

Universal STI Screening in the Pediatric Emergency Department

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I have no relevant financial relationships to disclose or conflicts of interest to resolve.



Objectives:

- Screening-based interventions in emergency department (ED) setting
 - What are the barriers?
 - What's out there?
- Why screen for gonorrhea and chlamydia in the ED?
- Current study
 - Methods
 - Preliminary results



Screening-based interventions in the pediatric ED

- Pressure to treat acute health problems vs. desire to prevent future health problems among patients and the community at large.¹
- ED overcrowding is a national issue.
- Routine screening for medical and psychiatric conditions imposes additional burdens on efficient ED flow.



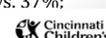
Screening in the ED

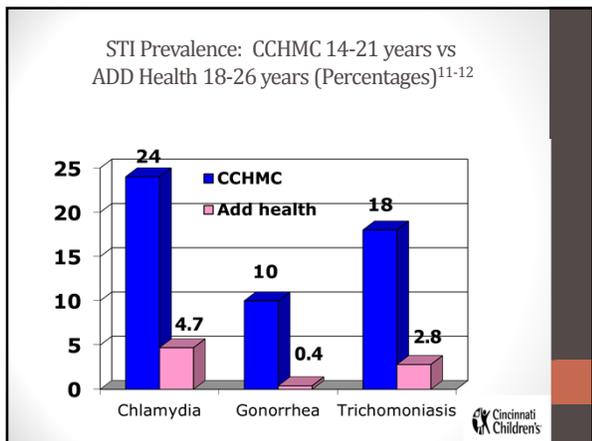
- Smoking
- Mental Health
- HIV



Smoking cessation:

- Prevalence of tobacco use in ED users > national average
- Brief tobacco cessation intervention for parents of PED patients:
 - Dr. Melinda Mahabee-Gittens and colleagues
- At 3-month follow-up:
 - at least one quit attempt (59% vs. 34%; $p < .01$)
 - seriously thinking about quitting (68% vs. 37%; $p < .001$)²





Gonorrhea and Chlamydia screening:

- Is the prevalence in the asymptomatic population significant enough to warrant universal screening?
- Would adolescents be open to being screened?
- Can we get follow up with patients regarding their results to assure proper treatment and preventative counseling?

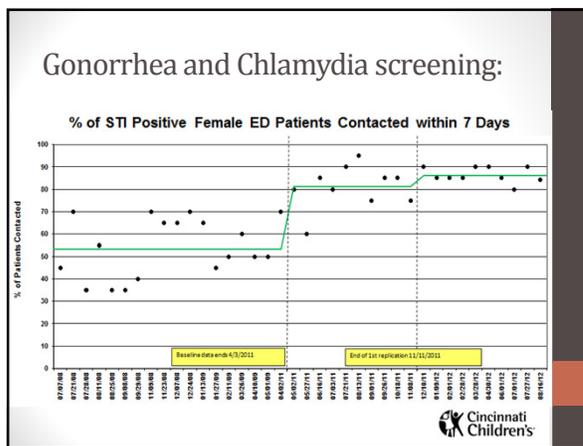
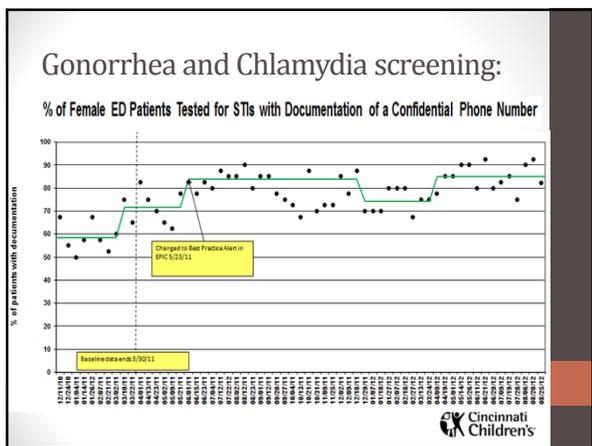
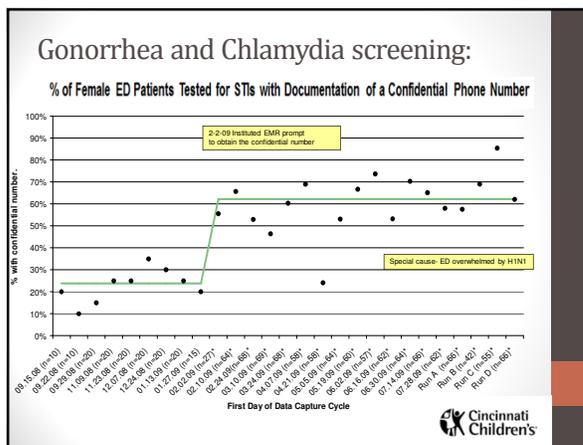
Gonorrhea and Chlamydia screening:

Our goal is to keep you healthy!

You had tests performed on ____/____/____.

Your results should be back in about 3-4 days.

Tell your doctor or nurse today what number we should call to reach you. We will contact you in a few days if your results are positive. You may also call Rachael at **513-226-6573** to get your test results. Please call between 9 AM and 5 PM.



Current Study:

An assessment of asymptomatic gonorrhea and chlamydia prevalence in the Pediatric Emergency Department and patient-related predictors of gonorrhea and chlamydia screening refusals



Current Study:

Aims

1. To determine the prevalence of gonorrhea and chlamydia infections in the asymptomatic adolescent population (ages 14-21 years) in our urban pediatric emergency department.
2. To determine the barriers to universal STI screening in this population.



Aim #1:

- We anticipate that the prevalence of asymptomatic gonorrhea and chlamydia infection among the ED adolescent population will be significant, thus further supporting the future implementation of universal STI screening in the ED setting.
- Over time, this could
 1. Decrease the prevalence of gonorrhea and chlamydia and their secondary complications
 2. Ease the ED burden by decreasing STI-related visits



Aim #2:

- Predictors of screening refusals identified in this study will inform future work that will explore solutions for minimizing screening refusal rates.
- This will lead to increased detection.



Study Design and Setting:

- Prospective study
- Convenience sample
- Adolescents aged 14-21 that present to the ER with non-genitourinary complaints.
- Cincinnati Children's Hospital Medical Center Emergency Department.



Inclusion Criteria:

- Male and female patients
- Ages 14-21 years
- Presenting at our Burnet location (main hospital)



Exclusion Criteria:

- Genitourinary complaint (symptomatic)
- Critically ill or an injury preventing participation
- Non-English speaking
- Developmentally delayed
- Altered mental status due to:
 - Injury
 - Ingestion of substances of abuse or alcohol
 - Medications for conscious sedation



Methods:

- Patients approached to participate
- Parents/guardians asked to leave the room.
- Patient consent/assent to STI screening, a questionnaire or both
 - provide a urine sample to be screened for gonorrhea and chlamydia.
 - Complete a questionnaire
- **The IRB waived the need for both parental consent and written consent/assent from the patient.**



Methods:

- Confidential telephone number is obtained
- Positive results:
 - Notified and a prescription called in to a pharmacy
 - Gonorrhea - instructed to return for ceftriaxone injection
- Pharmacy is later contacted to document treatment.



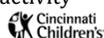
Methods:

- Patients not participating in STI screening are asked to complete a questionnaire
 - consent/assent is obtained
- Questionnaire is completed on a laptop
 - Qualtrics™ online survey software
- Patients who decline STI screening have a slightly different survey than those who agreed.



Why not ask about sexual activity?

- **We hope to reach patients that would not be honest about sexual history**
 - Inaccurate self-reported sexual history¹³
 - 10% with positive STI test reported abstaining from sexual intercourse in the preceding 12 months
 - 6% reported no history of sexual activity ever



Why not ask about sexual activity?

- Physicians can be inconsistent in taking a sexual history:
 - 82% of patients presenting to a PED with an STI-related complaint had a sexual history documented.¹⁴
 - White adolescent females with chief complaints concerning for STIs have sexual histories documented less frequently than black adolescent females¹⁵



Questionnaire:

- Sexual history
- Barriers to accepting screening?
 - Parental presence?
 - Concern about privacy/confidentiality?
 - Concern about negative reactions to a positive test result?
 - Time/Inconvenience?
 - Do not feel they need it?
 - Not sexually active
 - Recently tested elsewhere

This survey was pilot tested on several adolescents in the emergency department to assess for clarity, ease of reading, etc.

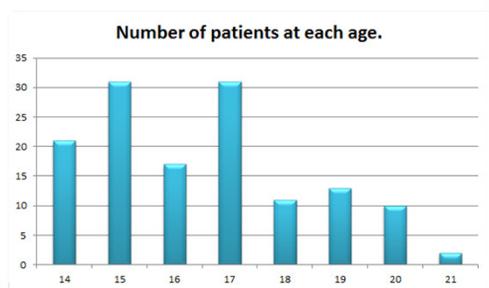


Results:

- **Screened:** 179
- **Declined:** 42
- **Enrolled:** 146
 - Total Urine samples: 102
 - Total Surveys: 116
- **Total Males/Females Enrolled:**
 - Males: 59
 - Females: 78

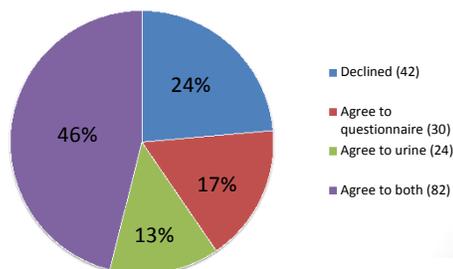


Results:



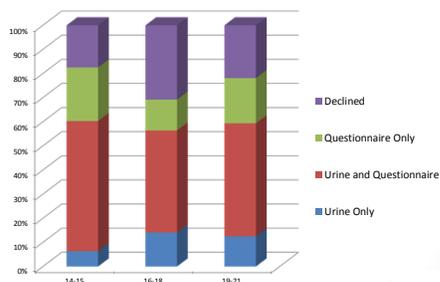
Results:

Enrollment



Results:

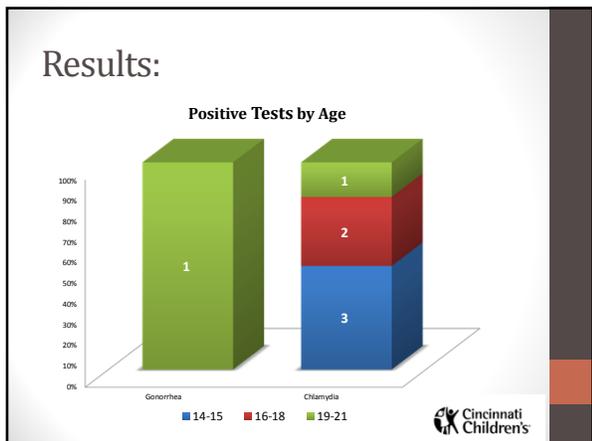
Enrollment by Age Group



Results:

- **Positive tests:**
 - Gonorrhea: 1 (1.2%)
 - Chlamydia: 6 (7.1%)





- ### Results:
- **Case 1:**
 - 19yo African American female with chief complaint: armpit abscess
 - Screening positive for gonorrhea and chlamydia
 - Patient was contacted and instructed to contact Teen Clinic for ceftriaxone injection
 - Patient urine hcg positive
- Cincinnati Children's

- ### Results:
- **Case 2:**
 - 16yo Caucasian female with chief complaint: headache.
 - Patient agreed to participate in urine sample (not survey).
 - Wanted to provide sample without parents knowing.
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Results:

| | | Have you ever engaged in [oral sex, vaginal intercourse, or anal intercourse]? | | Total |
|-----------------------------------|---------|--|-----------|-------------|
| | | Yes | No | |
| Response to STI screening request | Agreed | 52 63% | 30 37% | 82 100% |
| | Refused | 15 44% | 19 56% | 34 100% |
| Total | | 67 58% | 49 42% | 116 100% |

REFUSED TEST - What if you did agree to get tested today? As far as you know, how possible is it that you would test positive for either gonorrhea or chlamydia?

| Answer | Bar | Responses | % |
|------------------------|-------|-----------|------|
| Not at all possible | [Bar] | 29 | 85% |
| Only slightly possible | [Bar] | 1 | 3% |
| Somewhat possible | [Bar] | 1 | 3% |
| Very possible | [Bar] | 1 | 3% |
| Extremely possible | [Bar] | 2 | 6% |
| Total | | 34 | 100% |

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Results:

| | | Have you ever engaged in [oral sex, vaginal intercourse, or anal intercourse]? | | Total |
|-----------------------------------|---------|--|-----------|-------------|
| | | Yes | No | |
| Response to STI screening request | Agreed | 52 63% | 30 37% | 82 100% |
| | Refused | 15 44% | 19 56% | 34 100% |
| Total | | 67 58% | 49 42% | 116 100% |

AGREED TO TEST - As far as you know, how possible is it that you will test positive for either gonorrhea or chlamydia today?

| Answer | Bar | Responses | % |
|------------------------|-------|-----------|------|
| Not at all possible | [Bar] | 58 | 72% |
| Only slightly possible | [Bar] | 15 | 19% |
| Somewhat possible | [Bar] | 7 | 9% |
| Very possible | [Bar] | 1 | 1% |
| Extremely possible | [Bar] | 0 | 0% |
| Total | | 81 | 100% |

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Results:

Did the presence of people in the room, other than your doctor, affect your decision to not get tested today?

| Answer | Bar | Responses | % |
|-----------------|-----|-----------|------|
| No, not at all | | 15 | 88% |
| Yes, somewhat | | 1 | 6% |
| Yes, very much | | 0 | 0% |
| Unsure | | 0 | 0% |
| Yes, completely | | 1 | 6% |
| Total | | 17 | 100% |



Summary

- Screening programs in the PED can be done successfully.
 - Smoking
 - Mental Health
 - HIV
- Universal STI screening in the future??



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- Alison Damon
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Thank you! Questions?

Knock knock. Who's there?
Chlamydia; get checked.



your cards
somecards.com



Results:

Many people your age engage in sexual behaviors including oral sex, vaginal intercourse, or anal intercourse. We do not judge these behaviors as right or wrong, but it's possible to get gonorrhea or chlamydia from any of these.

Have you ever engaged in any of the behaviors described above?

| Answer | Bar | Responses | % |
|--------|-----|-----------|------|
| Yes | | 67 | 58% |
| No | | 49 | 42% |
| Total | | 116 | 100% |



