Published in final edited form as:

J Pediatr Adolesc Gynecol. 2014 April ; 27(2): 83–92. doi:10.1016/j.jpag.2013.08.011.

Racial and ethnic differences in HPV knowledge, attitudes, and vaccination rates among low-income African-American, Haitian, Latina and Caucasian young adult women

Natalie Pierre Joseph, MD, MPH¹, Jack A. Clark, Ph.D², Glory Mercilus, BS, MA¹, MaryAnn B. Wilbur, MD, MPH⁴, Jean Figaro, MD, MS¹, and Rebecca Perkins, MD, MSc³

Natalie Pierre Joseph: napierre@bu.edu; Jack A. Clark: jaclark@bu.edu; Glory Mercilus: gmercilu@bu.edu; MaryAnn B. Wilbur: mwilbur3@jhmi.edu; Jean Figaro: jean.figaro@bmc.org; Rebecca Perkins: rebecca.perkins@bmc.org

¹Department of Pediatrics, Boston Medical Center and Boston University School of Medicine, Boston, MA

²Boston University School of Public Health, Boston MA

³Department of Obstetrics and Gynecology, Boston University School of Medicine

⁴Department of Gynecology & Obstetrics, Johns Hopkins Hospital, 600 North Wolfe Street, Phipps 279, Baltimore, MD 21287, work phone: 410-997-0040

Abstract

Objective—To examine facilitators and barriers to HPV vaccine uptake in African-American, Haitian, Latina, and White women ages 18–22 and to determine vaccination completion rates among participants over 5 years.

Design—Using semi-structured interviews and medical record review, we assessed HPV knowledge and attitudes towards HPV vaccination among young women. We then determined their subsequent HPV vaccination initiation and completion rates. We used constructs from the Health Belief Model and methods based in grounded theory and content analysis to identify attitudes towards HPV vaccination cues to initiate vaccination, perception of HPV, and how communication about issues of sexuality may impact vaccine uptake.

Participants—We enrolled 132 African-American, Haitian, Latina, and White women aged 18–22 years who visited an urban academic medical center and two affiliated community health centers between the years 2007 and 2012.

Main Outcome Measures—Intent to vaccinate and actual vaccination rates

Results—Of 132 participants, 116 (90%) stated that they were somewhat or very likely to accept HPV vaccination if offered by their physician, but only 51% initiated the vaccination over the next 5 years. Seventy-eight percent of those who initiated vaccination completed the 3 doses of the HPV vaccine series. Forty-five percent (45%, n=50) of the adolescents who started the series completed three doses over a five year period: forty-two percent African-American (n=16), thirty-three percent Haitian (n=13), sixty-three percent Latina (n=10), and sixty-five White young

Correspondence to: Natalie Pierre Joseph, napierre@bu.edu.

Office number: 617-414-5216; Fax: 617-414-4092

Publisher's Disclaimer: This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final citable form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

women (n=11) completed the three-dose series. Despite low knowledge, they reported high levels of trust in physicians and were willing to vaccinate if recommended by their physicians.

Conclusion—Desire for HPV vaccination is high among older adolescents, physician recommendation and use of every clinic visit opportunity may improve vaccine uptake in young women. More White young women completed the HPV vaccine series compared with other race and ethnic young women.

Keywords

HPV vaccine; young adult women; HPV; cervical cancer prevention in young adult women

Introduction

Human Papillomavirus (HPV) infection causes nearly all (99%) cases of cervical cancers, with an annual US burden of about 12,000 cases of cervical cancer and 4000 deaths.¹⁻⁴ Overall, an average of 33,369 HPV-associated cancers (10.8 per 100,000 population) were diagnosed annually during 2004-2008: 21,290 among females.¹ Cervical cancer was the most common of these cancers; oropharyngeal cancer was the second most common, with an average of 11,726 cases annually (2,370 among females and 9,356 among males).¹ HPV prevalence increases significantly among females aged 14 to 24 years with each year of age.^{2,3,4} In the United States, the incidence and mortality rates of cervical cancer are higher among Black and Latina low-income women than White affluent women.^{1,5} Cervical cancer incidence and mortality are 25% and 95% higher among Blacks, respectively, and 53% and 41% higher among Latinas, respectively, compared to White women.⁶ Despite the decline in cervical cancer rates among all women, cervical cancer incidence rates are highest among women living in low socioeconomic areas.⁷ In some low-income communities, cervical cancer incidence and mortality rates approach the rates seen in developing nations.^{6,7}

HPV vaccination can protect against two oncogenic HPV types 16 and 18, which are responsible for 70% of cervical cancers.^{1,4} Since 2006, the Advisory Committee on Immunization practice has recommended routine Quadrivalent HPV vaccination for girls aged 11 to 12 years, with catch-up immunization through age 26.^{1,4} The benefits and cost-effectiveness of HPV vaccination decline with age because women become more sexually active as they enter their twenties and are at higher risk of HPV infection.^{3,8-10} However, the quadrivalent HPV vaccine can protect against strains these young women may not have been exposed to, making them an important catch-up population for the HPV vaccine.^{3,8,9} In 2010, approximately 22% of women aged 19–26 years in the USA had received at least one dose of the HPV vaccine.¹⁰ Given the higher rate of cervical cancer mortality in African-American, Haitian, and Latina women, increasing HPV vaccination rates in these populations could help reduce cervical cancer disparities observed between Black and/or Latina women and White women.

The purpose of this study was to examine how the knowledge, attitudes, and beliefs related to HPV disease and HPV vaccination affect vaccine uptake among young adult African-American, Haitian, Latina, and White women ages 18–22.

Material and Methods

Study Design

To gain insight on what factors might influence HPV vaccine acceptability, we used quantitative and qualitative methods to assess knowledge, attitudes, and beliefs regarding HPV vaccination among Haitian immigrant, African-American, Latina and White young adult women ages 18–22. We then compared their subsequent vaccination rates determined

by medical record review. The Boston University Medical Center Institutional Review Board approved the study.

Study Setting and subjects

Our study took place in the pediatric and adolescent departments in an urban academic medical center and two affiliated community health centers. The outpatient clinic at the academic medical center has over 10,000 patient visits annually, many from low-income ethnic minority families (35% African-American, 15% Haitian-American, 30% Latino, and 10% other). Of the two community health centers, one serves a predominately low-income Haitian immigrant population (75% of patients) and the other serves a predominantly Latina population (80% of patients).

We recruited English, Haitian Creole, and Spanish-speaking individuals between July 2007 and January 2009. Participants were eligible for inclusion if they were ages 18–22 and self-identified as White, African-American, Latina or Haitian (U.S.-born or immigrants). Participants were excluded if they were pregnant or had received HPV vaccination. The age was limited to 22 as this was the upper age limit of girls seen in the pediatric and adolescent clinics at the study sites.

Instruments

Quantitative Study Instrument

The interview assessed demographic information, knowledge about HPV-related disease and HPV vaccination, personal experience with HPV, level of trust in physician, and intent to vaccinate. To assess HPV disease and vaccine knowledge, study participants answered eight validated true or false questions related to HPV transmission and its association with abnormal Pap smears and cervical cancer.¹¹ After the knowledge assessment, participants received a short educational paragraph about HPV disease for their own knowledge.¹ Participants were asked about personal experience with abnormal Pap tests, genital warts, and cervical cancer.¹² Participants' level of trust in their physician was assessed on a 4-point Likert scale, to the following question: "How much of the time do you think you can trust physicians or health care providers to do what is best for their patients?" We also assessed participants' intent to vaccinate on a 4-point Likert-scale by asking: "If the doctor recommends the HPV vaccine for you today, how likely are you to get vaccinated?"

Qualitative Study Interview

Qualitative questions were designed to understand perceptions that may be barriers to HPV vaccine acceptance, and included constructs of the Health Belief Model: perceived severity, perceived susceptibility, perceived benefits, and perceived barriers.^{13, 14} Participants' responses were probed to elicit detailed explanations. We asked participants about their attitudes and beliefs towards HPV vaccination, the appropriate time to vaccinate relative to initiation of sexual activity, adolescent female sexual behavior, and parent-daughter communication about sexuality issues.

¹The wording of the educational paragraph was: HPV is a virus. HPV is spread from one person to another by contact with the skin of the vagina or penis. People usually catch HPV from having sex, but they can catch it from touching someone else's genitals, even if they do not have sex. Condoms can decrease the chance that a person catches HPV, but they are not 100% effective. There is a vaccine to prevent HPV. HPV can't be cured with antibiotics because it is a virus. Sometimes after someone catches HPV, it never goes away. If this happens, it can cause problems. HPV can cause abnormal PAP smears, warts on the penis or vagina, and cancer of the cervix (uterus or womb), anus, and mouth.

Determination of HPV Vaccination

To assess the relationship between intention and actual vaccination rates for initiation and completion, electronic medical records were reviewed following the interview on day of enrollment, 12 months later to determine whether the participant had initiated HPV vaccination as well as 5 years from study enrollment. Documentation of HPV vaccination (Gardasil-Quadrivalent HPV vaccine) is noted in the participant's immunization record, a nursing note describing Gardasil injection, or a pharmaceutical order for Gardasil were considered evidence of vaccination.

Data Collection

Young women were interviewed during clinic visits. The semi-structured interviews, which were 20–30 minutes in length, were conducted in the language preferred by the study participant. English, Spanish, and Haitian Creole native speakers recorded and transcribed each interview verbatim. To ensure accuracy of interviews conducted in Haitian Creole and Spanish, transcripts were translated into English by a bilingual investigator and independently reviewed by two additional bilingual speakers. Upon completion of the interview, study participants received a \$10 gift certificate as compensation for participation.

Data Analysis

We compared the demographics, HPV knowledge, intent to vaccinate, and vaccination rates among study participants. Correct responses to the knowledge scale were added to create a total knowledge score (range: 0–8). Categorical variables were assessed with chi-square and Fisher's exact tests. T-tests were used to assess continuous variables. Analysis of variance (ANOVA) was used to determine whether mean knowledge scores differed by race. Tukey's *post hoc* procedure was applied to identify specific differences in knowledge scores between races. P-values less than 0.05 were considered significant. Analyses were conducted with SAS 9.2.

Qualitative data were analyzed using methods based on ground theory and content analysis.¹⁵ Four investigators assessed interview responses for meaningful content and common themes regarding risks, barriers, benefits, and attitudes toward HPV vaccination. Category codes were formulated based on similarity of content and assessed for generalization. From this analysis, a systematic coding system was applied for all subsequent interview responses. The codes were synthesized into themes. We then evaluated the associations between themes and race/ethnicity, intent to vaccinate against HPV, and receipt of the HPV vaccine.

Results

Of 132 patients, 45 (34%) were African-American, 47 (36%) Haitian, 20 (15%), Latina, and 20 (15%) White. Average age was 19 years (SD 1.2) (Table 1). Over half of the participants had completed high school (55%) and less than a third were in college with Caucasian participants more likely to reach this educational level ($p=0.03$). Most study participants were single (78%), and spoke English as their primary language (80%). As expected, the percentage of respondents that spoke English differed significantly by race ($p<0.0001$) (Table 1). Over half of participants ($n=81$, 61%) indicated they practice a religion with Haitian participants being more likely to do so ($p=0.007$). Most participants had at least one prior sexual partner (98 (74%)) with African-American participants having a higher level of ever having sex than women of other races (Haitians, Latina and Whites (98%, 65%, 89%, 75%; $p<0.0001$).

Personal experience with HPV-related diseases

About one-third (33%) of participants had personal experience or knew someone who had with an abnormal pap smear (Table 1). Experience with an abnormal pap smear varied significantly by race, with only 13% of Haitian women reporting a personal experience compared to 44% of African-American, 45% of Latina, and 45% of White women ($p=0.002$). Few women knew someone with genital warts (14%) or cervical cancer (13%), and responses did not differ significantly across groups.

Trust in physicians

Almost all participants (94%) reported a high level of trust in their physicians, with only 10% ever declining a recommended vaccine. No Latinas had ever declined a recommended vaccine.

Knowledge of HPV

Table 2 shows adolescents' knowledge of HPV and HPV vaccine across race/ethnicity. The majority of participants (83%) reported having heard of HPV, and 74% knew there was an HPV vaccine available (Table 3). Haitian women had the lowest mean knowledge scores ($p=0.0002$) (Table 3), and were the least likely to report having heard of HPV infection (72%) compared with White (100%), African-American (87%) and Latina (85%) women ($p=0.05$). Haitian women were also least likely to know that HPV infection is sexually transmitted ($p<0.0001$), can be asymptomatic ($p=0.004$), cause an abnormal pap smear ($p=0.002$) or cervical cancer ($p<0.0001$). Overall, Haitians were the least knowledgeable about HPV infection and its vaccine while Whites were the most knowledgeable.

HPV vaccination intent and receipt

The majority of patients (90%) stated that they were "somewhat" or "very likely" to accept the HPV vaccine if recommended by their physician (Table 1). Yet, only 51% of participants who expressed intent to vaccinate received the first dose HPV vaccination following the interview (Table 3). Forty-eight percent of participants received the first dose of the vaccination with Whites recording the highest initiation rate (65%, $p=0.11$) (Table 3). Seventy-eight percent (78%) of the adolescents who started the series completed three doses over a five year period. The average time to complete the vaccines (among those who did) was 19 months. Median was 18 months, and the range was 6 – 49 months.

Predictors of intent and receipt of HPV vaccine

Married adolescents were less likely to intend to receive the HPV vaccine (50%) compared to those who were single (92%) or in non-married partnership (91%), $p=0.02$ (Table 4). Sexual activity did not prove to be a determining factor in intention to vaccinate, $p=0.44$. Adolescents with a high level of trust in their physicians were more likely to indicate intention (92%) compared to those who did not trust their doctors (57%), $p=0.02$. No factors predicted receipt of HPV vaccination (Table 5).

Qualitative results

Ethnic groups differed significantly in their attitudes and beliefs towards HPV vaccination, vaccine initiation in relation to sexual activity, adolescent female sexual behavior, and parent-daughter communication about issues of sexuality (Table 6).

Perceived susceptibilities, severities and benefits: Positive attitudes towards HPV vaccine

All women recognized the advantages of vaccination to protect them from infection and to prevent HPV transmission. After learning the vaccine prevented cervical cancer, most

participants expressed a desire to be vaccinated for personal health and public health reasons (Table 6). When asked why she was likely to get vaccinated with the HPV vaccine, one African-American woman said, *"I don't want to have cervical cancer, and if I could prevent that in any way, I would."* One White young woman expressed that HPV vaccination extends protection to unforeseeable circumstances when teens are not being cautious: *"Um, that the sexual health and decision and adolescents make are unpredictable so having a vaccine that can be helpful in keeping them healthy even if they're not making the best decisions."* (Table 6). A Haitian participant summarized the public health and overall benefit of HPV vaccination as, *"You basically are protecting lives. Sex is very common among the adolescents. If you can give a vaccine to protect, that would be good."* One Latina young woman understood the primary rationale for accepting the HPV vaccine and expressed her trust in physician by saying, *"Because it's a sexually transmitted disease and I plan on me having sex and I don't want anything to have happened to me...And it's always good to listen to your doctor."* Overall, physicians played an important role in the participants' decision to receive HPV vaccination. Most participants considered their doctor to be their primary source of medical information and placed a high level of trust in physician recommendations (Table 6). A Haitian woman was vaccinated because her doctor recommended the vaccine. She said, *"I decided to get vaccinated. Just because the doctor recommends that I take the vaccine."*

Perceived barriers: Concerns about HPV vaccine

Despite recognizing the benefits of HPV vaccination, participants also revealed perceived barriers to vaccination. Those barriers included fear of endorsement of sexual behavior, a false sense of security, fear of infection of HPV from vaccination/counter-effect of the vaccine, limited knowledge or need for more information, needle phobia, cost of vaccine, and low perceived risk due to sexual inactivity (Table 6).

One White woman feared endorsing sexual behavior in adolescents because vaccination, she said, *"is like giving them permission to go have sex, and they are not cautious."* One Haitian participant was hesitant because of her lack of knowledge about vaccination: *"I don't know much about it."* Due to their limited knowledge about HPV transmission, many women seemed to think that getting a vaccine after sex (after exposure to HPV) would clear the infection or *"get it out your system"* as one participant stated. Additionally, vaccination was viewed as unnecessary when participants perceived themselves to be at low risk due to sexually inactivity. One Latina woman stated: *"If you plan on having sex, then you should get it, but if you don't plan then you shouldn't."*

Attitudes toward HPV vaccine initiation and sexual activity

Most participants (nearly 90%) were in favor of receiving an HPV vaccination before sexual debut (Table 6). As stated by one White woman, *"When they are really little. When they are like 8 ha-ha, because like girls are young and do it young. Rather be safe than sorry."* When asked what age is best to vaccinate against HPV, most participants suggested the ACIP-recommended target age of 12, with a range from 9 to 23 years of age (Table 6). Most reasons given in support of vaccine prior to age 12 related to the onset of puberty, menarche, age when sexually active, and early sexual debut (Table 6). One participant said: *"I would say probably 12 because that is right before they hit puberty, and before like, and promiscuous things could happen. You could prevent [HPV] before it happens."* Others suggested 16 and older believing that was more consistent with the age of sexual debut.

Attitudes toward sexual behavior and school mandatory vaccination

Many participants supported HPV mandates in school because they felt that adolescents are involved in sexual activities without their parents' knowledge (Table 6). When asked if the

HPV vaccine should be mandated for school entry, one African-American woman supported it mainly for fear that parents are now aware of their daughter's sexual activity, she said, *"They should. I feel that way because some people's parents don't think they are having sex. They don't know about what their kids are doing behind their back. So they should."* Other participants supported HPV vaccination mandates due to public health concerns. They did not want to be infected with something that could have been prevented through vaccination. One Haitian woman said, *"I don't want to catch something because somebody did not take his vaccine. I think people should require to take their vaccines."*

In contrast, some participants felt HPV vaccination should be a "personal choice," and should be left up to parents (Table 6). One White woman said, *"...Because that's more of a personal choice. You shouldn't really have to force people. Sex is a personal choice, just like a vaccine would be."* One Latina woman felt it should be up to the parents to decide, not the school because she felt that sexually active patients are asking for the HPV vaccine without parental consent, as most parents are unaware of their daughters' sexual behavior. She said, *"Now that one is up to the parents. I think because I mean those, you can't get infected with that in school unless you are having sex with everyone in school."* One African-American woman also opposed the mandate because she associated vaccination with having sex in school: *"Who has sex in school? Nobody, that's not what school's for, so I don't think that should be a requirement."*

Communication about issues of sexuality

There were differences among study participants regarding parent-daughter and physician-patient discussions on issues of sexuality (Table 6). Haitian and Latina women reported limited communication about issues of sexuality with their parents compared to White and African-American women. One Haitian woman said of her parents, *"They don't talk about sex."* She also felt that physicians should be more active in discussing issues of sexuality with patients and advocating for sexually active patient to vaccinate without parental consent (Table 6). All participants stated that they would be more open and honest with their daughters when discussing issues of sexuality (Table 6). One White woman said, *"I will start to tell her pieces by pieces about what she should be appropriate for her age. I would tell her about her private parts and little by little/And when I find out she's mature enough then I'll really...."* One Latina woman felt it is important to state accurate facts: *"I'll be straight up with her. I will give her the talk too when the time comes. And try to be as most accurate and um... and straight up with them; like, I won't lie."*

Discussion

Our data indicate that despite limited knowledge about HPV, 90% study participants intended to vaccinate against HPV if offered by their physicians. However, only half of participants subsequently received the vaccine, suggesting missed vaccination opportunities during clinic visits. Knowledge about HPV infection and vaccination and intent to vaccinate were the only predictive factors in the receipt of HPV vaccination.

Missed opportunities, defined as visits when the patient was due for vaccination but vaccination did not occur, have also been identified as contributors to non-completion among minority and low-income adolescents^{16,17,18}. Research consistently demonstrates lower knowledge levels related to HPV and HPV vaccine among Latina and Black women compared with White women^{19,20}, which may limit the ability of patients to request vaccination when appropriate. Like previous studies, our study revealed limited HPV and HPV vaccine knowledge among African-American, Haitian and Latino women compared to White women.^{13,14,21,22,23,24} Limited knowledge is concerning as Haitian, Black, and Latina women are more likely to be diagnosed with late stage cervical cancer and to die

from their disease.^{25–29} Previous findings have also demonstrated that women from these populations are less likely to complete the HPV vaccine series than White women.^{0,31} Increasing HPV vaccine rates in these populations can significantly reduce existing cervical cancer disparities.

Findings were consistent with previous studies that reported a disconnect between intent to vaccinate and vaccine initiation.^{15,21,31–33} Overall initiation and completion rates among our participants were higher than reported in previous national estimates and other studies.^{10,21,30,22} Among those who started the series, 78% completed all three doses, similar to other reports among this age group.³⁴

Participants expressed positive attitudes toward HPV vaccination for protecting personal health as well as public health. However, we identified barriers upon examining the perceptions of participants, such as needle phobia, a false sense of security, anticipated counter-effects of vaccination, and belief that vaccination is unnecessary in the absence of sexual activity. These perceptions underscore the need for more education about HPV and benefits of vaccination to disarm barriers for vaccine uptake. These findings are in agreement with similar studies on HPV vaccine uptake from parents of girls.^{35–38} Many participants supported HPV mandates in school and young women consenting for the vaccine without parental consent as they felt that adolescents are sexually active without their parents' knowledge.

Although their knowledge about HPV infection and vaccination is limited, young women from all racial groups in our study trust their physicians' recommendations and would vaccinate against HPV if it was recommended by their physician. Our study is consistent with previous studies reporting that young women value their physicians' opinions and are willing to vaccinate against HPV if recommended. Physician recommendation has been shown to be a powerful indicator of vaccine acceptance in other studies as well.^{14,21,22, and 34}

Conclusions

In conclusion, the low-income, minority, and immigrant young women in this study demonstrate limited knowledge about HPV infection and HPV vaccine. Despite low knowledge, they reported high levels of trust in physicians and were willing to vaccinate if recommended by their physicians. This indicates that empowering physicians to provide culturally competent education and strong recommendations for HPV vaccination to all their patients could raise vaccination rates and reduce cervical cancer disparities in the future.

Implications

The following will have great potential to improve HPV vaccination rates: strong provider recommendation, and risk-based education aimed at increasing knowledge of HPV infection and vaccination, utilizing every clinical opportunity, and allowing sexually active adolescents to consent for vaccination without parental consent. The effectiveness of targeted, culturally-specific messaging about HPV needs to be evaluated to determine if such approaches will increase HPV vaccine uptake. Physicians should be encouraged to establish HPV vaccination as normative, advocate for sexually patients consent to vaccination, and have standard protocol for assuring injection and follow-up to improve initiation and completion rates and reduce HPV infection and eventually cervical cancer disparities among Blacks, Latina and Caucasian women.

Acknowledgments

We would like to thank the multiple research assistants who conducted the interviews and transcribed them. This work is supported by a Building Interdisciplinary Research Careers in Women's Health Grant (K12-HD43444), Boston University Institutional Research Grant (IRG-72-001-33-IRG), and the American Cancer Society Career Development Award (CDDA-10-086-01; and ACS-MRSG-09-151-01).

References

1. CDC. Human papillomavirus-associated cancers—United States, 2004–2008. *MMWR*. 2012; 61(15):258–261. [PubMed: 22513527]
2. Hariri, Susan; Unger, Elizabeth R.; Sternberg, Maya; Dunne, Eileen F.; Swan, David; Patel, Sonya; Markowitz, Lauri E. Prevalence of Genital Human Papillomavirus Among Females in the United States, the National Health and Nutrition Examination Survey, 2003–2006. *J Infect Dis*. 2011; 204(4):566–573.10.1093/infdis/jir341 [PubMed: 21791659]
3. Dunne, Eileen F., MD, MPH; Unger, Elizabeth R., PhD, MD; Sternberg, Maya, PhD; McQuillan, Geraldine, PhD; Swan, David C., PhD; Patel, Sonya S., BS; Markowitz, Lauri E, MD. Prevalence of HPV Infection Among Females in the United States. *JAMA*. 2007; 297(8):813–819. [PubMed: 17327523] U.S. Cancer Statistics Working Group. United States Cancer Statistics: 1999–2009 Incidence and Mortality Web-based Report. Atlanta (GA): Department of Health and Human Services, Centers for Disease Control and Prevention, and National Cancer Institute; 2013. Available at: <http://www.cdc.gov/uscs> [Accessed March 5, 2013]
4. United States Cancer Statistics: 1999e2009 Incidence and Mortality Web-based Report. Atlanta (GA), Department of Health and Human Services, Centers for Disease Control and Prevention, and National Cancer Institute, 2013. Available at: <http://www.cdc.gov/uscs>; 2013. Accessed March 5, 2013.
5. SEER. [Accessed 01/4/11 2013] <http://seer.cancer.gov/statfacts/html/cervix.html#incidence-mortality>
6. Kahn JA, Lan D, Kahn RS. Sociodemographic factors associated with high-risk human papillomavirus infection. *Obstet Gynecol*. 2007; 110(1):87–95. [PubMed: 17601901]
7. Jemal A, Simard EP, Dorell C, Noone AM, Markowitz LE, Kohler B, Ehemann C, Saraiya M, Bandi P, Saslow D, Cronin KA, Watson M, Schiffman M, Henley SJ, Schymura MJ, Anderson RN, Yankey D, Edwards BK. Annual Report to the Nation on the Status of Cancer, 1975–2009, featuring the burden and trends in human papillomavirus (HPV)-associated cancers and HPV vaccination coverage levels. *J Natl Cancer Inst*. 2013 Feb 6; 105(3):175–201. Epub 2013 Jan 7. 10.1093/jnci/djs491 [PubMed: 23297039]
8. Kim JJ, Goldie SJ. Health and economic implications of HPV vaccination in the United States. *N Engl J Med*. 2008; 359:821–832. [PubMed: 18716299]
9. Eaton DK, Kann L, Kinchen S, et al. Youth risk behavior surveillance—United States, 2007. *MMWR Surveill Summ*. 2008; 57:1–131. [PubMed: 18528314]
10. Centers for Disease Control and Prevention (CDC). Adult vaccination covered United States 2010. *MMWR Morb Mortal Wkly Rep*. 2012; 61:66–72. [PubMed: 22298302]
11. Dempsey AF, Zimet GD, Davis RL, Koutsky L. Factors that are associated with parental acceptance of human papillomavirus vaccines: a randomized intervention study of written information about HPV. *Pediatrics*. 2006; 117(5):1486–1493. [PubMed: 16651301]
12. Zimet GD, Perkins SM, Sturm LA, Bair RM, Juliar BE, Mays RM. Predictors of STI vaccine acceptability among parents and their adolescent children. *Journal of Adolescent Health*. 2005; 37(3):179–186. [PubMed: 16109336]
13. Perkins RB, Pierre-Joseph N, Marquez C, Iloka S, Clark JA. Why do low-income minority parents choose human papillomavirus vaccination for their daughters? *J Pediatr*. Oct; 2010 157(4):617–622. [PubMed: 20472250]
14. Pierre Joseph N, Clark JA, Bauchner H, Walsh JP, Perkins RB. Knowledge, Attitudes, and Beliefs Regarding HPV Vaccination: Ethnic and Cultural Differences Between African-American and Haitian Immigrant Women. *Women's Health Issues*. 2012; 22(6):e571–e579. [PubMed: 23122214]

15. Charmaz, K. *Constructing Grounded Theory: A Practical Guide Through Qualitative Analysis*. Thousand Oaks, California: Sage; 2006.
16. Dempsey A, Cohn L, Dalton V, Ruffin M. Patient and clinic factors associated with adolescent human papillomavirus vaccine utilization within a university-based health system. *Vaccine*. 2010; 28(4):989–95. [PubMed: 19925899]
17. Neubrand TP, Breitkopf CR, Rupp R, Breitkopf D, Rosenthal SL. Factors associated with completion of the human papillomavirus vaccine series. *Clin Pediatr (Phila)*. 2009; 48(9):966–9. [PubMed: 19483128]
18. Perkins RBBS, Adams WG, Freund KM. Correlates of Human Papillomavirus (HPV) vaccination rates in low-income, minority adolescents: a multi-center study. *Journal of Women's Health*. 2012 in press.
19. Gelman A, Nikolajski C, Schwarz EB, Borrero S. Racial disparities in awareness of the human papillomavirus. *J Women's Health (Larchmt)*. 2011; 20(8):1165–73. [PubMed: 21668381]
20. Mehta NR, Julian PJ, Meek JI, et al. Human papillomavirus vaccination history among women with precancerous cervical lesions: disparities and barriers. *Obstet Gynecol*. 2012; 119(3):575–81. [PubMed: 22353956]
21. Jain N, Euler GL, Shefer A, Lu P, Yankey D, Markowitz L. Human papillomavirus (HPV) awareness and vaccination initiation among women in the United States, National Immunization Survey-Adult 2007. *Prev Med*. 2009; 48:426–431. [PubMed: 19100762]
22. Price, Rebecca Anhang, PhD1; Tiro, Jasmin A., PhD2; Saraiya, Mona, MD, MPH3; Meissner, Helen, PhD4; Breen, Nancy, PhD5. Use of Human Papillomavirus Vaccines Among Young Adult Women in the United States: An Analysis of the 2008 National Health Interview Survey. *Cancer*. 2011; 117:5560–8. [PubMed: 21732336]
23. Kobetz E, Menard J, Hazan G, Koru-Sengul T, Joseph T, Nissan J, Kornfield J. Perceptions of HPV and cervical cancer among Haitian immigrant women: implications for vaccine acceptability. *Education for Health (Abingdon)*. 2011; 24(3):479.
24. Pitts MK, Heywood W, Ryall R, et al. Knowledge of human papillomavirus (HPV) and the HPV vaccine in a national sample of Australian men and women. *Sex Health*. 2010; 7:299–303. [PubMed: 20719218]
25. Arrossi S, Sankaranarayanan R, Parkin MD. Incidence and mortality of cervical cancer in Latin America. *SaludPublica de Mexico Scientific Publication*. 2003; 45(3):1–15.
26. Miller, S. Haiti's chaos reverberates for expatriates in American cities. *The Christian Science Monitor*. 2004 Mar 3. Retrieved from <http://www.csmonitor.com/2004/0303/p03s02-ussc.html/>
27. Partners in Health. Curbing Cervical Cancer in Haiti. 2010. Retrieved from <http://www.pih.org/news/entry/curbing-cervical-cancer-in-haiti/>
28. Fruchter RG, Nayeri K, Remy JC, Wright C, Feldman JG, Boyce JG, Burnett WS. Cervix and breast cancer incidence in immigrant Caribbean women. *American Journal of Public Health*. 1990; 80(6):722–724. [PubMed: 2343960]
29. Fruchter RG, Remy JC, Burnett WS, Boyce JG. Cervical Cancer in immigrant Caribbean women. *American Journal Public Health*. 1986; 76:797–799.
30. Caskey R, Lindau ST, Alexander GC. Knowledge and early adoption of the HPV vaccine among girls and young women: results of a national survey. *J Adolesc Health*. 2009; 45:453–462. [PubMed: 19837351]
31. Watts LA, Joseph N, Wallace M, Rauh-Hain JA, Muzikansky A, Growdon WB, del Carmen MG. HPV vaccine: A comparison of attitudes and behavioral perspectives between Latino and non-Latino women. *Gynecologic Oncology*. 2009; 112:577–582. [PubMed: 19150120]
32. Chao C, Velicer C, Slezak JM, et al. Correlates for completion of 3-dose regimen of HPV vaccine in female members of a managed care organization. *Mayo Clin Proc*. 2009; 84:864–70. [PubMed: 19797775]
33. Rosenthal SL, Weiss TW, Zimet GD, Ma L, Good MB, Vichnin MD. Predictors of HPV vaccine uptake among women aged 19–26: importance of a physician's recommendation. *Vaccine*. 2011; 29:890–895. [PubMed: 20056186]
34. Gold R, Naleway A, Riedlinger K. Factors Predicting Completion of the Human Papillomavirus Vaccine Series. *Journal of Adolescent Health*. 2012; xxx:1–6.

35. Guerry SL, De Rosa CJ, Markowitz LE, Walker S, Liddon N, Kerndt PR, Gottlieb SL. Human papillomavirus vaccine initiation among adolescent girls in high-risk communities. *Vaccine*. 2011; 29(12):2235–2241. [PubMed: 21288799]
36. Bartlett JA, Peterson JA. The uptake of human papillomavirus (HPV) vaccine among adolescent females in the United States: a review of the literature. *Journal of School Nursing*. 2011; 27(6): 434–446. [PubMed: 21750234]
37. Gerend MA, Barely J. Human papillomavirus vaccine acceptability among young adult men. *Sex Transm Dis*. 2008; 36:58–62. [PubMed: 18830138]
38. Allen JD, Fantasia HC, Fontenot H, Flaherty S, Santana J. College men's knowledge, attitudes, and beliefs about the human papillomavirus infection and vaccine. *J Adolesc Health*. 2009; 45:535–7. [PubMed: 19837363]

Table 1

Demographic information by racial/ethnic category

YOUNG WOMEN						
Variable	Total N=132	African American n=45	Haitian n=47	Latino n=20	White n=20	p-value ANOVA
Age						
Mean (SD)	19.1 (1.2)	19.1 (1.2)	19.2 (1.4)	18.6 (0.7)	19.4 (1.5)	0.25
	N (%)	n (Col %)	n(Col %)	n (Col %)	n (Col %)	p-value chi ² or Fisher's exact
Age category						
18–19 years	92 (70)	32 (71)	30 (64)	18 (90)	12 (60)	0.17
19–22 years	38 (29)	13 (29)	15 (32)	2 (10)	8 (40)	
>22 years	2 (1)	0 (0)	2 (4)	0 (0)	0 (0)	
Education						
Less than high School	22 (17)	11 (24)	2 (4)	3 (15)	6 (30)	0.03
High School	72 (55)	23 (51)	31 (69)	12 (60)	6 (30)	
At least some college	36 (28)	11 (24)	12 (27)	5 (25)	8 (40)	
Marital Status						
Single	101 (78)	30(67)	39 (85)	13 (72)	19 (95)	0.07
Married	6 (5)	3 (7)	3 (7)	0 (0)	0 (0)	
NonMarital- Partnership	22 (17)	12 (27)	4 (9)	5 (28)	1 (5)	
Language						
English	103 (80)	43 (98)	28 (60)	12 (71)	20 (100)	<0.0001
* Other	25 (20)	1 (2)	19 (40)	5 (29)	0 (0)	
Service attendance						
At least weekly	44 (54)	10 (50)	28 (74)	5 (36)	1 (10)	<0.0001
1–3 times per month	17 (21)	3 (15)	7 (18)	1 (7)	6 (60)	
Less than once Per month	21 (26)	7 (35)	3 (8)	8 (57)	3 (30)	
Have or know anyone with						

YOUNG WOMEN						
Variable	Total N=132	African American n=45	Haitian n=47	Latino n=20	White n=20	p-value ANOVA
Positive Pap smear	44 (33)	20 (44)	6 (13)	9 (45)	9 (45)	0.002
Genital warts	19 (14)	8 (18)	5 (11)	2 (10)	4 (20)	0.64
Cervical cancer	17 (13)	3 (7)	7 (15)	3 (15)	4 (20)	0.40
Sexually active	98 (74)	42 (98)	24 (65)	17 (89)	15 (75)	<0.0001
High level of trust in MD	123 (94)	40 (89)	45 (98)	18 (90)	20 (100)	0.17
Ever declined vaccination	13 (10)	6 (14)	3 (7)	0 (0)	4 (20)	0.12
Ever received vaccination	124 (95)	42 (93)	46 (98)	18 (95)	18 (90)	0.38
Intent to vaccinate	116 (90)	39 (89)	39 (87)	19 (95)	19 (95)	0.70

* Other language: French, Haitian Creole, Hispanic, Portuguese (Cape Verde)

Table 2

HPV-related knowledge by racial/ethnic category

Variable	Answer	Total	African American	Haitian	Latino	Whites	p-value
Knowledge Score (8 total)							
Mean (SD)		4.3 (2.4)	4.5 (2.7)	3.1 (2.5)	4.8 (2.3)	6.0 (2.1)	0.0002**
Score level							
>=5		68 (52%)	25 (56%)	16 (34%)	11 (55%)	16 (80%)	
< 5		64 (48%)	20 (44%)	31 (66%)	9 (45%)	4 (20%)	
Heard of HPV	Yes	110 (83%)	39 (87%)	34 (72%)	17 (85%)	20 (100%)	0.03
Heard of HPV vaccine	Yes	98 (74%)	32 (71%)	30 (64%)	17 (85%)	19 (95%)	0.03
HPV can cause genital warts	Correct	56 (42%)	18 (40%)	21 (45%)	5 (25%)	12 (60%)	0.17
HPV can be prevented by using condom	Correct	64 (49%)	26 (58%)	17 (36%)	14 (70%)	7 (35%)	0.02
HPV is an STD	Correct	61 (46%)	23 (51%)	12 (26%)	10 (50%)	16 (80%)	<0.0001
HPV can be asymptomatic	Correct	76 (58%)	29 (64%)	19 (40%)	11 (65%)	17 (85%)	0.004
HPV can cause abnormal pap smears	Correct	67 (51%)	29 (64%)	14 (30%)	10 (50%)	14 (70%)	0.002
HPV can cause cancer of the mouth/anus	Correct	67 (51%)	26 (58%)	16 (34%)	10 (50%)	15 (75%)	0.01
HPV can cause cervical cancer	Correct	62 (47%)	19 (42%)	15 (32%)	10 (50%)	18 (90%)	<0.0001

** Significant difference in knowledge score across the race/ethnic groups

Table 3

Receipt of HPV vaccine doses by race/ethnicity

Variable	Total N (%)	African- American n (%)	Haitian n (%)	Latino n (%)	White n (%)	p-value
1 st dose	62 (51)	22 (50)	16 (37)	12 (71)	12 (67)	0.05
2 nd dose	56 (48)	18 (45)	16 (37)	10 (63)	12 (67)	0.12
3 rd dose	50 (45)	16 (42)	13 (33)	10 (63)	11 (65)	0.06

Missing Data: 1st dose: AA=1; H=4; L=3; W=2.2nd dose: AA=5; H=4; L=4; W=2.3rd dose: AA=7; H=7; L=4; W=3.

Table 4Association of study variables with Intention to receive HPV vaccination

Variable	Likely to vaccinate n (Row %)	Unlikely to vaccinate N (Row %)	p-value for chi ² or Fisher's exact
Received vaccinations in the past	108 (89)	13 (11)	1.0
Declined vaccination in the past			0.11
Yes	10 (77)	3 (23)	
No	104 (92)	9 (8)	
HPV knowledge score			0.15
≥5	63 (94)	4 (6)	
<5	53 (85)	9 (15)	
Marital Status			0.02
Single	90 (92)	8 (8)	
Married	3 (50)	3 (50)	
NMP	20 (91)	2 (9)	
Age category			1.0
18–19	80 (90)	9 (10)	
20–22	34 (89)	4 (11)	
>22	2 (100)	0 (0)	
Sexually active			0.44
Yes	89 (91)	9 (9)	
No	18 (86)	3 (14)	
Race			0.70
Blacks	39 (89)	5 (11)	
Haitian	39 (87)	6 (13)	
Latino/Hispanics	19 (95)	1 (5)	
Caucasians	19 (95)	1 (5)	
Have or know someone with			
Abnormal Pap smear	41 (95)	2 (5)	0.22
Genital warts	16 (89)	2 (11)	1.0
Cervical cancer	14 (88)	2 (12)	0.66
Education			0.23
Less than high school	19 (86)	3 (14)	
High school	61 (88)	8 (12)	
At least some college	35 (97)	1 (3)	
High level of trust in Doctor			0.02
Yes	111(92)	10 (8)	
No	4(57)	3 (43)	

* Probability of “Intention to receive the vaccine” was modeled

Table 5

Association of study variables with receipt of HPV vaccination

Variable	Vaccinated n (Row %)	Unvaccinated n (Row %)	p-value for chi ² or Fisher's exact
Received vaccinations in the past	59 (52)	55 (48)	0.27
Declined vaccination in the past			0.56
Yes	8 (62)	5 (38)	
No	54 (50)	53 (50)	
Intent to vaccinate			0.15
Likely	57 (54)	49 (46)	
Unlikely	4 (31)	9 (69)	
HPV knowledge score			0.05
≥5	38 (60)	25 (40)	
<5	24 (41)	35 (59)	
Age category			0.28
18–19	47 (54)	40 (46)	
20–22	15 (45)	18 (55)	
>22	0 (0)	2 (100)	
Sexually active			1.0
Yes	50 (54)	42 (46)	
No	10 (56)	8 (44)	
Race			0.05
Blacks	22 (50)	22 (50)	
Haitian	16 (37)	27 (63)	
Latino/Hispanics	12 (71)	5 (29)	
Caucasians	12 (67)	6 (33)	
Have or know someone with			
+ Pap smear	23 (58)	22 (42)	0.34
Genital warts	7 (37)	12 (63)	0.22
Cervical cancer	6 (43)	8 (57)	0.58
Education			0.07
Less than high school	5 (26)	17 (74)	
High school	36 (52)	33 (48)	
At least some college	19 (59)	13 (41)	
High level of trust in Doctor			0.72
Yes	57 (50)	56 (50)	
No	5 (63)	3 (37)	

* Probability of "Receiving the vaccine" was modeled

Table 6

Attitudes Toward HPV vaccination

Theme	US born African-American	Haitian	Latina	White
Reasons to vaccinate: Trust MD-Physician endorsement	- Because if I'm asked to take it, I will get it." (-18 year-old African-American) - "Because it's a sexually transmitted disease and I plan on me having sex and I don't want anything to have happened to me. I want to prevent it before anything happens. And it's always good to listen to your doctor." (19 year-old African American)	"I decided to get vaccinated. Just because the doctor recommends that I take the vaccine." "I ask my doctor if it's good for me." If doctors recommend to have the HPV why not, if you can be safe from a virus, that cool with me...	"Whenever I come here, they just tell me what I need, so I get it." - "Because he knows what he's talking about, so I'm going to do what he tells me." (20 year-old Hispanic) - "Whenever I come here, they just tell me what I need, so I get it." - "Because he knows what he's talking about, so I'm going to do what he tells me."	"I really trust my doctors, so I feel like I always kind of take the vaccines that have been recommended to me." (-22 year-old Caucasian) - "I really trust my doctors, so I feel like I always kind of take the vaccines that have been recommended to me." Common: "... don't just want things in my system."
Benefits of HPV vaccine	one African-American young woman said, "I don't want to have cervical cancer and if I could prevent that in any way, I would. At first I would say no but when I heard of what it was, I agreed." Prevention/stay healthy (5) Protection (4) Safe side/good idea/peace of mind (2) "feel informed" (1) Safe side/good idea/peace of mind (3) Prevent cancer (3)	HPV vaccination: "you basically are protecting lives. Sex is very common among the adolescents. If you can give a vaccine to protect, that would be good." Prevention/stay healthy (3) Protection (2) Safe side/good idea/peace of mind (1) Physician recommendation (1) "feel informed" (1)	"Because it's a sexually transmitted disease and I plan on me having sex and I don't want anything to have happened to me. I want to prevent it before anything happens. And it's always good to listen to your doctor." Prevention/stay healthy (5) Protection (2) Safe side/good idea/peace of mind (1) Physician recommendation (1) Prevent cancer (3)	"Um, that the sexual health and decision and adolescents make are unpredictable so having a vaccine that can be helpful in keeping them healthy even if they're not making the best decisions. And in adults too [haha]...." Prevention/stay healthy (5) Protection (2) Safe side/good idea/peace of mind (1) Physician recommendation (1) Prevent cancer (3)
Concerns about HPV vaccine: Reasons given for answering very unlikely to vaccinate (number of respondent)	"scared of shots" Needle phobia (1) Mixed messages/promote sex/false sense of security (3) May try to take place of sex ed (1) Side effects (2)	"I don't know much about it. So, I haven't heard doctors speaking about it, so I don't know if it's really good for us." They are really new. We really don't know the side effect New vaccine (1) Pain at site (1) Hunger (1)	No, because they shouldn't be having sex anyways." - "like giving them permission just to go have sex, and they're not cautious." - "If you plan on having sex, then you should get it, but if you don't plan to you shouldn't." Needle phobia (1) Fear of having to discuss sex with kids (1) Pain at site (1) Side effects (10)	One Caucasian young woman, who was opposed to school-mandated vaccination, stated she felt it is "...like given them permission to go have sex, and they are not cautious." (20) - "you inject part of the virus into you. So if your body is more susceptible, you might get it. Just like when you take the flu shot, a lot to time people get sick." (18) At the same time, one young Caucasian women fears that the vaccination may leave the teen with a false sense of security: BUT "...it can give them a false sense of security." 49C Caucasian "I think it can give a false sense of security, health, that nothing can happen to you." Pain at site (1) Cost of vaccine (1) Needle phobia (2)
Preferred age of Vaccination	"Yes. Cause kids these days ... at age 12. It's true! It's good to get them ready." "[1]-12 because can start going crazy."	15, they having sex at this age 14, they are sexually active	10 (the age at which we can explain this vaccine to them)	14, [Haha] the reason that I choose this age is because, [pause] a lot of girls are having sex these days, which is not a good thing.

Theme	US born African-American	Haitian	Latina	White
(number of respondent)	<p>"16, wants to say 18 but 16 sounds better, cause they sexually active earlier."</p> <p>10 (1) 11 (1) 12 (4) 13 (2) 13-14 (1) 13-16 (1) 14 (3) 15 (1) 16 (1) after menarche (1)</p>	<p>11,12, Because girls, they having sex at this age</p> <p>9 (1) 11-12 (1) 13 (1) 13-14 (1) 14 (1) 15 (2) 16-18 (1) 17-18 (1) when sexually active (1)</p>	<p>um 13, right before their... to prevent before they actually start having relationships</p> <p>10 (1) 12 (2) 13 (2) 13-14 (1) 15-23 (1) when sexually active (1)</p>	<p>but its... and a lot of girls are getting pregnant these days too and I just think girls should be vaccinated at 14.</p> <p>umm hmm. I'd say probably the first year of middle school, so probably around 10. Because that's the time too when girls probably get their period things like that too around that age. And that when health lessons occur, at that time. Puberty. Things like that.</p> <p>when they are really little. When they are like 8 ha-ha, because like girls are young and do it young. Rather be safe than sorry."</p> <p>"As soon as they're having sex."</p> <p>11 (1) 12 (2) 13 (1) 14 (1)</p>
Mandatory vaccine acceptable (Number of respondent)	<p>"They should. I feel that way because some people's parents don't think they are having sex. They don't know about what their kids are doing behind their back. So they should. So they want to wait until they get older and find out that they have it."19 yr</p> <p>"Who has sex in school? Nobody, that's not what school's for, so I don't think that should be a requirement." It really shows how concrete adolescents sometimes think (they are NOT really adults yet).</p> <p>Prevention (3) Public health (1) Early sex initiation (1) Protection (1) Extension of parental control (1)</p>	<p>"I don't want to catch something because somebody did not take his vaccine. I think people should require to take their vaccines."</p> <p>(Haitian)</p> <p>Pro: Girls are having sex early, it good to give them the vaccine, to protect them if their partner is infected</p> <p>If this vaccine is really good, they have to get it. Because stds are so common</p> <p>You have to protect those girls, because if they get the virus the can also have the cancer after die.</p> <p>Prevention (2) Public health (4) Early sex initiation (4) Protection (1)</p>	<p>"I don't see why they wouldn't, but it shouldn't be a requirement."</p> <p>now that one is up to the parents I think because I mean those, you cant get infected with that in school unless you are having sex with everyone in school but and its (cant hear the rest)</p> <p>Prevention (3) Public health (5) Protection (1) People are irresponsible (1) Backup plan (1)</p>	<p>"... because that's more of a personal choice.. you shouldn't really have to force people. Sex is a personal choice, just like a vaccine would be."</p> <p>Prevention (1) Public Health (1)</p>
Mandatory vaccine NOT acceptable (Number of respondent)	<p>Privacy (1) Personal/parental choice (3) Recommend, don't require (1) Mixed messages/promote sex (1) "no sex in school" (7)</p>	<p>I don't agree, because if you don't have sex, they don't have to require you to have it</p> <p>I must say children are not having sex why they have to required, I don't understand this part. Mixed messages/promote sex (1) Nothing should stop someone from going to school (1) Vaccine not needed by everyone (3) Kids shouldn't be having sex anyway (1) "no sex in school" (1)</p>	<p>Privacy (1) Personal/parental choice (3) Potentially offensive to offer vaccine (1) Kids shouldn't be having sex anyway (2)</p>	<p>Personal/parental choice (1) Recommend, don't require (2) new vaccine (1) better safe than sorry (1)</p>
Communication about issues of	<p>How parents talked: "me and her talk about sex, open relationship.." "very open, explain.."</p>	<p>How parents talked: they don't talk about sex We don't talk a lot</p>	<p>How parents talked: "Umm we had talks, the talk."</p>	<p>How parents talked: How will they talk: "I will start to tell her pieces by pieces about what she should be</p>

Theme	US born African-American	Haitian	Latina	White
sexuality with daughter:	<p>"Mom is good. Always told me about sex, advise me to protect myself."</p> <p>How will they talk: "talk to them about sex, condoms, things like that."</p> <p>"I will have an open relationship with her, she could come to me and trust me."</p> <p>"girls will be girls, talk to her about it."</p> <p>"Tell her what I didn't know. It ain't what it always seems."</p>	<p>open to her ...ask her to wait ...not hiding anything</p> <p>I will be very open to her</p> <p>Just say what you have to say don't lie</p>	<p>How will they talk: "Just say what you have to say, don't lie."</p> <p>I'll be straight up with her. I will give her the talk too when the time comes. And try to be as most accurate and um... and straight up with them. like, I won't lie. To actually give them right stats. Like not to say if you hold hands with them you are going to get pregnant</p>	<p>appropriate for her age. I would tell her about her private parts and little by little/ And when I find out she's mature enough then I'll really..." Caucasian: "I feel that way because some people's parents don't think they are having sex. They don't know about what their kids are doing behind their back.... Yes, I think they will prevent a lot more. That's why they have doctor/patient confidential things. They'd be going to the doctors and say that I'm ready to have sex can I get the shot, instead of their parents forcing them when they find out. And I think doctors should become more active with their patients."</p>