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Human Papillomavirus among Gay and Bisexual Men: The Need for Education and Vaccination

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HPV Knowledge Quiz

TRUE OR FALSE?

1. HPV is a "women's disease."
2. Men can receive the HPV vaccine.
3. HPV infection can lead to genital warts.
4. HPV can lead to cancers of the genitals, anus, mouth, and throat.
5. Men who have sex with men are at higher risk for developing an HPV-related cancer.

Answers……

- HPV is a women's disease. **FALSE.**
  - Both men and women can be infected with HPV and both can develop HPV-related cancers.
- Men can receive the HPV vaccine. **TRUE.**
  - The HPV vaccine was approved for use among men in 2009.
- HPV infection can lead to genital warts. **TRUE.**
  - HPV infection can lead to genital warts.

Answers……

- HPV can lead to cancers of the genitals, anus, mouth, and throat. **TRUE.**
  - HPV can lead to cervical, vulvar, penile, anal, mouth, and throat cancers, among others….
- Men who have sex with men are at higher risk for developing an HPV related cancer. **TRUE.**
  - In the United States, rates of anal cancer among MSM are higher than rates of cervical cancer among women.*

Chin-Hong, P. V., Vittinghoff, E., Cranston, R. D., Browne, L., Buchbinder, S., Colfax, G., Da Costa, M., Darragh, T., Benet, D. J., Judson, F., Koblin, B., Mayer, K. H., & Palefsky, J. M. (2005). Age-related prevalence of anal cancer precursors in homosexual men: The EXPLORE study. *Journal of the National Cancer Institute, 97*(12), 896-905.

HPV 101

CDC Fact Sheet

Genital HPV

What is genital HPV infection?

Genital human papillomavirus (HPV) is the most common sexually transmitted infection (STI). There are more than 40 HPV types that can infect the genital areas of men and women, including the skin of the penis, vulva (area outside the vagina), and anus, and the linings of the vagina, cervix, and rectum. You cannot see HPV. Most people who become infected with HPV do not even know they have it.

HPV 101: Basics

- Most common STI in the US: At least 50% of sexually active men and women acquire genital HPV infection.
- Most people do not develop health problems from HPV (virus clears on its own).
- Low-risk vs. high-risk types.
- Genital warts and genital cancers.

HPV 101: Screening

- No approved test for men.
- Women advised to get regular PAP tests (and HPV DNA test) for cervical cancer prevention.
- Some providers suggest yearly anal PAPs for gay/bisexual men and HIV+ men.
- Genital warts diagnosed by visual exam.

HPV 101: Transmission and Prevention

- Genital (skin-to-skin) contact; vaginal or anal sex.
- Symptoms need not be present for transmission.
- Condoms lower risk of transmission.
- More partners=more exposure=more risk.
- Vaccination is safe and effective prevention for men and women.

October 2009: GARDASIL® approved for genital wart prevention in boys and men

U.S. Food and Drug Administration

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FDA NEWS RELEASE

For Immediate Release: Oct. 16, 2009

Media Inquiries: Shelly Burgess, 301-796-4651, shelly.burgess@fda.hhs.gov
Consumer Inquiries: 888-INFO-FDA

FDA Approves New Indication for Gardasil to Prevent Genital Warts in Men and Boys

The U.S. Food and Drug Administration today approved use of the vaccine Gardasil for the prevention of genital warts (condyloma acuminata) due to human papillomavirus (HPV) types 6 and 11 in boys and men, ages 9 through 26.

Each year, about 2 out of every 1,000 men in the United States are newly diagnosed with genital warts.

Gardasil currently is approved for use in girls and women ages 9 through 26 for the prevention of cervical, vulvar and vaginal cance caused by HPV types 16 and 18; precancerous lesions caused by types 6, 11, 16, and 18; and genital warts caused by types 6 an 11.

HPV is the most common sexually transmitted infection in the United States and most genital warts are caused by HPV infection.

"This vaccine is the first preventive therapy against genital warts in boys and men ages 9 through 26, and, as a result, fewer men will need to undergo treatment for genital warts," said Karen Midthun, M.D., acting director of the FDA's Center for Biologics Evaluation and Research.

Gardasil's effectiveness was studied in a randomized trial of 4,055 males ages 16 through 26 years old. The results showed that in men who were not infected by HPV types 6 and 11 at the start of the study, Gardasil was nearly 90 percent effective in preventin

Dec. 12, 2010:GARDASIL® approved for prevention of anal cancer.

U.S. Department of Health & Human Services www.hhs.gov

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FDA NEWS RELEASE

For Immediate Release: Dec. 22, 2010
Media Inquiries: Shelly Burgess, 301-796-4651, shelly.burgess@fda.hhs.gov
Consumer Inquiries: 888-INFO-FDA

FDA: Gardasil approved to prevent anal cancer

The U.S. Food and Drug Administration today approved the vaccine Gardasil for the prevention of anal cancer and associated precancerous lesions due to human papillomavirus (HPV) types 6, 11, 16, and 18 in people ages 9 through 26 years.

Gardasil is already approved for the same age population for the prevention of cervical, vulvar, and vaginal cancer and the associated precancerous lesions caused by HPV types 6, 11, 16, and 18 in females. It is also approved for the prevention of genital warts caused by types 6 and 11 in both males and females.

"Treatment for anal cancer is challenging; the use of Gardasil as a method of prevention is important as it may result in fewer diagnoses and the subsequent surgery, radiation or chemotherapy that individuals need to endure," said Karen Midthun, M.D., director of the FDA's Center for Biologics Evaluation and Research.

Although anal cancer is uncommon in the general population, the incidence is increasing. HPV is associated with approximately 90 percent of anal cancer. The American Cancer Society estimates that about 5,300 people are diagnosed with anal cancer each year in the United States, with more women diagnosed than men.

Gardasil's ability to prevent anal cancer and the associated precancerous lesions [anal intraepithelial neoplasia (AIN) grades 1, 2, and 3] caused by anal HPV-16/18 infection was studied in a randomized, controlled trial of men who self-identified as having sex with men (MSM). This population was studied because it has the highest incidence of anal cancer. At the end of the study period, Gardasil was shown to be 78 percent effective in the prevention of HPV 16- and 18-related AIN. Because anal cancer is the same disease in both males and females, the effectiveness data was used to support the indication in females as well.

GARDASIL®

- Licensed by Merck & Co.
- 2006 FDA approval for prevention of cervical cancer and genital warts (females).
- Quadrivalent vaccine protective against types 6,11,16, and 18.
- 3 dose regimen over 6 months.
- Approved for men and women aged 9-26 years.

GARDASIL®

- ACIP universal recommendation for females (and covered by most insurance); "permissive" recommendation for males.
- Out-of-pocket cost about $400.
- Risk higher for gay/bi men and HIV+ men, current debate about future indication: universal vaccination for all boys or targeted vaccination based on risk factors*.

- * Kim, JJ. **Focus on Research: Weighing the Benefits and Costs of HPV Vaccination of Young Men. *NEJM.* Feb 3, 2011; 364(5): 393-5.**

Acceptability of the HPV vaccine among Men: Research Findings

- A 2010 literature review indicated that 74% - 78% of college men reported they were willing to get the HPV vaccine, compared to 33% of men in a community sample.[1]

- In a 2010 national study, 39% of heterosexual men had never heard of HPV, 42% had heard of it, but had low knowledge scores, and 37% were willing to be vaccinated (after learning of the availability of the vaccine).[2]

- In a similar 2010 national study among gay and bisexual men, ***HPV-related knowledge and acceptability were higher***; 73% had heard of the vaccine and 74% were willing to get it.[3]

1 Liddon, N., Hood, J., Wynn, B. A., & Markowitz, L. E. (2010). Acceptability of human papillomavirus vaccine for males: A review of the literature. *Journal of Adolescent Health, 46*(2), 113-123. doi:10.1016/j.jadohealth.2009.11.199

2 Reiter, P. L., Brewer, N. T., & Smith, J. S. (2010). Human papillomavirus knowledge and vaccine acceptability among a national sample of heterosexual men. *Sexually Transmitted Infections, 86*(3), 241-246.

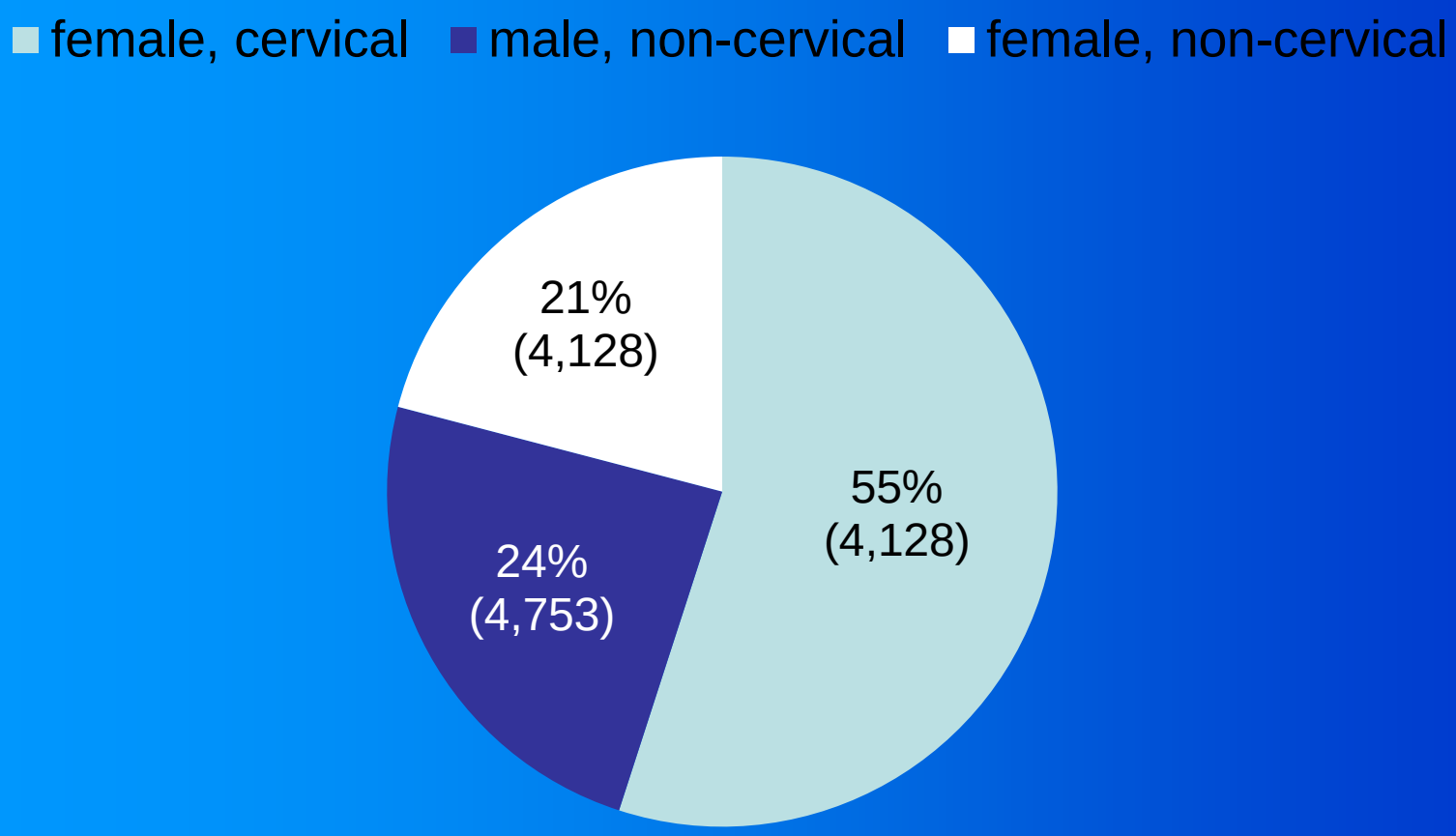
3 Reiter, P. L., Brewer, N. T., McRee, A. L., Gilbert, P., & Smith, J. S. (2010). Acceptability of HPV vaccine among a national sample of gay and bisexual men. *Sexually Transmitted Diseases, 37*(3), 197-203.

Rates of HPV infection

- Rates of HPV infection among men and women are similar*
- At least 50% of sexually active men and women will be infected with HPV in their lives
  - The MAJORITY of sexually active college students become infected with HPV
  - Multiple “type” HPV infection is not uncommon

Giuliano, A. R., Lee, J. H., Fulp, W., Villa, L. L., Lazcano, E., Papenfuss, M. R., . . . Smith, D. (2011). Incidence and clearance of genital human papillomavirus infection in men (HIM): A cohort study. *Lancet, 377*(9769), 932-940.

HPV-related cancers in the United States 1998 – 2003



Data from: Chaturvedi, A. K. (2010). Beyond cervical cancer: Burden of other HPV-related cancers among men and women. *The Journal of Adolescent Health : Official Publication of the Society for Adolescent Medicine, 46*(4)

HPV-related cancers

- 4% of all cancers are related to HPV[1]
- Risk factors for HPV infection include higher number of lifetime sex partners, infrequent condom use, and smoking
- Anal HPV infection has been called “nearly universal” among gay and bisexual men who are 17 times more likely to develop anal cancer[2]

1. Stanley, M. (2010). Pathology and epidemiology of HPV infection in females. *Gynecologic Oncology, 117(2) Suppl*, S5-10.
2. Vajdic, C. M., van Leeuwen, M. T., Jin, F., Prestage, G., Medley, G., Hillman, R. J., Stevens, M. P., Botes, L. P., Zablotska, I., Tabrizi, S. N., & Grulich, A. E. (2009). Anal human papillomavirus genotype diversity and co-infection in a community-based sample of homosexual men. *Sexually Transmitted Infections, 85*(5), 330-335.

Rates of HPV vaccination

- Rates of HPV vaccination among men are currently unknown, but are assumed to be low
- Rates of HPV vaccination among women vary between 12% and 44%
  - RI has one of the highest HPV vaccination rates
  - Vaccination rates are higher among college students

Genital Warts…..

- 6 million cases are diagnosed annually
- The CDC estimates that 1% of the population has genital warts
- 5.6% of 18-to 59-year olds reported having ever been diagnosed with genital warts*

Dinh, T. H., Sternberg, M., Dunne, E. F., & Markowitz, L. E. (2008). Genital warts among 18- to 59-year-olds in the united states, national health and nutrition examination survey, 1999--2004. *Sexually Transmitted Diseases, 35*(4), 357-360.

HPV-related research on campus

- **Women**: Research ongoing since 2009, *funded by Merck & Co.*
  - Aim 1: To develop measures of readiness to receive the HPV vaccine using the Transtheoretical Model of Change framework. **DONE**
  - Aim 2: To develop a computer-tailored intervention (CTI) to increase HPV vaccination. **DONE**
  - Aim 3: To assess the feasibility, acceptability and initial efficacy of the CTI. **ONGOING**

HPV-related research on campus

- Men: Dissertation research, Spring 2011, *EGRA funding received*
  - Aim 1: To develop measures of readiness to receive the HPV vaccine using the Transtheoretical Model of Change as a framework.
  - Aim 2: To examine HPV-related knowledge, Descriptive norms, Perceived Risk, and vaccine mistrust among men AND women.
  - Aim 3: To compare men and women across all constructs measured

Study Recruitment

- Paid Research Opportunity Available:
  - See flyers
  - Interested students can contact Anne
    - annefernandez@gmail.com
    - (401) 874-9137

HIV Prevention Study for Gay and Bisexual Men

- New HIV Prevention Study for Men

  Dr. Michelle Lally is recruiting participants for a new Internet-based research study. We're interested in learning more about what gay and bisexual men think of the pros and cons of condoms, as well as situations that may make it tempting to have unprotected sex.

- You may be eligible to participate in a brief, confidential online survey if: you're male, HIV-negative, between the ages of 18 and 50, have had 2 or more male sexual partners in the past year, and have access to a computer.

- **If you're interested in learning more about the study, click on this link:**
- **http://www.zoomerang.com/Survey/WEB22BJ3ADD7UV/**

- The survey takes about 30 minutes to complete. For each completed survey received, Dr. Lally will offer to donate $10 to Youth Pride, Inc to help support programs for GLBTQ youth in Rhode Island.
- For more information, you can go to the link or call the principal investigator, Dr. Michelle Lally at 401-793-4770.

Conclusions/Questions?

- Copies of these slides available upon request

annefernandez@gmail.com