Adolescent Chlamydia Screening in Primary Care: California’s Rapid-Quality Improvement Initiative

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Disclosures

- None.
Presentation Roadmap

- Set the stage: chlamydia burden among adolescents
- Outline goal + aims of the chlamydia rapid-QI project
- Describe project intervention methods
- Share results, key themes, lessons learned = recipe for success
- Describe efforts to scale-up + spread this work
- Summarize take-home points
Chlamydia rates in CA and the US are rising

Chlamydia Incidence Rates, California and the United States, 1990–2017; Rev. 9/2018

CA = 552.2
US = 528.8
Young people are most impacted by skyrocketing Chlamydia rates

Chlamydia incidence rates, California, 2017, by gender and age

<table>
<thead>
<tr>
<th>Age (years)</th>
<th>Male Rate per 100,000</th>
<th>Female Rate per 100,000</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-14</td>
<td>4,000</td>
<td>2,000</td>
</tr>
<tr>
<td>15-19</td>
<td>3,000</td>
<td>1,000</td>
</tr>
<tr>
<td>20-24</td>
<td>2,000</td>
<td>2,000</td>
</tr>
<tr>
<td>25-29</td>
<td>1,000</td>
<td>3,000</td>
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<tr>
<td>30-34</td>
<td>0</td>
<td>4,000</td>
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<tr>
<td>35-44</td>
<td>0</td>
<td>3,000</td>
</tr>
<tr>
<td>45+</td>
<td>0</td>
<td>2,000</td>
</tr>
<tr>
<td>Total</td>
<td>0</td>
<td>1,000</td>
</tr>
</tbody>
</table>
Chlamydia causes adverse health consequences

<table>
<thead>
<tr>
<th>Local Infection</th>
<th>Complication</th>
<th>Sequelae</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Males</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Conjunctivitis</td>
<td>Epididymitis</td>
<td>HIV risk</td>
</tr>
<tr>
<td>Urethritis</td>
<td>Reactive arthritis (rare)</td>
<td>Chronic arthritis (rare)</td>
</tr>
<tr>
<td>Proctitis</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Females</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Conjunctivitis</td>
<td>Endometritis</td>
<td>HIV risk</td>
</tr>
<tr>
<td>Urethritis</td>
<td>Salpingitis</td>
<td>Infertility</td>
</tr>
<tr>
<td>Cervicitis</td>
<td>Perihepatitis</td>
<td>Ectopic pregnancy</td>
</tr>
<tr>
<td>Proctitis</td>
<td>Reactive arthritis (rare)</td>
<td>Chronic pelvic pain</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Chronic arthritis (rare)</td>
</tr>
<tr>
<td><strong>Infants</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Conjunctivitis</td>
<td>Eye and lung infections</td>
<td>Rare, if any</td>
</tr>
<tr>
<td>Pneumonitis</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pharyngitis</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rhinitis</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Many national medical organizations recommend annual chlamydia screening:

- Annual screening of sexually active females ≤24 years
- Screening of adolescent males in high prevalence settings
Chlamydia screening rates need improvement

Estimated Chlamydia Screening Coverage (HEDIS), Females Age 15–24, USA and California, 2010-2015

Source: National Committee on Quality Assurance; California DHCS Division of Medi-Cal Managed Care (2015 not available); Kaiser Permanente Northern CA
Adolescents experience unique challenges to sexual health

**Social or Institutional**
- Lack of sex education
- Confidentiality concerns
- Transportation barriers
- Lack of insurance/$ to pay
- Stigma

**Biological**
- Adolescent cervix
- Lack of immunity from prior infections
- Smaller introitus
- Lack of lubrication (potential abrasions)

**Cognitive**
- Unable to plan ahead for condoms (concrete thinking)
- Serial monogamy leading to multiple partners
- Unable to judge risk (personal fable)

**Behavioral**
- Age at first intercourse
- Sexual activity with new/older partner
- Multiple sexual partners
- Substance/alcohol use

**Stigma**
Numerous factors are associated with reduced risk for adverse sexual health outcomes for adolescents

- Parent engagement, including communication about sex
- School connectedness + future success
- Comprehensive sexual health education
- Peer support for contraception and condoms
- Providers offering safe access to services
**Goal:** Engage primary care in **Rapid-Quality Improvement (QI)** to increase chlamydia screening rates

Traditional QI projects take too long + Many competing priorities

Lean rapid-QI is a short commitment + focuses on process efficiencies
Aim #1

Use rapid-QI methods to help primary care clinics institutionalize sexual health best practices among their adolescent patient panel, specifically:

- Routinize annual sexual activity assessment + alone time w/provider
- Document sexual history in a standard, confidential EHR location
- Order annual chlamydia screen for all sexually active youth
Aim #2

Identify key themes in successful protocols implemented across practices in order to scale up + spread technical assistance statewide.
Primary care partnerships: **Prioritizing clinic outreach**

**Primary Care**

- **Fresno County**
  - Among females age 15-19\(^\dagger\):
    - 2\(^{\text{nd}}\) highest chlamydia rate
    - 7\(^{\text{th}}\) highest teen birth rate
    - 5\(^{\text{th}}\) highest for repeat adolescent births

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Post ACA: More Californians enrolling in Medicaid -- more Medicaid patients being served by community health centers*  

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*California Primary Care Association (CPCA), 2017 State Community Health Center Profile ; ^ Data from 2014
Primary care partnerships: by clinic type/setting
2015-2018

Onsite 1 & 2: hospital out-patient pediatric clinic with a residency program

Onsite 3: federally-qualified health center (FQHC) pediatric clinic in an urban area

Onsite 4: federally-qualified health center (FQHC) pediatric clinic in a rural area
Project Leadership and Expertise

Subject Matter Expertise:

Quality Improvement Expertise:

[Logos of California Department of Public Health, Population Health Improvement Partners, National Quality Improvement Center]
Our QI Process: Lean Rapid-QI Onsite Events (~4 days)

Day 1

Day 2

Day 3

Day 4
Our QI Process: Lean Rapid-QI Onsite Events (~4 days)
Our QI Process: Lean Rapid-QI Onsite Events (~4 days)
Clinics implemented protocol changes across four categories:

- Welcoming Environment
- Assessing Sexual Activity
- Minor Consent & Confidentiality
- Chlamydia Screening
Category 1: Creating a welcoming environment

Create a confidential space to complete risk assessment forms

Proactive information about minor consent & provider alone time protocols
Category 2: Assessing sexual activity

Conduct an annual sexual activity assessment using a standard format.

Don’t Forget Your HEADSSS

Social History Narrative Tips

- Document as a Sensitive Note
  - Open a new note & click the “sensitive” button on top right
  - Date your HEADSS entry
  - Do not put HEADSS or other confidential info in provider notes or social history
  - If you cannot complete a HEADSS during the visit, write in “HEADSS deferred” with the date

HEADSSS Assessment

Write `cheadsss` in the note for the template

Full HEADSSS may include:
- H: Home
- E: Education/Employment
- A: Activities
- D: Drugs (incl. alcohol and tobacco)
- S: Sexuality
- S: Safety
- S: Suicidality/Depression

Other “S” topics may include Spirituality or Strengths.

Adolescent Sexual History Algorithm

Setting the stage

1. I talk to all of my patients about puberty and sex because they are important parts of health. Everything we talk about is between us, unless you tell me you might hurt yourself, might hurt someone else, or that someone has been hurting you.
2. (Relationships) Some of my teen patients are exploring new relationships. Do you have a crush on anyone? Are you dating or seeing anyone?
3. Consider including this discussion during conversations about menstruation or puberty.

- What questions do you have about your body and sex?

- “Teen” means vaginal, which is penis in vagina, only, which is penis in anus, or

- Oral, which is penis in mouth.

- How have you ever had sex with someone?

- If no:
  - (1) Do you have someone you can talk to when you feel ready to have sex?
  - (2) You can come back and talk to me about sex at any time.
  - (3) At least once a year we test young people who are having sex for STDs because they are really common and don’t usually have any symptoms. California law says we can do this without talking to your parents. If you need us to...

- If you:
  - (1) Test for other diseases.
  - (2) Proceed to questions on back page.

Introduce language. I’m going to ask you several questions about your experiences with sex, so that I can help you in making these experiences positive and healthy.
Category 3: Minor consent and confidentiality

Ensure all adolescents have alone time with their provider.

Provide staff training on minor consent and confidentiality laws.
Category 4: Chlamydia screening

Collect *universal* urine
(with some exceptions by visit type)
Practice Improvements: Hospital Out-Patient Clinic, Onsites 1 and 2

**Annual Chlamydia Screening Rate**
Adolescents Ages 12-19 Years

**Well-Check Visits**
- Baseline: 28%
- 1-3 Months Post-Onsite: 58%
- 7-9 Months Post-Onsite: 73%
- 7-9 Months Post-Onsite: 160%

**Drop-In & Follow-Up Visits**
- Baseline: 49%
- 1-2 Months Post-Onsite: 66%
- 1-2 Months Post-Onsite: 35%
Practice Improvements: Federally-Qualified Health Centers, Onsites 3 and 4

- Key decision makers were not bought into the process
- No improvements in chlamydia screening rates

Onsite 3:
- Providers resistant to change
- Changes tested by front desk staff and MAs
- Focus: creating a welcoming environment

Onsite 4:
- A variety of changes were adopted
- Agency leadership redirected staff which interrupted process of sustaining changes
Take Home Lessons: Onsite QI Events

- Rapid-QI methods led to meaningful chlamydia screening improvements when all levels of staff prioritized implementation and follow-up.

- Consistent protocol changes were tested across diverse clinic sites.

- Providing concrete change ideas and technical assistance to institutionalize successful efforts were critical!
Six-month QI effort
Used rapid-PDSA cycles to design and test changes
All training and coaching provided remotely
Enrolled practices located in 8 counties across the state
Assessment and Screening Rates Improved

**Annual Sexual Activity Assessment + Documentation**

- Baseline: 46%
- Post-Project: 39%
- Goal = 90%

**Annual Chlamydia (CT) Screening**

- Baseline: 81%
- Post-Project: 96%
- Goal = 80%
Using Rapid QI to Improve Chlamydia Screening: Take Aways

Rapid QI can improve chlamydia screening rates in primary care!

**Important!**
Quality Improvement and Subject Matter training

Clinics must have buy-in from all levels of administration and staff.

Diverse clinics tested and adopted similar changes to improve rates.
Even if practice improvement ideas feel obvious, remember:

1. Institutionalizing changes in a busy primary care practice is not trivial!

2. Solutions to implementation challenges will look different in every practice.
Thank you!

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NQIC Resource Library: https://californiaptc.com/qi-resources