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Confusion regarding cervical cancer screening and chlamydia screening among sexually active young women

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Abstract

Objective—The American Congress of Obstetricians and Gynecologists (ACOG) recently recommended that cervical cancer screening begin at 21 years of age and occur biennially for low-risk women younger than 30 years. Earlier studies suggested that women may have limited understanding of the differences between cervical cancer screening and chlamydia screening. This study assessed the knowledge of chlamydia and cervical cancer screening tests and schedules in younger women.

Methods—A survey regarding knowledge of chlamydia and cervical cancer screening was administered to 60 younger women aged 18–25 years in an obstetrics and gynaecology clinic at an urban community health centre.

Results—The majority of respondents recalled having had a Pap smear (93.3%) or chlamydia test (75.0%). Although many respondents understood that a Pap smear checks for cervical cancer (88.3%) and human papillomavirus (68.3%), 71.7% mistakenly believed that a Pap smear screens for chlamydia. No respondent correctly identified the revised cervical cancer screening schedule, and 83.3% selected annual screening. Few respondents (23.3%) identified the annual chlamydia screening schedule and 26.7% were unsure.

Conclusion—Many younger women in an urban community health centre believed that cervical cancer screening also screens for chlamydia and were confused about chlamydia screening schedules. As there is limited knowledge of the revised ACOG cervical cancer screening guidelines, there is a risk that currently low chlamydia screening rates may decrease further after these new guidelines are better known. Obstetrician gynaecologists and primary care providers

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should educate younger women about the differences between chlamydia and cervical cancer screening and encourage sexually active younger women to have annual chlamydia screening.

Annual chlamydia screening for sexually active younger women is recommended by the Centers for Disease Control and Prevention, the United States Preventive Task Force, the American Academy of Family Physicians and the American Congress of Obstetricians and Gynecologists (ACOG) for those aged 24–25 years and younger to reduce the burden of ensuing sequelae.¹ Chlamydia, the most prevalent bacterial sexually transmitted infection in the USA, is often asymptomatic in women, and untreated infections can result in pelvic inflammatory disease, infertility and ectopic pregnancy.² The incidence of chlamydia continues to increase in the USA, but screening rates are consistently below 50% despite often being combined with cervical cancer screening.^{2–4} Studies suggest that most women understand the importance of chlamydia screening, but are still not being tested.^{5,6}

In 2009, ACOG revised the cervical cancer screening guidelines to delay screening until the age of 21 years, regardless of the age at sexual debut, and recommended biennial screening to replace annual screening for low-risk women under the age of 30 years.⁷ There is concern that chlamydia screening will decrease as these revised guidelines are adopted because in general practice these tests are often combined.⁸ Furthermore, some studies have shown that younger women exhibit limited knowledge of the difference between screening for cervical cancer and screening for chlamydia.^{9,10} There are not yet any published studies addressing the knowledge of new cervical cancer screening guidelines.

In this study, we assessed the understanding of cervical cancer screening and chlamydia screening among younger women in an obstetrics and gynaecology clinic at an urban community health centre in Roxbury, a neighbourhood of Boston, Massachusetts, USA, with a substantial proportion of minority and low-income residents.¹¹ The incidence of chlamydia in Roxbury was 1084.4 per 100 000 in the population in 2008, which was more than twice that of the USA.^{11,12} This study was conducted to guide outreach and inform educational messages to increase chlamydia screening.

MATERIALS AND METHODS

This cross-sectional study was conducted from June 2010 to July 2011 and was approved by our institution's Committee on Clinical Investigations. Participant recruitment took place from June to August 2010 and from June to July 2011, because two investigators were available to conduct the verbal survey at these times. All English-speaking women aged 18–25 years who visited the Dimock Center's Obstetrics and Gynecology Clinic during the study period for any reason were eligible, from a total of approximately 500 women in this age group seen annually.

A convenience sample of participants was recruited to complete a verbal survey (see supplementary appendix, available online only) consisting of 17 multiple-choice and open-ended questions administered by one of two investigators in a private room. One investigator coded responses to open-ended questions.

All analyses were performed using SAS V.9.2. Data are presented as proportions or means with SD. Proportions were compared using Fisher's exact test.

RESULTS

Sixty women agreed to complete the survey. Their mean age was 22.2 years (± 1.9). Twenty-seven (45.0%) respondents identified as non-Hispanic African American, and seven (11.7%) identified as Hispanic African American. Seventeen (28.3%) identified as Hispanic and

another race (ie, native American, Caucasian, or other), six (10.0%) identified as more than one race, and three (5.0%) identified as another race. The most common reasons for the clinic appointment were obstetrics (36.7%), family planning (28.3%), acute illness or symptom (18.3%) and routine physical (11.7%).

Among respondents, 93.3% recalled having a Pap smear and 75.0% recalled having a previous chlamydia test. While most respondents knew a Pap smear checks for human papillomavirus (68.3%) or cervical cancer (88.3%), many erroneously believed that a Pap smear checks for chlamydia (71.7%), HIV (18.3%), or gonorrhoea (13.3%) (table 1). Women younger than 21 years were less likely to understand that a Pap smear checks for cervical cancer (63.6%) than women between 21 and 25 years (93.9%; $p=0.02$).

No respondent was aware that the recommended interval for cervical cancer screening is every 2 years, and 83.3% of respondents thought that cervical cancer screening should occur annually. For chlamydia screening, only 23.3% correctly identified the screening schedule as annual, although some were aware of testing when worried about exposure to a sexually transmitted infection (10.0%) or after unprotected sexual intercourse (11.7%). Nearly all (97.8%) respondents with a previous chlamydia test also reported having a Pap smear. Women who reported a previous Pap smear were more likely to report a previous chlamydia test (83.0%) than women who did not report a previous Pap smear (25.0%; $p=0.03$).

DISCUSSION

The majority of younger women in this study erroneously believed that cervical cancer screening also tests for chlamydia, and a substantial proportion incorrectly thought that cervical cancer screening also tests for HIV and gonorrhoea. Consistent with another study in the USA, we found that women were more likely to have had chlamydia screening if they had had a previous Pap smear.⁸ This raises concerns that informing urban younger women of the delayed and less frequent cervical cancer screening guidelines may negatively affect chlamydia screening in this population.

Due to the demographics of the study, the results are not necessarily generalisable to all younger women in the USA. However, the high incidence of chlamydia in the population served by this clinic is similar to that among other urban minority populations, which potentially makes our findings generalisable to other high-risk communities.¹² In addition, given that respondents confuse cervical cancer screening and chlamydia screening, they may have inaccurately reported which test was performed. We did not verify the self-reported test history.

In contrast to other studies that examined the factors that prevent organisations or physicians from achieving the recommended chlamydia screening, this study identified patient confusion between cervical cancer screening and chlamydia screening as a potential target for interventions to increase screening. Chlamydia incidence in the USA has risen in the past decade.³ Identifying potentially harmful misconceptions may help providers design methods to educate younger women about the revised ACOG cervical cancer screening schedule without negatively affecting chlamydia screening.

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Key messages

- ▶ The incidence of chlamydia in the USA has increased in the past decade, but annual screening rates are still less than 50%.
- ▶ Chlamydia screening is often combined with cervical cancer screening, but new guidelines call for later and less frequent cervical cancer screening.
- ▶ Many women erroneously believe that cervical cancer screening also tests for chlamydia, HIV and gonorrhoea.

Table 1

Understanding of cervical cancer screening and chlamydia screening

| Survey question | n (%) [*] n=60 |
|-------------------------------|----------------------------|
| A pap smear checks for | |
| Cervical cancer | 53 (88.3%) |
| Human papillomavirus | 41 (68.3%) |
| Chlamydia | 43 (71.7%) |
| HIV | 11 (18.3%) |
| Gonorrhoea | 8 (13.3%) |
| Not sure | 4 (6.7%) |
| I should get a Pap smear | |
| Once every 2 years | 0 (0.0%) |
| Once a year | 50 (83.3%) |
| Not sure | 4 (6.7%) |
| I should get a chlamydia test | |
| Once a year | 14 (23.3%) |
| When worried about exposure | 6 (10.0%) |
| After unprotected sex | 7 (11.7%) |
| Not sure | 16 (26.7%) |

* Respondents were allowed to select multiple answer choices; some answer choices are not listed.