

Sexually Transmitted Disease Update

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Leadership for a Healthy Arizona



Reportable STDs in Arizona

(all within 5 working days)

STD reporting forms available at:

http://www.azdhs.gov/phs/oids/downloads/com_rpt_std.pdf

- Chlamydia
- Gonorrhea
- Syphilis
- Genital Herpes
- Chancroid (*H. ducreii*)
- HIV http://www.azdhs.gov/phs/oids/downloads/cdr_form.pdf

STD 101

- Most STDs occur without symptoms
- STDs can be transmitted through oral, vaginal, or anal sex
- STDs (chlamydia, gonorrhea, herpes, HIV, syphilis, and HPV) can be transmitted from mother to infant during pregnancy
- STDs facilitate the transmission of HIV

Arizona STD Facts

- Arizona has one of the highest rates of congenital syphilis in the nation
- In Arizona, adolescents and young adults have the highest rates of chlamydia and gonorrhea
- Syphilis is highest among men who have sex with men (MSM)
- Patients with chlamydia and gonorrhea can be given medications or prescriptions to treat their sexual partners (EPT)

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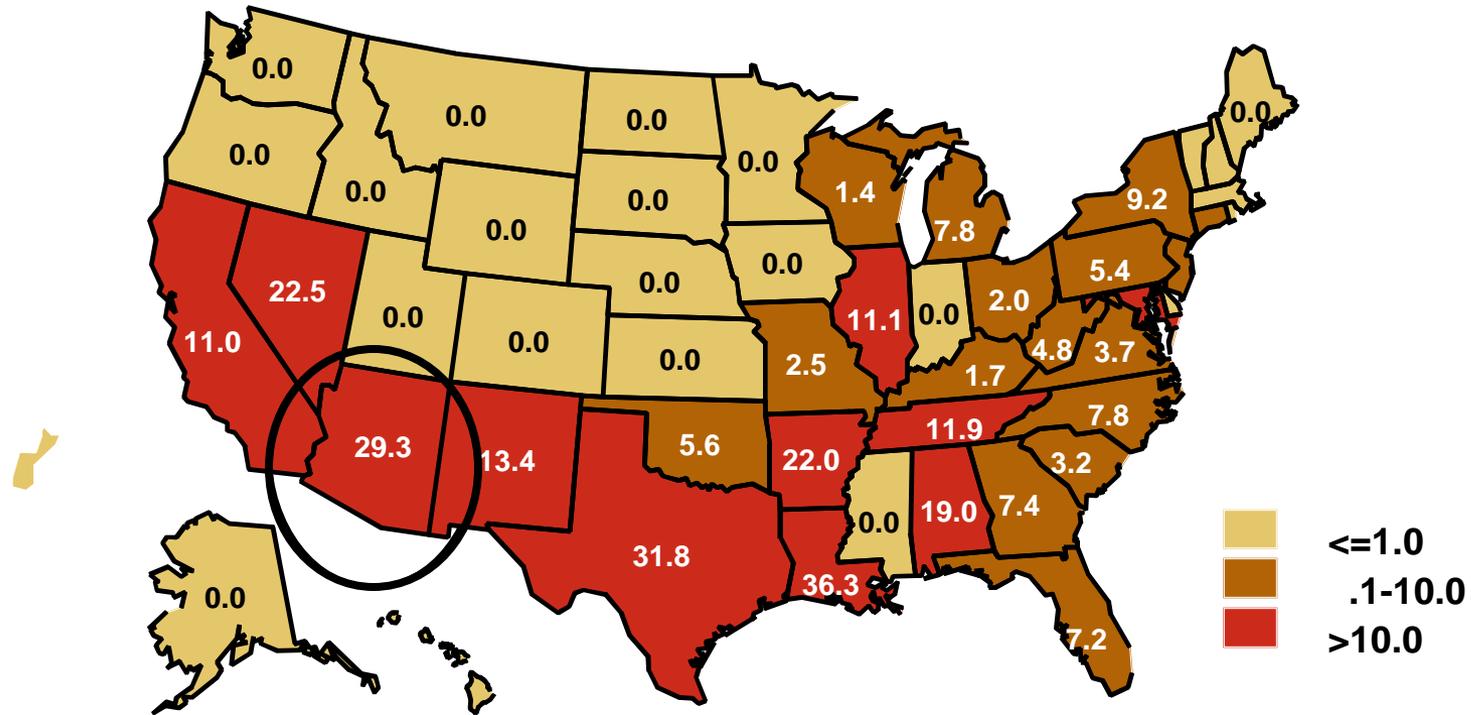
Congenital syphilis – Reported Cases and Rates in Infants < 1 Year of Age by State, Ranked by Rates: United States, 2008

Rank*	State	Cases	Rate per 100,000 Live Births
1	Louisiana	23	36.3
2	Texas	127	31.8
3	Maryland	23	29.7
4	Arizona	30	29.3
5	Nevada	9	22.5

Healthy People 2010 Goal: 1.0 case per 100,000 live births

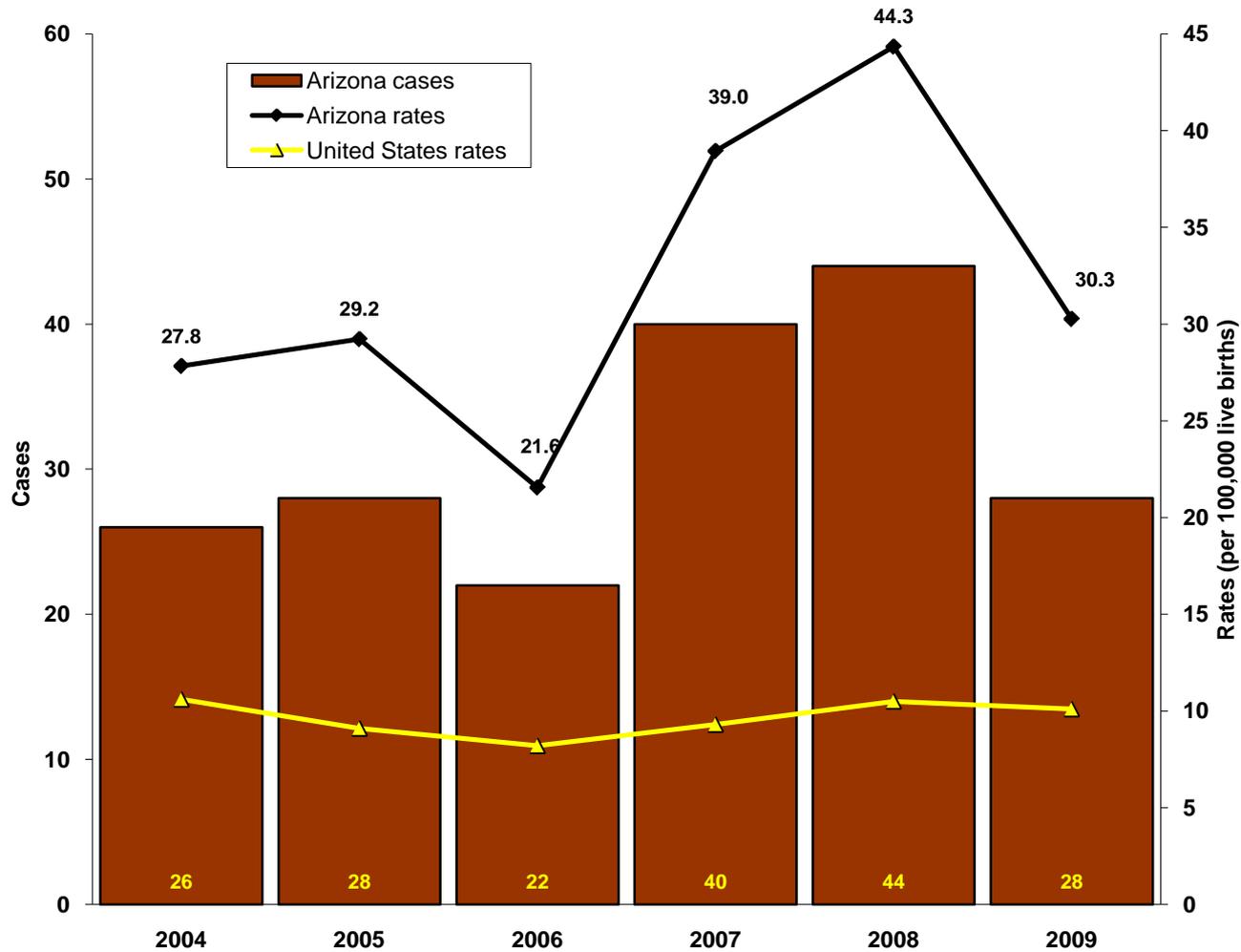
<http://www.cdc.gov/std/stats08/tables/39.htm>

CS Rates by State — United States, 2008



United States: 10.2

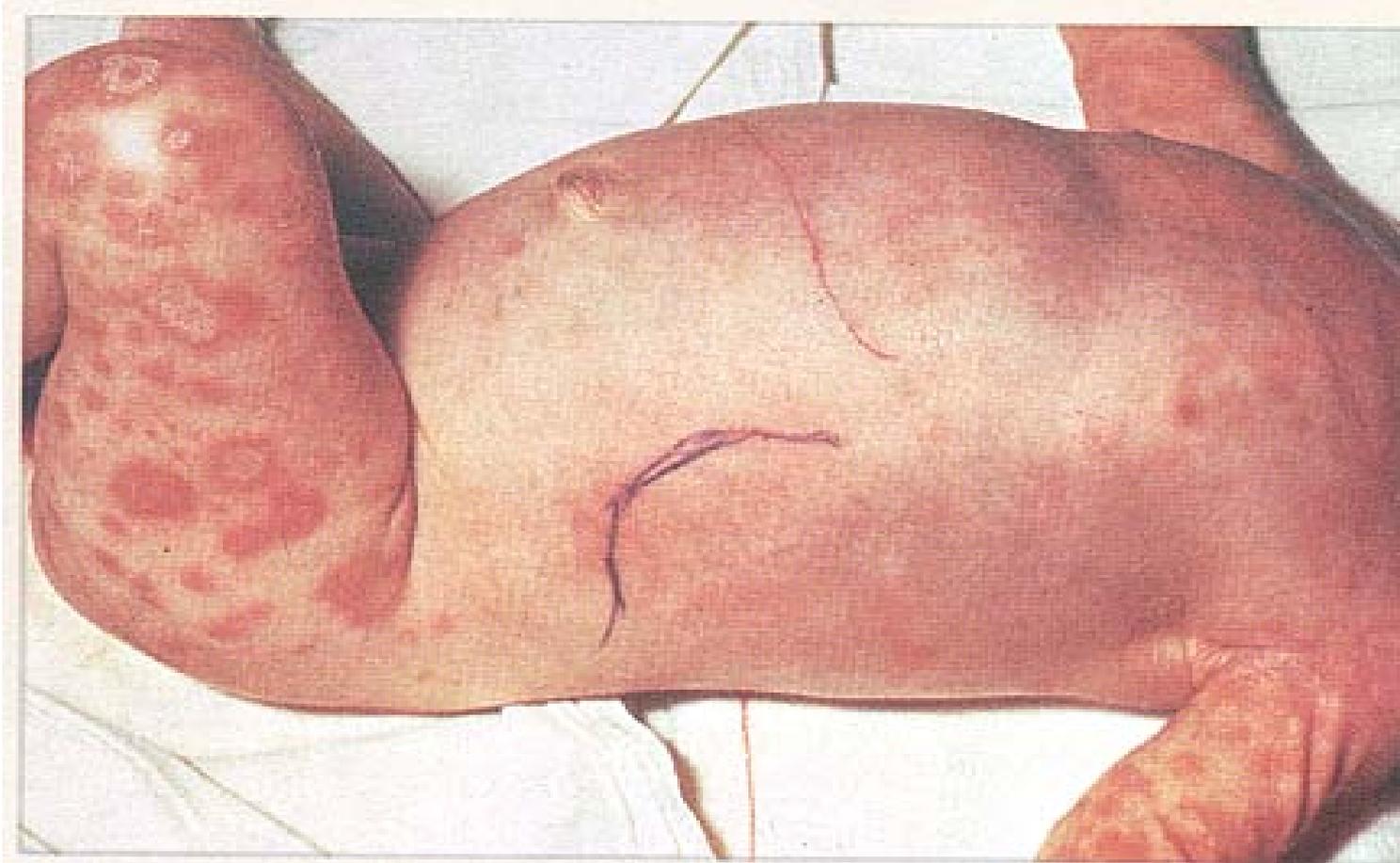
Reported Congenital Syphilis Cases and Case Rates per 100,000 Live Births by Birth Year, Arizona and United States 2004-2009



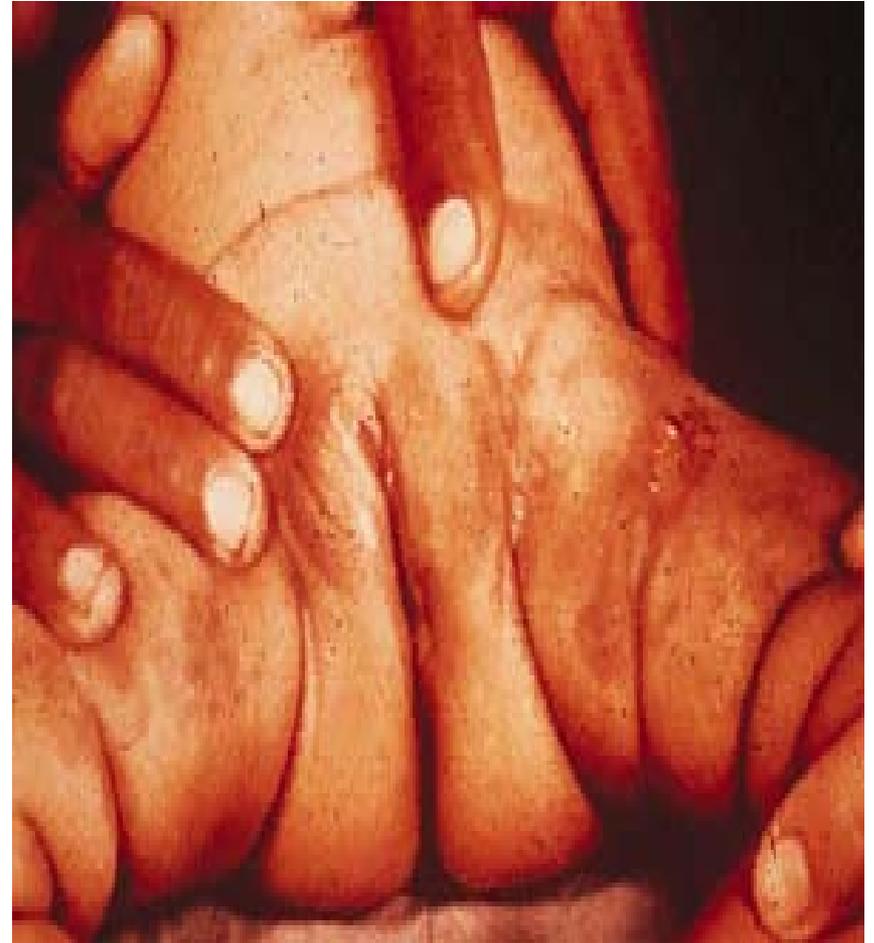
Delivery Outcomes

- Stillborn
- Low birth weight (IUGR)
- Premature delivery
- Birth defects
- Non-immune hydrops fetalis
- Spontaneous abortion

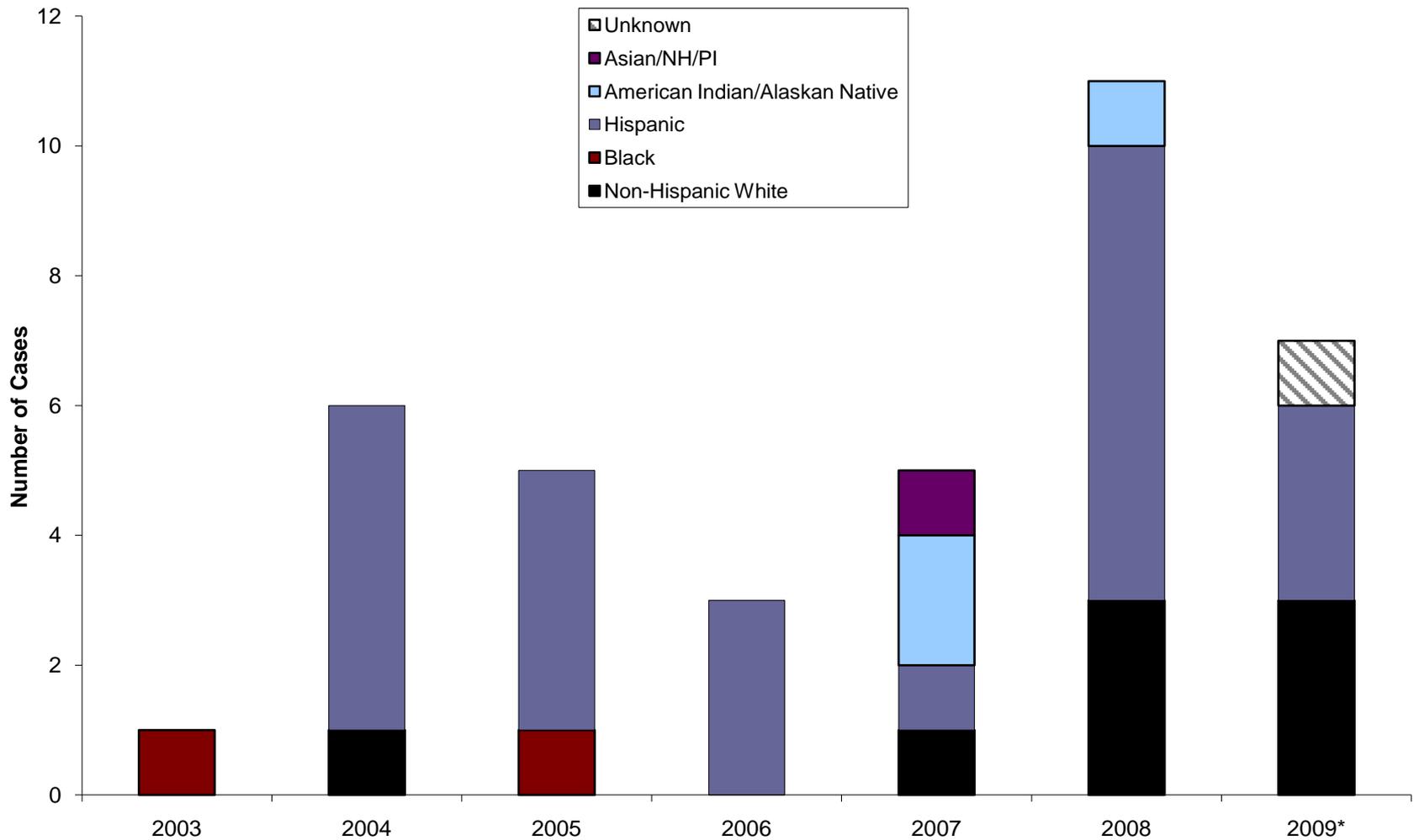
Congenital Syphilis



Congenital Syphilis



Reported Pima County Congenital Syphilis Cases by Race/Ethnicity, 2003-2009*





PIMA COUNTY HEALTH DEPARTMENT
Clinical & Outreach Services • HIV/STD PROGRAM

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February 17, 2010

Dear Obstetrical Provider:

I am writing to highlight an ongoing and increasing problem of great public health significance, and that is, our rate of congenital syphilis cases. Arizona was #1 for rates of congenital syphilis in the nation from 2003-2005, and we remain one of the most highly impacted states in the

Additionally, I urge you to assure that all congenital syphilis-suspected cases are reported. A recent retrospective analysis matching women with reported syphilis with mothers in the birth registry, uncovered three additional congenital syphilis cases in 2007 (two of whom were treated) and four additional congenital syphilis cases in 2008 (three of whom were treated and one of which was a stillbirth to a woman with no time for a documented response to her treatment for syphilis). Given that low numbers of congenital syphilis cases are highly significant (our number should be 0!), this lack of reporting led to a delay in recognizing the real severity of the problem and the fact that Pima County has at least as large if not larger problem than Maricopa County. This led to a delay in adequately alerting the community to this problem.

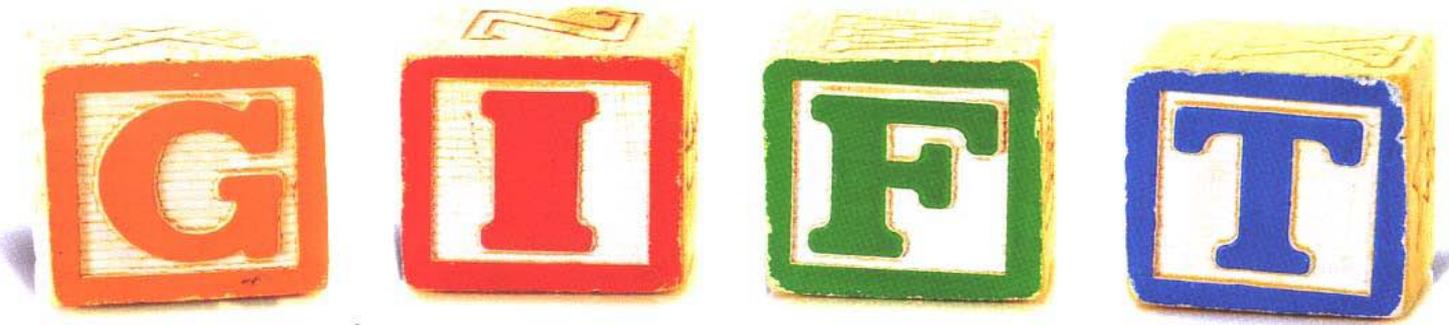
Current Syphilis Screening Recommendations for Pregnant Women in Maricopa County

- Maricopa County
 - Arizona Statute 36-693: “A physician shall at the time of the first prenatal examination take a standard blood test for syphilis”.
 - Requests that all physicians and midwives providing obstetrical services in Maricopa County perform a third trimester blood sample for syphilis between 24 and 32 weeks gestation.
 - Require that all newborns in Maricopa County have blood drawn for syphilis testing.

Prevention Recommendations

- Test mother for syphilis
 - First prenatal visit
 - During third trimester
 - At delivery (cord blood)
- Treatment history of sex partners
- HIV testing

Every baby is a



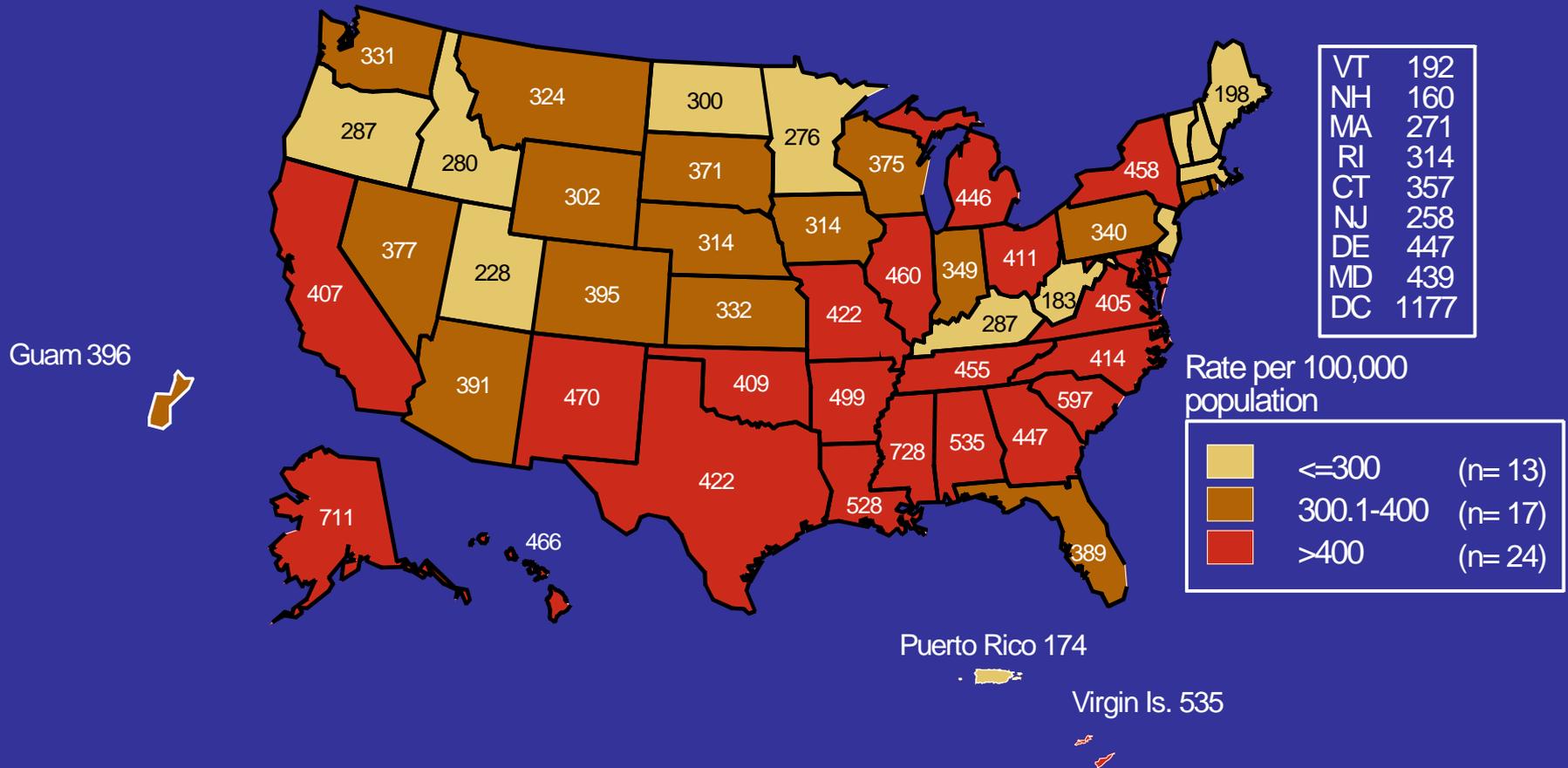
Help your patients protect theirs.

Remember to test all expectant mothers for syphilis.

“One in four teens with an STD”

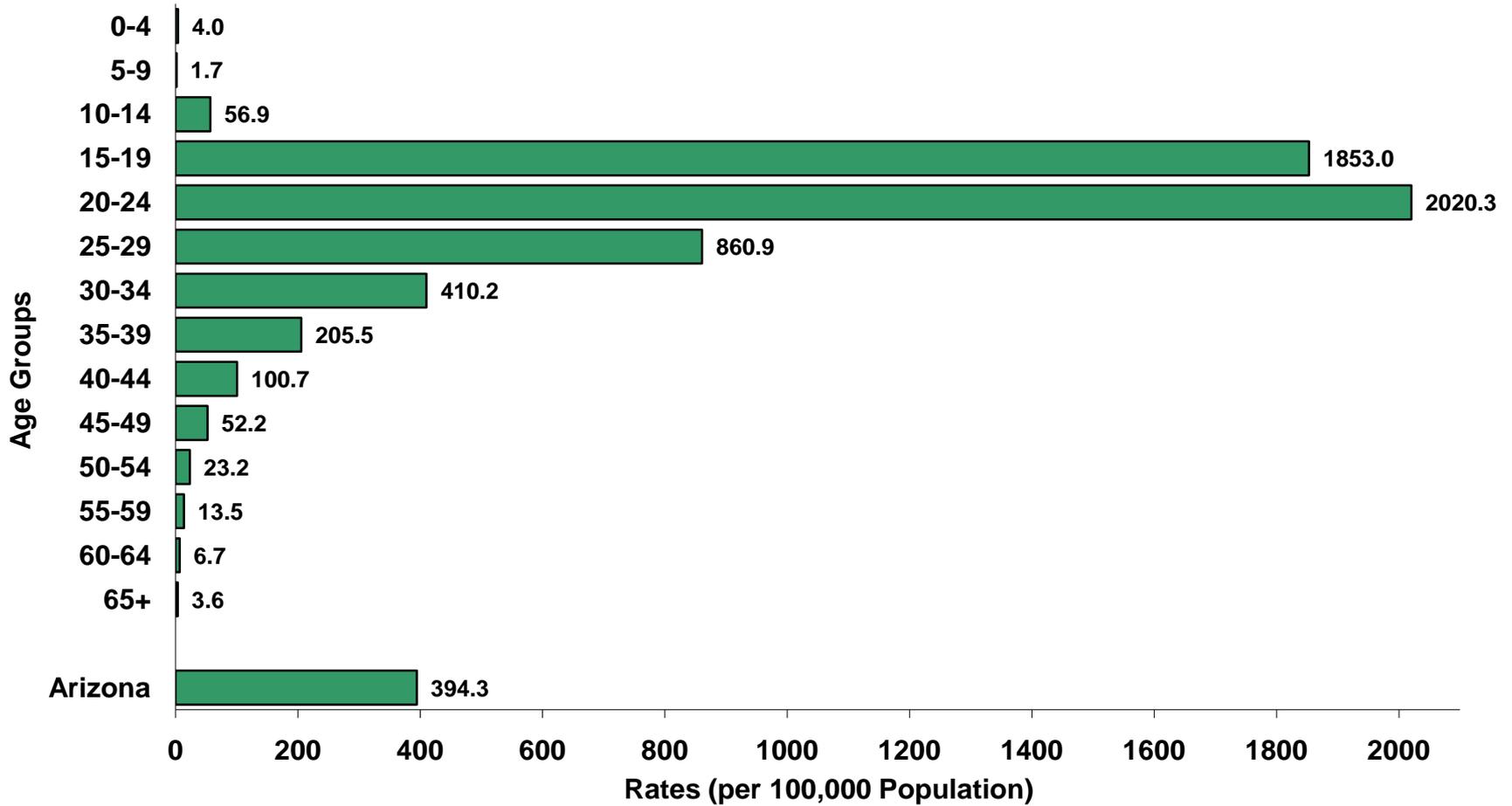
- 838 adolescents (Age 14-19)
- 404 reported ever having sex
- Overall prevalence of STDs (25.7%)
- Prevalence among sexually active (39.5%)
- Prevalence among Afr-Am teens (48%)
- The teens were tested for four infections:
 - Human papillomavirus (HPV) (18%)
 - Chlamydia (4%)
 - Trichomoniasis (2.5 %)
 - Genital herpes (2%)
- Forhan S et al. Abstract D4a. National STD Conference. March 2008.

Chlamydia — Rates by state: United States and outlying areas, 2008

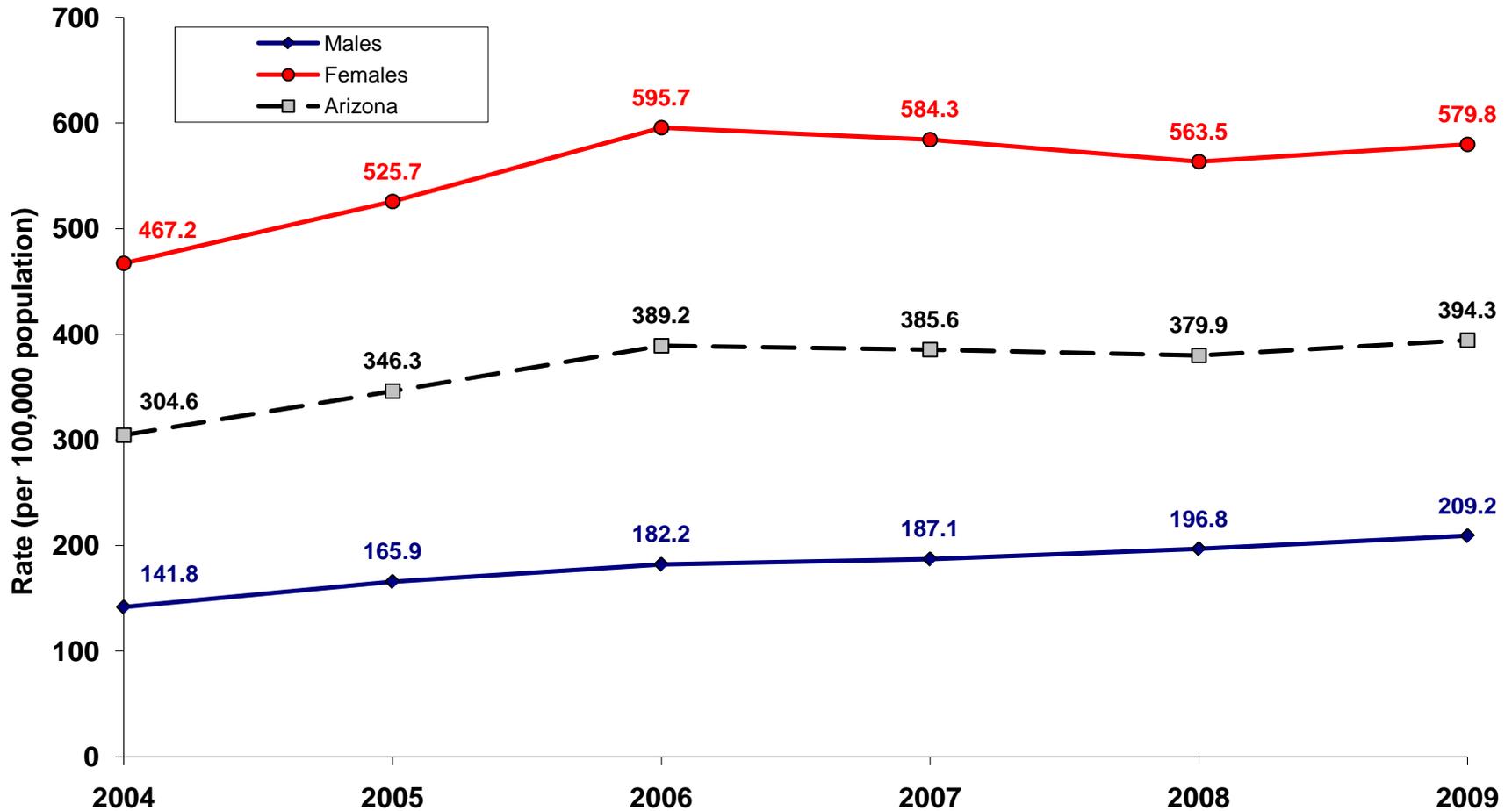


Note: The total rate of chlamydia for the United States and outlying areas (Guam, Puerto Rico, and Virgin Islands) was 398.5 per 100,000 population.

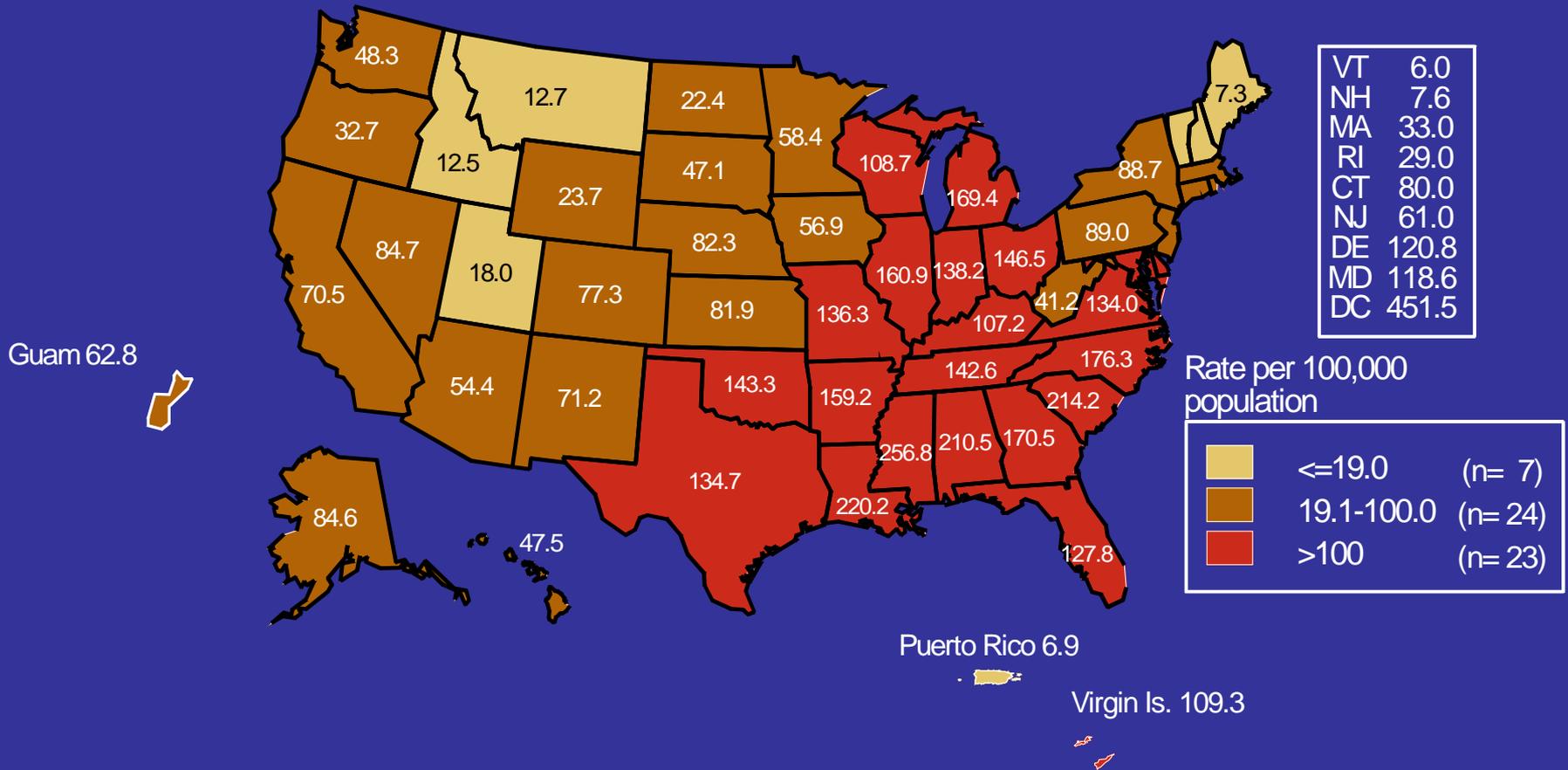
Reported Chlamydia Rates per 100,000 Population by Age Group, Arizona 2009



Reported Chlamydia Case Rates per 100,000 Population by Gender, Arizona 2004-2009

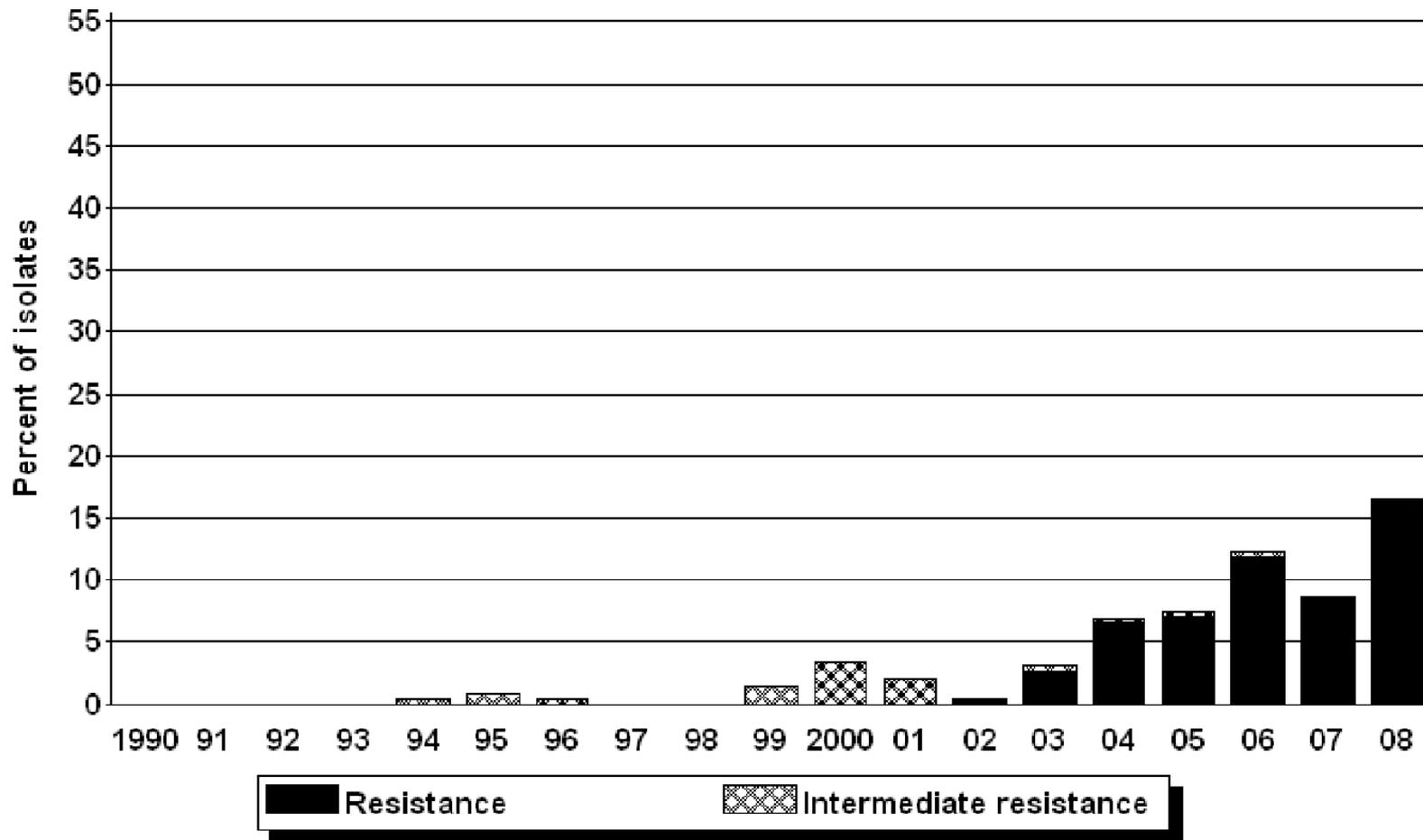


Gonorrhea — Rates by state: United States and outlying areas, 2008



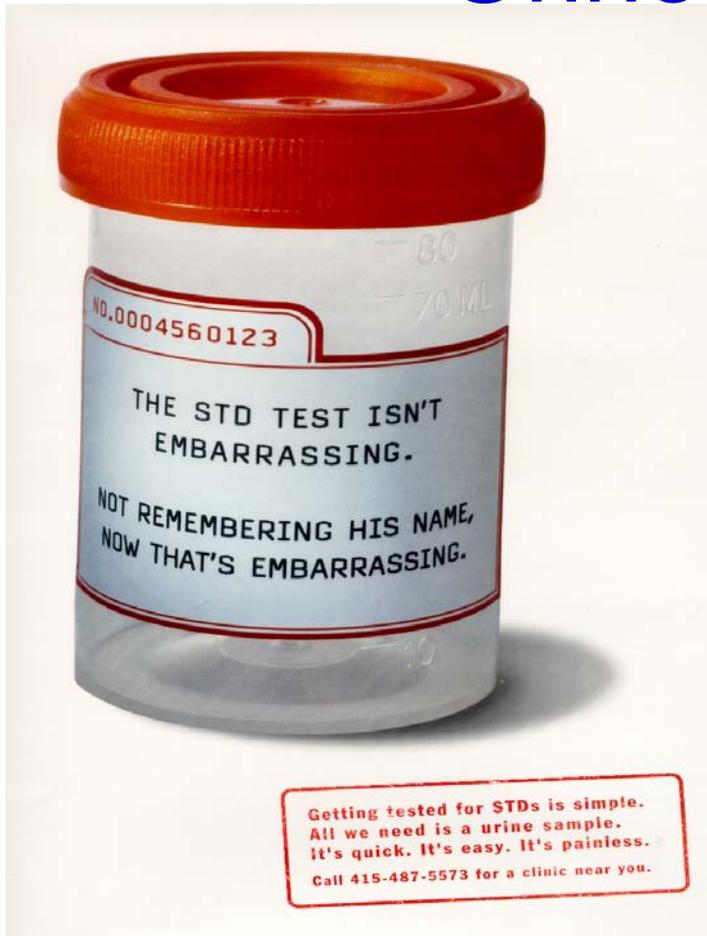
Note: The total rate of gonorrhea for the United States and outlying areas (Guam, Puerto Rico, and Virgin Islands) was 110.3 per 100,000 population.

Quinolone Resistance among Male Gonococcal Isolates Collected in the Maricopa County, STD Clinic*, 1990-2008



* No isolates with decreased susceptibility to ceftriaxone have been identified at this clinic during this time period.

New STD Diagnostic Technology: Urine-Based Tests



- Nucleic Acid Amplification Tests (NAATs) for gonorrhea and Chlamydia
- Highly accurate
- Non-invasive collection
 - High patient acceptability
 - Appropriate for screening asymptomatic persons
- Allows screening in non-traditional settings
 - Community settings
 - Correctional settings
 - Schools



EXPEDITED
PARTNER *Therapy*
IN ARIZONA

Chlamydia and Gonorrhea

YOU CAN TREAT THE PARTNERS



Leadership for a Healthy Arizona

Patient-Delivered Partner Therapy (Bill Passed April 2008)

- **2008 Arizona Senate Bill 1078:**
- Amends A.R.S. 32-1401.27 and now allows providers to dispense antimicrobial treatment to persons in contact with someone with a communicable disease without a physical exam including STDs.

Expedited Partner Therapy

- Amendment in effect since September 26, 2008
- ARS 32-1401 (27)(ss)(v) "Unprofessional Conduct"
 - (ss) Prescribing, dispensing or furnishing a prescription medication or a prescription-only device as defined in section 32-1901 to a person unless the licensee first conducts a physical examination of that person or has previously established a doctor-patient relationship. This subdivision **does not apply** to:
 - (v) Prescriptions written or antimicrobials dispensed to a contact as defined in section 36-661 who is believed to have had significant exposure risk as defined in section 36-661 with another person who has been diagnosed with a communicable disease as defined in section 36-661 by the prescribing or dispensing physician.
 - <http://www.azleg.state.az.us>

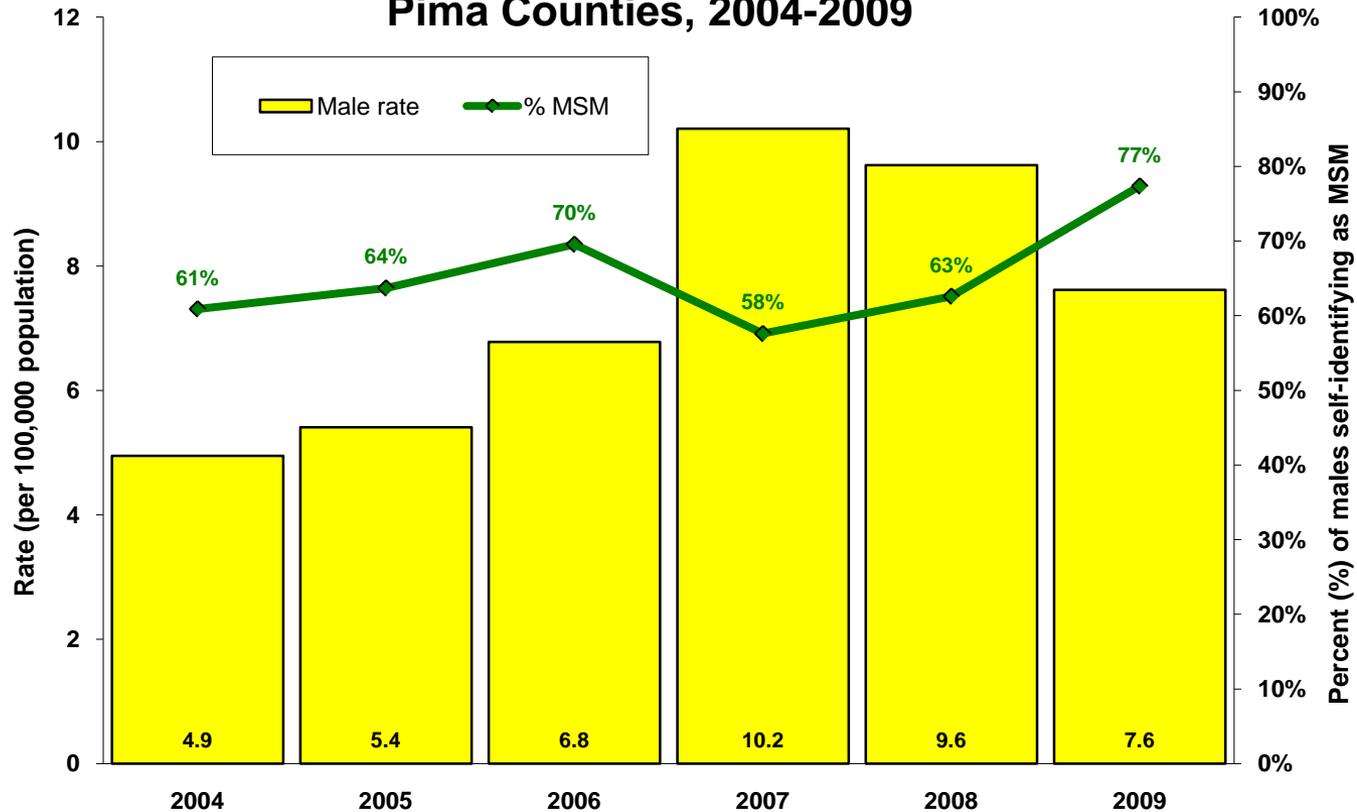
What to prescribe for EPT

- For partners of chlamydia cases:
 - Azithromycin 1 gram PO X 1 dose
- For partners of gonorrhea cases
 - Cefixime 400 mg PO X 1 dose
- Medication or prescriptions should be accompanied by partner information sheets

Educational Materials

- Provider and Pharmacy Fact Sheets
- Partner fact sheets in English and Spanish
- Frequently asked questions
- Postcards to providers
- <http://azdhs.gov/phs/oids/std/>

Reported Primary and Secondary Syphilis Case Rates per 100,000 Population among All Males and the Percentage of Male Cases that Self-Identify as Men who Have Sex with Men (MSM), Maricopa and Pima Counties, 2004-2009



Case 1: 19 yo male with penile lesion

- Painless
- Present for 4 days
- Methamphetamine use
- Reports having 4 sex partners:
 - 3 male and
 - 1 female

What are the appropriate next steps in management of this patient?

Case 1: Management

- Presumptive treatment with benzathine penicillin
- Send serum specimen for RPR with reflex confirmatory TP-PA if positive
- HIV, chlamydia and gonorrhea testing
- Partner management
- Report to the local health department

Case 2: 22 year old Male partner of Case 1

- Referred to your clinic by the health department
- Has rash on palms and soles of feet
- Headache
- HIV positive
- Methamphetamine use
- Reports 11 other male partners solicited through Internet

Case 2: Management

- Presumptive treatment with benzathine penicillin given
- RPR returns at 1:1024
- What additional testing is needed?

Case 2: Management

- Lumbar puncture
 - VDRL positive in CSF 1:2
 - 30 WBC/hpf
 - Protein 80 gm/dl
- Patient hospitalized for treatment of neurosyphilis with IV penicillin
- County health department notified to initiate contact investigations

Case 3: 19 year old female partner of Case 1

- Was called by the health department and told to report to your clinic for testing and treatment
- Single painless vaginal lesion on exam
- Urine pregnancy test positive

Case 3: Management Considerations

- 70% likelihood of transmission to infant during maternal primary stage
- Presumptive treatment with 2.4 MU of benzathine penicillin given

What testing should she receive?

Case 3: Management Considerations

- Initial RPR 1:256
- HIV negative, GC/CT negative
- She returns for follow-up 3 months later; now 20 weeks gestation
- RPR titer is 1:128
- Reports 2 new sexual partners

What are the management considerations?

Case 3: Management Considerations

- Inadequate titer response
- Possible re-exposure, re-infection or treatment failure
- Needs repeat treatment with benzathine penicillin

Genital Herpes

- Lifelong infection
- HSV-2 seropositivity 20-25% in sexually active population
- Asymptomatic shedding is common, thus many remain undiagnosed
- HSV-1 & HSV-2 may cause genital ulcers

Penile Herpes



Herpes Suppressive Treatment

- Reduces recurrences by 70-90%
 - Asymptomatic viral shedding continues

 - Acyclovir 400mg BID **OR**
 - Famciclovir 250mg BID **OR**
 - Valacyclovir 500mg QD **or** 1.0 gram QD
- (2002 CDC Treatment Guidelines)

Genital HPV Infection in the U.S.

- 20 million people currently infected
- 6.2 million new infections annually
- Up to 80% of sexually active people acquire HPV at some point in their lives

W. Cates, STD 1999; Weinstock, Persp Sexual Repro Health 2004

Cervical Cancer in the U.S.

- Projected 11,000 new cases and 3,000 deaths in 2008 in U.S. (WHO)
- Significant racial and ethnic disparities
- Preventable with screening and early treatment
- Nearly 100% caused by HPV
- 70% caused by HPV types 16 and 18

Source: ACS www.cancer.org

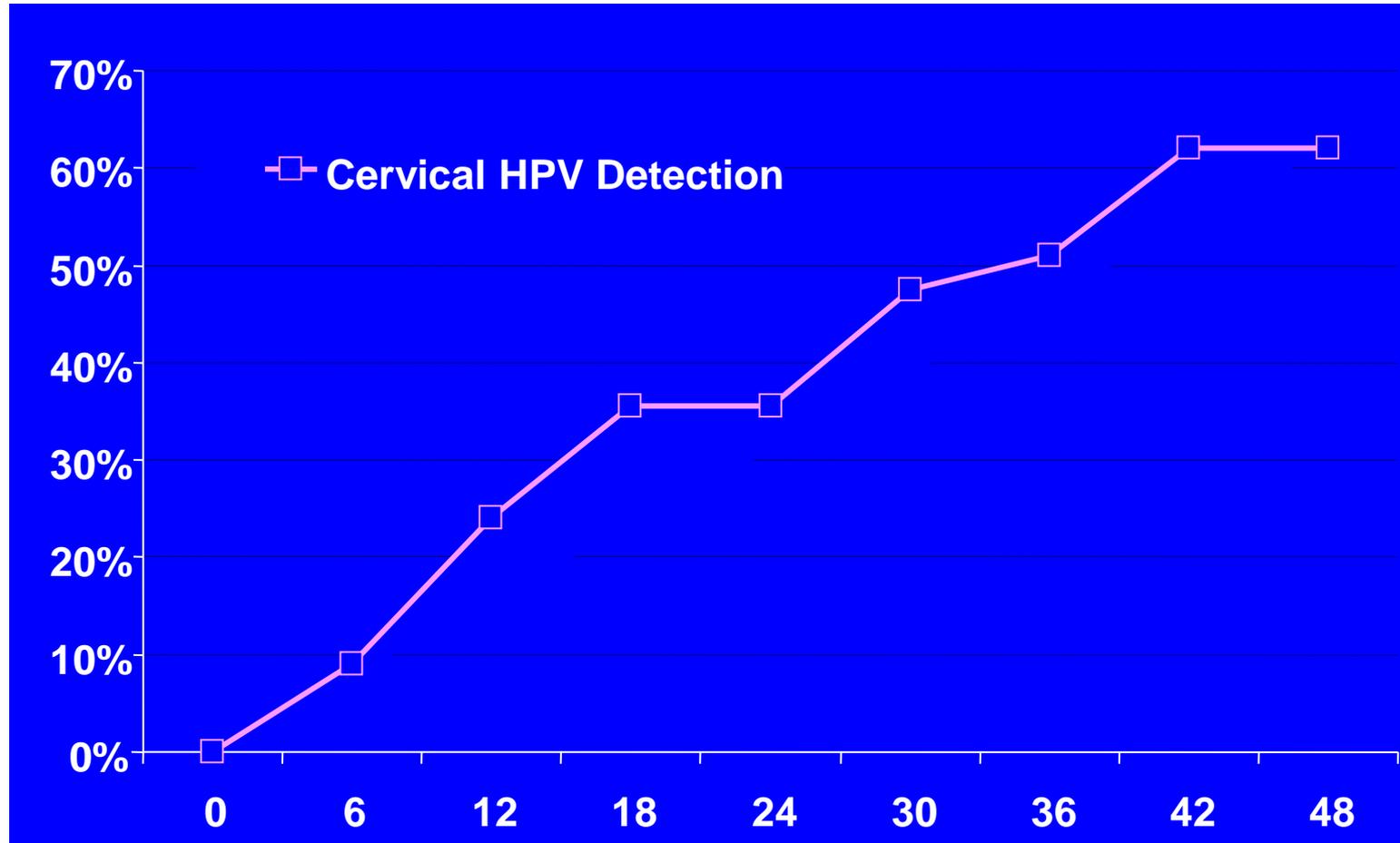
Low Risk Mucosal HPVs

TYPES	<ul style="list-style-type: none">• Most common: 6, 11• Other: 40, 42, 43, 44, 54, 61, 70, 72, 81, 89
DISEASES	<ul style="list-style-type: none">• Genital and oral warts• Respiratory papillomatosis• Low grade cervical Pap abnormalities

High Risk Mucosal HPVs

TYPES	<ul style="list-style-type: none">• Most common: 16, 18• Other high risk: 31, 33, 35, 39, 45, 51, 52, 56, 58, 59,• Likely HR: 26, 53, 66, 68, 73, 82
DISEASES	<ul style="list-style-type: none">• Low and high grade cervical Pap abnormalities• Cervical cancer• Vulvar, vaginal, penile, and anal cancer• Head and neck cancers

Incidence of Cervical HPV Detection in Women from the Time of Sexual Debut



Time since first intercourse (months)



Current HPV Vaccines

	Quadrivalent	Bivalent
Manufacturer	Merck	GSK
Product	Gardasil®	Cervarix ®
VLP types	6, 11, 16, 18	16, 18
Antigen source	Yeast	Baculovirus
Adjuvant	Alum	ASO4
Timing	0, 2, 6 months	0, 1, 6 months
Target groups	Females 9-26 No data in males	Females 10-55
FDA clearance	June 2006	Expected 2007



Quadrivalent HPV Vaccine Efficacy Combined Protocols, Per Protocol Population

Endpoint	Vaccine (n>7800)	Placebo (n>7800)	Efficacy	95% CI
HPV 16/18-related CIN 2/3 or AIS	0	53	100%	93 - 100%
HPV 6/11/16/18- related CIN 1, CIN 2/3, or AIS	4	83	95%	87 - 99%
HPV 16/18-related VIN 2/3 or VaIN 2/3	0	24	100%	83-100%
HPV 6/11/16/18- related genital warts	1	91	99%	94 - 100%

CIN = Cervical Intraepithelial Neoplasia AIS = Adenocarcinoma in situ
 VIN = Vulvar Intraepithelial Neoplasia
 VaIN = Vaginal Intraepithelial Neoplasia

ACIP Recommendations

- Routine vaccination of females ages 11-12 (as young as age 9)
- Catch-up vaccination for females 13-26
- Can be given despite history of abnormal Pap, HPV, warts
- Not recommended in pregnancy
- No change in cervical cancer screening recommendations
- Contraindications: allergy to yeast or other vaccine component, severe illness
- VAERS: www.vaers.hhs.gov or 800-822-7967
- Merck Pregnancy registry: 800-986-8999

HPV Vaccine Administration in Arizona

- Total administered by gender since 2006
- Females 192,688
- Males* 4,932
- Missing gender 4,963

* FDA licensed the vaccine for males in 2009

Prevention Methods

Male Condoms

- Consistent/correct use of latex condoms are effective in preventing sexual transmission of HIV infection and can reduce risk of other STDs
- Likely to be more effective in prevention of infections transmitted by fluids from mucosal surfaces (GC, CT, trichomonas, HIV) than those transmitted by skin-skin contact (HSV, HPV, syphilis, chancroid)



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Contact Information

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