The Role of STD Clinical Preventive Services in the Provision of Quality Family Planning Guidelines

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No conflicts of Interest
Overview

- New estimates of STI burden in the US
- Clinical pathway for family planning services
- Scale up and monitoring of effective STD prevention interventions
  - Chlamydia screening of females < 25 years
  - EPT
  - Other STI screening recommendations including HIV
  - HPV vaccination
- 2014 STD Treatment Guidelines
New estimates of STI burden in the U.S.: Why Now?

- **Better data availability**

- **Better detection of infections**
  - Improved test technology

- **Ongoing need to quantify burden of STIs in United States**

http://www.cdc.gov/nchs/nhanes.htm
Estimated number of new sexually transmitted infections
- United States, 2008

Ages 25+
Ages 15-24

Hepatitis B: 19,000
HIV*: 41,400
Syphilis: 55,400
HSV-2: 776,000
Gonorrhea: 820,000
Trichomoniasis: 1,090,000
Chlamydia: 2,860,000
HPV: 14,100,000

Total: 19,738,800

Young people (15-24) represent 50% of all new STIs

*HIV incidence not calculated by age in this analysis

Bars are for illustration only; not to scale, due to wide range in numbers of infections
Chlamydia Prevalence in Sexually Active Females Aged 14-24 in the United States

NHANES, National Health and Nutrition Examination Survey, 1999-2008
Sexual activity = “yes” response to “Have you ever had sex?”
Sex = vaginal, anal, or oral sex
Chlamydia—Percentage of Reported Cases by Sex and Selected Reporting Sources, United States, 2011

*HMO*=health maintenance organization; HD=health department

**NOTE:** These categories represent 70.2% of cases with a known reporting source. Of all cases, 11.2% has a missing or unknown reporting source.
HIV transmission

Adverse pregnancy outcomes

Impaired fertility

Reproductive tract cancer

Most STDs

e.g. Syphilis

HSV-2

e.g. Chlamydia

Gonorrhea

STIs and their Consequences

~ 19.7 million estimated annual new cases*

$17.5 billion estimated annual direct costs*

e.g. HPV

2010 estimates
Clinical Pathway of Family Planning Services*

Determine the need for services
- Assess reason for visit
- Assess reproductive life plan
- Assess other sources of primary care

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

Contraceptive Services → Pregnancy testing → Achieving Pregnancy → Basic infertility services

Title X clients should also be provided these services, regardless of the reason for clinic visit

STD services → Preconception health services

Clients without another source of primary care should be provided or referred for these services

Related preventive health services

* proposed
What STD Services should be provided?

- Sexual Health Assessment
- STI Screening
- STD Treatment
- STI vaccination
- Partner Treatment and Management
- High Intensity Behavioral Counseling
SCALE UP AND MONITORING OF EFFECTIVE PREVENTION INTERVENTION
Sexual Health Assessment: The Five P's

- **Partners**
  - Number, gender and concurrency

- **Practices**
  - Vaginal, anal and oral sex

- **Prevention of Pregnancy**
  - Current and previous use

- **Protection from STDs**
  - Condom use

- **Past History of STD**
  - Be specific and include partner history
Chlamydia: Risk for Sequelae in Women

Untreated chlamydial infections → Clinical PID → Tubal factor infertility

10-15%

Subclinical tubal inflammation

? Risk

Oakeshott et al, BMJ 2010
Weström et al, Sex Transm Dis 1992
Land et al, Hum Reprod Update 2010
Chlamydia Diagnosis and Treatment

- **Diagnosis**
  - Nucleic acid amplification tests (NAATs)
    - Sensitivity ~96%, specificity >98%
    - Specimens: Urine; vaginal, cervical, and urethral swabs
      - Self collected vaginal swab

- **Treatment**
  - Simple and efficacious: Single-dose oral azithromycin or oral doxycycline twice a day for 7 days
**Chlamydia Screening: Women Current Recommendations**

- **United States Preventive Services Task Force (USPSTF), CDC and medical associations recommend that clinicians**
  - Screen all sexually-active females aged <25 years annually
  - Screen women aged ≥25 years if at increased risk
    - New or multiple partners or partner with a concurrent partner

- **USPSTF: A-rated recommended preventive service**

<table>
<thead>
<tr>
<th>Population</th>
<th>Non-Pregnant Women</th>
<th>Pregnant Women</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>24 yrs &amp; younger</td>
<td>25 yrs &amp; older</td>
</tr>
<tr>
<td>Includes adolescents</td>
<td>Not at increased risk</td>
<td>At increased risk</td>
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<tr>
<td><strong>Recommendation</strong></td>
<td><strong>A</strong> Screen if Sexually Active</td>
<td><strong>C</strong></td>
</tr>
</tbody>
</table>

Chlamydia Screening Coverage* Trends (Women Aged 16-20 and 21-24 years, HEDIS)

*Among women enrolled in commercial or Medicaid plans who had a visit where they were determined to be sexually active

The State of Healthcare Quality, 2012:
Percent of all Family Planning Clients aged <25 Years Tested for Chlamydia, 2005–2011

Percent

Year

2005

2006

2007

2008

2009

2010

2011

50

51

52

55

55

57

58

Family Planning Annual Reports, 2005-2011

http://www.hhs.gov/opa/title-x-family-planning/research-and-data/fp-annual-reports/
Provider and Health System Level Issues

- **Provider knowledge and attitudes**
  - Reasons for low screening
    - 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 that Limit Access to Chlamydia Screening**
  - Confidentiality and EOBs
  - Insurance coverage/adequate reimbursement
  - High co-pays and deductibles
Confidentiality and STI*

- All 50 states and the District of Columbia allow minors to consent to STI services
- 11 states require that a minor be a certain age (12 or 14) to consent.
- 31 states include HIV in package of STI services to which minors may consent
- 18 states allow physicians to inform parents that a minor is seeking or receiving STI services
- Exceptions:
  - Suspected physical, sexual or emotional abuse
  - At risk for harm to self or others
  - May confidentially report STIs to health department

*www.guttmacher.org/statecenter/adolescents.html
What About Men?

- **Screening men**
  - No documented substantial secondary prevention
  - Costly

- **Highest risk: Partners of chlamydia-infected females**
Expedited Partner Therapy (EPT)

- CDC and medical associations endorse expedited partner therapy (EPT)
- EPT: Providing prescriptions or medications to the patient to take to her partner
  - Without examining partner first
- Two RCTs: EPT useful in assuring partner treatment and reducing repeat infections among heterosexuals

Schillinger et al, Sex Transm Dis 2005
Golden et al, NEJM 2005
Photo courtesy of Dr. Cornelis A. Rietmeijer, Denver Public Health Department
Evolving Landscape of EPT, 2006 - 2013: Legal Status Summary

Map showing the legal status of EPT in different states.

- **EPT is Permissible**
- **EPT is Likely Prohibited**
- **EPT is Potentially Allowable**

Legend:
- 2006
- 2013

States color-coded based on their legal status for EPT from 2006 to 2013.
Gonorrhea screening: Women
Current Recommendations

- The USPSTF recommends that clinicians screen women for gonorrhea infection if at risk.
  - B-rated recommended preventive service

- Risk factors include:
  - Age < 25 years
  - Previous gonorrhea infection, presence or history of other STDs
  - New or multiple partners, commercial sex work, drug use

- Pregnant women should be screened for gonorrhea at the first prenatal visit or at the time of the pregnancy test if linkage to prenatal care may be delayed
  - B-rated recommended preventive service

http://www.ahrq.gov/clinic/uspstf/uspschlm.htm
STD Treatment Guidelines, 2012

Uncomplicated Gonococcal Infections of Cervix, Urethra & Rectum

Recommended Regimen

Ceftriaxone 250 mg as a single intramuscular dose

PLUS

Azithromycin 1 g orally
or Doxycycline 100 mg twice daily for 7 days

Source: MMWR Aug 9, 2012
Syphilis screening: Current Recommendations

- The USPSTF recommends that clinicians screen clients for syphilis infection if at risk.
  - A-rated recommended preventive service

- Risk factors include:
  - Those living in communities with high prevalence of syphilis
  - Those in adult correction facilities
  - Commercial sex worker, persons who exchange sex for drugs, drug use

- Pregnant women should be screened for syphilis at the first prenatal visit or at the time of the pregnancy test if linkage to prenatal care may be delayed
  - A-rated recommended preventive service

http://www.ahrq.gov/clinic/uspstf/uspschlm.htm
HIV Screening: Current Recommendations

- The USPSTF recommends that clinicians screen for HIV infection in adolescents and adults ages 15 to 65 years. A-rated recommended preventive service.

- Younger adolescents and older adults who are at increased risk should also be screened.

- The evidence is insufficient to determine optimum time intervals for HIV screening.

- Repeated screening if to be at risk for HIV infection, actively engaged in risky behaviors, and living or receiving medical care in a high-prevalence setting.
  - A high-prevalence setting is a geographic location or community with an HIV seroprevalence of at least 1%.
  - Settings include clinics with a high prevalence of STDs.

http://www.ahrq.gov/clinic/uspstf/uspschlm.htm
HPV: Natural History of Cervical Infection

- Persistent infection with oncogenic types highest risk for disease progression
- HPV necessary but not sufficient for cervical cancer
- Peak incidence of precancers in late 20’s; of cancers in late 30’s early 40’s

Current ACIP HPV Vaccine Recommendations: Females and Males

- **Routine vaccination of females aged 11 or 12 years with 3 doses of either bivalent or quadrivalent HPV vaccine**
  - Also for 13 through 26 year olds who have not been vaccinated previously or who have not completed the 3-dose series

- **Routine vaccination of males aged 11 or 12 years with 3 doses of quadrivalent HPV vaccine**
  - Also for 13 through 21 year olds who have not been vaccinated previously or who have not completed the 3-dose series
  - Gay, bisexual and other men who have sex with men are recommended to receive vaccine through age 26 years
National Estimated Vaccination Coverage Levels among Adolescents 13-17 Years, NIS-Teen, 2006-2011
HPV Vaccine Communications during the Healthcare Encounter

- HPV vaccine is often presented as ‘optional’ whereas other adolescent vaccines are recommended
- Parents expressed mixed or negative opinions about the vaccine: ‘new vaccine’; concerns over safety/efficacy
- When parents expressed reluctance, providers were hesitant to engage in discussion
- Some providers shared parent’s views that teen was not at risk for HPV and could delay vaccination until older

Goff, et al. Vaccine 2011
Hughes, et al. BMC Pediatrics 2011
Proportion of Women Aged <26 Years with Genital Warts, 2004-2010, Australia

Vaccine first introduced in Australia (dashed line)


73% decrease in genital warts
Genital Warts, Females 2003-2010 by Age Group, U.S. MarketScan® Database

Vaccine first introduced in United States (dashed line)

Incidence per 1,000 person years

Flagg E et al. AJPH 2013 (in press)
Prevalence of HPV 6, 11, 16, 18* in cervicovaginal swabs, by age
NHANES 2003-2006 and 2007-2010

Markowitz, et al. JID 2013 *weighted prevalence

56% decline
Strategies to Increase STI Clinical Preventive Services

- Training medical professionals
- Endorsing screening and vaccination by professional medical associations
- Developing tools and systems to facilitate office-based screening and vaccination
- Disseminating information
- Promoting quality measures to improve care
- Reducing confidentiality barriers
2014 STD TREATMENT GUIDELINES
CDC STD Treatment Guidelines

- Authoritative, evidence-based source for STD clinical management
- Available at 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).
How have you learned about what’s new in the 2010 STD Treatment Guidelines recommendations?

1. I have reviewed the CDC or other available STD Treatment Guideline tables
2. I listened to the CDC webinar or podcast
3. I have read the entire 100+ page document
4. I have read the entire 100+ page document and listened to the CDC webinar or podcast
5. I am not very familiar and am hoping to become so at this session
6. Other
STD Prevention Opportunities with Electronic Health Records and Meaningful Use of Data

- Electronic case-base reporting
- Monitoring adverse outcomes (e.g., PID, ectopic pregnancy, infertility, neurosyphilis)
- Prevention through point-of-care STD clinical decision support systems
- Electronic adoption (computable) of STD clinical guidelines
Resources

- National Network STD/HIV Prevention Training Centers (NNPTCs)
  - nnptc.org
- STD Fact Sheets
  - http://www.cdc.gov/std/healthcomm/fact_sheets.htm
- Vaccine safety
  - http://www.cdc.gov/hpv/vaccinesafety.html
- HPV vaccines for preteens, teens
- HPV vaccines for Providers
  - http://www.cdc.gov/vaccines/who/teens/for-hcp.html
Summary

- Addressing the urgent public health issues of STIs is everyone’s responsibility and Title X providers play a critical role
- Effective prevention interventions are under-utilized
- More holistic and combined prevention interventions
- Research and development of new approaches
  - POC diagnostic tests, effective treatments, and vaccines
  - Effective communication including the use of social media
  - Use of health information technology
  - Systems interventions
Save the Date:
2014 STD Prevention Conference

In collaboration with the 15th IUSTI World Congress and the 2nd Latin American IUSTI-ALACITS Congress

Atlanta, Georgia / USA / June 9-12, 2014

www.cdc.gov/stdconference

Thank you
Questions?

For more information please contact Centers for Disease Control and Prevention

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Telephone, 1-800-CDC-INFO (232-4636)/TTY: 1-888-232-6348
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The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention.