

# Using IIS for Population Level Estimates of Immunization During Pregnancy

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# Two Vaccines for Pregnant Women

	<b>Influenza vaccine</b>	<b>Tdap vaccine</b>
Recommendation	One dose if pregnant or planning to be pregnant	One dose every pregnancy
Timing	Any trimester	Preferably 27–36 weeks gestation
Purpose	Protect pregnant woman, unborn child, passive immunity for infant	Passive immunity for infant

# Importance of Surveillance

- New and changing recommendations
- Risk factors and characteristics of low immunization
- Targeted interventions

# Wisconsin Immunization Registry (WIR)

- All residents born 1995 or later
- All ages
- New clients and vaccinations entered by providers, pharmacies, HMOs, Medicaid, WIC
- Does not collect pregnancy status



**Wisconsin Immunization Registry**

HOME FORMS RENEWAL/REGISTRATION RELATED LINKS

**Immunization Record Search**

Families and individuals can use this screen to view and print their immunizations. First Name, Last Name, and Birth Date are required.

\* First Name  \* Last Name

\* Birth Date  MM/DD/YYYY

Please supply either the Social Security Number, Medicaid ID, or Health Care Member ID:

\* SSN  -  -

- or -

\* Medicaid ID

- or -

\* Health Care Member ID

Click one of the links below to see the Wisconsin Immunization Registry Parent Brochure:

- [WIR Parent Brochure](#)
- [Folleto de WIR para Padres de Familia](#)
- [WIR Niam Thiab Txiv Phau Me Nyuam Ntawv](#)

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# Wisconsin State Vital Records Office (SVRO)

- Received birth records from 2017
- Variables used include demographics and characteristics of pregnancy and delivery
- Includes last name and last name at birth

# Matching

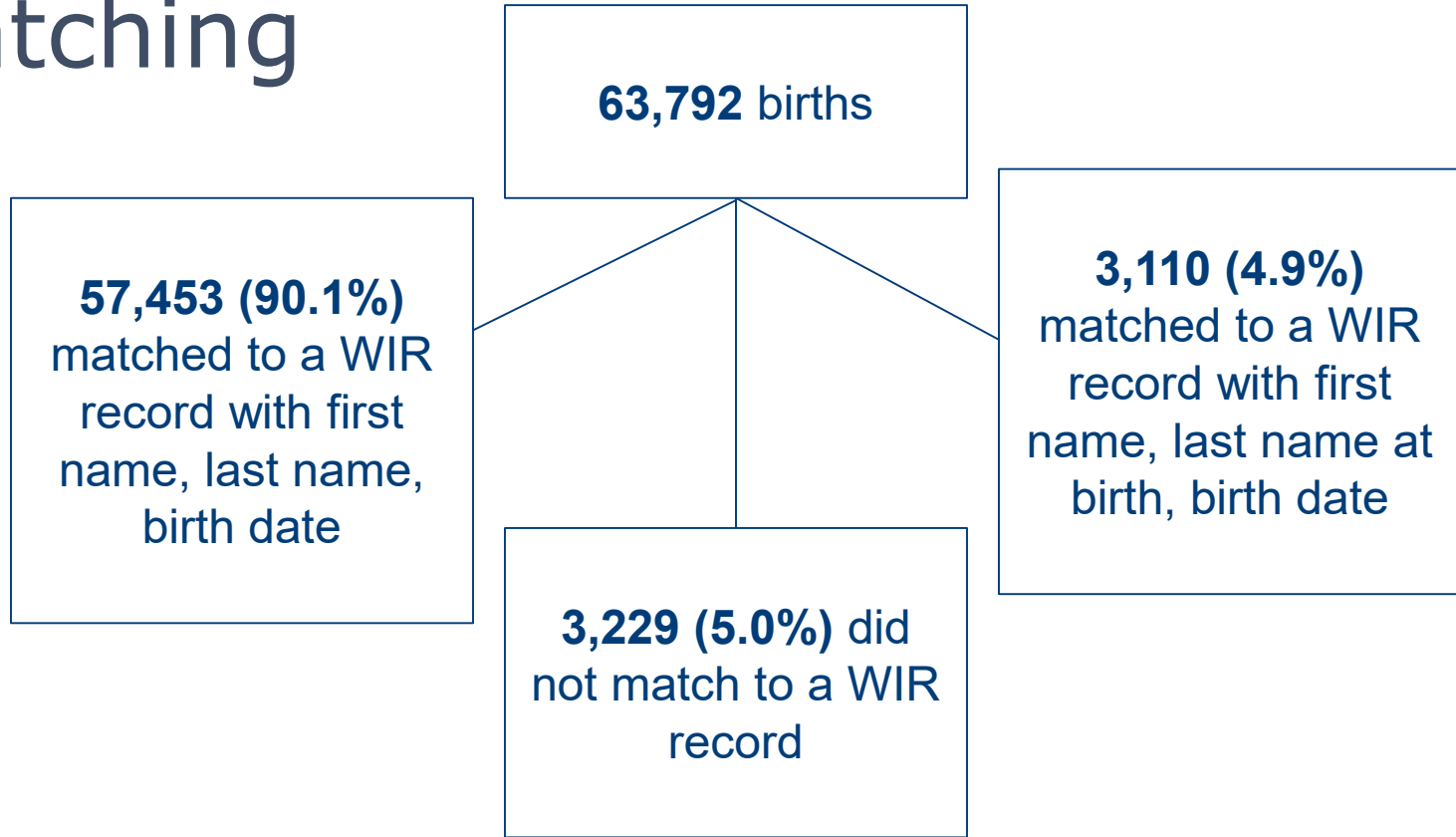




Table 1. Percent of birth records matched to a WIR record by demographic.

Demographic		Percent matched to WIR record
Race	Asian, non-Hispanic	91.5%
	Black, non-Hispanic	96.7%
	Hispanic	94.3%
	AI/AN, non-Hispanic	96.6%
	White, non-Hispanic	95.2%
Insurance	Medicaid	95.8%
	Private	96.4%
Prenatal Care	Adequate	96.2%
	Inadequate	90.1%

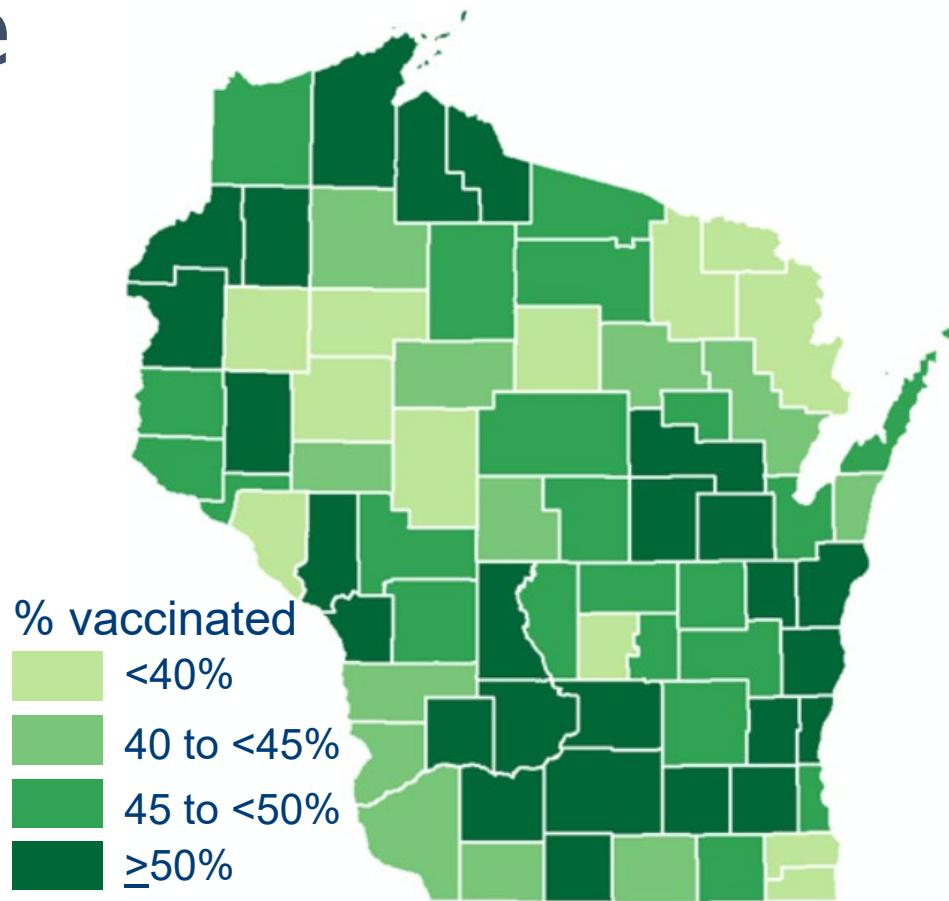


# Results



# Influenza Vaccine

49.5% of women who gave birth in Wisconsin in 2017 received a flu shot during their pregnancy.



## Overall

49.5%

## Age (years)



## Race/Ethnicity



## Insurance



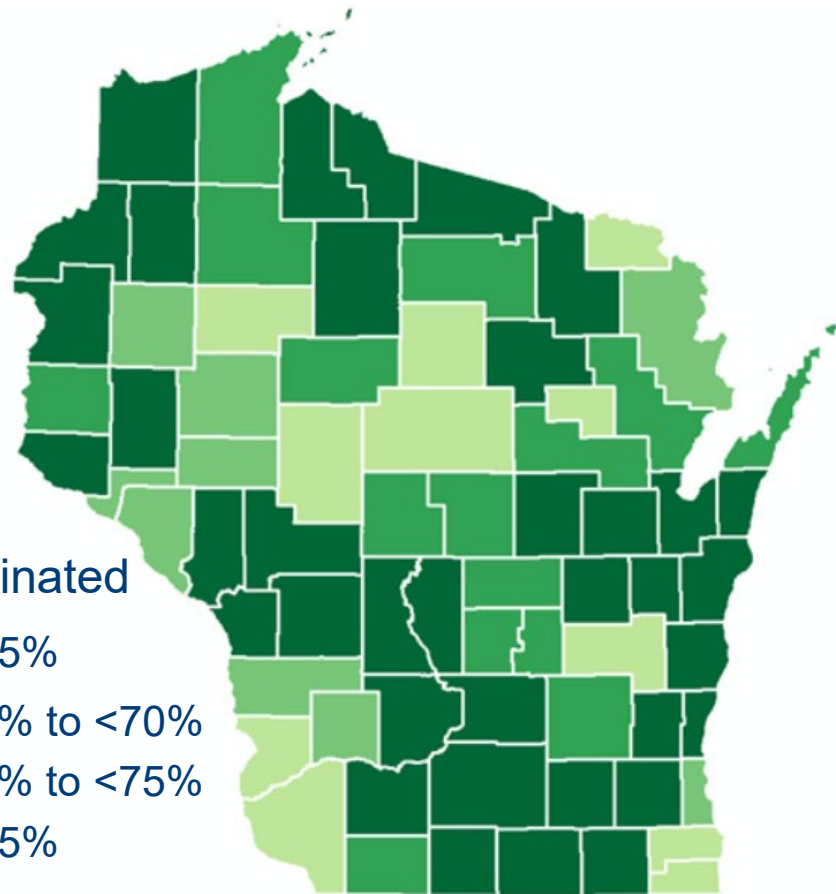
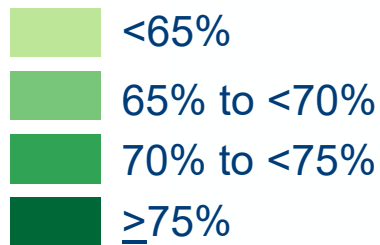
## Prenatal Care



# Tdap Vaccine

74.5% of women who gave birth in Wisconsin in 2017 received a Tdap vaccine during their pregnancy.

% vaccinated



## Overall

74.5%

## Age (years)

<20

59.3%

20-29

73.9%

30-39

76.8%

>=40

68.8%

## Race/Ethnicity

Asian

80.3%

White

77.0%

Hispanic

71.2%

AI/AN

63.1%

Black

62.4%

## Insurance

Private

80.7%

Medicaid

67.5%

## Prenatal Care

Adequate

78.5%

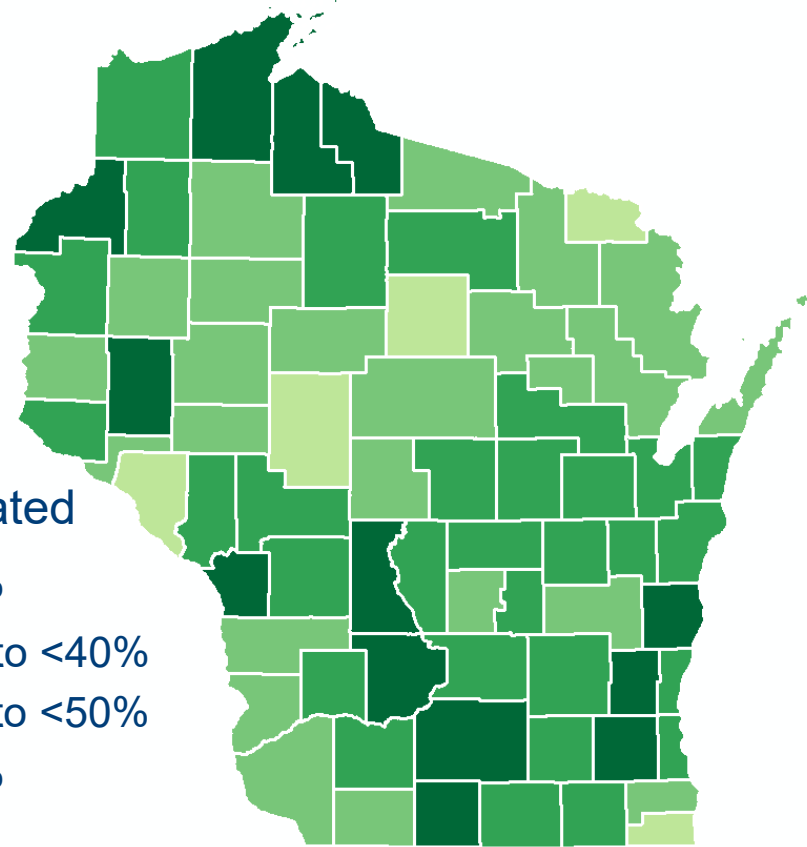
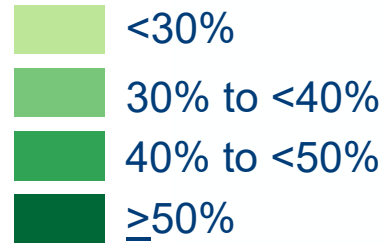
Inadequate

59.0%

# Influenza and Tdap Vaccine

44.1% of women who gave birth in Wisconsin in 2017 received a Tdap and influenza vaccine during their pregnancy.

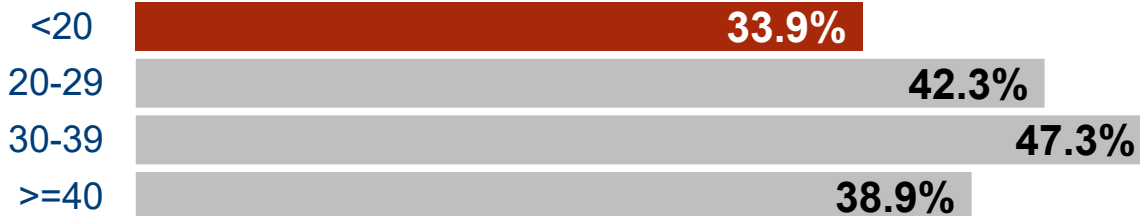
% vaccinated



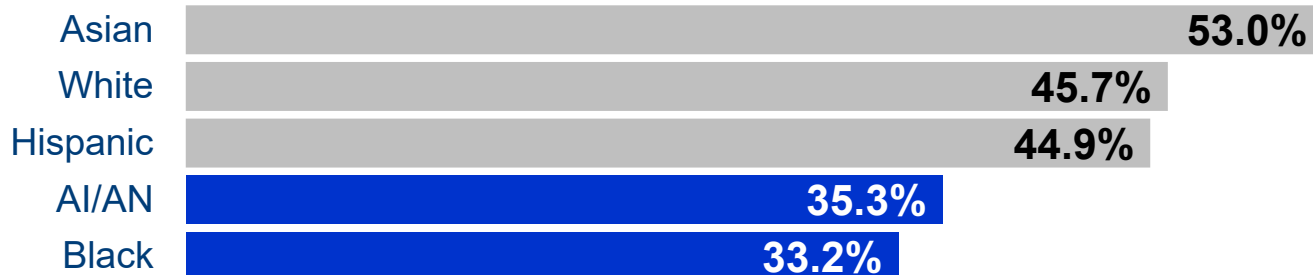
## Overall

44.1%

## Age (years)



## Race/Ethnicity



## Insurance



## Prenatal Care



# Data in Action





# Data Use

[www.dhs.wisconsin.gov/immunization/data.htm](http://www.dhs.wisconsin.gov/immunization/data.htm)

## Immunization Rate Reports

Unless otherwise specified, the data source for the immunization rates presented below is the Wisconsin Immunization Registry. For more information about immunizations in Wisconsin, go to the [Wisconsin Immunization Program home page](#).

### Influenza

**Influenza Weekly Report** (PDF)

**Are pregnant women in Wisconsin receiving influenza vaccine? P-01988** (PDF)

**Influenza vaccination rates by age and county, 2015-2016, P-01609** (PDF)

**Protect your patients against influenza! P-01633** (PDF)

**Influenza vaccination rates among people with asthma, P-01640** (PDF)

### Children Ages 0-18 Years

**Childhood vaccination rates** (PDF)

**By county and city** (PDF)  
**Map** (PDF)

**Adolescent vaccination rates** (PDF)

**By county and city** (PDF)  
**Maps:**  
**HPV (1 dose)** (PDF)  
**HPV (up-to-date)** (PDF)  
**MeningACWY (1 dose)** (PDF)  
**MeningACWY (up-to-date)** (PDF)  
**Tdap** (PDF)

### Adults

**Adult vaccination rates** (PDF)

**By county and city** (PDF)  
**Maps:**  
**HPV (up-to-date)** (PDF)  
**Tdap** (PDF)  
**Zoster** (PDF)  
**PCV13** (PDF)  
**PPSV23** (PDF)

**Vaccination at retail pharmacies** (PDF)

### Pregnant Women

**Are pregnant women in Wisconsin receiving influenza vaccine? P-01998** (PDF)

**Are pregnant women in Wisconsin receiving the Tdap vaccine? P-01696** (PDF)

**Are your pregnant patients receiving Tdap vaccine? P-01713** (PDF)



**Tdap and influenza vaccination rates, 2013-2015** Vaccine. 2017 Apr 25; 35(18): 2298-2302.

# Fact Sheets

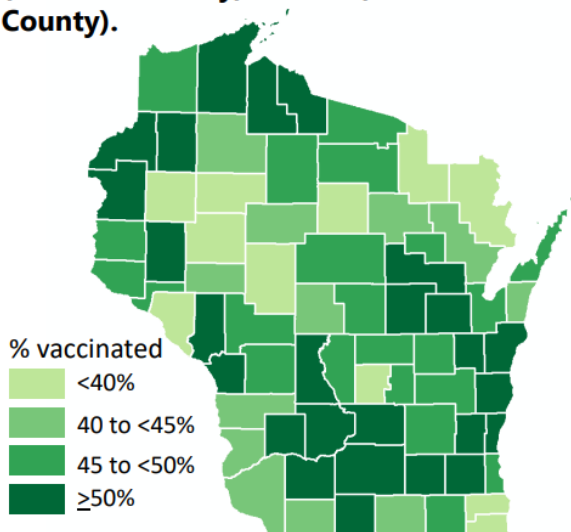
- Separate fact sheets for Tdap and flu
- Audiences include general population as well as providers

# Are pregnant women in Wisconsin getting their flu shot?

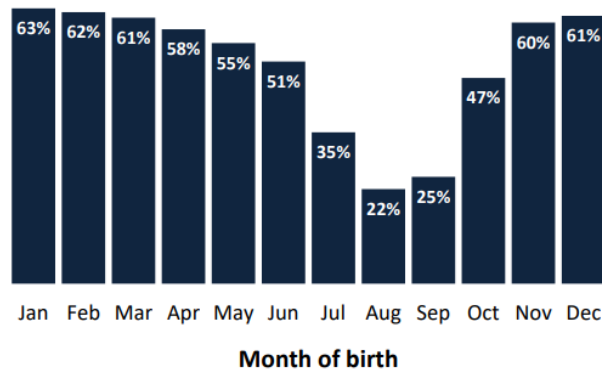
To protect themselves and their newborn infants from influenza, pregnant women are recommended to get the influenza vaccine.

 Nearly half of all women who gave birth in Wisconsin in 2017 received influenza vaccination during their pregnancy. 

Vaccination coverage ranged from 22% (Florence County) to 68% (Dane County).



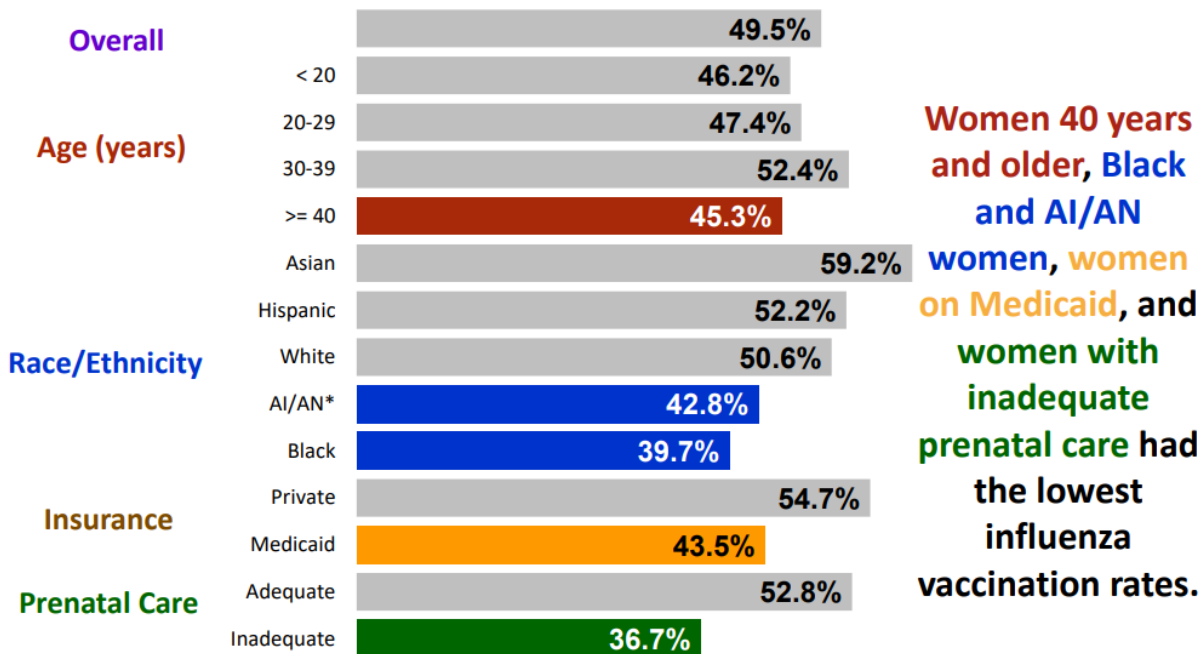
Women who deliver in January and February have **highest** rates of influenza vaccination whereas, women who deliver in August and September have the lowest.



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P-01998 (06/2019)

## Influenza vaccination rates in pregnant women vary by age, race/ethnicity, insurance type, and prenatal care.



\*American Indian and Alaska Native

Notes: This report includes information on women residing in Wisconsin who had a live birth during 2017. Of these women, 98.9% had a Wisconsin Immunization Registry record and the others were excluded from this analysis. All percentages reported are the percentage of the women who received influenza vaccine any time during the pregnancy. Influenza doses received before the pregnancy were not included. Prenatal care (PNC) adequacy was measured by the Kotelchuck index.

# Are your pregnant patients receiving the Tdap vaccine?

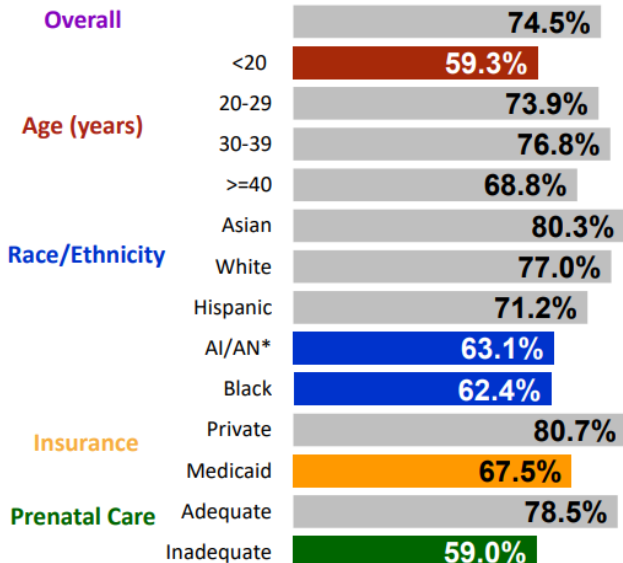
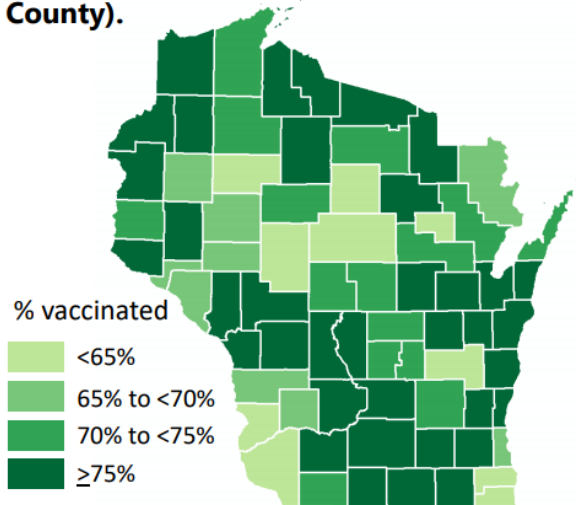
To protect their newborns from pertussis (whooping cough), it is recommended that pregnant women receive the Tdap vaccine during every pregnancy.



**Of the 74% of women who received Tdap during their pregnancy, 96% received it at the recommended time during pregnancy (27-36 weeks gestation).**



**Vaccination coverage ranged from 15% (Florence County) to 88% (Dane County).**



\*American Indian and Alaska Native

Notes: Tdap is tetanus-diphtheria-acellular pertussis vaccine. This report includes information on women ages 18 and older residing in Wisconsin who had a live birth during 2017. 98.9% of these women had a Wisconsin Immunization Registry record and the others were excluded from this analysis. All percentages reported are the percentage of the women who received Tdap any time during the pregnancy. Prenatal care (PNC) adequacy was measured by the Kotelchuck index.



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P-01713 (06/2019)

## Strategies for prenatal care providers to prevent infant pertussis

**Strongly recommend Tdap to your patients during every pregnancy.**

Administer the vaccine in your office or refer the patient to an immunization provider.

**Optimal timing of Tdap administration is between 27 and 36 weeks gestation to maximize the maternal antibody response and passive antibody transfer to the infant.**

Recent evidence suggests that Tdap administration earlier during the 27-36 week window provides more passive immunity to the newborn. Therefore, Tdap should be administered early during the 27-36 week window, if possible. Early in pregnancy, discuss with your patient the importance of Tdap vaccination during every pregnancy.

**Postpartum Tdap administration is NOT optimal.**

Tdap during pregnancy provides the best protection for mother and infant. Fewer babies will be hospitalized for and die from pertussis when Tdap is given during pregnancy rather than during the postpartum period.

**Tdap should NOT be offered as part of routine preconception care.**

Protection from pertussis vaccines does not last as long as vaccine experts would like, so Tdap is recommended during pregnancy in order to provide optimal protection to the infant. If Tdap was administered during a preconception visit, it should be administered again during pregnancy between 27 and 36 weeks gestation.

**Tdap can be safely administered earlier in pregnancy if needed.**

Pregnant women should receive Tdap anytime during pregnancy if it is indicated for wound care or during a community pertussis outbreak. If Tdap is administered earlier in pregnancy, it should not be repeated between 27 and 36 weeks gestation; only one dose is recommended during each pregnancy.

**Recommend pertussis vaccination for close contacts.**

Ensure the infant's close contacts, including siblings, other parents, grandparents, and caregivers are up to date with pertussis vaccinations (DTaP or Tdap). Administer needed vaccines or refer for vaccination as needed.

### References and resources

<https://www.cdc.gov/pertussis/pregnant/>

<https://www.cdc.gov/pertussis/downloads/fs-hcp-provide-prenatal-care.pdf>

<http://immunizationforwomen.org/providers/resources/toolkits/tdap.php>

# Letter to providers

- Wisconsin birthing hospitals, obstetricians, pharmacists, and local health departments
- Reminder that influenza and Tdap are recommended every pregnancy
- Vaccine safety
- Encourage use of WIR

# Conclusions

True population estimates of immunizations during pregnancy are important to gauge progress and identify areas for improvement.



# Next Steps

- We are in the process of obtaining 2013–2017 data to analyze trends.
- It is important to monitor these trends and identify pockets of need.
- Work with partners, disseminate results, and identify vulnerable populations.

# Thank you





# Table 2. Demographics of matched and unmatched birth records.

	Matched (n=60,563)	Unmatched (n=3,229)
White, non-Hispanic*	69.2%	65.8%
Black, non-Hispanic*	10.6%	6.9%
Hispanic*	8.1%	9.3%
Mean age	28 years	29 years
Private insurance*	58.4%	41.3%
Adequate prenatal care*	79.7%	60.6%
Milwaukee County*	20.8%	18.0%
Dane County*	9.2%	6.4%

\*Race/Ethnicity, pay code, prenatal care, and county type were all significantly different between the two samples.