

Wisconsin HAI Long-Term Care Education Series

August 22, 2024



WISCONSIN DEPARTMENT
of HEALTH SERVICES

SYPHILIS 101



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SYPHILIS IS HARD!!!!!!

- ▶ Providers have 100's of diseases they need to know.
- ▶ DIS concentrate on 4 main diseases, per CDC recommendations; these include
 - ▶ Syphilis
 - ▶ Gonorrhea
 - ▶ Chlamydia
 - ▶ HIV
- ▶ Please reach out to your regional DIS for assistance (or me).

STI data should be interpreted with caution. It may be underreported, unevenly reported, and incomplete.



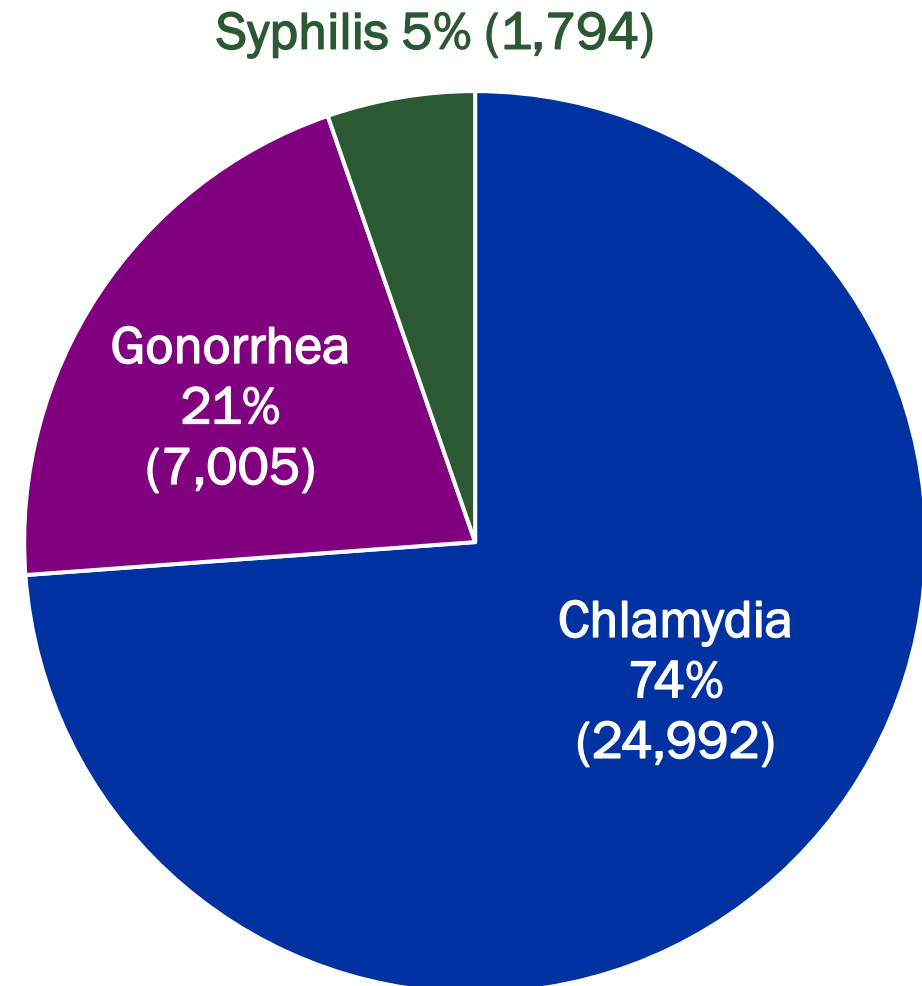
Cases of STIs should be reported to LTHDs first.



Chlamydia is the Most Commonly Reported STI

Of the 33,791 STI cases reported in 2023, **Chlamydia** accounted for **74%** by followed by **gonorrhea** at **21%** and **syphilis** at **5%**.

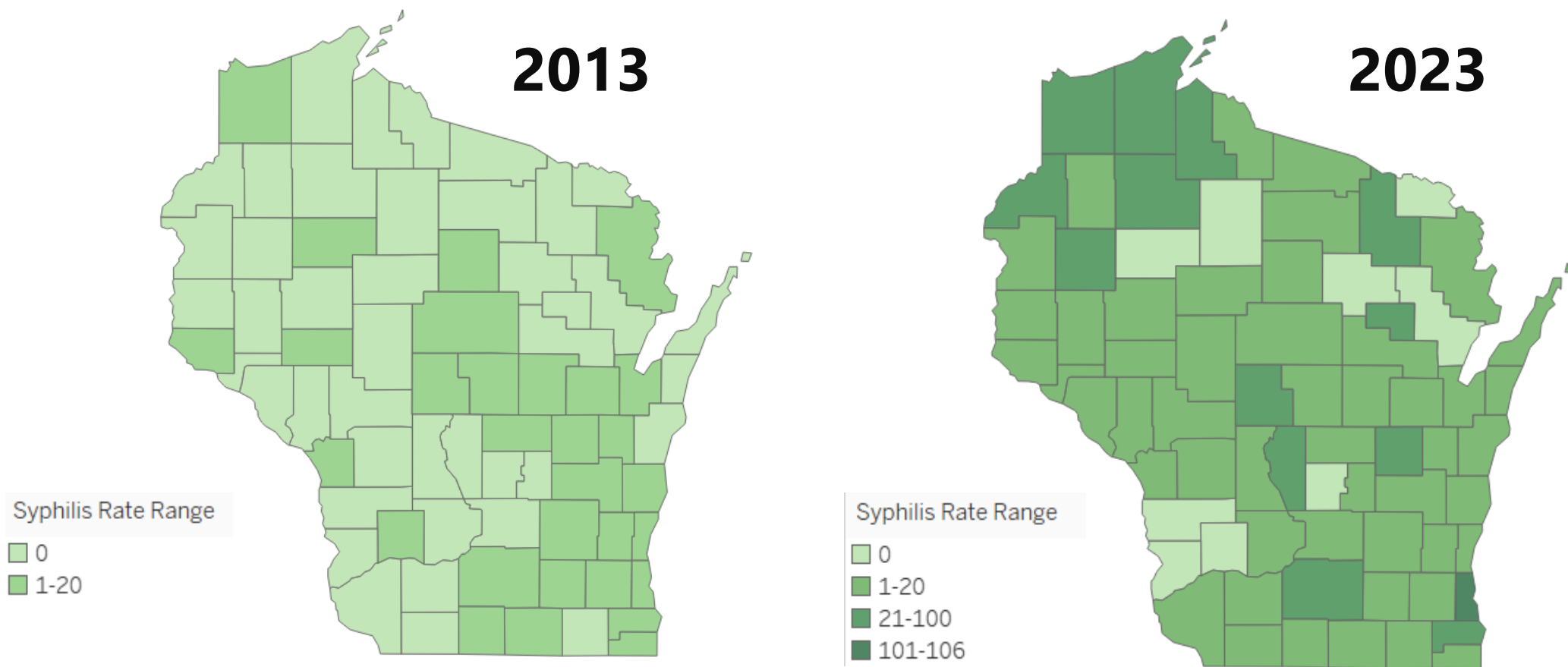
Number of Sexually Transmitted Infections Reported in Wisconsin, 2023



Note: Includes all (Wisconsin, out of jurisdiction cases and correctional cases) reported cases.

More Wisconsin Counties Reporting Increased Syphilis Rates in 2023 than in 2013

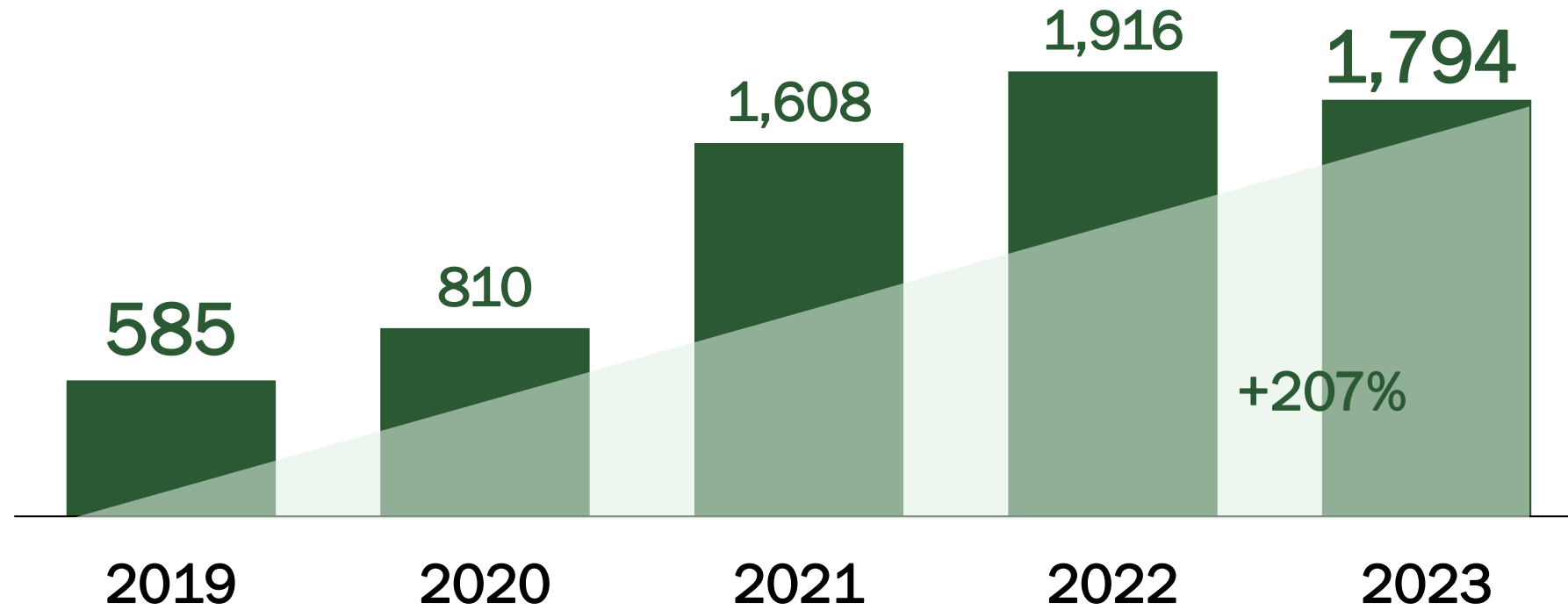
Syphilis rates of reported cases 2013 and 2023



Syphilis Cases Have Increased Since 2019

Syphilis cases increased by 206.7% from 2019 to 2023.

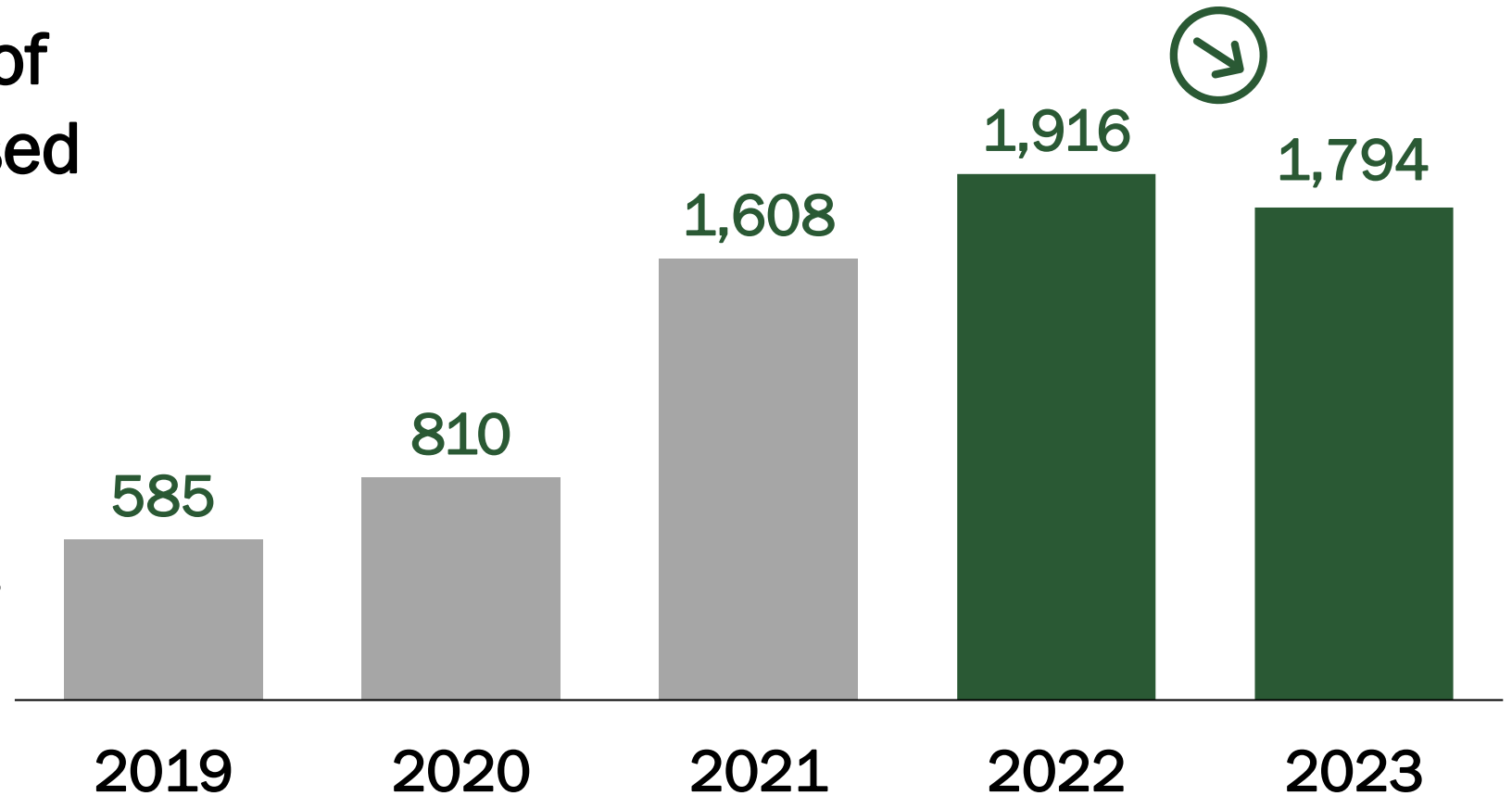
Trend of reported cases of syphilis (all stages including congenital) 2019–2023



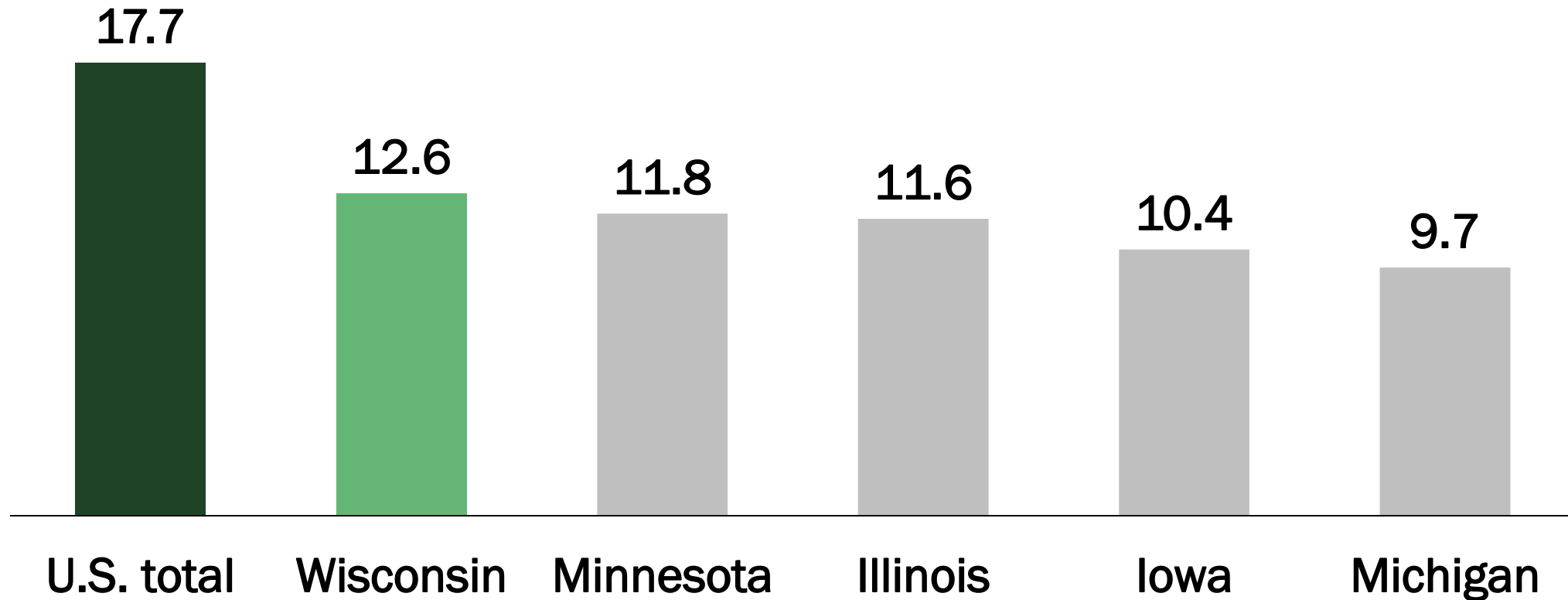
There Were Fewer Syphilis Cases Reported in 2023 than in 2022

The reported number of syphilis cases decreased by 6.4% in 2023 compared to 2022.

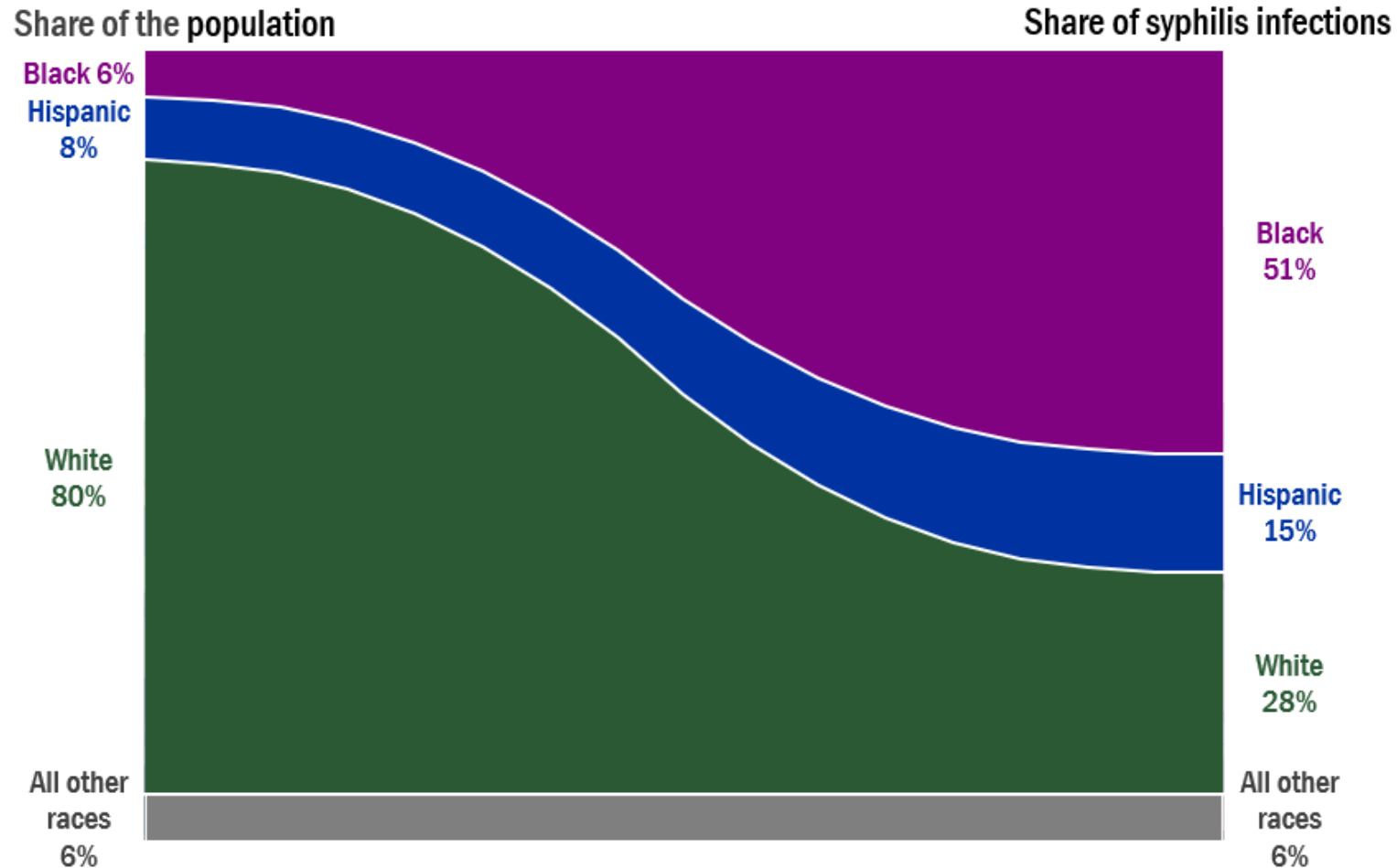
Trend of reported cases of syphilis (all stages including congenital) 2019–2023



Wisconsin ranked highest among its neighboring states for primary and secondary syphilis rates per 100,000 people in 2022.

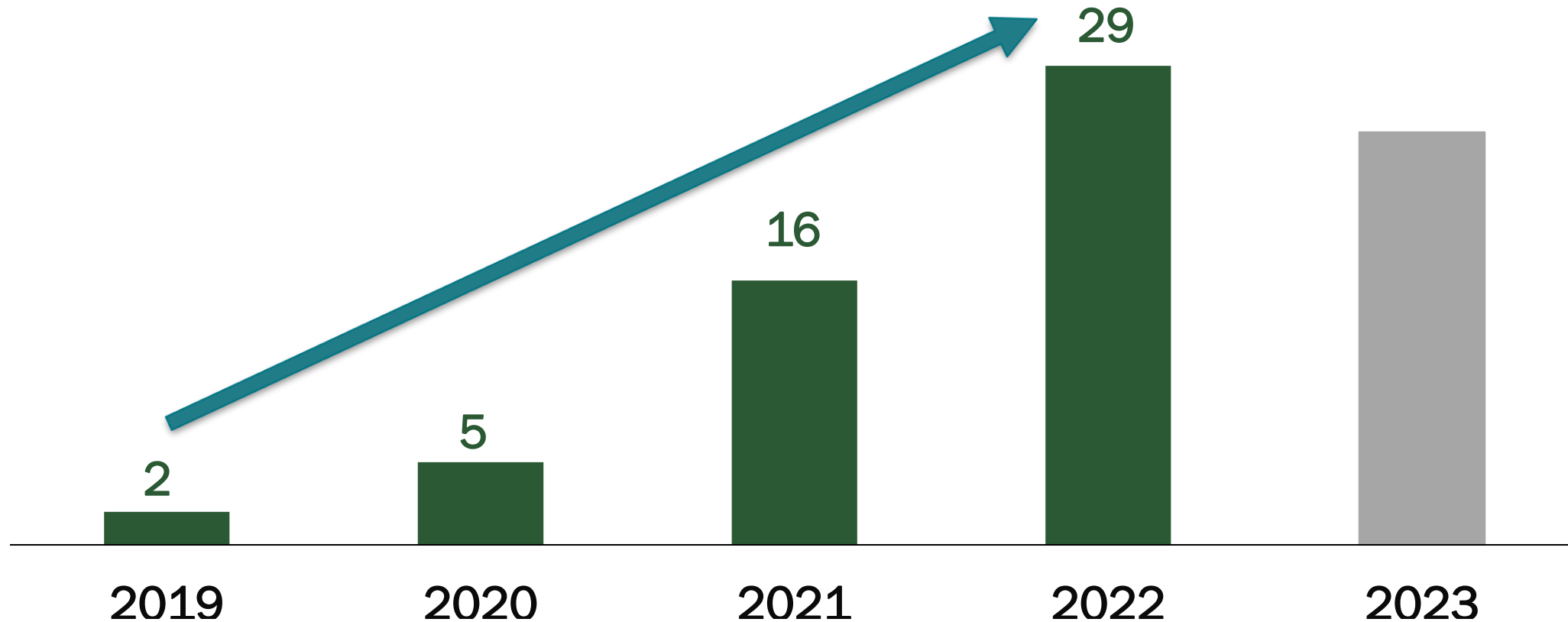


Black and Hispanic People are Disproportionately Impacted by Syphilis



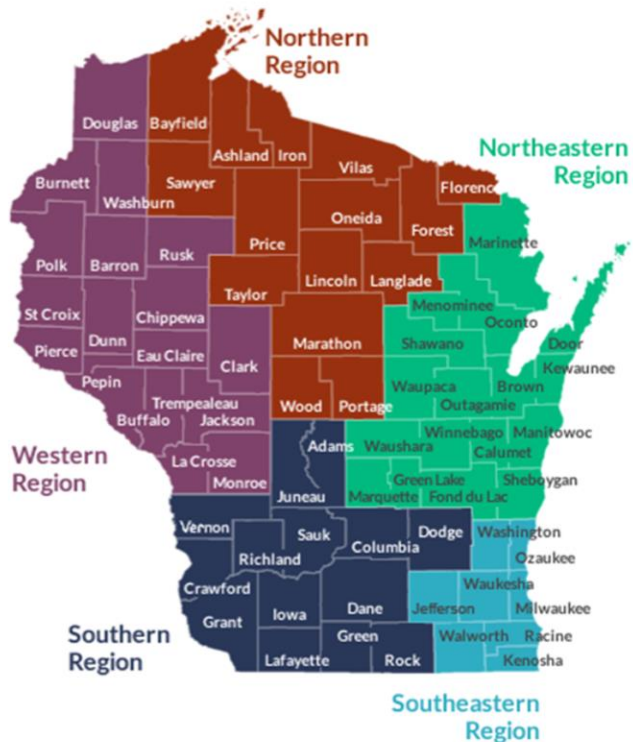
Reported Number of Congenital Syphilis Cases Increased Until 2022

Reported cases of congenital syphilis in Wisconsin, 2019–2023



Wisconsin Regional Data

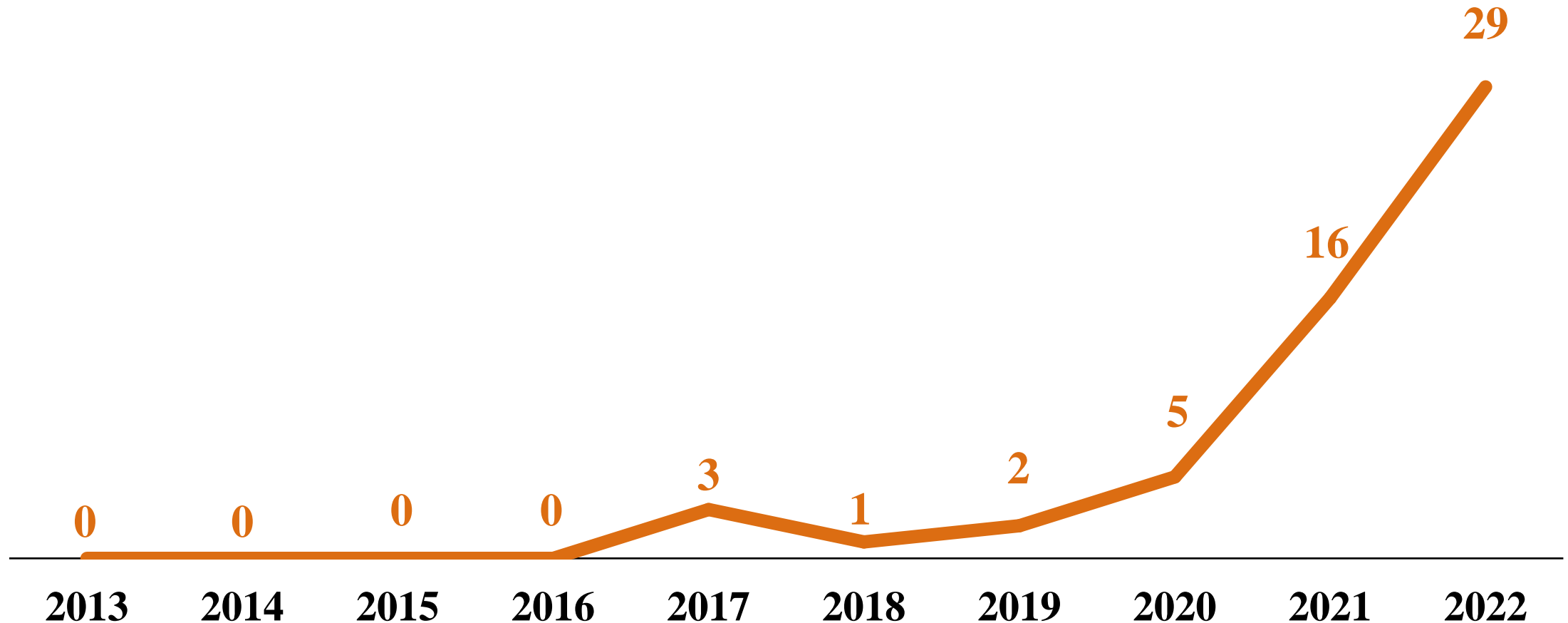
2023 Unpublished Data *do not release*



Region		2019	2020	2021	2022	2023
Southern	Primary	8	30	34	31	31
	Secondary	11	22	36	40	33
	Early	25	32	46	38	58
	Late	42	62	71	106	125
Northern	Primary	2	4	9	11	3
	Secondary	1	3	10	11	9
	Early	1	1	6	8	8
	Late	9	4	18	20	37
Western	Primary	5	5	15	18	8
	Secondary	10	1	12	16	18
	Early	7	7	6	21	24
	Late	22	17	28	41	36
Northeast	Primary	9	18	35	29	35
	Secondary	10	13	17	30	25
	Early	15	18	25	37	32
	Late	49	32	72	84	102
Southeast	Primary	50	153	274	249	165
	Secondary	80	116	282	308	207
	Early	149	169	292	300	237
	Late	81	115	296	471	513
Congenital(Statewide)		2	1	8	28	25

Congenital syphilis cases increased by 580% during the pandemic from 2020 to 2022.

Congenital syphilis cases, 2013 - 2022




DHS News Release

- DHS recommends testing pregnant people for syphilis in any health care setting.
- DHS recommends across the board syphilis testing at first prenatal visit, 28 weeks, and at delivery.

<https://www.dhs.wisconsin.gov/news/releases/101023.htm>

Official website of the State of Wisconsin [Here's how you know](#) ▾

 WISCONSIN DEPARTMENT
of HEALTH SERVICES

FOR IMMEDIATE RELEASE Contact
October 10, 2023 Elizabeth Goodsitt, 608-266-1683
Jennifer Miller, 608-266-1683

Syphilis Cases Continue to Rise in Wisconsin-Affecting Babies, Teens, and Adults

DHS is calling on medical providers to increase syphilis screening and testing during pregnancy

PCN Shortage

A recent shortage of benzathine penicillin G could cause possible disruption in syphilis treatment.

-
- Treat patients with early syphilis who are not pregnant and are likely to tolerate oral therapy with **oral doxycycline**.
 - Prioritize **penicillin for pregnant people**.



DHS Health Alert Network

Current Drug Shortages Affecting Treatment of Syphilis and Gonorrhea

Bureau of Communicable Diseases

July 19, 2023

Key points

- A recent shortage of penicillin G benzathine could cause a disruption in treatment for those who have active syphilis or are contacts to known syphilis cases. Treatment with oral doxycycline for patients with early syphilis who are not pregnant and are likely to tolerate oral therapy, while prioritizing penicillin for pregnant people, may be necessary.
- Gentamicin is an alternative gonococcal treatment recommended for patients with known or self-reported allergy to cephalosporins. If gentamicin is not available due to reported shortages, the CDC (Centers for Disease Control and Prevention) recommends treatment with a single dose of 2 grams of azithromycin.

Background

The Food and Drug Administration (FDA) has issued a notice of [limited availability of STI testing and treatment products](#).

A recent shortage of penicillin G benzathine injectable suspension products (Bicillin L-A®)

Two Types of Tests



Treponemal Test

EIA/IGG/FTA/MHTP/TPPA

- Detects syphilis antibodies
- Remains detectable for life even after treatment
- Will appear reactive before RPR/VDRL
- Can take up to ten weeks after exposure to show reactive

Non-Treponemal

RPR/VDRL

- Response to cardio lipid antigens
- May appear non-reactive either early or late in an infection
- Non-treponemal tests should have a titer
 - 1:1, 1:2, 1:4 etc

Common Syphilis Serologic Tests

Test	Full Name	Type	Target	Notes
RPR	Rapid Plasma Reagin	Non-treponemal	Cardiolipin Antibodies	Quantitative results reported as a titer.
VDRL	Veneral Disease Research Laboratory	Non-treponemal	Cardiolipin Antibodies	Quantitative results reported as a titer. Only test approved for CSF (cerebrospinal fluid) specimens.
FTA-ABS	Fluorescent Treponemal Antibody-Absorption	Treponemal	<i>T. pallidum</i> Antibodies	
TP-PA	<i>Treponema pallidum</i> -particle agglutination	Treponemal	<i>T. pallidum</i> Antibodies	
MHA-TP	Microhemagglutination- <i>Treponema pallidum</i>	Treponemal	<i>T. pallidum</i> Antibodies	
EIA	Enzyme immunoassay	Treponemal	<i>T. pallidum</i> Antibodies	May be initial test in reverse sequencing algorithm.
CIA	Chemiluminescent immunoassay	Treponemal	<i>T. pallidum</i> Antibodies	May be initial test in reverse sequencing algorithm.

Note: This table is not exhaustive of all the tests available for diagnosing syphilis.

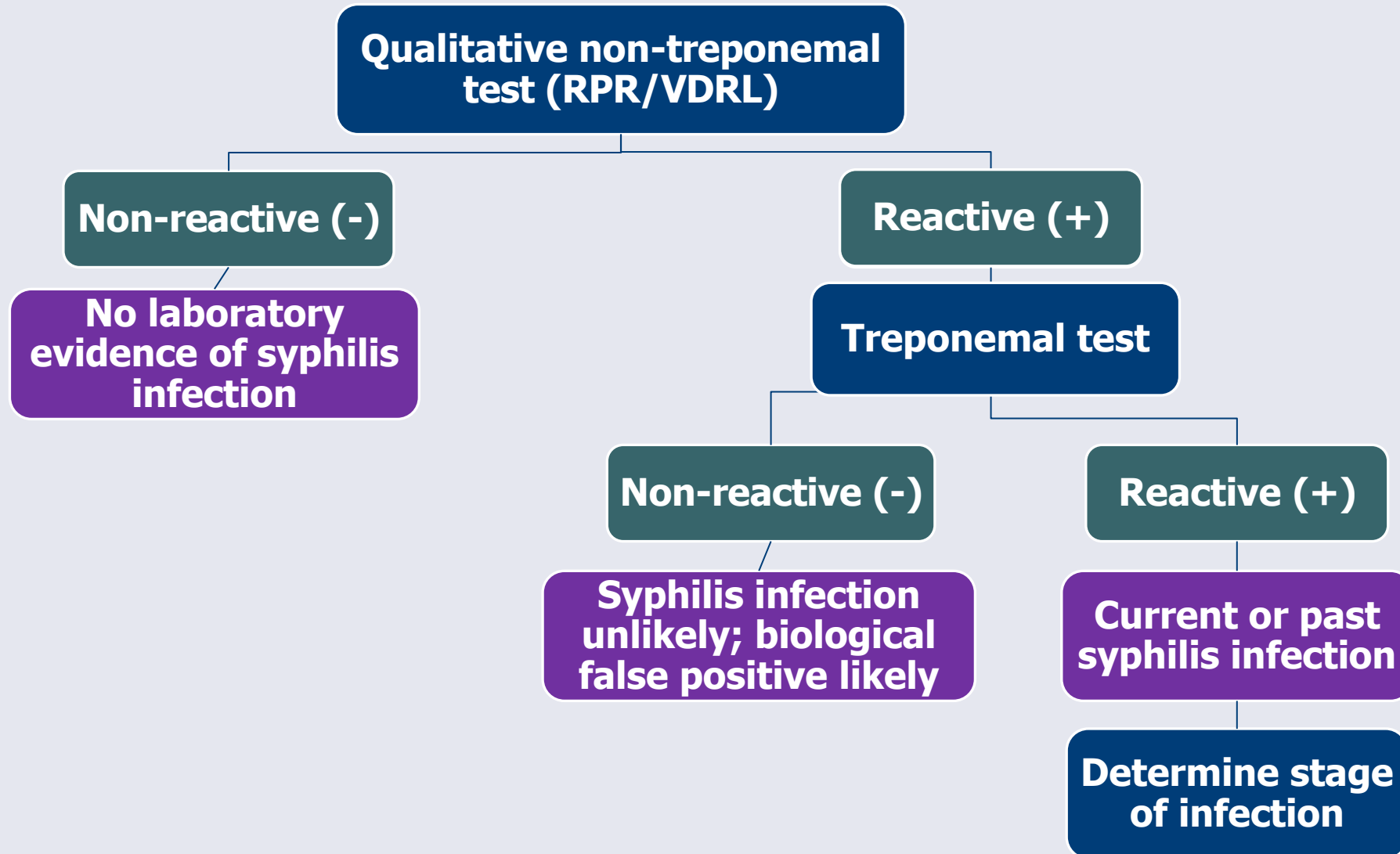
Two CDC-Recognized Algorithms

- Treponemal and non-treponemal tests must be used together to establish a syphilis diagnosis.
- CDC recognizes two serologic algorithms
 - Traditional
 - Reverse

Traditional Algorithm

- Begins with an RPR/VDRL (Non-treponemal)
- If non-reactive testing stops. *not a case*.
- If reactive, reflex to a Treponemal test.
- If both reactive it is a case of syphilis
determine stage of infection or if previously treated infection.
- If Non-reactive *not a case*.
- Determining stage of infection is a whole other conversation.

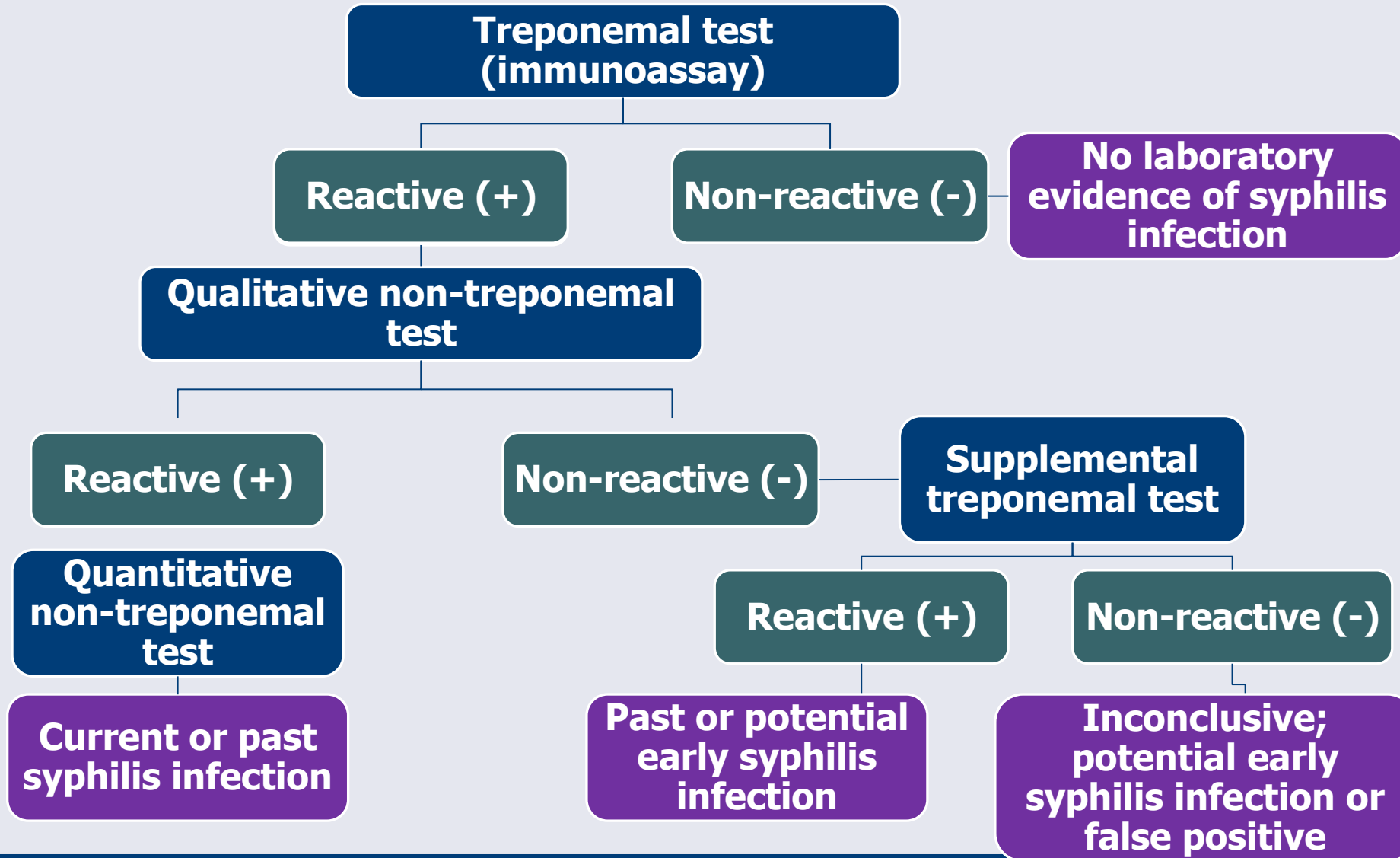
Traditional Syphilis Testing Algorithm



Reverse Algorithm

- Begin with a less specific Treponemal test
- If non-reactive testing stops *not a case*.
- If reactive, reflex to a Non-treponemal test.
- If reactive testing stops *determine stage of disease or if previously treated infection*.
- If results are discordant, should reflex to another more specific Treponemal test.
- Gold standard is the TP-PA, other test can be used.
- If non-reactive *not a case*.
- If reactive *determine stage of disease or if previously treated infection*.

Reverse Syphilis Testing Algorithm



PRIMARY SYPHILIS



- Chancre must be present and seen by provider
 - Chancre is normally painless

Treatment:

- 2.4 MU Benzathine Penicillin G IM 1X
- 14 days Doxycycline 100 Mg BID

SECONDARY SYPHILIS



- Plantar Palmer Rash
 - Palms of hands/soles of feet
 - Also presents full body (torso), forearms, legs
 - This presentation must be bilateral
- Condyloma Lata
 - Cluster of painful blisters



Treatment:
-1 dose PCN
-14 days Doxy

EARLY LATENT / EARLY NON-PRIMARY NON-SECONDARY SYPHILIS

- Symptom Free
- Must prove known exposure to Primary or Secondary Stage
- A known negative lab within the last year.
- Treatment
 - 1 dose PCN
 - 14 days Doxy

LATE LATENT / LATE OR UNKNOWN DURATION

- No known exposure
- Previous testing over 12 months or no known previous testing
- If unable to determine as an Early Stage of Syphilis we always defer to this.

- Treatment
 - 3 doses PCN G 2.4 MU given 7 days apart for 3 weeks
 - 28 Days Doxy 100mg BID

Neurosyphilis

- All stages of disease **must** have at least a minimal neurologic examination.
- Neurosyphilis can occur at any stage.



After treatment recommendations

- Repeat testing at 6 and 12 months
 - At a minimum annually thereafter.
- Can take up to 12 months to get a four-fold decrease.
- May not have a full four-fold decrease if the titer starts low or obviously if it is non-reactive.
- There may be an initial titer spike shortly after treatment, this is why we want to wait a minimum of three months after treatment.



Reporting

- Per State Statutes ALL reactive syphilis cases are required to be reported.
- Report can either be via WEDSS, paper fax, or call (please don't do that).
- Even after report we may call for clarification.
- Following slides if completed via web report we probably will not need a follow up call.
- <https://www.dhs.wisconsin.gov/library/collection/f-44243> (plain ol' syphilis)
- <https://www.dhs.wisconsin.gov/forms/f4/f44243a.pdf> (congenital syphilis)

Patient tab

A tab to document any patient locating information.

Document the information in all text fields highlighted in yellow **plus** the fields below:


- Home, cell, or work phone number
- Email (if applicable)
- Primary language
- Pregnancy and delivery date (if applicable)
- Marital status
- STI additional demographics (if applicable)



The screenshot shows a web form titled "Disease Incident" with a navigation bar containing icons for help, search, and other functions. The form header includes patient and incident details: Patient: Test, Test; Patient ID: 21028979; Incident ID: 37371125; Disease: SYPHILIS REACTOR; Pro/Res Status: Final/Unknown. Below the header are tabs for Patient, Syph-LabClinical, Syph-Risk, Syph-Intervention, and Investigation. A dropdown menu shows "* Disease Being Reported" set to "SYPHILIS REACTOR". The main form area is divided into sections: "Name" with fields for Last Name (Test), First Name (Test), Middle Name (Z), and Name Suffix; "Primary Language" set to Spanish; "Future Client No."; "DOB (MM/DD/YYYY)" set to 10/01/1950; "Age" set to 72; "Address Number & Street" set to 1234 ADDRESS; "Apartment/Unit Number"; "City" set to Hortonville; "State" set to WI; and "Zip" set to 54942. On the right side, there are dropdowns for "Ethnicity" (Hispanic or Latino) and "Race" (American Indian or Alaska Native, Asian).


If more than one test is performed, add additional tests by using the add button.


Laboratory Testing


ID-001

Collection date
 

Provider (Doctor, Clinic)
  

Specimen source
 

Type of test
 

Nontreponemal serologic syphilis test result
 

Qualitative result


Indeterminate Negative Non-Reactive
 Positive Reactive Unknown
 Weakly-reactive Quantity not sufficient Contaminated specimen

Attending Physician/Doctor's Name

If other, please specify

If other serologic test, please specify

Quantitative test result, if applicable (titer)

Date result sent from lab
 

Delete

Add

STI & DGI Signs and Symptoms

A section to document any signs or symptoms the patient may have experienced in the past or present. This section will also help the interviewer in determining the stage of syphilis the patient is in. Remember, any syphilis symptoms **must** be seen by a provider to determine stage of syphilis.

Document any signs or symptoms specific to syphilis in the fields below:

- STI signs or symptoms or if other, please specify. Common syphilis symptoms: chancre, sores, lesions, ulcers, rash, alopecia (hair loss), condylomata lata, pharyngitis (sore throat), and mucous patch
- Anatomic site or if other, please specify
- Earliest observation
- Duration (days)
- When did the patient first seek medical care for symptom

If more than one symptom, add additional symptoms by using the add button. If there are no symptoms, leave the section blank.

STI & DGI Signs and Symptoms

ID-001

When documenting symptoms please use Other for chills, malaise and pain unless already on the list under STI signs/symptoms. When documenting Anatomic site please use other for joints.

STI signs/symptoms	If other, please specify
<input type="text"/>	<input type="text"/>
Anatomic site	If other, please specify
<input type="text"/>	<input type="text"/>
Earliest observation date	Duration (days)
<input type="text"/>	<input type="text"/>
When did the patient first seek medical care for symptom	
<input type="text"/>	
In what type of facility did the patient seek medical care for symptom	If other facility, specify
<input type="text"/>	<input type="text"/>
Sign/symptom was observed by a health care provider	Sign/symptom was described by patient
<input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> Unknown	<input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> Unknown

Document any neurological or other manifestations of syphilis based on their definitions from above in the fields below:

- Does the patient present with any neurological, ocular (eye), otic (ear), or late clinical manifestations which are consistent with syphilis
- If yes, which:
 - Neurological manifestations
 - Ocular manifestations
 - Otic manifestations
 - Late clinical manifestations

Neurological / Other Manifestations of Syphilis (Providers)

Does the patient present with any neurological, ocular(eye), otic(ear) or late clinical manifestations which are consistent with syphilis

Yes

No

Unknown

If Yes, which

Neurological

Ocular(eye)

Otic(ear)

Late clinical
manifestations


Syphilis treatment recommendations


If more than one treatment, add additional treatments by using the add button.


Syphilis Treatment (MANDATORY)


ID-001


Was patient treated
 Yes No Unknown


Treatment initiation date
 

BIC #2 Date
 



BIC #3 Date
 

CDC First-line Recommended Rx
 

STI Complication and/or Alternative CDC Recommended Rx
 


STI condition
 


Did patient's symptoms resolve
 Yes No Unknown
 N/A

Provider Name
  

If other, please specify

Appropriate treatment
 Yes No Unknown

Delete 

Add 

DATA GATHERING FOR DOXY PEP/ HIV PrEP

- DoxyPEP and HIV-PrEP

Is this patient eligible for HIV-PrEP based on the guidelines?
 Yes N/A Unknown

Is this patient eligible for DoxyPEP based on the guidelines?
 Yes N/A Unknown


Did the patient receive a recommendation for HIV-PrEP or DoxyPEP?
 No, PrEP No, DoxyPEP Yes, DoxyPep Yes, PrEP N/A Unknown

If yes, who recommended (medical provider, DIS, investigator, nurse, etc.)?

Is the patient taking HIV-PrEP?

Does the patient have a prescription for Doxy-PEP?

Has the patient taken DoxyPEP?
 No Yes N/A
 Unknown

When was the last dose of DoxyPEP taken?
 

Notes

Questions

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Fax: 608-261-9301



HAI Prevention Program Contact Information



Email: dhswhaipreventionprogram@dhs.wisconsin.gov



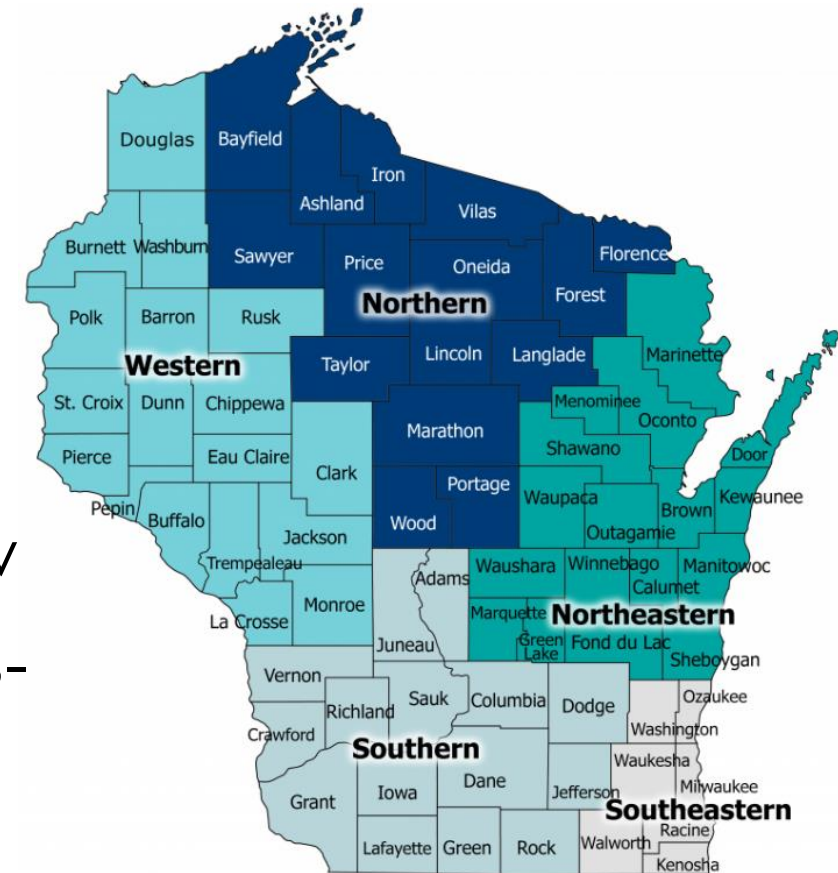
Phone: 608-267-7711



Website: www.dhs.wisconsin.gov/hai/contacts.htm

Regional Infection Preventionists

- **Western Region:** Nikki Mueller, MLS(ASCP)CM, MBA, CIC, Phone: 608-628-4464
- **Northern Region:** Anna Marciniak, MLS(ASCP), CIC, Phone: 608-590-2980
- **Northeastern Region:** Tess Hendricks, BS, MLS, CIC, Phone: 608-338-9071
- **Southeastern Region:**
DHSWIHAIPreventionProgram@dhs.wisconsin.gov
- **Southern Region:** Paula Pintar, MSN, RN, ACNS-BC, CIC, FAPIC, Phone: 608-471-0499



[HAI: Home](#)[For Health Professionals](#)[For Patients & Families](#)[Infection Prevention Education](#)[Infection Preventionist Starter
Kit](#)[Multidrug-Resistant Organisms](#)[Precautions](#)[HAI Data](#)[National Healthcare Safety
Network](#)[Antimicrobial Stewardship](#)[Get Handy Hygiene Tips](#)

HAI Infection Prevention Education webpage

HAI Infection Prevention Education

The resources below are intended to connect health care facility infection preventionists (IP) with education materials to support their role in preventing, detecting, and responding to healthcare-associated infections (HAI).

IPs play an essential role in facility infection prevention policy development, surveillance, and risk assessment. IPs also serve as a resource to other staff and programs within their facilities.

In addition to the state in-person trainings and online references below, there are a number of links to trusted education resources, including the CDC (Centers for Disease Prevention and Control), the CMS (Centers for Medicare and Medicaid Services), and the Association for Professionals in Infection Control and Epidemiology (APIC).

Monthly webinars for IPs

Long-Term Care Education Series

The Long-Term Care (LTC) Education Series provides education presentations on topics that include infection prevention, HAIs, antibiotic stewardship, disease surveillance, and outbreak response for staff at skilled nursing facilities, assisted living facilities, local health departments, and other LTC stakeholders. Each session features a new, timely topic presented by the Department of Health Services (DHS) program staff, HAI infection preventionists, partner organizations, or other external subject matter experts.

The LTC Education Series is a monthly webinar series, typically held the fourth Thursday of each month. Register for the [LTC Education Series](#).

[Session recordings](#)

IP Lunch and Learn

The IP Lunch and Learn is a webinar series that gives IPs from all care settings the opportunity to come together to discuss introductory infection prevention and control (IPC) topics, as well as share information, network, and ask questions. Each session focuses on a different basic IPC topic area and includes a brief overview with resources and time for attendees to ask questions and share tips and tricks. IPs newer to their role will especially benefit from the information shared.

The IP Lunch and Learn is typically held the second Tuesday of each month. Register for the [IP lunch and learn webinar series](#).

Upcoming LTC Education Session

Date: September 26, 2024

**Topic: Notes from the Field: Environmental
Services in Long-Term Care**



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