- The HIV/STD/TB/Hepatitis Program in the Division of Disease Control is starting a series of Lunch and Learn Webinars for health-care professionals.
- Each month a new topic will be held from 12:00 p.m. to 1:00 p.m. CST on the fourth Wednesday of the month.
- Nursing education credits will be available for these presentations. Registration and schedule of topics are available at: www.ndhealth.gov/HIV/events.htm.
  - Post Test Available Up to 2 Weeks After Presentation
- The schedule of topics will be updated as they become available. The presentations will also be archived and available on the above website.

2013 STD Surveillance Data & Diagnosis, Treatment and Follow-up of Chlamydia and Gonorrhea

Sarah Weninger, STD Program Coordinator
April 23, 2014

April is STD Awareness Month

- 20 million new STDs, including 50,000 new HIV infections, occur every year
- Over 1 in 2 Americans will contract an STD at some point in their lifetimes
- One in two sexually active persons will contract an STD/STI by age 25
- One in four teens contract an STD/STI each year
- Less than half of adults ages 18 to 44 have ever been tested for an STD/STI other than HIV
- Cost the U.S. health-care system nearly $16 billion in direct medical costs

Chlamydia trachomatis

Chlamydia (*Chlamydia trachomatis*)

- The most commonly reported bacterial sexually transmitted disease
- 1,422,976 cases reported in the US, 2012
- Estimated 2.8 million infections occur each year
- CT prevalence among 14 to 24-year-olds is nearly 3x that of 25-39 yrs
- Estimated that 1 in 15 sexually active females aged 14-19 years has chlamydia

Chlamydia

- Caused by the bacteria, *Chlamydia trachomatis* (CT)
- Incubation period: 7 – 14 days or longer
- Duration of illness: unknown, may be months up to a year
- Transmission is sexual (vaginal, anal, oral) or vertical (perinatal)
- Highly transmissible (co-infection rates in partners > 50%)
- Majority of infections are asymptomatic

Risk of Sequelae Following CT Infection

- Pelvic Inflammatory Disease (PID) – 10% to 15% of untreated CT infections in females will result in symptomatic PID
  - Ectopic Pregnancy
  - Infertility
  - Chronic pelvic pain

Chlamydia Screening Recommendations

- All sexually active women under age 26 should be screened once a year
- Women age 26 and older with one or more of the following:
  a) Multiple or new sex partner in last 60 days
  b) PID or other sequelae
  c) Positive for CT in last 12 months

Screening Males for Chlamydia

- Routine CT screening of males not recommended
  - Feasibility, impact, cost-effectiveness in preventing sequelae in females
- Male partners of females infected with CT should be top priority
- Consider targeted screening in high prevalence settings such as corrections or STD clinics

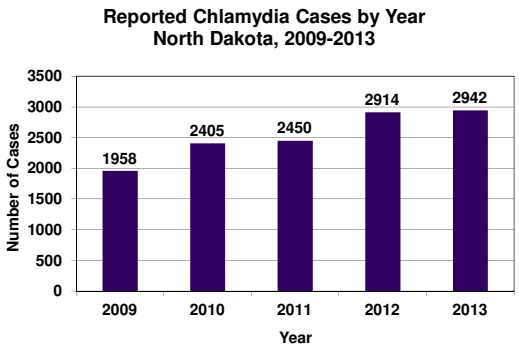
Chlamydia Screening Recommendations

- STD resources are directed at facilities that reach a minimum of 3% positivity rate in females (number of positives divided by total number of clients tested)
- Screening coverage (number of females screened divided by total number of females meeting screening criteria) should be at least 80%

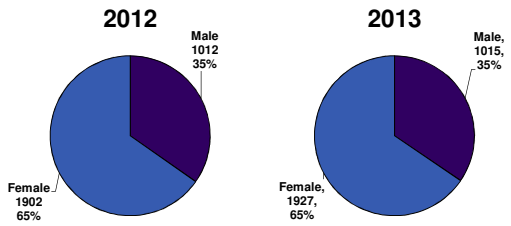
Chlamydia Treatment Guidelines

- Azithromycin 1 g orally in a single dose
  OR
- Doxycycline 100 mg orally twice a day for 7 days

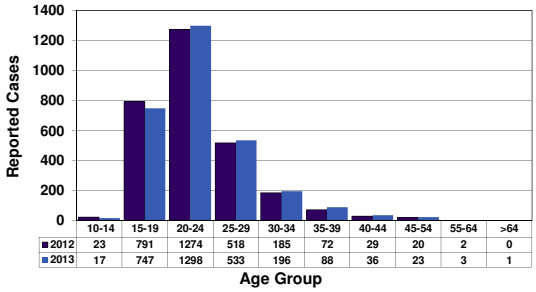
*Persons with chlamydia should abstain from sexual activity for 7 days after single dose antibiotics or until completion of a 7-day course of antibiotics, to prevent spreading the infection to partners.



Reported Chlamydia by Sex North Dakota, 2012 -2013

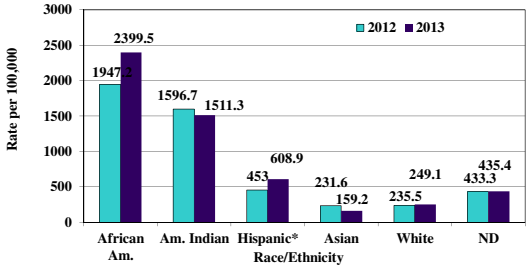


Reported Cases of Chlamydia by Age Group North Dakota, 2012 -2013



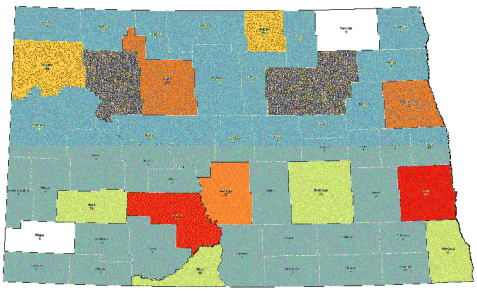
	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-54	55-64	>64
2012	23	791	1274	518	185	72	29	20	2	0
2013	17	747	1298	533	196	88	36	23	3	1

Chlamydia Rates by Race/Ethnicity North Dakota, 2012 - 2013

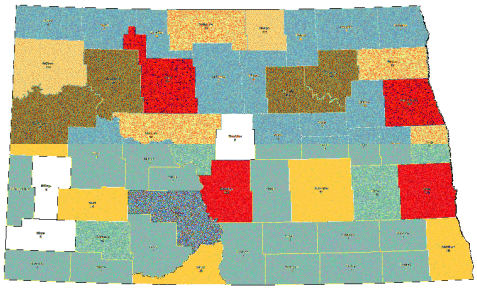


*Person of Hispanic ethnicity may be of any race;
2013: 22% of Chlamydia cases have unknown race

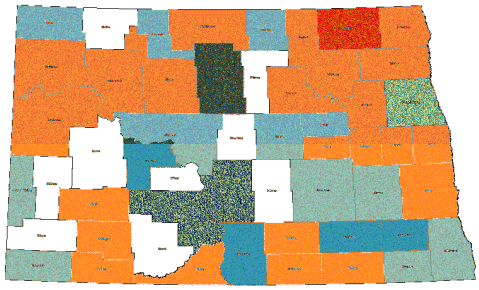
2012 Chlamydia: Geographic Map



2013 Chlamydia: Geographic Map



Changes from 2012-2013; Chlamydia



Neisseria gonorrhoeae

Gonorrhea

- Caused by the bacteria, *Neisseria gonorrhoeae*
- In 2012, 334,826 cases were reported to CDC
- Incubation period: 1- 14 days, or longer
  - Most men becoming symptomatic within 2-5 days after exposure.
- Transmission is sexual (vaginal, anal, oral) or vertical (perinatal)
- Duration: unknown, may be months up to a year
- Highly transmissible
- Asymptomatic infections

Risk of Sequelae Following GC Infection

- Women: Untreated gonorrhea can cause PID
- Men: gonorrhea may be complicated by epididymitis
  - Rare: Infertility
- Untreated gonorrhea can also spread to blood and cause disseminated gonococcal infection (DGI)

Gonorrhea Screening Guidelines

- Base screening on high morbidity areas among high-risk populations
- Age groups 15-24 years

Gonorrhea Treatment Guidelines: Dual Therapy

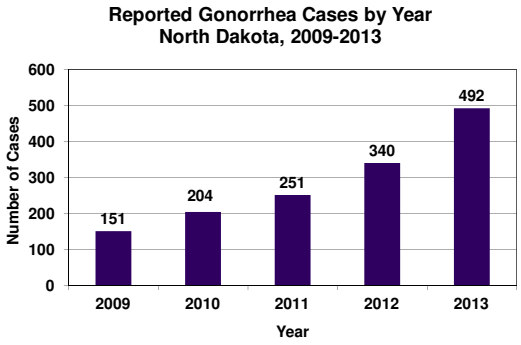
- Ceftriaxone 250 mg IM in a single dose

AND

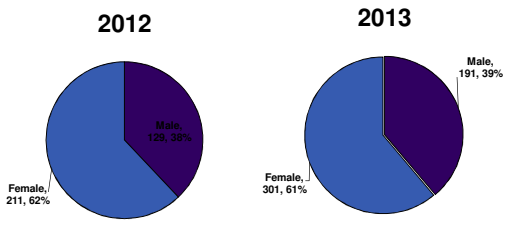
- Azithromycin 1 g orally in a single dose

OR

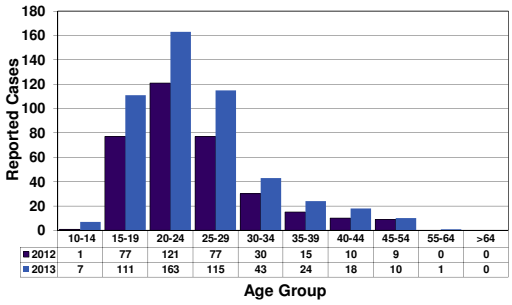
- Doxycycline 100 mg orally twice a day for 7 days



Reported Gonorrhea by Sex North Dakota, 2012 - 2013

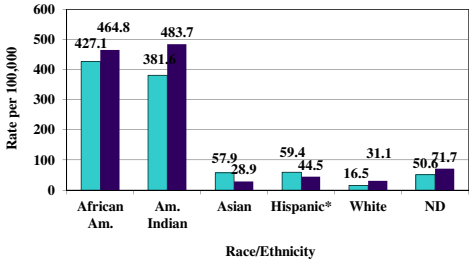


Reported Cases of Gonorrhea by Age Group; North Dakota, 2012 – 2013



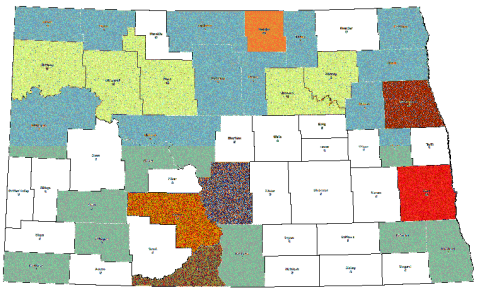
	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-54	55-64	>64
2012	1	77	121	77	30	15	10	9	0	0
2013	7	111	163	115	43	24	18	10	1	0

Gonorrhea Rates by Race/Ethnicity North Dakota, 2012 - 2013

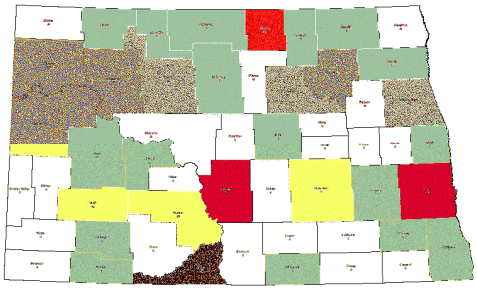


*Person of Hispanic ethnicity may be of any race
For 2013, 15.6% of GC Cases have unknown race

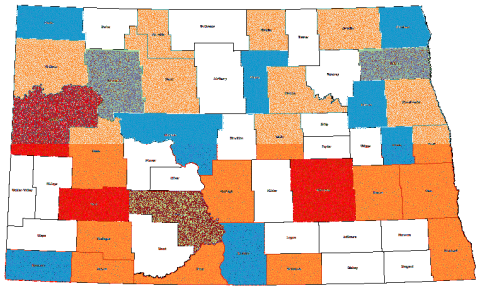
2012 Gonorrhea – ND Map



2013 Gonorrhea – ND Map



Changes from 2012-2013

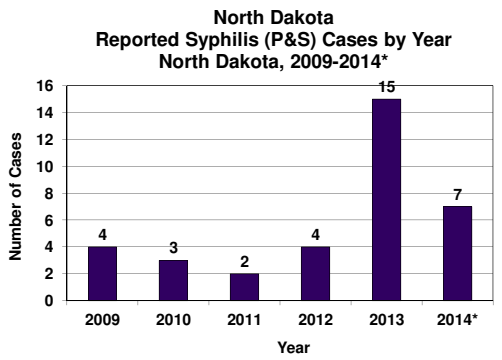


Prevent Re-Infection

- CDC recommended re-screening 3 months after treatment
- Treating partners of infected females with CT/GC is critical
- Dual therapy for GC cases regardless if CT is ruled out (2010 STD Guidelines)

Expedited Partner Therapy (EPT)

- Treatment of partners without an intervening personal assessment by a health-care provider
- Accepted method of treatment of CT and GC infections in ND as of January 2009
  - (ND Administrative Code, Chapters 61-04-04-01 Unprofessional Conduct, 54-05-03.1-10 Authority to Prescribe, 50-05-01 Expedited partner therapy).
- Guidelines for medical providers, website, EPT toolkit under development



*As of April 23, 2014

Primary

- Occurs after incubation
- Occurs in every case
- Usually one or more chancres at the site of exposure
- Most infectious stage of syphilis

Secondary

- Occurs any time after the eruption of the primary chancre (usually 4 – 6 weeks up to one year)
- The "great imitator" – rashes of different varieties, often on palms and soles

Syphilis: *Treponema pallidum*

Tertiary

- Late manifestations of syphilis
- Can involve any part of the body
- Can occur during primary or secondary syphilis
- Gummatous lesions

Other characteristics

- Latency – periods between stages in which the person has no symptoms or signs of syphilis
- Neurosyphilis
- Congenital syphilis

Syphilis: *Treponema pallidum*

Traditional Syphilis Screening Algorithm

- Presumptive diagnosis
  - Non-treponemal tests: RPR and VDRL
    - Both are usually quantified
    - Titer correlates with disease activity
- Confirmed diagnosis
  - Treponemal tests: TP-PA and FTA-ABS

Syphilis Screening Recommendations

- Pregnant females
- Partner(s) exposed to a positive syphilis case
- Blood donors
- MSM
  - Screen CT, GC and syphilis at 3 – 6 mo intervals if reporting multiple and anonymous sex partners
- HIV+ individuals should be tested once a year

Syphilis Treatment Guidelines

- P&S:
  - Benzathine penicillin G 2.4 million units IM in a single dose
- Early Latent:
  - Benzathine penicillin G 2.4 million units IM in a single dose
- Late Latent or Unknown:
  - Benzathine penicillin G 7.2 million units total (3 doses of 2.4 million units IM at 1-week intervals)

Partner Services

- GOAL: The overall goal of partner services programs is to prevent STD disease transmission and progression via partner notification and the provision of screening and referrals for treatment for identified partners.
- Critical function of partner services is partner notification,
- A process through which index patients (i.e., infected persons who are candidates for partner services) are interviewed to elicit information about their sexual and needlesharing partners, who can then be confidentially notified of their possible exposure or potential risk. Index patients should be encouraged to notify past partners, in addition to current partners, and engage them in testing services.

The STD Interview

- Taking a sexual history
  - Discuss confidentiality
  - All partners in the past 60 days
  - Client-centered counseling
  - Use open-ended questions when possible
  - Inquire about HIV status and test
  - Abstain from sex for 7 days following completion of antibiotic therapy
  - Come back in 3 months to get tested again
- Partner referrals
  - Provider, Patient, Contract, Dual
  - Test and treat all partners
  - Refer for HIV testing and HPV vaccine

Chlamydia Follow-Up

- Conduct Partner Services for Cases who are <14 years, pregnant or who have PID
- 2942 cases in 2013
  - 812 (28%) were reported as being interviewed
    - 577 in a clinic
    - 218 by field staff
  - 458 contacts reported to NDDoH
    - 29 became confirmed cases

Gonorrhea Follow-Up

- Field Staff Conduct Investigations on all GC Cases
- 492 cases in 2013
  - 322 (65%) were reported as being interviewed
    - 67 in a clinic
    - 255 by field staff
  - 158 contacts reported to NDDoH
    - 19 became confirmed cases

HIV/AIDS and STDs

- Individuals who are infected with STDs are at least 2-5x more likely to acquire HIV infection
  - Genital ulcers create a portal of entry for HIV
  - Inflammation resulting from STDs increase conc. of cells in genital secretion that serve as targets for HIV (e.g., CD4+ cells)
- People with STDs > 2x as likely to have HIV in genital secretions; the median conc. of HIV in semen is 10x higher in men infected with GC and HIV than in men only infected with HIV
- STD treatment reduces an individual's ability to transmit HIV
- HIV testing should always be recommended for individuals who are diagnosed with or suspected to have an STD.

www.ndhealth.gov/std

- Online reporting at www.ndhealth.gov/disease/reportcard/
- North Dakota STD stats
- Free resources
- Reference materials
- STD Program contact information
- www.cdc.gov/std/treatment/2010/default.htm 2010 STD Treatment Guidelines

Questions?

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