

Sexually Transmitted Infections in Iowa

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Disease Intervention Specialist

Division of Public Health

Iowa Department of Health and
Human Services

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Learning Objectives

- Describe recent trends for STIs in Iowa for chlamydia, gonorrhea, and syphilis
- Review Community Based Screening Sites program (CBSS)
- Review stages and clinical presentation of syphilis
- Partner Services

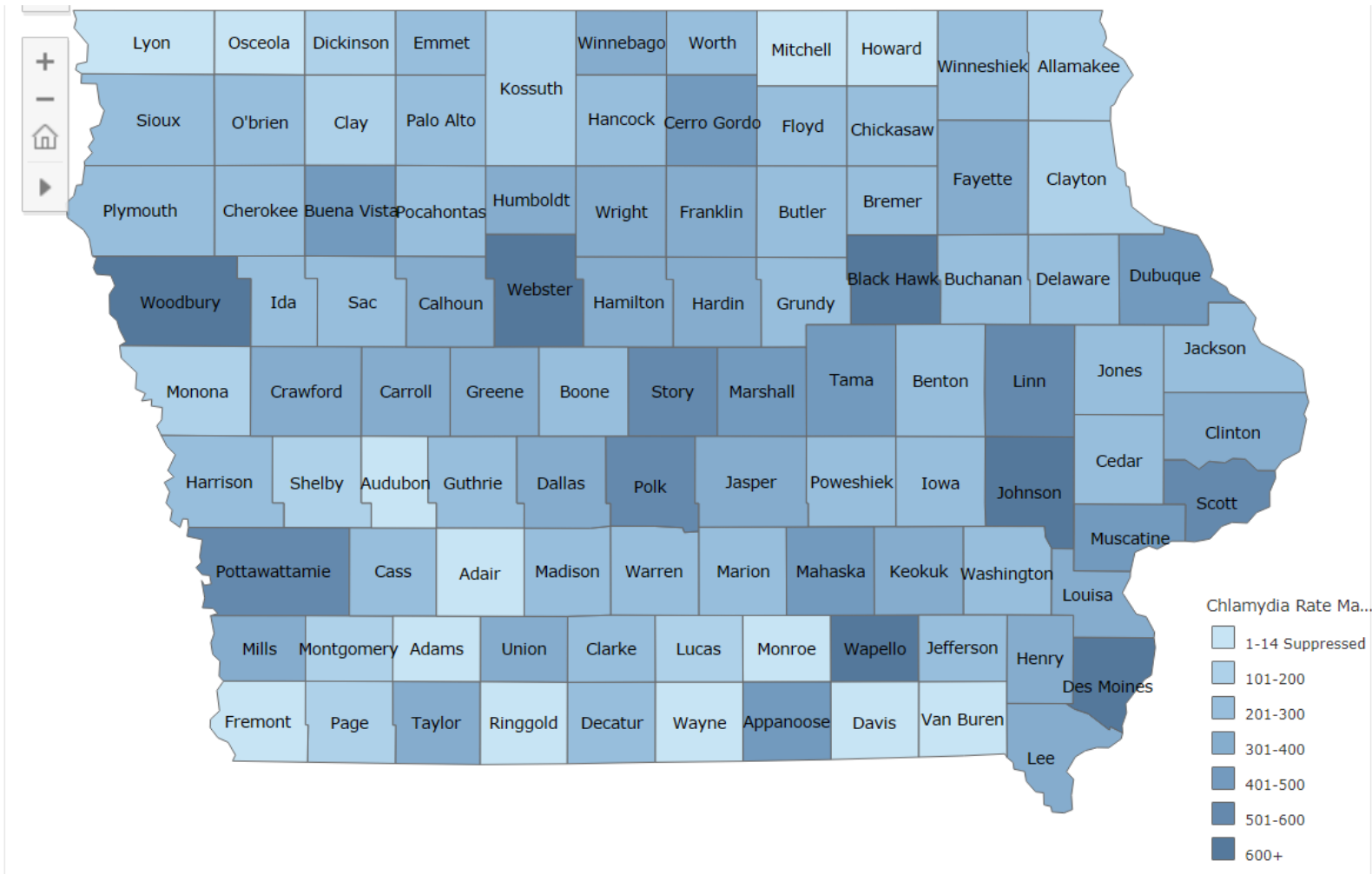
Chlamydia and gonorrhea – The dynamic duo!

- Often thought of together since most common laboratory assays detect both from single specimen
- Signs/symptoms
 - Often asymptomatic/subclinical (chlamydia more than gonorrhea)
 - Vaginal or penile discharge
 - Burning sensation upon urination
- Sequelae
 - Can be very serious, particularly in women
 - Salpingitis, Pelvic Inflammatory Disease (PID)
 - Ectopic pregnancy
 - Chronic pelvic pain
 - Infertility
 - Epididymitis in men
 - May lead to Disseminated Gonococcal Infection (DGI)

Chlamydia epidemiology in Iowa

- 2023 surveillance data:
 - Greatest number of cases of any reportable disease (STD or otherwise) in Iowa and U.S.
 - 13,684 cases reported in Iowa
 - 62% of cases <25 years of age
 - 65% of cases among women
 - Greater number screened
- ▶ 1,649,716 reported nationally (2022 data)





State Chlamydia for 2022

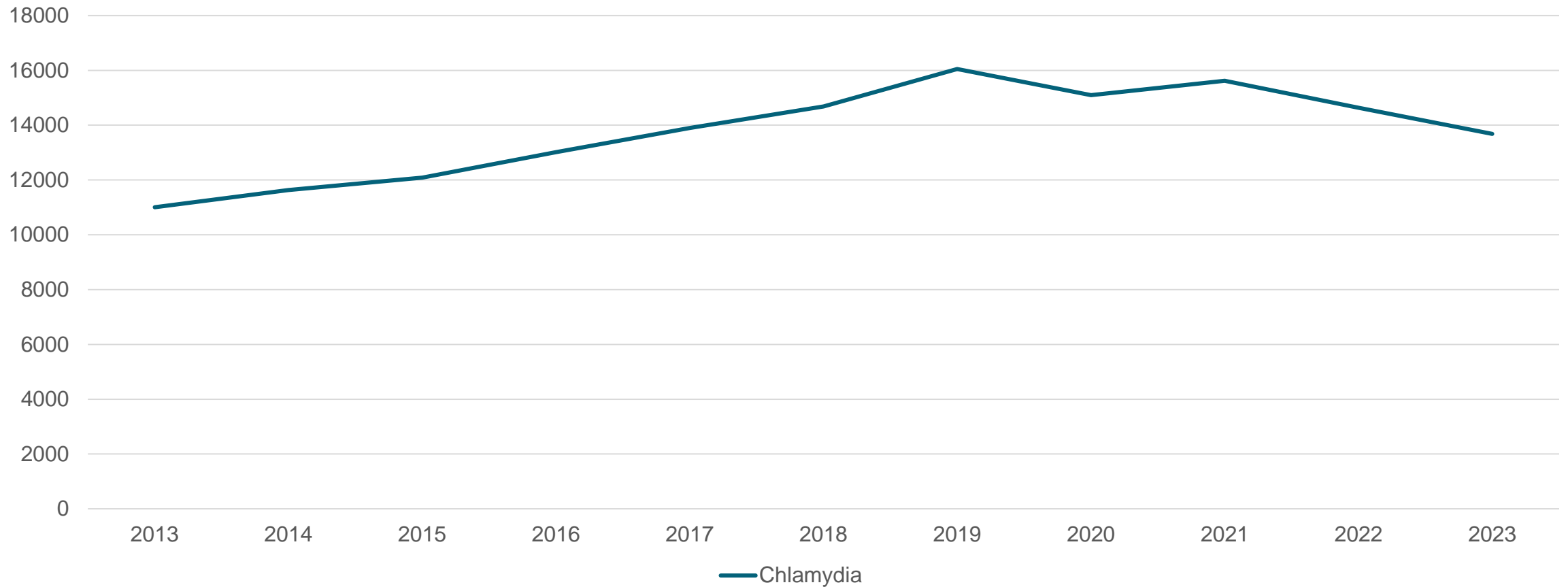
County Chlamydia Rate (Per 100,000)	458
County Chlamydia Cases	14,633
Population	3,193,079

County Chlamydia for 2022

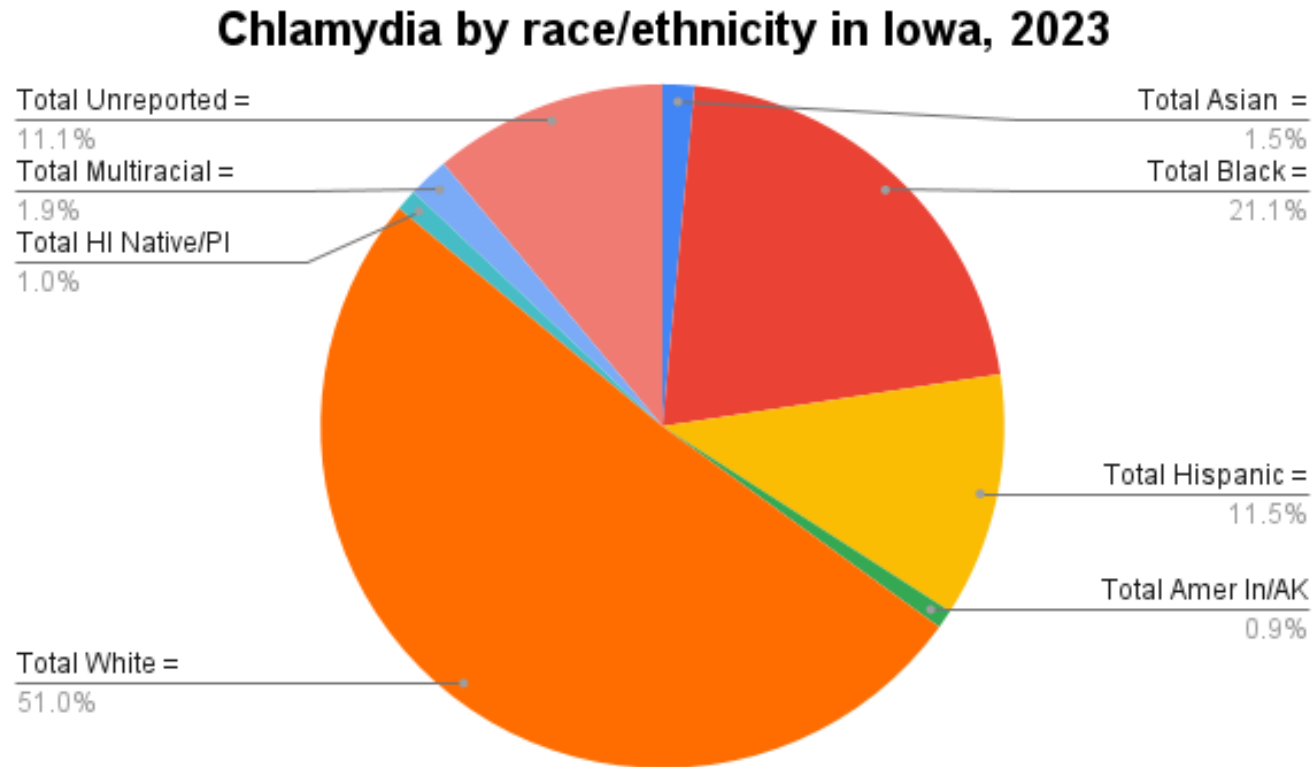
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<https://hhs.iowa.gov/public-health/data/health/sexually-transmitted-diseases/chlamydia-data>

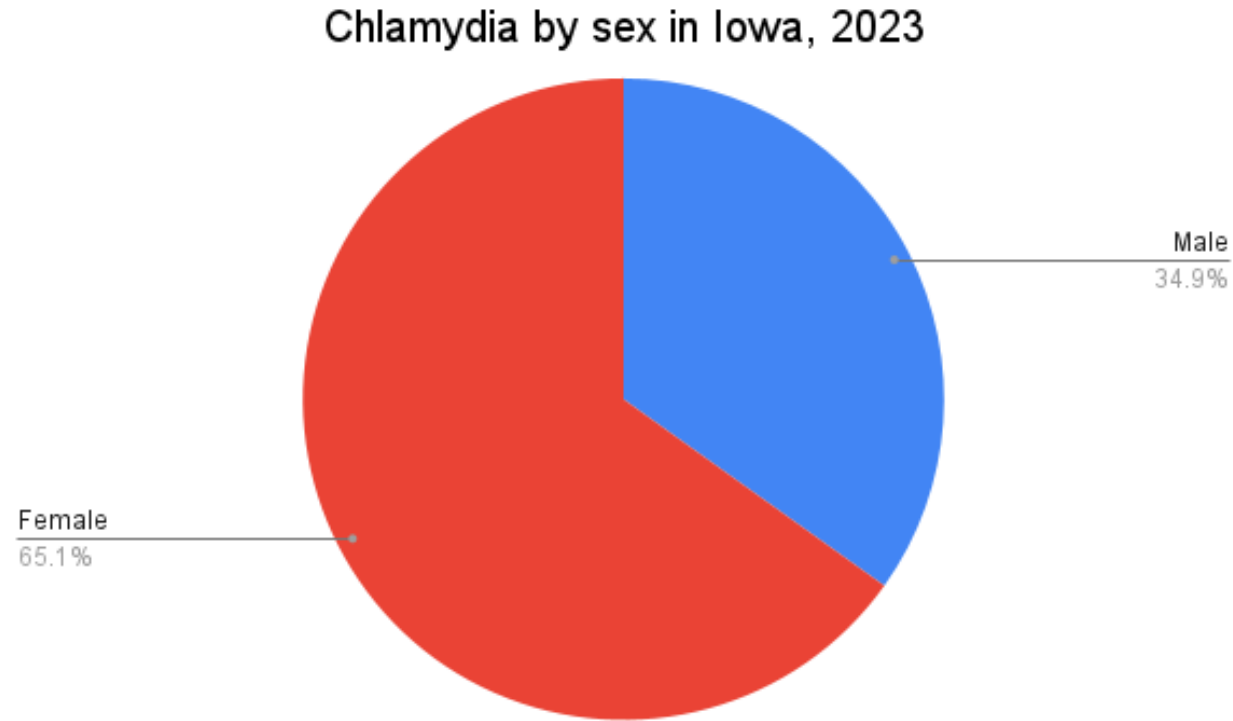
Chlamydia diagnoses in Iowa 2013-2023



Chlamydia by race/ethnicity in Iowa, 2023



Chlamydia by sex in Iowa, 2023

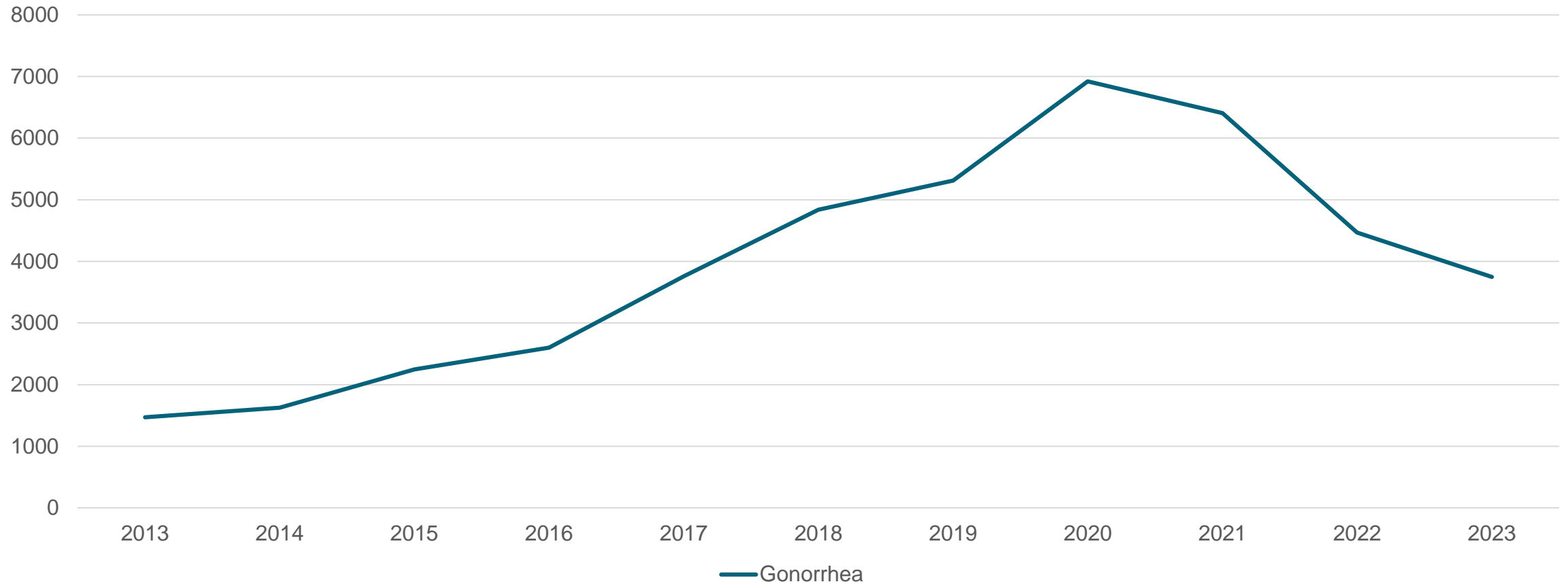


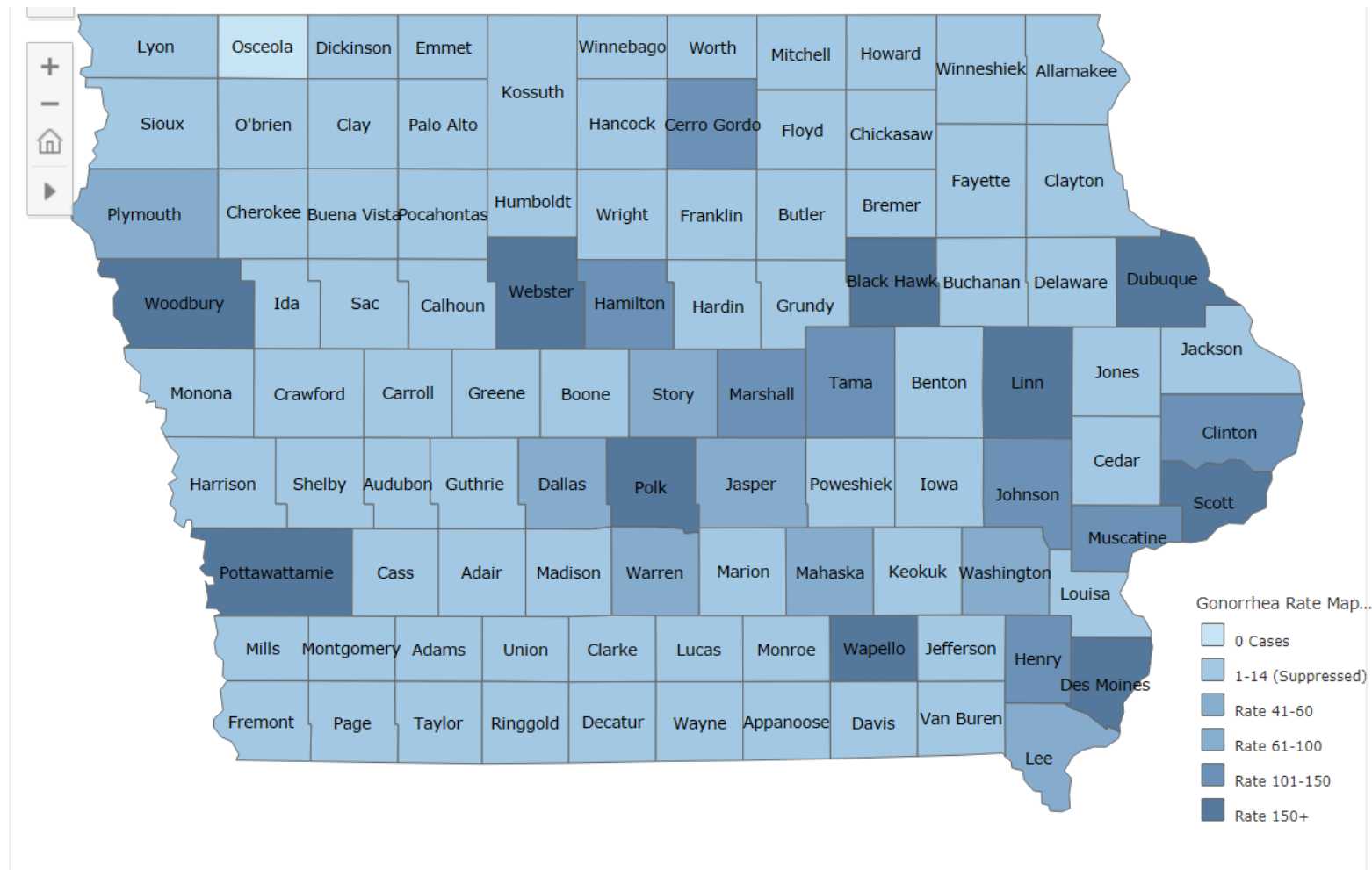
Gonorrhea epidemiology in Iowa

- 2023 surveillance data:
 - Second most commonly reported infection in Iowa and U.S.
 - 3,747 cases reported
 - 40% of cases <25 years of age; 73% in persons <35 years of age
 - Some racial and ethnic groups disproportionately impacted
 - Close to even distribution between sexes (47% male, 53% female)
 - 648,056 cases reported nationally (2022 data)



Gonorrhea diagnoses in Iowa 2013-2023





State Gonorrhea for 2022

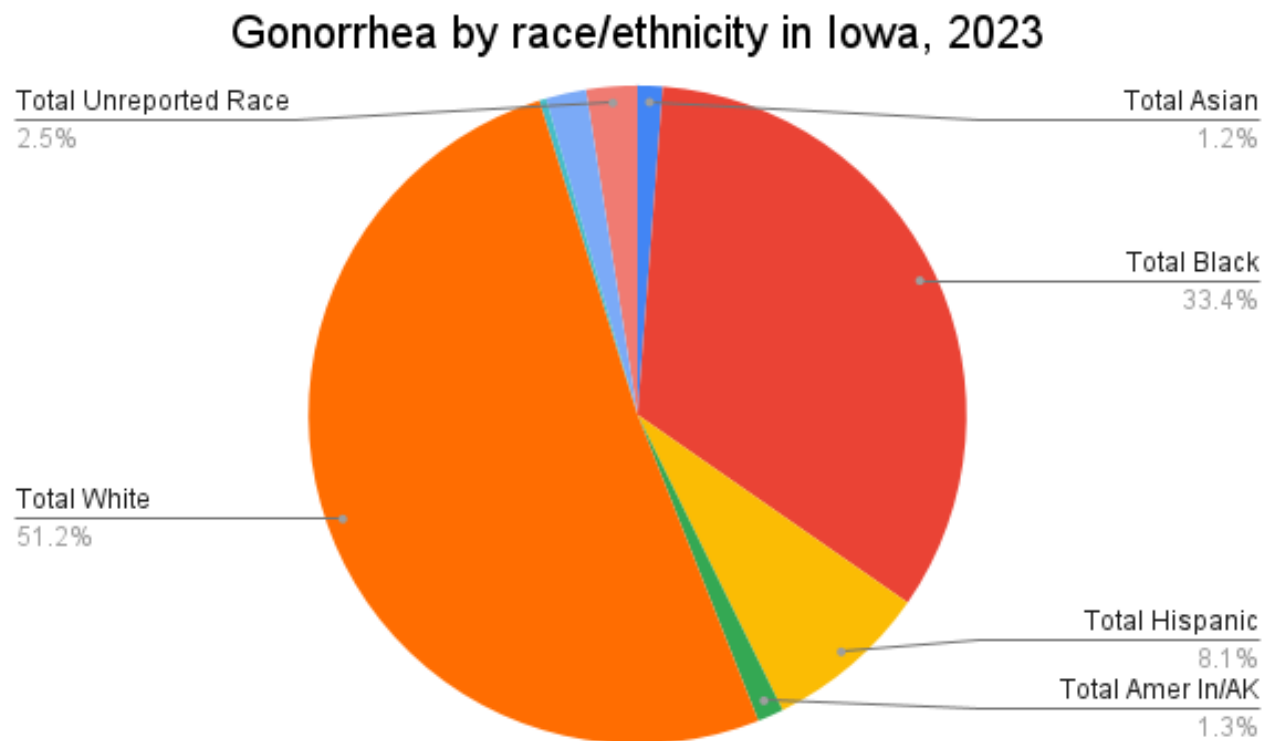
County Gonorrhea Rate (Per 100,000)	140
County Gonorrhea Cases	4,466
Population	3,193,079

County Gonorrhea for 2022

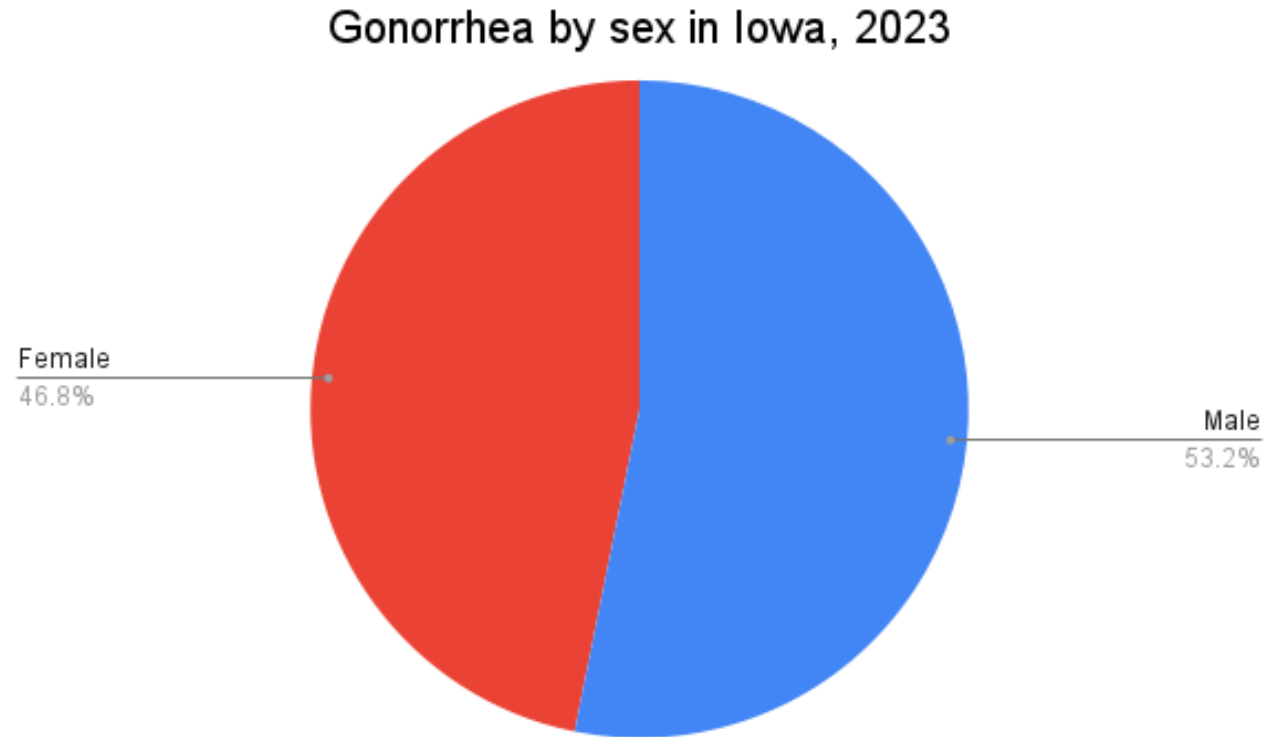
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<https://hhs.iowa.gov/public-health/data/health/sexually-transmitted-diseases/gonorrhea-data>

Gonorrhea by race/ethnicity in Iowa, 2023



Gonorrhea by sex in Iowa, 2023



Disseminated Gonococcal Infection

- Occurs when *Neisseria gonorrhoeae* spreads beyond the initial site of infection (e.g., urogenital, oropharyngeal, rectal) to other parts of the body (e.g., joint fluid, bloodstream, skin, spinal fluid)
- Unclear why some individuals progress to DGI and others do not
- Curable if diagnosed early, potentially life-threatening if not recognized early and treated properly

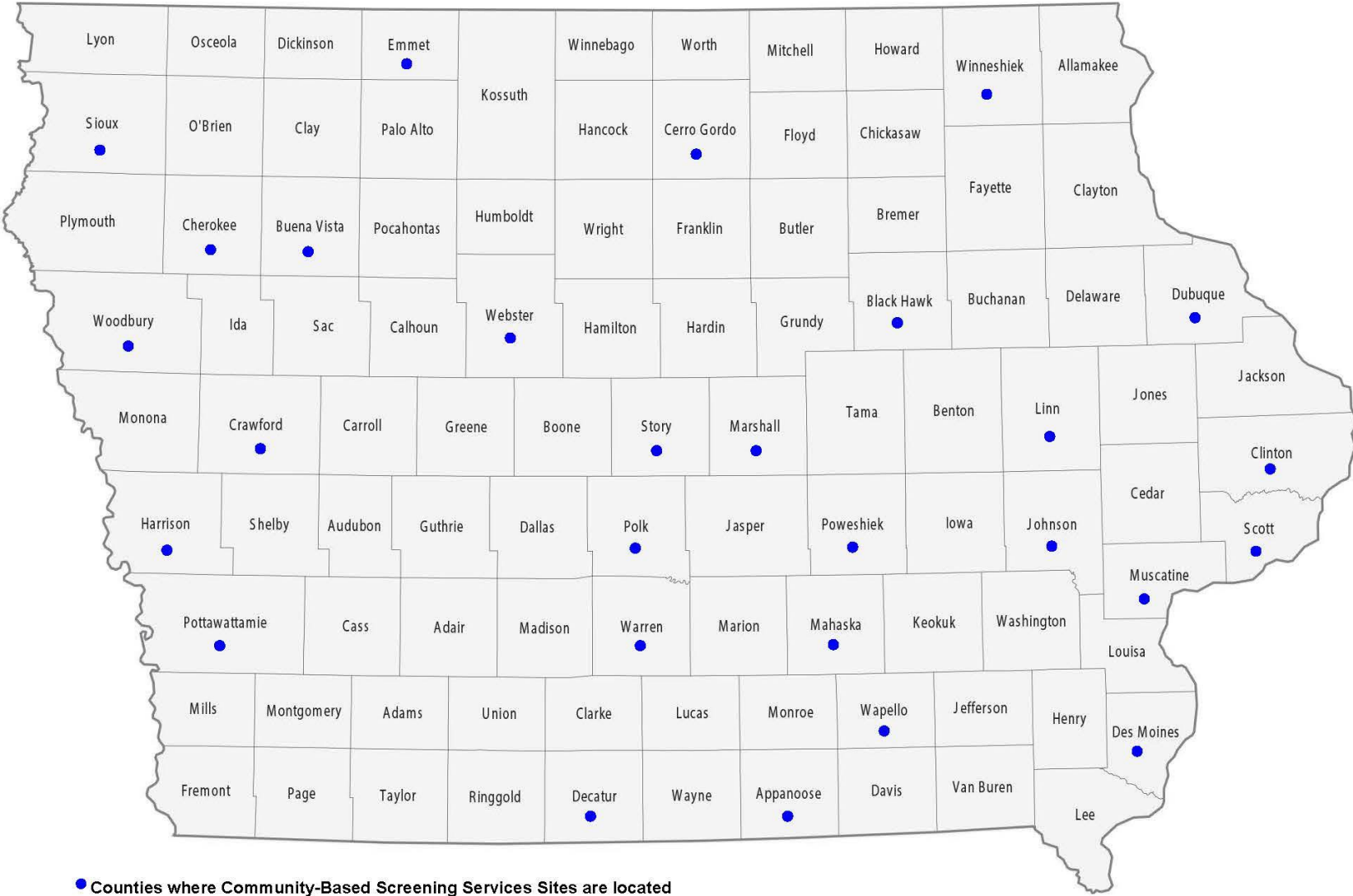
Disseminated Gonococcal Infection

- CDC definition for “verified” DGI
 - Isolation or detection of *Neisseria gonorrhoeae* from a disseminated site of infection (e.g., skin, synovial fluid, blood, or cerebrospinal fluid [CSF]) by culture or nucleic acid amplification test (NAAT).
- As gonorrhea increases, likely to see increases in DGI
 - Occurs in 0.5-3% of untreated gonorrhea cases
 - Death is rare. One known DGI-associated death in Iowa in recent history (2019).

Community-Based Screening Services (CBSS)

- Collaborative project between the Bureau of HIV, STI, and Hepatitis within the Iowa Department of Health and Human Services and the State Hygienic Laboratory (SHL)
- Supported by resources from the state of Iowa and the Centers for Disease Control and Prevention (CDC)
- Primary focus is testing and treatment of chlamydia and gonorrhea
- Test kits and processing made available to select safety-net clinic sites throughout the state

Iowa Community-Based Screening Services Map | May 2024



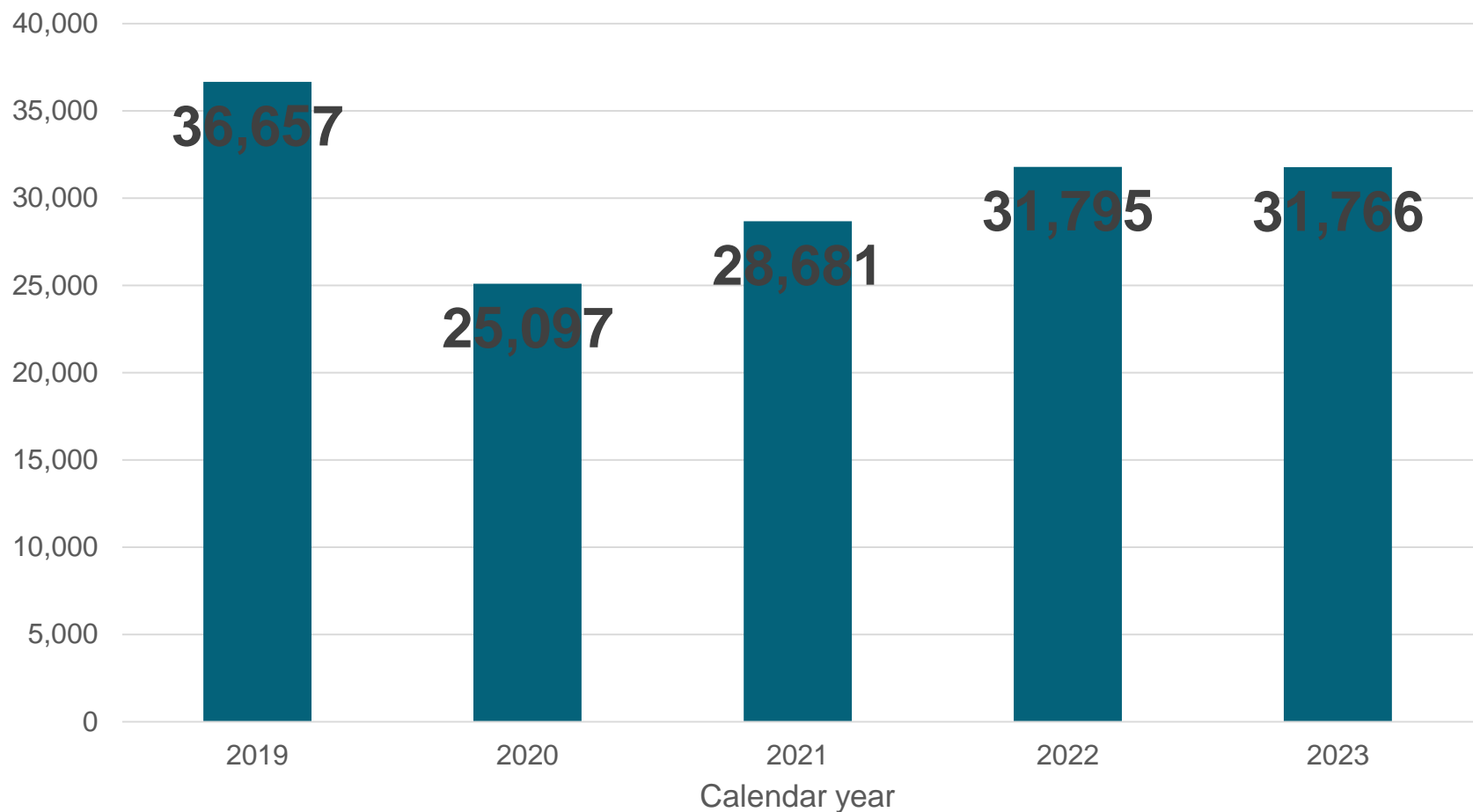
Community-Based Screening Services Sites

- Currently, 60 safety-net clinic sites participate – a mix of family planning, STI clinics, student health centers, community health centers, and corrections
- Eligible clients are uninsured, under-insured, or seeking confidential services
- Medicaid clients can also be tested, and the lab seeks reimbursement for processing
- Remains a collaborative effort between STI Program and SHL to provide high-quality, STI services

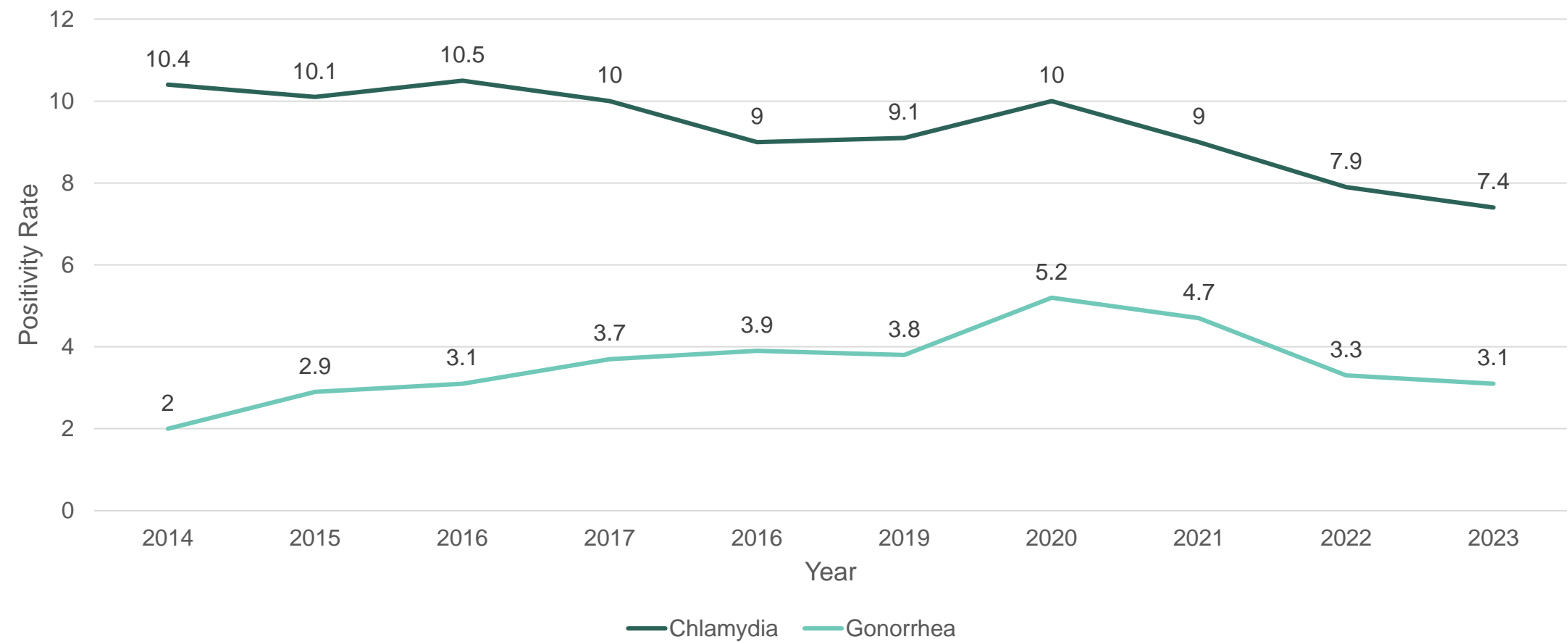
Prevalence Monitoring and Use of Data

- Data Collection and Analysis is an important part of the CBSS program.
- SHL collects data through the test request forms
 - Demographics and program specific fields such as risk history, symptoms, clinic signs, and type of clinic
- Provides the ability to estimate positivity because both the total tests and number of positive tests are collected
 - Versus surveillance systems that only capture positive cases
- Data is used on a state and local basis to examine sexually transmitted (STI) incidence and trends, drive programmatic decisions, guide prevention, and secure funding

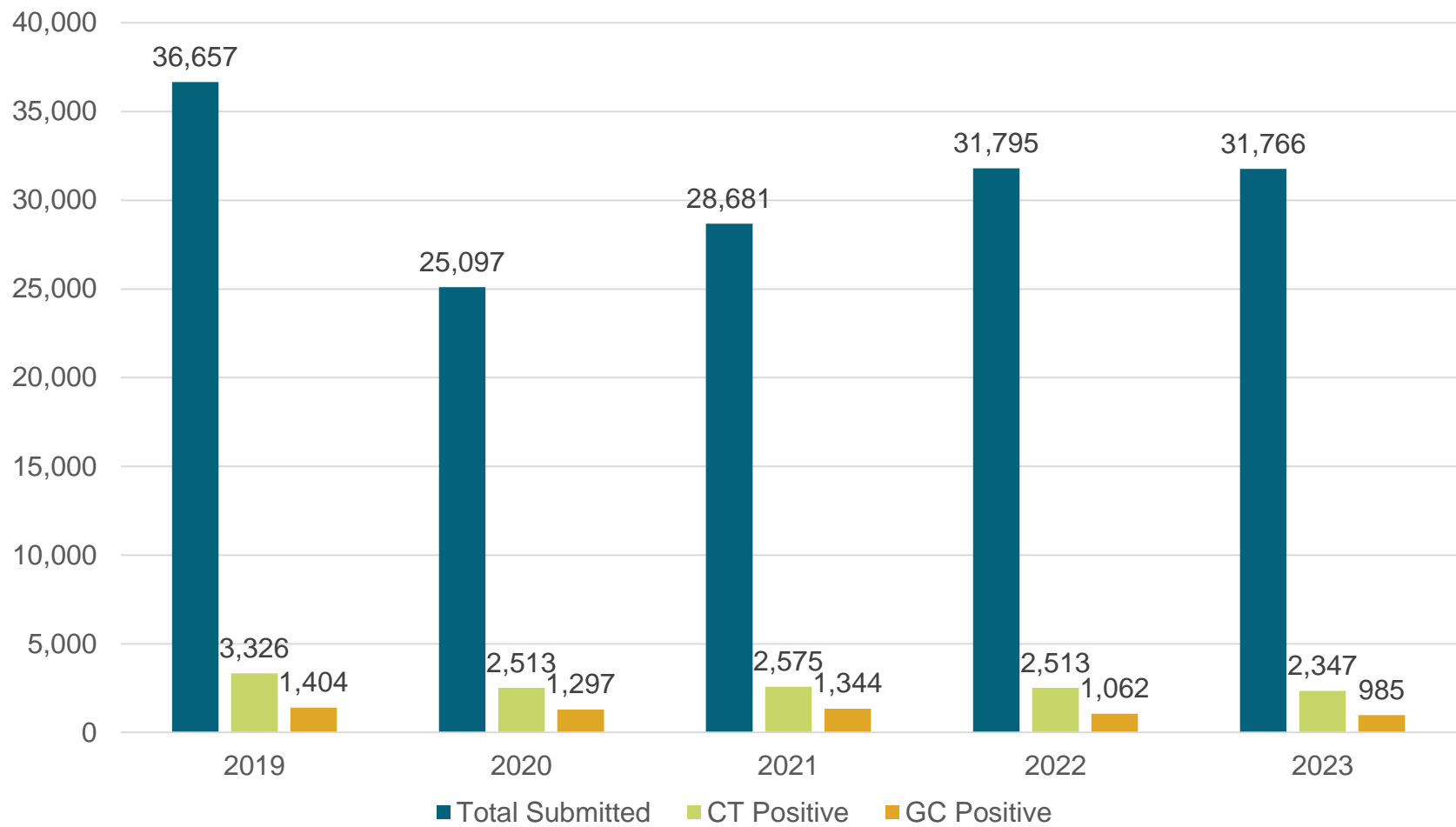
Total number of CT/GC specimens submitted by CBSS sites



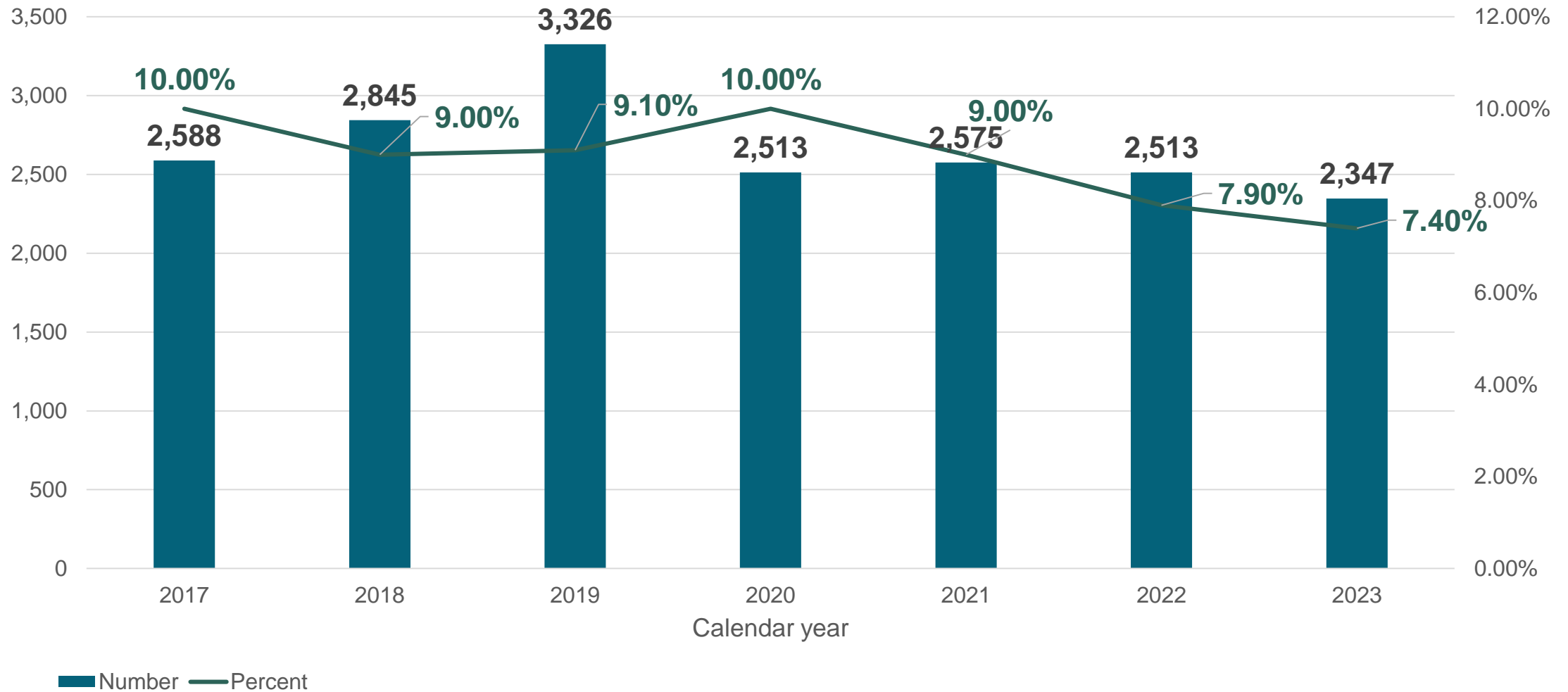
Chlamydia and Gonorrhea Positivity Rate at CBSS Sites by Year



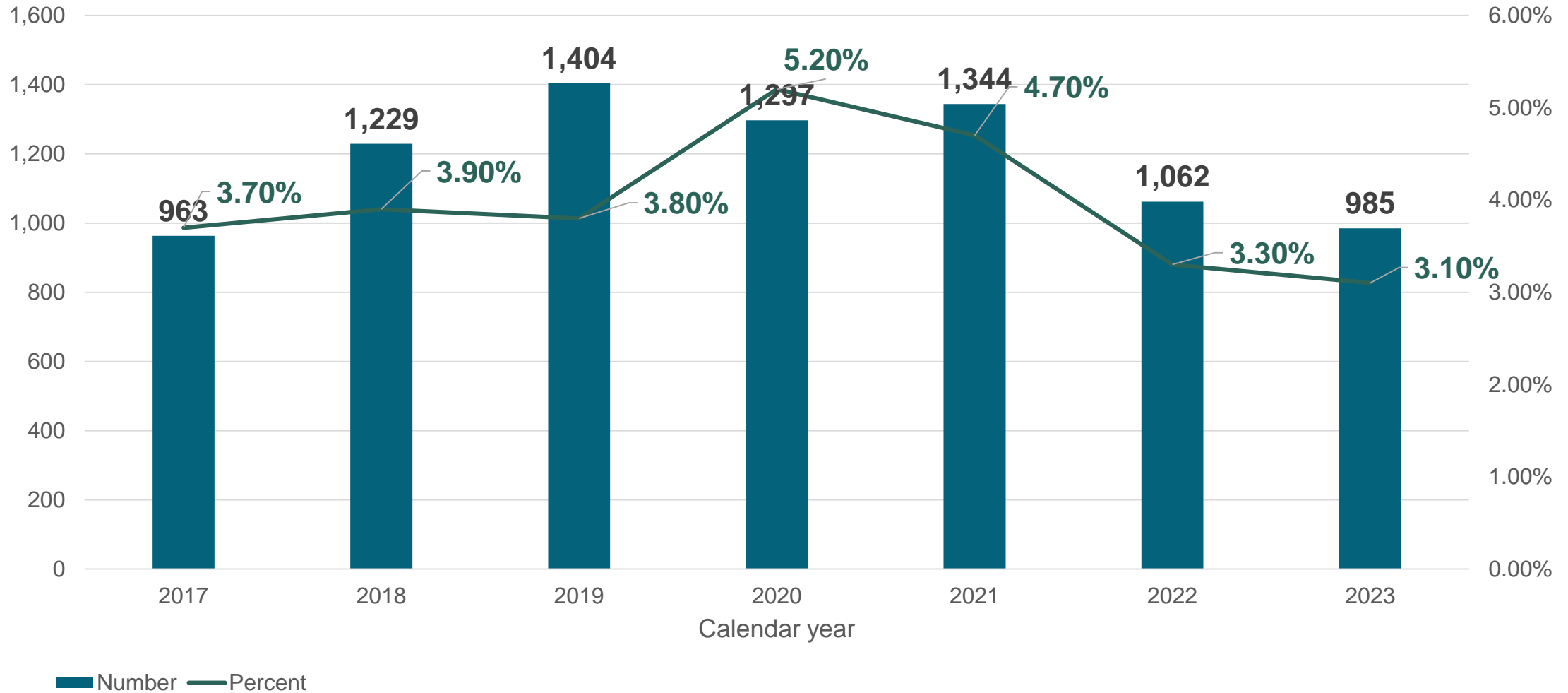
CBSS – Specimens and Positives by Year



Number and percent of chlamydia tests submitted by CBSS sites that were positive



Number and percent of gonorrhea tests submitted by CBSS sites that were positive



CBSSS Coordinator: Jodie Liebe

Jodie Liebe, BA
Community-Based Screening Services Coordinator
Bureau of HIV, STI, and Hepatitis
Iowa Department of Health and Human Services
(515) 783-4076 mobile
jodie.liebe@idph.iowa.gov



Syphilis

- Syphilis is a sexually transmitted Infection (STI) caused by the bacterium *Treponema pallidum*.
- Transmission occurs during vaginal, anal, and oral sex.
- Pregnant women with syphilis can transmit through the placenta to the fetus or at birth to the neonate.
- Syphilis is sometimes called “bad blood”, pox, the great imitator, or a “zipper cut”
- Incubation Period: 10-90 days (average 21 days)



Stages of syphilis

- Primary
- Secondary
- Early non-primary non-secondary
- Late or unknown duration
- Additional Manifestations:
 - Neurological
 - Otic
 - Ocular



Symptoms of Syphilis: Primary Stage

- A painless sore called a chancre may be located on the genitals, lips, anus, or other area of direct contact
- The chancre will last 1-5 weeks and heal without treatment
- The person can easily pass it on to sex partners Late or unknown duration

Classic Presentation

Single painless ulcer or chancre at the site of infection

Atypical Presentation

Multiple, atypical, or painful lesions at the site of infection

Primary Syphilis Chancre



STI Update, STI Case Discussion, Dr.
Cherabie and Dr. Reno, 2/10/22



Source: CDC/ NCHSTP/ Division of STD
Prevention, STD Clinical Slides

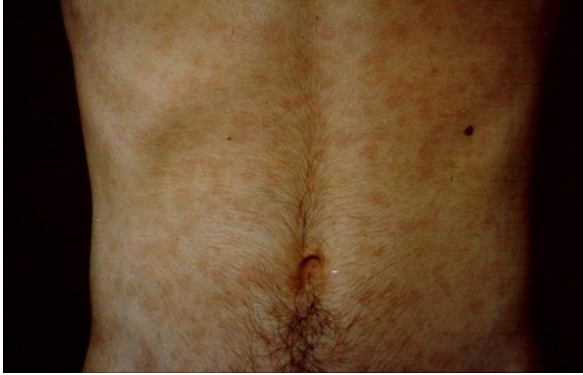


Source: CDC/ NCHSTP/ Division of STD
Prevention, STD Clinical Slides

Symptoms of Syphilis: Secondary Stage

- Skin rashes lasting 2 – 6 weeks (average of 4 weeks) on the palms of the hands, bottoms of the feet, or any part of the body
- Other symptoms include fever, swollen lymph glands, headache, hair loss, and muscle ache
- Symptoms will go away without treatment
- The person can transmit to sex partners

Secondary Syphilis Rash



Source: CDC/NCHSTP/Division of STD Prevention, STD Clinical Slides

Source: Cincinnati STD/HIV Prevention Training Center

Source: Florida STD/HIV Prevention Training Center

Source: CDC/ NCHSTP/ Division of STD Prevention, STD Clinical Slides

Syphilis, early non-primary non-secondary

- Clinical Description
 - A stage of infection caused by *T. pallidum* in which the initial infection has occurred within the previous 12 months, but there are no signs or symptoms of primary or secondary syphilis.
- Serological evidence of infection without clinical symptoms
- Infection of less than a year
- Can transmit to sex partners

Syphilis, unknown duration or late

- Clinical Description

- A stage of infection caused by *T. pallidum* in which initial infection has occurred >12 months previously or in which there is insufficient evidence to conclude that infection was acquired during the previous 12 months.
- Serological evidence of infection without clinical symptoms
- Not Infectious

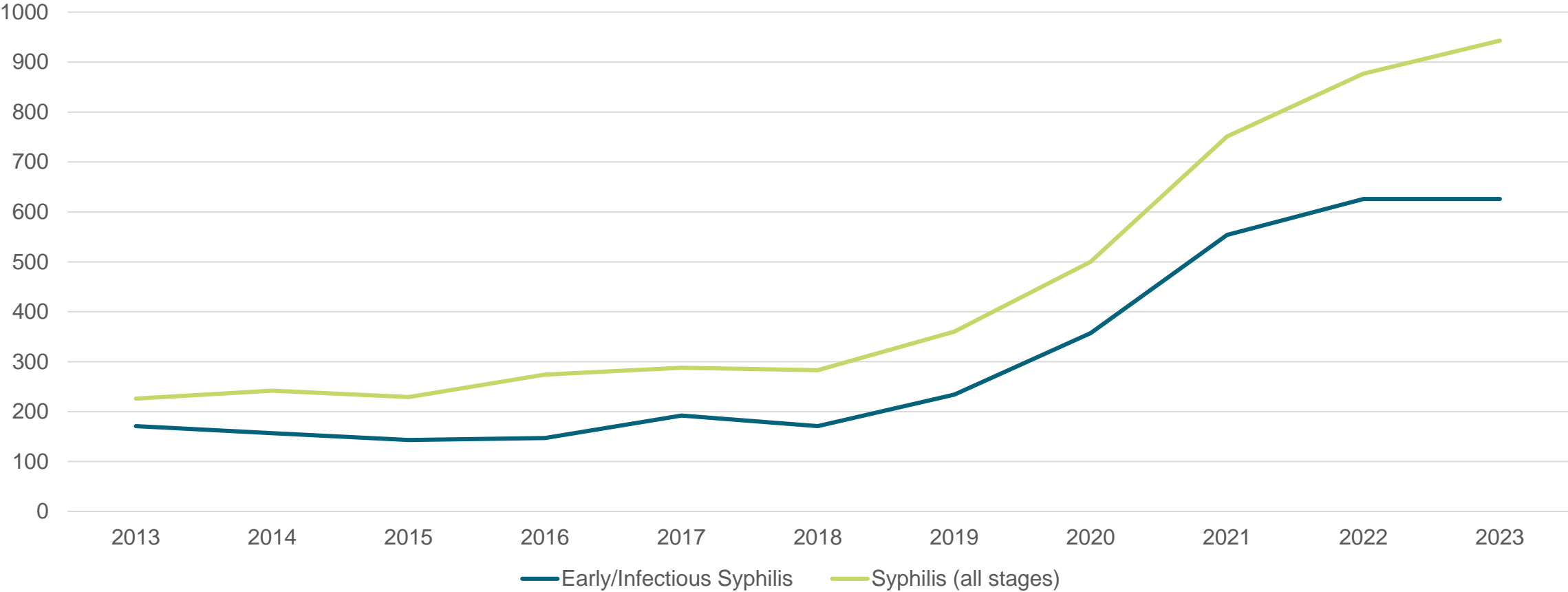
Long Term Complications of Untreated Syphilis

- Paralysis
- Insanity
- Blindness (Ocular)
- Damage to knee joints
- Personality changes
- Impotency
- Aneurysm (ballooning of a blood vessel)
- Tumor on the skin or internal organs

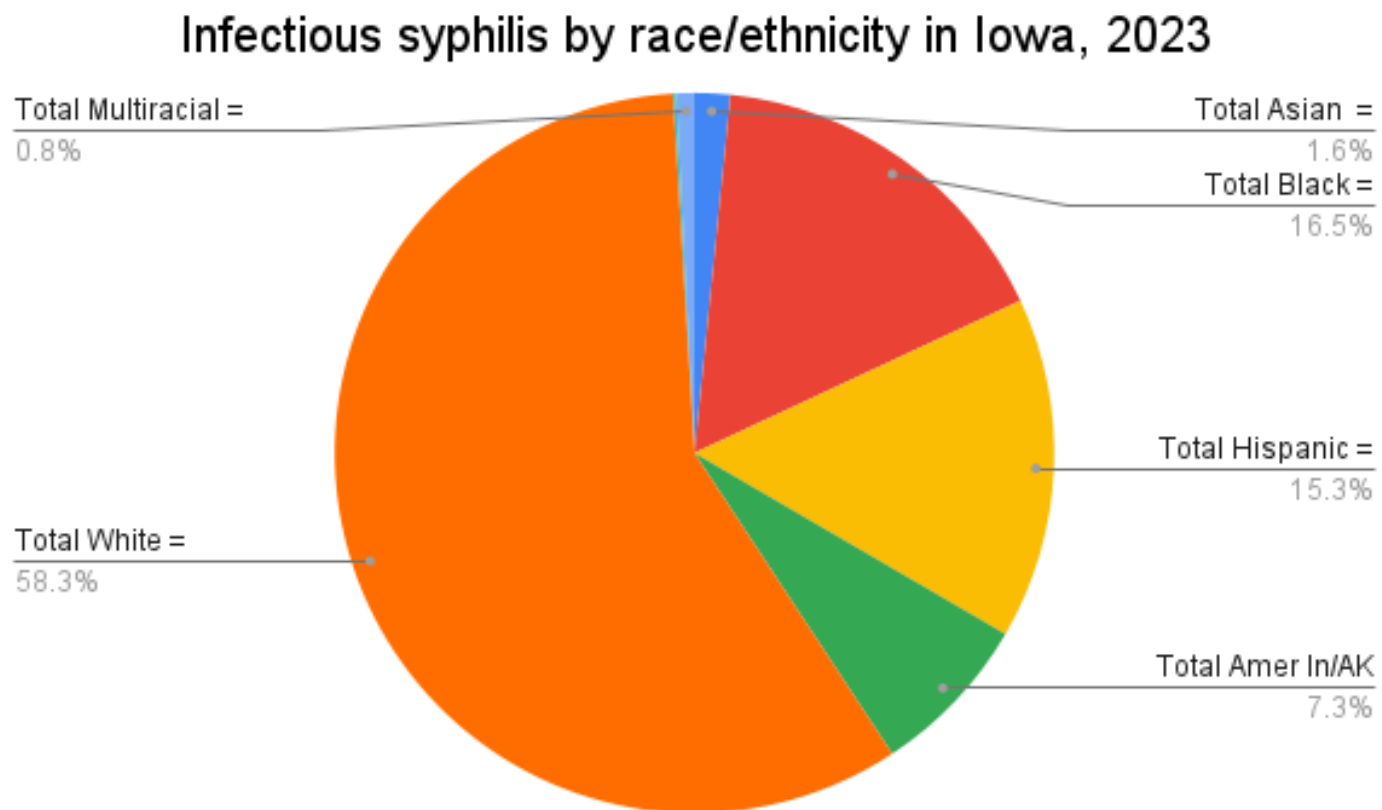
Syphilis epidemiology in Iowa

- 2023 surveillance data:
 - 943 cases reported
 - Of those 626 were in the early/infectious stages
 - Another indicator of social determinants of health -- Disproportionate rates among Black (19% of reported cases), Latino (16% of reported cases), and American Indian (7% of reported cases) compared to white populations (57%)
 - 62% of cases are among men
 - Number of cases among women more than quadrupled in 2 years

Infectious syphilis and syphilis (all stages) in Iowa 2013-2023

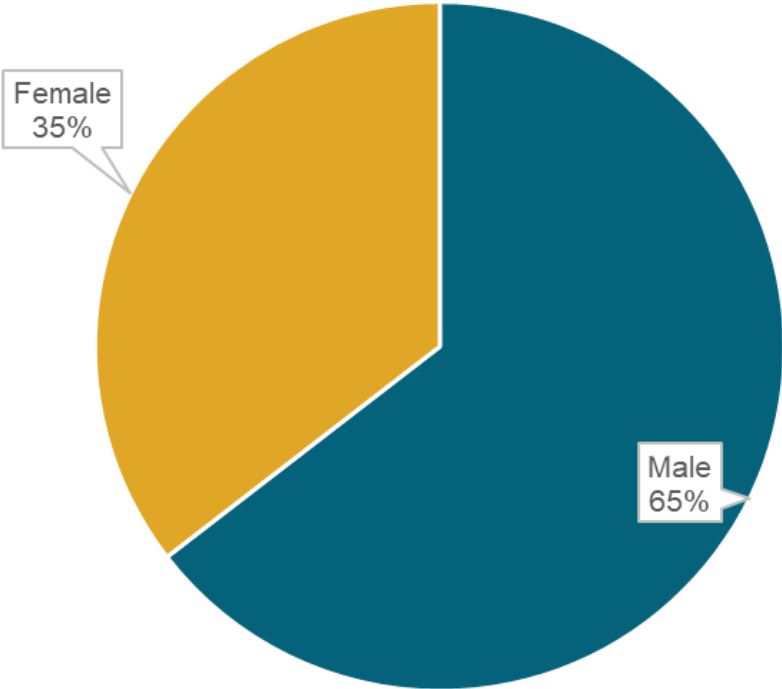


Infectious syphilis by race/ethnicity in Iowa, 2023

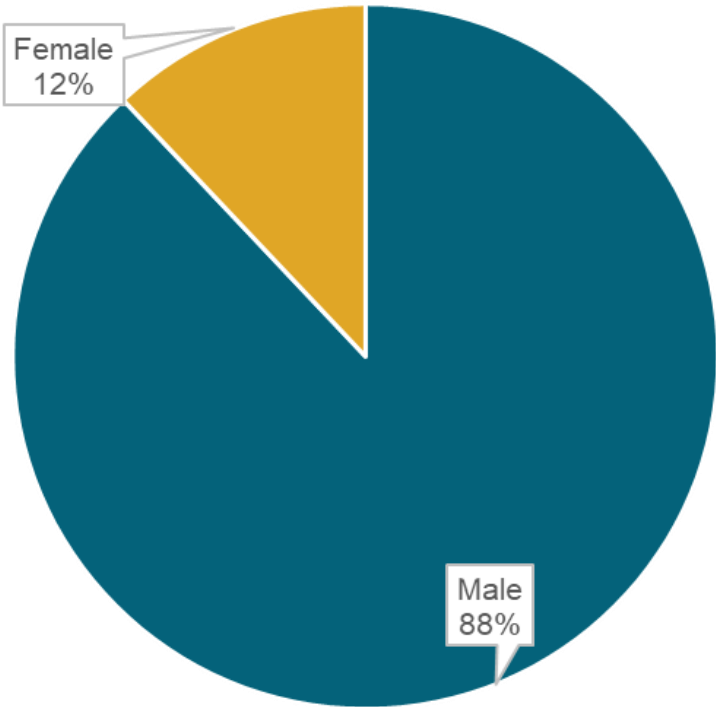


Infectious/early syphilis by sex in Iowa

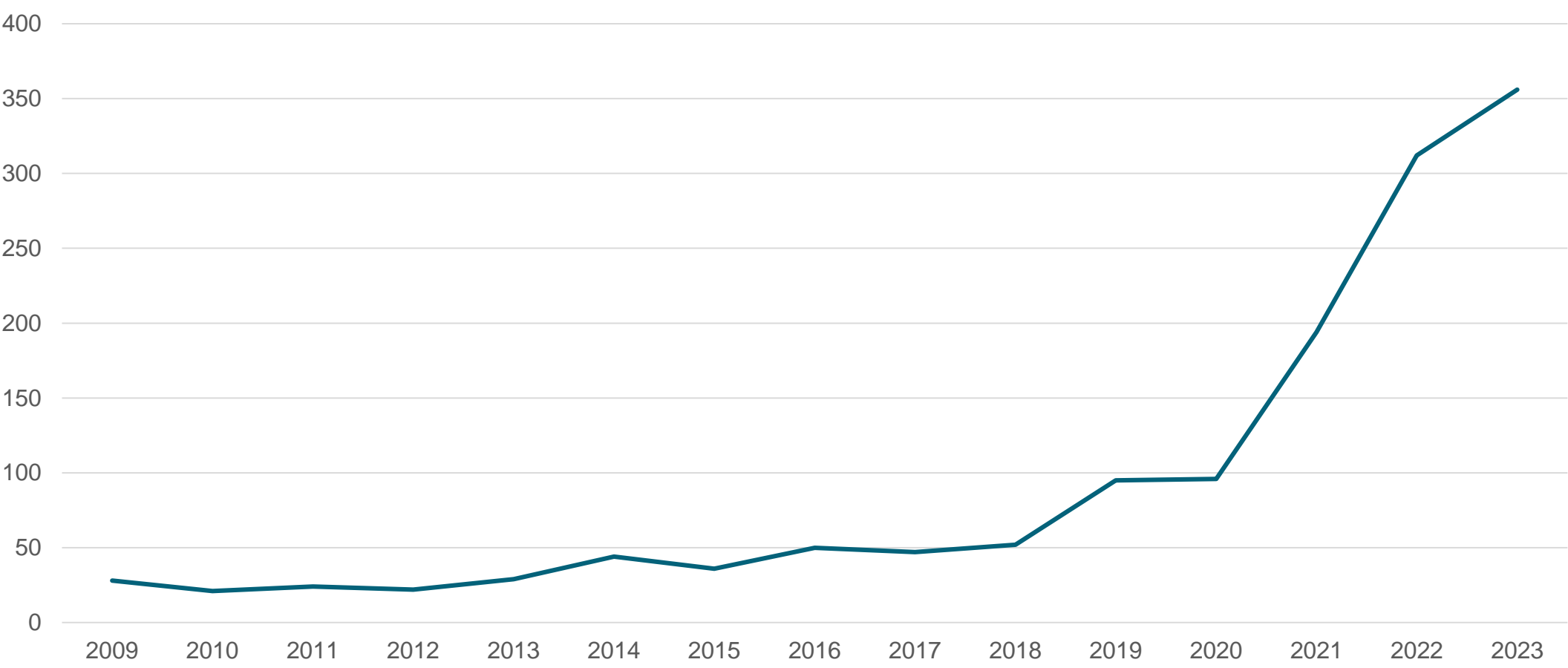
2023



2020



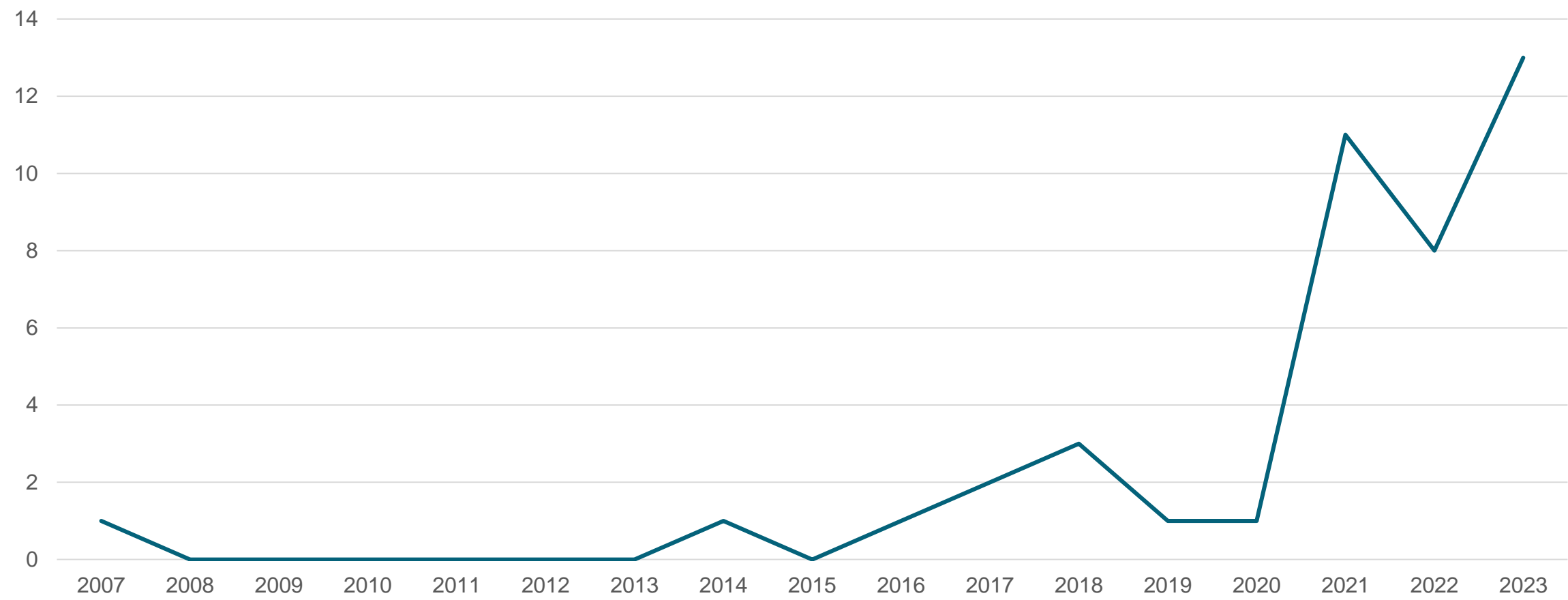
Syphilis (all stages) among women in Iowa 2009-2023



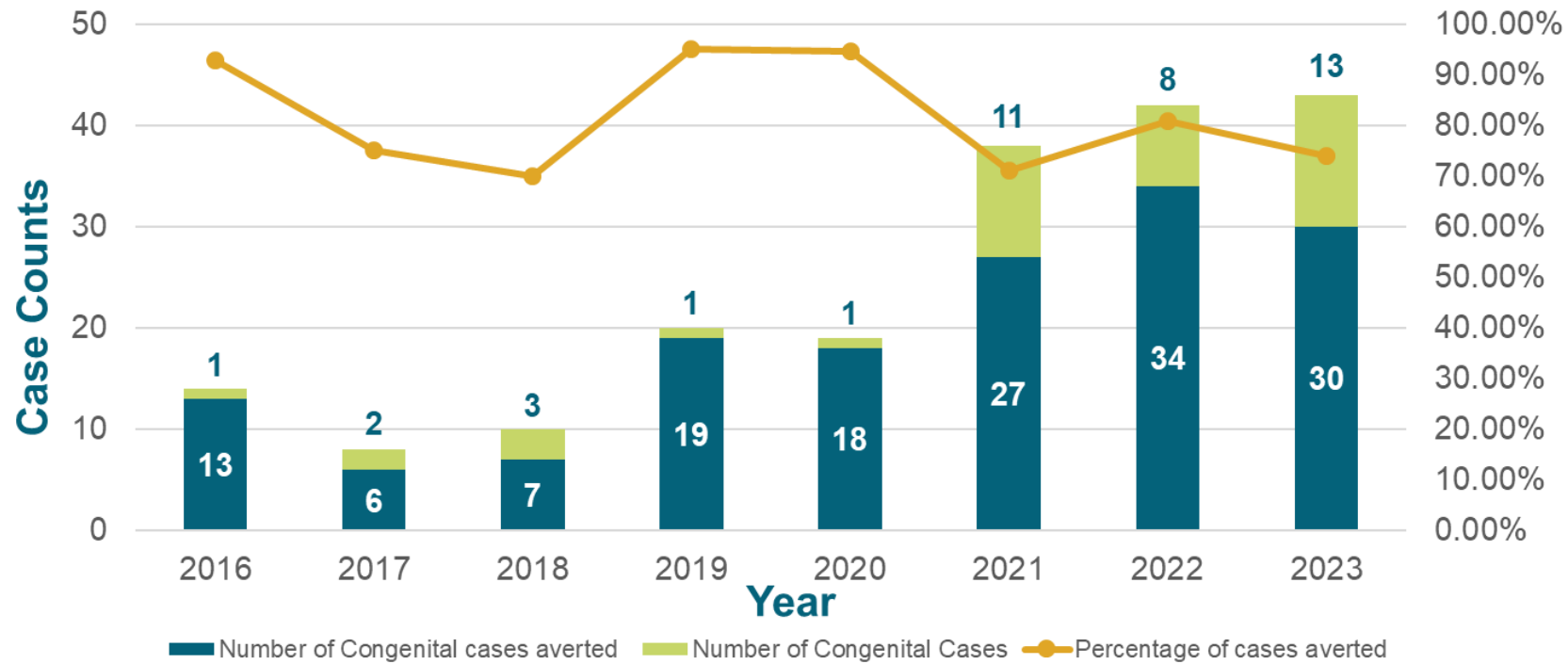
Congenital syphilis

- Occurs when a pregnant woman is infected with syphilis, remains untreated, and passes the infection on to her fetus or newborn
- Serious complications may result, including death
- 13 cases have occurred in Iowa in 2023
 - Greatest number of cases in last 20 years
 - Upward trend nationally also

Congenital syphilis in Iowa 2007-2023



Number & Percent of Congenital Syphilis Cases Averted, 2016-2023



Meet the State of Iowa STI Team!

Staff who Support the STI Program



George Walton,
MPH, MLS(ASCP)CM
STI Section Supervisor



Kelli Campbell, BA
STI Data
Management Analyst



Jo Mostrom,
MPA, MLS(ASCP)CM
STI Treatment and Data
Assurance Specialist



Jodie Liebe, BA
CBSS Coordinator



Claudia Becker, CHES
STI Data Coordinator

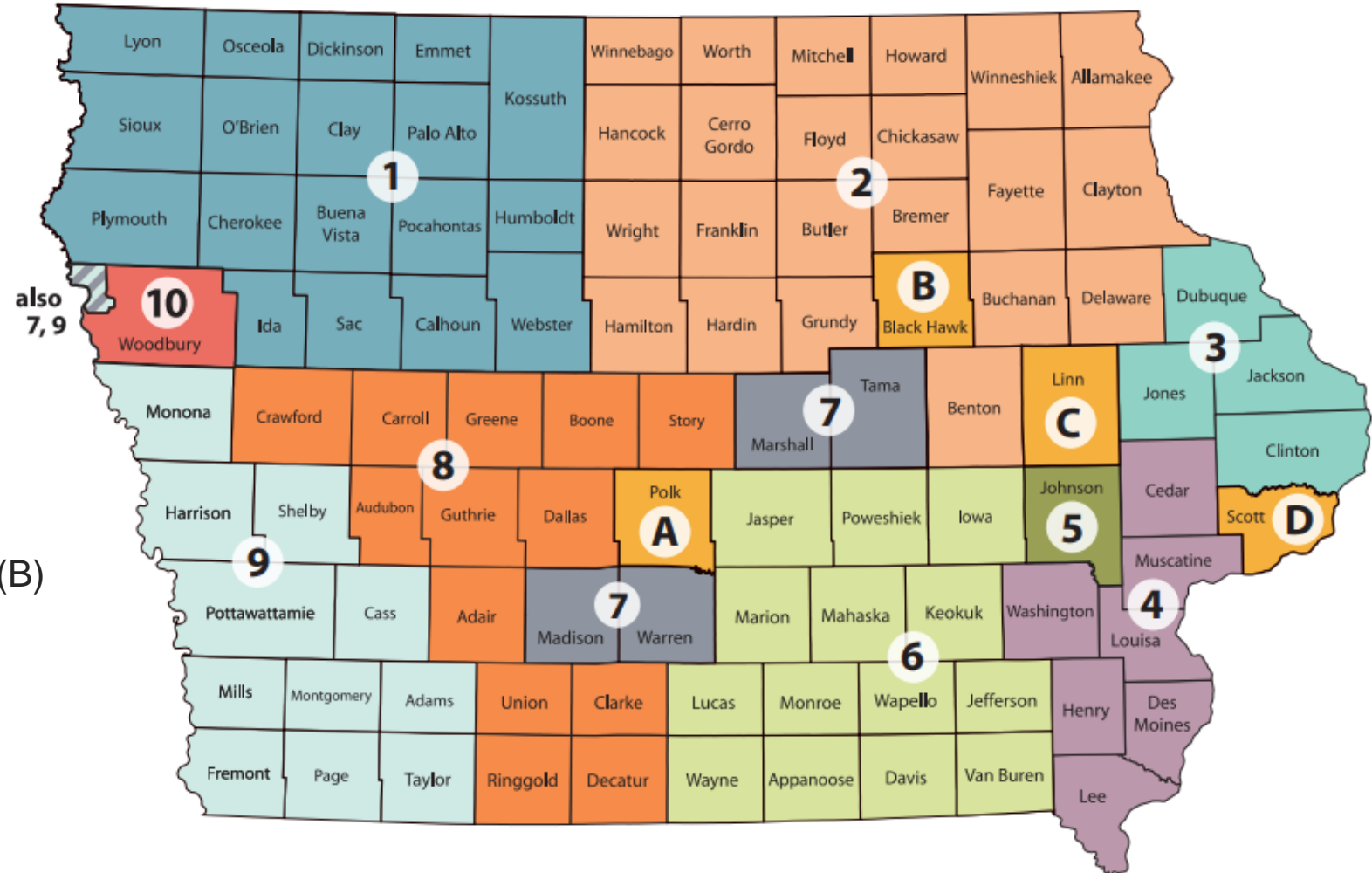


Katy Hernandez, MPH
STI Epidemiologist



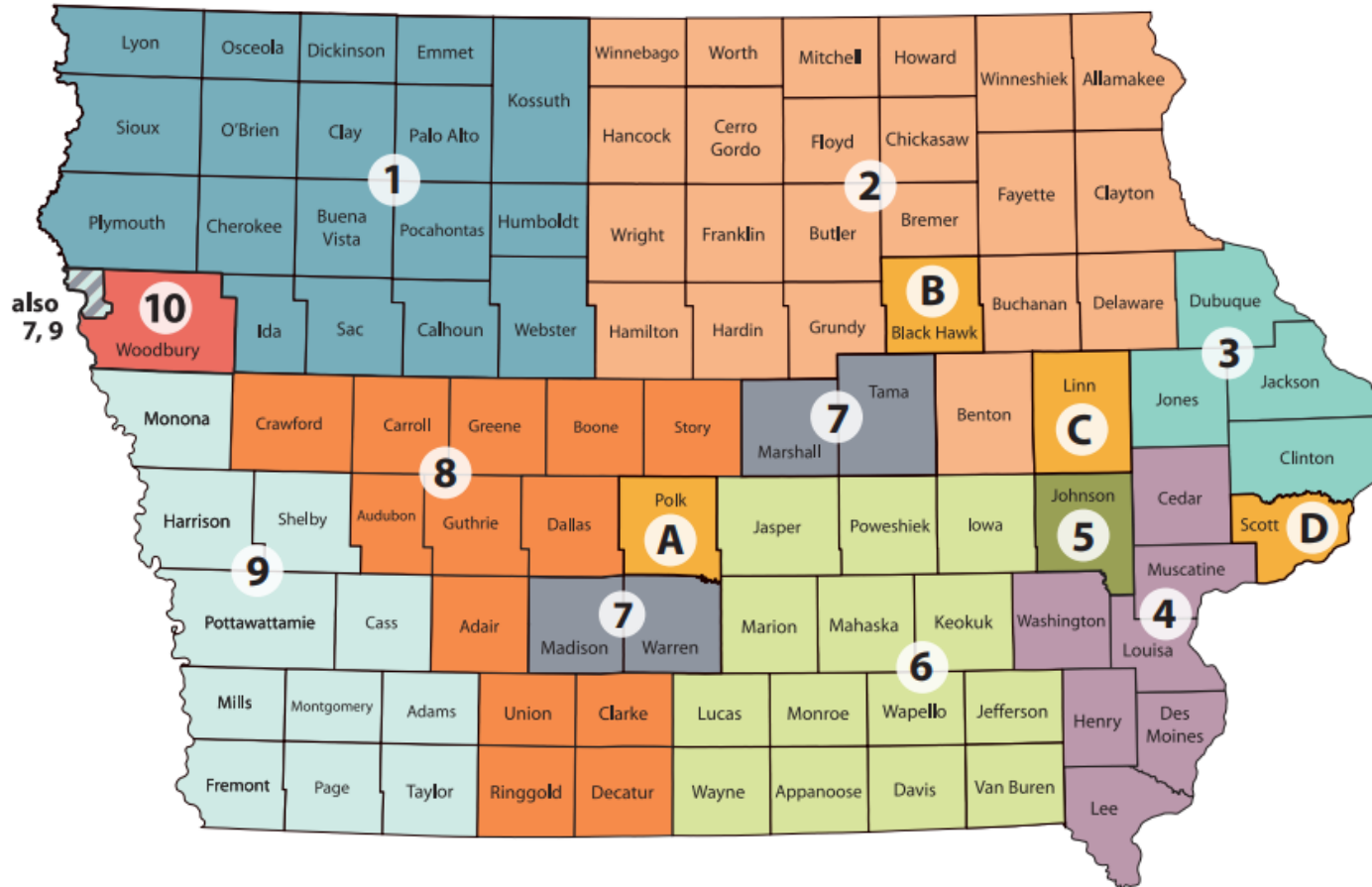
Preet Dhugga, BA
STI Data Assistant

DIS State and County Regions



- Polk County Health Department (A)
- Black Hawk County Health Department (B)
- Linn County Health Department (C)
- Scott County Health Department (D)

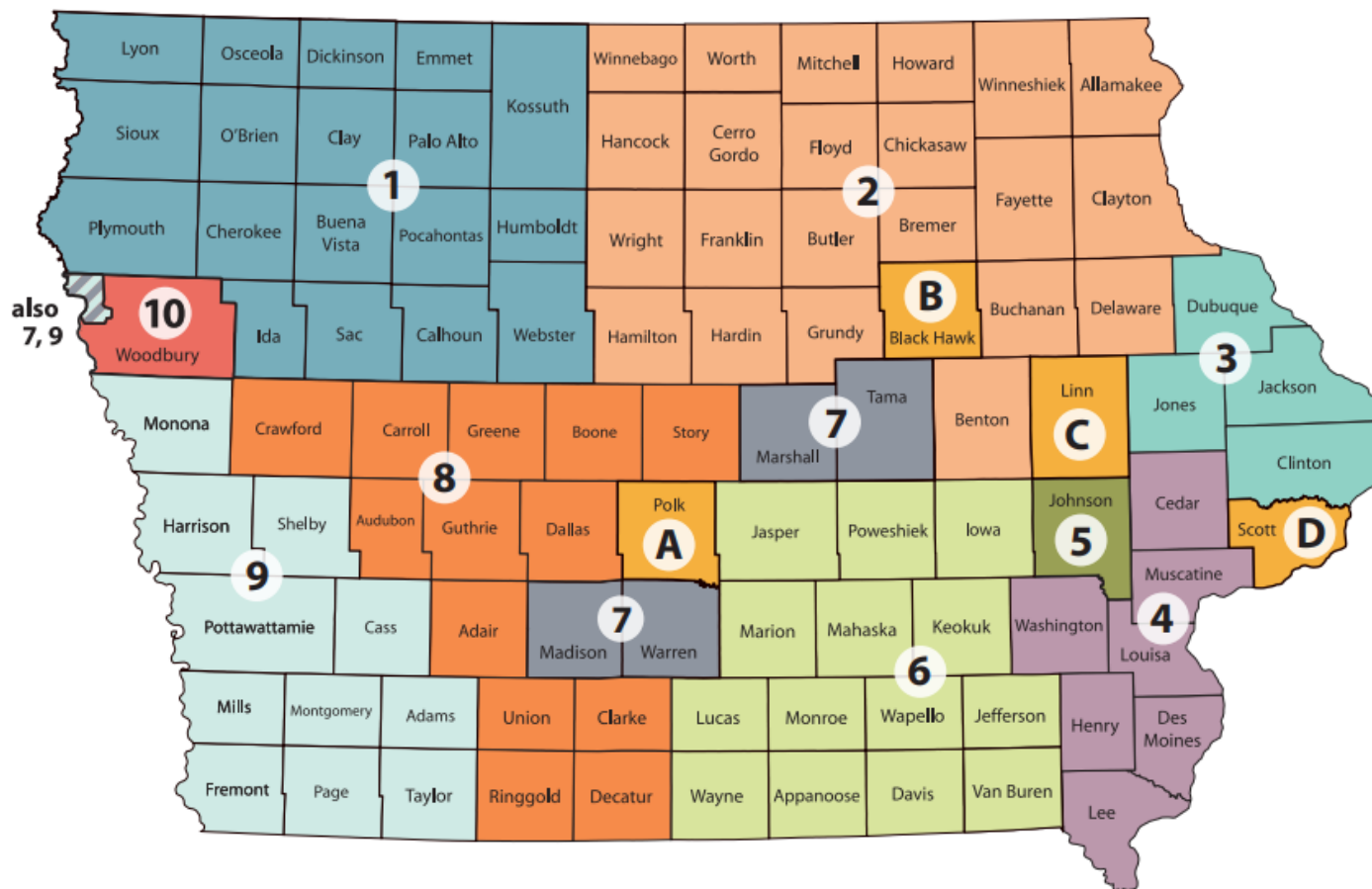
Lead DIS: Shannon Wood



Shannon Wood, BSW
Lead Disease Intervention Specialist

** Provides technical assistance to state and county DIS across the state*

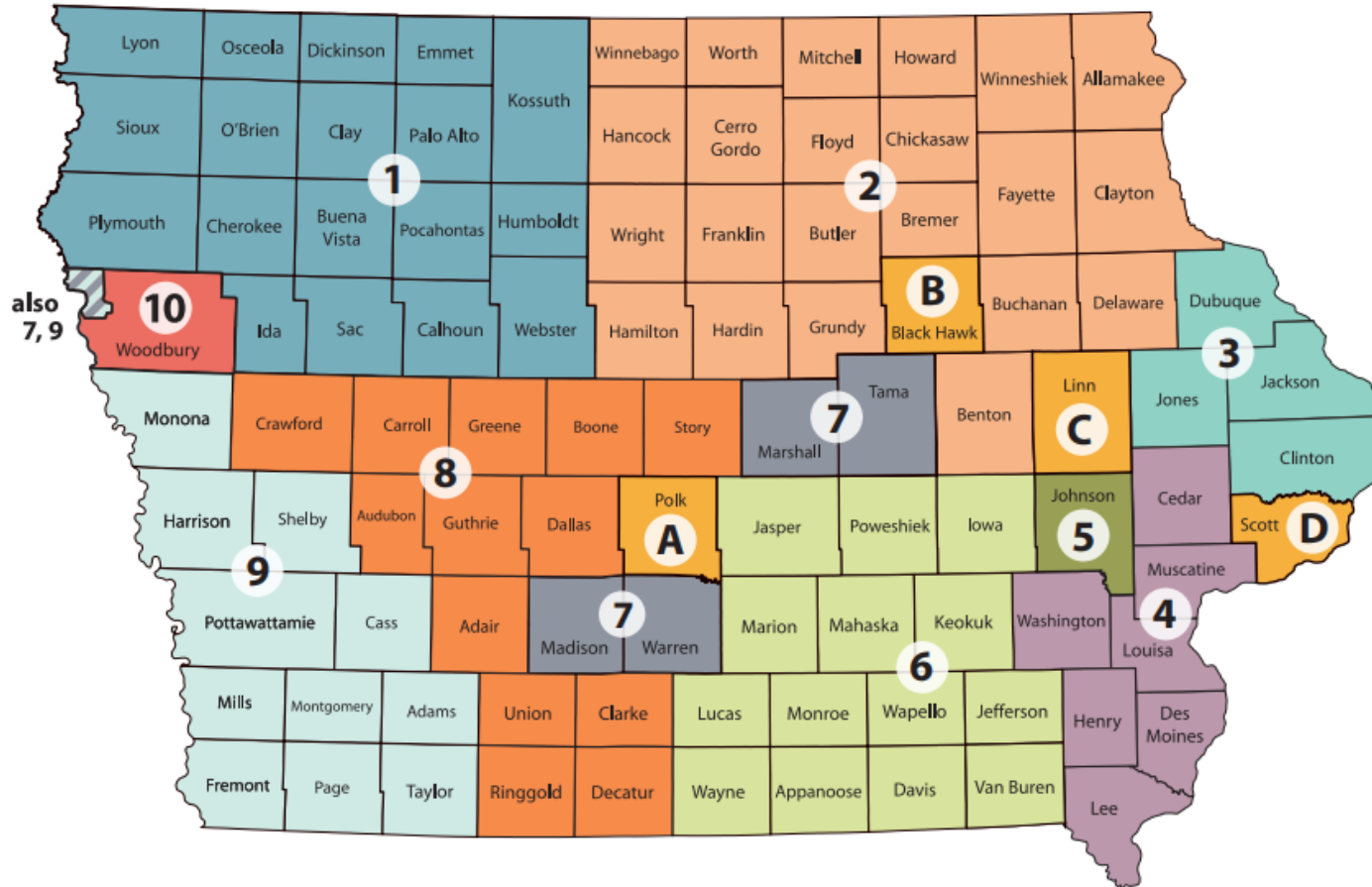
DIS Region 1: Maria Alvarez



18 counties in NW IA

Maria Alvarez, RN
Disease Intervention Specialist

DIS Region 2: Gina Mallett

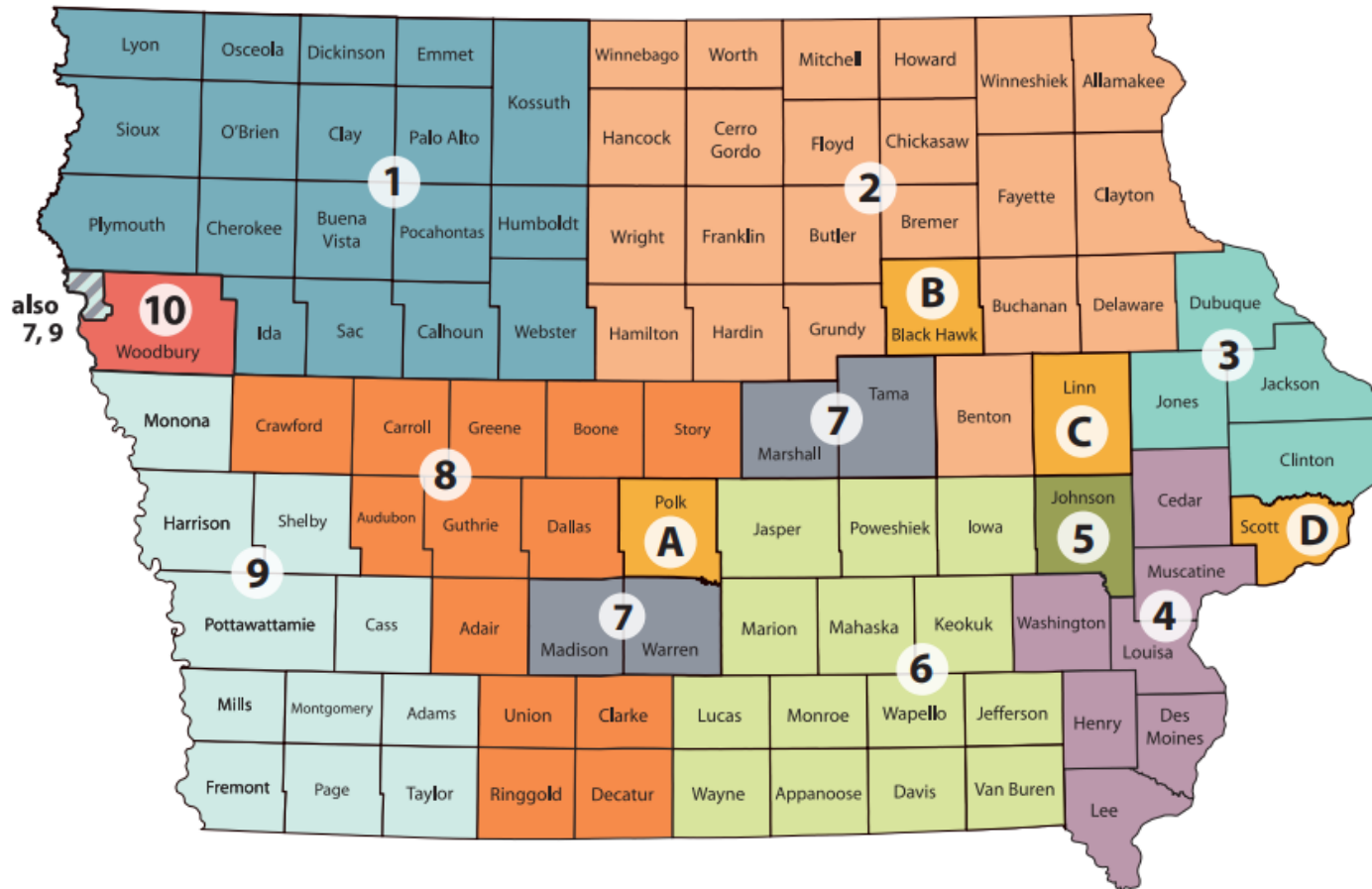


22 counties in NE IA



Gina Mallett, BA, MPP
Disease Intervention Specialist

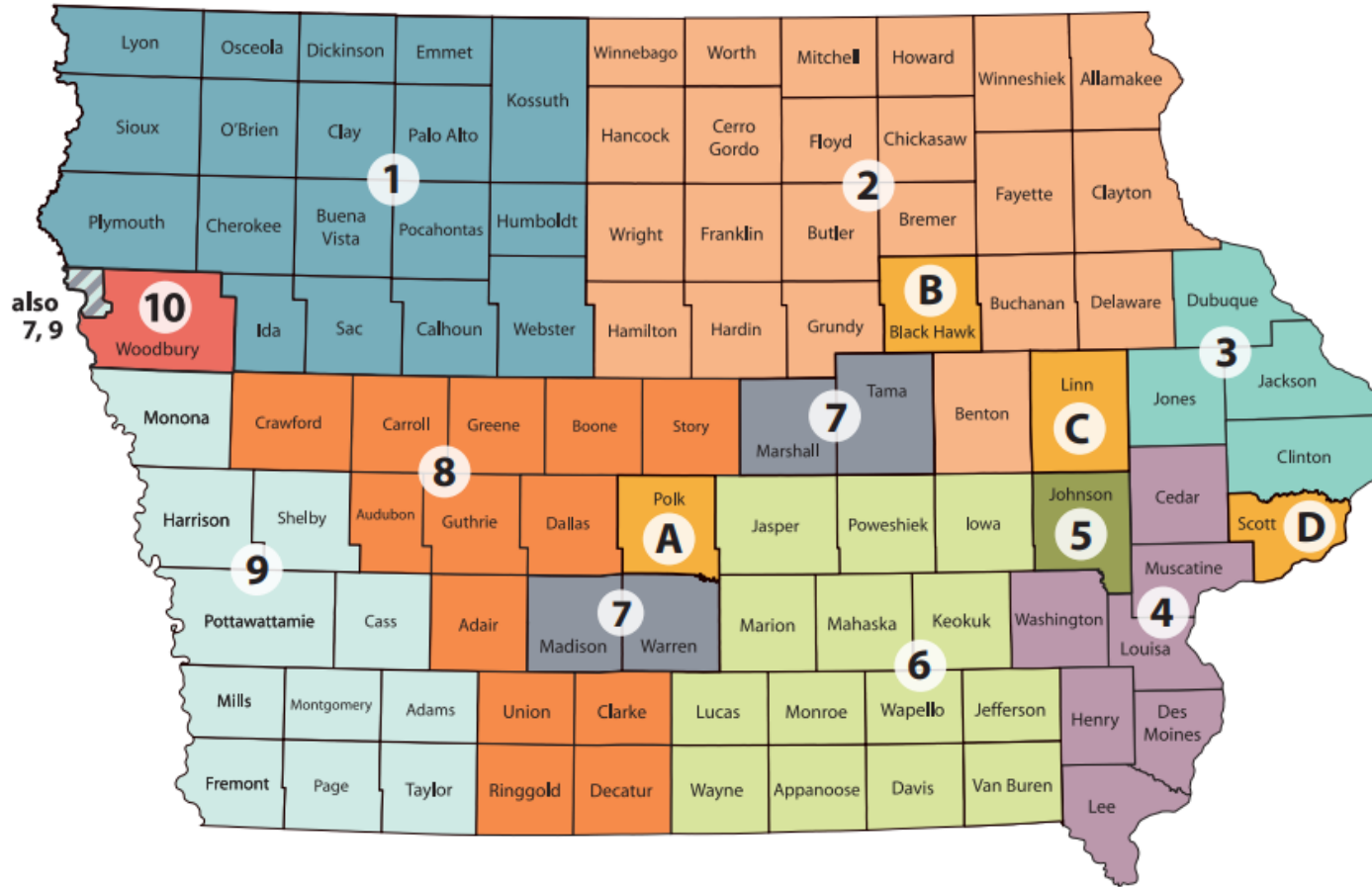
DIS Region 3: Nellie Burk



Nellie Burk, MS
Disease Intervention Specialist

4 counties in Eastern IA

DIS Region 4: Mindy Schattner

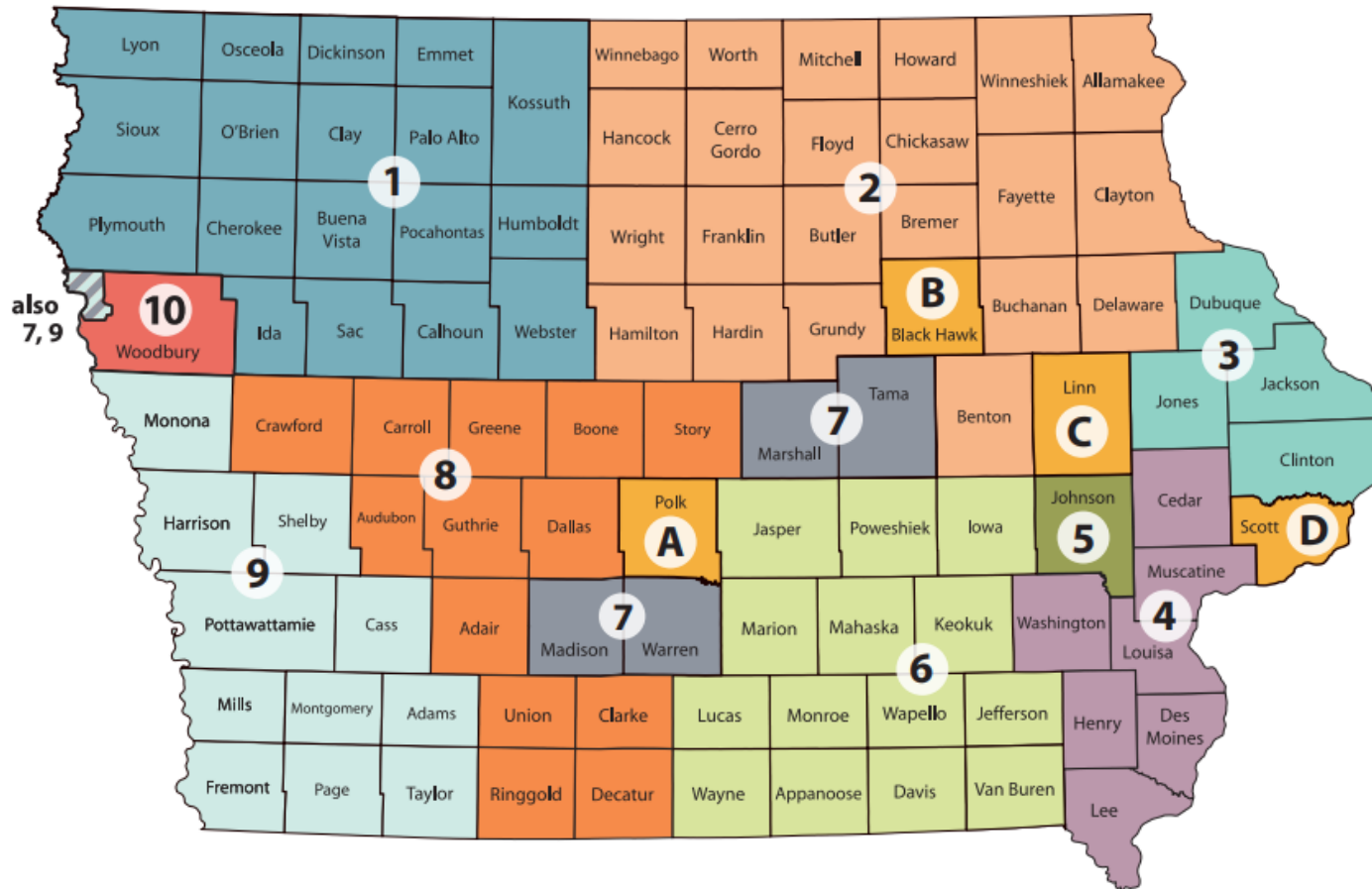


7 counties



Mindy Schattner, RN, BSN
Disease Intervention Specialist

DIS Region 5: Matt Sanford

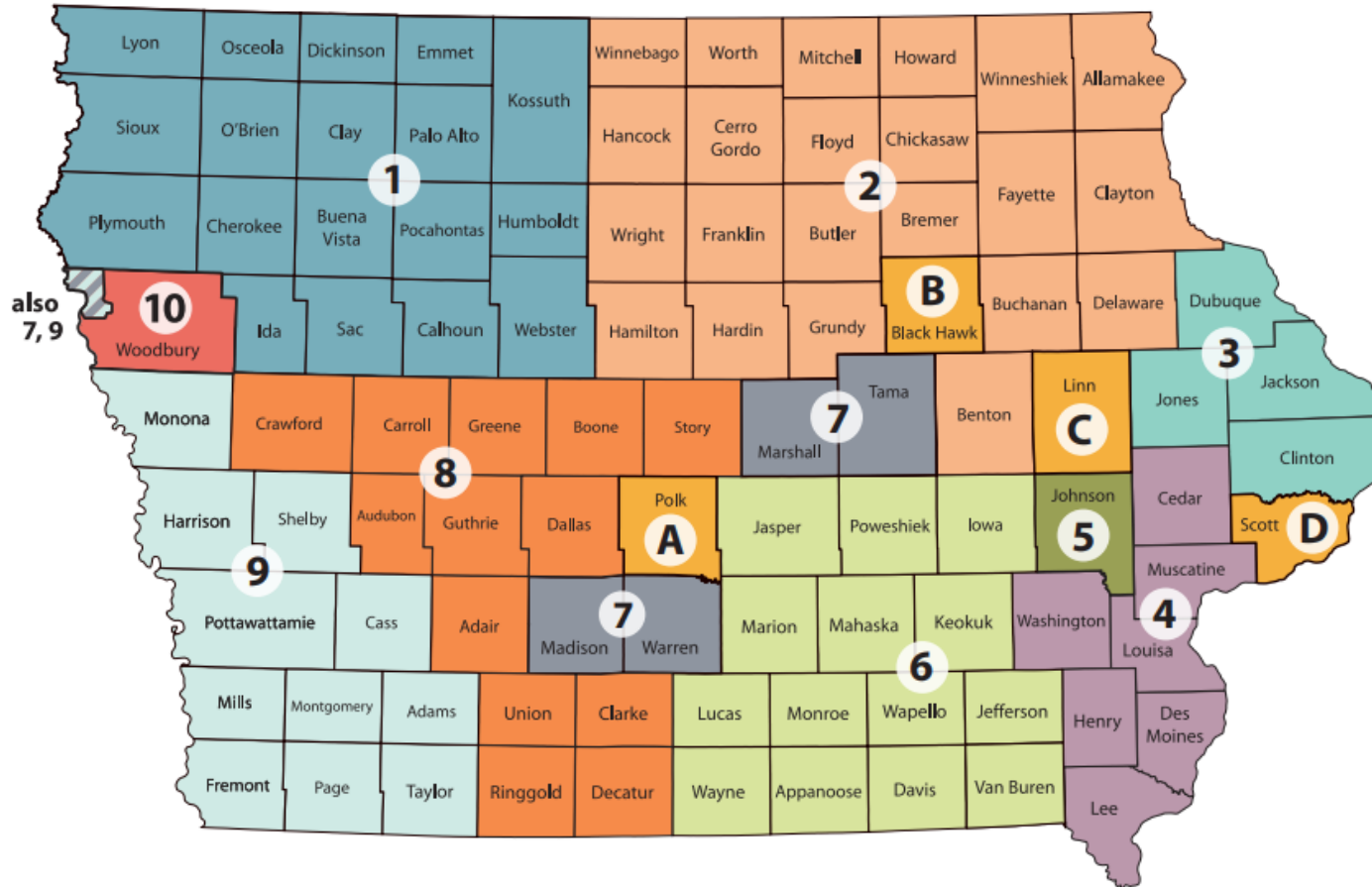


Johnson County



Matt Sanford, BS
Disease Intervention Specialist

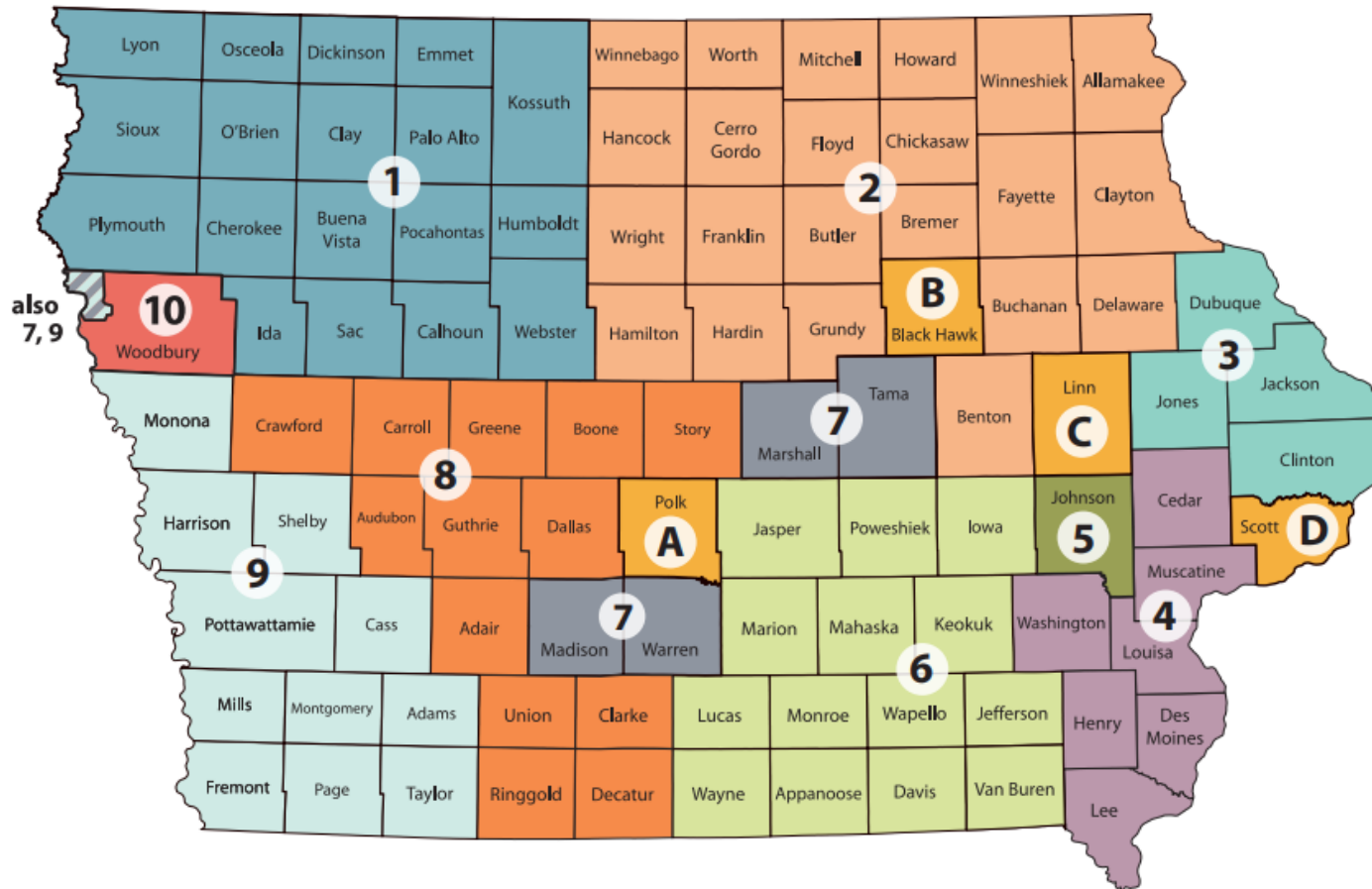
DIS Region 6: Sydni Hilton



Sydni Hilton, BSPH
Disease Intervention Specialist

14 counties in SE IA

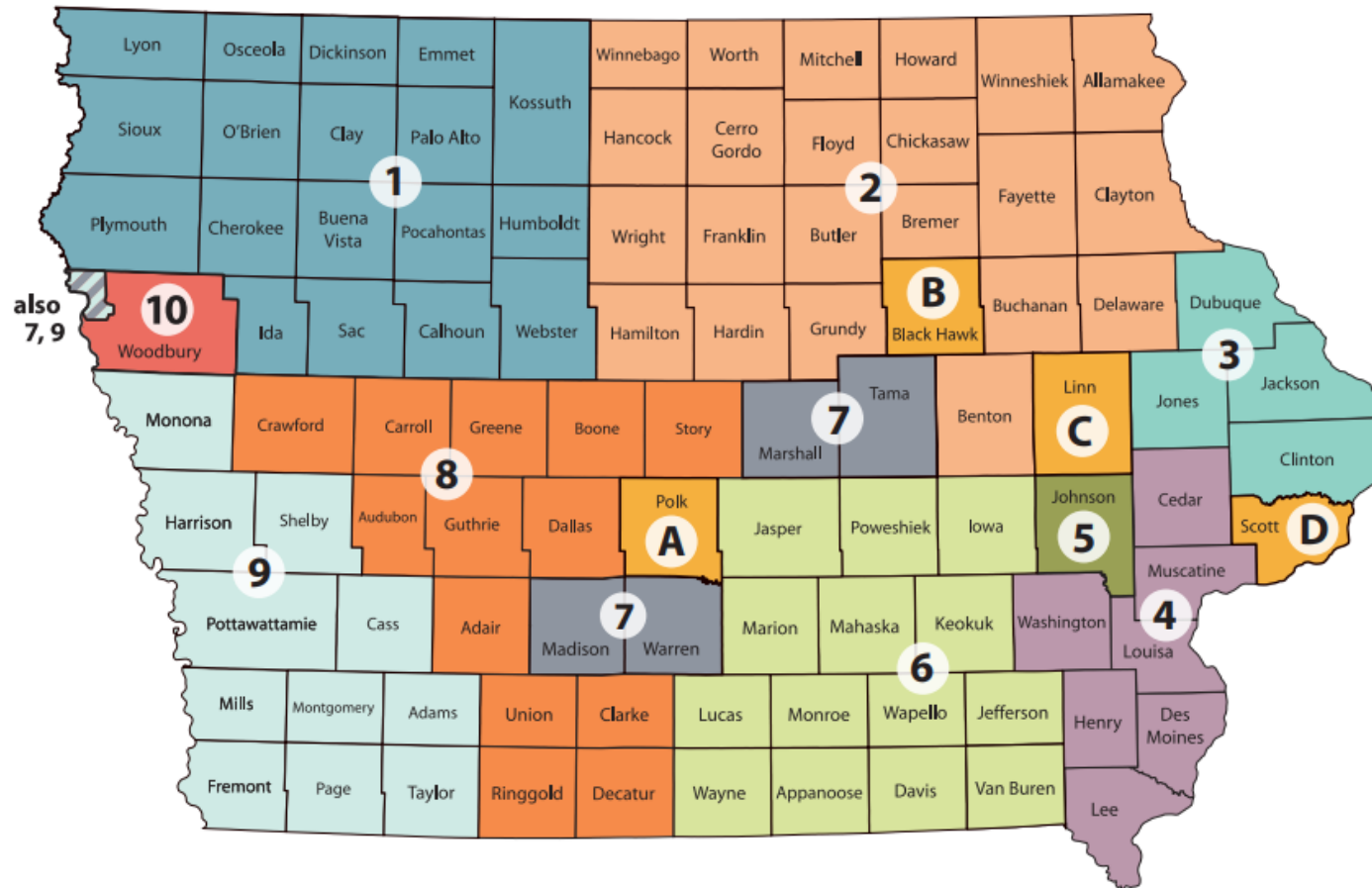
DIS Region 7: Jennie Wonderlin



Jennie Wonderlin, MPH
Disease Intervention
Specialist

*4 counties in South Central IA
Covering Siouxland Community Health Center, Woodbury
County*

DIS Region 8: Annie Rodruck

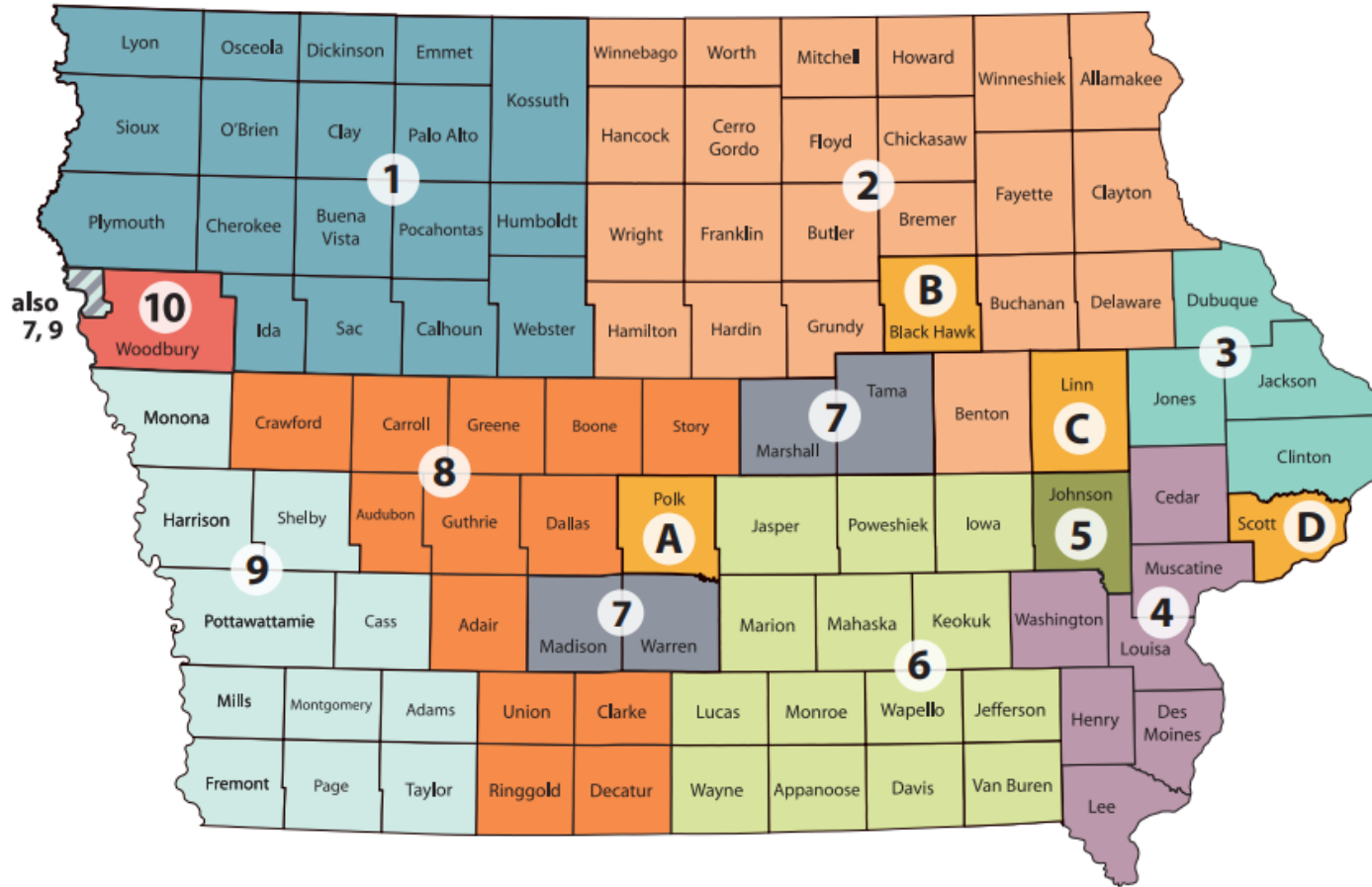


13 counties in SW IA



Annie Rodruck, BA
Disease Intervention
Specialist

DIS Region 9: Laccie Marvin

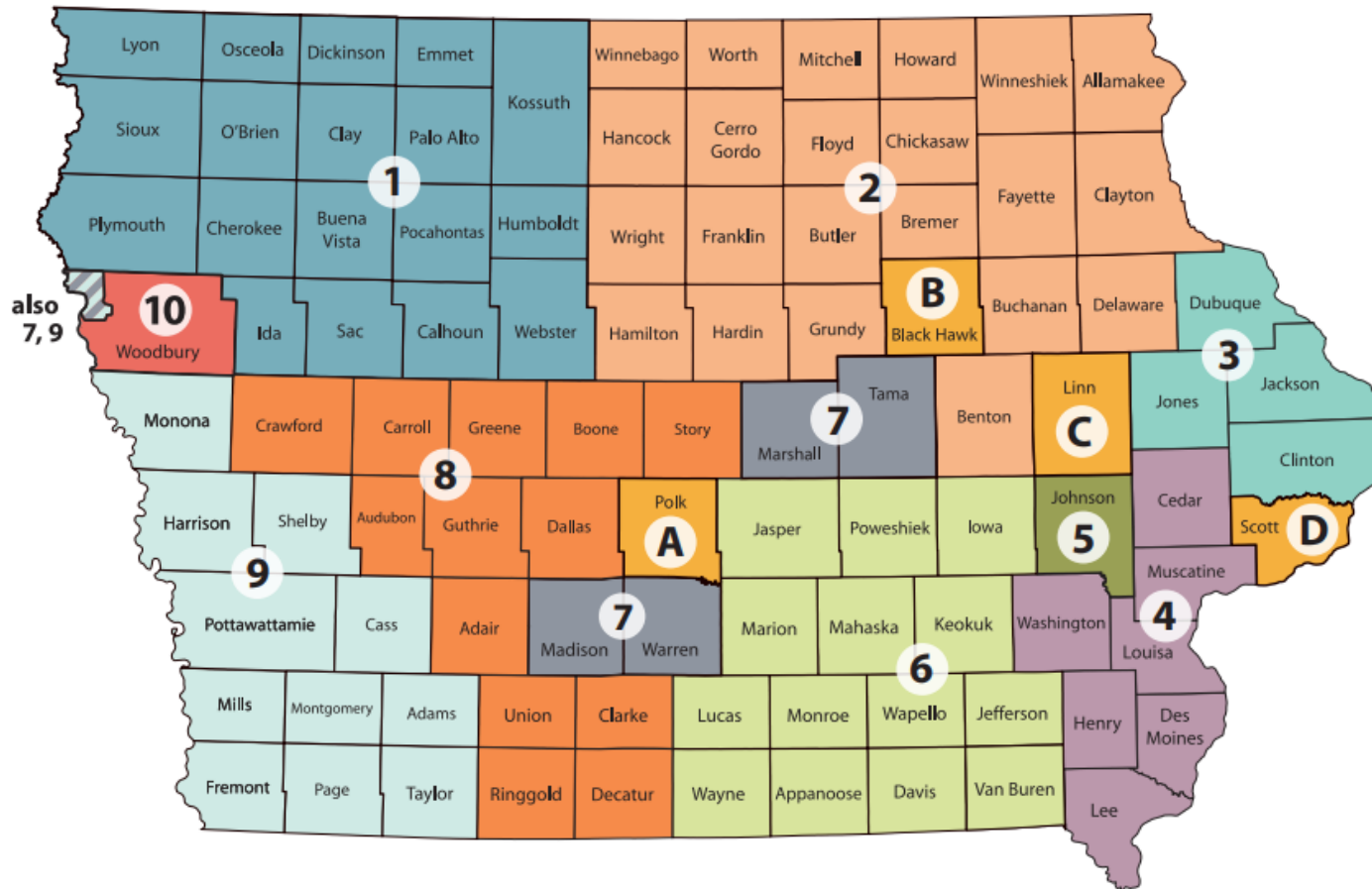


*11 counties in SW IA
Woodbury County Jail*



Laccie Marvin
Disease Intervention
Specialist

DIS Region 10 & Special Projects: Lexie Hach



Lexie Hach, MA, DrPH(c)
Integrated Disease Intervention
Specialist and Special Projects
Coordinator

*Primary Woodbury County DIS
Covering Vacancy*

Summary

- STI epidemiology in Iowa
 - Chlamydia had been steadily increasing for many years, slight decrease recently
 - Gonorrhea was sharply increasing through 2020, decreases past few years
 - Syphilis is rapidly increasing in Iowa and the U.S.
- Iowa is fortunate to have highly skilled and dedicated STI professionals, and valuable partnerships with Family Planning and other clinics

Questions

George Walton, MPH, MLS(ASCP)^{CM}

STI Section Supervisor

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Annie Rodruck

Disease Intervention Specialist

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Health and
Human Services