STIs in the United States: What’s Happening

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No Conflicts of Interest
Nothing to Disclose

Overview

- What’s new in STI epidemiology in the United States
  - Changing trends in chlamydia
- STI clinical preventive services
  - Role of Reproductive Health Providers
- New Directions in STD Treatment and Management
  - 2014 STD Treatment Guidelines

Chlamydia — Rates of Reported Cases Among Women by Age Group, 2004–2013
*percent change during 2012–2013

Chlamydia — Percentage of Reported Cases Among Women by Source of Report, 2013

Gonorrhea — Rates of Reported Cases Among Women by Age Group, 2004–2013
*percent change during 2012–2013

NOTE: 2013 data are preliminary

*Other includes: Indian Health Service, military, HIV testing, prenatal and other sites
STI CLINICAL PREVENTIVE SERVICES

Clinical Pathway of Family Planning Services

Most clients come to Title X sites for one or more of these services

STD services

Contraceptive services

Pregnancy testing

Screening Women for Chlamydia:

Current Recommendations

- Recommendations by CDC, United States Preventive Services Task Force (USPSTF), medical associations
  - Screen all sexually-active females aged <25 years annually
  - Screen women aged ≥25 years if at increased risk
- USPSTF: A-rated recommended preventive service

Strengthening Health Services

What STD Clinical Preventive Services should be provided?

- Sexual Health Assessment to guide management and counseling
- STI Screening
- STD Treatment
- STI vaccination - HPV and Hepatitis A & B
- Partner Treatment and Management

Complex Prevention Messaging

Prevention approach | HIV | STDs | Pregnancy
--- | --- | --- | ---
Condoms
PrEP
HIV Seroadaptation
Monogamy
Abstinence
Long Acting Contraceptives

Chlamydia — Screening Coverage Trends Among Sexually-Active Women,* by Age and Plan, HEDIS, 2001–2012

[Graph showing screening coverage trends]
Number of Female Family Planning Users Aged <25 years Tested for Chlamydia and Percent Tested, Title X Family Planning, 2005–2012


Provider and Health System Level Issues that Limit Access to Chlamydia Screening

- Provider knowledge and attitudes
  - Lack of information about disease rates in their community
  - Belief that their patients are not at risk
  - Cannot offer confidential services to adolescents
  - Believe chlamydia is not an urgent medical condition
  - Limited time

- Other Factors
  - Confidentiality and EOBs
  - Insurance coverage/adequate reimbursement
  - High co-pays and deductibles

Chlamydia and Gonorrhea Prevalence Monitoring Toolkit

- Supports STD and FP clinic administrators and managers in monitoring and evaluating CT/GC screening efforts
- Introduces key indicators for assessing screening efforts
- Explains how each indicator is useful and how to calculate it
- Provides examples of each indicator

NEW DIRECTIONS IN STD TREATMENT AND MANAGEMENT
8/5/2014

**STD Treatment Guidelines Evidence-based Approach**
- Enlistment of Subject Matter Expert
- Systematic Review of Evidence
- Background papers, Tables of evidence
- Guidelines 3-day Meeting April 2013
- Answer the "Key Questions"
- Rate the quality of the evidence
- Identify critical gaps in knowledge (research agenda)
- 2014 Guidelines

**STD Prevention Opportunities with EHR and MU**
- Electronic case-base reporting
- Monitoring adverse outcomes (e.g., PID, ectopic pregnancy, infertility, neurosyphilis)
- Prevention through point-of-care STD clinical decision support
- Electronic adoption (computable) of STD clinical guidelines

**CDC STD Treatment Guidelines**
- Authoritative, evidence-based source for STD clinical management
- Recommended regimens preferred over alternative regimens
- Alphabetized unless there is a priority of choice
- Available at [www.cdc.gov/std](http://www.cdc.gov/std)
- Wall charts, pocket guides, eBook
- Webinars, podcasts
- STD Treatment Mobile App for Apple devices (iPhone & iPads) and Droid devices (phones & tablets).
- Currently under revision for release in 2014

**Chlamydia Treatment: Areas of Clinical Uncertainty**
- Effectiveness of azithromycin vs. doxycycline in anorectal infection (Hathorn, Steedman)
- Doxycycline delayed-release 200mg tablet daily of 7 days
  - Equally efficacious to generic doxycycline 100mg BID x 7 days
  - Less GI side effect
  - Consider as an alternative regimen but costly
- Concerns over amoxicillin use in pregnancy due to chlamydia persistence in vitro
  - Use only as an "alternative regimen"

**Chlamydia Reminders**
- Screen young females
- Self-collected vaginal swabs for NAATs
- EPT as permissible by law
- Retest 3 months after treatment
**GC Treatment: Areas of Clinical Uncertainty**

- Higher ceftriaxone and/or azithromycin doses recommended outside U.S. (UK, Japan, etc.) although no data to support increasing doses
- Ceftriaxone in vitro susceptibility and clinical efficacy data in U.S. stable
- Ceftriaxone and cefixime susceptibility failures rare, all outside U.S.
- Azithromycin 1g effectiveness meets lower CI >95% threshold
- Azithromycin resistance remains low, but can develop quickly

**Pelvic Inflammatory Disease**

- Both inpatient and outpatient approaches showed similar short and long-term outcomes
- Regimens should be effective against GC and Ct – quinolones not recommended
- Using metronidazole to treat anaerobes and BV should be individualized
- Consider client acceptance, availability, cost, antimicrobial susceptibility
- Can treat with IUD in place

**CDC Treatment Recommendations for Gonococcal Infections (proposed)**

Ceftriaxone 250 mg IM x 1  
PLUS  
Azithromycin 1 g po x 1  
Doxycycline 100 mg po BID x 7 days

**Alternatives**

- If ceftriaxone not available or for expedited partner therapy (EPT):  
  Cefixime 400 mg po x 1 PLUS Azithromycin 1 g po x 1
- If cephalosporin allergy:  
  Gentamicin (240mg IM or 5 mg/kg IM) /azithro 2 g po or  
  Gemifloxacin 320 mg po /azithro 2 g po
- TOC if alternative regimen used for pharyngeal GC at ~14 days with NAAT

**Syphilis: Areas of Clinical Uncertainty**

- Serologic response after treatment  
  17-21% with early syphilis with not achieve a four-fold decline in nontrep titer at 6 months
- Role of reverse screening algorithm
- Neurosyphilis definition

**Cervicitis**

- Evaluation – Ct/GC NAAT, Tv, BV
- Persistent cervicitis – Mycoplasma genitalium
- If <25 yr, empiric therapy for Ct/GC
- If >25 yr, risk assessment and patient availability determine empiric tx

**Algorithm for reverse sequence syphilis screening**

- Evaluate clinically, determine if treated for syphilis in the part, assess risk of infection, and administer therapy according to CDC’s STD Treatment Guidelines if not previously treated
- If incubating or primary syphilis is suspected, treat with benzathine penicillin G 2.4 million units IM x 1 and/or repeat in 1-2 weeks
- If at risk for syphilis, repeat RPR in 2 to 4 weeks
- Risk of syphilis – EIA/CIA+  
  RPR+  
  TP-PA+  
  Syphilis (past or present)
- Risk of syphilis – EIA/CIA-  
  RPR-  
  TP-PA-  
  Syphilis unlikely
**Additional formulation of imiquimod**

Case reports of inflammatory responses to imiquimod

**HPV Infection Management (proposed)**

- HPV Vaccine recommendations updated
  - ACIP recommendation for routine vaccination of males at age 11-12 with quadrivalent vaccine and catch up to 21 years
  - ACIP recommendation for vaccination through age 26 years for MSM and HIV-infected with quadrivalent vaccine
- Podophyllin resin 10-25% moved to “alternative therapy” for genital warts
  - Case reports of adverse effects with misuse
- Case reports of inflammatory responses to imiquimod
  - “In a small number of case reports, might have been associated with worsened inflammatory or autoimmune skin disease such as psoriasis, vitiligo, and lichenoid dermatoses”
- Additional formulation of imiquimod
  - 3.75 % cream applied daily

**Herpes**

- Anogenital HSV 1 is increasing but serologic tests do not distinguish anogenital from orolabial
- Serologic screening in general population not recommended
  - Recurrent/atypical genital sx with negative HSV cultures
  - Partner with genital herpes
  - Client requests test for genital herpes
- Famciclovir out of alphabetical order
- Individualize use of episodic or suppressive antiviral therapy

**TV vaginalis Infection Management (proposed)**

- Highly sensitive tests (e.g., NAATs) are encouraged for diagnostic testing of individuals with symptoms of trichomoniasis
- Retesting 3 months after TV treatment is recommended for women
- NAATs may be done 2 weeks after treatment
- TV vaginalis infection areas of clinical uncertainty
  - Asymptomatic screening of non HIV-infected pregnant women, individuals receiving care at high-prevalence settings (e.g., correctional facilities, STD clinics), or individuals at high risk for infection
  - Management of nitroimidazole-resistant TV

**T vaginalis and HIV infection in Women**

- TV is an independent risk factor for HIV acquisition
  - TV increases probability of acquiring HIV
    - DR 2.6 (1.4-4.7) Hughes, 2012
    - TV infected women more likely to test positive for HIV
      - HR 3.1 (1.3-4.6) Marrazzo, 2010
    - TV infection associated with incident HIV in women
      - OR 2.7 (1.3-6.0) Van der Pol, 2008
- Maternal TV is a risk factor for HIV vertical transmission
  - Maternal TV increases HIV vertical transmission risk
    - RR 1.7 (1.0-2.8) Gumbo, 2010
- Treating TV reduces genital HIV shedding
  - Women treated for TV less likely to shed HIV vaginally
    - RR 0.3 (0.1-0.6) Kissinger, 2009
  - Genital viral load decreases 3.5 log10 after TV treatment
    - P<0.01 Anderson, 2012

**Management of TV with HIV co-infection (proposed)**

- HIV-infected women should receive periodic screening for TV including at entry to care and annually
- HIV-infected, pregnant women should be screened for TV, ? at mid-gestation
- HIV-infected women diagnosed with TV should receive metronidazole 500mg BID for 7 days to improve cure rates
  - HR 0.46, CI 0.21-0.98 (Kissinger, 2010)
Bacterial Vaginosis

- Not recommended – Single dose metronidazole 2g due to lower efficacy
- Recurrent BV – twice weekly metronidazole gel reduced the frequency
- BV in pregnancy – treat if symptoms, insufficient evidence to screen
- Prophylaxis before surgery – screen and treat

Proposed New Sections

- Transgender men and women
- Emerging Issues
  - Role of Mycoplasma genitalium
    - Good evidence for role in urethritis; may play role in PID;
    - No commercially-available test for M. genitalium
  - Sexual transmission of HCV
    - HIV-infected infected individuals especially MSM
- Good evidence for role in urethritis; may play role in PID;
- Treatment concerns: resistance to doxycycline > azithromycin

STD Treatment Key Issues

- Gonorrhea: Two drugs
- Chlamydia: Screen/retest in 3 months if positive
- Azithromycin in pregnancy
- Trichomonas: Expanded diagnosis options
- Screen women with HIV
- HPV: Encourage HPV vaccine

STD Treatment Key Issues

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What to Say to Clients

- Get tested to know your infection status
- Talk to your partner and know your partner’s infection status
- If infected, treat curable infections
- If unknown or incurable, use condoms consistently and correctly

Looking Forward

Thank you Questions?
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