

End of the COVID-19 Emergency Response

Connecticut Department of Public Health

Connecticut Infectious Disease Society

May 11, 2023

*Data for this week are incomplete

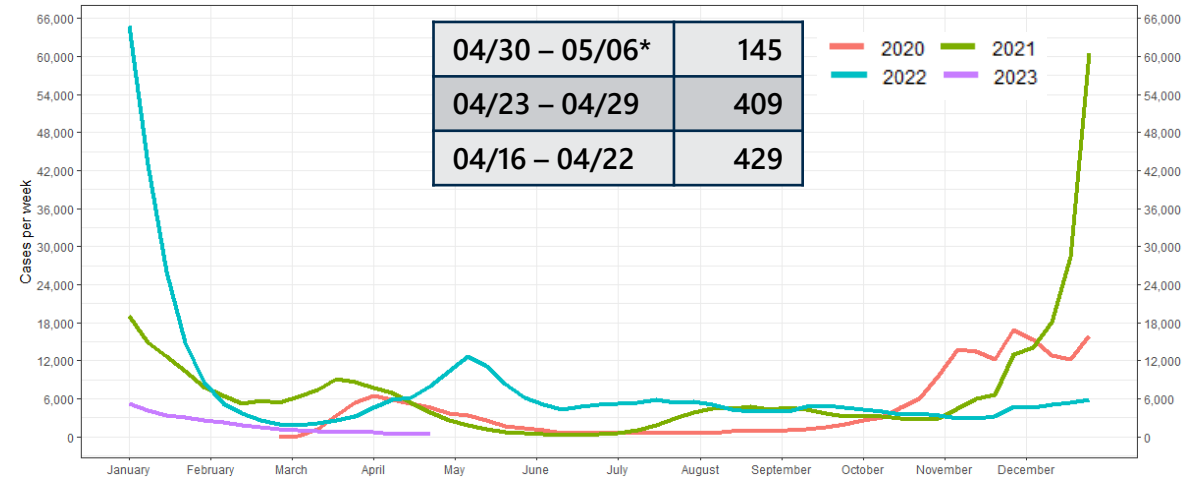
CT 7-day Case Rate per 100,000: 8.0

Big Picture: COVID-19 Statewide Snapshot

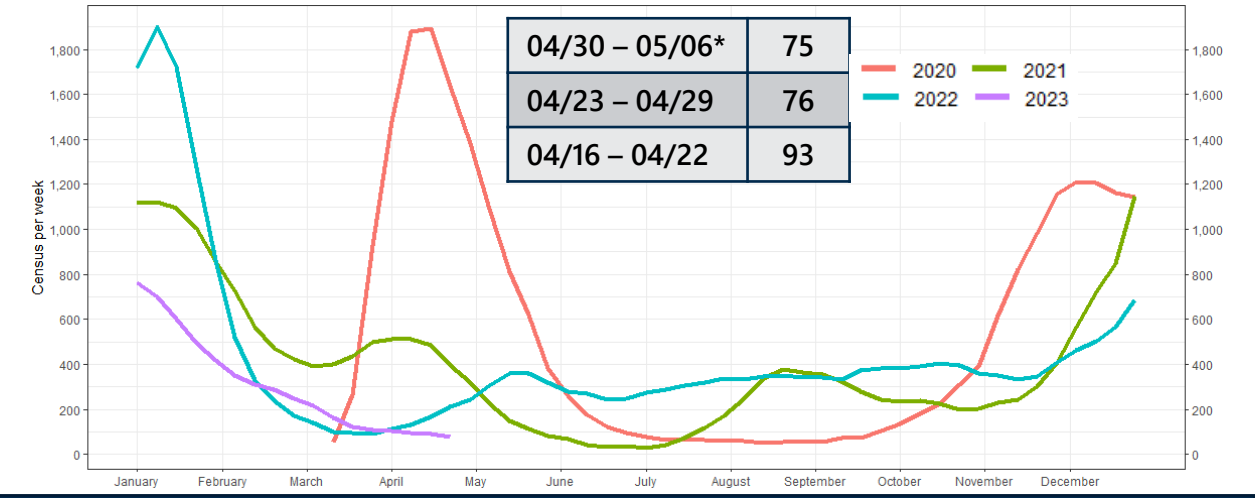
March 1, 2020 – May 03, 2023



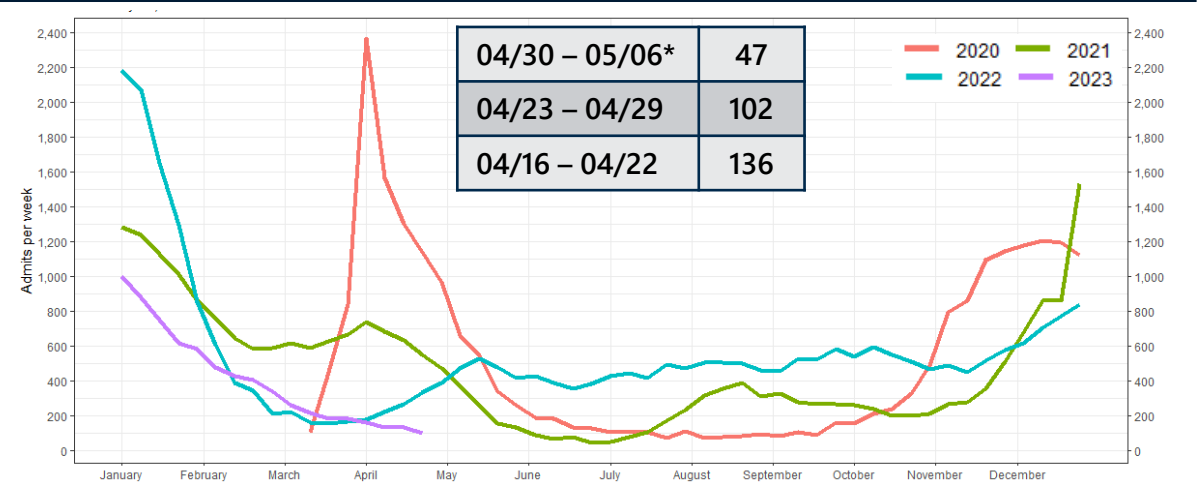
Cases – 982,096



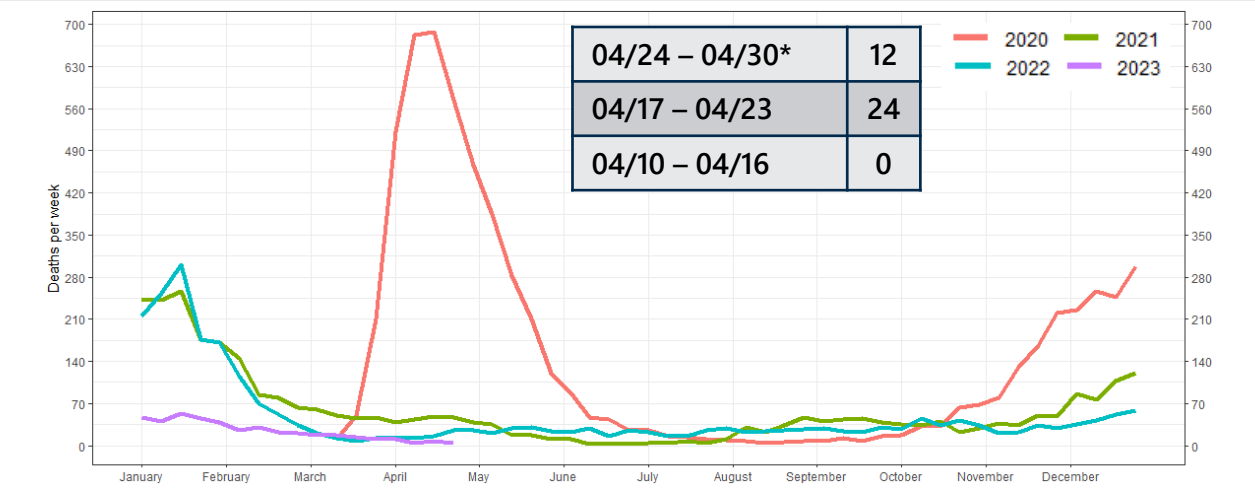
Hospital Census -61



New Admissions – 82,300



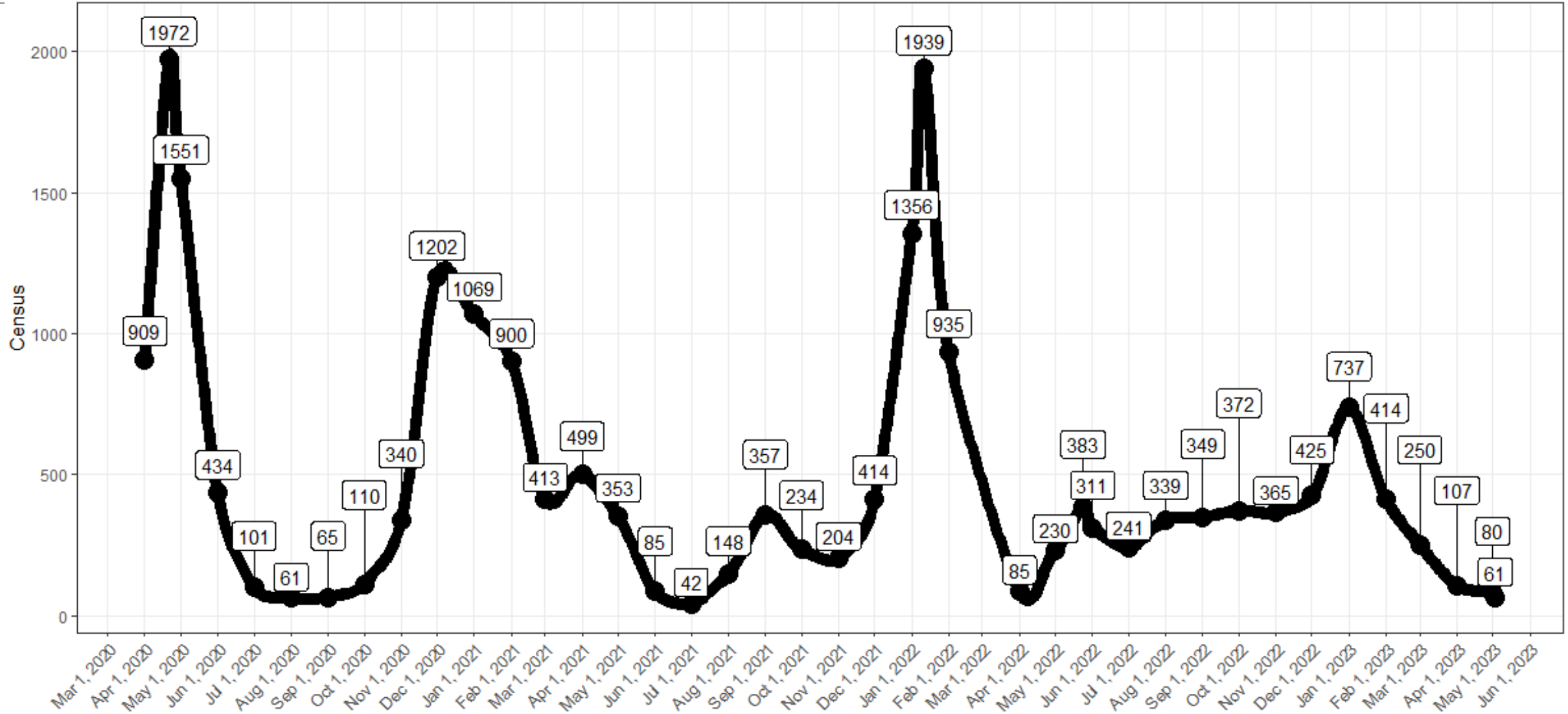
Deaths – 12,338



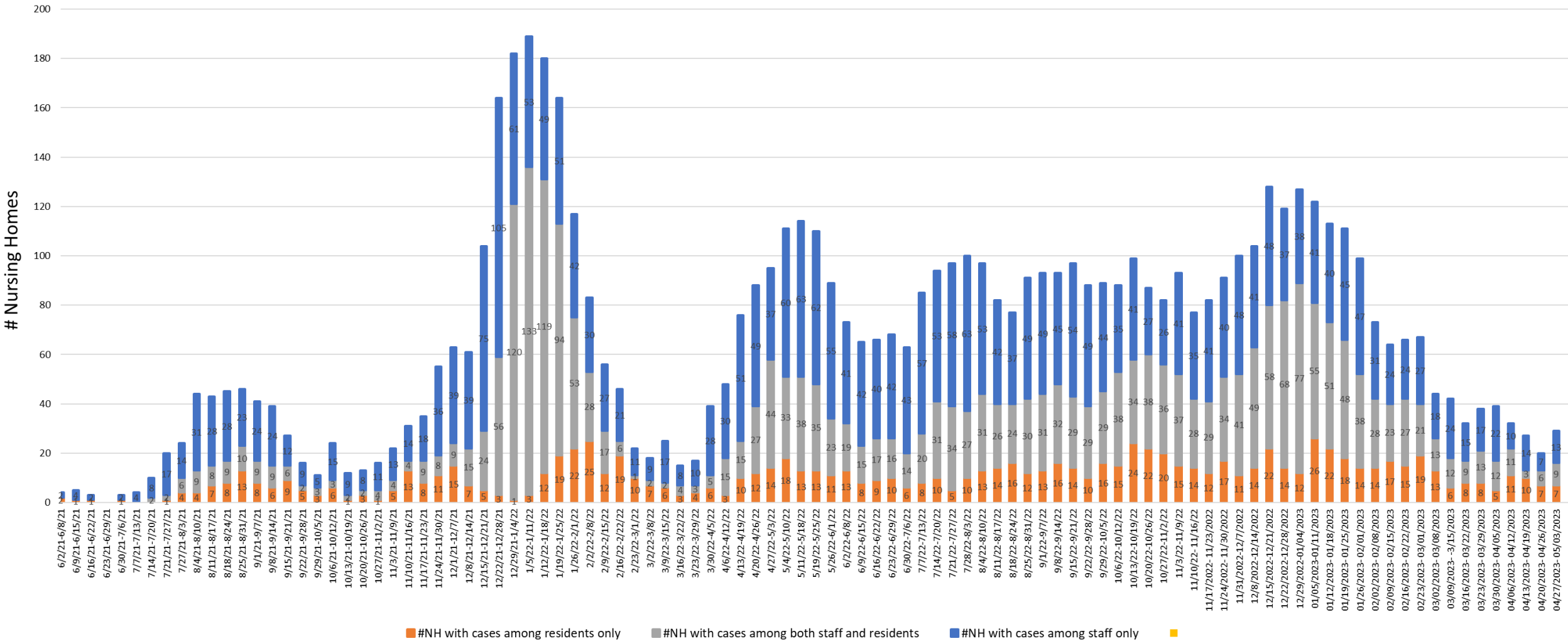
☆ **Note:** Prior to 5/29/20, CHA defined “COVID admissions” as suspected + confirmed; after 5/29/20, confirmed only

COVID-19 Positive Hospital Census

April 1, 2020 – May 03, 2023



Nursing Homes with Positive Staff or Residents June 2, 2021 - May 3, 2023

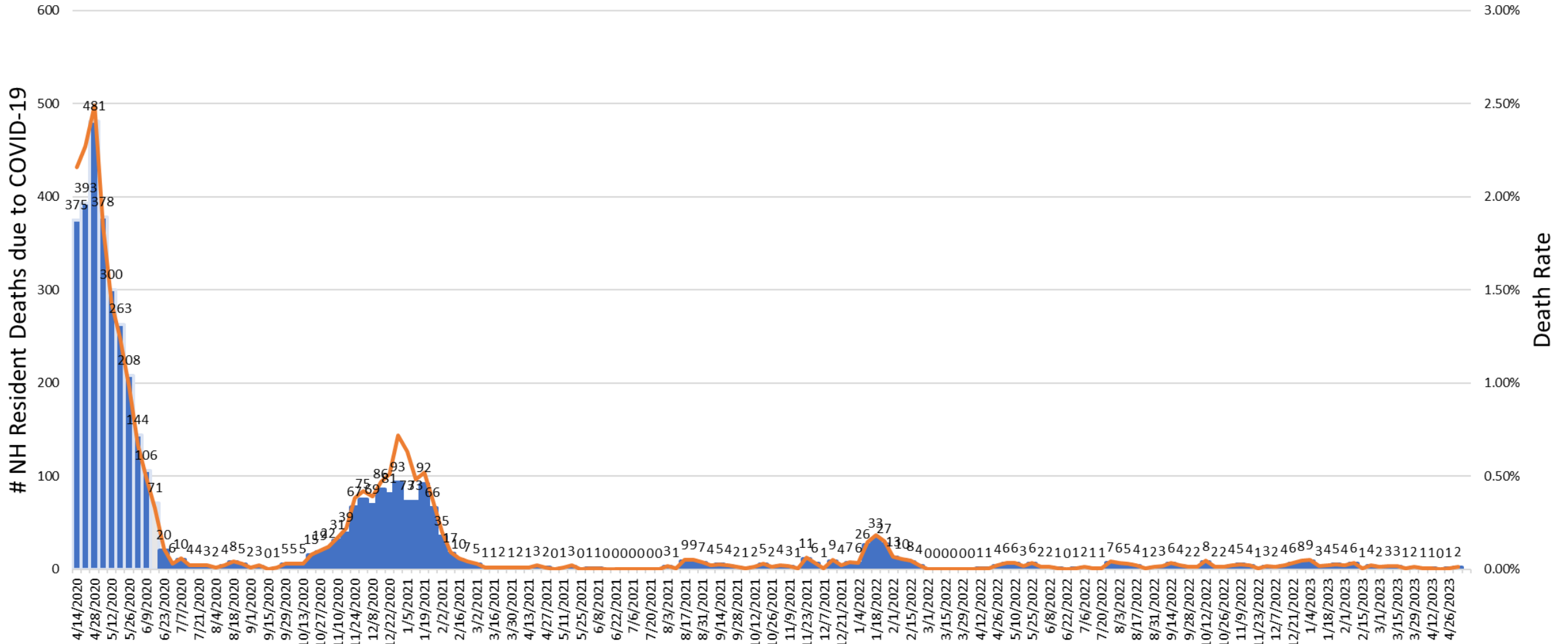


■ #NH with cases among residents only
 ■ #NH with cases among both staff and residents
 ■ #NH with cases among staff only
 ■ #NH with no cases

Nursing Home Resident Deaths Associated to COVID -19

4/15/2020 — 5/3/2023

#NH resident deaths due to COVID-19 Death Rate



Percentage of ILI and CLI-related Hospital ED and Urgent Care Visits

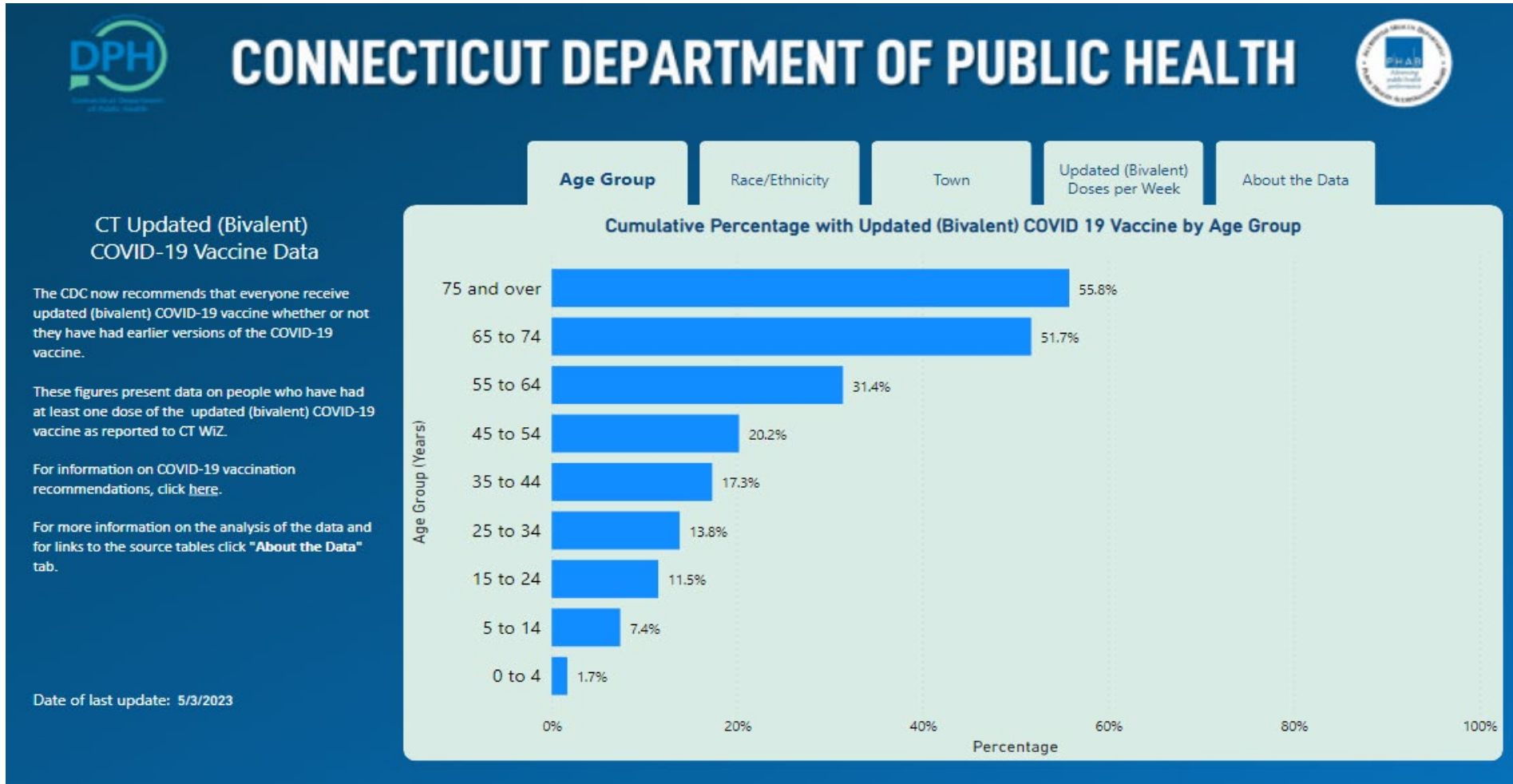
By Year (12/29/20 – 05/03/23)



Syndrome CLI ILI

COVID-19 Updated (Bivalent) Booster Coverage by Age Group (5 and over)

Reported to CT WiZ by 5/2/2023 - Administered by 4/29/2023



General ID Considerations

- May 11, 2023—End of Federal Public Health Emergency (PHE) Declaration for COVID-19
 - Most COVID-19 data activities are not directly impacted by the end of the PHE
 - ↳ Discontinue reporting of negative results
 - ↳ Changes to aggregate hospitalization reporting to HHS protect
- COVID Surveillance will continue—current focus is ‘rightsizing’
 - Commitment to continue to provide surveillance data to inform public health decision making for COVID-19 and other respiratory viral diseases
 - Changes in public health recommendations and availability of prevention and mitigation strategies so primary focus is preventing severe illness and death
 - Changing resource availability as emergency funding ends in 2024
 - Care-seeking/testing behaviors have changed so need to re-evaluate available surveillance data



Accomplishments

Disease Surveillance and Reporting

- July 2020-present issued daily COVID-19 reports and weekly extended data reports
- Received over 21 million SARS-CoV-2 test results
- Responsive to changing needs during the pandemic

Case Investigation and Contact Tracing

- Consistently met benchmarks for attempted interviews on >90% and completed interviews on >50% of cases and contacts within 48 hours
- Established Community Outreach Specialists in 13 high SVI communities to ensure equitable outreach
- 20,000 residents referred to Community Resource Coordinators for Q/I support

Improved informatics and IT infrastructure and data quality improvements

Accomplishments (cont.)

Immunizations

- Engaging and enrolling **778** COVID-19 vaccination providers into the COVID-19 Vaccine Program (CoVP)
- Setting up near real-time vaccine reporting from **1,853** clinics to CT WiZ from 1/1/2020 to 3/29/2023
- Receiving, managing, and analyzing **8,683,325** COVID-19 vaccine administration records
- Mobile vans and homebound vaccine program administered vaccines to hard to reach populations

HAI-AR

- The HAI-AR Program, along with FLIS and Yale School of Public Health, created the current web based COVID-19 SNF outbreak surveillance system hosted on the FLIS portal
- The HAI-AR program provides COVID-19 and general infection control guidance to healthcare facilities such as skilled nursing facilities (SNFs) and assisted living facilities (ALSA)
- Since the start of the pandemic, HAI-AR has supported over **1,145** COVID-19 outbreaks in SNFs and over **498** COVID-19 outbreaks in ALSAs

Improved communication and collaboration with partners

Sexually Transmitted Diseases: Re-emergence of Old and New Diseases

Lynn Sosa, MD

April 26, 2023

THE STATE OF STDs IN THE UNITED STATES, 2021

STDs continue to forge ahead, hitting the nation hard.

- 1.6 million** CASES OF CHLAMYDIA
3.8% decrease since 2017
- 710,151** CASES OF GONORRHEA
28% increase since 2017
- 176,713** CASES OF SYPHILIS
74% increase since 2017
- 2,855** CASES OF SYPHILIS AMONG NEWBORNS
203% increase since 2017

LEARN MORE AT: www.cdc.gov/std/

- ANYONE WHO HAS SEX COULD GET AN STD, BUT SOME GROUPS ARE MORE AFFECTED
- YOUNG PEOPLE AGED 15-24
 - GAY & BISEXUAL MEN
 - PREGNANT PEOPLE
 - RACIAL & ETHNIC MINORITY GROUPS

LEFT UNTREATED, STDs CAN CAUSE:

- INCREASED RISK OF GIVING OR GETTING HIV
- LONG-TERM PELVIC/ABDOMINAL PAIN
- INABILITY TO GET PREGNANT OR PREGNANCY COMPLICATIONS

PREVENT THE SPREAD OF STDs WITH THREE SIMPLE STEPS:

talk | test | treat

Centers for Disease Control and Prevention
National Center for HIV, STD, and STI Prevention

THE STATE OF STDs IN

2021



STDs continue to increase in Connecticut despite being preventable and treatable



14,749
CASES OF CHLAMYDIA

3% decrease since 2019



5,405
CASES OF GONORRHEA

22% increase since 2019



329
CASES OF SYPHILIS

56% increase since 2019



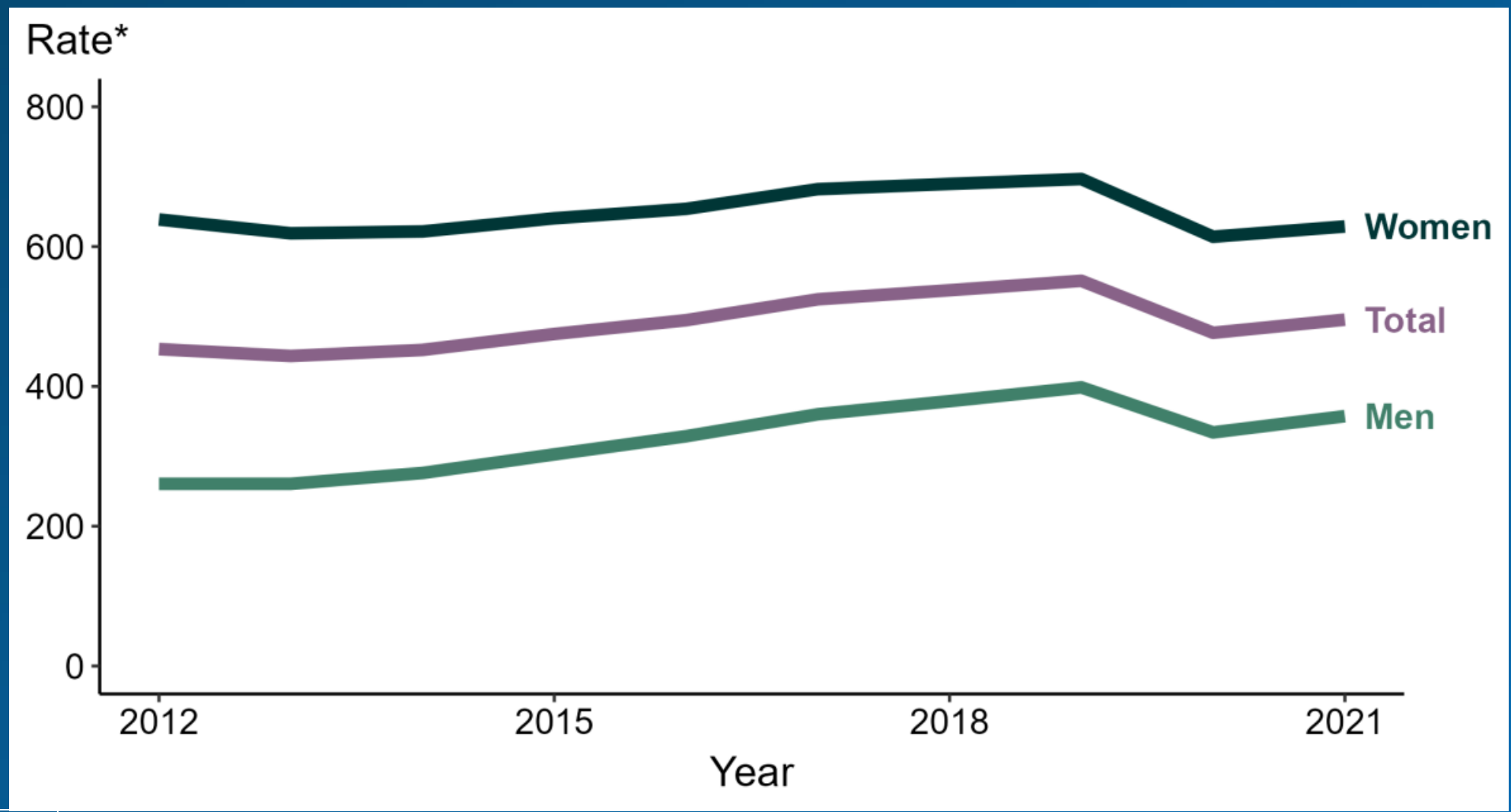
6
**CASES OF SYPHILIS
AMONG NEWBORNS**

Most cases reported in CT in one year

LEARN MORE AT: www.cdc.gov/std/

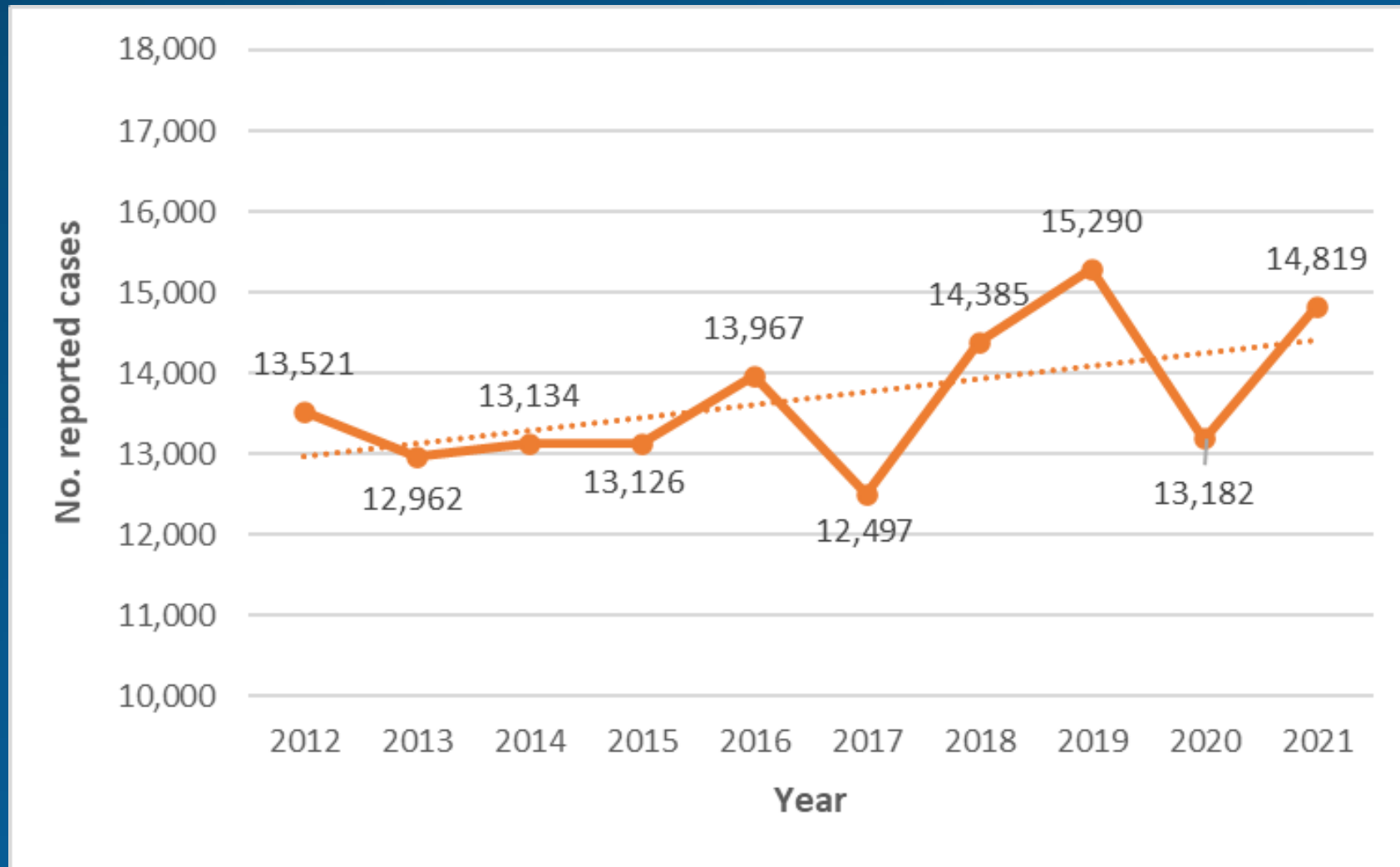


Chlamydia Rates *Nationwide 2012-2021*



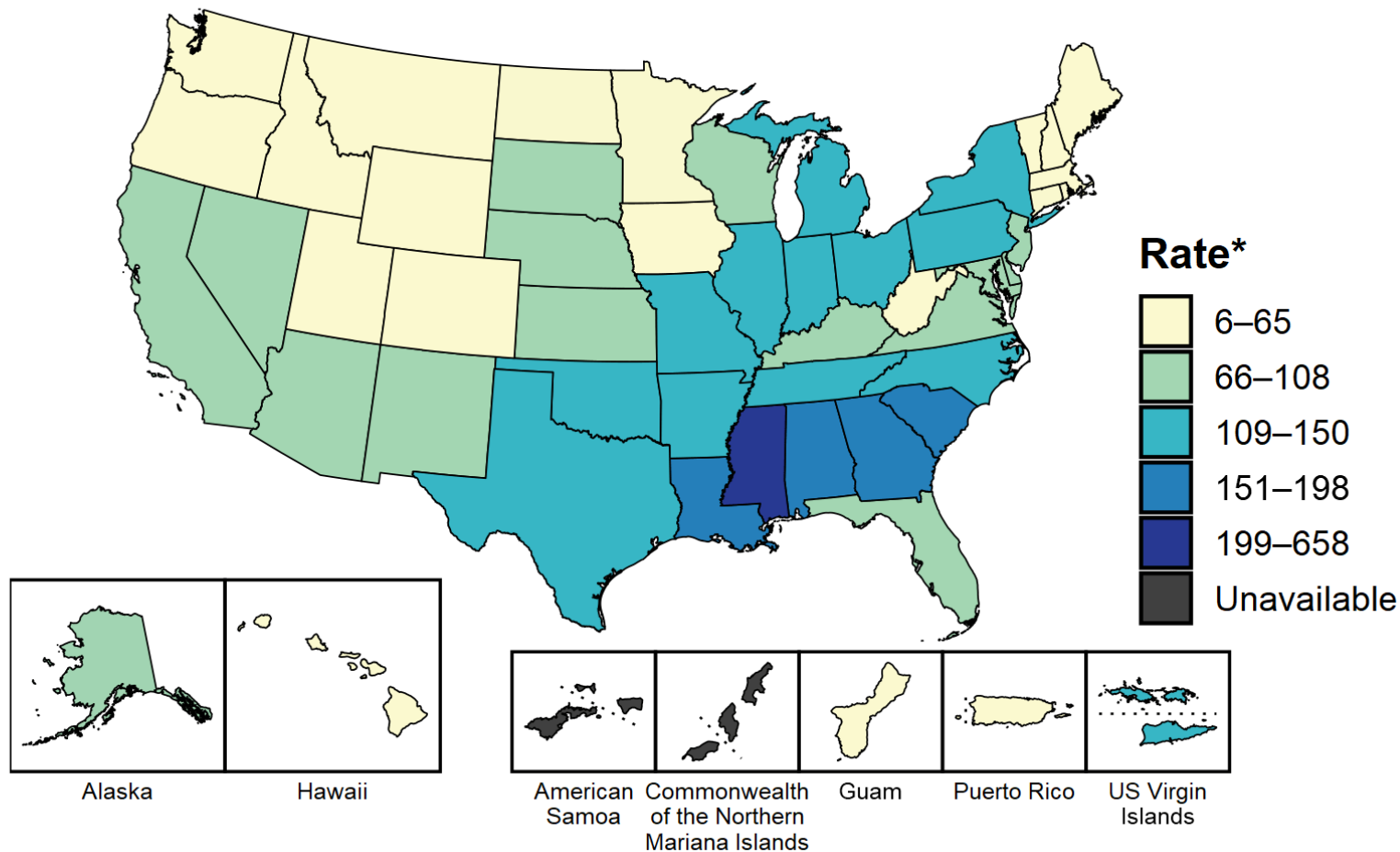
Chlamydia

Reported Cases, Connecticut, 2012–2021



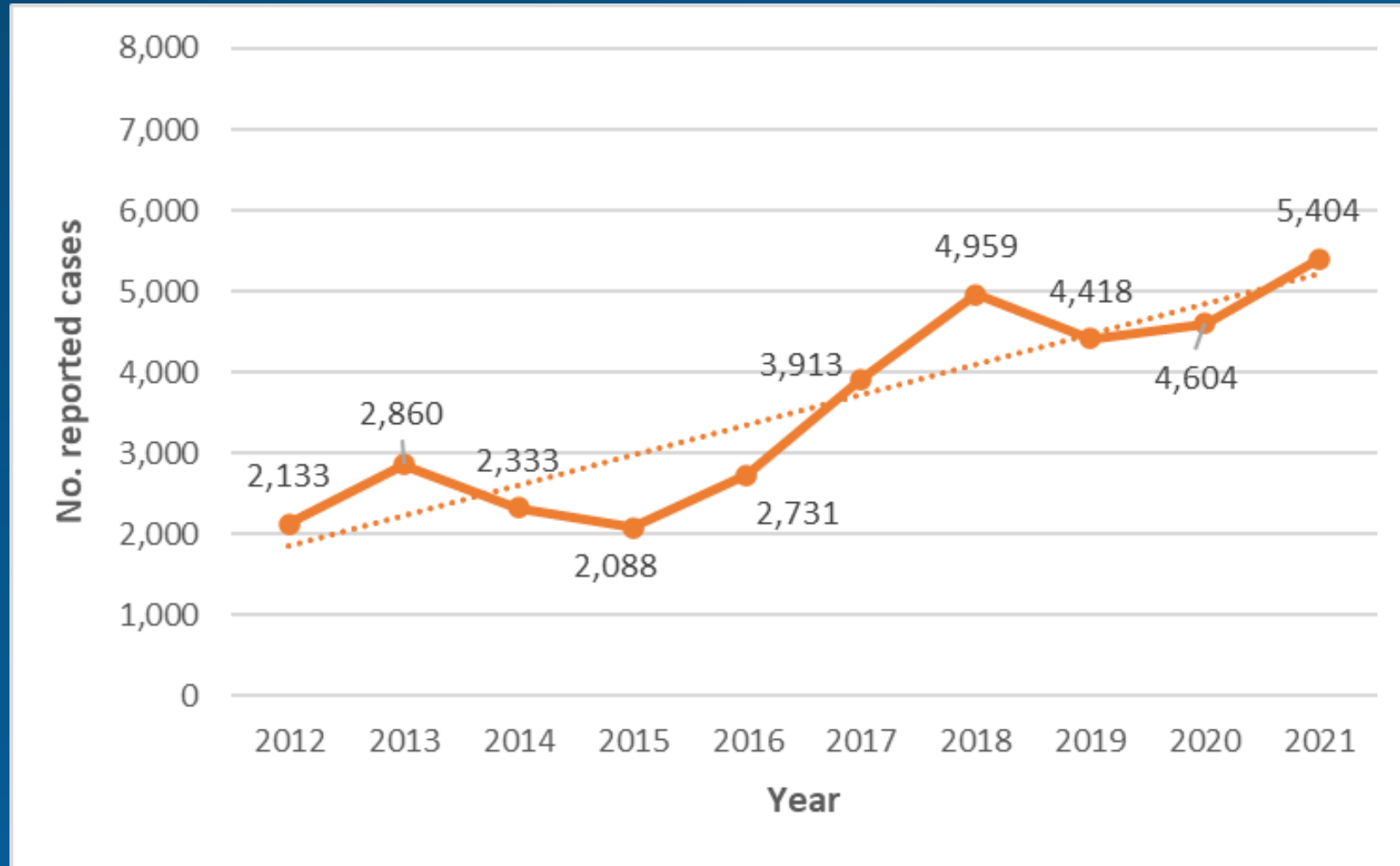
Gonorrhea Rates Nationwide 2012-2021

2012



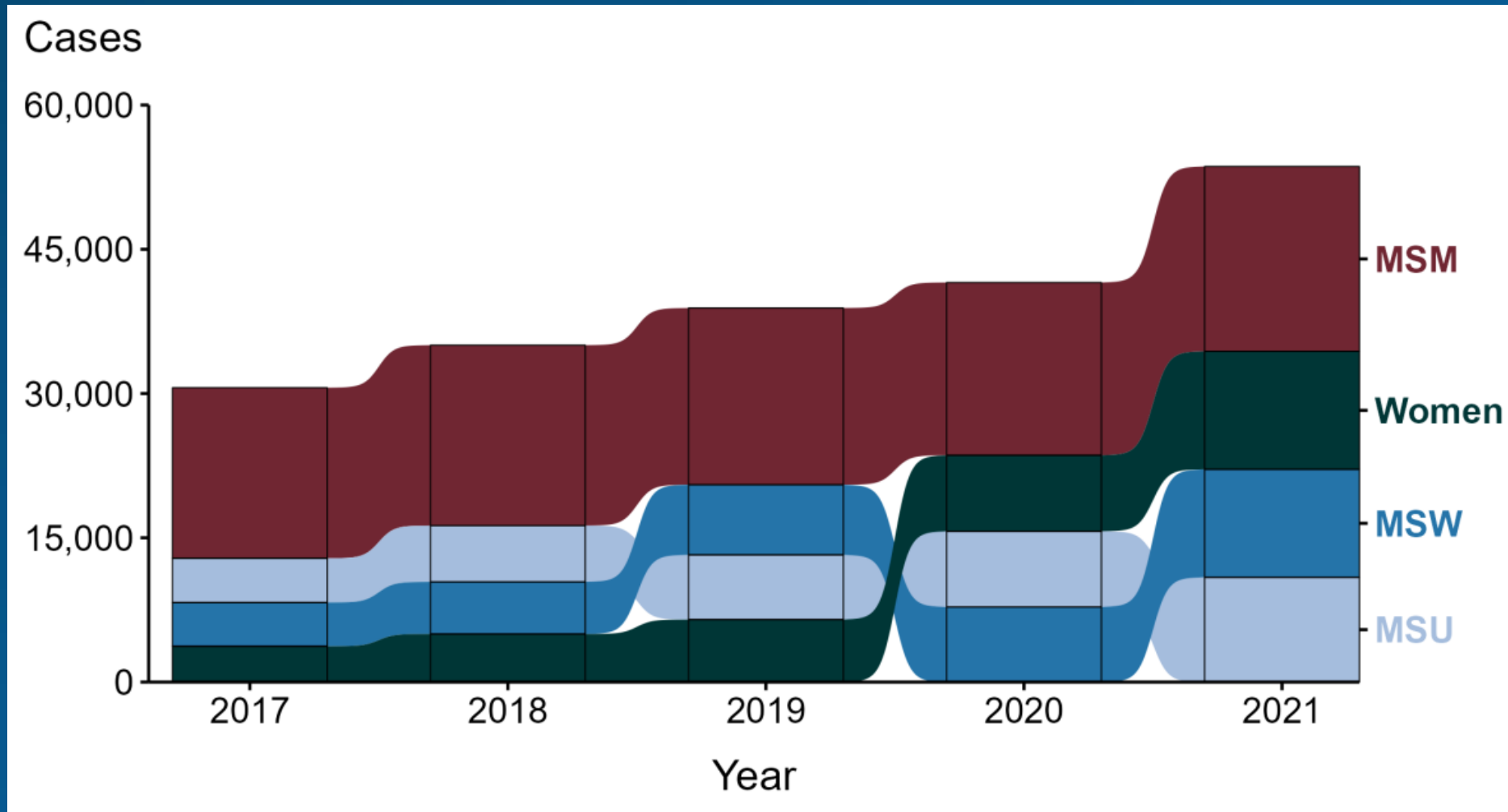
Gonorrhea

Reported Cases, Connecticut, 2012–2021



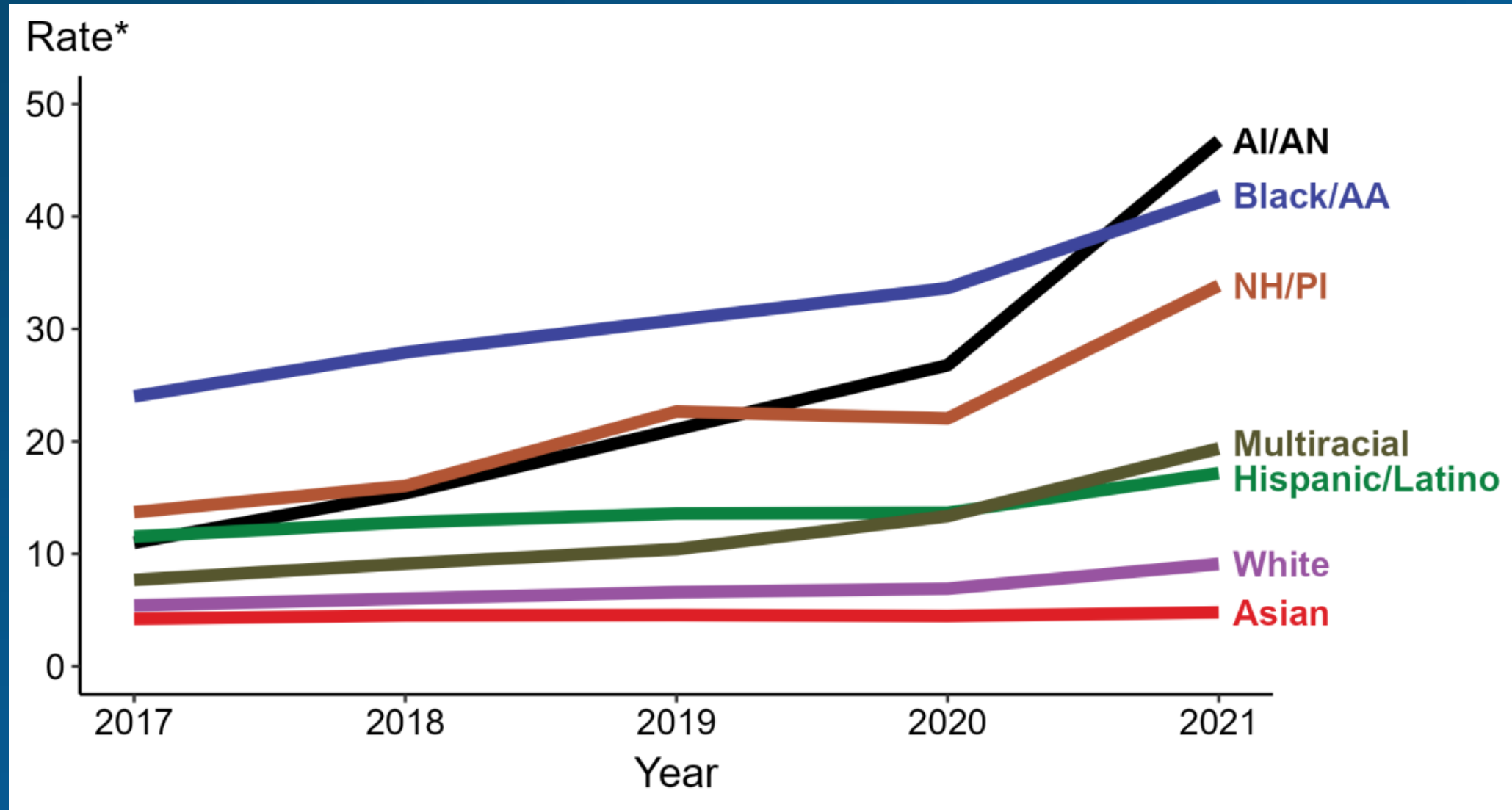


Primary and Secondary Syphilis — Reported Cases by Sex and Sex of Sex Partners, United States, 2016–2020

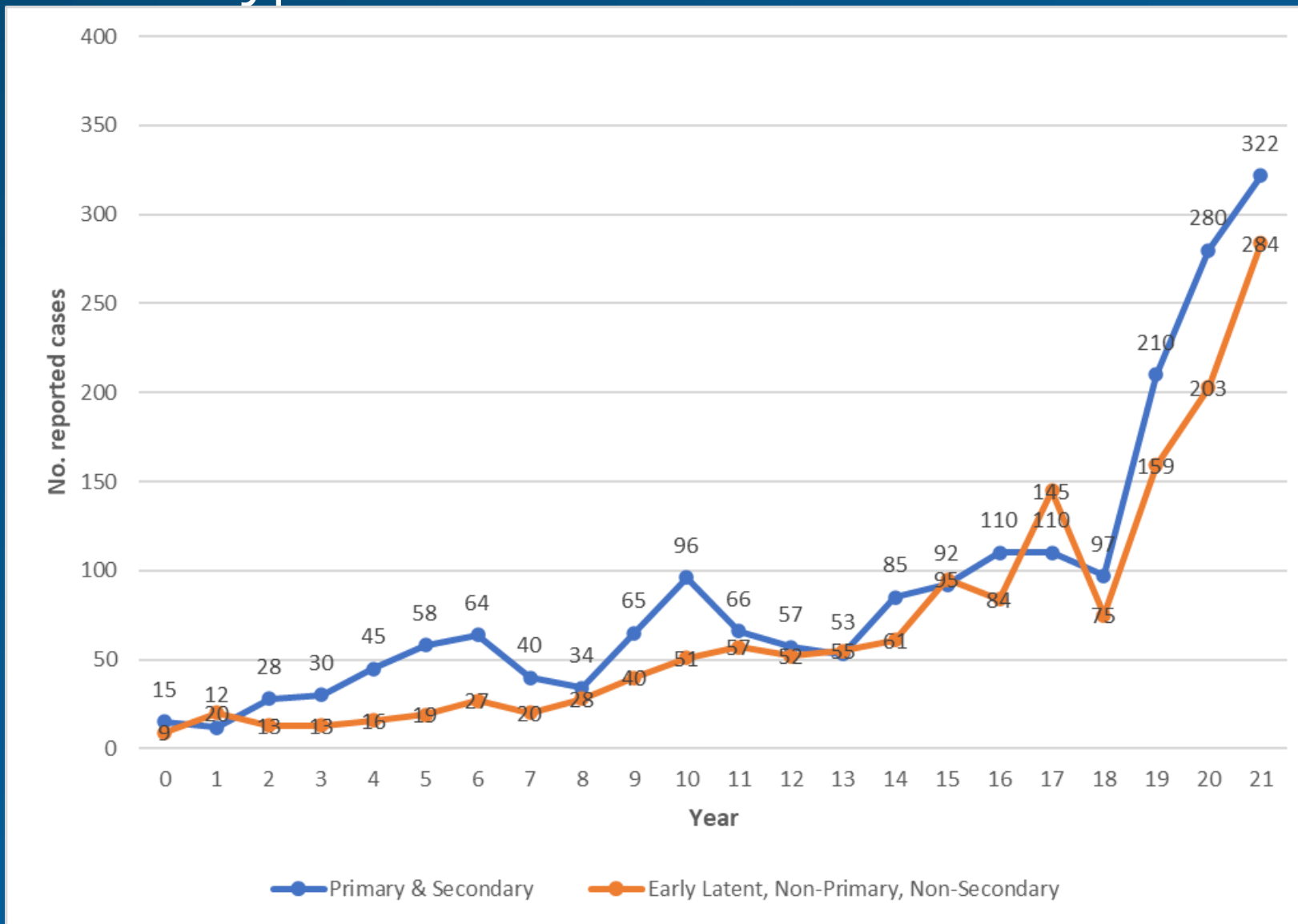


Content source: Division of STD Prevention, National Center for HIV, Viral Hepatitis, STD, and TB Prevention, Centers for Disease Control and Prevention

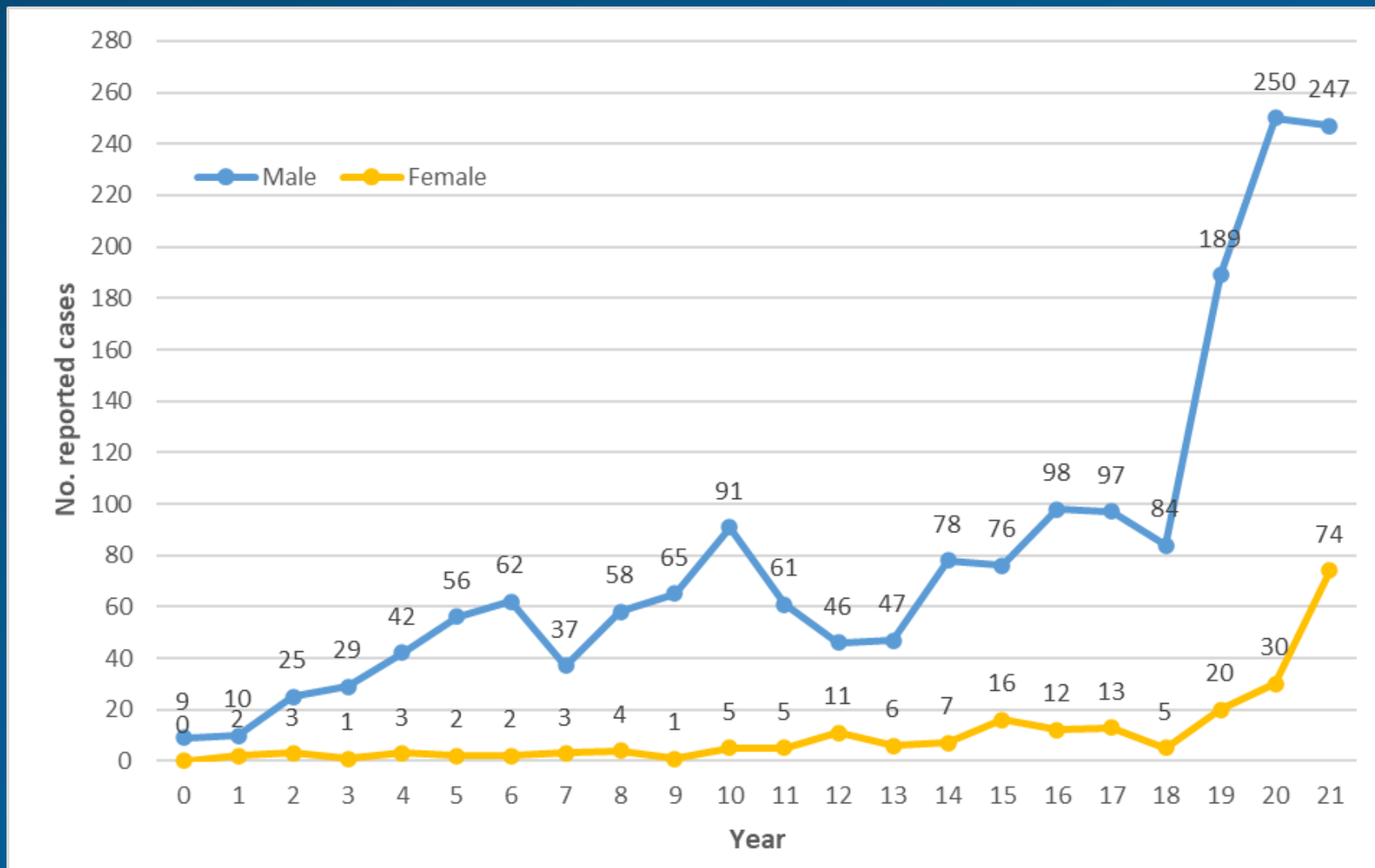
Primary and Secondary Syphilis by Race/Ethnicity Nationwide, 2017-2021



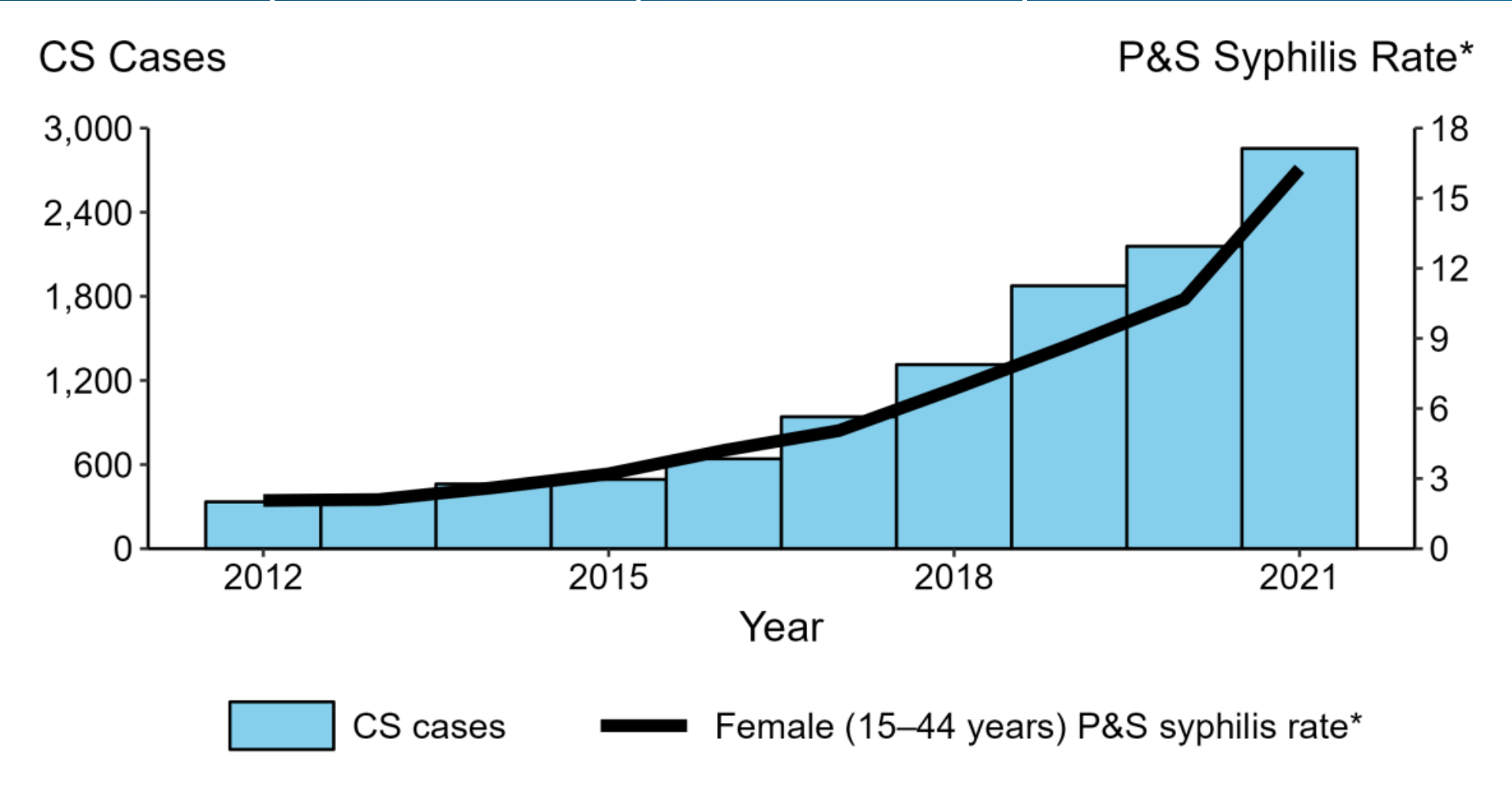
Primary & Secondary, and Early Non-Primary, Non-Secondary Syphilis, Connecticut, 2000–2021



Primary & Secondary Syphilis Cases by Gender, Connecticut, 2000–2021



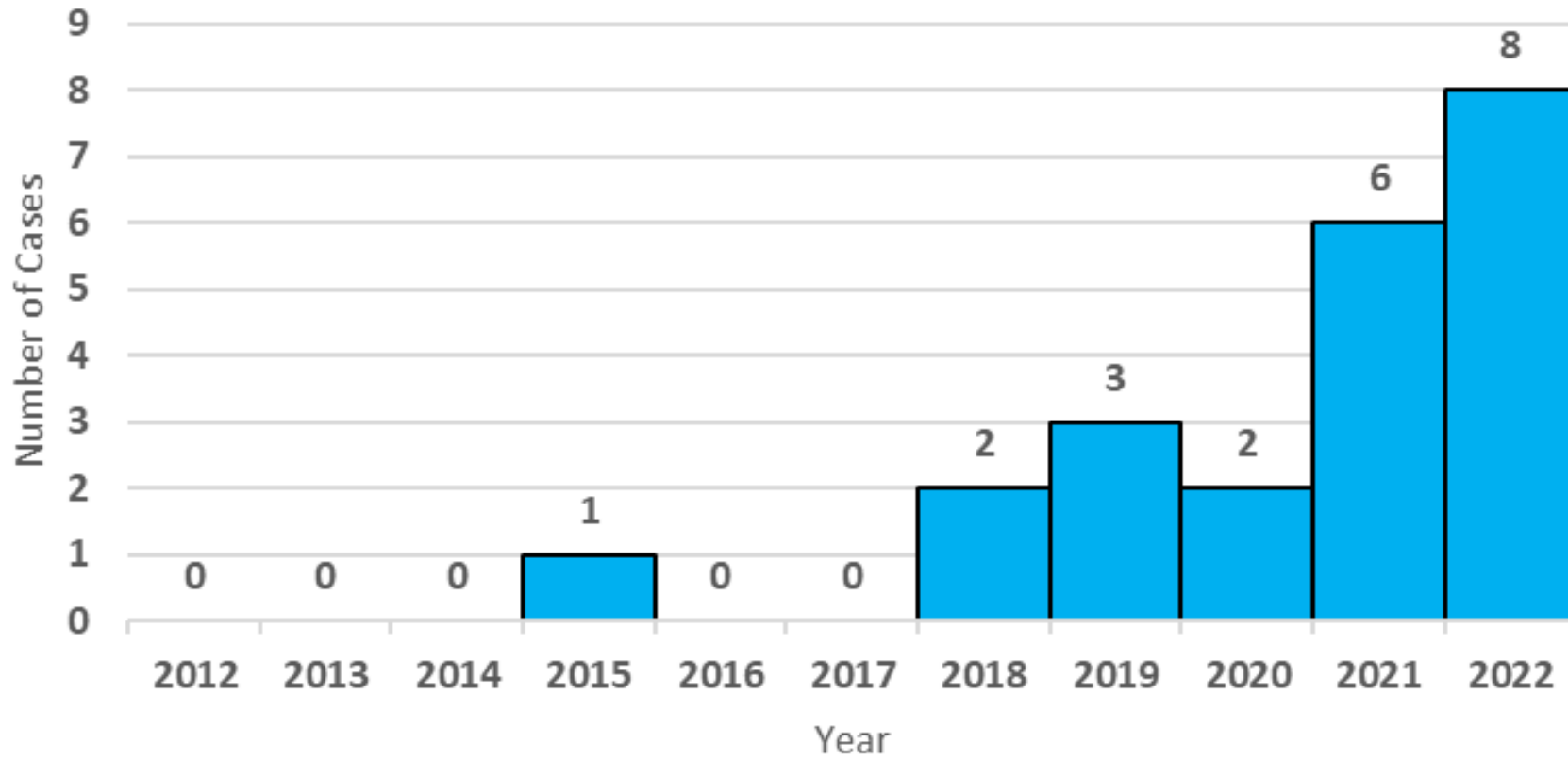
Syphilis— Reported Cases of Syphilis (All Stages) among Pregnant Women and Reported Cases of Congenital Syphilis By Year of Birth, United States, 2012–2021



Content source: Division of STD Prevention, National Center for HIV, Viral Hepatitis, STD, and TB Prevention, Centers for Disease Control and Prevention



Congenital Syphilis - Reported Cases by Year of Birth, Connecticut, 2012 - December 2022



Congenital Syphilis in Connecticut

Active surveillance effort

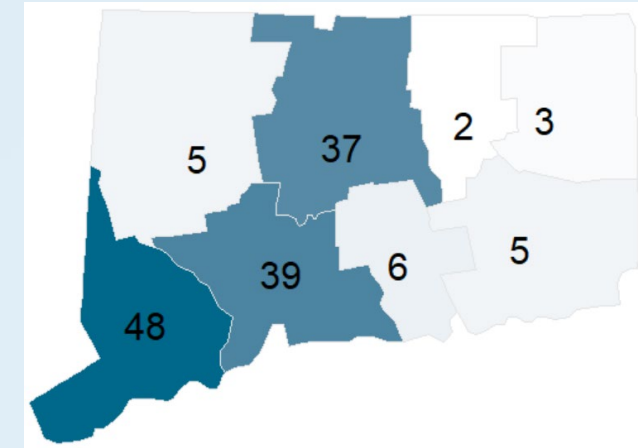
- Started in April 2022
 - Provider call within 3–5 days of recognition of no current or historic, reactive treponemal test result for
 - Female of reproductive age (15–49yo) with a titer, and
 - Ordering provider is an OB/GYN or CNM
- January 2023
 - CS has been added to the list of Category 1 reportable diseases
 - Call to DPH within 12 hours of recognition or strong recognition
 - Boost provider awareness

Mpox cases in Connecticut, 2022

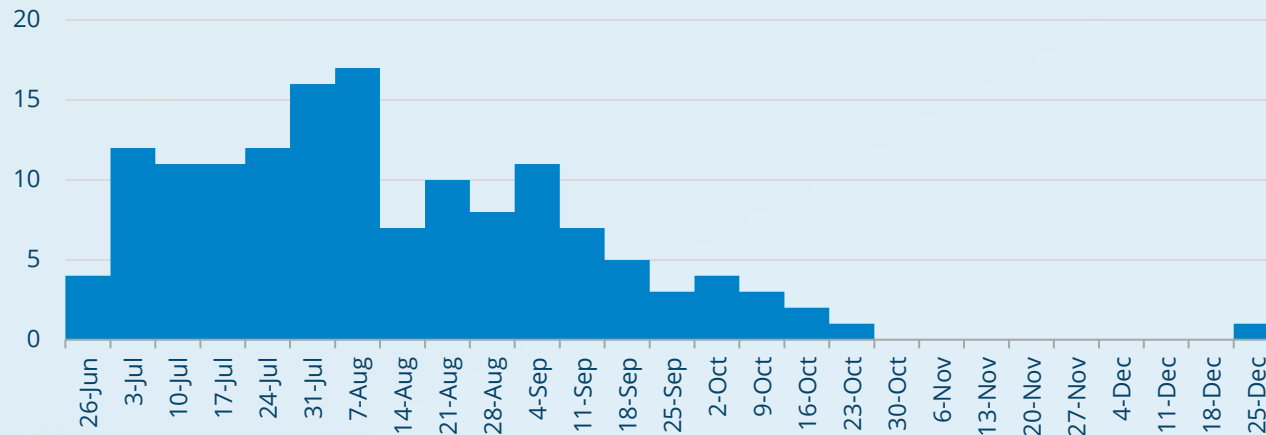
- **145** cases reported in 2022
- Most in men and persons who identify as LGBTQ+
- Median age 34 years

90%

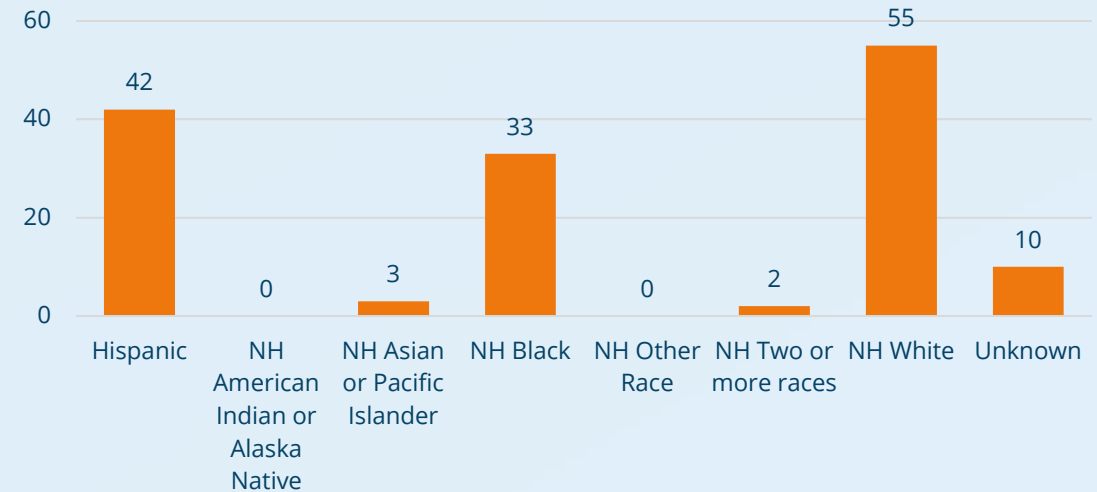
identify as **LGBTQ+** among 105 cases with information about sexual orientation



Mpox Cases by Week



Mpox Cases by Race/Ethnicity



Where do we go from here?

Re-engage people at risk

- Many people have a low risk perception because of their relationship status or declining news coverage

Incorporate mpox in routine care

- Many at risk face challenges to getting vaccinated:
 - not knowing where to go
 - not having time
 - believing they need to have insurance or that it will cost money

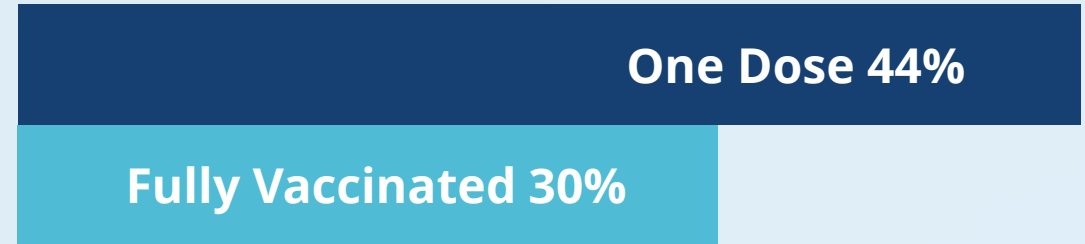
Tailor patient education with new information

- Many who are at risk for mpox want the vaccine or are undecided and need more information

Incorporate mpox risk and prevention discussion into STD care

- Mpox risk identification, detection, and prevention should become part of standard clinic workflows
- Reach out to persons at risk to **get vaccinated**
- Remind patients to get the **second dose**

Estimated vaccine coverage among CT population at risk



[CDC vaccine coverage estimates](#)



CONNECTICUT DEPARTMENT OF PUBLIC HEALTH



Emergence of VIM CRPA in Connecticut, 2022

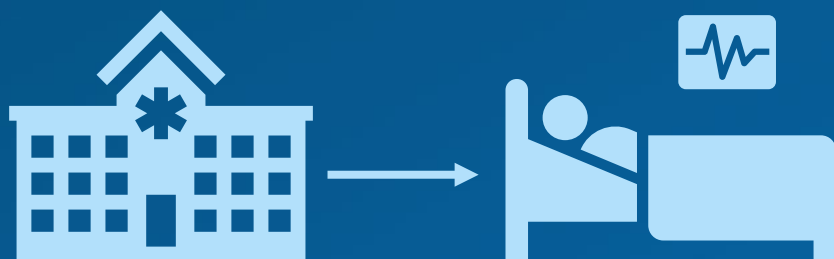
Meghan Maloney

Healthcare-Associated Infections & Antimicrobial Use Program

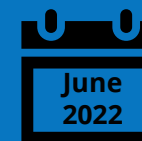
Katherine Kelley Public Health Laboratory

Index case

- June 2022: carbapenem resistant *Pseudomonas aeruginosa* (CRPA) reported to DPH from an acute care hospital laboratory
 - Patient admitted to post-acute care facility after long hospitalization in CT
 - No out-of-state medical care



CT Outbreak Tracker




 1
Clinical Cases

 0
Colonization Cases


 1
Laboratories

 1
Acute Care Hospitals


 0
Post Acute Care




 0
PPS Conducted

Pseudomonas aeruginosa is a serious threat



MULTIDRUG-RESISTANT **PSEUDOMONAS AERUGINOSA**

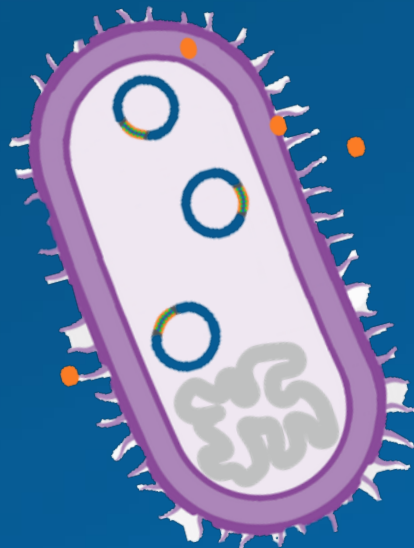
THREAT LEVEL **SERIOUS** 

 32,600 Estimated cases in hospitalized patients in 2017	 2,700 Estimated deaths in 2017	 \$767M Estimated attributable healthcare costs in 2017
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Pseudomonas aeruginosa (*P. aeruginosa*) causes many types of healthcare-associated infections, including pneumonia, bloodstream infections, urinary tract infections, and surgical site infections.

First ever VIM carbapenemase identified in CT

- SPHL testing confirmed isolate was susceptible only to Cefiderocol
- Identified *bla*_{VIM} by PCR



Plasmid with carbapenemase gene



Carbapenemase = VIM

VIM-CRPA = Verona Integron-mediated metallo-β-lactamase producing CRPA

CT Outbreak Tracker



Clinical Cases

1



Colonization Cases

0



Laboratories

2



Acute Care Hospitals

2



Post Acute Care

1



PPS Conducted

0

Initial healthcare investigation & response

- Point Prevalence Survey (PPS) of index patient's unit
 - Rectal screening ~30 patients
- Laboratory 'look-back' at affiliated facility identified increase in phenotypic CRPA
 - PPS screening of 12 patients



■ Index case
■ Screening cases



CT Outbreak Tracker



Clinical Cases

1



Colonization Cases

7



Laboratories

3



Acute Care Hospitals

2



Post Acute Care

1



PPS Conducted

2

Continuing healthcare investigation & response

1. On site, non-regulatory **Infection Control and Assessment visits (ICARs)** to identify potential infection prevention gaps and identify source
2. **Prospective case surveillance** for clinical cases
3. **Repeat PPS** every 2 weeks until no new positives for 2 consecutive rounds

New cases identified in PPS despite implementation of control measures

CT Outbreak Tracker



Clinical Cases

2



Colonization Cases

18



Laboratories

4



Acute Care Hospitals

3



Post Acute Care

2



PPS Conducted

10

Whole Genome Sequencing (WGS)

- August 2022: ARLN lab identified colonization isolates as *P. aeruginosa* **ST1203** containing **VIM-2**, **GES-9** carbapenemases
- *P. aeruginosa* **ST1203** is rare
- *bla*_{VIM-80} not been previously sequenced from a US isolate
- *bla*_{GES-9} is rare in US

Organism: Pseudomonas aeruginosa
AR Gene Variant: blaGES-9, blaVIM-2
MLST: 1203

0	1	1	2	3	3	3	4	4	5	5	7	7	11	13
1	0	0	0	0	0	0	2	2	2	1	5	5	8	2
1	0	0	0	0	0	0	2	2	2	1	0	0	3	0
2	0	0	0	0	0	0	2	2	2	1	3	3	6	0
3	0	0	0	0	0	0	2	1	2	1	5	5	8	2
3	0	0	0	0	0	1	2	2	2	1	5	5	9	2
3	0	0	0	0	1	0	2	2	2	1	5	5	8	2
4	2	2	2	2	2	2	0	4	3	3	6	6	9	3
4	2	2	2	1	2	2	4	0	4	3	6	6	7	4
5	2	2	2	2	2	2	3	4	0	3	6	6	9	2
5	1	1	1	1	1	1	3	3	3	0	6	6	9	3
7	5	0	3	5	5	5	6	6	6	6	0	0	2	3
7	5	0	3	5	5	5	6	6	6	6	0	0	2	3
11	8	3	6	8	9	8	9	7	9	9	2	2	0	5
13	2	0	0	2	2	2	3	4	2	3	3	3	5	0

Multistate outbreak identified from WGS

- October 2022: Genomic surveillance through NCBI identified multiple cases in distinct geographic locations
 - Outbreak isolates *highly* related
 - No epidemiologic link between locations identified
- CT DPH began to collaborate with CDC and other states
 - Hypothesized contaminated product might be involved

Ongoing investigation in CT



Common central supply
and pharmacy services
between facilities



Some staff
overlap/sharing



Patients very rarely
move between facilities

CT Outbreak Tracker



Clinical Cases

2



Colonization Cases

20



Laboratories

4



Acute Care Hospitals

3



Post Acute Care

2



PPS Conducted

15

CT DPH requests CDC Epi Aid

CDC on the ground Nov 8–22

Goals of Epi Aid

- Perform medical record chart abstraction for VIM-CRPA case-patients to **identify common exposures** such as procedures, products or medications that may be the source of the outbreak.
- Obtain a **list from facilities of products** used including manufacturers and lot numbers.
- **Directly observe how products are used** during clinical care including respiratory therapy, wound care, bathing, eye care, oral care, and other procedures, across the facilities where case-patients were identified.
- Use the information collected to inform additional measures to identify the outbreak source such as a **case-control study and/or product testing**, and to implement measures to **mitigate further spread**.

Artificial tears identified as product of concern

- Informed by findings of CT case-control study and investigations in other states
- 52 opened and 10 unopened vials of artificial tears from 7 manufacturers recovered from CT healthcare facilities
- CDC tested a subset of products based on epidemiologic investigations in other jurisdictions

CT Outbreak Tracker



Clinical Cases

5



Colonization Cases

22



Laboratories

6



Acute Care Hospitals

5



Post Acute Care

2



PPS Conducted

26

Isolates from vials collected in CT matched outbreak strain

- 26 VIM-GES-CRPA isolates of **ST1203** harboring both *bla*_{VIM-80} and *bla*_{GES-9} were recovered from **6 opened EzriCare containers across 3 lots collected in Connecticut**
- Other organisms recovered from opened EzriCare containers included:
 - P. aeruginosa* without the *bla*_{VIM} gene
 - Klebsiella pneumoniae*
 - Serratia marcescens*
 - A gram-positive organism
- Representative subset of 13 isolates identified from opened EzriCare containers uploaded to NCBI






Product Notifications/Recalls

Date: January 20, 2023

To: Clinical Laboratories and Healthcare Providers

From: Lynn Sosa, MD Acting State Epidemiologist

**Multistate Cluster of Carbapenem-resistant Pseudomonas Aeruginosa (CRPA)
Associated with Artificial Tears**




Jan 20

Feb 1

**This is an official
CDC HEALTH ADVISORY**

Distributed via the CDC Health Alert Network
February 1, 2023, 7:00 PM ET
CDCHAN-00485

**Outbreak of Extensively Drug-resistant
Pseudomonas aeruginosa Associated with Artificial Tears**



Feb 2

COMPANY ANNOUNCEMENT

**Global Pharma Healthcare Issues Voluntary
Nationwide Recall of Artificial Tears Lubricant
Eye Drops Due to Possible Contamination**



Feb 22

COMPANY ANNOUNCEMENT

**Global Pharma Healthcare Issues Voluntary
Nationwide Recall of Delsam Pharma Artificial
Eye Ointment Due to Possible Microbial
Contamination**



CT Outbreak Tracker



Clinical Cases

5



Colonization Cases

23



Laboratories

6



Acute Care Hospitals

5



Post Acute Care

2



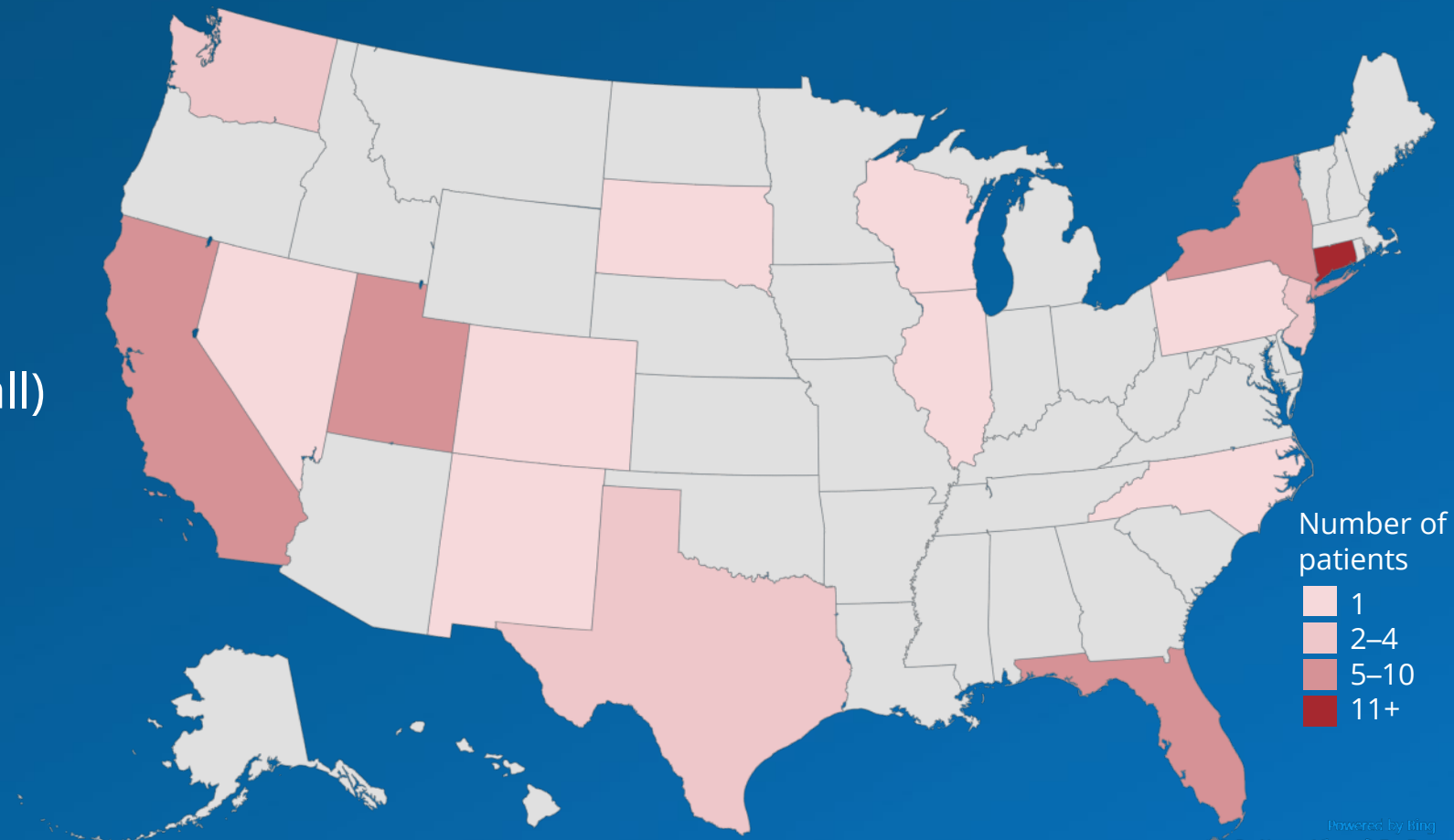
PPS Conducted

30

68 patients with outbreak strain identified in 16 states

- 37 patients linked to 4 healthcare facility clusters
- 3 deaths
- 8 reports of vision loss
- 4 reports of enucleation (surgical removal of eyeball)
- Specimens collected: May 2022–February 2023

Patients with *P. aeruginosa* outbreak strain as of March 14, 2023 by state, N=68



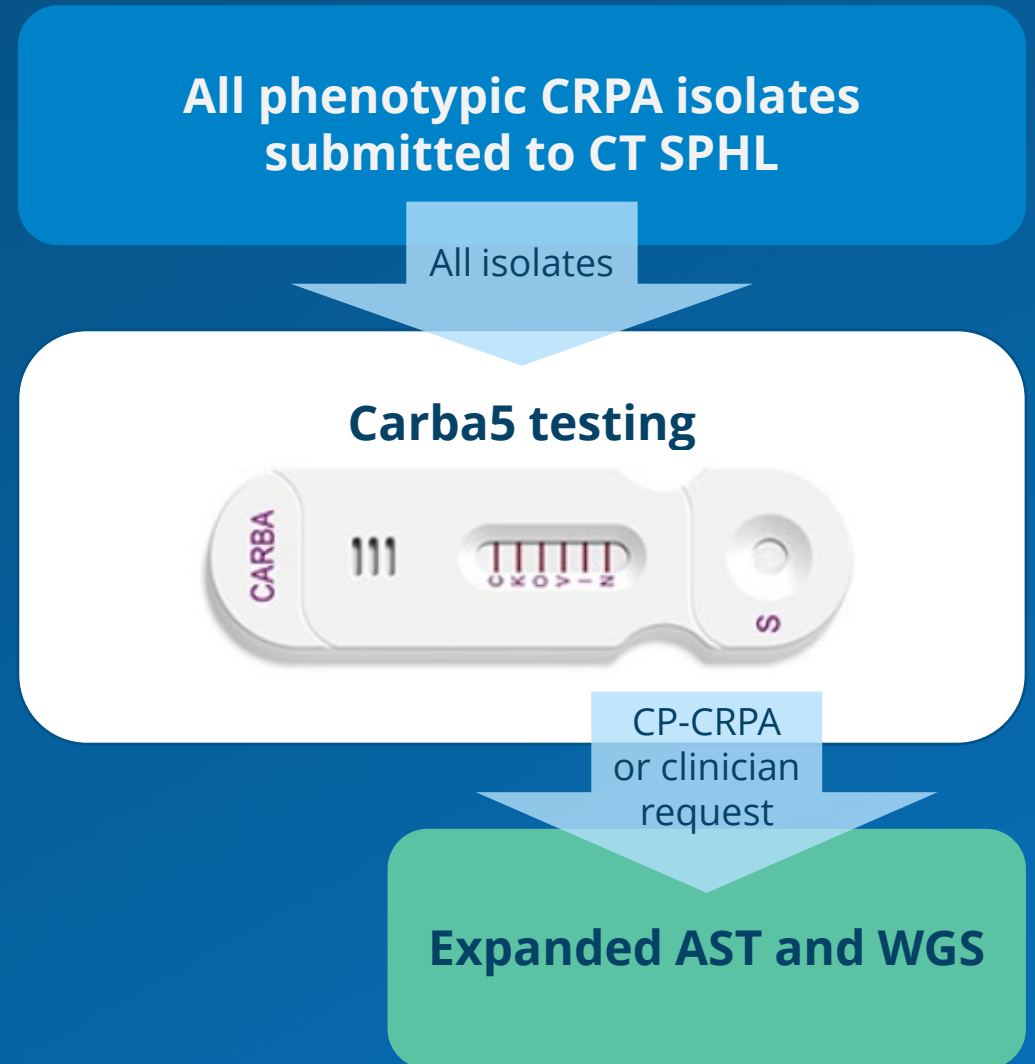
Number of patients
1
2-4
5-10
11+

Ongoing statewide surveillance plan

Jan 1, 2023: CRPA added to the List of Reportable Laboratory Findings

Q1 2023:

- CT SPHL tested **146 phenotypic CRPA isolates**
- **9 isolates VIM+**
all from patients identified with infections/colonization in 2022





Summary Slide

- CT DPH and SPHL instrumental in recognizing outbreak and identifying source which led to recall of contaminated products
- Strong partnerships between healthcare facilities, epidemiologists, and laboratorians in multiple jurisdictions were essential
- Active surveillance and PPS ongoing in affected facilities

CT Outbreak Tracker



Clinical Cases

5



Colonization Cases

23



Laboratories

6



Acute Care Hospitals

5



Post Acute Care

2



PPS Conducted

34

Acknowledgements

- Katherine Kelley Public Health Laboratory
- Antimicrobial Resistance Laboratory Network Regional Laboratory at Wadsworth
- Centers for Disease Control and Prevention Division of Healthcare Quality and Promotion
- Multidisciplinary Antimicrobial Resistance and Antimicrobial Stewardship Technical Advisory Group
- All healthcare facilities, laboratories, and healthcare providers who assisted in this investigation whose partnership was critical