Indiana Department of Health

CLINICIAN UPDATES

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12/01/23

OUR MISSION:

To promote, protect, and improve the health and safety of all Hoosiers.

OUR VISION:

Every Hoosier reaches optimal health regardless of where they live, learn, work, or play.

Current HAI Progress Report

Indiana Department of Health

2022 Healthcare Association Infection Annual Highlights

Decreases in the standardized infection ratio (SIR) from 2021 to 2022 for some HAIs in Acute Care Hospitals included:

- 19% decrease in ventilator-associated events (VAE)
- 16% decrease in hospital-onset methicillin-resistant Staphylococcus aureus (MRSA) bacteremia
- 12% decrease in catheter-associated urinary tract infections (CAUTI)
- 9% decrease in central line-associated bloodstream infections (CLABSI)
- 3% decrease in hospital-onset Clostridioides difficile infection (CDI)

The report showed little progress in reducing HAIs in other healthcare settings.

- Among Inpatient Rehab Facilities, there was a 9% decrease in hospital-onset CDI infection, otherwise there were no significant changes in the 2022 SIRs compared with 2021.
- Among LTACHs, there were no significant changes in 2022 SIRs compared with 2021.

Current HAI Progress Report | HAI | CDC

Recalls

Indiana Department of Health

OTC eye drops recall due to risk of eye infections

Nov 3, 2023

- The U.S. Food and Drug Administration (FDA) issued a warning to not purchase and to immediately stop using 26 over-the-counter eye drop products due to potential for risk of eye infections that could result in vision loss
- The agency investigators found positive bacterial test results from environmental sampling of critical drug production areas in the manufacturing facility
- FDA recommended the manufacturer recall all lots and the manufacturers have been compliant (see link below for full information)

FDA warns consumers not to purchase or use certain eye drops from several major brands due to risk of eye infection | FDA

FDA Safety Communication

- The U.S. Food and Drug Administration (FDA) is warning consumers, healthcare providers, and healthcare facilities not to use recalled saline (0.9% sodium chloride) and sterile water medical products manufactured by Nurse Assist, LLC, and sold under various brands.
- To date, Nurse Assist, LLC has not received any reports of adverse events for these products. The product was distributed in the United States and Canada. Recalled product was distributed from November 1, 2021 to September 18, 2023.
- Reports of HAIs associated with use of these recalled products can be transmitted via MedWatch.
- On November 6, 2023, Nurse Assist, LLC announced a voluntary recall of the following water-based medical products because the products **may not be sterile**:
    - 0.9% Sodium Chloride Irrigation USP (100 mL bottles, 250 mL bottles, 500 mL bottles, 1000 mL bottles, 3.1oz spray can, 7.1oz spray can, 3mL syringes, 5mL syringes, and 10mL syringes);
    - Sterile Water for Irrigation USP (100 mL bottles, 250 mL bottles, 500 mL bottles, 1000 mL bottles, 120 mL cups, 10mL syringes, and 30mL syringes).
    - These products were sold under the following brands: Nurse Assist, Cardinal, Covidien, Halyard Owens Minor, Idexx, Mac Medical, McKesson, Medichoice Owens Minor, Medline, Sol, SteriCare, Trudell, and Vyaire. The recalled products may be available as individual units or may be included as part of a kit.

Do Not Use Certain Brands of Saline and Sterile Water Medical Products by Nurse Assist Because They May Not Be Sterile: FDA Safety Communication | FDA

Nurse Assist, LLC Issues Recall of 0.9% Sodium Chloride Irrigation USP and Sterile Water for Irrigation USP Nationwide and to Canada | FDA

High Blood Lead Levels in Children Consuming Recalled Cinnamon Applesauce Pouches

November 9, 2023 - United States - WanaBana USA is voluntarily recalling all lots of WanaBana Apple Cinnamon Fruit Purée pouches due to reports of elevated levels of lead found in certain units of the product

- WanaBana apple cinnamon fruit puree pouches are sold nationally and are available through multiple retailers including Amazon, Dollar Tree, and other online outlets.
- Schnucks-brand cinnamon-flavored applesauce pouches and variety pack are sold at Schnucks and Eatwell Markets grocery stores.
- Weis-brand cinnamon applesauce pouches are sold at Weis grocery stores.
- **No Indiana cases detected**

Health Alert Network (HAN) - 00500 | High Blood Lead Levels in Children Consuming Recalled Cinnamon Applesauce Pouches (cdc.gov)

WanaBana Recalls WanaBana, Weis, and Schnucks Apple Cinnamon Fruit Purée Pouches & Cinnamon Apple Sauce Due to Elevated Lead Levels | FDA

Investigation of Elevated Lead Levels: Cinnamon Applesauce Pouches (November 2023) | FDA

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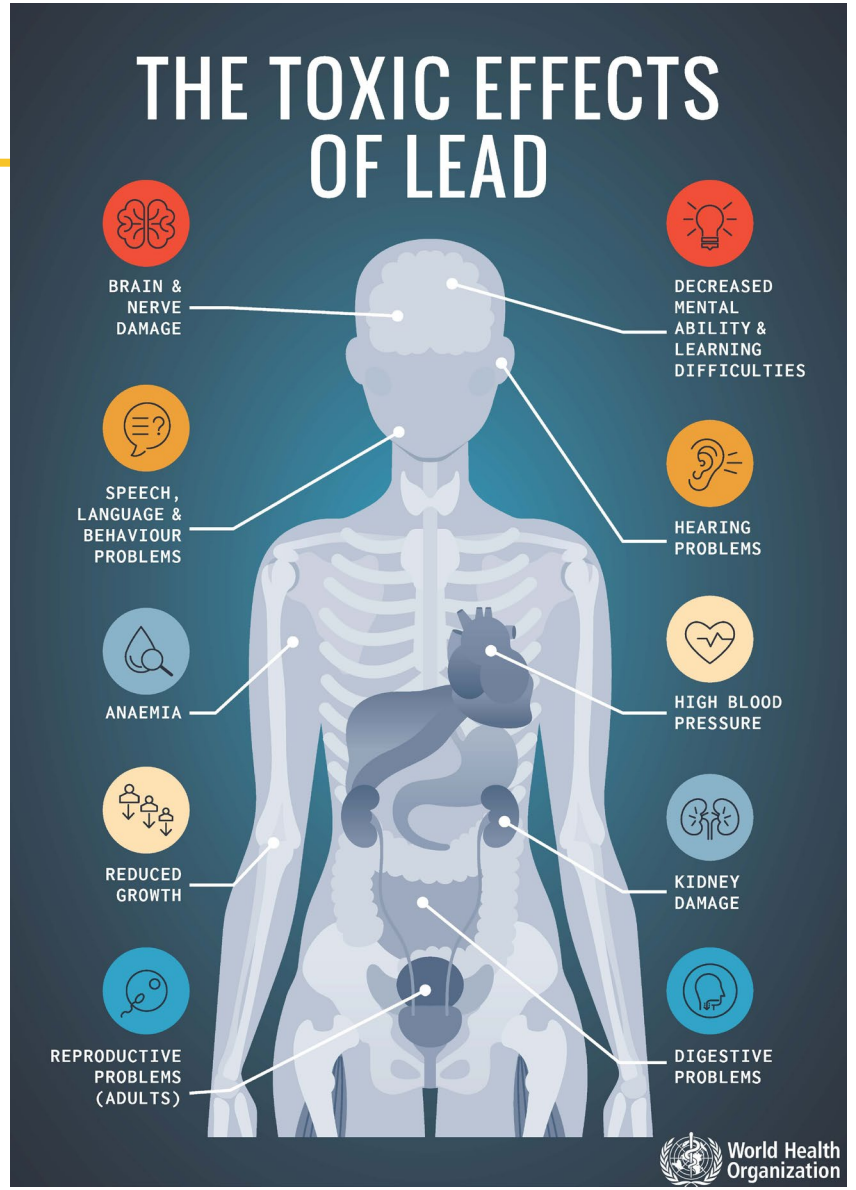
Symptoms of Lead Toxicity

- Lead is toxic to humans and can affect people of any age or health status. Protecting children from exposure to lead is particularly important because they are more susceptible to lead toxicity. Most children have no obvious immediate symptoms.
- Short term exposure to lead could result in the following symptoms: headache; abdominal pain/colic; vomiting; anemia.
- Longer term exposure could result in the following additional symptoms: irritability; lethargy; fatigue; muscle aches or muscle prickling/burning; constipation; difficulty concentrating/muscular weakness; tremor; weight loss.



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Salmonella outbreak linked to cantaloupe

- Rapidly expanding multi-serotype Salmonella outbreak in the U.S. and Canada.
- Nearly 10 product recalls of both whole melons and pre-cut fruit products are associated with this outbreak and new ones keep getting added. The melons themselves appear to be imported produce from Mexico.
- Other states have had numerous cases added who are residents of long-term care facilities or are children attending daycare. These age groups in particular are at high risk for severe illness due to age and potential immunocompromising factors. Of note, these specific outbreak strains of salmonella appear to be causing more severe illness than expected (typical hospitalization rate is around 20% for salmonella, but it's over 50% for this outbreak).
- Only two cases are confirmed in Indiana, 117 nationally

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https://www.cdc.gov/salmonella/sundsvall-11-23/index.html

Congenital Syphilis

Indiana Department of Health

Vital Signs: Missed Opportunities for Preventing Congenital Syphilis — United States, 2022

Summary

What is already known about this topic?

Since 2012, U.S. congenital syphilis cases increased substantially. Syphilis during pregnancy can lead to stillbirth, miscarriage, infant death, and maternal and infant morbidity, which are preventable through appropriate screening and treatment.

What is added by this report?

In 2022, lack of timely testing and adequate treatment contributed to almost 90% of congenital syphilis cases in the United States, including substantial proportions of congenital syphilis cases in all U.S. Census Bureau regions and among all racial and ethnic groups.

What are the implications for public health practice?

Implementing tailored strategies addressing missed opportunities at the local and national levels could improve timeliness of testing and appropriateness of treatment for syphilis during pregnancy and thereby reduce the incidence of congenital syphilis and complications of syphilis during pregnancy.

Vital Signs: Missed Opportunities for Preventing Congenital Syphilis — United States, 2022 | MMWR (cdc.gov)

Vital Signs: Missed Opportunities for Preventing Congenital Syphilis — United States, 2022

- Syphilis during pregnancy can lead to stillbirth, miscarriage, infant death, and maternal and infant morbidity; these outcomes can be prevented through appropriate screening and treatment.
- In 2022, a total of 3,761 cases of congenital syphilis in the United States were reported to CDC, including 231 (6%) stillbirths and 51 (1%) infant deaths.
- Lack of timely testing and adequate treatment during pregnancy contributed to 88% of cases of congenital syphilis. Testing and treatment gaps were present in the majority of cases across all races, ethnicities, and U.S. Census Bureau regions.

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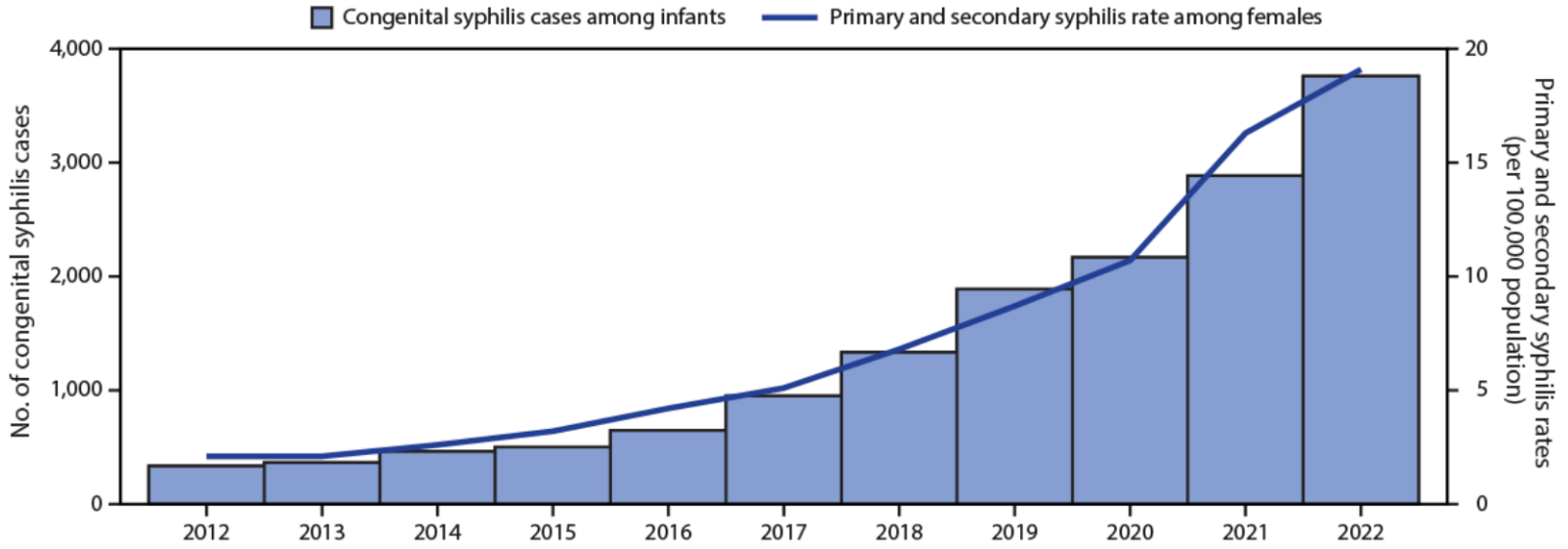
Vital Signs: Missed Opportunities for Preventing Congenital Syphilis — United States, 2022 | MMWR (cdc.gov)

Vital Signs: Missed Opportunities for Preventing Congenital Syphilis — United States, 2022

Congenital syphilis cases in the United States increased 755% during 2012–2021.

Top

FIGURE 1. Reported number of cases of congenital syphilis among infants, by year of birth, and rates* of reported cases of primary and secondary syphilis† among females aged 15–44 years, by year — United States, 2012–2022



* Cases per 100,000 population.

† Primary and secondary syphilis case data for all U.S. territories and freely associated states and outlying areas were not available for all years; therefore, rates presented include only the 50 states and the District of Columbia.

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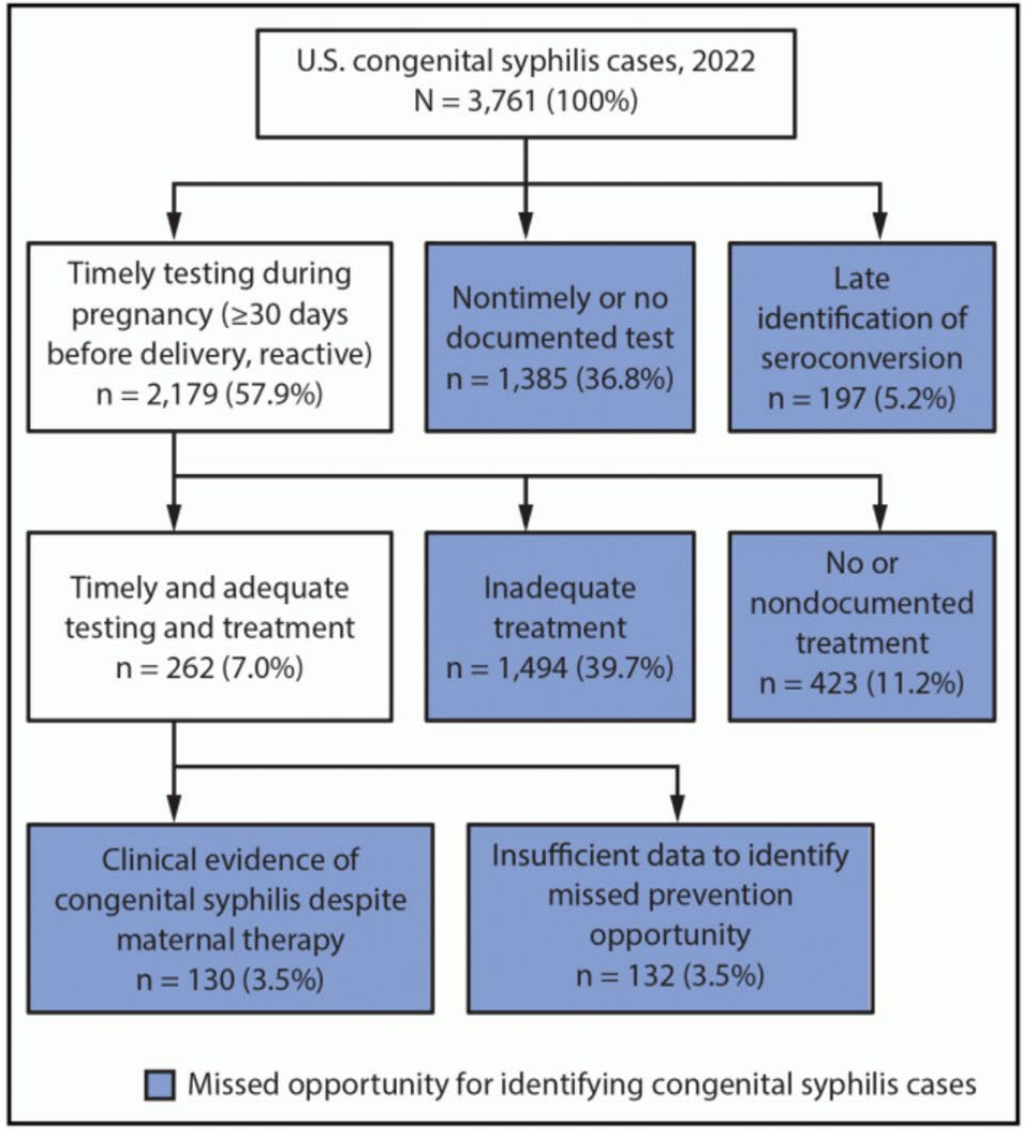
[Vital Signs: Missed Opportunities for Preventing Congenital Syphilis — United States, 2022 | MMWR (cdc.gov)]

FIGURE 2. Distribution of congenital syphilis cases, by missed prevention opportunities*,†,§ — United States, 2022



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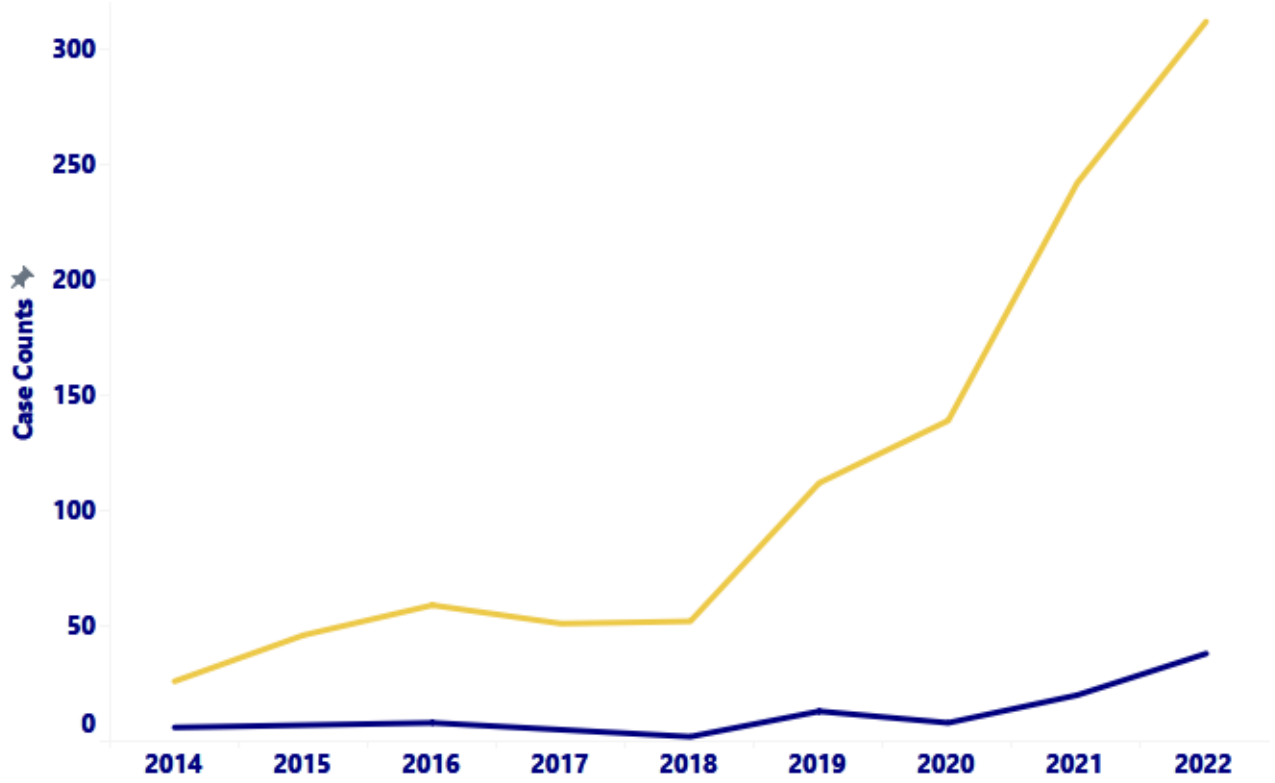
[Vital Signs: Missed Opportunities for Preventing Congenital Syphilis — United States, 2022 | MMWR (cdc.gov)]

Congenital Syphilis (CS) in Indiana

CS and Early Syphilis Cases in Women of Childbearing Age in Indiana, 2014-2022



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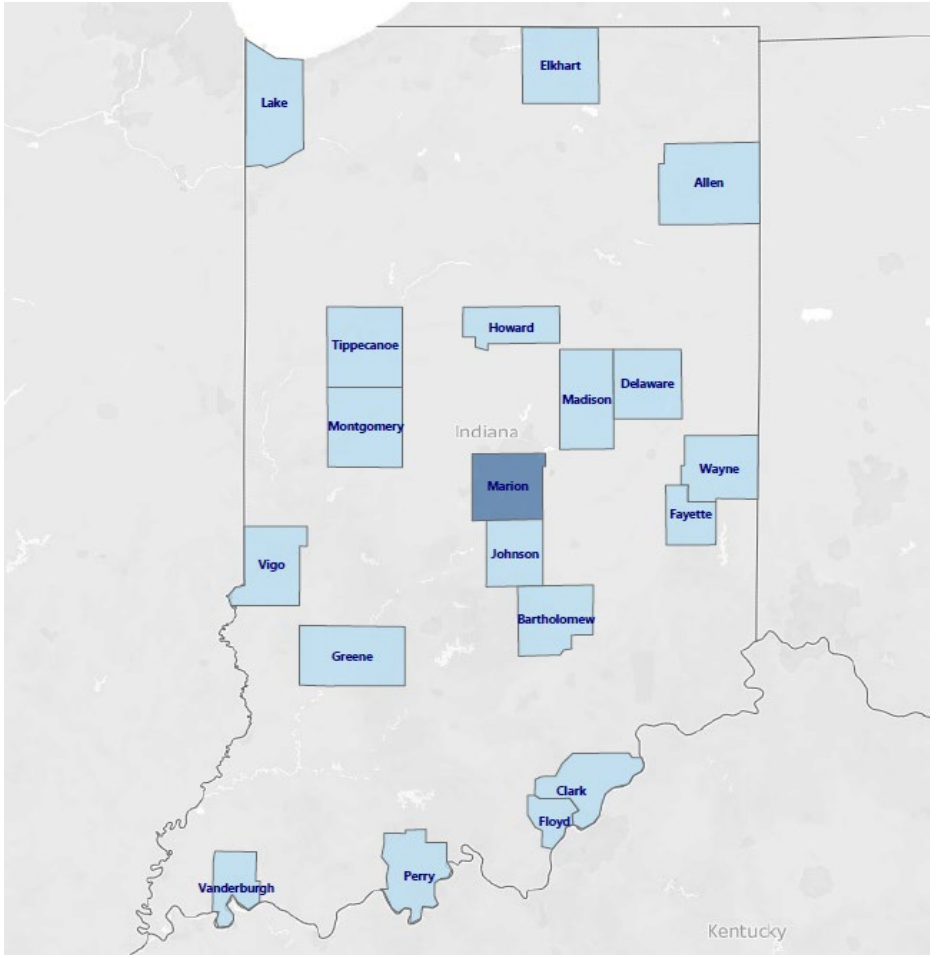
Congenital Syphilis in Indiana

- Most CS and syphilis cases in women of childbearing age occurred in Marion County
- Marion County reported 34 CS cases between 2020-2022
- All other counties highlighted on the map reported <5 cases between 2020-2022

2020-2022 Indiana CS Cases, by County



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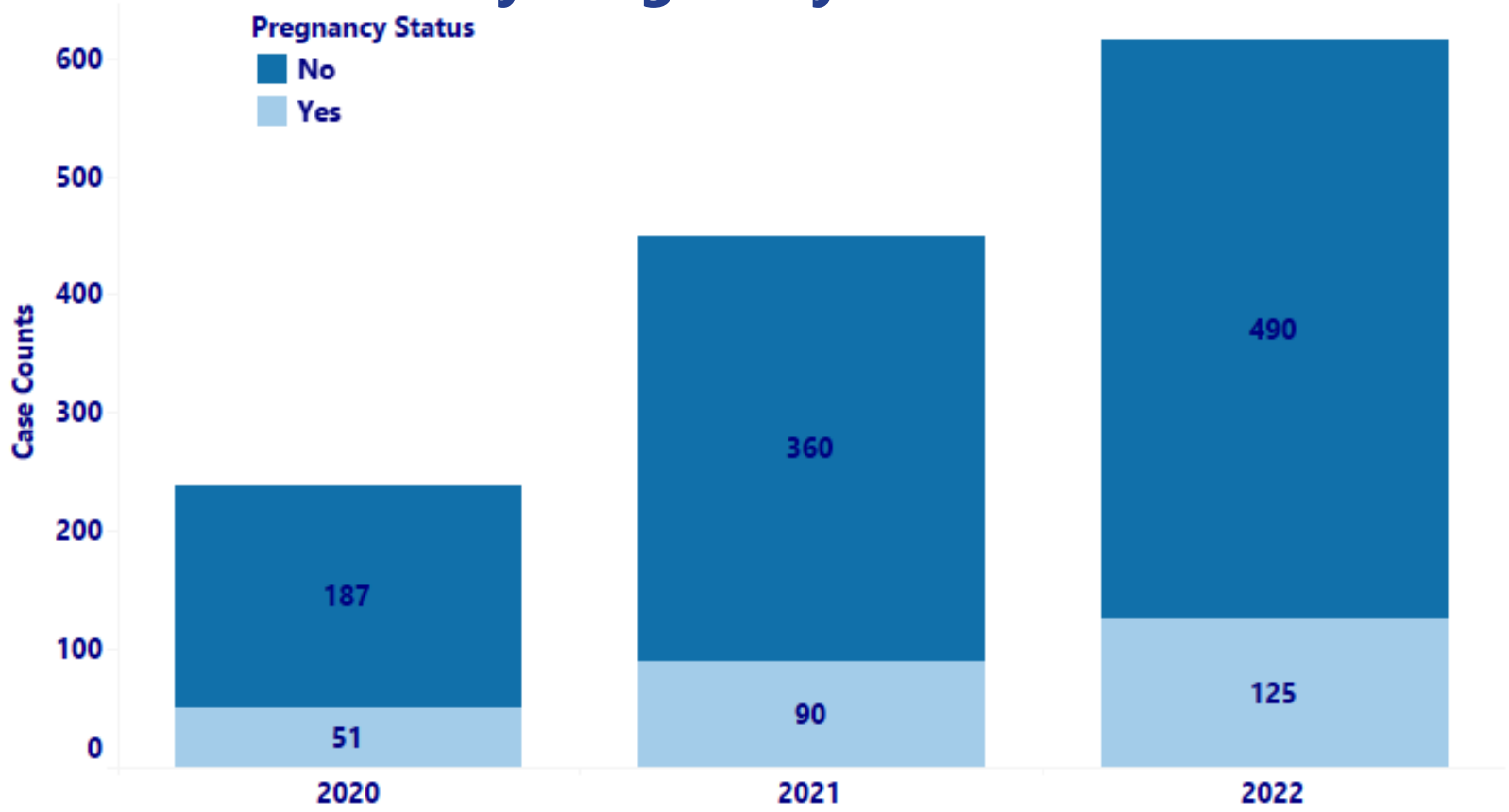
Congenital Syphilis in Indiana

2020-2022 Adult Syphilis Cases Among Women of Childbearing Age, by Pregnancy Status



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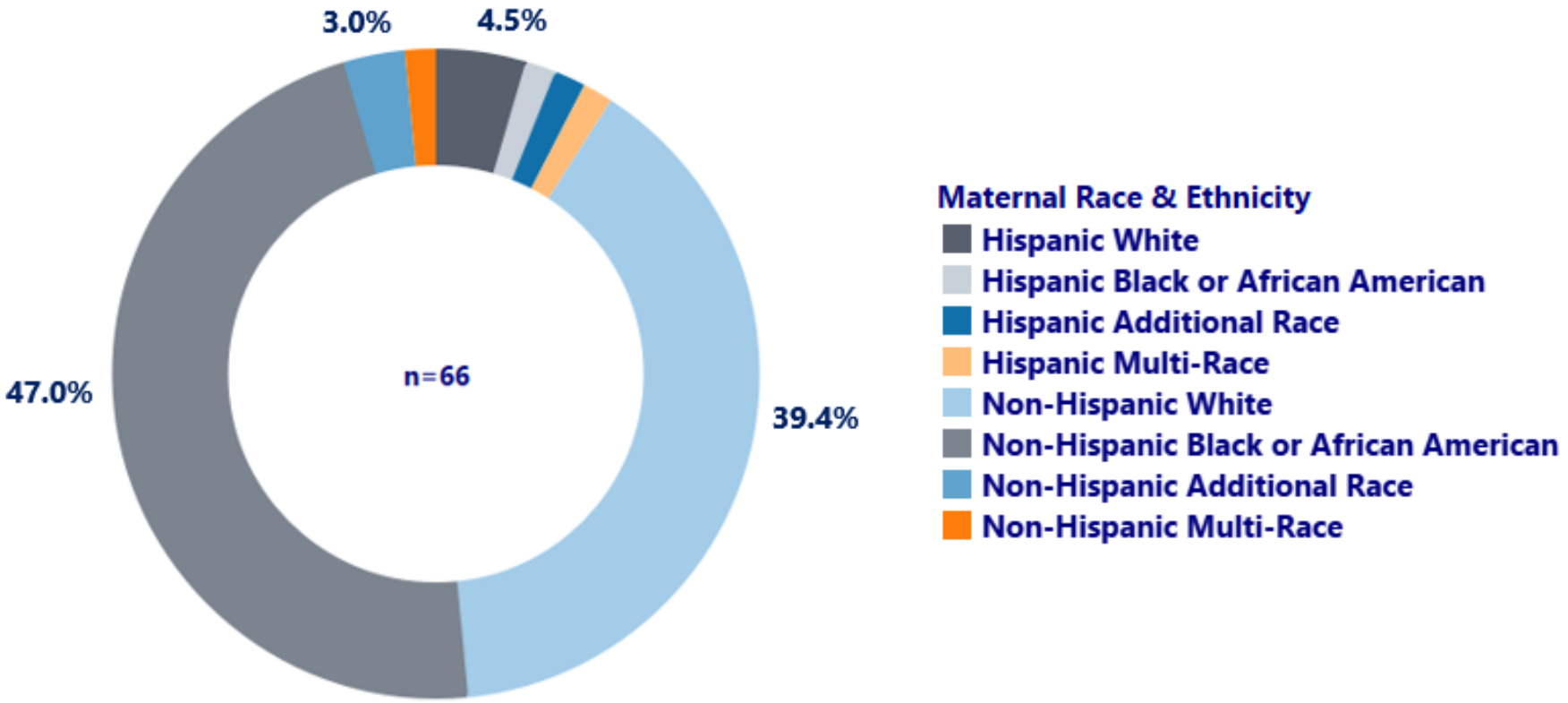
Maternal Information

Percentage of CS Cases by Maternal Race and Ethnicity, 2020-2022



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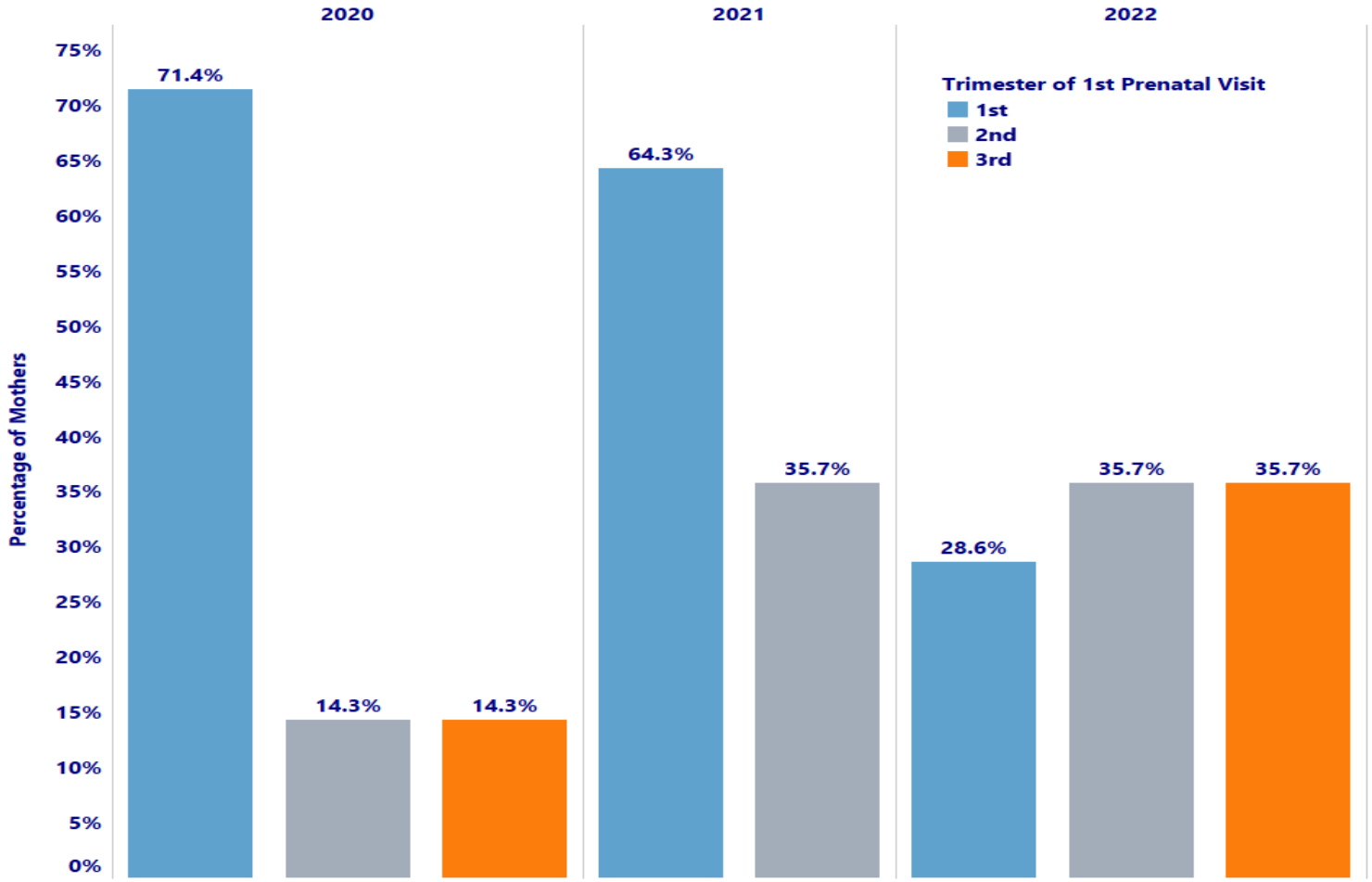
Barriers to Care

Trimester of First Prenatal Care Visit among Mothers who delivered an infant with CS, 2020-2022



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Unknown values are not included on graph

Screening for syphilis in pregnancy

- To reduce perinatal transmission, CDC recommends screening for syphilis during pregnancy at the first prenatal care visit.
- Where access to prenatal care is not optimal, screening and treatment (if indicated) should be performed as soon as pregnancy is identified.
- CDC recommends screening at 28 weeks' gestation and at delivery for those who 1) live in communities with high rates of syphilis, 2) are at high risk for syphilis acquisition during pregnancy (e.g., substance use or a new sex partner), or 3) were not previously tested during the pregnancy.
- Appropriate screening for syphilis during pregnancy, as well as screening of sexually active persons when appropriate, has been shown to prevent syphilis morbidity.

Vital Signs: Missed Opportunities for Preventing Congenital Syphilis — United States, 2022 | MMWR (cdc.gov)

IDOH Congenital Syphilis Prevention Initiatives

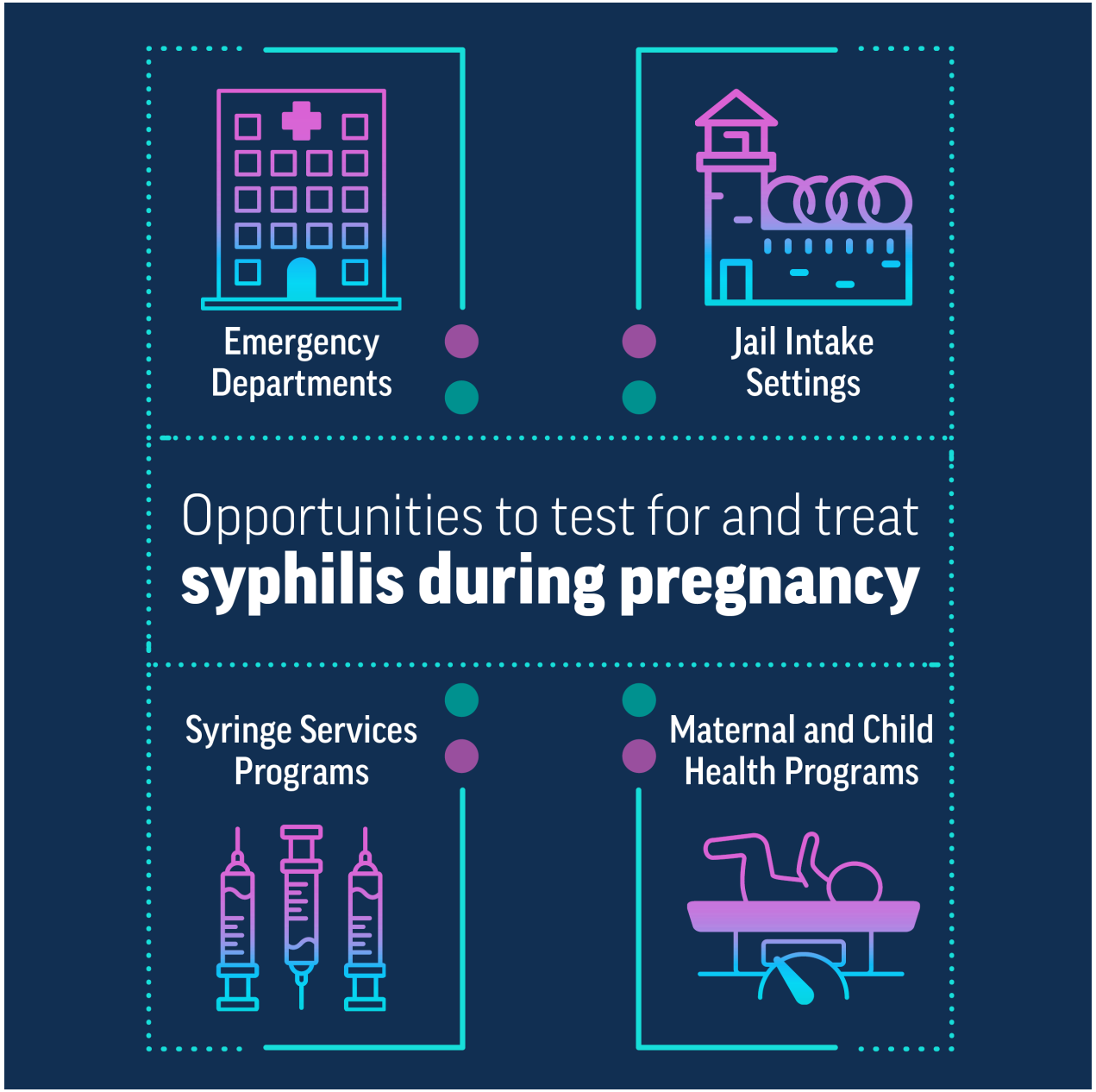
- All pregnant women with reactive syphilis serology (with absence of biological false-positives) are tracked through delivery
- 2023 – IDOH has tracked 190 completed pregnancies, 38 of which had infants born with congenital syphilis. IDOH is currently tracking 101 pregnancies until delivery
- IDOH endorses screening during first trimester (or discovery of pregnancy), third trimester, and at delivery
- Screening at 28-32-weeks' gestation allows for the detection of newly acquired syphilis among pregnant women and allows for treatment prior to delivery
    - Infants born to mothers with untreated or inadequately treated syphilis are classified as probable cases of congenital syphilis—if a mother's treatment regimen was initiated <30 days prior to delivery and was not completed prior to delivery, the infant meets the surveillance case definition of congenital syphilis.
- All infants born to mothers with reactive non-treponemal tests should have a non-treponemal test completed at birth
    - Subsequent follow-up is dependent on clinician judgement (i.e., infant has s/s consistent with congenital syphilis—administer treatment, CSF evaluation, etc.)

Syphilis in Babies Reflects Health System Failures | VitalSigns | CDC

All you need to do is test!

These are potential opportunities to improve testing and, ultimately, treatment.

If a test is collected from any of these places and is positive, local health departments can assist with investigating and managing the cases.



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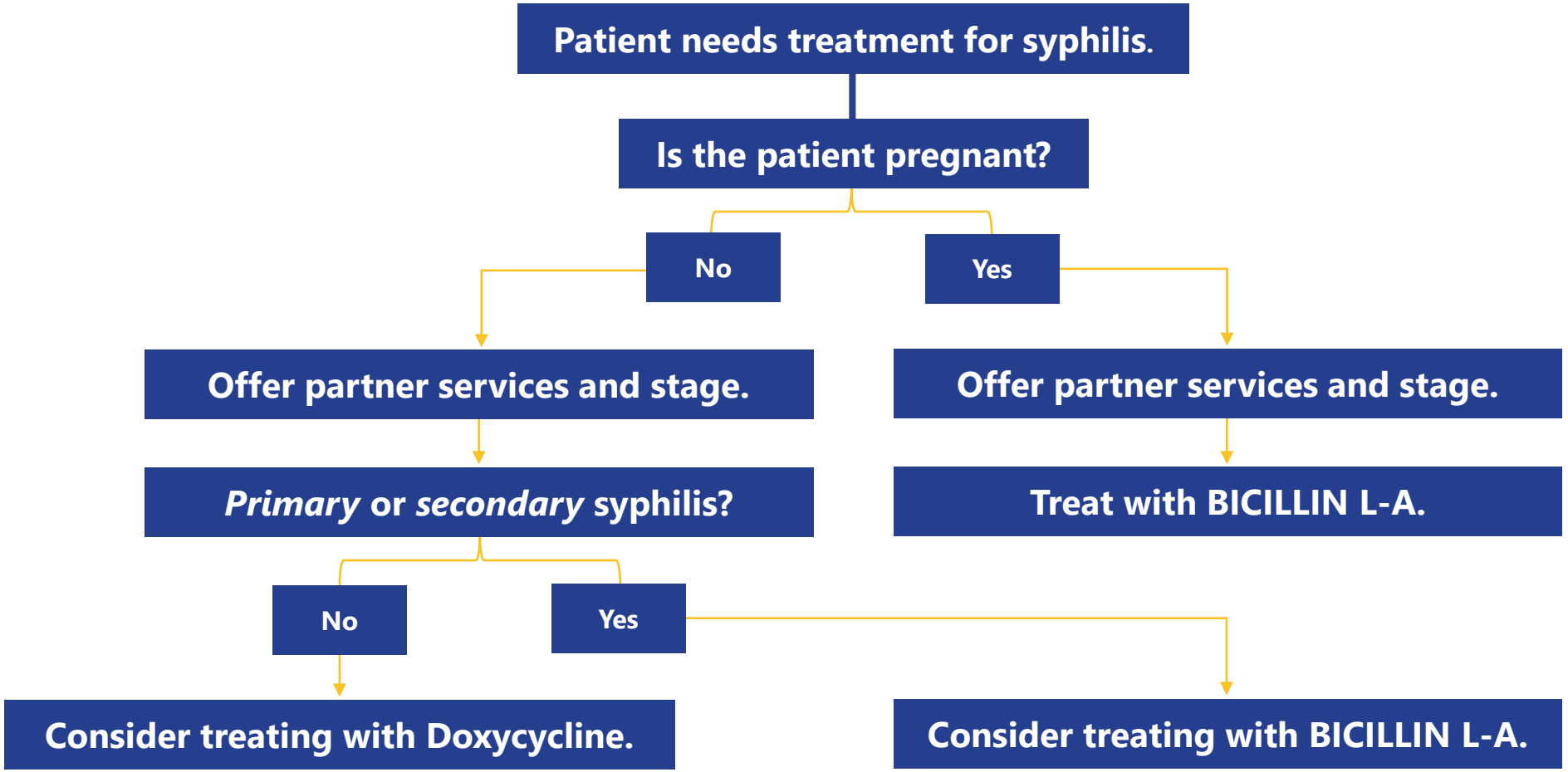
Recommended Treatment for Prevention of Congenital Syphilis

- Benzathine penicillin G is the only recommended treatment for syphilis during pregnancy; this drug must be administered as an injection by a trained professional as either a single dose or as 3 doses spaced 7–9 days apart, depending on the stage of infection.
- The success rate of this treatment in preventing congenital syphilis has been reported to be as high as 98%
- Although this analysis includes cases with clinical evidence of congenital syphilis despite adequate treatment, some of these cases might be explained by undetected reinfection late in pregnancy.
- Because the United States is currently facing a shortage of benzathine penicillin G, CDC has encouraged providers and health departments to prioritize benzathine penicillin G for the treatment of syphilis in pregnancy.

Vital Signs: Missed Opportunities for Preventing Congenital Syphilis — United States, 2022 | MMWR (cdc.gov)

IDOH BICILLIN L-A Use During Shortage



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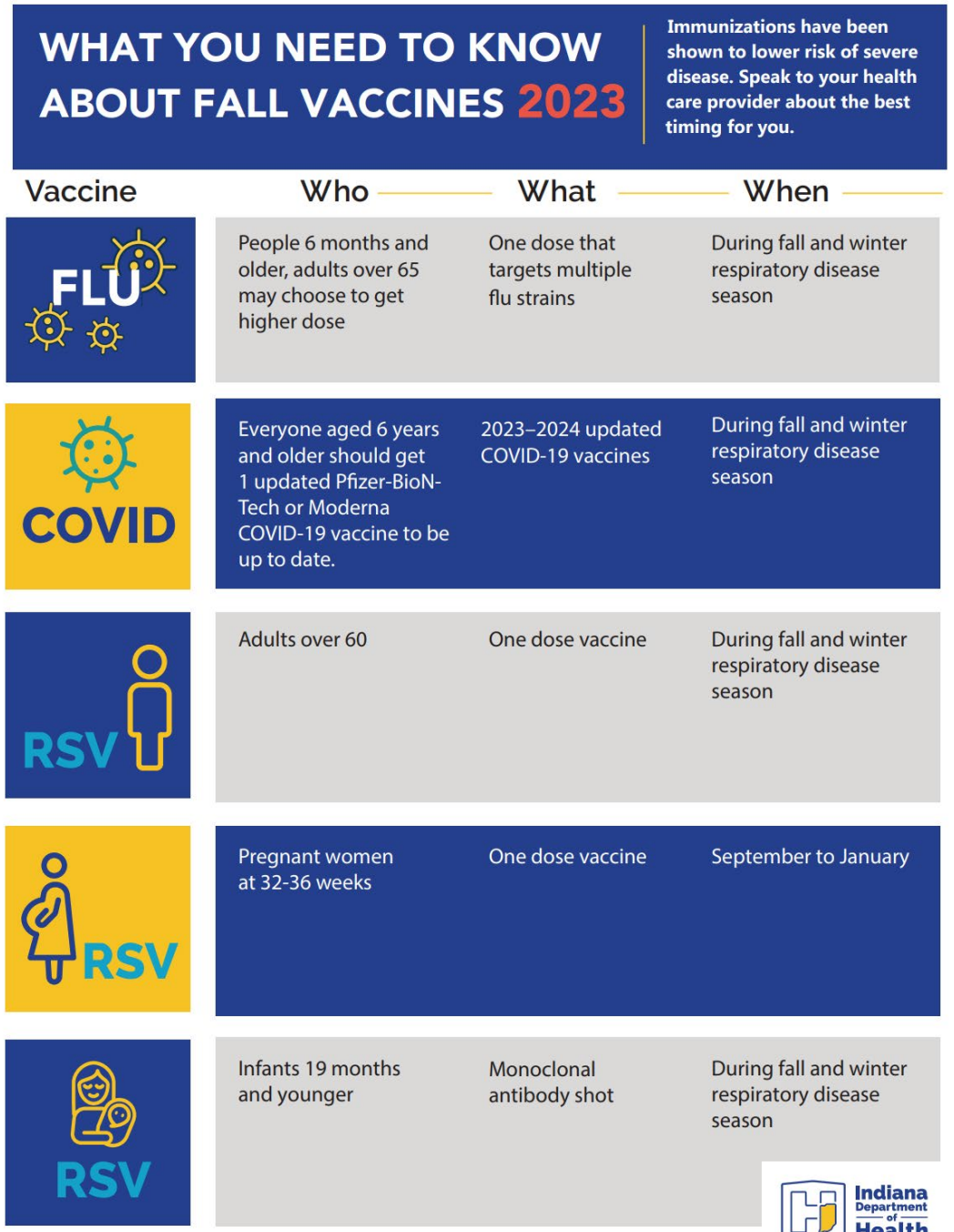
*One order (ten [10] units) of BICILLIN L-A is processed at a time, per week, per covered entity until further notice.

Respiratory infections

Indiana Department of Health

Fall respiratory season

23_FALL-immunizations_11-30 (in.gov)



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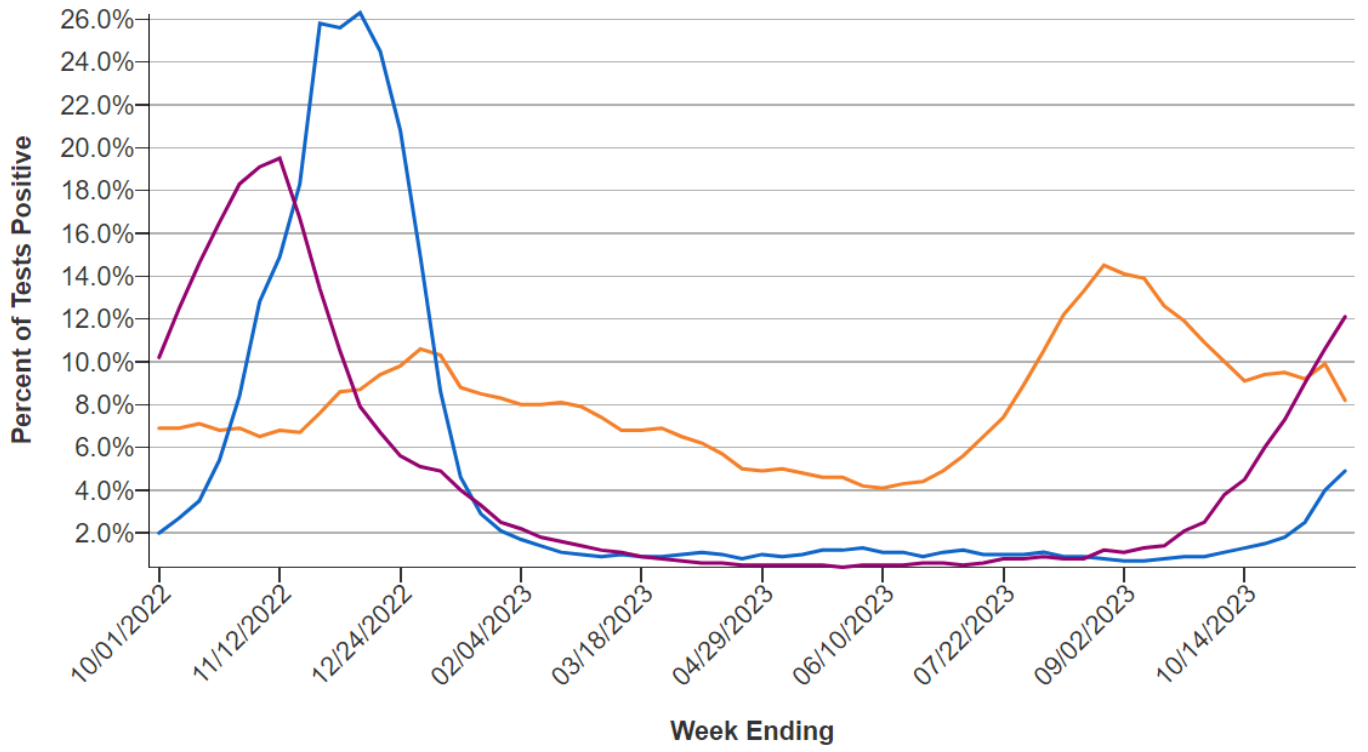
[Respiratory Virus Activity Levels (cdc.gov)]

Percent of Tests Positive for Respiratory Viruses

Weekly percent of tests positive for the viruses that cause COVID-19, influenza, and RSV at the national level.



Data for recent weeks may be incomplete due to delays in reporting. These preliminary may change as more data become available.

Data presented through: 11/18/2023; Data as of: 11/23/2023

Dataset on data.cdc.gov | Link to Dataset

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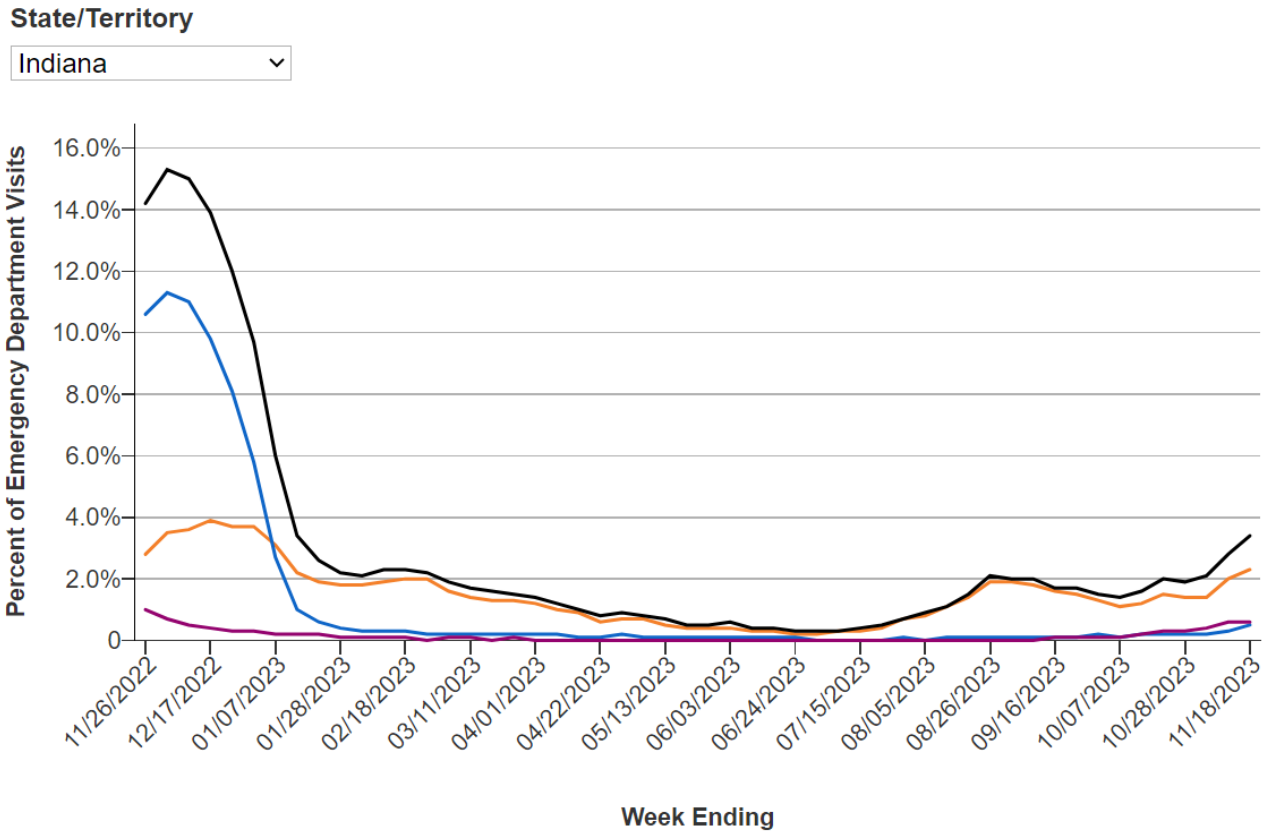
[Respiratory Virus Activity Levels (cdc.gov)]

Emergency Department Visits for Viral Respiratory Illness

Weekly percent of total emergency department visits associated with COVID-19, influenza, and RSV.



Data presented through: 11/18/2023; Data as of: 11/22/2023

Dataset on data.cdc.gov | Link to Dataset

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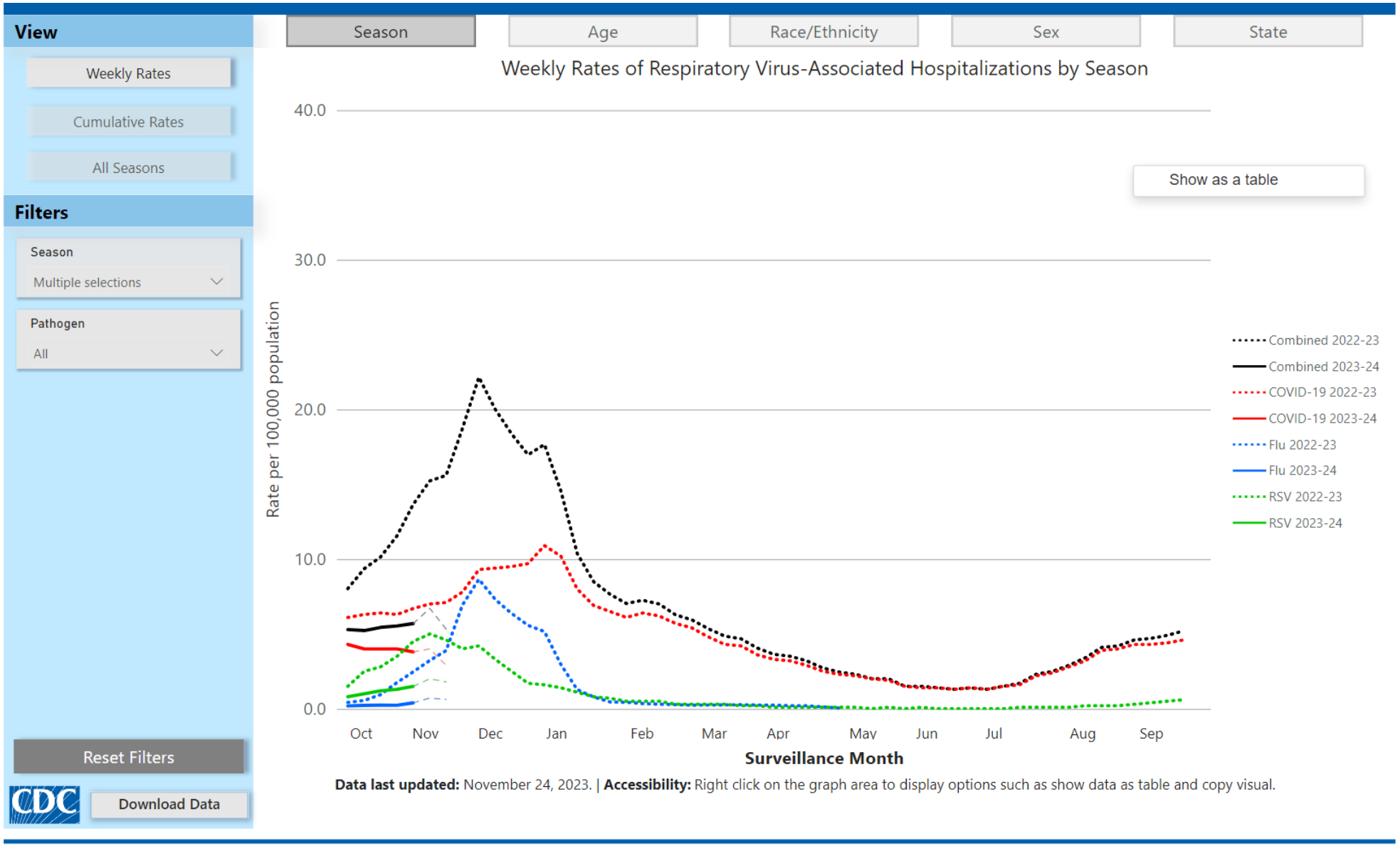

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RESP-NET Interactive Dashboard | CDC

Indiana | Marion County | Submit | Reset

Low overall respiratory illness activity in Indiana

Based on healthcare visits for fever and cough or sore throat:

Now is a good time to get your recommended vaccinations before respiratory illness is more widespread to reduce your risk of serious illness.

Find more respiratory illness data, inlcuding a national overview

Weekly Viral Respiratory Illness Snapshot

Illness trends in Indiana

Based on visits to emergency departments:

- Flu INCREASING
- RSV INCREASING
- COVID-19 INCREASING

Low COVID-19 hospitalization levels in Marion County, Indiana

Based on inpatient admissions for COVID-19:

- If you are at high risk of getting very sick from COVID-19, talk with a healthcare provider about additional prevention actions.

COVID-19 Situation in Marion County, Indiana

Protect yourself from COVID-19, Flu, and RSV (cdc.gov)

New Immunizations to Protect Against Severe RSV

Who Does It Protect?	Type of Product	Is It for Everyone in Group?
Adults 60 and over	RSV vaccine	Talk to your doctor first
Babies	RSV antibody given to baby	All infants entering or born during RSV season. Small group of older babies for second season.
	OR	
Babies	RSV vaccine given during pregnancy	Can get if you are 32–36 weeks pregnant during September–January

www.cdc.gov/rsv

CDC

Indiana Department of Health

https://www.cdc.gov/rsv/downloads/RSV-new-immunizations-chart.pdf

Additional doses of Nirsevimab released

- On November 16, 2023, the CDC announced the release of more than 77,000 additional doses of Beyfortus (nirsevimab-alip (100 mg)), a long-acting monoclonal antibody designed to protect infants against severe respiratory syncytial virus (RSV) disease.
  - These additional doses will be distributed immediately to physicians and hospitals through the Vaccines for Children Program and commercial channels
    - **Indiana will be allocated a *maximum* of 1,030 doses of the 100mg and 5,030 doses of the 50mg for the remainder of the season**
    - **Two doses of the 50mg to equal 100mg has not been studied and is not authorized (compared to 2 doses of the 100mg to equal 200mg for older children)**
- CDC and FDA will continue to be in close contact with manufacturers to ensure the availability of additional doses through end of this year and for early 2024 to meet the demand.

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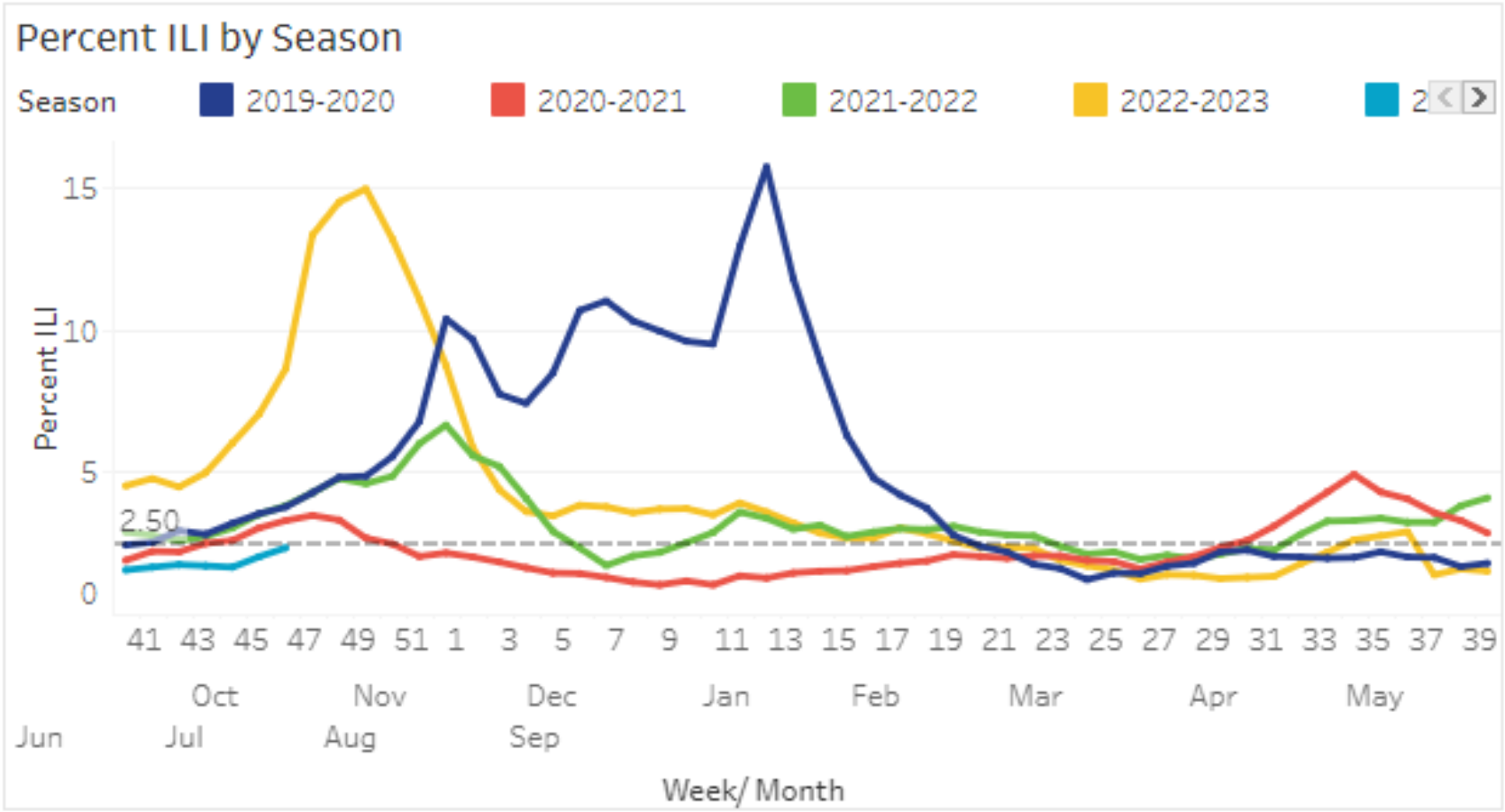
CDC and FDA Expedite the Availability of Additional Doses of New RSV Immunization for Infants | CDC Online Newsroom | CDC

IDOH flu dashboard (updates today)

Emergency Department Visits for Influenza-like Illness



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Health: Infectious Disease Epidemiology & Prevention Division: Influenza Dashboard

Deaths from Influenza

- The Indiana Department of Health urges Hoosiers to get vaccinated against influenza (flu) after confirming the first **four** flu-related deaths of the 2023-24 season, all age 65 or older. No additional information about the patients will be released due to privacy laws.
- The early influenza-associated deaths are a reminder for healthcare providers to continue to encourage seasonal influenza vaccinations, especially among individuals who are at higher risk of developing influenza-related complications
- IDOH recommends that all people ages 6 months and older receive the influenza vaccine
- Vaccination is particularly encouraged for individuals with a history of influenza illness and for those who have been vaccinated in previous years due to natural waning of immunity and changes in circulating viruses

Influenza specimen submission

- If you are reporting an influenza-associated death, a corresponding specimen should be submitted to the IDOH Laboratory within five days of collection whenever possible. If a specimen is available for subtyping, please contact the IDOH for specimen authorization and submission instructions.
- The requested specimen type for influenza testing at the IDOH Laboratory is a nasopharyngeal (NP) swab. The IDOH Laboratory accepts post-mortem NP swabs
- Whenever possible, please send specimens from patients positive for influenza, especially by rapid tests, to IDOH Laboratories for both confirmation and strain typing. Please ensure the specimens are properly stored and shipped, so the testing can be performed.
- To report an influenza-associated death, a suspected influenza outbreak, or for other influenza-related questions, please contact Madi Asbell at or 317-233-7125 during normal business hours (M-F, 8:15 a.m.-4:45 p.m.).

Reporting requirements: Influenza associated deaths

- Hundreds of Hoosiers become sick from influenza, and some cases are fatal. More than 270 Hoosiers died after contracting influenza during the 2022-23 flu season, which typically runs from October through May.
- Influenza-associated deaths should be reported to the IDOH within one working day of identification.
- The IDOH defines an influenza-associated death as a death (with the exception of homicide, suicide, accident or injury) that occurs while an individual is infected with influenza, or shortly after testing positive, regardless of whether influenza is listed as a contributing cause of death.
- NBS users should submit morbidity reports for an influenza-associated death, attaching laboratory confirmation of influenza infection and death documentation.
- A summary of influenza-associated death reporting requirements can be found here.

Treatment

- Treatment with antivirals is of greatest benefit when started within 48 hours of onset of symptoms.
- Start treatment with an influenza antiviral drug for people who have influenza or suspected influenza (even before test results are available) and who are at increased risk of developing serious influenza complications.

COVID-19 Update for the United States

Early Indicators

Test Positivity

% Test Positivity

8.2%

(November 12 to November 18, 2023)

Trend in % Test Positivity

-1.7% in most recent week

Sep 30, 2023 Nov 18, 2023

Emergency Department Visits

% Diagnosed as COVID-19

1.5%

(November 12 to November 18, 2023)

Trend in % Emergency Department Visits

+1.8% in most recent week

Sep 30, 2023 Nov 18, 2023

Severity Indicators

Hospitalizations

Hospital Admissions

18,119

(November 12 to November 18, 2023)

Trend in Hospital Admissions

+9.7% in most recent week

Sep 30, 2023 Nov 18, 2023

Deaths

% of All Deaths in U.S. Due to COVID-19

2.6%

(November 12 to November 18, 2023)

Trend in % COVID-19 Deaths

+8.3% in most recent week

Sep 30, 2023 Nov 18, 2023

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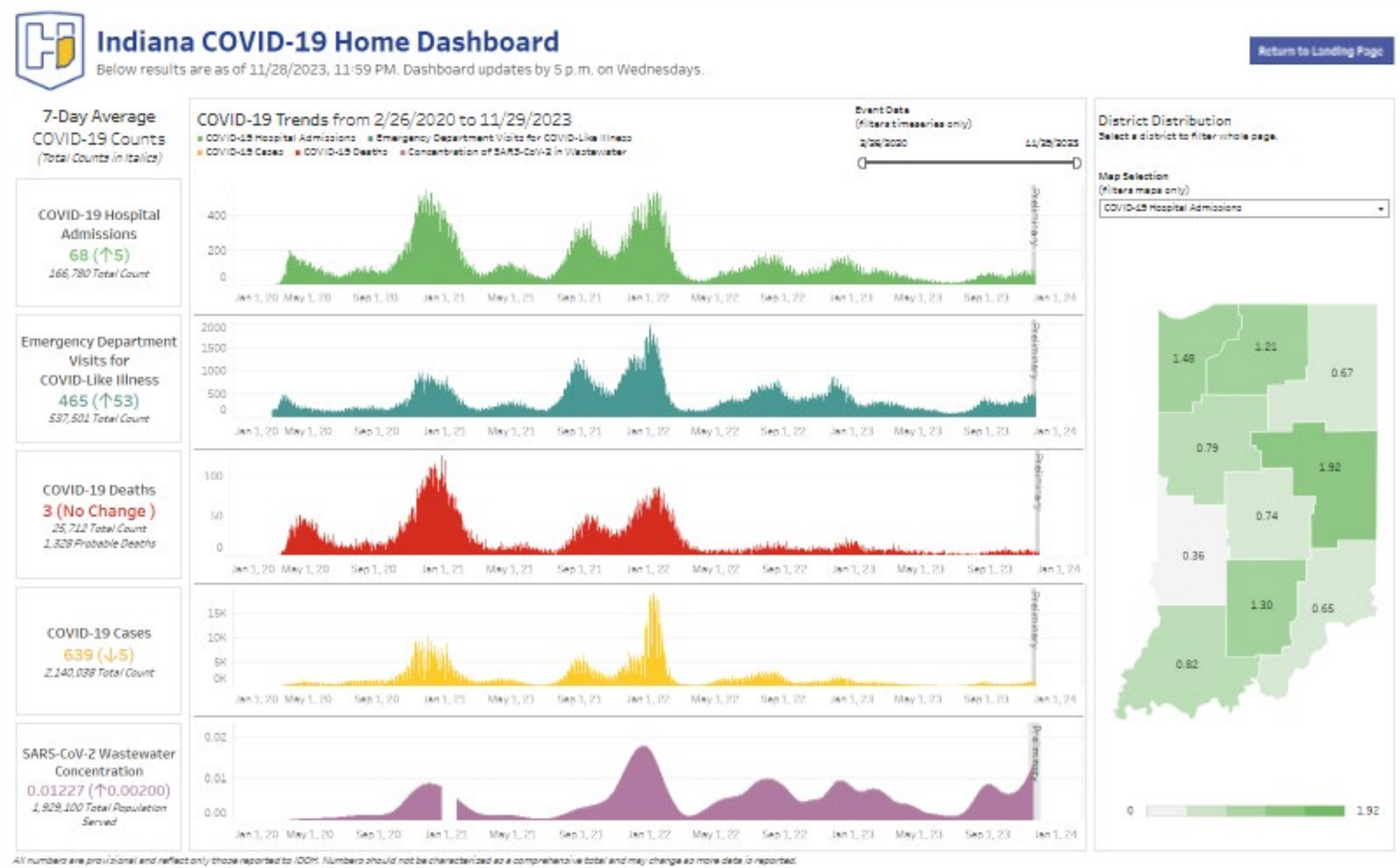
CDC COVID Data Tracker: Home



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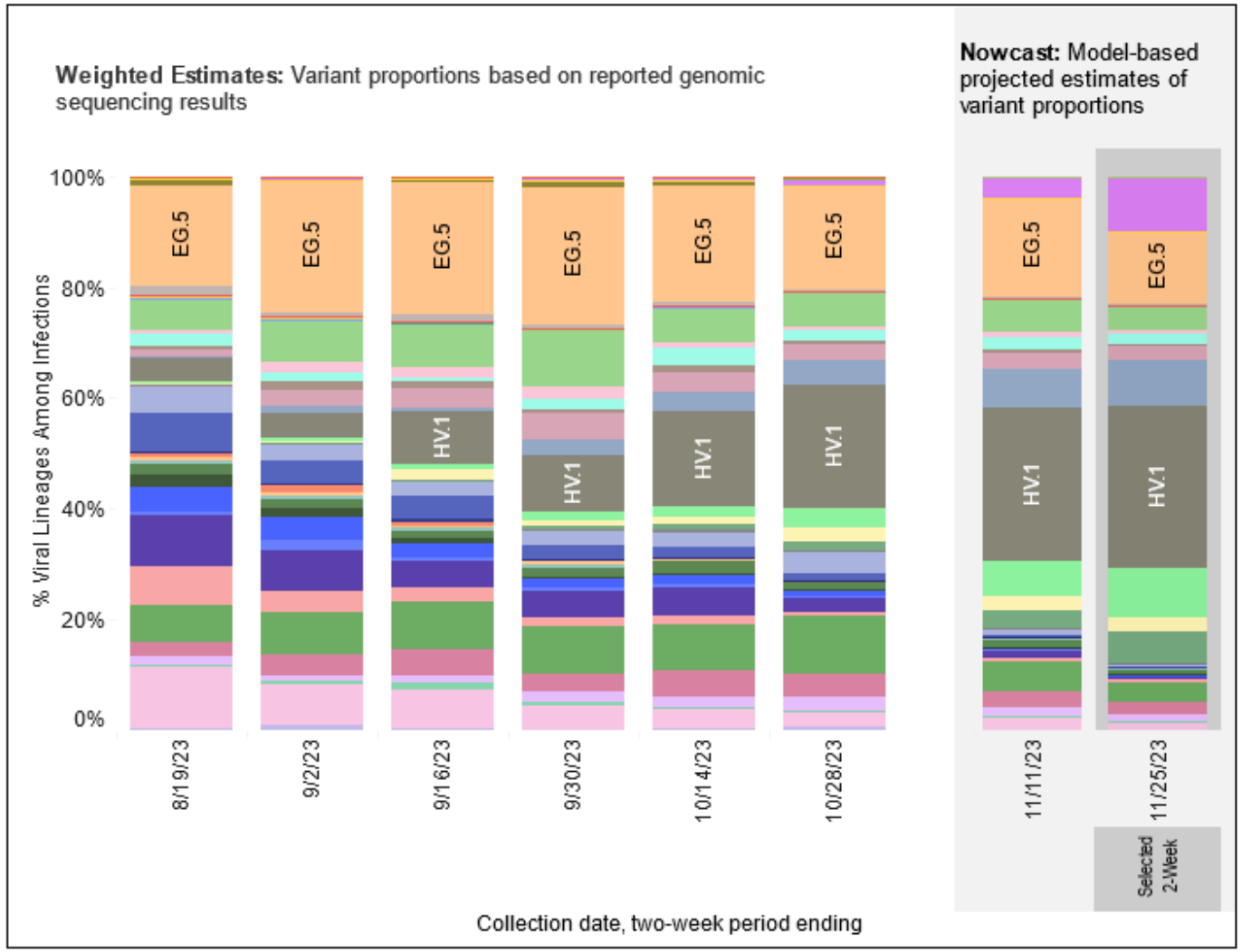
Coronavirus: Indiana COVID-19 Home Dashboard

Weighted Estimates in HHS Region 5 for 2-Week Periods in 8/6/2023 – 11/25/2023

Nowcast Estimates in HHS Region 5 for 11/12/2023 – 11/25/2023

Hover over (or tap in mobile) any lineage of interest to see the amount of uncertainty in that lineage's estimate.



Region 5 - Illinois, Indiana, Michigan, Minnesota, Ohio, and Wisconsin

WHO label	Lineage #	%Total	95%PI
Omicron	HV.1	29.2%	25.0-33.9%
	EG.5	13.0%	11.3-15.0%
	BA.2.86	9.8%	4.3-20.0%
	JD.1.1	9.0%	6.5-12.2%
	HK.3	8.3%	6.1-11.2%
	JG.3	5.7%	3.3-9.6%
	FL.1.5.1	4.5%	3.8-5.3%
	XBB.1.16.6	3.7%	2.7-5.0%
	JF.1	2.6%	1.8-3.8%
	HF.1	2.2%	1.2-4.1%
	XBB.1.16.11	2.2%	1.6-2.9%
	GK.1.1	2.0%	1.2-3.2%
	XBB.2.3	1.5%	1.1-2.0%
	XBB.1.16.15	1.2%	0.7-2.0%
	XBB.1.5.70	1.1%	0.6-2.0%
	XBB.1.16	0.6%	0.4-0.9%
	GE.1	0.6%	0.4-0.8%
	XBB	0.6%	0.4-0.8%
	GK.2	0.4%	0.3-0.6%
	XBB.1.16.1	0.4%	0.3-0.5%
	XBB.1.9.1	0.2%	0.1-0.3%
	EG.6.1	0.2%	0.1-0.3%
	CH.1.1	0.2%	0.1-0.3%
	XBB.1.5	0.2%	0.1-0.2%
	XBB.1.5.68	0.1%	0.1-0.2%
	XBB.2.3.8	0.1%	0.0-0.4%
	XBB.1.9.2	0.1%	0.0-0.1%
	XBB.1.5.72	0.1%	0.0-0.1%
	XBB.1.42.2	0.1%	0.0-0.1%
	XBB.1.5.59	0.0%	0.0-0.1%
	XBB.1.5.10	0.0%	0.0-0.0%
	XBB.1.5.1	0.0%	0.0-0.1%
	FD.1.1	0.0%	0.0-0.0%
	FE.1.1	0.0%	0.0-0.0%
	EU.1.1	0.0%	0.0-0.0%
Other	Other*	0.1%	0.0-0.2%

In De Health

https://covid.cdc.gov/covid-data-tracker/#variant-proportions

Paxlovid new scope of authorization

11/1/2023: …FDA is reissuing the May 25, 2023 letter in its entirety, to revise the scope of authorization to no longer require the distribution of PAXLOVID under this EUA to be directed by the United States Government. The scope of authorization was also revised to authorize the emergency use of PAXLOVID labeled and packaged in accordance with NDA 217188 for the treatment of mild-to-moderate COVID-19 in certain pediatric patients.

- PAXLOVID, as described in Category A[12] of the Product Description section of this letter, is authorized for emergency use by healthcare providers for the treatment of mild-to-moderate COVID-19 in adults and pediatric patients (12 years of age and older weighing at least 40 kg) who are at high risk for progression to severe COVID19, including hospitalization or death;
- PAXLOVID, as described in Category B[13] of the Product Description section of this letter, is authorized for emergency use by healthcare providers for the treatment of mild-to-moderate COVID-19 in pediatric patients (12 years of age and older weighing at least 40 kg) who are at high risk for progression to severe COVID-19, including hospitalization or death;

[12] The presentations of PAXLOVID described in Category A of the Product Description section of this letter are those **that are labeled and packaged in accordance with EUA 105**

[13] The presentations of PAXLOVID described in Category B of the Product Description section of this letter are those **that are labeled and packaged in accordance with NDA 217188**

Reminder: Product Expiration Date Summary

- **Paxlovid**: First lot expiry July 31, most in field supply expiry is later
- **Lagevrio**: No lots have reached expiry, first expiry is Feb 9, 2024, last is Feb 27, 2025

Therapeutic	First expiry	Last expiry	Extension
Bamlanivimab[1]	09/5/2022	5/22/2023	No further extension
Etesevimab[1]	4/8/2022	5/16/2023	No further extension
Regen-COV	12/31/2022	12/31/2023	No further extension
Evusheld	6/30/2023	8/31/2024	No further extension
Sotrovimab	8/31/2023	8/31/2024	Extension possible
Bebtelovimab	7/11/2023	8/28/2024	Extension possible

[1]All lots have expired. No expiry extension expected. Dispose of all product.

- For Paxlovid (nirmatrelvir co-packaged with ritonavir): Pfizer's searchable expiry data
- For up-to-date information on expiration dates of all products: ASPR searchable expiry database

Long COVID

[Products - Data Briefs - Number 480 - September 2023 (cdc.gov)]

Indiana Department of Health

Data from the National Health Interview Survey

- In 2022, 6.9% of adults ever had Long COVID and 3.4% had Long COVID at the time of interview (currently have Long COVID); women were more likely than men to ever have or currently have Long COVID.
- Adults ages 35–49 were the age group most likely to ever have (8.9%) or currently have (4.7%) Long COVID.
- The percentage of adults who ever had or currently had Long COVID varied by race and Hispanic origin.
- Adults with family incomes at 400% or more of the federal poverty level were less likely than those with family incomes at 200%–399% to ever have or currently have Long COVID.
- The percentage of adults who ever had Long COVID was lower in large central metropolitan areas compared with medium and small metropolitan and nonmetropolitan areas. Current Long COVID was lowest in large central metropolitan areas.

Immunization updates

Indiana Department of Health

COVID-19 mRNA Vaccine Effectiveness ages 6 months to 4 years

Summary

What is already known about this topic?

SARS-CoV-2 infection in young children is often mild or asymptomatic; however, some children are at risk for severe disease. In June 2022, original monovalent COVID-19 mRNA vaccines were recommended for infants and children aged 6 months–4 years.

What is added by this report?

Among vaccine-eligible children aged <5 years hospitalized or seeking care in emergency departments for acute respiratory illness during July 2022–September 2023, 86% had not received any COVID-19 vaccine. Despite low vaccination coverage, only 5% of children received a positive SARS-CoV-2 test result. Receipt of ≥2 COVID-19 mRNA vaccine doses was 40% effective (95% CI = 8%–60%) in preventing emergency department visits and hospitalization.

What are the implications for public health practice?

These findings support existing recommendations for COVID-19 vaccination of young children to reduce COVID-19–associated emergency department visits and hospitalization.

Indiana Department of Health

SARS-CoV-2 Epidemiology and COVID-19 mRNA Vaccine Effectiveness Among Infants and Children Aged 6 Months–4 Years — New Vaccine Surveillance Network, United States, July 2022–September 2023 | MMWR (cdc.gov)

COVID-19 mRNA Vaccine Effectiveness ages 6 months to 4 years

TABLE 2. COVID-19 vaccine effectiveness among infants and children aged 6 months–4 years evaluated in the emergency department or hospitalized with acute respiratory illness (N = 7,434) — New Vaccine Surveillance Network, United States, July 2022–September 2023*

Return

Vaccination status	No. (%)		Median no. of days since last dose (IQR)	Adjusted VE,† % (95% CI)
	Case-patients (positive SARS-CoV-2 test result) n = 387	Control patients (negative SARS-CoV-2 test result) n = 7,047		
Unvaccinated	348 (90)	6,029 (85)	NA	—
Vaccinated	39 (10)	1,018 (15)	Not calculated	Not calculated
1 dose only	12 (3)	269 (4)	71 (31 to 128)	31 (–27 to 62)
≥2 doses	27 (7)	749 (11)	93 (51 to 172)	40 (8 to 60)§

Indiana Department of Health

SARS-CoV-2 Epidemiology and COVID-19 mRNA Vaccine Effectiveness Among Infants and Children Aged 6 Months–4 Years — New Vaccine Surveillance Network, United States, July 2022–September 2023 | MMWR (cdc.gov)

Moderna COVID-19 vaccine dosing 6 months to 11 years

- Healthcare providers who administer the Moderna COVID-19 Vaccine (2023-2024 Formula) to individuals ages 6 months through 11 years should ensure the correct volume of the vaccine (0.25 mL) is withdrawn from the vial and administered to the recipient
- Discard vial and excess volume after extracting a single dose

Indiana Department of Health

Important Information About the Correct Dosage and Administration of Moderna COVID-19 Vaccine (2023-2024 Formula) for Individuals 6 Months Through 11 Years of Age | FDA

2024 Recommended Immunization Schedules Now Online

The 2024 ACIP Recommended Immunization Schedules were recently posted online. The schedules summarize final recommendations that were previously adopted and made official by the CDC director. These schedules are effective immediately.

- Birth-18 Years Immunization Schedule – Healthcare Providers | CDC
- Catch-up Immunization Schedule for Children, Birth-18 Years | CDC
- Adult Immunization Schedule – Healthcare Providers | CDC

Child and Adolescent Immunization Schedule Changes for 2024

Changes summarized below:

- Added 20- valent pneumococcal conjugate vaccine (PCV20), Mpox vaccine (Jynneos), RSV monoclonal antibody (nirsevimab), RSV vaccine (Abrysvo), and meningococcal groups A, B, C, W, Y (Penbraya)
- Deleted bivalent mRNA COVID-19 vaccines, diphtheria and tetanus Toxoid Adsorbed vaccine (DT), 13-valent pneumococcal conjugate vaccine (PCV13), and meningococcal groups A, C, W, Y polysaccharide diphtheria toxoid conjugate vaccine (MenACWY-D, Menactra)
- Added RSV and Mpox to the list of vaccines excluded from the vaccine injury compensation program (VICP)
- Added Mpox vaccine to the list of vaccines covered by the Countermeasures Injury Compensation Program (CICP)
- Added a new Addendum section to summarize new and updated ACIP recommendation that will occur after the 2024 child and adolescent immunization schedule is published.

Immunization Schedule Changes | CDC

Meningococcal vaccines for adolescents

There are three types of meningococcal vaccines available in the United States.

- MenACWY vaccines provide protection against 4 serogroups: A, C, W, and Y.
- MenB vaccines provide protection against serogroup B.
- MenABCWY** vaccine provides protection against all 5 serogroups.
    - **New this year and distribution is expected to start in January**

NEW

You can administer MenACWY and MenB vaccines at the same time. You can also administer them, or MenABCWY vaccine, with other vaccines recommended for adolescents.

Vaccine providers may administer meningococcal and other vaccines during the same visit, but at different injection sites if feasible.

Meningococcal vaccine schedule for adolescents

CDC recommends routine MenACWY vaccination for:

- All preteens and teens at 11 to 12 years old with a booster dose at 16 years old
- Children and adults at increased risk for meningococcal disease

CDC recommends routine MenB vaccination for:

- People 10 years or older at increased risk for meningococcal disease

CDC recommends MenABCWY vaccination as an option for:

- People 10 years or older who are getting MenACWY and MenB vaccines at the same visit.

*****If MenABCWY is given, the follow-up MenB vaccine dose (if given alone) has to be Pfizer's Trumenba as the MenB series is not interchangeable between Trumenba and Bexsero*****

Indiana Department of Health

https://www.cdc.gov/vaccines/vpd/mening/index.html

Vaccine Catch-Up Guidance

CDC has developed catch-up guidance job aids to assist healthcare providers in interpreting Table 2 in the child and adolescent immunization schedule.

- Pneumococcal Conjugate Vaccine (PCV) Catch-Up Guidance for Children 4 Months through 4 Years of Age [3 pages]
- *Haemophilus influenzae* type b-Containing Vaccines Catch-Up Guidance for Children 4 Months through 4 Years of Age
  - Hib vaccine products: ActHIB, Hiberix, Pentacel, Vaxelis, or Unknown [3 pages]
  - Hib vaccine products: PedvaxHIB only [2 pages]
- Diphtheria-, Tetanus-, and Pertussis-Containing Vaccines Catch-Up Guidance for Children 4 Months through 6 Years of Age [2 pages]
- Inactivated Polio Vaccine (IPV) [2 pages]
- Tetanus-, Diphtheria-, and Pertussis-Containing Vaccines Catch-Up Guidance for Children 7 through 9 Years of Age [2 pages]
- Tetanus-, Diphtheria-, and Pertussis-Containing Vaccines Catch-Up Guidance for Children 10 through 18 Years of Age [2 pages]

Adult Immunization Schedule Changes for 2024

- Added Mpox vaccine (Jynneos), RSV vaccines (Abrysvo and Arexvy), and meningococcal groups A, B, C, W, Y (Penbraya)
- Deleted bivalent mRNA COVID-19 vaccines and meningococcal groups A, C, W, Y polysaccharide diphtheria toxoid conjugate vaccine (MenACWY-D, Menactra)
- Added RSV and Mpox to the list of vaccines excluded from the vaccine injury compensation program (VICP)
- Added Mpox vaccine to the list of vaccines covered by the Countermeasures Injury Compensation Program (CICP)
- Added a new Addendum section to summarize new and updated ACIP recommendations occurring after the 2024 adult immunization schedule is published.

Immunization Schedule Changes | CDC

Vaccination Rate Trends

Indiana Department of Health

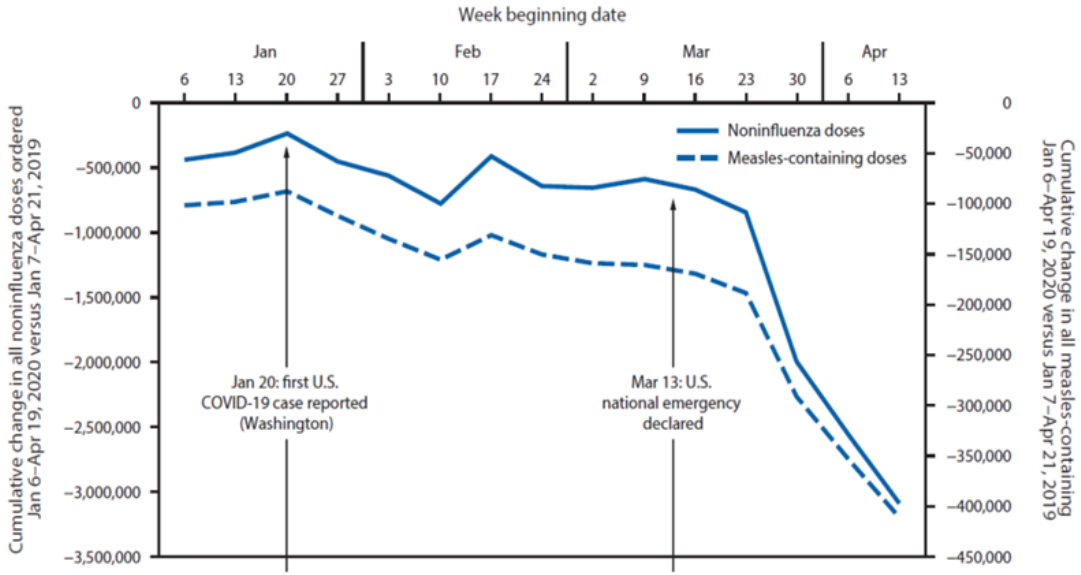
COVID-19 Pandemic Effects on Routine Vaccination In the United States

Where We Are

- The COVID-19 pandemic caused disruption in routine vaccination
- Routine vaccinations decreased in both children and adults
- Coverage is rebounding, but has been insufficient to catch up everyone who missed doses in 2020-2021

How We Got Here

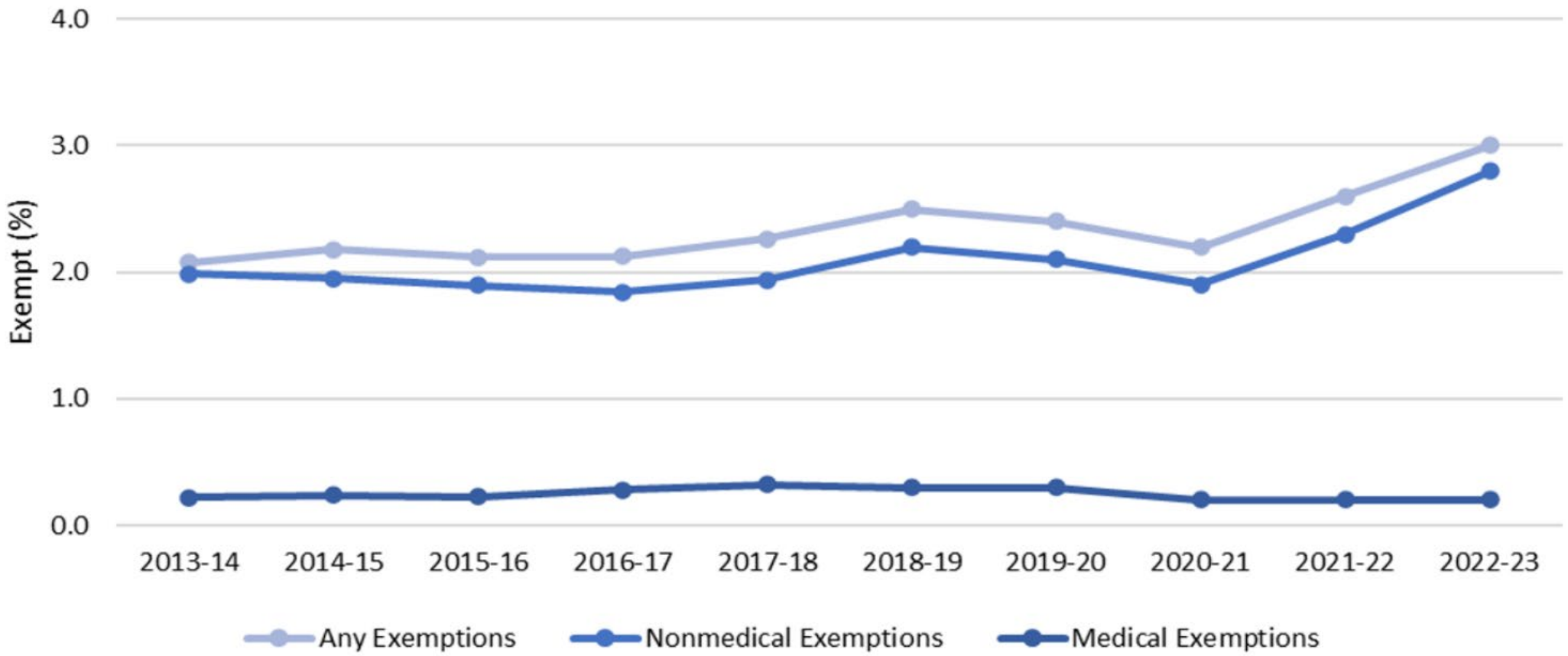
Weekly changes in Vaccines for Children program provider orders for pediatric vaccines – United States, January 6-April 19, 2020



Source: https://www.cdc.gov/mmwr/volumes/69/wr/mm6919e2.htm

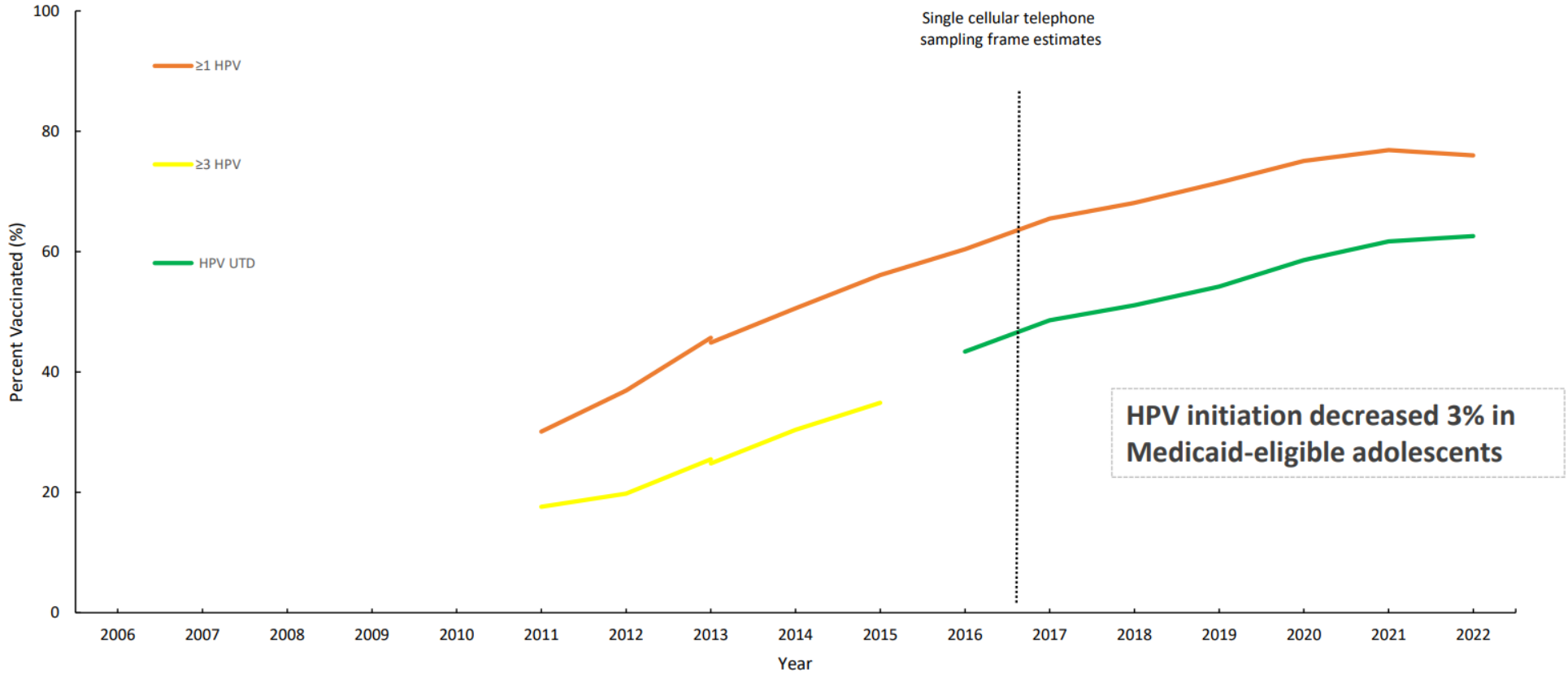
Increase in Exemptions to 3%, the Highest Reported Exemption Rate Ever in the U.S.

Increases Driven by Rates of Non-Medical Exemptions



Coverage with Selected Vaccines and Exemption from School Vaccine Requirements Among Children in Kindergarten — United States, 2022–23 School Year | MMWR (cdc.gov)

For the First Time Since 2013, HPV Initiation Did Not Increase

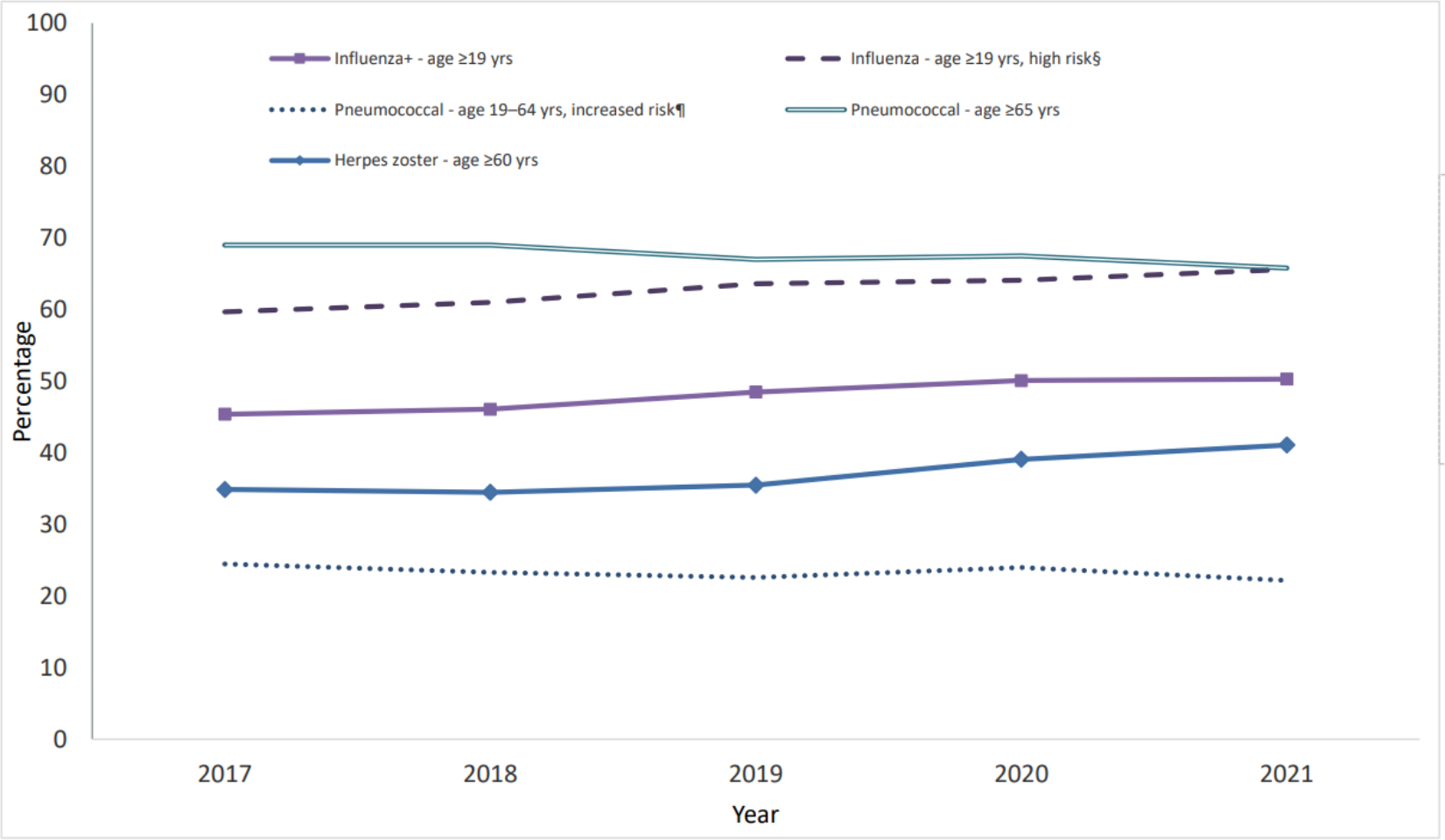


https://www.cdc.gov/mmwr/volumes/72/wr/mm7234a3.htm

Indiana Department of Health

Many Adults Remain Unprotected Against Vaccine-Preventable Diseases

Estimated Proportion of Adults Aged ≥19 Years Who Received Selected Vaccines by Age Group and Risk Status, 2017-2021



Disparities in adult vaccination coverage persist, with lower coverage in Black and Hispanic adults compared to White adults

Vaccination Coverage among Adults in the United States, National Health Interview Survey, 2021 | CDC

Despite Stable Overall Coverage, Evidence of Pandemic Effects on Adolescent Vaccination Remain

- Compared to adolescents born in 2007 (i.e., reached age 12 in 2019), those born in 2008 (i.e., reached age 12 in 2020) had lower coverage with:
  - ≥1 Tdap and ≥1 MenACWY by age 13
  - ≥1 Tdap, ≥1 HPV, and HPV up-to-date by age 14

- Continued efforts needed to catch up adolescents who missed vaccination during pandemic years, particularly those born in 2008 (current 14-15 year olds)

Vaccine series initiation in Indiana is being delayed according to recent data

- **Birth dose hep B – 2 months**
- **MMR – approximately 6 months**

Vaccination Coverage Among Adolescents Aged 13–17 Years — National Immunization Survey–Teen, United States, 2022 | MMWR (cdc.gov)

Progress Toward Measles Elimination — Worldwide, 2000–2022

Summary

What is already known about this topic?

Global coverage with measles-containing vaccine (MCV) declined during the COVID-19 pandemic to the lowest levels since 2008, and measles surveillance was suboptimal.

What is added by this report?

During 2000–2022, estimated measles vaccination prevented approximately 57 million deaths worldwide. However, millions of children missed vaccinations during the COVID-19 pandemic, resulting in an 18% increase in estimated measles cases and a 43% increase in estimated measles deaths in 2022 compared with 2021. Large or disruptive outbreaks were reported in 37 countries. Measles surveillance remains suboptimal.

What are the implications for public health practice?

To continue progress toward measles elimination, all children should receive 2 MCV doses to address pandemic-related immunity gaps and measles surveillance should be strengthened.

Indiana Department of Health

Global measles threat continues to grow

- Following years of declines in measles vaccination coverage, measles cases in 2022 have increased by 18%, and deaths have increased by 43% globally (compared to 2021). This takes the estimated number of measles cases to 9 million and deaths to 136,000 – mostly among children – according to a new report from the World Health Organization (WHO) and the U.S. Centers for Disease Control and Prevention (CDC).
- Measles continues to pose a relentlessly increasing threat to children. In 2022, 37 countries experienced large or disruptive outbreaks compared with 22 countries in 2021. Of the countries experiencing outbreaks, 28 were in the WHO Region for Africa, six in the Eastern Mediterranean, two in Southeast Asia, and one in the European Region.

Progress Toward Measles Elimination — Worldwide, 2000–2022 | MMWR (cdc.gov)

Global measles threat continues to grow as another year passes with millions of children unvaccinated | CDC Online Newsroom | CDC

Increasing Vaccination Coverage: Initiatives & Campaigns

[Routine Immunizations on Schedule for Everyone (RISE)]

[Catch Up on Well-Child Visits and Recommended Vaccinations]

[Standards for Adult Immunization Practice]

The video illustrates the implementation of best practices of the Adult Immunization Standards.

[Increasing Adult Vaccination Rates]

Getting routine immunizations back on-track is a goal that we can achieve by working together

Let's RISE

Health Departments	Health Care Professional	Other Partners	Schools
▪ Leverage IIS to identify individuals behind on their vaccinations ▪ Facilitate patient return for vaccination ▪ Make vaccines easy to find and access ▪ Give strong vaccine recommendations ▪ Disseminated vaccine-related communications around catch-up ▪ Partner with schools and community organizations	▪ Send reminders to families whose children are behind on or due for vaccination ▪ Improve vaccine-related communications ▪ Offer vaccination-only appointments or hold vaccination clinics ▪ Implement systems to review vaccine history at every visit ▪ Offer strong recommendations ▪ Have standing orders ▪ Be prepared to answer questions and address concerns	▪ Know where to find accurate information on routine vaccination ▪ Connect with local public health department, ask how you can help with catch-up ▪ Help carry messages about importance of catch-up; you are trusted sources who understand your community best ▪ Engage with community members to address vaccine hesitancy ▪ Leverage data to focus catch-up efforts on communities that have fallen behind on vaccinations	▪ Share and utilize school vaccination data for catch-up ▪ Include vaccination information in back-to-school communications ▪ Help share the facts about vaccines ▪ Send reminders to families whose children are not up to date on their vaccinations ▪ Expand access to immunization services (e.g. school-based vaccination clinics) ▪ Enforce school vaccination requirements

Routine Immunizations on Schedule for Everyone (RISE) | CDC

Vaccines for Children (VFC) Program

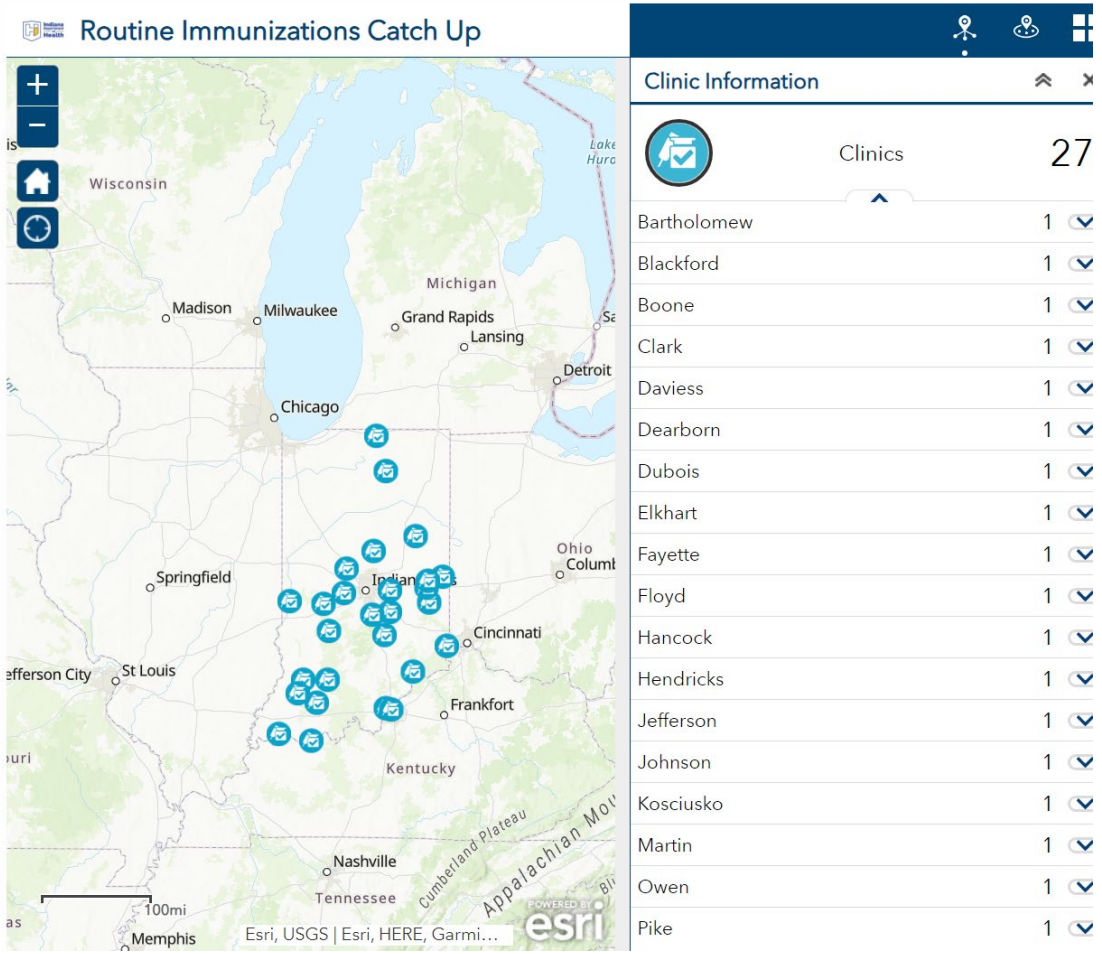
- Supplies >50% vaccines for children in the United States

- By improving vaccine access, the VFC program has helped to substantially:
  - Increase vaccination coverage rates
  - Reduce incidence of preventable diseases
  - Reduce disparities in coverage

Walker AT , et al. *MMWR Surveill Summ* . 2014 ; *63* (Suppl 1): 7 – 12; Zhao Z , et. al. *Am J Prev Med* . 2010 ; *38* (2): 127 – 37; Walsh, Brendan, et. al. *Health Affairs* 35.2 (2016): 356-364; Whitney CG, et. al. MMWR Morb Mortal Wkly Rep. 2014;63(16): 352–355. https://www.cdc.gov/vaccines/programs/vfc/index.html

Start Smart

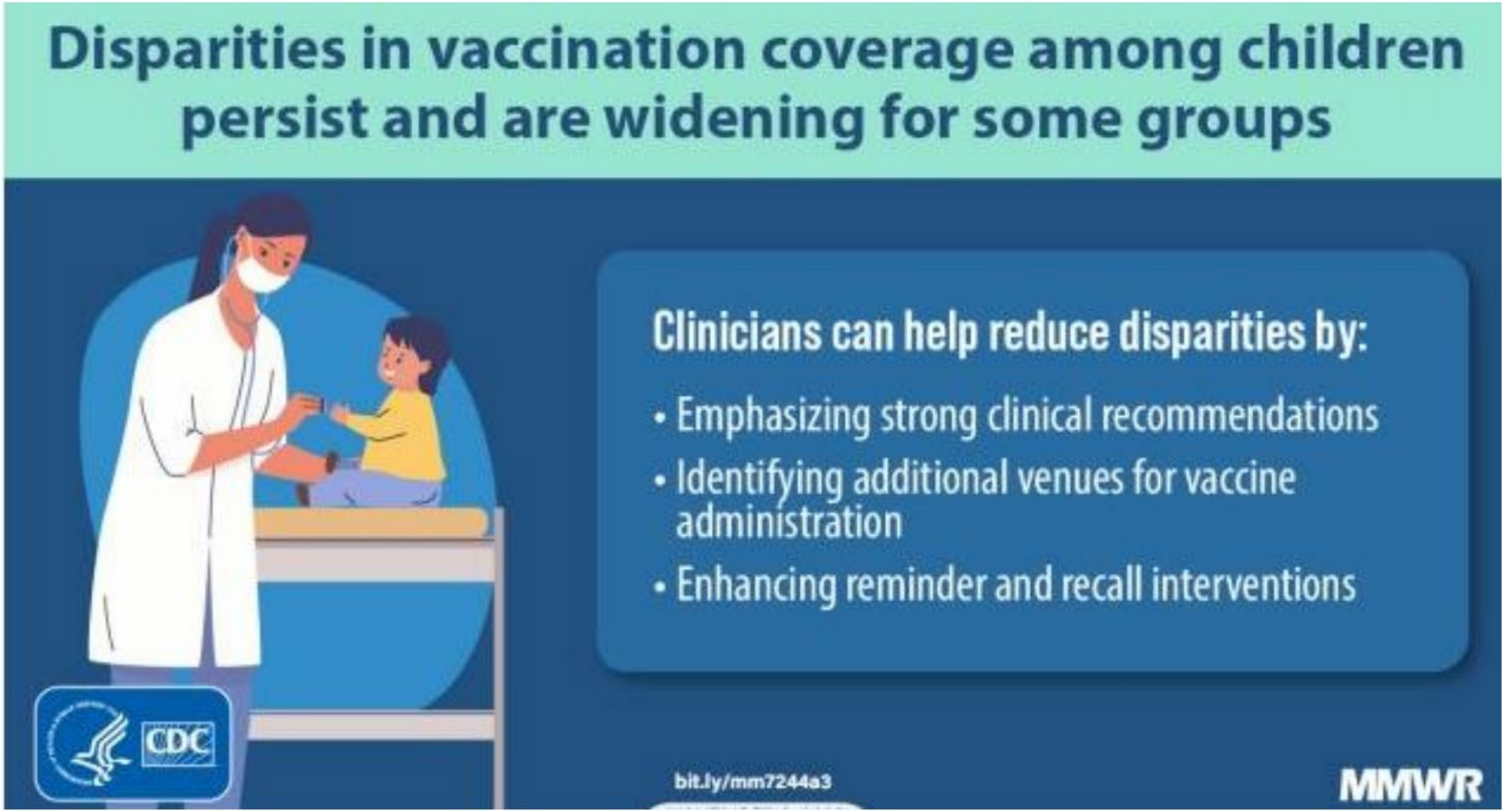
There are dozens of immunization clinics in Indiana that provide routine vaccinations for babies, children, and teens. The Routine Immunizations Catch Up Map shows where these clinics are, when they are open, and how to schedule an appointment. Many clinics allow walk-ins so you don't need an appointment.



Indiana Department of Health

Health: Immunization: Start Smart: Catch Up Immunizations (in.gov)

Disparities in vaccination coverage among children persist and are widening for some groups



Evidence-based Strategies and Resources to Increase Routine Vaccination Rates and Confidence

The Centers for Disease Control and Prevention (CDC) calls on healthcare providers and education professionals to support school-aged children to catch up on their vaccinations. Healthcare providers are trusted leaders within their communities and have unique opportunities to communicate with and support families in ensuring children are up to date on routine childhood vaccinations and in compliance with school vaccination requirements.

Strategies:

- Remind families about childhood vaccines that are due or required for school entry
- Help Share the Facts
- Assess Vaccination Status and Make Strong Recommendations
- Help Make Vaccines More Accessible

Indiana Department of Health

Lets_RISE_HCP_Toolkit.pdf (phf.org)

Strategies for Increasing Adult Vaccination Rates

National Adult and Influenza Immunization Summit calls on all clinicians to follow the National Vaccine Advisory Committee's (NVAC) Standards for Adult Immunization Practice including:

- Assess the vaccination status of patients at all clinical encounters
  - Utilize CHIRP, the immunization information system (IIS) to view patients' prior vaccinations to support vaccine needs assessment.
- Identify vaccines patients need, then clearly recommend needed vaccines
- Offer needed vaccines or refer patients to another provider for vaccination
- Document vaccinations given, including in the IIS
  - Many electronic health record (EHR) systems already link IISs – providers should check with their EHR administrators.
  - Providers not already utilizing an IIS should contact their local or state immunization program to inquire about enrolling in the IIS.
- Measure vaccination rates of providers' patient panels; making changes to clinic patient flow and taking other steps to address barriers to patient vaccination.

Tips to talk about vaccines

How to have conversations about vaccination

- Listen with empathy
- Ask open-ended questions
- Share trusted information
- Explore reasons for wanting to get vaccinated

How organizations and vaccinators can help boost vaccine confidence

- Lead by example
- Build Trust
- Break down barriers

How to Apply Motivational Interviewing During a Patient Visit

- Step 1: Embrace an attitude of empathy and collaboration
- Step 2: Ask permission to discuss vaccines
- Step 3: Motivational interviewing: Ask the patient a scaled question. The goal is to help the patient become more open to moving toward higher numbers
- Step 4: Respond to questions about vaccines, health, or mental health

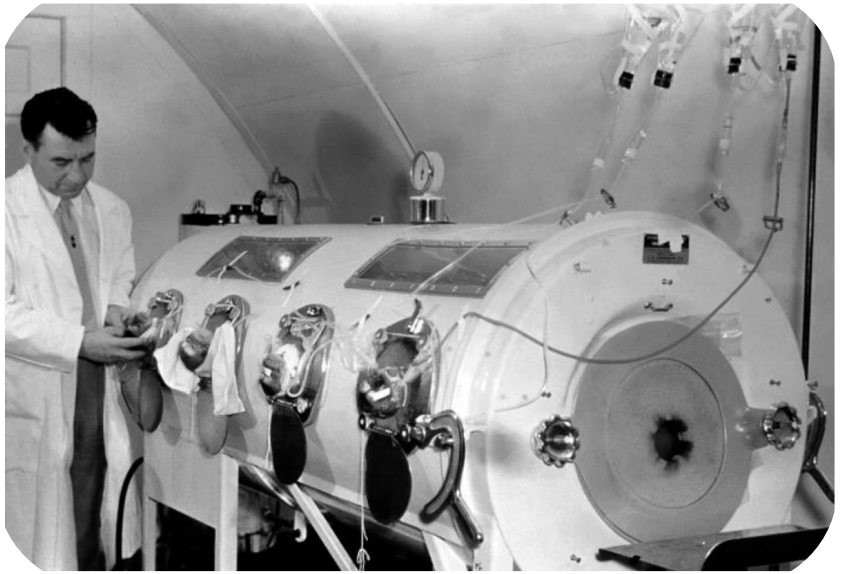
Indiana Department of Health

How to talk about vaccines (who.int)

Talking with Patients about COVID-19 Vaccination | CDC

14 Diseases
YOU ALMOST FORGOT ABOUT
(THANKS TO VACCINES)

- Polio
- Tetanus
- Flu (influenza)
- Hepatitis B
- Hepatitis A
- Rubella
- Hib
- Measles
- Whooping Cough (Pertussis)
- Pneumococcal Disease
- Rotavirus
- Mumps
- Chickenpox
- Diphtheria



Without vaccines, children are at risk of becoming seriously ill or even dying from childhood diseases such as measles and whooping cough.

Indiana Department of Health

https://www.cdc.gov/vaccines/parents/diseases/forgot-14-diseases.html

Addressing Common Vaccine Concerns

- Vaccines protect against diseases
- Strengthening a baby's immune system
  - Children are exposed to thousands of germs every day
  - Babies are born with immune systems that can fight most germs, but some germs cause serious or even deadly diseases a baby can't handle
  - Vaccines use very small amounts of antigens to help your child's immune system recognize and learn to fight serious diseases
- Today's vaccines use only the ingredients they need to be as safe and effective as possible
- Mild side effects are expected
- Before a new vaccine is licensed, extensive testing and clinical studies are completed
- **It is always better to prevent a disease than to treat one after it occurs**

https://www.cdc.gov/vaccines/parents/why-vaccinate/vaccine-decision.html

Varicella (Chickenpox)

Source: CDC Public Health Image Library

Indiana Department of Health

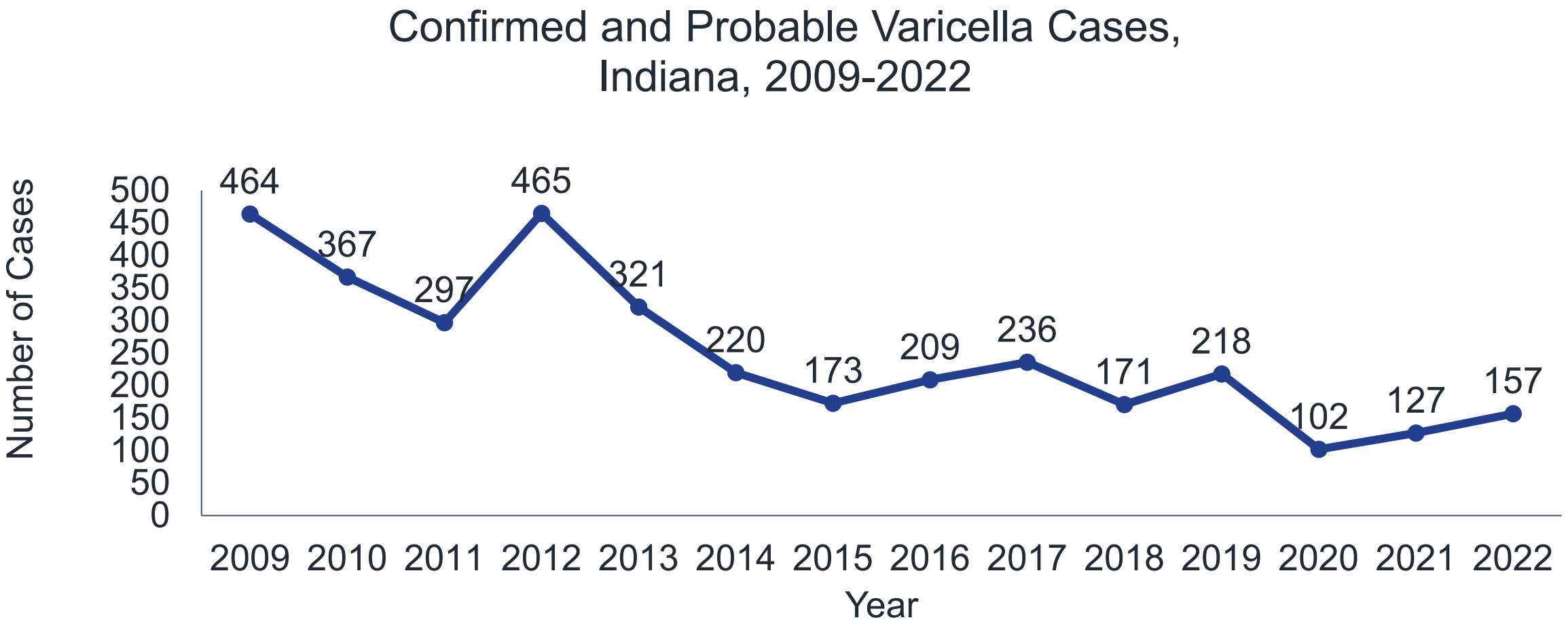
Varicella Overview

Etiologic agent	Varicella-zoster virus

Symptoms	• Pruritic, generalized maculo-papulovesicular rash
	  • Progresses rapidly from macules → papules → vesicles →crusts
	  • Lesions appear in successive crops and are present in multiple stages of development at the same time
	  • Typically most concentrated on chest and back
	• Other symptoms: Fever, malaise, headache, fatigue, loss of appetite

Complications	Bacterial skin and soft tissue infections, pneumonia, encephalitis, cerebellar ataxia, aseptic meningitis, other bacterial infections
Incubation period	Average: 14-16 days (Range: 10-21 days)
Infectious period	From 2 days before rash onset until: • All lesions have crusted **or** • No new lesions appear in a 24-hour period (in patients without vesicles)

Indiana Varicella Cases



Indiana Department of Health

Varicella Laboratory Testing

- **PCR from skin lesions -** most sensitive
  - Vesicular lesions or scabs are best for sampling.
  - Maculopapular lesions are acceptable with proper collection technique.
  - CDC specimen collection guidance: https://www.cdc.gov/chickenpox/lab-testing/collecting-specimens.html
- **Direct fluorescent antibody (DFA) and viral culture:** Also considered confirmatory but are less sensitive than PCR.
- **Serology:**
  - IgM – less sensitive than PCR and may be prone to poor specificity. Not considered confirmatory for public health surveillance purposes.
  - IgG – 4-fold rise between acute and convalescent sera may confirm varicella, but less sensitive than PCR in people with prior vaccination or history of disease.

Varicella Testing at IDOH Laboratories

Varicella PCR may be performed at the IDOH laboratories for public health purposes

- Examples: Suspected outbreaks or when cases are suspected to have occurred in settings where people at high risk of severe varicella are present
- Authorization is required prior to testing at the IDOH laboratories. For testing authorization, call:
  - 317-233-7125 during normal business hours (8:15 AM – 4:45 PM, Monday – Friday)
  - 317-233-1325 after hours, weekends, or holidays
- Routine diagnostic testing should be performed at clinical laboratories

Varicella Reporting

Per Indiana Communicable Disease Rule (410 IAC)

- Providers, hospitals, and laboratories are required to report cases of varicella within one working day.
  - Note: Reporting by one entity does not nullify other entities' responsibility to report.
- All clinically diagnosed cases of varicella are reportable, regardless of whether laboratory testing was performed.

- If communicable disease reporting within a healthcare facility is delegated to specific staff, providers diagnosing varicella should ensure those staff are notified so the case can be reported appropriately.

Importance of Varicella Reporting

- Proper reporting allows for:
  - Timely public health investigation and implementation of control measures.
  - Improved ability to detect and respond to clusters and outbreaks in a timely manner.
  - More robust surveillance of varicella incidence and trends.
- Failure to report may result in missed opportunities for prevention and delayed outbreak response.

How to report varicella

- Facilities reporting via the NEDSS Base System (NBS) may submit morbidity reports electronically.
- Facilities not reporting via NBS may fax reports to IDOH at 317-234-2812.
- Suspected outbreaks should be reported immediately by phone to:
  - The local health department **or**
  - IDOH (317-233-7125 during business hours or 317-233-1325 after hours)
- Reporting forms and guidance are available at:
  - https://www.in.gov/health/idepd/communicable-disease-reporting/

Varicella: Key Points

- Clinicians should continue to be vigilant for cases of varicella, including breakthrough cases.
- Laboratory confirmation is highly encouraged.
- Providers must report **all** clinically diagnosed cases, even if laboratory testing was not performed.
- Clinicians should encourage patients to remain up to date on recommended varicella vaccines.

Other Infections

Indiana Department of Health

A Cluster of Ocular Syphilis Cases with a Common Sex Partner — Southwest Michigan, 2022

Summary

What is already known about this topic?

Untreated syphilis can lead to rare manifestations of ocular syphilis, otosyphilis, and neurosyphilis. Prompt diagnosis and treatment of syphilis can prevent systemic complications.

What is added by this report?

A cluster of five cases of ocular syphilis in women with a common male sex partner was identified in Michigan, suggesting that an unidentified *Treponema pallidum* strain might have been a risk factor for developing systemic manifestations of syphilis.

What are the implications for public health practice?

Maintaining a high index of clinical suspicion and obtaining a thorough sexual history are critical to diagnosing ocular syphilis, otosyphilis, and neurosyphilis. Coordination of disease surveillance with disease intervention specialist case investigation, partner notification, and treatment referral can interrupt syphilis transmission.

A Cluster of Ocular Syphilis Cases with a Common Sex Partner — Southwest Michigan, 2022 | MMWR (cdc.gov)

Increase in Extensively Drug-Resistant Shigellosis

- The Indiana Department of Health (IDOH) and Centers for Disease Control and Prevention (CDC) have been monitoring an increase in extensively drug-resistant (XDR) Shigella infections (shigellosis) reported through national surveillance systems.
  - In 2022, about 5% of Shigella infections reported to CDC were caused by XDR strains, compared with 0% in 2015.
- Starting in 2022, the Indiana Department of Health Laboratory (IDHOL) began sequencing submitted Shigella isolates and samples through whole genome sequencing (WGS) to identify antibiotic resistance genes and genetically link cases.
  - This sequencing has made it possible to determine that 12.7% of Shigella cases in Indiana are extensively drug-resistant so far in 2023.

Increase in Extensively Drug-Resistant Shigellosis

- Notably, a cluster of XDR Shigella cases from multiple states have been linked to a camp site in Indiana that has ties to the men who have sex with other men (MSM) community.
  - Increased suspicion of shigellosis should be considered for individuals who have acute diarrhea and report recent MSM activity.
- With XDR strains having limited antimicrobial treatment options and Shigella bacteria being easily transmissible, healthcare professionals should be vigilant about suspecting and reporting cases of XDR Shigella infection to their local or state health department and educating patients and communities at increased risk about prevention and transmission.

Recommendations For Healthcare Providers

Consider shigellosis in the differential diagnosis of acute diarrhea, especially for patients at higher risk for Shigella infection, including:

- Young children
- MSM
- People experiencing homelessness
- International travelers
- Immunocompromised persons
- People living with HIV

Recommendations For Healthcare Providers

If Shigellosis is suspected:

- Ask the patient about relevant exposures and social history, including sexual activity, housing status, and international travel.
- When ordering diagnostic testing for Shigella, stool culture is preferred for patients who will require antimicrobial treatment.
- If a culture-independent diagnostic test (CIDT) is performed instead of culture and Shigella bacteria are detected, sample or isolate should be sent to Indiana Department of Health Laboratory (IDOHL)
- If a culture is positive for Shigella, order antimicrobial susceptibility testing (AST) to inform antimicrobial selection.
- Providers should report* Shigella cases to their local health department or via the IDOH disease surveillance system (NBS).

*Shigellosis is a reportable condition in Indiana; cases should be reported by the next business day, per the Indiana communicable disease rule 410 IAC 1-2.3-47.

Useful notes

- Shigellosis has a typical incubation period of 12 hours to 4 days
- Most people with diarrheal illness require only supportive care and fluid replacement.
- Antimicrobial agents are not always needed for mild shigellosis, but they may be indicated to shorten the duration of illness (by about 2 days), or reduce the likelihood of transmission, for example during outbreaks, in institutional settings, from food handlers, to immunocompromised persons or those being treated with immunosuppressive drugs, to people living with HIV/AIDS

Mpox

- The Indiana Department of Health was notified of nine new mpox cases in the month of October and two in November. Prior to these new cases, the last case was reported in July of 2023.
- The IDOH Mpox Dashboard is updated monthly and includes information about statewide mpox cases.
- IDOH reminds providers to consider mpox as a possible etiology of rash illness in people who are immunocompromised despite mpox vaccination status.
- For information about specimen collection, testing, vaccines and treatment, see the mpox clinical summary guide here.

Miscellaneous

Indiana Department of Health

Maintain Vigilance for Acute Flaccid Myelitis

- Acute flaccid myelitis (AFM) is a rare, serious paralytic disease that mainly affects children.
- Clinicians play a critical role in recognizing AFM symptoms and assessing patients quickly.
- Viruses, including non-polio enteroviruses, may cause AFM. In particular, enterovirus D-68 (EV-D68) is believed to be the main enterovirus responsible for the increases in AFM cases observed during 2014, 2016, and 2018.
- During fall months, seasonal increases in the circulation of respiratory pathogens, including enteroviruses, is to be expected.
  - This year the number of reported cases of AFM has remained relatively low.
  - As of Oct. 2, the Centers for Disease Control and Prevention (CDC) reported 10 confirmed cases out of 30 reports of patients under investigation (PUIs).
  - In past years, increases in EV-D68 respiratory disease have preceded cases of AFM by about 2 weeks. Therefore, providers should maintain vigilance for possible increases in EV-D68 respiratory disease and AFM.

Reporting Acute Flaccid Myelitis

- Suspected cases of AFM are required to be reported to IDOH within one working day.
- Clinicians should report all patients presenting with onset of acute flaccid limb weakness and MRI showing spinal cord lesions in at least some gray matter, regardless of lab results.
- Clinicians should obtain whole stool samples from all patients with suspected AFM to rule out poliovirus infection.
- Additional information about reporting cases of AFM is available here.
- Additional information can be found here.

Most people with prediabetes do not they know they have it

- More than 1 in 3 adults – about 98 million Americans — has prediabetes, and 81% of them don't know they have it.
- CDC and the Ad Council are launching new public service announcements (PSAs) as part of the ongoing "Do I Have Prediabetes?" initiative to encourage people to learn their risk of prediabetes.
- The new "Be Your Own Hero" PSAs, developed by creative agency Subject Matter+Kivvit, encourages viewers to take the 1-minute prediabetes risk test so they can take steps to delay or prevent type 2 diabetes. If someone receives a high-risk score, the campaign provides additional resources and encourages them to speak with their doctor about getting a blood test to confirm a diagnosis of prediabetes.

More Than One in Three Americans are at Increased Risk for Type 2 Diabetes, but Changing the Outcome is Possible | CDC Online Newsroom | CDC

Fatal Occupational Asthma in Cannabis Production — Massachusetts, 2022

Summary

What is already known about this topic?

Occupational allergic diseases, including asthma, are an emerging concern in the rapidly expanding U.S. cannabis industry.

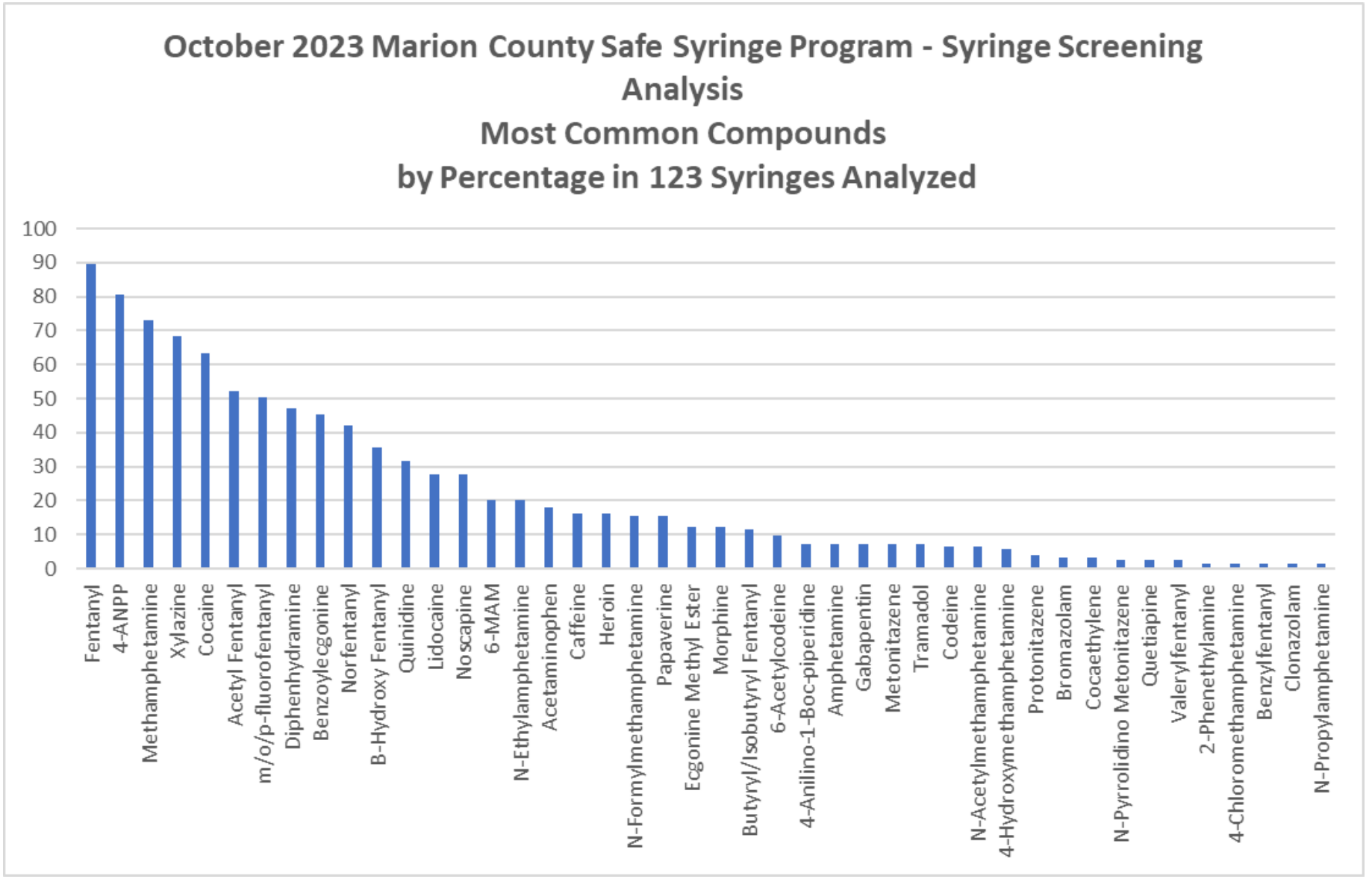
What is added by this report?

In 2022, the first death attributed to occupational asthma in a U.S. cannabis production worker occurred in Massachusetts. This case illustrates missed opportunities for prevention, including control of workplace exposures, medical surveillance, and treatment according to current asthma guidelines.

What are the implications for public health practice?

Prevention is best achieved through a multifaceted approach. It is essential to evaluate workers with new-onset or worsening asthma for relation to work exposures and to recognize work in cannabis production as potentially causative.

Fatal Occupational Asthma in Cannabis Production — Massachusetts, 2022 | MMWR (cdc.gov)


October 2023 Marion County Safe Syringe Program - Syringe Screening Analysis
Most Common Compounds
by Percentage in 123 Syringes Analyzed
100
90
80
70
60
50
40
30
20
10
0
Fentanyl
4-ANPP
Methamphetamine
Xylazine
Cocaine
Acetyl Fentanyl
m/o/p-fluorofentanyl
Diphenhydramine
Benzoylecgonine
Norfentanyl
B-Hydroxy Fentanyl
Quinidine
Lidocaine
Noscapine
6-MAM
N-Ethylamphetamine
Acetaminophen
Caffeine
Heroin
N-Formylmethamphetamine
Papaverine
Ecgonine Methyl Ester
Morphine
Butyryl/Isobutyryl Fentanyl
6-Acetylcodeine
4-Anilino-1-Boc-piperidine
Amphetamine
Gabapentin
Metonitazene
Tramadol
Codeine
N-Acetylmethamphetamine
4-Hydroxymethamphetamine
Protonitazene
Bromazolam
Cocaethylene
N-Pyrrolidino Metonitazene
Quetiapine
Valerylfentanyl
2-Phenethylamine
4-Chloromethamphetamine
Benzylfentanyl
Clonazolam
N-Propylamphetamine

Hospice: New Requirement for Physicians Who Certify Patient Eligibility

- Effective May 1, 2024, for Medicare to pay for hospice services, the following physicians must enroll in Medicare or opt out:
  - Hospice medical director or the physician member of the hospice interdisciplinary group who certifies the patient's terminal condition
  - Patient-designated attending physician (if they have one) who certifies their terminal condition
- If you're currently enrolled or opted out, no action required

2023-11-16-MLNC | CMS

Hospice: New Requirement for Physicians Who Certify Patient Eligibility

This new requirement:

- Only applies to Fee-for-Service Medicare
- Doesn't prohibit the patient's independent attending physician from treating them while in hospice and billing for these services under Part B
- Applies to all written or oral certifications under § 418.22(c)

Hospices can quickly verify a physician's enrollment or opt-out status using the CMS ordering and referring data file (ORDF), which lists all Medicare-enrolled and opted-out physicians. CMS will modify the ORDF to create a separate column with this status.

Updates From FSSA

HIP Rate Equalization Project to align rates across all programs, effective Jan. 1, 2024

- The IHCP Professional Fee Schedule will be aligned with 100% of Medicare rates. Rates for Hoosier Healthwise, Hoosier Care Connect and fee-for-service (FFS) programs are all being increased to 100% of Medicare rates to align with HIP rates. The HIP rates for 2024 will remain the same as the rates paid in 2023.
- The 2024 IHCP Professional Fee Schedule will be implemented as a minimum fee schedule for all managed care plans, and managed care entities will be required to reimburse providers at or above the fee schedule rates for services covered under the member's benefit plan.

Extended Coverage

FSSA expanded maternal and child health coverage as a step towards reducing Indiana's maternal mortality rate.

① Postpartum Coverage Extension – BT202226

Effective April 1, 2022, the postpartum coverage period for traditional Medicaid, Healthy Indiana Plan Maternity, and Hoosier Healthwise members was extended from **60 days to one year**.

② Prenatal Tests and Screening Coverage – BT202295

Effective Dec. 1, 2022, Medicaid covers certain prenatal screenings for **all pregnant women**.

Extended Coverage (Cont.)

FSSA expanded maternal and child health coverage as a step towards reducing Indiana's maternal mortality rate.

3 LARC Carve-out – BT202323

Effective Nov. 1, 2022, FQHCs and rural health clinics are **separately reimbursed for LARC devices** using the prospective payment system (PPS) rate.

4 Donor Breastmilk Coverage – BT202280

Effective Nov. 1, 2022, accredited donor milk banks are now considered **eligible providers** and a stand-alone specialty.

Perinatal Psychiatry Phone Line

The Indiana Consultations for Healthcare Providers in Addiction, Mental Health, and Perinatal Psychiatry Program (CHAMP), launched in March 2023, is a free statewide phone consultation line, referral service, and educational opportunities available to providers who work with adults 18+ patients.

Providers call **317-274-2400** and after a short intake with a CHAMP health navigator, are connected to a psychiatrist.

The provider will then be connected to a psychiatrist **within 30 minutes** or at a specific callback time that works for them.

At the conclusion of the conversation, the provider will receive a brief written **documentation of the recommendations** via encrypted email.

Continuous coverage ended

- Redetermination actions began in April and we are now in month eight.
  - We are trying to reach Hoosiers who in many cases have never completed an annual redetermination or who haven't been in contact with us for this process in as many as four years.
- Indiana is one of only a few states that had no deficiencies in our CMS unwinding plan.
- Extensive outreach to stakeholders and providers continues.

Outreach Efforts, 2023

FSSA made 5 to 7 contact attempts to individuals due for redetermination who did not qualify for auto-renewal.

	Outreach Method	Items Sent
Advanced Outreach	Postcard	700,000
	211 Outbound Call	49,357
Total Outreach	Warning Letter	324,858
	Renewal Packet (households / members)	455,674 / 624,739
	Text Message	180,030
	DFR Outbound Call	89,202
	Email	81,099
	Postcards Utilizing BMV Data	80,242

- **Data Notes:**
- Postcards were sent to all PHE-protected members, who would have lost coverage during the PHE except for the special PHE flexibilities, and 211 Outbound calls were made to all PHE-protected Fee-for-Service members
- Warning letters are sent to PHE-protected members two months before their redetermination paperwork is due
- Renewal Packets are sent to members who do not qualify for ex parte (auto) renewal over a month before their redetermination paperwork is due
- Text Messages are sent to all members who must return their renewal packets, a month before their packets are due.
- Outbound calls were made and emails sent to members who have not returned their renewal packets after the official redetermination due date but prior to the end of the renewal month
- The tables above does not include managed care entity outreach, except for the postcards. In January 2023, MCEs sent postcards to PHE-protected members to prompt them to update their contact information. MCEs are also doing monthly outreach to those who receive renewal packets and those who no longer have coverage
- FSSA is also providing hospitals, nursing facilities and other health care providers with a list of PHE-protected patients/ residents to aid in further targeted outreach efforts.

Hoosier Families First Fund RFS 23-7451

FSSA released a Request for Services (RFS) to invest in existing maternal child health programs meeting one or more of eight Eligible Spending Categories to support healthy pregnancies and families.

Awardee Summary

32 Applications Competitively Awarded

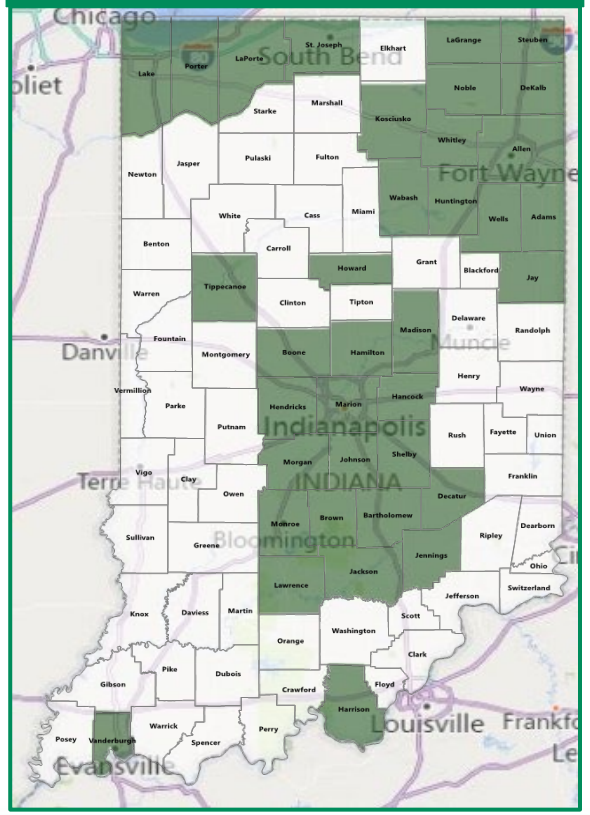
$4.5M Total Amount Awarded

36 Counties Represented

Funded Activities Include:

- Implementing Vitamin K Awareness
- Increasing Doula Services
- Supporting Mobile Outreach Units
- Expanding Home Visiting Programs

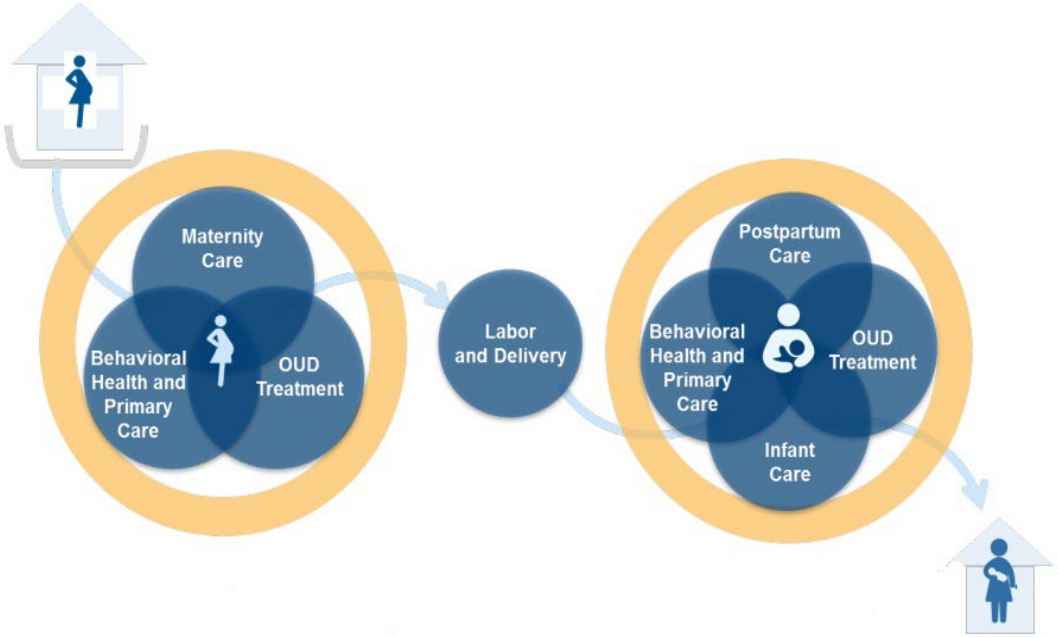
County Coverage



Pregnancy Promise Program

Indiana Pregnancy Promise Program

- 5-year Cooperative Agreement with CMS Innovation Centers (currently in Y4)
- Improve outcomes for pregnant/postpartum individuals and infants impacted by opioid use disorder
- FSSA administers program in partnership with Medicaid Managed Health Plans to offer enhanced high-risk OB case management services to participants



Pregnancy Promise Program – Eligibility and Referral

To be eligible, participants must meet the following criteria:

- Pregnant or within 90 days of the end of pregnancy
- Identify as having current or previous opioid use
- Be eligible for or receive Medicaid health coverage

**** Anyone may make a confidential referral****

Visit: PregnancyPromise.in.gov

Email: PregnancyPromise@fssa.in.gov, or

Call: 317-234-5336 or toll-free 888-467-2717

Indiana Pregnancy Promise Program

What are the Pregnancy Promise Program benefits?

- **Connection:** Participants in the Pregnancy Promise Program will be matched with a case manager. Case managers will offer confidential support during enrollment to be sure parents and infants receive the care and resources they need during and after pregnancy to be healthy and well.
- **Coordination:** Pregnancy Promise Program case managers will work with participants and their team of doctors and providers to coordinate care and identify community resources for families.
- **Prevention:** By connecting pregnant individuals with health care and treatment as early as possible, the Pregnancy Promise Program aims to reduce and prevent the negative impacts of opioid use to the parent and child.

To make a referral for yourself or someone you know, visit www.PregnancyPromise.in.gov, email PregnancyPromise@fssa.in.gov, call 317-234-5336 or call toll-free 888-467-2717.

Health First Indiana

Indiana Department of Health

Please join us!

Save the Date

Please join us for

PUBLIC HEALTH DAY

Celebrating an Investment in Prevention

11 a.m. to 2 p.m.
Thursday, Feb. 22
at the Indiana Statehouse
North Atrium

Show your support for
public health in Indiana
by wearing blue and gold.

MORE INFO:healthfirstindiana.com

Indiana Department of Health

Ways to connect with us

- IDOH Clinician Update Feedback Survey – Please let us know what topics you'd like us to cover
- Sign up for IHAN– Indiana Health Alert Network https://ihan-in.org
- Health: Long Term Care/Nursing Homes: Newsletters
- MARK YOUR CALENDARS - Clinician webinars for 2024: Jan 26, Feb. 23, March 22, April 26, May 24, June 28, July 26, Aug. 23, Sept. 27, Oct. 25, Nov. 22, Dec. 27

For more information

The supplemental information section covers other topics to read on your own:

- Paxlovid letter of authorization
- Additional information on HPV vaccination
- Chikungunya vaccine
- Tick-borne encephalitis vaccine
- CDC Guidelines for the Prevention and Treatment of Anthrax

Questions?

CONTACTS:

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State Health Commissioner
lweaver@health.in.gov

Guy Crowder, M.D.
Chief Medical Officer
GCrowder@health.in.gov

Shireesha Vuppalanchi, M.D.
Medical Director
svuppalanchi@health.in.gov

Next call: Noon, Jan 26, 2024

Supplemental information

Indiana Department of Health

New! Paxlovid EUA 105 Letter of Authorization Update

11/1/2023: FDA Paxlovid FAQ updated

Q. What are the differences between EUA-labeled Paxlovid and NDA-approved Paxlovid?

A. There are certain differences in the design of the carton packaging and the blister cards containing the nirmatrelvir and ritonavir tablets. It is important that patients recognize which presentation they have received. For more information, please see LINK to the HCP and Patient Dosing Cards

Q. Can adolescents still receive Paxlovid?

A. The EUA authorizes the use of Paxlovid for the treatment of mild-to-moderate COVID-19 in pediatric patients (12 years of age and older weighing at least 40 kg), who are at high risk for progression to severe COVID-19, including hospitalization or death. Under the EUA, either EUA-labeled Paxlovid or NDA-labeled Paxlovid may be dispensed for this use

download (fda.gov)

New! Paxlovid EUA 105 Letter of Authorization Update

11/1/2023: FDA Paxlovid FAQ updated

Q. Are pharmacists permitted to prescribe Paxlovid?

A. In addition to any health care provider licensed or authorized under state law to prescribe drugs, PAXLOVID may also be prescribed for an individual patient by a state-licensed pharmacist for the treatment of mild-to-moderate COVID-19 in adults and pediatric patients (12 years of age and older weighing at least 40 kg) who are at high risk for progression to severe COVID-19, including hospitalization or death, subject to the following conditions:

- Sufficient information is available, such as through access to health records less than 12 months old or consultation with a health care provider in an established provider-patient relationship with the individual patient, to assess renal and hepatic function; and
- Sufficient information is available, such as through access to health records, patient reporting of medical history, or consultation with a health care provider in an established provider-patient relationship with the individual patient, to obtain a comprehensive list of medications (prescribed and non-prescribed) that the patient is taking to assess for potential drug interaction.

The state-licensed pharmacist should refer an individual patient for clinical evaluation (e.g., telehealth, in-person visit) with a physician, advanced practice registered nurse, or physician assistant licensed or authorized under state law to prescribe drugs, if any of the following apply:

- Sufficient information is not available to assess renal and hepatic function.
- Sufficient information is not available to assess for a potential drug interaction.
- Modification of other medications is needed due to a potential drug interaction.
- Paxlovid is not an appropriate therapeutic option based on the authorized Fact Sheet for Healthcare Providers or due to potential drug interactions for which recommended monitoring would not be feasible

The EUA does not place any limitation on the presentation of Paxlovid to be dispensed (EUA-labeled Paxlovid or NDA-labeled Paxlovid) when pharmacist prescribing is consistent with the conditions above.

download (fda.gov) for FAQ link

Paxlovid™
(nirmatrelvir 150 mg tablets | ritonavir 100 mg tablets)

Guide to PAXLOVID packaging

What to expect in packaging changes as PAXLOVID transitions from EUA to NDA commercialization

For educational purposes only.

Besides EUA packaging, commercial NDA packaging for PAXLOVID will be available soon. To prevent potential medication errors, please be aware of the differences between these packages.

Important: Despite this packaging update, the PAXLOVID medication remains the same.

Continue reading to learn about the following differences between EUA and commercial NDA packaging:

- NDC numbers
- Carton shapes
- Blister cards

EUA=Emergency Use Authorization; NDA=New Drug Application; NDC=National Drug Code.

Pfizer

For educational purposes only.

Two different Dose Packs will continue to be available in both EUA and NDA packaging: Standard Dose and Reduced Dose

EUA PACKAGING

EUA Packaging Recognizable Features:

- Carton is **rectangular**
- "For use under Emergency Use Authorization" is printed on the carton
- Carton contains **5 two-dose blister cards**, with each blister card holding both morning and night doses
- In-Market NDC Numbers:
  - Standard Dose: 0069-1085-30 and 0069-0345-30
  - Reduced Dose: 0069-1101-20

NDA PACKAGING

NDA Packaging Recognizable Features:

- Carton is **cube-shaped**
- Carton contains **10 single-dose blister cards**, with each blister card containing 1 dose
- In-Market NDC Numbers:
  - Standard Dose: 0069-5321-30
  - Reduced Dose: 0069-5317-20

CARTON (FRONT)

Standard Dose

Reduced Dose for Patients with **Moderate Renal Impairment**

CARTON (FRONT)

Standard Dose

Reduced Dose for Patients with **Moderate Renal Impairment**

BLISTER CARD

Standard Dose

Reduced Dose for Patients with **Moderate Renal Impairment**

These represent 1 of 5 two-dose blister cards.

BLISTER CARD

Standard Dose

Reduced Dose for Patients with **Moderate Renal Impairment**

These represent 1 of 10 single-dose blister cards.

Based on the packaging presentation dispensed, counsel patients on how the tablets are labeled on the blister pack, how to take each dose, and how to complete their medication regimen.

PAXCESS Patient Support Program Has Two Offerings

- Co-pay program to reduce out-of-pocket for eligible patients
- Details found at PAXLOVID.com and PAXLOVID.pfizerpro.com

- Expected December 1, 2023
- 2024: PAXLOVID remains free of charge

Terms and conditions apply. See full terms and conditions at paxlovid.com/paxcess-terms-and-conditions.

*USG PAP eligibility also includes patients insured through TRICARE and the VA Community Care Network

Please see full Prescribing Information including BOXED WARNING at this presentation or at www.paxlovid.pfizerpro.com

Pfizer Paxlovid (nirmatrelvir tablets | ritonavir tablets)

HPV Vaccination

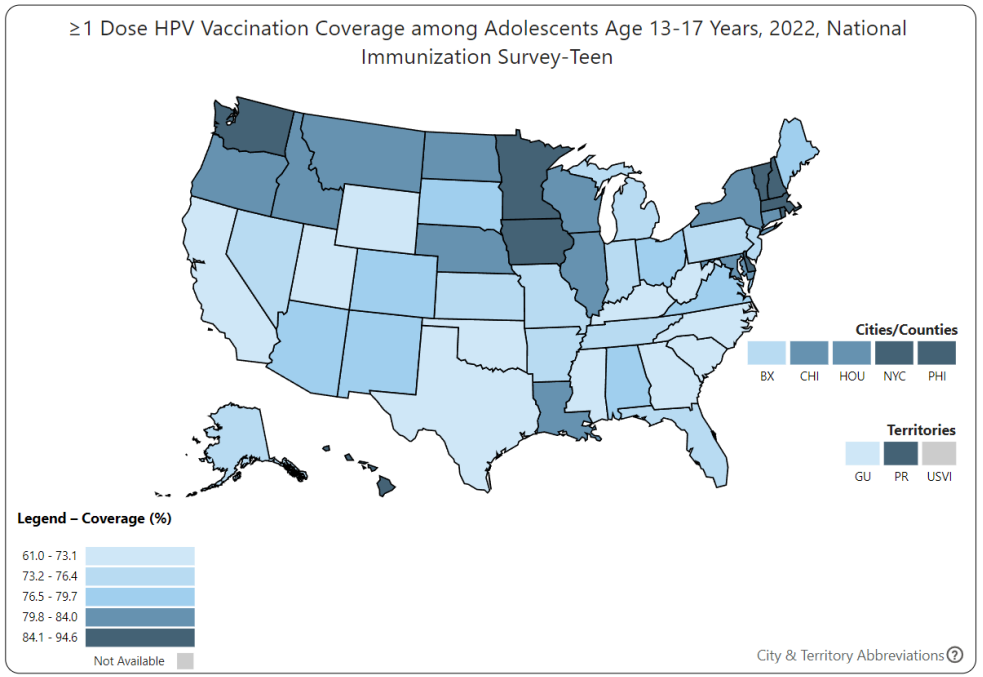
- First recommended in 2006; Gardasil-9 protects against nine HPV types
- Recommendation: 2 doses given 6-12 mos apart at 11-12 years of age
- Administration:
  - Age 9-15 yrs = 2 doses over 6-12 mos
  - Age 15-26 yrs = 3 doses over 6 mos
- Outcomes:
  - Reduction of 88% among teen girls and 81% among young adult women in high-risk and genital wart-causing HPV types
  - Among vaccinated women, 40% reduction in cervical precancers causes by high-risk HPV types
- Safe and effective; no evidence of decreasing protection over >12 years of follow-up

Indiana Department of Health

https://www.cancer.gov/about-cancer/causes-prevention/risk/infectious-agents/hpv-and-cancer
https://www.cdc.gov/hpv/parents/vaccine/six-reasons.html

National Immunization Survey-Teen (13-17 yo, 2022)

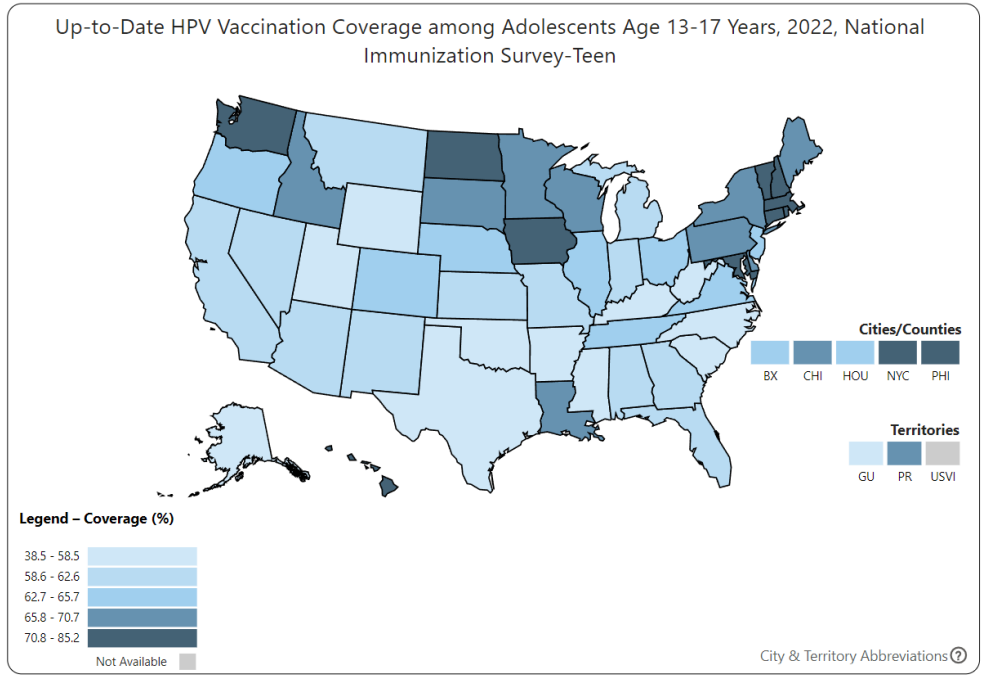
Received ≥1 Dose of HPV Vaccine



- National: 76.0%
- Indiana: 75.5%

Rank: 36th

Up to Date on HPV Vaccine



- National: 62.6%
- Indiana: 59.6%

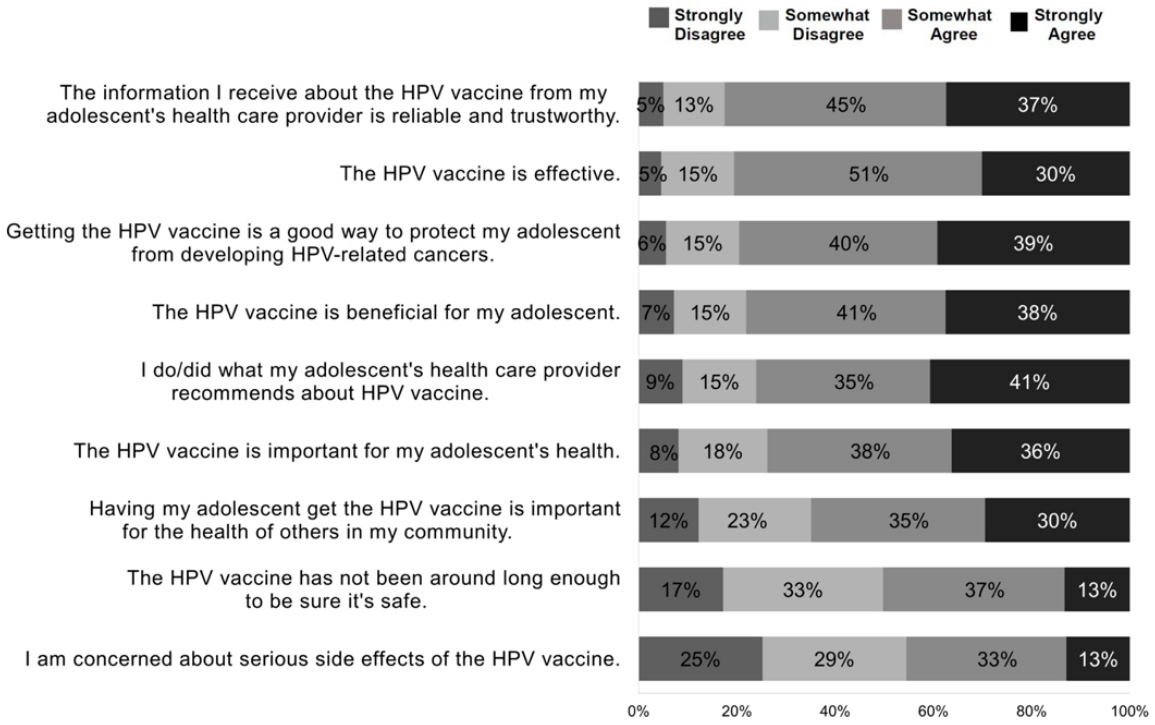
Rank: 34th

Indiana Department of Health

TeenVaxView | Adolescent Vaccine Coverage Interactive Data | NIS | CDC

HPV Vaccine Hesitancy

- Assessed using Vaccine Hesitancy Score (VHS)
- >23% of parents expressed vaccine hesitancy (VHS >3)
- Contributing beliefs among vaccine-hesitant parents:
  - Concern about importance of vaccine for child's health (90%) or community's health (93%)
  - Concern about the benefits for their child (85%)
- Among HPV vaccine hesitant parents:
  - 21% of adolescents received ≥1 vaccine
  - 15% completed the series
  - 73% refused HPV vaccine due to concerns

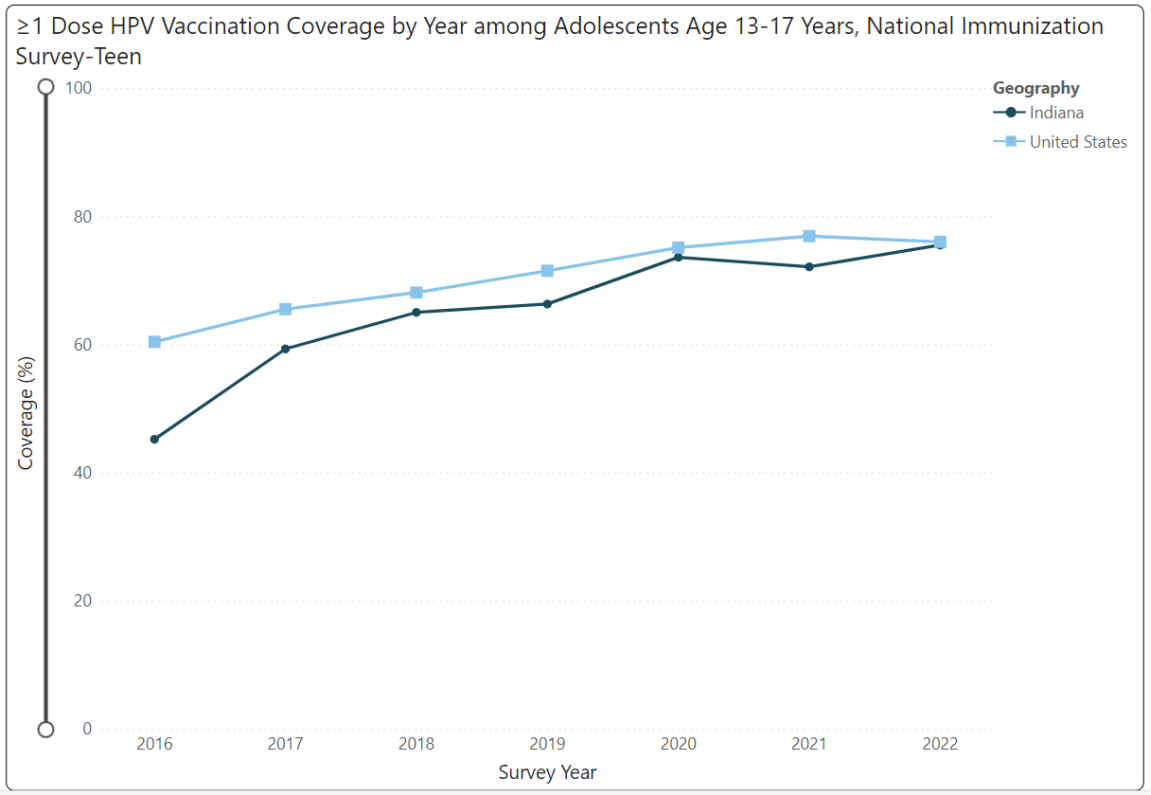


Indiana Department of Health

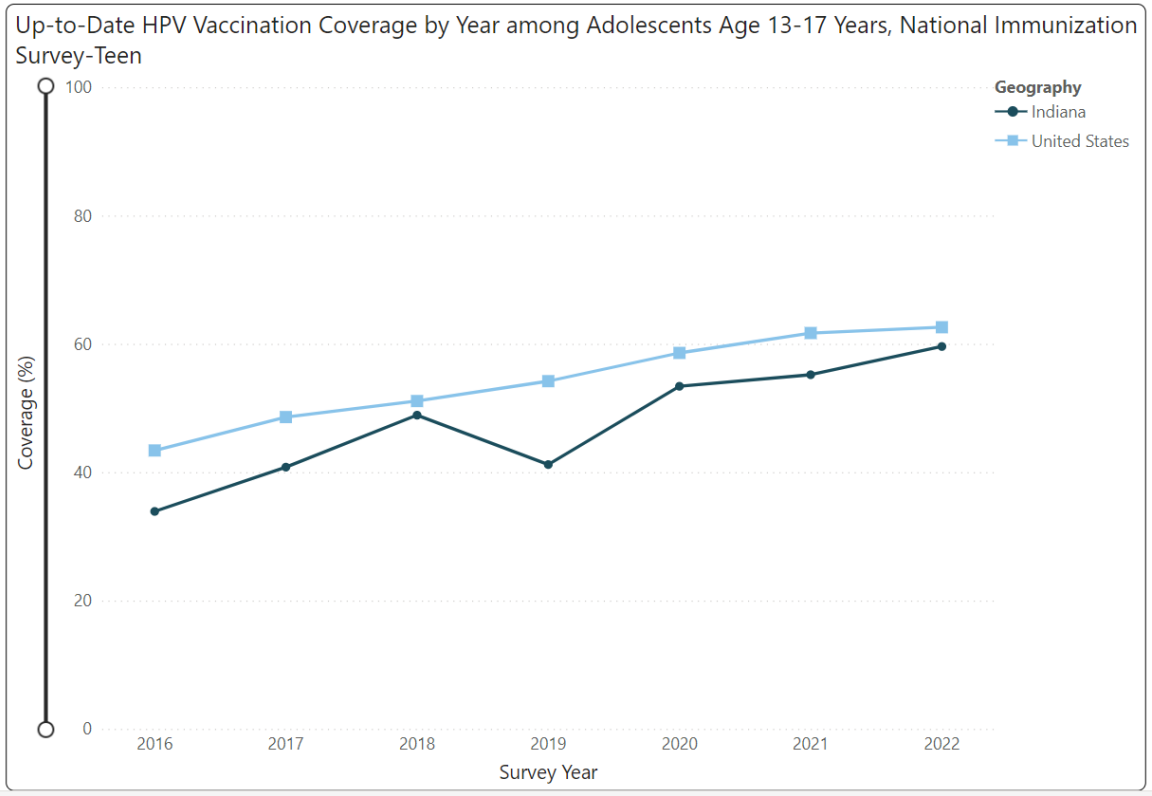
[Prevalence and characteristics of HPV vaccine hesitancy among parents of adolescents across the US - ScienceDirect]

National Immunization Survey-Teen

Received ≥1 Dose of HPV Vaccine



Up to Date on HPV Vaccine



[TeenVaxView | Adolescent Vaccine Coverage Interactive Data | NIS | CDC]

Healthcare Provider Messaging Matters

- Provider recommendation of the HPV vaccine was significantly associated with both vaccine initiation and completion.
  - Parents who reported that their provider had not recommended the HPV vaccine were >3 times more likely to be vaccine hesitant than those whose providers had.
- In another study, participants who received a provider recommendation for the HPV vaccine were >35 times more likely to receive ≥1 dose of HPV vaccine relative to participants without a recommendation.
- Disparities in provider recommendation exist:
  - Aged 18-21 years, female, white participants with health insurance (i.e. employer- or military-sponsored) were more likely to report receiving an HPV vaccine recommendation.
  - Adolescents who were younger (aged 11-12), male, non-white, uninsured, or rural were less likely to report receiving an HPV vaccine recommendation.

Disparities in Healthcare Providers' Recommendation of HPV Vaccination for U.S. Adolescents: A Systematic Review | Cancer Epidemiology, Biomarkers & Prevention | American Association for Cancer Research (aacrjournals.org)

Prevalence and characteristics of HPV vaccine hesitancy among parents of adolescents across the US - ScienceDirect

Predictors of provider recommendation for HPV vaccine among young adult men and women: findings from a cross-sectional survey | Sexually Transmitted Infections (bmj.com)

Communication Strategies

Strong Recommendation

- Use of first-person pronouns
- Adverbs and verbs conveying personal ownership of a strong recommendation
- Confident in tone with inclusion of rationale

"I noticed you're due for the HPV vaccine, which we highly recommend all of our patients receive for the following reasons."

Presumptive Recommendation

- Presume parents are ready to vaccinate
- Use of words like "due" or "needed"
- Bundling the HPV vaccine with other vaccines, thus presuming no special hesitancy

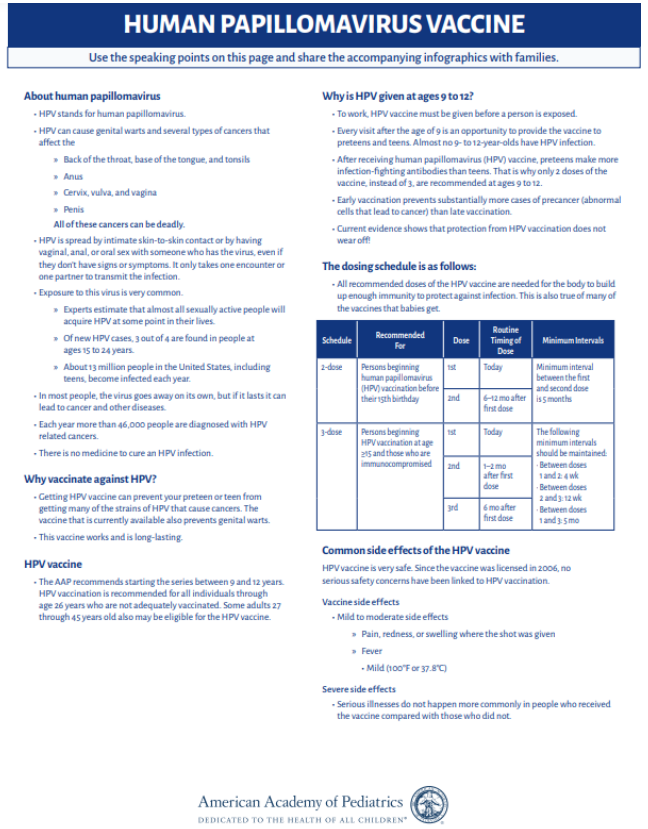
"You're due for a few vaccines today. The vaccines you will be getting are Adacel, Menactra, and the HPV vaccine."

Alternative strategies: motivational interviewing, in-depth discussion, emphasizing favorable risk/benefit profile, personal recommendation

Clinician communication strategies associated with increased uptake of the human papillomavirus (HPV) vaccine: A systematic review - Constable - 2022 - CA: A Cancer Journal for Clinicians - Wiley Online Library

Available Resources

- Myriad of resources available through American Academy of Pediatrics:
  - "*HPV Vaccine: Same Way, Same Day*" app simulates difficult conversations with parents
  - One page discussion guide to use during visit
  - Infographics, digital media, etc.
- Additional resources through CDC:
  - #HowIRecommend Vaccination video series
  - Answering parent questions conversation prompts
- Indiana Immunization Coalition:
  - Central repository for downloads of some of the resources discussed above
  - Action guide for dental healthcare providers
  - HPV: Don't Wait. Vaccinate! Project



HUMAN PAPILLOMAVIRUS VACCINE

Use the speaking points on this page and share the accompanying infographics with families.

About human papillomavirus

- HPV stands for human papillomavirus.
- HPV can cause genital warts and several types of cancers that affect the
  - Back of the throat, base of the tongue, and tonsils
  - Anus
  - Cervix, vulva, and vagina
  - Penis

  All of these cancers can be deadly.
- HPV is spread by intimate skin-to-skin contact or by having vaginal, anal, or oral sex with someone who has the virus, even if they don't have signs or symptoms. It only takes one encounter or one partner to transmit the infection.
- Exposure to this virus is very common.
  - Experts estimate that almost all sexually active people will acquire HPV at some point in their lives.
  - Of new HPV cases, 3 out of 4 are found in people at ages 15 to 24 years.
  - About 13 million people in the United States, including teens, become infected each year.
- In most people, the virus goes away on its own, but if it lasts it can lead to cancer and other diseases.
- Each year more than 46,000 people are diagnosed with HPV related cancers.
- There is no medicine to cure an HPV infection.

Why vaccinate against HPV?

- Getting HPV vaccine can prevent your preteen or teen from getting many of the strains of HPV that cause cancers. The vaccine that is currently available also prevents genital warts.
- This vaccine works and is long-lasting.

HPV vaccine

- The AAP recommends starting the series between 9 and 12 years. HPV vaccination is recommended for all individuals through age 26 years who are not adequately vaccinated. Some adults 27 through 45 years old also may be eligible for the HPV vaccine.

Why is HPV given at ages 9 to 12?

- To work, HPV vaccine must be given before a person is exposed.
- Every visit after the age of 9 is an opportunity to provide the vaccine to preteens and teens. Almost no 9- to 12-year-olds have HPV infection.
- After receiving human papillomavirus (HPV) vaccine, preteens make more infection-fighting antibodies than teens. That is why only 2 doses of the vaccine, instead of 3, are recommended at ages 9 to 12.
- Early vaccination prevents substantially more cases of precancer (abnormal cells that lead to cancer) than late vaccination.
- Current evidence shows that protection from HPV vaccination does not wear off!

The dosing schedule is as follows:

- All recommended doses of the HPV vaccine are needed for the body to build up enough immunity to protect against infection. This is also true of many of the vaccines that babies get.

Schedule	Recommended For	Dose	Routine Timing of Dose	Minimum Intervals
2-dose	Persons beginning human papillomavirus (HPV) vaccination before their 15th birthday	1st	Today	Minimum interval between the first and second dose is 5 months
		2nd	6–12 mo after first dose	
3-dose	Persons beginning HPV vaccination at age ≥15 and those who are immunocompromised	1st	Today	The following minimum intervals should be maintained: Between doses 1 and 2: 4 wk Between doses 2 and 3: 12 wk Between doses 1 and 3: 5 mo
		2nd	1–2 mo after first dose	
		3rd	6 mo after first dose	

Common side effects of the HPV vaccine

HPV vaccine is very safe. Since the vaccine was licensed in 2006, no serious safety concerns have been linked to HPV vaccination.

Vaccine side effects

- Mild to moderate side effects
  - Pain, redness, or swelling where the shot was given
  - Fever
    - Mild (100°F or 37.8°C)

Severe side effects

- Serious illnesses do not happen more commonly in people who received the vaccine compared with those who did not.

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Indiana Department of Health

Evaluation of HPV Vaccine: Same Way, Same DayTM: A Pilot Study: Journal of Health Communication: Vol 26, No 12 (tandfonline.com)
HowIRecommend Vaccination Video Series | CDC
Downloadable Resources - Vaccinate Indiana

https://www.aap.org/en/news-room/campaigns-and-toolkits/human-papillomavirus-hpv/, https://www.cdc.gov/vaccines/howirecommend/index.html, https://vaccinateindiana.org/downloadable-resources/

Chikungunya vaccine

- On Nov 9, the U.S. Food and Drug Administration approved Ixchiq, the first chikungunya vaccine. Ixchiq is approved for individuals 18 years of age and older who are at increased risk of exposure to chikungunya virus.
- The chikungunya virus is primarily transmitted to people through the bite of an infected mosquito.
- Chikungunya is an emerging global health threat with at least 5 million cases of chikungunya virus infection reported during the past 15 years.
- The highest risk of infection is in tropical and subtropical regions of Africa, Southeast Asia, and parts of the Americas where chikungunya virus-carrying mosquitos are endemic. However, chikungunya virus has spread to new geographical areas causing a rise in global prevalence of the disease.
- The most common symptoms of chikungunya include fever and joint pain. Other symptoms may include a rash, headache, and muscle pain. Some individuals may experience debilitating joint pain that persists for months or even years. Treatment includes rest, fluids, and over-the-counter medications for pain and fever.
- Infection with chikungunya virus can lead to severe disease and prolonged health problems, particularly for older adults and individuals with underlying medical conditions.

FDA Approves First Vaccine to Prevent Disease Caused by Chikungunya Virus | FDA

Tick-Borne Encephalitis

- Tick-borne encephalitis (TBE) virus is focally endemic in parts of Europe and Asia. The virus is primarily transmitted to humans by the bites of infected Ixodes species ticks but can also be acquired less frequently by alimentary transmission.
- The risk for TBE for most U.S. travelers to areas where the disease is endemic is very low. The risk for exposure to infected ticks is highest for persons who are in areas where TBE is endemic during the main TBE virus transmission season of April–November and who are planning to engage in recreational activities in woodland habitats or who might be occupationally exposed.
- All persons who travel to areas where TBE is endemic should be advised to take precautions to avoid tick bites and to avoid the consumption of unpasteurized dairy products because alimentary transmission of TBE virus can occur.

Tick-Borne Encephalitis Vaccine: Recommendations of the Advisory Committee on Immunization Practices, United States, 2023 | MMWR (cdc.gov)

Tick-Borne Encephalitis Vaccine

- ACIP recommends TBE vaccine for U.S. persons who are moving or traveling to an area where the disease is endemic and will have extensive exposure to ticks based on their planned outdoor activities and itinerary.
    - Extensive exposure can be considered based on the duration of travel and frequency of exposure and might include shorter-term (e.g., <1 month) travelers with daily or frequent exposure or longer-term travelers with regular (e.g., a few times a month) exposure to environments that might harbor infected ticks.
- In addition, TBE vaccine may be considered for persons who might engage in outdoor activities in areas where ticks are likely to be found, with a decision to vaccinate made on the basis of an assessment of their planned activities and itinerary, risk factors for a poor medical outcome, and personal perception and tolerance of risk.
- In the laboratory setting, ACIP recommends TBE vaccine for laboratory workers with a potential for exposure to TBE virus.

Tick-Borne Encephalitis Vaccine: Recommendations of the Advisory Committee on Immunization Practices, United States, 2023 | MMWR (cdc.gov)

CDC Guidelines for the Prevention and Treatment of Anthrax, 2023

- Anthrax is a zoonotic disease caused by infection with Bacillus anthracis. Sheep, goats, cattle, and other herbivores are primarily affected.
- Occurs in agricultural regions of the Americas, sub-Saharan Africa, central and southwestern Asia, and southern and eastern Europe.
- Humans are secondarily infected through contact with infected animals, contaminated animal products (e.g., meat or hides), or, rarely, from injection drug use.
    - Cutaneous anthrax, which results from direct inoculation of spores through the skin, is the most common form and accounts for >95% of human cases.
    - Ingestion anthrax usually results from consumption of infected meat. Inhalation anthrax results from the inhalation of aerosolized spores.
    - Injection anthrax, which is a relatively new form, results from injection of heroin contaminated with B. anthracis spores. Anthrax meningitis can complicate any form of anthrax or occur alone.

CDC Guidelines for the Prevention and Treatment of Anthrax, 2023

- In the United States, anthrax has almost been eliminated through livestock vaccination.
- Wildlife and livestock anthrax still occurs sporadically in an area from southwest Texas through Colorado, North and South Dakota, and Montana.
- Since 2006, nine confirmed or probable U.S. cases of anthrax have been reported to CDC: two inhalation one ingestion, four cutaneous and two with no documented route of infection.
- In addition, since 1997, seven cases of severe pneumonia have been identified that were caused by Bacillus cereus group species that harbor a plasmid that encodes anthrax toxins similar to those found in B. anthracis

CDC Guidelines for the Prevention and Treatment of Anthrax, 2023

- B. anthracis is a Tier 1 select considered one of the most likely bioterrorism agents to be used because it is relatively agent and easy to acquire from the natural environment, mass produce, and disseminate as spores via aerosolization.

- Prophylaxis and treatment for various groups are in tables 6-16 on the MMWR.