

Using IIS for Population Level Estimates of Immunization During Pregnancy

Stephanie Schauer, Ph.D.
Immunization Program Manager
December 2019



Two Vaccines for Pregnant Women

	Influenza vaccine	Tdap vaccine
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

Production Region

Org Code:

Username:

Password:

Login

DO NOT ATTEMPT TO LOG ON UNLESS YOU ARE AN AUTHORIZED USER

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:

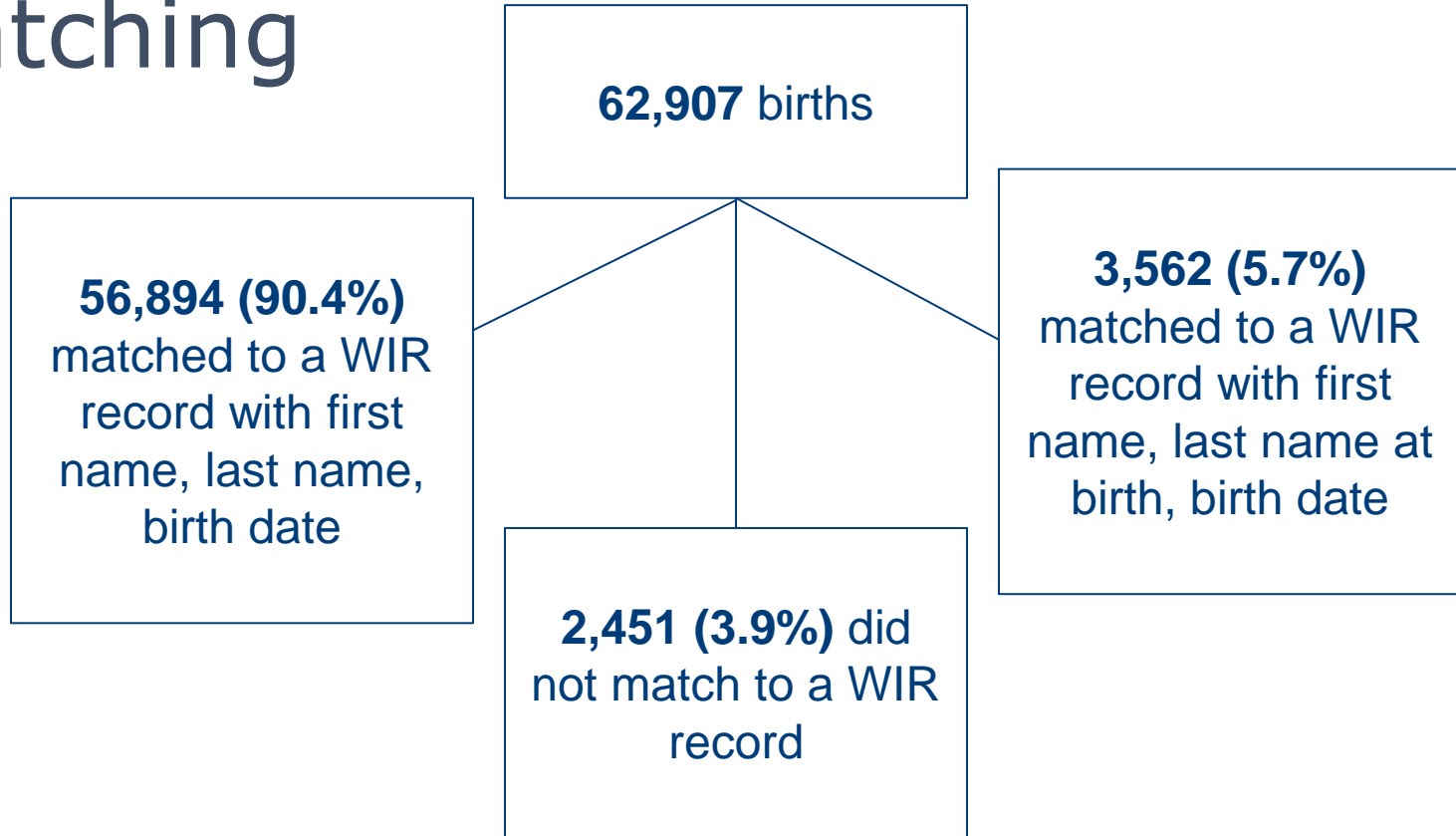
- [WIR Parent Brochure](#)
- [Folleto de WIR para Padres de Familia](#)
- [WIR Niam Thiab Txiv Phau Me Nyuam Ntawv](#)

Copyright © 1999 - 2017 State of Wisconsin. All rights reserved.

Wisconsin State Vital Records Office (SVRO)

- Received birth records from 2018
- Variables used include demographics and characteristics of pregnancy and delivery
- Includes last name and last name at birth

Matching



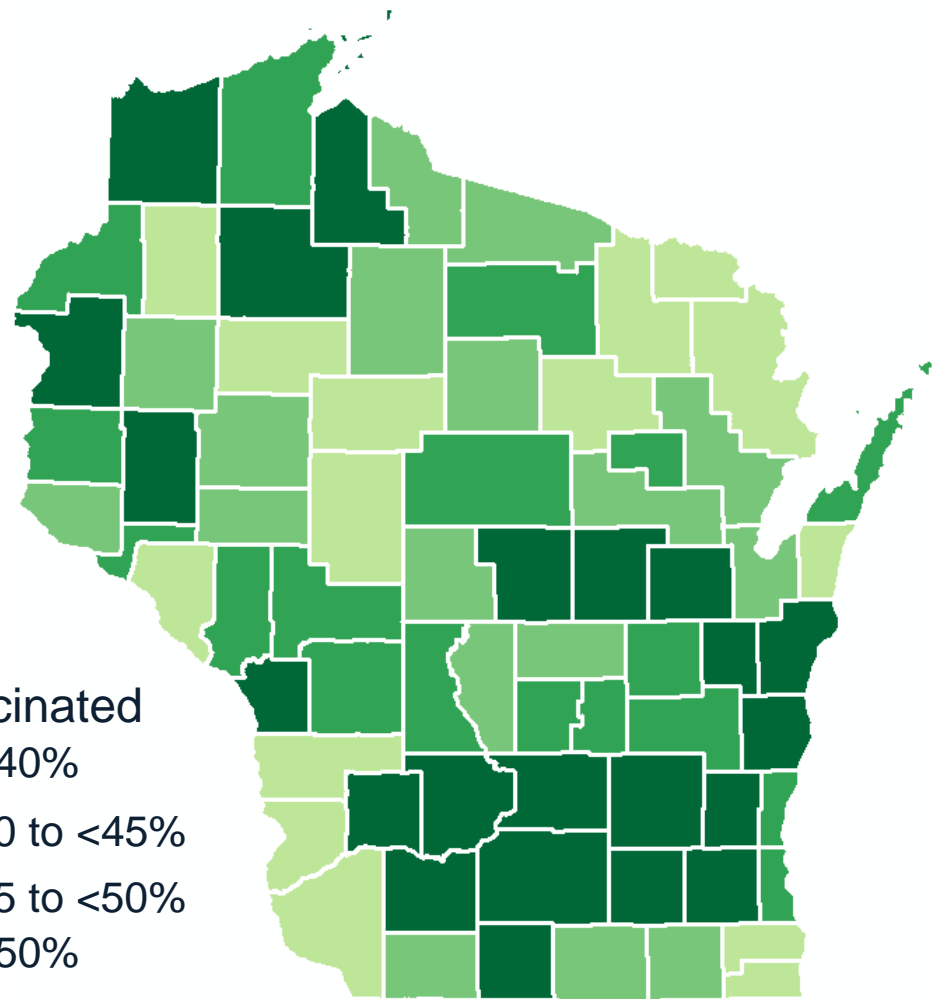
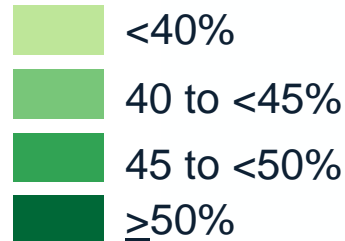
Results



Influenza Vaccine

48.5% of women who gave birth in Wisconsin in 2018 received a flu shot during their pregnancy.

% vaccinated



Overall

48.5%

Age (years)

< 20

47.6%

20-29

45.7%

30-39

51.7%

>= 40

46.8%

Race/Ethnicity

Asian

58.4%

Hispanic

48.0%

White

50.0%

AI/AN

42.4%

Black

37.9%

Insurance

Private

53.9%

Medicaid

42.0%

Prenatal Care

Adequate

51.5%

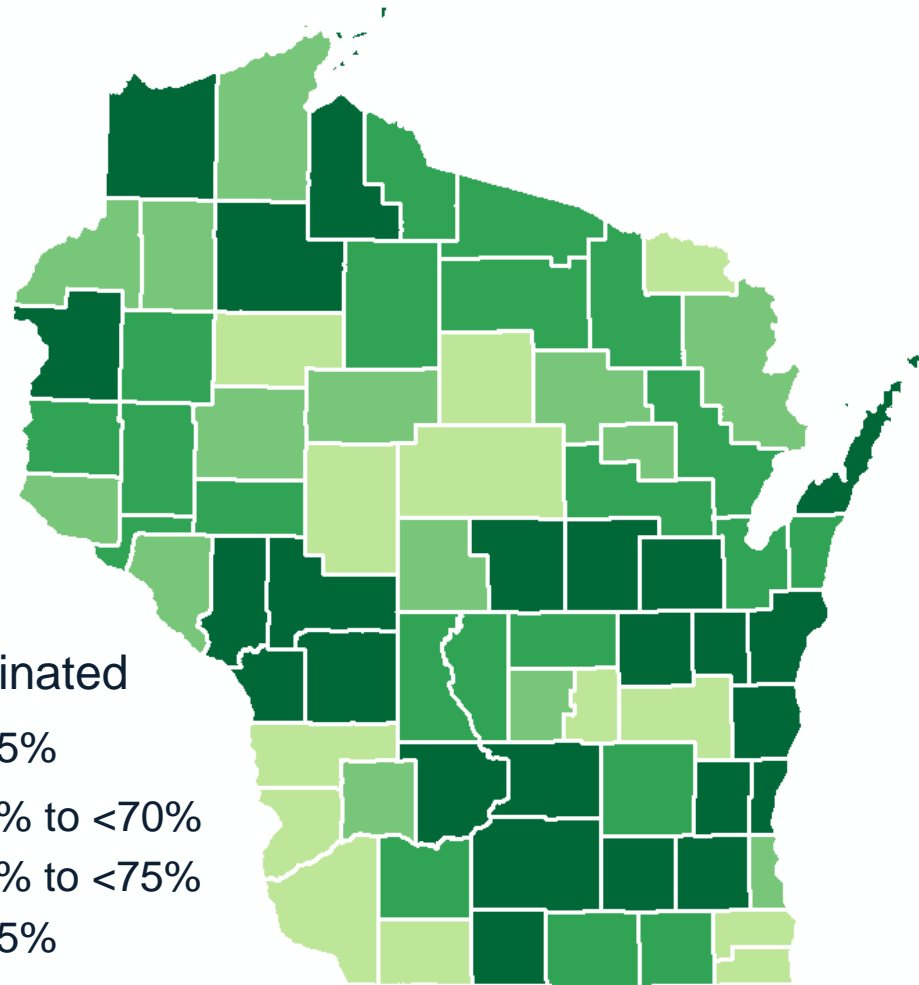
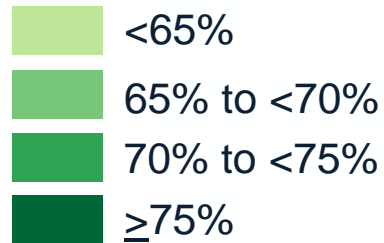
Inadequate

37.0%

Tdap Vaccine

76.3% of women who gave birth in Wisconsin in 2018 received a Tdap vaccine during their pregnancy.

% vaccinated



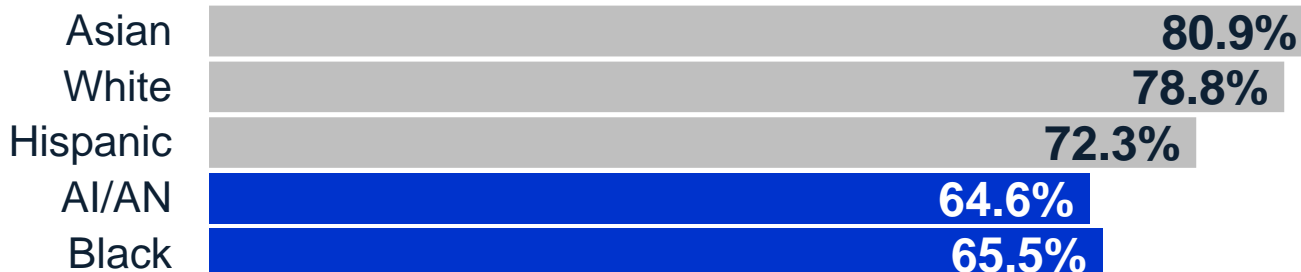
Overall

76.3%

Age (years)



Race/Ethnicity



Insurance



Prenatal Care



Data in Action



Data Use

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)

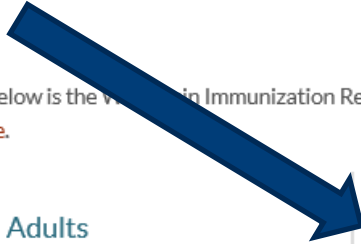
Pregnant Women

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

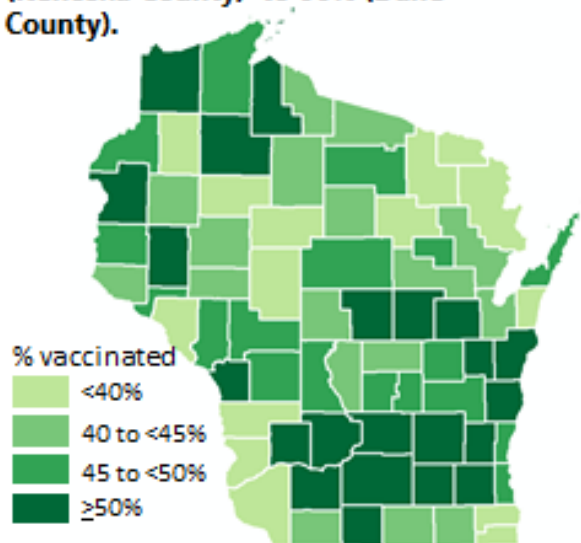
- Separate fact sheets for Tdap and flu
- Audiences include general population as well as providers

Are pregnant women in Wisconsin getting their flu shot?

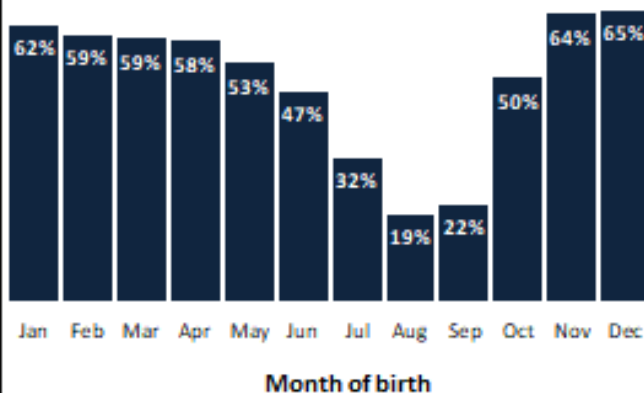
To protect themselves and their newborn infants from influenza, pregnant women are recommended to get the influenza vaccine.

Nearly half of all women who gave birth in Wisconsin in 2018 received influenza vaccination during their pregnancy.

Vaccination coverage ranged from 25% (Kenosha County) to 66% (Dane County).



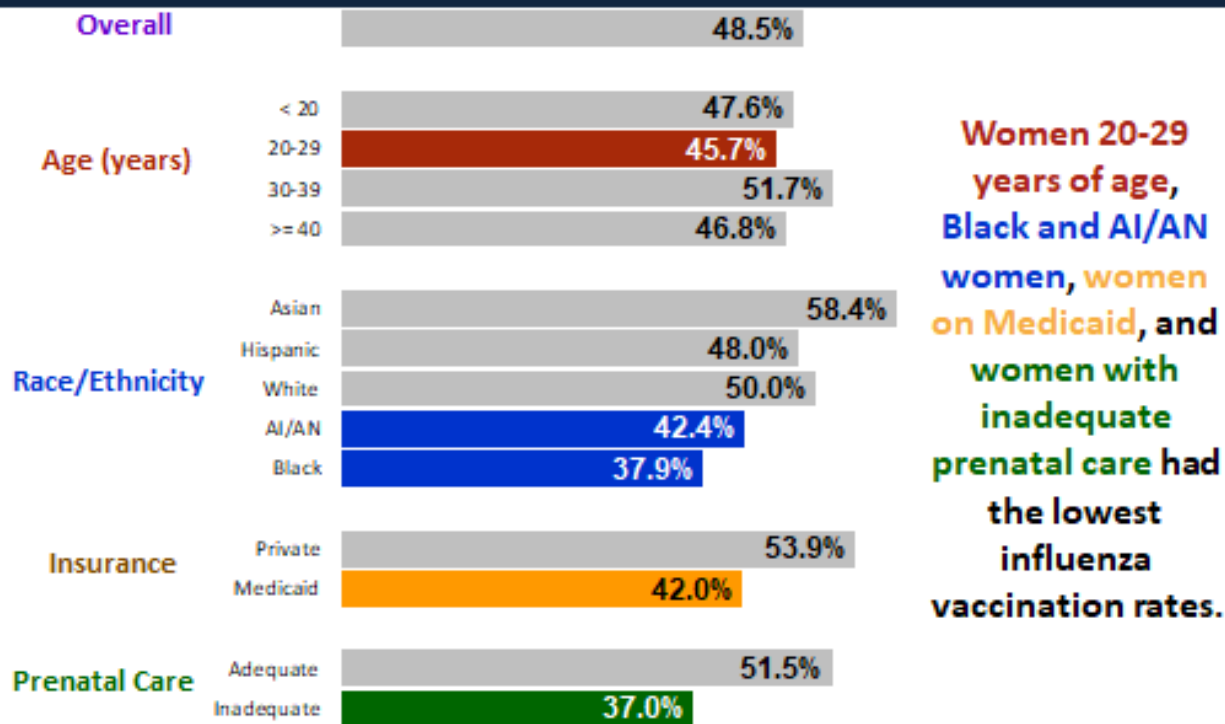
Women who deliver in January and February have highest rates of influenza vaccination whereas, women who deliver in August and September have the lowest.



WISCONSIN DEPARTMENT
of HEALTH SERVICES

P-01998 (09/2019)

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 2018. Of these women, 96.1% 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.

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.

Project demonstrates the ability to successfully match data from two systems.

Next Steps

- We are in the process of obtaining 2013–2018 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

