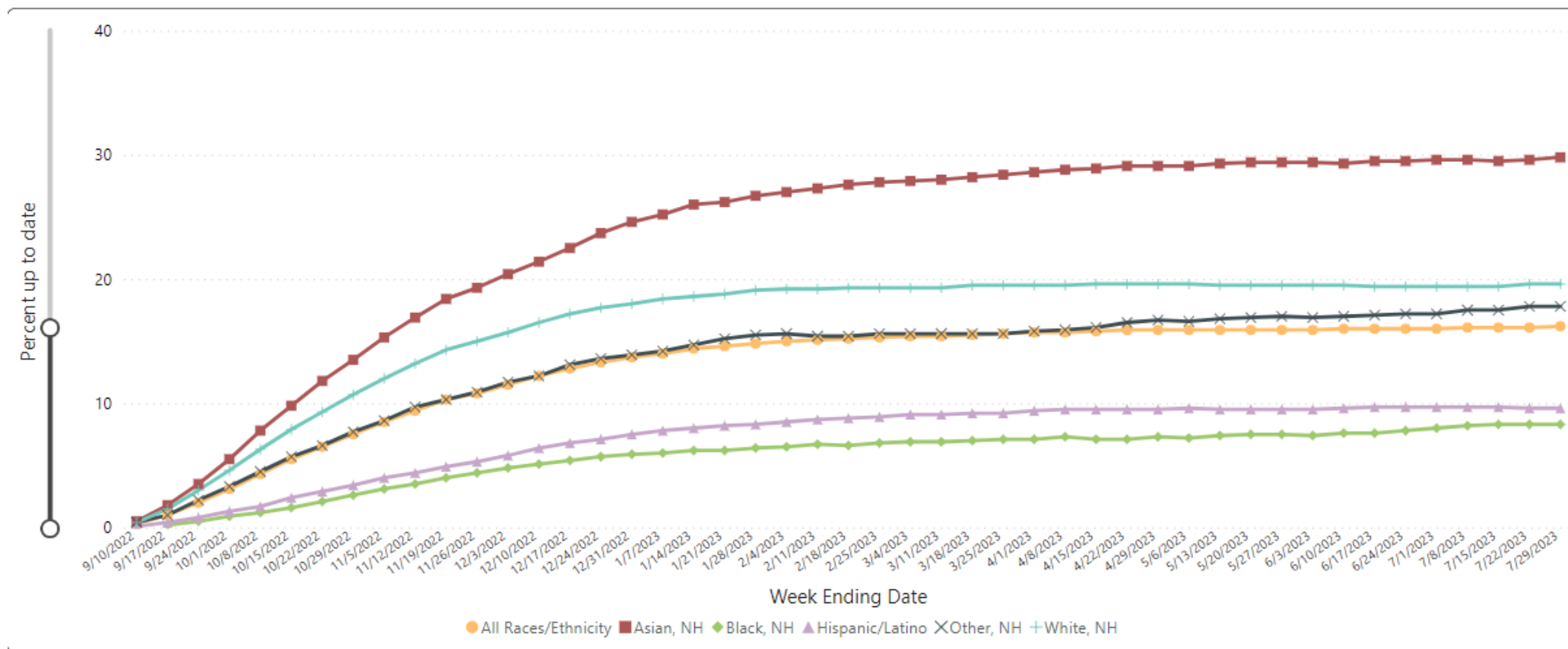
Flu vaccination coverage among pregnant persons, by race and ethnicity, United States, April 2020 – April 2022



Tdap vaccination coverage among pregnant persons, by race and ethnicity, United States, April 2020 – April 2022



PERCENT OF PREGNANT PERSONS AGES 18-49 WHO ARE UP TO DATE WITH COVID-19 VACCINES, VSD, SEPTEMBER 1, 2022- JULY 29, 2023

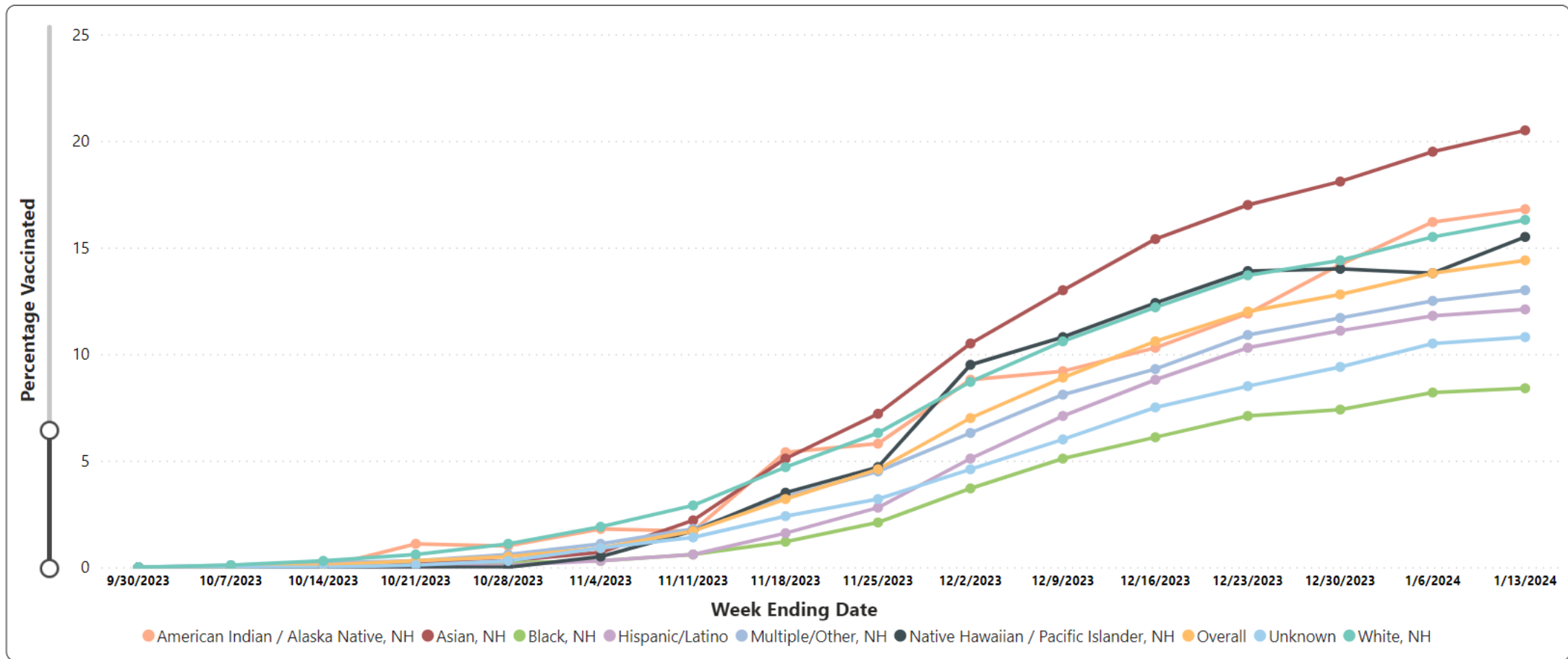


*CDC recommended bivalent boosters to persons age ≥ 12 years starting September 1, 2022. Data on bivalent boosters among pregnant persons was available starting September 4, 2022, and includes doses received starting September 1, 2022.

PERCENT OF PREGNANT PERSONS AGES 18-49 WHO ARE UP TO DATE WITH COVID-19 VACCINES, VSD, SEPTEMBER 1, 2022- JULY 29, 2023

Race and Ethnicity	Updated (bivalent) Booster Dose Coverage (%)	Denominator	Week Ending Date
All Races/Ethnicity	16.2	66,127	7/29/2023
Asian, NH	29.8	9,473	7/29/2023
Black, NH	8.3	4,574	7/29/2023
Hispanic/Latino	9.6	23,659	7/29/2023
Other, NH	17.8	3,351	7/29/2023
White, NH	19.6	20,275	7/29/2023

RSV vaccination coverage among pregnant persons September 30, 2023-January 13, 2024

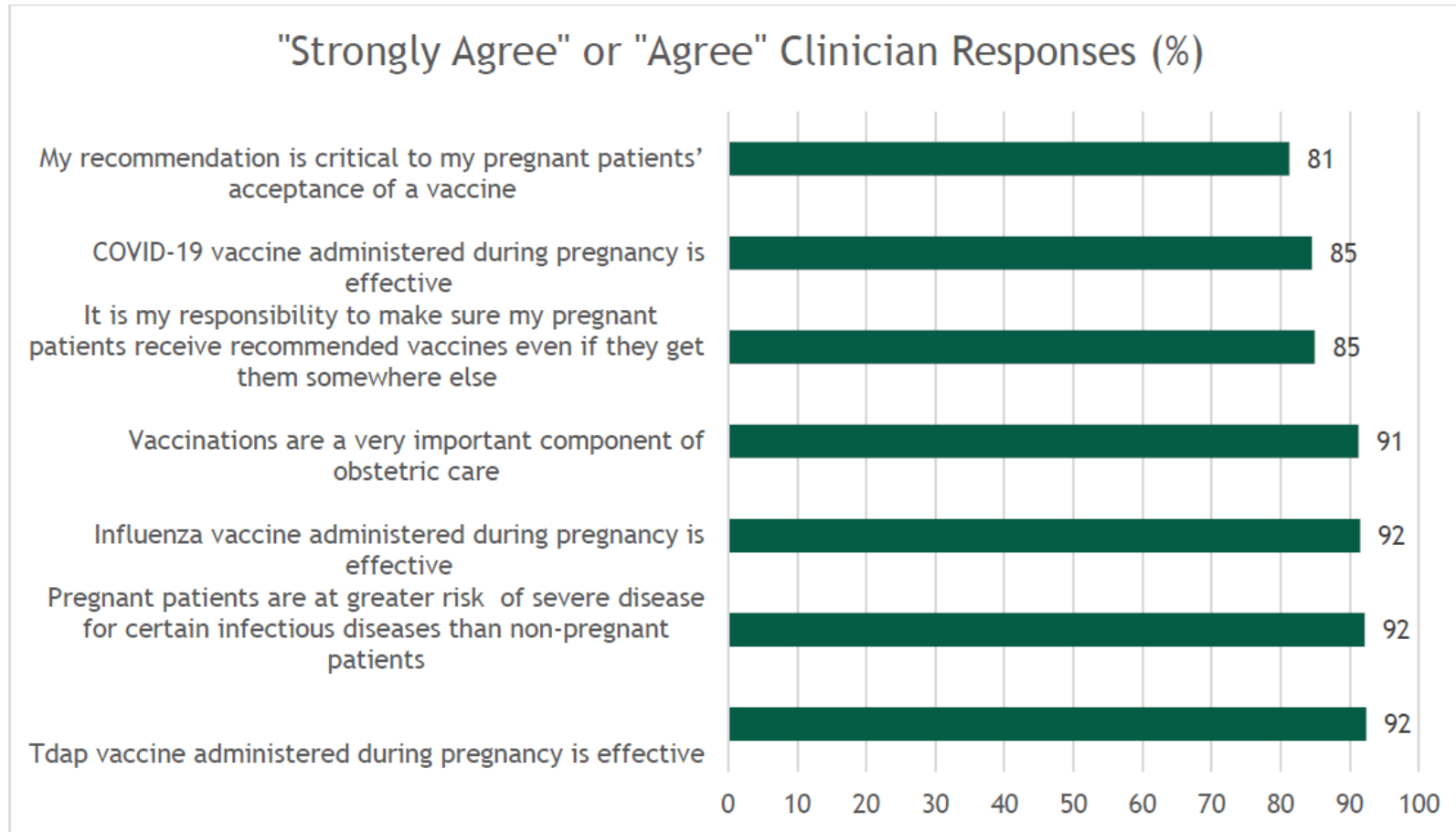


RSV vaccination coverage among pregnant persons September 30, 2023-January 13, 2024

Race and Ethnicity	Coverage Estimate (%)	Denominator	Week Ending Date
American Indian / Alaska Native, NH	16.8%	196	1/13/2024
Asian, NH	20.5%	9,007	1/13/2024
Black, NH	8.4%	4,789	1/13/2024
Hispanic/Latino	12.1%	22,063	1/13/2024
Multiple/Other, NH	13.0%	2,605	1/13/2024
Native Hawaiian / Pacific Islander, NH	15.5%	387	1/13/2024
Overall	14.4%	61,501	1/13/2024
Unknown	10.8%	3,407	1/13/2024
White, NH	16.3%	19,047	1/13/2024

CLINICIAN PERSPECTIVES

CLINICIAN PERSPECTIVES: CLINICIANS STRONGLY AGREE THAT...



CLINICIAN PERSPECTIVE: BARRIERS TO ADMINISTERING VACCINES

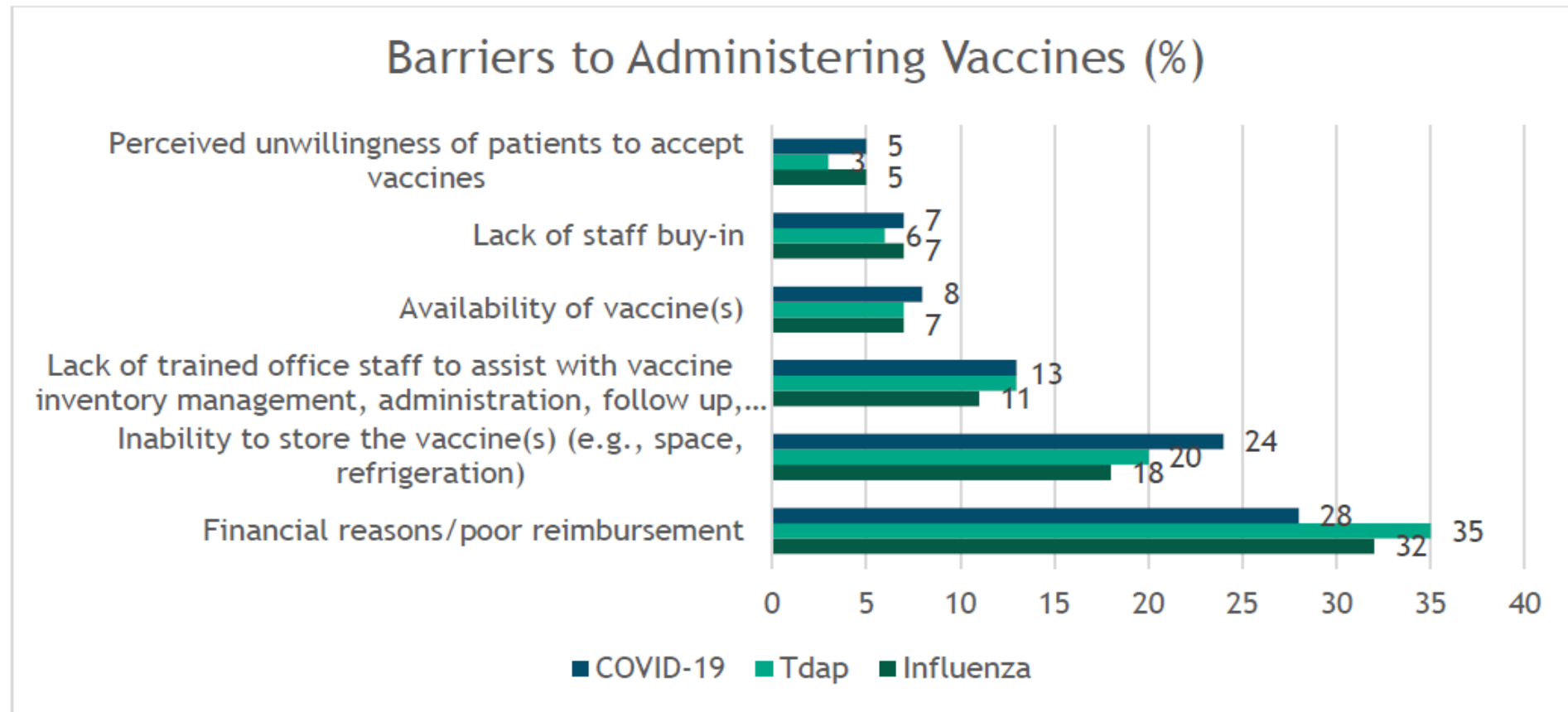
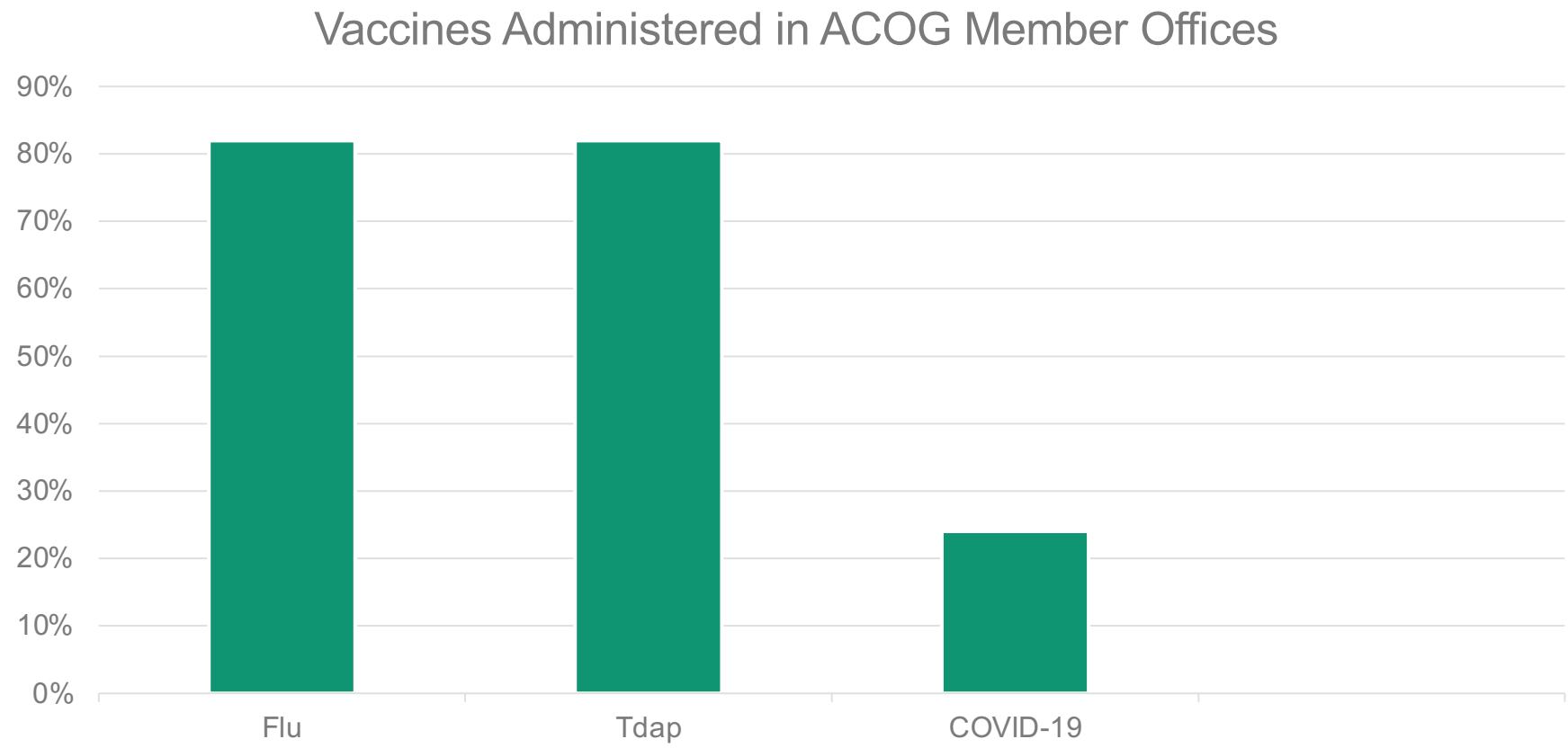


Figure 13. Respondents Who Reported Barriers to Administering Vaccines in Office or Clinic, n = 40

CLINICIAN PERSPECTIVES: VACCINE ADMINISTRATION



CLINICIAN PERSPECTIVES: IMPACT OF COVID-19 ON MATERNAL IMMUNIZATION

Pregnant patients are more cautious about receiving vaccines and have more vaccine related questions

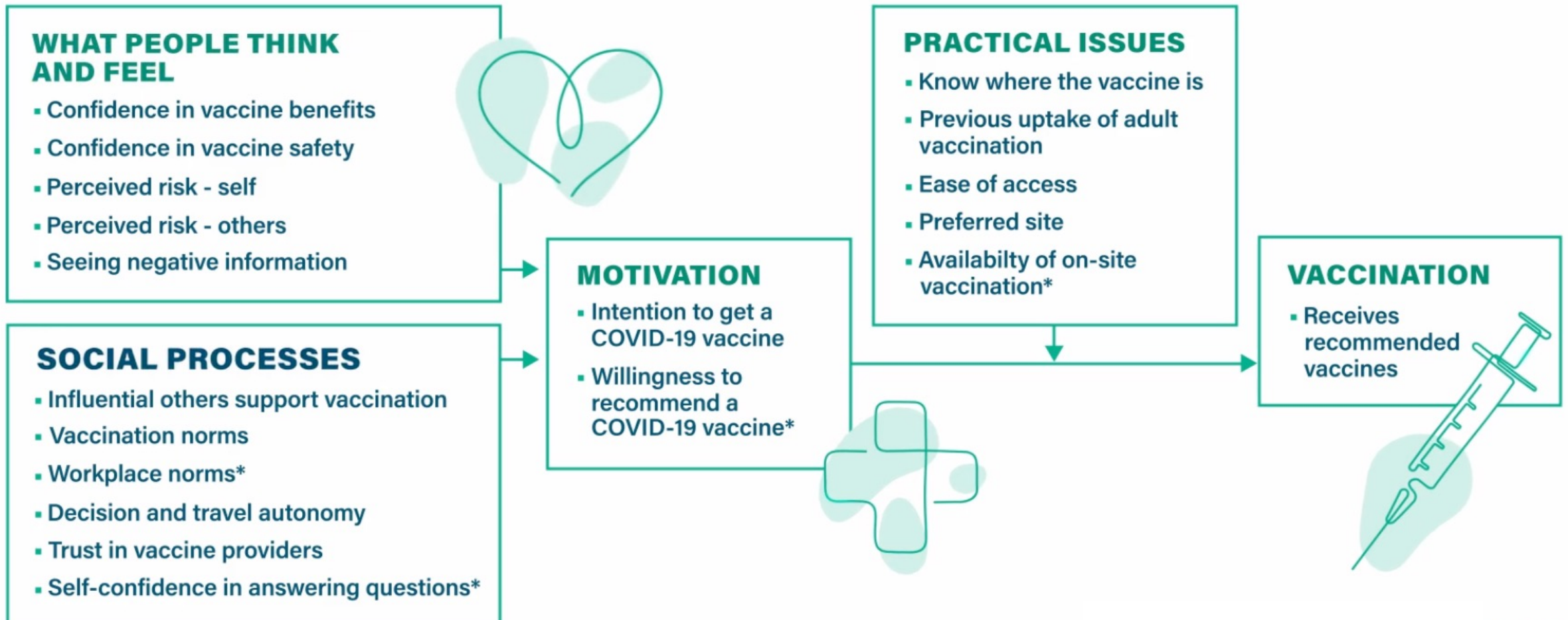
Clinical practices are instituting new efforts for regular or ongoing clinician and staff education about vaccination

Patients are reporting lack of trust in CDC, government institutions, and health systems/providers around immunizations

Patients are reporting concerns about politicization and polarization of vaccinations and maternal health, in general

OPPORTUNITIES: WHAT CAN WE DO?

DRIVERS ASSOCIATED WITH VACCINATION



PREGNANCY SPECIFIC CONSIDERATIONS FOR VACCINATION

Risk of exposure to the disease



Whether an infection poses special risk to the mother



Whether an infection poses a special risk to the fetus

PREGNANCY SPECIFIC CONSIDERATIONS FOR VACCINATION

Research on vaccine safety and efficacy in pregnancy



Support from partner, family, community



Access to vaccination



Trust in medical system

PREGNANCY SPECIFIC FACILITATORS TO VACCINATION



Clinician recommendation

Confidence in vaccine safety and effectiveness

High perceived risk of infection

High perceived severity of infection

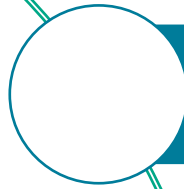
Perceived benefits of vaccination

Access to vaccination sites

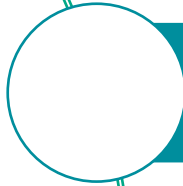
THE OBSTETRICIAN'S ROLE

- **Engage in vaccine counseling early and frequently**
 - Leverage frequency of prenatal care to elicit concerns and provide guidance
- **Provide strong recommendations for vaccines during pregnancy**
 - Patients who receive recommendations for vaccines from their obstetric provider are more likely to receive vaccines
- **Affirm long-term maternal and infant health benefits**
 - Emphasize the role of vaccines towards long term maternal and infant health outcomes and as an equitable strategy to decrease disparities in infectious disease morbidity

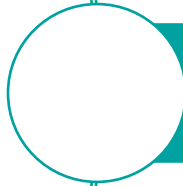
THE OBSTETRICIAN'S ROLE



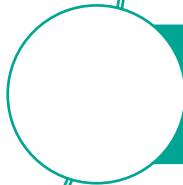
Individualize your approach



Actively listen to and validate concerns



Address and re-address misinformation



Communicate pregnancy specific data regarding safety and efficacy



Remain knowledgeable regarding vaccine access

THANK YOU!