

**STD Communications Database
General Public Focus Group Findings**

Final Report

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**Submitted to
Division of Sexually Transmitted Disease Prevention
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EXECUTIVE SUMMARY

Introduction

Sexually transmitted diseases (STDs) remain a significant public health concern in the United States. There are more than 25 diseases that are transmitted through sexual activity and the trends vary considerably for each. Other than HIV, the most common STDs in the United States are chlamydia, gonorrhea, syphilis, genital herpes, human papillomavirus, hepatitis B, trichomoniasis, and bacterial vaginosis. Each affects different audience segments and requires different communication approaches to prevent and control disease.

Given the dearth of information available about the general public, their knowledge of STDs, and their communication preferences, the Division of Sexually Transmitted Disease Prevention (DSTD) at the Centers for Disease Control and Prevention (CDC) contracted with ORC Macro to conduct a series of focus groups to address these particular gaps in health communication literature. In the study reported here, the intent was to collect data regarding the knowledge, attitudes, and beliefs of the general public relevant to STDs and their ideas for increasing knowledge of how to prevent these diseases.

The focus groups were designed to address the following five research questions:

1. What do members of the general public ages 25 – 45 know about STDs?
2. What do members of the general public ages 25 – 45 know about HPV?
3. What are the most effective channels and sources of information to reach this audience with STD prevention messages?
4. What are the most effective message tone and qualities for STD prevention messages?
5. When should prevention campaigns focus on only one STD and when should STDs be bundled together to provide a general prevention message?

Methodology

Thirty-five focus groups were conducted with members of the general public from July – September 2003. Groups were segmented by sex (male, female), race/ethnicity (African American, Caucasian, Hispanic), and geography (urban, rural). These groups were held in six geographically dispersed U.S. sites, selected because of high county-specific rates of cervical cancer mortality or prevalence of syphilis, as well as available census data indicating proportion of the population identifying as African American, Caucasian, or Hispanic. Groups were held in Kelseyville, California; Miami, Florida; Atlanta, Georgia; Kansas City, Missouri; Lumberton, North Carolina; and McAllen, Texas.

Professional focus group companies recruited participants. Potential participants were only considered if they were within targeted zip codes, between the ages of 25 and 45, and of the designated race/ethnicity. Potential participants were not selected for

participation if they were: employed by federal, state, or local health department; employed in a health care setting; employed by an organization promoting awareness of health issues including STDs; employed in marketing or advertising; pregnant; or a participant in a focus group within the previous six months.

Each group was conducted by a professional moderator and assisted by a notetaker. Audiotapes of the discussions were transcribed and a thematic analysis was conducted using the notes and the transcripts.

Highlights of Findings

Key findings are presented by research question below. Unless otherwise noted, no differences emerged among the segments.

Research Question 1: What Members of the General Public Know about STDs

Overall, the most striking finding from this section of the focus group study was the fact that most participants were aware of sexually transmitted diseases, but not very knowledgeable about them. For many participants the focus group discussions pointed out how much they did not know about STDs. Many parents expressed concern that they needed to learn more about the diseases so they could educate their children. Other participants indicated that they needed to learn more to protect themselves, and to be able to help someone they care about if they become infected.

- When asked to identify health conditions and diseases they were most concerned about, participants responded in very similar ways. Across all of the groups, participants generally developed a long list of health conditions that could be placed in the following categories:
 - Chronic diseases/conditions (e.g., diabetes, high/low blood pressure, arthritis, asthma)
 - Life threatening/fatal diseases (e.g., cancer, heart disease/attack, stroke, AIDS, SARS, West Nile Virus)
 - Health conditions associated with aging
 - Health conditions they have control over, such as weight
 - STDs other than AIDS, most often hepatitis
- In almost all of the groups, AIDS was included in the list of concerns. Participants attributed this to the fact that they have heard so much about AIDS over a period of years and they associate it with death. In a few groups, someone added STDs to the list of general health concerns, stating that it was because of a concern for their children, or that it would be a concern if they were not married.
- For most participants, STDs were not a major health concern. They said this was because other health conditions were more of a concern for them and because they just do not think of STDs except for AIDS.

- Focus group participants were asked to identify thoughts, concerns, or feelings that came to mind when they heard the term “sexually transmitted disease.” Responses included a list of diseases; behaviors such as unprotected sex, condom use, promiscuity, infidelity, drug/alcohol use, and having multiple sex partners; and emotional responses such as depression, worry, sadness, shame/embarrassment, guilt, and discomfort. Heard across all of the groups was the association of severe consequences associated with STDs, including death, infertility, pain, treatment/drugs, doctor visits, medical bills, and divorce.
- In general, participants’ knowledge of sexually transmitted diseases was very limited. Most often, participants indicated that they had heard of the diseases but did not know a lot of specific information about them. Aside from HIV, the diseases that participants knew the most about were syphilis, gonorrhea, and herpes.
- Women had more knowledge about chlamydia, trichomoniasis, and pelvic inflammatory disease than men. Men were somewhat more knowledgeable about gonorrhea and syphilis than women and typically identified symptoms and treatment accurately.
- In one site (Robeson County, North Carolina) in the study, the public health department had begun a campaign to educate people about syphilis, in response to a very high incidence of the disease. This campaign was mentioned in all of the focus groups conducted at this site, with participants stating that there was a high incidence of the disease and that the health department was trying to educate people about the symptoms and when to come in for treatment. Surprisingly, these participants did not know any more than other groups about the consequences of not getting treatment.

Research Question 2: What Members of the General Public Know about HPV

HPV awareness was low among participants across the segments, although awareness of this disease was more common among females than among males regardless of race or ethnicity. In general, participants were concerned that most of them had never heard of the disease.

- Due to participants’ lack of awareness of and knowledge about HPV, the moderators explained to participants that prior research has shown that a link exists between some forms of HPV and cervical cancer. In response, many participants expressed concern that they had not been previously informed of the disease and did not have the important information they needed to address their concerns.
- Participants across the groups were interested in receiving information to better understand what HPV is, its transmission route, its symptoms, and ways to protect themselves. Often participants wanted to receive information from health care providers; women mentioned gynecologists as the specific health care provider they preferred. Participants also mentioned pamphlets in clinics, reputable Internet sites, schools, magazines, local television news, and television advertisements as appropriate vehicles.

- Participants were asked about the acceptability of a vaccination for HPV. Many participants were uncomfortable with the idea of accepting a vaccine because of their limited knowledge and awareness of HPV. Responses centered around three main themes: additional information about HPV, additional information about the vaccine, and assessment of one's own susceptibility.
- In addition, participants expressed needing to know their own risk for and susceptibility to HPV before being able to offer an opinion about the vaccine. Those who were married did not view themselves as susceptible and thus did not see a need for vaccination. Participants expressed that the vaccination should be personal choice based on one's lifestyle.
- When asked what would discourage people from getting vaccinated, participants noted lack of knowledge about HPV, the cost of the vaccine, and lack of susceptibility as main reasons. Participants' desire to protect their individual health was noted as a factor that would encourage them to accept vaccination.

Research Question 3: Effective Channels and Sources of Information

Participants stated that they go through similar channels to obtain information about general health and information about STDs. They spoke of interpersonal channels, the Internet, and print, television and radio as the resources they most often utilize to obtain information about general health and information about STDs.

- Most participants stated that the stigma associated with STDs might prevent them from seeking more information if they or a loved one thought they had a problem.
- Participants stated that any information or materials developed should be made available in a variety of languages. Preferred formats of information included:
 - Billboards
 - Brochures/flyers
 - Hotline/800-number
 - Magazine articles
 - Newsletters
 - Newspaper articles
 - Posters
 - Radio ads
 - Radio programs
 - School programs
 - Television ads
 - Television programs
 - Websites

- The American Red Cross, CDC, and Planned Parenthood were frequently mentioned as specific organizations that would be trusted. Other trusted organizations include community-based organizations, doctors' offices, health departments/clinics, and insurance companies. Participants further stated that they would not trust information developed by pharmaceutical companies.
- Participants had mixed reactions to the notion of a specific spokesperson for an STD campaign. Some participants believed that individuals who have, or are affected by, a particular STD would be most appropriate. They also believed that other reputable celebrities with knowledge of health issues, such as the U.S. Surgeon General, would be appropriate representatives to speak about STDs. Other participants stated that the most believable spokesperson would be an "average person" who has been affected by an STD. These participants believed that this person would be able to provide a credible testimonial about his/her experience with STDs. African American participants believed that the most effective spokesperson to deliver STD messages to their community would be an African American person.
- Most participants viewed CDC as a credible and trustworthy organization. They believed that CDC would be an appropriate organization to develop an STD prevention campaign. Some participants in the African-American focus groups stated their distrust of CDC and other government agencies. They referenced the Tuskegee Study as the impetus for their distrust and made other references to government conspiracy with regard to HIV and genocide of the African-American population.

Research Question 4: Effective Message Tone and Qualities

Participants said the most important things they would like to know about STDs would be the symptoms of STDs and treatment options. Participants were also interested in the consequences of the disease. In particular, participants were interested in whether or not the STDs were curable, merely treatable, or life threatening.

- With the exception of the urban Caucasian females, participants in the other segments were interested in knowing how to prevent STDs. Participants also expressed interest in understanding how STDs are transmitted from person-to-person. Of note, African American males in urban areas and Hispanic females in rural areas were interested in knowing if the STD could be transmitted to a child during pregnancy or childbirth.
- Across all segments participants stated that the main point of materials should be factual information about the diseases, their symptoms, and means to prevent them. Participants expressed that prevention information should focus on abstinence, safer sex, and condom usage. In addition, participants noted the importance of including resource information about whom to contact with questions or when experiencing symptoms.

- Participants across the groups recognized the need to educate all people about STDs while creating messages that are appropriate for different audience segments. Participants believed that STD prevention information should be provided to young children, although there was no consensus as to what age information about sexual health should begin to be shared. Participants did agree, however, that age-appropriate language was necessary.
- Across the groups, participants recognized the need to be “realistic” about people engaging in sexual activity. This recognition led participants to suggest that a combination of abstinence and condom usage messages would be appropriate. Most people agreed that messages should focus on abstinence as an effective method to prevent STDs, but that providing information on using condoms correctly to reduce the likelihood of contracting STDs was imperative.
- Discussions in the groups demonstrated that the need to craft different types of messages for adults. First, some participants saw the need for STD prevention information so that they could protect themselves from STDs. Second, some participants expressed the need as parents for information so they could provide information to their children.
- Discussion within the groups also highlighted the need for personal responsibility and parental responsibility. A few participants expressed the importance for individuals to take responsibility for protecting their own sexual health, including understanding the different methods for preventing STDs and the behaviors that increase one’s risk. Through this understanding, individuals would be able to make informed decisions and choices. A few participants also expressed the need for parents to establish and foster open relationships with their children so that the parents – and not the government, schools or churches – would be guiding the choices their children make.
- Participants expressed the need for factual information to be delivered using serious tones in clear, simple language. Participants suggested that humor not be used because STDs are serious and humor would detract from that message. Scare tactics were also mentioned as an effective way to convey STD messages, although some participants believed that STDs are “scary enough on their own” that a scare tactic can instill unnecessary panic. In addition, participants wanted materials to provide real-life examples to which they could relate.

Research Question 5: Individual STD Focus Versus Bundling of STD Messages

Participant reactions to this question were mixed. Some participants stated that the use of smaller specific campaigns would help differentiate the diseases from one another; others believed that a general campaign that provided information common to all diseases would be more effective.

- Participants who preferred a series of smaller campaigns focusing on specific diseases stated that this approach would allow for a more narrow focus on the details of each

disease including symptoms, transmission, treatment, cure, and other statistics. They believed that this would be the best approach for filling in gaps in knowledge among the general public about certain STDs.

- Participants who preferred a more general campaign focusing broadly on all STDs noted that this would be the most efficient means of disseminating the most important pieces of information about all STDs. They believed that it would be best to provide information common to all diseases, such as prevention.

Limitations

This study has several limitations:

- First, focus groups rely on convenience samples. As such, the generalizability of these findings is limited.
- Second, all of the participants were willing to participate in the focus groups. It is not known how, if at all, these participants differ from those who did not participate.
- Third, the topic of discussion may have made individuals uncomfortable and unwilling to express their ideas and opinions.
- Fourth, in this study, groups were segmented by sex, race/ethnicity and geography. This precludes being able to examine differences among people based on marital status or based on having a child.
- Fifth, defining geography (urban/rural) by location introduces a confounding variable. It is possible that the differences in urban and rural locations are due to the city in which the groups were held rather than a true difference.
- Sixth, as a result of participating in a 1½ hour discussion about this topic, participants are likely very different than those who did not participate. They may have become more open and willing to discuss sex, STDs, and prevention methods.

Summary

This focus group study offers an initial exploration of the knowledge, attitudes, beliefs, and communication preferences of the general public related to STDs and STD prevention. The results suggest that campaigns need to focus on increasing knowledge of STDs. To do this, materials should use straightforward language, personal testimonials. Trusted sources for the information should include local organizations such as churches, community-based organizations, health care providers, and businesses such as beauty parlors and barber shops. Separate materials should be developed for people who want to learn information to protect themselves and for people who want to educate others. This speaks to the need to develop materials targeted to specific audiences. The data from this study suggest that interpersonal and mediated communication (Internet, television, radio)

are channels through which individuals seek out and receive health-related information, including information on STDs.

I. Introduction and Background

A. Introduction

Sexually transmitted diseases (STDs) remain a significant public health concern in the United States. Estimates of the incidence and prevalence of STDs in the United States vary according to method of data collection and source of the data, however the latest estimates of STD incidence indicate that there are 15 million new cases each year.¹ Women disproportionately bear the long term consequences of STDs. Women infected with some STDs are prone to pelvic inflammatory disease (PID), which may lead to infertility and adverse outcomes of pregnancy. Genital infections with certain types of human papillomavirus (HPV) have been causally associated with cervical cancer. Other types of HPV have been causally associated with respiratory papillomavirus in infants.²

Surveillance data indicate that the rate of reported STDs is higher among some racial and ethnic minorities than the rate among whites. Some of the differences in rates of infection may be attributable to reporting biases, e.g., publicly-funded clinics, utilized more by racial and ethnic minorities than by whites, submit more complete reports than do private health services providers. However, much of the difference in reported rates of infection is due to more fundamental determinants of health status, including poverty, access to quality health care, illicit drug use, and living in communities with high prevalence of STDs. These fundamental determinants will need to be considered closely in any public health strategy for preventing STDs, including those based in health communication approaches.

There are more than 25 diseases that are transmitted through sexual activity and the trends vary considerably for each. Other than HIV, the most common STDs in the United States are chlamydia, gonorrhea, syphilis, genital herpes, human papillomavirus, hepatitis B, trichomoniasis, and bacterial vaginosis. Each affects different audience segments and requires different communication approaches to prevent and control disease.

B. Evidence-Based Communication Interventions

As one way to address the prevalence and seriousness of STDs in the United States and to promote prevention of STDs, the Division of Sexually Transmitted Disease Prevention (DSTD) at the Centers for Disease Control and Prevention (CDC) contracted ORC Macro, an Opinion Research Corporation company, to develop a comprehensive STD Communications Database. The purpose of the STD Communications Database is to provide easy access to a comprehensive reference of evidence-based communication efforts, peer-reviewed journal articles, and target audience profiles. The Database houses information specific to a variety of STDs and target audiences that can be used to guide

¹ Cates, W. 1999. *Sexually Transmitted Diseases*. Estimates of the Incidence and Prevalence of Sexually Transmitted Diseases in the United States. April, 1999, v26 (4); S2-S7.

² U.S. Department of Health and Human Services, National Institutes of Health, National Institute of Allergy and Infectious Diseases. 2001. *Sexually Transmitted Diseases, Fact Sheets*. Retrieved August 9, 2001 from NIAID Website: <http://www.niaid.nih.gov/dmid/stds/#6>.

future health communication efforts or message development in a cost-effective, timely, and efficient manner. The Database provides information regarding specific target audiences in relation to certain STD communication and information needs. It serves as a useful tool to public health practitioners by identifying and drawing on lessons learned from previous audience research and evaluation of communication intervention efforts. Specifically, it contains information about knowledge, attitudes, beliefs and behaviors of five key target audiences. These include at-risk populations, the general public, policymakers, health care providers, and community leaders. The Database also describes preferred communication source, channel, and message quality information for each audience. The Database is available at <http://www.cdc.gov/std/commdata>.

Approximately 500 studies are captured within this Database. These studies were published in English between January 1985 and September 2003. Literature published prior to 1985 was excluded from the Database based on the notion that research regarding HIV and risk behaviors applicable to present day issues was limited.

In addition, all studies captured within the Database provide information regarding evidence-based communication interventions and target audience profiles. Although the majority of the literature included within the Database focuses on information specific to the United States, studies conducted internationally were included when the study population was considered similar to cultures in the United States.

C. The Need for More Information

In developing the protocol for the study reported, the Database was searched to determine where more information was needed. While many studies have focused on at-risk populations and health care providers, few have focused on the general public and effective public health communication strategies for preventing STDs. A search of the Database reveals three articles with data from across the United States. These studies drew data from the National Household Survey of Drug Use^{3,4} and the National Ambulatory Medical Care survey.⁵ The results contained in these articles focused on risk behaviors and patient demographics in relation to treatment physician specialty. While this information is helpful in understanding the audience, it does not provide sufficient information regarding communication preferences.

In addition, searches of the Database revealed most of the research focuses on interpersonal, face-to-face communication, not on printed or mass media communication. In research articles that included information about communication channels, the

³ Anderson, J.E.; Wilson, R.; Doll, L.; Jones, T.S.; Barker, P. 1999. Condom use and HIV risk behaviors among U.S. adults: data from a national survey. *Family Planning Perspectives*, 31(1), 24-28.

⁴ Anderson, J.E.; Wilson, R.W.; Barker, P.; Doll, L.; Jones, T.S.; Holtgrave, D. 1999. Prevalence of sexual and drug-related HIV risk behaviors in the U.S. adult population: results of the 1996 National Household Survey on Drug Abuse. *Journal of Acquired Immune Deficiency Syndromes*, 21(2), 148-156.

⁵ Fleischer, A. B., Jr.; Parrish, C. A.; Glenn, R.; Feldman, S. R. 2001. Condylomata acuminata (genital warts): patient demographics and treating physicians. *Sexually Transmitted Diseases*, 28(11), 643-7.

information is based on anecdotal evidence and authors' suggestions about how the findings can be applied.⁶ There may be no evidence in the article to support these conclusions. Additional empirical information regarding appropriate channels for information dissemination would be helpful to health communication practitioners.

Additional analyses of information in the Database revealed that the empirical findings more often focus on behaviors (including condom usage, sexual behaviors, and alcohol, tobacco and other drug use) and attitudinal and other social influences (including barriers and motivators to action) than on knowledge and awareness about STDs.

Given the dearth of information available about the general public, their knowledge of STDs, and their communication preferences, project resources were dedicated to address these particular gaps in health communication literature. In the study reported below, the intent was to collect data regarding the knowledge, attitudes, and beliefs of the general public relevant to STDs and their ideas for increasing knowledge of how to prevent these diseases.

Focus group methodology was used because it is one of the most effective methods for collecting data on the knowledge, attitudes, and beliefs of various audiences.⁷ This methodology was particularly appropriate in this study because focus groups allow for exploration and discovery of sensitive topics and to gain more information about groups of people that are poorly understood. Focus groups are also helpful in understanding the context and depth of participants' experiences and attitudes, providing interpretive insights into why they believe the way they do and what has influenced them. This type of information is particularly important when seeking to determine the best communication interventions with similar groups of people.

The focus groups were designed to address the following five research questions:

1. What do members of the general public ages 25 – 45 know about STDs?
2. What do members of the general public ages 25 – 45 know about HPV?
3. What are the most effective channels and sources of information to reach this audience with STD prevention messages?
4. What are the most effective message tone and qualities for STD prevention messages?
5. When should prevention campaigns focus on only one STD and when should STDs be bundled together to provide a general prevention message?

⁶ The abstraction coding term "Author Suggestions and Other Findings" in the Database refers to recommendations made by the authors that are not necessarily supported by data from the research.

⁷ Morgan, D. 1998. *The Focus Group Guidebook*. Thousand Oaks, CA: Sage.

D. Sexually Transmitted Diseases of Interest in this Investigation

While numerous STDs exist, the study described in this report only focused on assessing knowledge and awareness of five specific STDs – chlamydia, gonorrhea, syphilis, genital herpes, and human papilloma virus. Below, we present brief descriptions of each.

Chlamydia The most commonly reported bacterial sexually transmitted disease in the United States is chlamydia. Chlamydia is common among all races and ethnic groups, however prevalence is greater among racial and ethnic minorities. Forty percent of the reported chlamydia cases are among young people between the ages of 15 to 19 years old.⁸ An estimated three million people contract chlamydia each year.¹ The reported rate of infection in 1999 was the highest ever reported, with over 650,000 cases.⁹ Chlamydia is an easily curable disease that left untreated, can lead to infertility in women. It can be transmitted during oral, vaginal, or anal sexual contact. As many as 75 percent of women and 50 percent of men infected with chlamydia have no symptoms resulting in many undiagnosed cases³. Reported chlamydia rates in women greatly exceed those in men, however, reported rates are not thought to reflect the true rates. Increased funding for chlamydia screening in publicly funded family planning and STD clinics has resulted in greater numbers of women being tested for chlamydia than men. It is difficult to determine the true geographic distribution of chlamydia but it appears that infection rates are highest in the southern region of the United States. Jurisdictions with the highest rates are generally the jurisdictions where screening and treatment have not been widely implemented. Jurisdictions that have seen the greatest declines are those with effective and prolonged screening processes.

Gonorrhea Like chlamydia, gonorrhea is a curable bacterial disease that can be transmitted through oral, vaginal, or anal sexual contact. Women who are infected with gonorrhea can transmit the disease to their newborn infants during delivery. From 1975 through 1997, rates for gonorrhea declined by 72 percent². Both 1997 and 1998 saw increases in reported cases of gonorrhea, however some of the increase may be attributable to increased screening, more sensitive diagnostic tests, and improved reporting, rather than changes in sexual behaviors.

As with chlamydia, infection with gonorrhea can lead to pelvic inflammatory disease (PID), which can lead to infertility in as many as 10 percent of infected women.³ There is strong evidence that infection with gonorrhea can also increase an individual's risk of becoming infected with HIV, should they be exposed to the virus. Gonorrhea rates among African Americans are 11 times greater than rates among Hispanics and 30 times greater

⁸ U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National, National Center for HIV, STD, and TB Prevention, Division of Sexually Transmitted Diseases. 2001. *Tracking the Hidden Epidemics; Trends in STDs in the United States 2000*. Retrieved August 9, 2001 from DSTD Website: http://www.cdc.gov/nchstp/dstd/disease_info.htm

⁹ U.S. Department of Health and Human Services, Centers for Disease Control and Prevention. 2001. *Morbidity and Mortality Weekly Report*. Summary of Notifiable Diseases, United States, 1999. April 6, 2001. V48 (53); 1-104.

than rates among whites.³ Among all races and ethnic groups, those most affected are teenagers and young adults, with rates highest among females between the ages of 15 and 19 and males between the ages of 20 and 24.³

The highest gonorrhea rates are found in the southern states. It is believed that access to quality health care and a higher level of poverty may be contributing factors. Recently, and in several cities throughout the country, researchers have witnessed an increase in the number of cases of gonorrhea among men who have sex with men.¹⁰

Syphilis The early symptoms of syphilis may be very mild, thus many people do not seek treatment when they first become infected even though it can be effectively diagnosed and treated with antibiotic therapy. It is a genital ulcerative disease that, like gonorrhea, facilitates the transmission of HIV. There are four distinct stages in the course of the disease. An infected person is contagious only during the first two stages that may span a period of one to two years. In its late stages, untreated syphilis may cause serious heart abnormalities, mental disorders, blindness, and death. Pregnant women can transmit the disease to their unborn child, resulting in both physical and mental abnormalities.

With the rate of primary and secondary (P&S) syphilis reported in the United States at the lowest it had been since reporting began, Surgeon General Satcher announced the National Plan to Eliminate Syphilis in the United States in October 1999.¹¹ Currently, syphilis cases occur in only a small number of geographic areas, highest in the south. Rates for P&S syphilis increased in 14 states in 1999, with the greatest increases in Indiana, Oklahoma, and Washington⁶. As with gonorrhea, there have been syphilis outbreaks recently among men who have sex with men, perhaps reflecting an increase in risk behavior in this population.¹²

Genital Herpes With as many as one million people in the United States becoming infected each year, herpes simplex virus type two (HSV-2) is one of the most common sexually transmitted diseases³. A manageable, yet incurable disease, HSV-2 is potentially fatal in newborns and is particularly severe in individuals who are immuno-compromised. The disease is widespread, geographically, and crosses all social, economic, racial, and ethnic boundaries.

Human papillomavirus An estimated 5.5 million people are infected with genital human papillomavirus (HPV) every year.³ The virus sometimes causes genital warts, but often people infected with HPV experience no noticeable symptoms. Recent studies have

¹⁰ U.S. Department of Health and Human Services, Centers for Disease Control and Prevention. 1997. *Morbidity and Mortality Weekly Report*. Gonorrhea Among Men Who Have Sex with Men—Selected Sexual Transmitted Diseases Clinics, 1993-1996. September 26, 1997. v46 (38); 889-892.

¹¹ U.S. Department of Health and Human Services, Centers for Disease Control and Prevention. 2001. *Morbidity and Mortality Weekly Report*. Primary and Secondary Syphilis—United States, 1999. February 23, 2001. v50 (07); 113-117.

¹² U.S. Department of Health and Human Services, Centers for Disease Control and Prevention. 2001. *Morbidity and Mortality Weekly Report*. Outbreak of Syphilis Among Men Who Have Sex with Men—Southern California, 2000. February 23, 2001. v50 (07); 117-120.

shown that some types of HPV may increase a woman's risk for cervical cancer. Since HPV is not a reportable disease, there is no way of telling if the rate of HPV is increasing. Improved testing technology will enable researchers to gain a better understanding of the true extent of HPV in different populations and geographic regions. Some of the recently introduced technologies, which have significantly impacted clinical practice, are the thin-prep¹³ cytology as well as the Hybrid Capture II test¹⁴, which have been shown to be significantly more effective than the traditional PAP tests in clinical trials.

In addition, several biotechnology firms, pharmaceutical companies, and academic researchers are working currently to develop vaccines to prevent HPV infections associated with cervical cancers.¹⁵ Some of these vaccines under development are prophylactic, designed to prevent initial infections, while others are therapeutic, designed to slow the progress of the disease or its recurrence. Prophylactic vaccinations offer the opportunity to reduce the public health burden posed by the number of cervical cancer cases. However, to be effective, these vaccines would need to be administered before individuals become sexually active.¹⁵ Thus, attainment of this public health benefit is contingent on the acceptability of receiving such vaccinations among members of the general public.

II. Methodology

The purpose of this study was to learn more about the knowledge, attitudes, and beliefs related to STDs in the general public. A focus group methodology was used to allow for exploration of these variables, and to solicit information that would be helpful in developing a public health campaign for preventing STDs.

A. Site Selection and Audience Segmentation

Thirty-five focus groups were conducted with members of the general public from July – September 2003.¹⁶ These groups were held in six geographically dispersed U.S. sites, selected because of high county-specific rates of cervical cancer mortality or prevalence of syphilis, as well as available census data indicating proportion of the population identifying as African American, Caucasian, or Hispanic. Groups were held in Kelseyville, California; Miami, Florida; Atlanta, Georgia; Kansas City, Missouri; Lumberton, North Carolina; and McAllen, Texas.

¹³ Cytoc Corporation in Boxborough, MA. <http://www.thinprep.com/85506Prd/prepdata.htm> accessed on December 2, 2003.

¹⁴ Clavel, C.; Masure, M.; Bory, J-P.; Putaud, I.; Mangeonjean, C.; Lorenzato, M.; Gabriel, R.; Quereux, C.; Birenbaum, P. 1999. Hybrid Capture II-based human papillomavirus detection, a sensitive test to detect routine high-grade cervical lesions: a preliminary study on 1518 women. *British Journal of Cancer*, 80(9), 1306-11.

¹⁵ Kols, A.; Sherris, J. July 2000. HPV Vaccines: Promise and Challenges. Seattle, WA: PATH. (<http://www.path.org/files/jsrp13710.pdf>)

¹⁶ A total of 36 focus groups were conducted. However, in one group held in Lake County, CA there were only five participants, providing insufficient data to consider in aggregate. As a result, the data from this group were excluded from the analysis.

In determining the specific audience to be included in this study, a number of factors were considered. First, a great deal of research has been conducted with college-age individuals or teens, but less with adults who are older and most likely in a different stage of life, possibly in committed relationships and with children of their own. To address this gap in knowledge, this study focused on the general public ages 25–45. To allow for possible differences, the research design segmented groups by gender (male, female), race/ethnicity (African American, Caucasian, Hispanic), and geographic location (rural, urban). All Hispanic participants were able to speak and read English. Race and ethnic groups were selected because they represent the largest segments in the U.S. population.

Table 1 outlines the counties from which participants were selected, the corresponding sites in which the groups were held, and the number of groups in each site. A graphical depiction of the audience segmentation for these focus groups and further justification for selecting each site can be found in Appendix A.

Table 1. Audience Segmentation

County From Which Participants Were Selected	Site In Which The Groups Were Held	Geographic Location	Participants' Race/Ethnicity	Number Of Groups Conducted
Lake County, CA	Kelseyville, CA	Rural	Caucasian	5 ¹⁶ (3 female, 2 male)
Miami-Dade County, FL	Miami, FL	Urban	Hispanic	6 (3 female, 3 male)
Clayton County, GA Fulton County, GA	Atlanta, GA	Urban	Caucasian	6 (3 female, 3 male)
Wyandotte County, KS	Kansas City, MO	Urban	African American	6 (3 female, 3 male)
Robeson County, NC	Lumberton, NC	Rural	African American	6 (3 female, 3 male)
Hidalgo County, TX	McAllen, TX	Rural	Hispanic	6 (3 female, 3 male)

B. Recruitment of Participants

Professional focus group companies in each site were contracted to recruit participants for that area. ORC Macro provided the following recruitment specifications to each company.

- Inclusion criteria - potential participants were only considered if they were:
 - Within targeted zip codes
 - Between the ages of 25 and 45
 - Of designated race/ethnicity.
- Exclusion criteria - potential participants were not selected for participation if they were:
 - Employed by federal, state, or local health department

- Employed in a health care setting
- Employed by an organization promoting awareness of health issues including STDs
- Employed in marketing or advertising
- Pregnant
- A participant in a focus group within the previous six months.

Recruiters were provided with a recruitment screener to assist in the process of identifying participants for the focus groups (a copy of the screener can be found in Appendix B). They were instructed to recruit twelve participants for each group to ensure that nine would be available to participate.

Additionally, in recognition of the difficulty of recruiting in rural areas, lists of community-based organizations were provided to recruiters in Lake County, California and Robeson County, North Carolina. These organizations provided some assistance in identifying potential focus group participants. Recruiters in these sites were instructed to over-recruit to fourteen participants for each group to ensure that nine participants would be able to participate.

Participation in the focus groups was confirmed by letter and telephone call. Potential participants were told they would receive a monetary incentive for participating in the focus groups. Incentives matched the competitive market price of \$50.00 or \$75.00 at each site.

C. Development of Moderator's Guide

ORC Macro developed the focus group moderator's guide to address the research questions presented above. CDC provided input on the guide and approved the final version. The guide was pilot-tested internally during mock focus groups with ORC Macro staff. Questions that were confusing or appeared out of order were revised. The guide was again pilot-tested during the first focus group held in Atlanta, Georgia, with CDC present. Final revisions were made at that time, and the guide remained the same for all other groups.

Components of the discussion guide captured participants' knowledge, awareness, attitudes, and behaviors regarding STDs and their preferences for receiving information about STDs. The guide covered five topic areas, roughly corresponding to the research questions. These are described below:

1. *Sources of Information: General Health and STDs* – Participants were asked a variety of questions aimed at capturing their usual sources for seeking/receiving information about health and STDs.
2. *STD Knowledge/Awareness/Behavior* – Participants were asked numerous questions about STDs, and HPV in particular, to determine what they already knew and what they would want to know about these diseases.

3. *Message Qualities* – Participants were asked what tone (humor, fear, fact) would be most effective in communicating about STDs.
4. *Bundling STD Information* – Participants were asked about their preferences for receiving information about STDs in a general campaign focusing on all STDs compared with a series of smaller campaigns focused on individual diseases.
5. *Developing Communication Messages* – Participants were asked to form small groups and develop sample materials (poster, brochure, etc.) that would effectively provide information to the general public about STDs. Each group was responsible for presenting and explaining the material developed.

A copy of the focus group moderator's guide can be found in Appendix C.

D. Training of Moderators and Notetakers

A total of five moderators conducted the focus groups. For the groups conducted with African American and Caucasian participants, the moderator was matched to race/ethnicity to encourage open discussion and increase participants' comfort, as is recommended in standard focus group methodology.¹⁷ For the groups conducted with Hispanic participants, the moderator was matched to race/ethnicity and gender. All moderators were given a formal briefing on the background and purpose of the focus groups. They were also given a fact sheet with a short description of the STDs that would be discussed in the groups. A copy of the moderator's briefing sheet can be found in Appendix D.

Additionally, three of the five moderators participated in a daylong training session on focus group moderation that was specific to this project. The training involved an interactive session on successful focus group moderation strategies and potential pitfalls. Mock focus groups with ORC Macro staff as participants were conducted using the draft discussion guide developed for this project. Moderators received feedback on their skills and use of the facilitation techniques from all participants in this training session. Two moderators, who were in different cities and could not participate in the training, were provided with videotapes from the pilot test. They also participated in a conference call with the ORC Macro project manager and lead moderator to allow time for questions and answers regarding the moderator's guide. In addition, an ORC Macro staff member provided ongoing feedback to them after each focus group.

A portion of the daylong training session was devoted to the importance of notetaking and the specific procedures involved with notetaking for this project. All four notetakers assigned to this project attended the training. Each notetaker was specifically trained to record individual responses as well as recurring themes in the groups. In an effort to assist with this task and ensure that notes were taken for each study question posed, a

¹⁷ Morgan, D. 1998. The Focus Group Guidebook. Thousand Oaks, CA: Sage.

notetaker's guide that corresponded to the discussion guide was developed. The notetaker's guide included all questions and topics presented to participants.

E. Conduct of Focus Groups

Focus groups in four of the six sites were conducted in professional focus group facilities. The focus groups conducted in Lake County, California and Robeson County, North Carolina, however, were held in a local hotel because there were no professional focus groups facilities in these rural areas.

Upon arrival for the focus group, participants were asked to sign in and to complete a brief information sheet prior to the start of each group. This information sheet allowed reconfirmation of eligibility for the group, provided demographic and behavioral information about the participants, and made it possible for the focus group moderator to avoid asking close-ended questions inappropriate for a focus group setting. A copy of the information sheets for each audience can be found in Appendix E.

Participants were also asked at this time to review and sign an informed consent form that detailed their rights, the limitations on the use of the data, and the investigators' assurance of maintaining confidentiality. The consent form also informed participants that the session would be audiotaped and videotaped. It also stated that staff from CDC and ORC Macro were present in the observation room to take notes, watch, and listen to the discussion. A copy of the informed consent form for each audience can be found in Appendix F.

To encourage early arrival at the groups, an early bird drawing was held at all groups. The names of all participants arriving at the facility more than 15 minutes prior to the start of the group were entered into a drawing. The winner of the drawing received \$25.

Each professional focus group facility was equipped with one-way mirrors, observer viewing rooms, a client waiting area, and audiotape/videotape equipment. The one-way mirrors allowed CDC and ORC Macro staff to observe the discussions from a separate observation room without being seen by participants. For the groups in California and North Carolina, observers were placed in an adjacent room where they viewed the groups on closed circuit television. An ORC Macro staff member was assigned to take notes in the observation room of every group. Each group was also audiotaped and videotaped.

The focus group discussions were guided by a skilled moderator who had received specific training in moderating focus groups and had extensive experience applying this technique. The role of the moderator was to ask pre-determined questions, guide the group discussion, and ask probing questions about salient, related topics that arose during the focus group session.

After a brief introduction, the moderator began asking questions from the focus group guide. Once the questions from the guide had been covered, the moderator informed the participants that he/she was going to check with the observers to determine if the

observers needed clarification on the discussion or had additional questions. Once these questions were completed, participants were thanked for their participation, offered CDC fact sheets with information on each of the STDs discussed during the group, and provided with their incentive payment.

F. Data Analysis

The analysis strategy for the project was considered and outlined when the study design was developed, taking into account the available resources and the anticipated quantity of data that would be generated from such a large number of focus groups. The approach to analyzing the data was adjusted slightly as modifications were made in the overall study design.

The challenge was to progress from raw data in the form of notes, transcripts, and videotapes from each of thirty-five, 1½-hour focus groups to meaningful answers to the five research questions. A great deal of importance was placed on maintaining the integrity of what was heard in individual groups and honoring the contributions of individual participants. At the same time, the analysis strategy had to enable the researchers to summarize and compare information within and across audience segments, to draw out insights and conclusions with confidence.

For each of the focus groups conducted, participants' responses were recorded by one of the primary evaluators from ORC Macro. All four of these researchers/notetakers had been involved in the development of the moderator's guide and were very familiar with the research questions and the intent of each question on the guide. Each notetaker was responsible for a particular audience segment.

Following completion of focus groups for a particular segment of the audience, the notetaker analyzed the notes across the groups for that segment and entered the details into a data table. The data table was organized by research question and guided the notetaker in how to use the responses to individual questions to form a comprehensive response to the larger research question. Additional data tables organized in the same way were used to record overall impressions and relevant quotations from the focus groups. Table 2 was used to provide the structure for this process. A sample of the data table can be found in Appendix G.

Table 2. Analyzing and Consolidating Participant Responses to Focus Group Questions

Research Question	Questions in Moderator's Guide
1. What do members of the general public ages 25 – 45 know about sexually transmitted diseases (STDs)?	1, 4, 5, 6, 9, 10
2. What do members of the general public ages 25 – 45 know about human papillomavirus (HPV)?	11, 12, 13, 14
3. What are the most effective channels and sources of information to reach this audience with STD prevention messages?	2, 3, 7, 8, 15, 17, 20, Drawing activity
4. What are the most effective message tone and qualities for STD prevention messages?	16, 18, 19, 21, Drawing activity
5. When should prevention campaigns focus on only one STD and when should STDs be bundled together to provide a general prevention message?	22, Drawing activity

In preparing the data tables, a rigorous, systematic process was implemented to ensure reliability and consistency among the researchers in how data were being summarized, and to ensure neutrality in the reporting and interpretation. The researchers met on a regular basis to discuss and come to agreement on categorizing responses. Particular attention was given to capturing the frequency of topics, extensiveness of the response across participants, and the intensity of the response. Based on these discussions, common and distinguishing themes across and between segments were identified. These data are reported in the Results section below.

III. Results

A. Description of Participants

Across the groups, 314 people participated. Most indicated they had resided in the community for at least 5 years. Participants' age ranged from 25-45, with an average age of 35 across the groups. Most participants had at least a high school education, with almost 30 percent having received a college degree. None of the Hispanic women in rural locations, it will be noted, had a college degree. Most participants were employed in either a technical, professional, or managerial capacity; several women noted that they were not employed outside of the home. Groups were comprised of single and married participants. More participants in urban areas (Atlanta, Kansas City, and Miami) had college degrees than those in rural areas (McAllen, Kelseyville, Lumberton). More participants in the rural areas reported incomes of \$20,000 or less than did participants from the urban areas. Table 3 summarizes the characteristics of the males and female participants in each of the six locations.

Table 3. Demographic Information for Male and Female Participants in Each Location

City		Atlanta		Kansas City		Miami		McAllen		Kelseyville		Lumberton			
Race/Ethnicity		Caucasian		African American		Hispanic		Hispanic		Caucasian		African American			
Sex		M	F	M	F	M	F	M	F	M	F	M	F		
No. Participants		27	27	27	27	27	27	27	27	17	27	27	27		
Age		Mean Age		35	36	35	36	34	36	33	32	37	35		
Education		Less than HS		0	0	0	1	0	0	0	0	0	1		
		Some HS		0	1	0	0	0	1	0	0	2	0	3	
		HS Graduate		3	5	12	4	2	9	10	10	2	5	17	12
		Some College		9	7	7	12	10	10	10	17	8	16	4	12
		College Graduate		15	14	8	10	15	7	7	0	4	6	2	3
HH Income		≤\$20,000		0	2	4	4	2	4	10	9	5	11		
		\$25,000-\$49,999		16	10	14	14	11	11	15	13	5	9	14	
		≥\$50K		10	15	9	9	14	12	2	5	7	7	0	
		Not Provided		1	0	0	0	0	0	0	0	0	0	0	
Marital Status		Single		18	15	7	14	10	12	10	12	5	9		
		Living Together		2	2	4	1	1	0	1	1	2	3	3	
		Married		7	10	16	12	16	15	16	14	10	15	9	

In the following sections, we present the results for each of the research questions offered above. Unless otherwise noted, findings were similar across all the segments.

B. Research Question 1: What Members of the General Public Know about STDs

The first objective of this study was to determine the extent of the knowledge about sexually transmitted diseases among the target population. To solicit this information, participants were first asked questions about health in general, then asked broad, open-ended questions about STDs. Below is the list of specific questions on this topic. Following the list, we present our findings for this research question.

<p>Research Question 1:</p> <p>What do members of the general public, ages 25 – 45, know about sexually transmitted diseases (STDs)?</p> <ul style="list-style-type: none"> ▪ What comes to your mind when I say “general health”? ▪ In general, what health conditions and diseases are you concerned about? ▪ What comes to your mind when I say “sexually transmitted disease” or “STD”? Why did you say that? What concerns, thoughts, or feelings come to your mind? ▪ I noticed that sexually transmitted diseases are (are not) on the list of health conditions and diseases you are concerned about. Why is that? ▪ What have you heard about (name of the STD)? What other terms/slang do you know of for this disease?
--

Perceptions of “General Health”

Participants were asked to say what comes to their mind when they hear the term “general health” as a way of initiating the discussion in the focus group, and as a way for

the researchers to learn of the basic perceptions they have about health. Responses were extremely consistent across all of the groups, with the following phrases being offered most often.

- Overall well-being
- Physical well-being
- Regular doctor visits/check-ups
- Activities and actions to prevent disease (diet, exercise)
- Taking care of the entire body, and mind

When asked to identify health conditions and diseases they were most concerned about, participants also responded in very similar ways. Across all of the groups, participants generally developed a long list of health conditions that could be placed in the following categories:

- Chronic diseases/conditions (e.g., diabetes, high/low blood pressure, arthritis, asthma)
- Life threatening/fatal diseases (e.g., cancer, heart disease/attack, stroke, AIDS, SARS, West Nile Virus)
- Health conditions associated with aging
- Health conditions they have control over, such as weight
- STDs other than AIDS, most often hepatitis

STDs and General Health

Participants were asked to comment on why STDs were or were not mentioned when they were asked to identify general health conditions or diseases they were concerned about. In almost all of the groups, AIDS was included in the list of concerns. Participants attributed this to the fact that they have heard so much about AIDS over a period of years and they associate it with death. In only a few groups were other STDs included on the general list, most often this was hepatitis, included because someone in the group knew that this was serious and debilitating. In a few groups, someone added STDs to the list of general health concerns, stating that it was because of a concern for their children, or that it would be a concern if they were single.

For most participants, STDs were not considered a major health concern. They said this was because other health conditions were more of a concern for them and because they just do not think of STDs except for AIDS. A number of participants in all of the population segments indicated that they did not have a concern about STDs because they were married. In a few groups, this comment sparked a debate about issues such as infidelity and trust. When asked later in the discussion to identify what they thought of when they heard the term “sexually transmitted disease,” some participants brought up these words again.

Only because HIV is life altering, if not ending.
Caucasian Urban Male

Yeah, I'm not too worried about STD's at this point. I'm not saying it couldn't happen except adultery. I'm happily married. You hope you know your partner.
Caucasian Rural Males

If I'm in a long-term stable relationship it's not a concern if I trust the person. If I'm single and on the market and dating it's a huge concern.
Caucasian Urban Female

It goes back to the things we were saying about all the other sexually transmitted diseases. We're married and you know pretty much your husband's history and kind of where you are coming from, you know you're not out there doing a lot of different things I probably wouldn't even be concerned about it at all.
African American Urban Female

Perceptions of STDs

Focus group participants were asked to identify thoughts, concerns, or feelings that came to mind when they heard the term “sexually transmitted disease.” In all of the groups, this question resulted in a list of diseases, but it also elicited other reactions. Heard most often were behaviors such as unprotected sex, condom use, promiscuity, infidelity, drug/alcohol use, and having multiple sex partners. A few participants mentioned “uncomfortable conversations with partners/friends.”

For some participants, the question elicited emotional responses. They added to the list of thoughts or concerns words like depression, worry, sadness, shame/embarrassment, guilt, discomfort. In a few groups, immediate reactions of participants included the phrases “careless,” “bad morals,” and “glad I don’t have it.”

Heard across all of the groups was the association of severe consequences associated with STDs, including death, infertility, pain, treatment/drugs, doctor visits, medical bills, and divorce. Many participants brought up at this time the need for education about STDs, including causes, symptoms, and consequences. Some of these participants emphasized the importance of this education for teens.

Another thing you think about when you think of STD's is the long-term effect of it, as far as like herpes, it's not totally curable. It comes and it goes, but that's a long-term effect that you have to think about, when it comes, how long it's going to go away for when it comes back. That's long-term; do you know what I'm saying?
African American Rural Female

Knowledge of STDs

Participants were first asked simply to list what came to mind when they heard the term “sexually transmitted disease.” This produced a list of sexually transmitted diseases that almost always included the most common STDs in the United States – HIV/AIDS, gonorrhea, syphilis, genital herpes, hepatitis B, pubic lice (i.e., “crabs”) and chlamydia. Trichomoniasis and human papillomavirus were rarely mentioned. No mention was made of bacterial vaginosis. Occasionally, participants also included mononucleosis and

yeast infections on the list but this was infrequent. In a few groups, PID was mentioned as an STD or a consequence of an untreated STD.

Most groups of participants identified HIV/AIDS, gonorrhea, syphilis, herpes, and genital warts pretty quickly in response to the question. From the responses and reactions in the group, it was apparent that most participants were at least aware of these diseases. Other STDs, including hepatitis B; chlamydia; trichomoniasis; and human papillomavirus, were not identified in every group. When these diseases were included, it was typically because only one or two people in the group were familiar with the disease. It was typical to hear reactions from other group members such as “what is that?” or “I’ve never heard of that before.”

The table below summarizes the most common information participants associated with the different diseases. In some cases this information is accurate.

Common Accurate Information Provided by Participants		
Disease	Across All Segments	Specific to Certain Segments
Gonorrhea	<p>Painful; painful, burning urination Can cause sterility/infertility Curable Treated with antibiotics/penicillin Common in Vietnam/disease of the past Affects men and women differently Causes death The “drip”</p> <p>Commonly expressed myths: Converts into syphilis</p>	
Chlamydia	<p>Sometimes confused with a yeast infection Both partners need to be treated Curable Treatable with antibiotics Itching Discharge for men and women A more common disease; “making a comeback” Symptoms in women are more severe The “clap” Similar to gonorrhea</p>	<p>Can cause PID and infertility (Caucasian rural male)</p>
Syphilis	<p>Can cause blindness, insanity, death Al Capone, Adolf Hitler, Vincent van Gogh had syphilis Curable No symptoms Symptoms include burning and sores Has different stages Affects unborn child</p> <p>Commonly expressed myths: Causes hair to fall out First stage is gonorrhea Contract from toilet seats</p>	<p>Miss Evers’ Boys/Tuskegee Institute Study (African American)</p>
Genital Warts	<p>Painful Painful intercourse Can remove them (freeze, cut and burn) Visible on penis; can be in vagina Not curable Treatable</p> <p>Commonly expressed myths: Affects more men than women Form of herpes Only contagious if they burst</p>	<p>Can lead to cervical cancer (one Caucasian urban male) Caused by HPV (one Hispanic rural Female) Pap can detect infection (one Hispanic rural Female)</p>
HPV	<p>Causes genital warts Pap smear to detect Can have it and not know it Affects both men and women</p> <p>Commonly expressed myths: Rashes</p>	<p>Causes cervical cancer (urban Caucasian male; rural Caucasian female; urban Hispanic female)</p>

Common Accurate Information Provided by Participants		
Disease	Across All Segments	Specific to Certain Segments
Pubic Lice	<ul style="list-style-type: none"> Crabs Itchy, scratchy Can get it without having intercourse Easily curable Are a parasite 	
Herpes	<ul style="list-style-type: none"> Two types (oral and genital) Painful outbreaks Can transmit without visible symptoms Can transmit to child during childbirth Treatable, not curable Medicine advertised on TV Flare ups, outbreaks Blisters Can be dormant Can be transmitted through oral sex Can be infected and not know it Stress related outbreaks Shingles <p>Commonly expressed myths:</p> <ul style="list-style-type: none"> Contracted from toilet Contracted from sweaty bench at the gym 	Like chicken pox (Hispanic rural male)
Hepatitis	<ul style="list-style-type: none"> Different types (A-E) Bloodborne Foodborne Unclean hands Sexually transmitted Affects the liver Turns skin and eyes yellow Vaccine available Can be deadly Pamela Anderson, Naomi Judd have hepatitis 	
Trichomoniasis	<ul style="list-style-type: none"> “Trick” Discharge Similar to yeast infection Treatable Itching Strong odor 	Prevalent in Native Americans (Rural Caucasian Females)
PID		<ul style="list-style-type: none"> Painful Fever Can cause infertility Treated with antibiotics Can result if one of the other STDs is not treated Not always sexually transmitted (African American urban female)

In general, participants’ knowledge of sexually transmitted diseases was very limited. Most often, participants indicated that they had heard of the diseases but did not know a lot of specific information about them. Aside from HIV, the diseases that participants

knew the most about were syphilis, gonorrhea, and herpes. They knew that the first two were curable with antibiotics, and, if not treated, would lead to severe consequences such as mental illness, infertility, and death. Participants typically knew that genital herpes are treatable but not curable, that a person with herpes has “outbreaks,” and that the disease is contagious even if there are no outward symptoms.

With the other STDs, there was less widespread knowledge. In many groups there was one or two people who knew and related valid information about each of the diseases, including symptoms, treatment, and consequences. Discussion of the diseases was frank and open as participants described symptoms of various diseases, and treatments such as “freezing” genital warts to remove them.

A discussion around hepatitis and the differences among various strains of the disease often occurred because many people had some level of awareness, but only some had factual knowledge in this area. Almost everyone knew that some form of hepatitis came from contaminated food, and another from blood transfusions with infected blood. Often during this discussion, vaccines were brought up and many people knew that children/young teens were given a vaccine for hepatitis but they did not know for which strains. Most participants knew that hepatitis affected the liver, but did not know much about how this affected a person who had the disease.

In general, women had more knowledge about chlamydia, trichomoniasis, and pelvic inflammatory disease than men. These diseases were identified in almost all of the female groups and during the discussion, the information shared was more likely to be factual than when these were discussed by men. With regard to all of the diseases, women were more likely to be aware of issues related to infertility and the possibility of a child becoming infected with an STD during birth.

Men were somewhat more knowledgeable about gonorrhea and syphilis than women. During discussion, men typically identified symptoms and treatment accurately. Both sexes knew these diseases could cause infertility if left untreated, and many knew that at least one of these diseases could cause blindness, dementia, and death.

In one site (Robeson County, North Carolina) in the study, the public health department had begun a campaign to educate people about syphilis, in response to a very high incidence of the disease. Public service announcements were appearing on television, and information was being given to health care providers and clinics for distribution to the public. This was mentioned in all of the focus groups conducted at this site, with participants stating that there was a high incidence of the disease and that the health department was trying to educate people about the symptoms and when to come in for treatment. Surprisingly, these participants did not know any more than other groups about the consequences of not getting treatment.

Another finding was that in the African American groups, the discussion of syphilis usually included reference to the “Tuskegee study.” This came up more often in the male

groups and sparked brief conversation about mistrust of research and the federal government in the African American community.

The most striking finding from this section of the focus group study was the fact that most participants were aware of sexually transmitted diseases, but not very knowledgeable about them. Almost every group could list at least six STDs by name, but when asked to describe what they had heard about these diseases most participants had only a very basic knowledge of symptoms, treatment, or consequences of these diseases. There was also a great deal of misinformation about STDs, most often around the availability and effectiveness of treatment. Participants would often disagree with each other over things they had heard and believed to be accurate, but the information would be incomplete or incorrect.

*Usually they say hepatitis C is passed through anal intercourse.
African American Rural Females*

*It's [Gonorrhea] probably also one of the easiest ones to catch. You can catch it
basically off of a toilet seat or anything like that.
Caucasian Urban Male*

*How long can you keep gonorrhea before it turns into syphilis? How long does it stay,
if you don't get treated for gonorrhea and it turns to syphilis, how long would it take?
African American Rural Male*

For many participants the focus group discussions pointed out how much they did not know about STDs. Many parents expressed concern that they needed to learn more about the diseases so they could educate their children. Other participants indicated that they needed to learn more to protect themselves, and to be able to help someone they care about if they become infected. There were many questions about prevalence of STDs in the U.S. and in particular racial/ethnic groups or parts of the country. All participants welcomed the educational materials that were distributed at the end of the focus groups, and there were some comments about how valuable the discussion had been in opening their eyes to the problem of STDs.

*I guess for me it's just thinking back, I mean I'm married now, but I wasn't back in
college days and you think back, and I'm really realizing how much I don't know and
how uninformed I am. I mean I probably knew it all at one and I would have been
tested at school in classes for it and probably knew it, but now it's like whew. And if
it's all linked, you have no way of knowing that what I did ten years ago isn't going to
hurt me when I'm trying to start a family.
Caucasian Urban Female*

C. Research Question 2: What Members of the General Public Know about HPV.

A primary purpose of this study was to determine knowledge and awareness of the HPV among members of the general public. Participants were asked questions regarding their

general knowledge and awareness of STDs, and moderators investigated participants' knowledge and awareness of HPV through a series of specific questions.

The following is a list of questions that were asked of participants in regard to HPV:

Research Question 2:

What do members of the general public ages 25-45 know about human papillomavirus (HPV)?

Moderator—If no one has said genital warts or HPV, add both separately and ask if anyone has heard of each. Ask about genital warts first, and then ask about HPV.

- What have you heard?
- Who did you hear it from?
- How did your doctor give you information about (genital warts/HPV)?

Probe:

- What did he/she tell you?
- Did he/she give you any written information (brochure, fact sheet, etc.)?
- Did he/she tell or give you any other information such as an 800#, a book, or a video?

What if I told you that research has shown that there is a connection between some forms of HPV and cervical cancer in women?

Probe:

- What questions does this raise for you?
- What would you want to know?
- What information would you want? From whom?
- How would you want to receive it?

If there were a vaccine available to prevent HPV, would you expect it to be part of the normally recommended vaccines? Why? If yes, should this vaccine be a part of normal adult immunizations or the regular childhood immunizations (such as measles, mumps, rubella)?

Would you consider getting an HPV vaccine if it were available? Why?

Probe:

- What are some things that might prevent you from getting this vaccine?
- What are some things that might encourage you to get this vaccine?

Knowledge and Awareness of HPV

HPV awareness was low among participants across the segments. HPV was rarely listed as an STD about which they were concerned or aware. However, awareness of HPV was more common among females than among males regardless of race or ethnicity. Among the female groups, often one or two participants in each group had heard of HPV and could describe it. Among the female participants who were aware of the disease, knowledge was low regarding specific details about HPV. Several had heard of it just recently. They cited learning about the disease from their gynecologists, friends whose partners had infected them, or from magazine articles. A few had abnormal Pap smears

and were told about HPV by their gynecologists. Several had heard that it was related to cervical cancer, but most did not know much about it.

In general, participants were concerned that most of them had never heard of the disease. Male participants, in particular, often expressed anxiety regarding their lack of awareness of HPV. This was manifested in the number of questions asked about HPV and in statements questioning why they had not heard of this disease before.

Behavioral Intent for HPV prevention

Participants' lack of awareness and knowledge about HPV made it difficult for them to discuss the actions they would take to prevent HPV infections, most particularly about the vaccination to prevent HPV. Across the groups, many participants stated they would seek out additional information and would speak to their health care providers about HPV and their risk. This was most often expressed by the women across the locations.

Why haven't I heard about it until now?

I'd definitely want to get more information on it.

I would want to be vaccinated and I would want my daughter to be vaccinated.

Caucasian Rural Females

I guess into research doing does this HPV create cervical cancer or does cervical cancer create HPV? It's the first time I've heard about it so I need more info.

Hispanic Rural Female

I think that as little as any of us know about it it's really hard to judge its relevance really. I mean how do we know if it's relevant if we don't know the demographics that it effects or how prevalent it is, if it's a common problem or a rare problem. I mean obviously we do all need to be informed about it just to know, just to answer those questions in itself to find out if it is relevant to us.

Actually at this point the whole conversation seems a little odd to me we don't even know about, so it's hard to answer these questions for you if we know absolutely nothing about it. I mean I don't know if I would get the vaccine or not because I don't know if it's a prevalent disease or if I'm in a high-risk situation.

Caucasian Urban Males

The Link between HPV and Cervical Cancer

Due to participants' lack of awareness of and knowledge about HPV, the moderators explained to participants that prior research has shown that a link exists between some forms of HPV and cervical cancer. In response, many participants expressed concern that they had not been previously informed of the disease and did not have the important information they needed to address their concerns. The moderators probed for what

information participants would want to receive regarding HPV and their preferences for how this information would be presented.

Overall, participants lacked knowledge about HPV itself, and thus were unaware of the relationships between HPV and genital warts and between HPV and cervical cancer. Across the groups, many participants had heard of genital warts and how they were treated. Most discussed them as benign, easily treatable, and not of great concern. Once participants learned that HPV causes genital warts, a number of participants expressed concern that genital warts were more serious than they originally believed.

During this discussion, moderators and notetakers noted an increase in anxiety and tension among participants when the relationship between HPV and cervical cancer was introduced. This was particularly true in the women's groups across all geographic segments. This increase in anxiety and tension was also noted in several of the men's groups. Across all the groups, the anxiety produced discussion about what participants want to know about HPV, who it affects, and how to prevent HPV. Few specific questions arose about the link between HPV and cervical cancer.

In summary, participants across the groups were interested in receiving information to better understand what HPV is, its transmission route, its symptoms, and ways to protect themselves. Participants also were concerned with whether HPV was "curable" or "treatable." Key questions participants wanted answered are presented in the table below.

Common Questions about HPV	
Questions about the disease itself (symptoms, transmission, detection, treatment)	What is it? How do I get it? What are the symptoms? How would I know it if I had it? Who has it? Who is the carrier? Can a male be diagnosed with it? Can it lie undetected? How long can I live with it? Can I pass it to my children? What are the chances of transmitting through sex? Is it treatable? What is the treatment? What are the chances of recovery? Is it curable? Is it preventable? How do you prevent it? Is there a test for it? Do pap smears always come back abnormal if you have it? Do doctors routinely test for it? Do doctors test for everything like this? How does it affect fertility?
Questions about occurrence in the population	Is there a section of the population more at risk? What ages does it mostly affect? What is the percentage of cases in the different segments of the population? Is it more prone to be in women? Is it an epidemic? Is it common across the races?
Questions about why they were unaware	Why haven't I heard of this? How long have they known about this?
Question about the link with cancer	How can it be detected early to prevent cancerous cells in women? How does it cause cancer? Can men get cancer from it too?

Participants stated they preferred a variety of resources for disseminating information regarding HPV. Often participants wanted to receive information from health care providers; women mentioned gynecologists as the specific health care provider they preferred. Participants also mentioned pamphlets in clinics, reputable Internet sites, schools, magazines, local television news, and television advertisements as appropriate vehicles. Although receiving information through the mail was mentioned, participants differed in whether or not they would want information through this channel. Those who did not prefer to receive information through the mail often mentioned concerns of how other people would view them for receiving information about an STD. An African American female suggested that another venue might be more accessible if you were targeting this information specifically to African Americans. She stated, "Because I'm a hairstylist and we get a lot of women in a salon, I think the salons and barbershops would be a good place for information, especially when it's that important to issue it out to the public."

HPV Vaccination

Participants were asked about the acceptability of a vaccination for HPV. Many participants were uncomfortable with the idea of accepting a vaccine because of their

limited knowledge and awareness of HPV. They also expressed that they were inadequately prepared to answer the question, as they had not heard of HPV before the focus group. Responses centered around three main themes: additional information about HPV, additional information about the vaccine, and assessment of one's own susceptibility.

Participants specifically noted that they would need answers to the questions they had articulated before considering a vaccination against HPV. Across the groups, they reiterated the questions described above. In addition, participants expressed the need to know if a vaccination was the only means to prevent HPV or if other strategies were available.

About the disease. You don't know how easily it is transmitted or anything like that. I mean if it's something you could get from a water fountain then you might want to get the vaccine.

Caucasian Urban Male

It really depends on how it's contracted. You just don't start putting chemicals in the human body just to put chemicals in the human body.

Caucasian Urban Male

Participants also expressed a need for more information about the vaccine itself. Specifically, they identified a number of factors they would consider before making a decision about the vaccine. These included

- Cost
- Possible side effects
- Safety of the vaccine
- Schedule of delivery for the vaccine (e.g., once or a series; intravenous shots or pills)
- Effectiveness of the vaccine
- Degree to which the vaccination would guarantee against infection (i.e., how many people who received the vaccine still became infected)
- Length of time it would offer protection, and if booster shots would be required
- Health care provider's recommendation.

Cost related. Usually with some of those they can be costly. Or it's not always something covered maybe through the normal vaccination process.

African American Urban Female

But at the same time it has to be researched where it's not going to have side effects ten years down the road. A lot of times they put something on the market and it's going to stop it for right now, but they've never tested it down the road. What I'm trying to say it's like the Ritalin right now that they're giving kids. It takes care of the child right now, but you don't know what the side effects might be ten years from now when the child might be impotent or he might be whatever or more susceptible to cancer or something.

Hispanic Rural Male

In addition, participants expressed needing to know their own risk for and susceptibility to HPV before being able to offer an opinion. Those who were married did not view themselves as susceptible and thus did not see a need for vaccination. Participants expressed that the vaccination should be personal choice based on one's lifestyle. For example, prostitutes and people with multiple partners should be vaccinated. Those who were not married but abstinent also did not see a need to be vaccinated based on their current behavior.

Personally myself no. I've been married 23 years I don't see why I should have to do this.

Hispanic Urban Female

I think you have to know more about how common it is, how often it happens, how many people out of a thousand are going to catch or how many are expected to catch it in their lifetime. I don't think there's enough information out there at this point to make a legitimate decision on whether you should vaccinate or not vaccinate against it. I don't think anybody knows enough about it.

Caucasian Urban Male

It's probably a waste of time if you don't have a highly susceptible risk of getting it. If you're in a high-risk group. If you're not it might cause more trouble than it would prevent

Caucasian Urban Males

There was no consensus as to whether or not the vaccine should be administered to a child. Some participants believed that it would be inappropriate and unnecessary to take the risk associated with vaccinating a child for an STD. The caveat, as a few participants said in response to this argument, is that child sexual abuse can and does occur. The other argument made by some participants was that it was appropriate to vaccinate children to protect them for when they do become sexually active. This led to discussions about the appropriate age for the vaccination and that making the vaccination available may convey the message that sexual activity is permissible.

If it's sexually transmitted, why would a child need it? I don't understand.

Caucasian Urban Female

I think it's the decision of an adult. If you know you're doing what you shouldn't be doing and protecting yourself that's a decision an adult should take, not a child.

Hispanic Rural Female

Maybe at the age of 12 or 13 they're going to ask why they're getting this. Oh, this is to prevent you from getting this sexually transmitted disease. To a lot of kids it's going to be oh, you know what? Now I can go do this because I'm not going to get this.

Hispanic Rural Female

When asked what would discourage people from getting vaccinated, participants noted lack of knowledge about HPV, the cost of the vaccine, and lack of susceptibility as main reasons. Another concern was that being vaccinated for an STD would imply that one is promiscuous. An additional concern was that the vaccination might provide a false sense of security, leading people to engage in unprotected sex and increase their risk for other STDs.

Maybe some people will be embarrassed to go and get the shot and people are going to say she sleeps around and she needs the shot.
Hispanic Rural Female

I feel that people are going to depend on the shot and might take it a step further where oh, okay, I have this shot so now I can go have sex and then they get something else instead of the HPV only. People do that. They really think that oh, I'm safe from all these STD's when it's really only geared to one, which is HPV. Kids and teenagers think they are invincible.
Hispanic Urban Female

Participants' desire to protect their individual health was noted as a factor that would encourage them to accept vaccination. Some individuals suggested that prevention of diseases is always beneficial, to society as well as to the individual. Other factors that would encourage participants to take the vaccine would be a health care provider's recommendation, more information about HPV, and believing they were at risk.

Get this shot and it is one less worry in your life.
Hispanic Urban Female

D. Research Question 3: Effective Channels and Sources of Information

The third objective of this study was to determine the most effective channels and sources of information to reach members of the general public ages 25-45 with STD prevention messages. In order to glean this information, participants were asked a number of questions about their usual methods for obtaining health and STD information, reasons for seeking this information, and preferences for receiving future information. Participants were also asked about the role of CDC in developing and disseminating information about STDs to the general public.

Below is the list of specific questions on this topic. Following the list, we present our findings for this research question.

Research Question 3:

What are the most effective channels and sources of information to reach this audience with STD prevention messages?

- Where do you get your information on general health? To whom do you turn for this information? To what do you turn for this information?
- When are you most likely to seek out health information?
- Up to now, where have you gotten your information on STDs? If you searched the Internet, what would you look for? How would you look for information?
- What are some of the reasons you would seek out more information about STDs? Are you more likely to seek out this information when you or someone you know has a problem or symptoms?
- If you thought you had an STD, who would be the first person you would turn to for information? What is it about an STD that might prevent you from seeking information? Would you be concerned about the stigma attached to a particular disease? Would embarrassment or shame influence your decision to talk about the disease?
- How would you most want to receive the information? Which organizations are the most trusted sources for developing these materials? What about the CDC or other government agencies? What organizations do you trust to distribute this information to you?
- If there was an effort to raise awareness about STDs in your community, who would be an

Usual Channels and Sources

Participants stated that they go through similar channels to obtain information about general health and information about STDs. They spoke of interpersonal channels, the Internet, and print, television and radio as the resources they most often utilize to obtain information about general health and information about STDs. There were few differences in participants' responses to this question across the focus group segments.

Similarly, participants stated that they also refer to similar sources for information about general health and information about STDs. All groups spoke of sources such as people and organizations and channels such as websites, magazines and other print sources, television, radio, public service announcements, and advertisements. For each type of source and channel, participants were asked to provide specific examples. Many of the examples of sources listed by participants were common across all focus group segments. Some examples, however, were specific to certain segments. The following table depicts the common and unique examples within each category of information source provided by focus group segments.

Source or Channel	Examples Common Across All Segments	Examples Specific to Certain Segments
<i>People</i>	<ul style="list-style-type: none"> ▪ Family members ▪ Friends ▪ Individuals who have experienced similar problems ▪ Pharmacist ▪ Physician 	
<i>Websites</i>	<ul style="list-style-type: none"> ▪ Ask Jeeves ▪ Google ▪ WebMD ▪ Yahoo 	<ul style="list-style-type: none"> ▪ CDC.gov (Caucasian males) ▪ MayoClinic.com (Caucasian females) ▪ Momma.com (Hispanic females)
<i>Magazines</i>	<ul style="list-style-type: none"> ▪ Health & Fitness ▪ Men's Health ▪ Prevention ▪ Shape ▪ Time 	<ul style="list-style-type: none"> ▪ Cosmopolitan (Females) ▪ Ebony (African-American females) ▪ Essence (African-American females) ▪ GQ (Males) ▪ O (African-American females)
<i>Other Print Sources</i>	<ul style="list-style-type: none"> ▪ Books ▪ Brochures/pamphlets from physician's office ▪ Flyers from insurance company ▪ Information brought home from child's school ▪ Newsletters from work ▪ Newspaper 	<ul style="list-style-type: none"> ▪ "Women's Bible" (African-American females)
<i>Television</i>	<ul style="list-style-type: none"> ▪ CNN ▪ Discovery Channel ▪ News programs such as 60 Minutes, Dateline, 20/20 ▪ The Learning Channel 	<ul style="list-style-type: none"> ▪ "For Your Health" segment on Spanish television station (Hispanic females)
<i>Radio</i>		<ul style="list-style-type: none"> ▪ Call-in program hosted by physicians on Spanish radio station
<i>Organizations</i>	<ul style="list-style-type: none"> ▪ Hospital/clinic ▪ Insurance company ▪ Library ▪ School/University ▪ Work 	<ul style="list-style-type: none"> ▪ Barber shops (African-American males) ▪ Church (African-American females) ▪ Government assistance programs such as WIC (Hispanic females) ▪ Military training (Caucasian males)
<i>Advertisements</i>	<ul style="list-style-type: none"> ▪ Prescription drug commercials ▪ Valtrex® ads 	

It is important to note that, when asked, female participants from the Hispanic rural focus groups stated that they preferred to watch and listen to information about health and STDs broadcast in Spanish, but preferred to read information printed in English. One possible explanation may be that these groups, conducted in McAllen, Texas, included assimilated female participants.

Reasons for Seeking Information

Participants responded that they seek information about general health and STDs for similar reasons. There were no detectable differences in responses to this question across audience segments.

All participants stated that they are most likely to seek health and STD information in the following cases:

- When they are sick or having symptoms or problems
- When they know someone who is sick or having problems
- When there is family history of a particular health problem
- When a health topic is covered in the news media
- When they want to educate their child or other youth
- When they are just curious

Most participants stated that the stigma associated with STDs might prevent them from seeking more information if they thought they had a problem. Embarrassment and shame were commonly cited as reasons for not seeking out information on this topic. In addition, the fears of being perceived as promiscuous, stupid (for not using protection or being unfaithful), or gay (especially in reference to HIV) were also noted as inhibitive factors to seeking more information about STDs.

Preferences for Receiving Future Information

Participants spoke of their specific preferences for receiving future information about STDs. These preferences fell into four main categories: format of the information, trusted organizations for developing the information, trusted organizations and appropriate settings for dissemination of the information, and a campaign spokesperson to deliver the information.

Format

Participants stated that any information or materials developed should be made available in a variety of languages. They also stated that there were a number of formats in which they would most like to receive the information developed. The following table depicts participants' format preferences and denotes formats receiving mixed reactions from participants.

Preferred Formats	Formats Receiving Mixed Reactions
<ul style="list-style-type: none"> ▪ Billboards ▪ Brochures/flyers ▪ Hotline/800-number ▪ Magazine articles ▪ Newsletters ▪ Newspaper articles ▪ Posters ▪ Radio ads ▪ Radio programs ▪ School programs ▪ Television ads ▪ Television programs ▪ Websites 	<ul style="list-style-type: none"> ▪ <i>Materials sent in mail</i> <p>Positive reactions:</p> <ul style="list-style-type: none"> – Important to distribute information to as many people as possible. – A mass mailing would be very effective for reaching a broad audience. <p>Negative reactions:</p> <ul style="list-style-type: none"> – People may perceive this information as junk mail. – May be offensive to a person's privacy; concern that a neighbor may see information received in mail and suspect that person has an STD.

Trusted Organizations for Development

Participants cited a number of trusted organizations for development of STD information and materials. The American Red Cross, CDC, and Planned Parenthood were frequently mentioned as specific organizations that would be trusted. Other trusted organizations include community-based organizations, doctors' offices, health departments/clinics, and insurance companies. Participants further stated that they would not trust information developed by pharmaceutical companies.

*The group I'm leery of is the pharmaceutical industry. My problem with the government with them is it's a lot of those companies that are in bed with politicians and it becomes a money issue with them, a business issue as far as do I want to give all this information or do I want to find a cure for certain diseases because if I have a cure, a vaccine that I can give them, that's one time they'll have to take it and they're fine versus this person being on medication for this many number of years or whatever. I'm leery more of that group.
African-American Urban Female*

Trusted Organizations and Appropriate Settings for Dissemination

Participants mentioned similar trusted organizations and appropriate settings across the groups, although a few differences were noted in the African American groups. The following table displays the organizations and settings commonly mentioned by all focus group segments, as well as those mentioned by specific segments.

Organizations and Settings Common to All	Specific Organizations and Settings
<ul style="list-style-type: none"> ▪ American Red Cross ▪ Bars/clubs ▪ CDC ▪ Community-based organizations ▪ Doctors' offices ▪ Health departments/clinics ▪ Health fairs ▪ Insurance companies ▪ Planned Parenthood ▪ Schools/colleges ▪ Women's shelters ▪ Work 	<ul style="list-style-type: none"> ▪ Church (African-American participants) ▪ Beauty shops (African-American participants) ▪ Barber shops (African-American participants)

Campaign Spokesperson

Participants had mixed reactions to the notion of a specific spokesperson for an STD campaign. While all participants agreed that having a campaign spokesperson was beneficial, they were divided as to who would be an appropriate spokesperson to deliver prevention messages about STDs.

Some participants believed that the use of a celebrity spokesperson for an STD campaign would be particularly effective. Participants referred to Magic Johnson's role in building awareness of HIV, and stated that it might be possible to heighten awareness of other STDs using this same approach. These participants believed that individuals who have, or are affected by, a particular STD would be most appropriate. Pamela Anderson was mentioned as a possible spokesperson in this case. However, these participants also stated that it would likely be very difficult to find a celebrity who would come forward to speak about his/her experience with an STD. In this case, it was believed that other reputable celebrities with knowledge of health issues, such as the U.S. Surgeon General, would be appropriate representatives to speak about STDs.

*A celebrity that has it, like Pamela Lee. I think she has herpes; no she has hepatitis.
She became a national spokesperson.
Hispanic Urban Female*

*But then again for like an additional awareness it seems like after that if you want more factual information that having a celebrity spout off facts, it's kind of like if you see a celebrity and you know they're probably not going to have a medical background and they're probably not going to really know on a deeper level what they're really talking about, in that respect maybe that in combination with someone like the Surgeon General who has recognized credentials that someone would know I could trust the person because they've been through years and years of training and know what they're talking about. I should believe them.
Caucasian Urban Male*

Other participants believed that a celebrity spokesperson would not be effective in delivering prevention messages about STDs. These participants stated that the most believable spokesperson would be an “average person” who has been affected by an STD. Participants believed that this person would be able to provide a credible testimonial about his/her experience with STDs. They also believed that a peer or someone in their community to whom they can relate would be most effective in this role.

*That's the role model, somebody in the news, spokesperson I mean, somebody in the community, somebody that you could see face to face that you could relate to because I mean I might see a Kobe Bryant but [someone else in the community] might not even watch basketball [and not recognize Kobe Bryant], so somebody who's in my neighborhood when I walk to the store that's informing me on this.
African American Rural Male*

African American participants believed that the most effective spokesperson to deliver STD messages to their community would be an African American person. It was stated that messages targeted to the African-American population should be presented by a person of similar race. Additionally, African American participants often referred to church leaders or clergy as appropriate spokespeople for an STD campaign.

*I think that it probably could come from...people would probably listen whether they were African American or not, but I think it would have a stronger message if they were African American. I mean you always have your exception to the rule; somebody is going to pay attention irregardless of who gives them the message. But I do think it would be more effective because it's somebody you can identify with. They look like you, they sound like you. You can identify better with them.
African-American Urban Female*

Role of CDC and Government Agencies

Across most groups, participants viewed CDC as a credible and trustworthy organization. They believed that the purpose of CDC is to disseminate information about health issues, and referred to CDC's activities with regard to West Nile virus, Severe Acute Respiratory Syndrome (SARS), and HIV. Participants also believed that CDC would be an appropriate organization to develop an STD prevention campaign.

*Aren't they [CDC] the experts? Who knows more?
Caucasian Urban Female*

*I mean the CDC to me like the agency. If it comes from them it's like the law.
Hispanic Urban Male*

When questioned further, participants expressed a belief that the U.S. government does not share all it knows with the general public. For example, participants showed concern when asking the focus group moderator why focus groups were being conducted in their particular area, and also when asking why they had not heard more about HPV. In both cases, participants wondered if there were some piece of information that CDC had not yet shared with them.

*I don't understand how it can be the most prevalent and not known. How is that? I mean just from word of mouth you would think, even without any type of input from CDC that word of mouth somehow would have gotten around to somebody if it's the most prevalent. I mean is it a big secret?
Caucasian Urban Male*

Some participants in the African-American focus groups stated their distrust of CDC and other government agencies. They referenced the Tuskegee Study as the impetus for their distrust and made other references to government conspiracy with regard to HIV and genocide of the African-American population. It is important to note that not all African-American participants shared this sentiment. These groups were split on this issue, expressing both distrust and trust of CDC and other government agencies.

*The government hasn't been the most forthcoming [with] people.
African American Urban Male*

*If it's coming from the government, if it's coming from the CDC, even though they may not be telling the full story, which of course we found about syphilis, we found out about AIDS, there are always the little things. But if they put the information out there then I think it would help to create a venue by which we can go and do the additional investigation. I never heard of this and if I had seen something it was like oh, okay, I need to check this out because that's what I have to do for my kids and me.
African American Urban Female*

D. Research Question 4: Effective Message Tone and Qualities

The fourth research question sought to determine the most effective message qualities and tone for STD prevention methods designed for the general public. This research question was explored both directly (through questions on the moderator's guide) and indirectly (through a drawing activity, discussed in Section III.G). The following is the list of questions used to address message tone and qualities:

Research Question 4:

What are the most effective message tone and qualities for STD prevention messages?

What are the most important things you would want to know about STDs?

What should be the main point in the materials?

If you were developing materials to prevent STDs in your community, would you: Target only a specific age group? If yes, which one? Why? Emphasize abstaining from sex? Why? Emphasize preventing STDs by using condoms? Why? Use a mix of both types of messages? Why? Should messages for adolescents differ from messages for adults? Why? Would it be appropriate for a government agency to do a national campaign to raise awareness about STDs?

Now we want to get your opinions about the qualities of the message. What tone do you think would be most effective in communicating about STDs? How would you respond to STD information that uses humor? Why? How would you respond to STD information that is serious? Why? How would you respond to STD information that tries to scare you? Why? What other types of messages would improve the chances that you would pay attention to the information?

Content of Effective STD Prevention Messages

Participants were asked to identify the most important things they would like to know about STDs and what the main point of the messages should be. Across the segments, participants identified similar things that they would want to know. Most often, participants expressed that they would want to know about the symptoms of the STDs and treatment options. Participants were also interested in the consequences of the disease. In particular, participants were interested in whether or not the STDs were curable, merely treatable, or life threatening.

With the exception of the urban Caucasian females, participants in the other segments were interested in knowing how to prevent STDs. Participants also expressed interest in understanding how STDs are transmitted from person-to-person. Of note, African American males in urban areas and Hispanic females in rural areas were interested in knowing if the STD could be transmitted to a child during pregnancy or childbirth.

Interest in the prevalence of STDs within communities was limited to Hispanic participants (males in urban and rural areas and females in rural areas) and to African American female participants in urban areas. Caucasian males in urban areas also were interested in knowing the cost associated with treatment and whether treatment would be covered by insurance.

Across all segments participants stated that the main point of materials should be factual information about the diseases, their symptoms, and means to prevent them. Participants expressed that prevention information should focus on abstinence, safer sex, and condom

usage. In addition, participants noted the importance of including resource information about whom to contact with questions or when experiencing symptoms.

Interestingly, Caucasian females in rural areas discussed the need for STDs to be de-stigmatized as they are a common part of society today and the stigma associated with STDs can hamper communication between sexual partners.

...STD's are part of our society and maybe take away a little bit of the darkness, take away a little bit of the shame involved with them and maybe show people talking, like maybe couples being honest with each other, like a partner telling the other partner that I have this.

Caucasian Rural Female

Designing Appropriate Materials for their Communities

Participants were asked how best to design materials for their communities. Participants across the groups recognized the need to educate all people about STDs while creating messages that are appropriate for different audience segments. Participants believed that STD prevention information should be provided to young children, although there was no consensus as to what age information about sexual health should begin to be shared. Participants did agree, however, that age-appropriate language was necessary.

Across the groups, participants recognized the need to be “realistic” about people engaging in sexual activity. This recognition led participants to suggest that a combination of abstinence and condom usage messages would be appropriate. Most people agreed that messages should focus on abstinence as an effective method to prevent STDs, but that providing information on using condoms correctly to reduce the likelihood of contracting STDs was imperative.

There will always be people having unprotected sex.

Hispanic Urban Male

I think a mixture of [condoms and abstinence], too, because you have to reach that person that says well, I'm not going without, I'm just not. So you have to have the next option, option number two.

African American Urban Female

Of note are differences in how messages should be framed for adults. Discussions in the groups demonstrated that the need to craft different types of messages for adults. First, some participants saw the need for STD prevention information so that they could protect themselves from STDs. Second, some participants expressed the need as parents for information so they could provide information to their children.

Discussion within the groups also highlighted the need for personal responsibility and parental responsibility. A few participants expressed the importance for individuals to take responsibility for protecting their own sexual health, including understanding the different methods for preventing STDs and the behaviors that increase one's risk. Through this understanding, individuals would be able to make informed decisions and

choices. A few participants also expressed the need for parents to establish and foster open relationships with their children so that the parents – and not the government, schools or churches – would be guiding the choices their children make.

But at the same time you also have to make sure that you as parents are educated. My dad was a stickler when I was a little kid, my dad would always tell me make sure you wipe that toilet seat before you sit down on it so you don't get anything from sitting on a toilet seat whether it's a public or your own. It's just some things that maybe as parents you don't know. And if you're educated enough and you can teach your kids then go for it.
Hispanic Rural Male

Effective Tone for STD Prevention Messages

Across all segments, participants expressed the need for factual information to be delivered using serious tones in clear, simple language. Participants suggested that humor not be used because STDs are serious and humor would detract from that message. Scare tactics were also mentioned as an effective way to convey STD messages, although some participants believed that STDs are “scary enough on their own” that a scare tactic can instill unnecessary panic. In addition, participants wanted materials to provide real-life examples to which they could relate.

I think a serious tone. I definitely do not think humorous because it's not a funny matter.
African-American Urban Female

I would have to say it has to be definitely catchy. I wouldn't want to say alarming. The last thing that you want to do is create panic. It's got to be at a good tone where it's going to catch somebody. I can't define the form but it's got to be something that defiantly creates awareness. You can't do it by humor. You are going to take it as a joke. It's got to be something very serious and I will say something that's going to impact you. You've got to make it alarming but you have to keep a tone on awareness.
Hispanic Urban Male

Across the groups, participants recalled memorable public service announcements and advertisements for health conditions. Often, participants mentioned two campaigns they found memorable – the TRUTH campaign, which presents factual information about cigarette smoking, and Mothers Against Drunk Driving. These campaigns were noted for their ability to convey important health information in a serious, tasteful, and believable way. On the opposite end of the spectrum, participants expressed disapproval at pharmaceutical advertisements that glamorize STDs and implicitly condone risky behaviors. Participants cited the advertisements for VALTREX® (valacyclovir HCl, a product of GlaxoSmithKline) as an example.

E. Research Question 5: Individual STD Focus Versus Bundling of STD Messages

The fifth objective of this study focused on “bundling” of STD messages. The intent of this research question was to determine when a message about STDs should address one disease and when it should address all STDs. Participants were asked when it is important to hear a general STD message and when is it important to hear a disease-specific message.

Below is the list of specific questions on this topic. Following the list, we present our findings for this research question.

Research Question 5:

When should prevention campaigns focus on only one STD and when should STDs be bundled together to provide a general prevention message?

If CDC were to design a prevention campaign about preventing STDs, would it be best to design: A general campaign focusing on STDs overall? Why? A series of smaller campaigns focused on individual diseases? Why? Does it make sense for any of these diseases to be grouped together in a campaign? If so, which ones? Why?

Participant reactions to this question were mixed. Some participants stated that the use of smaller specific campaigns would help differentiate the diseases from one another; others believed that a general campaign that provided information common to all diseases would be more effective.

Participants who preferred a series of smaller campaigns focusing on specific diseases stated that this approach would allow for a more narrow focus on the details of each disease including symptoms, transmission, treatment, cure, and other statistics. They believed that this would be the best approach for filling in gaps in knowledge among the general public about certain STDs. Participants also believed that it would be beneficial to set priorities in distributing information about the specific diseases. It was suggested, for example, that disseminating information about HPV be a priority because of its current prevalence.

*I think if it's too broad people aren't going to be able to retain it.
African-American Urban Male*

I think they should do them individually. If you lump them all together then some of the ones that are real bad won't seem as bad and the ones that are more mild will seem just as bad.

*I don't think they should be lumped together.
Caucasian Rural Females*

Conversely, participants who preferred a more general campaign focusing broadly on all STDs noted that this would be the most efficient means of disseminating the most important pieces of information about all STDs. They believed that it would be best to provide information common to all diseases, such as prevention. Participants also believed that it might be effective to bundle STDs by audience according to the diseases that most seriously affect that audience. They stated that it would be better to provide a strong message about all STDs and to provide a resource where people can turn for more information about specific diseases.

I'd rather have it all in one shot. You can't relate to that one disease. You could say oh my God, I could get all of these things? A lot of these are inter-related.
Hispanic Urban Female

You could do it all at once. The reason being is I might hit this target only once. I might have one chance to get them. If I have all the information, not detailed because people get—it gets to be mundane. But if you get poignant points in on everything because I might miss you the next time when I decide to do something that's really affecting your life.
African American Urban Female

G. Drawing Activity Summary

The drawing activity provided a means to gather supplemental information about the best ways to communicate information about preventing STDs. Through this activity, additional information could be garnered about effective sources of information, tone, message qualities, and best ways to present STDs. Copies of the drawings can be found in Appendix H.

Drawing Activity

This will be your last activity for tonight. We want to give you an opportunity to use your imagination and what you've learned in this discussion. We'd like you to give us your best thinking about what would be effective ways of communicating to people about STDs in general or about individual diseases. Please use the markers and paper provided to develop a sample poster, pamphlet, brochure, etc. that you think would successfully provide information about STDs. We would like you to include both text and pictures as you see fit.

Most participants presented ideas for printed information targeted to the general public. Trifold brochures, like those found in health care providers' offices, and posters were commonly drawn. A few groups presented ideas for billboards, storylines for television shows, or storyboards for television advertisements.

In general, the materials developed in this activity provided factual information using neutral (e.g., presenting only factual information about the STDs) or serious tones. Most groups' drawings reflected the need for factual information about the causes and nature of the disease, transmission routes, treatments, and prevention as their main points.

Appeals were personalized, using the term “you” to engage the audience. In addition, the Caucasian urban women included themes of “respecting yourself” and “be safe” as well. The Caucasian rural women included themes of “personal responsibility” for protecting yourself from an STD. The Hispanic rural women included themes about how STDs can ruin one’s life. They also included emotional appeals through the use of “victim’s stories.”

Some groups used scare tactics, alluding to death through visual images (e.g., skull and cross bones, coffins, tombstones) or words (e.g., death, deadly, die, kills). Several groups used irony, a form of humor, to stress their points. For example, irony is apparent in the tag line “It’s the gift that keeps on giving.” Other creative uses of irony involved the juxtaposition of celebrities with every day people with the tag line “The one thing these people have in common is an STD” or “You too can be famous.” Word play was another use of humor. As an example, one group played the slang term for pubic lice (crabs) with visual images and the tag line “Bring home these (shellfish) and not these (pubic lice).”

Most of the drawings were designed to increase awareness and knowledge about STDs. Some included information about how to prevent STDs, specifically using condoms as the means to protect oneself. Some of these groups also included abstinence in their messages. The Hispanic urban women framed their messages as action steps, including talking with a partner, using condoms, going to the doctor, informing others, and getting tested. The rural Caucasian groups (both male and female) also included talking with a partner as a key action step.

When people were depicted, most often they were “real” people. When couples were depicted, they typically were heterosexual. Celebrities were used in an ironic fashion (see above). Other visual images included tombstones, condoms, sperm, intravenous drug needles, and stop signs. Groups also emphasized that factual brochures should include pictures of what the symptoms of a disease look like.

Many of the groups included additional resources to contact for more information. Toll-free telephone numbers and Web sites were most common.

The drawings were also examined to see if participants presented individual STDs or STDs in general. Few groups chose to highlight one specific STD, but those that did addressed genital herpes, HPV, HIV/AIDS, pubic lice, and syphilis. Most groups chose to present STDs as a whole, often including factual information about several diseases in one brochure. An alternate presentation seen in a number of groups was to highlight the need to take precaution and to protect your health. In these drawings, a list of many different STDs was used to make the point that may one of them could significantly harm you.

IV. Discussion

The focus groups discussed in this report were conducted to explore the knowledge, attitudes, beliefs, and communication preferences among members of the general public ages 25-45 about STD and STD prevention. Analysis was also conducted to identify any differences by sex, race/ethnicity, and geographic location (urban/rural), but few were found.

Participants were aware of several common STDs, yet their knowledge of those diseases was limited. Participants were most familiar with gonorrhea, chlamydia and syphilis; however, these diseases were perceived as less common now than they were years ago. Participants were familiar with herpes due to recent television advertising promoting drugs designed to suppress outbreaks. There was some familiarity with hepatitis, with participants knowing that there are different types with different causes. Participants were less familiar with HPV, PID, and trichomoniasis. No mention was made of bacterial vaginosis.

STDs other than HIV/AIDS were rarely of concern to participants for several reasons. First, many participants believed their lifestyles did not put them at risk for contracting STDs. Second, STDs (except HIV/AIDS) were not viewed as life threatening.

Participants recognized their own lack of knowledge and expressed desire to receive current, scientific, factual information about STDs. The desire to receive information reflected two underlying purposes. First, by having this information individuals could protect themselves from contracting an STD. Second, individuals could use this information to educate their children and other loved ones. These two reasons for seeking out STD information suggest that different types of materials are needed to satisfy each purpose. For example, to appeal to a parent, a public communication campaign would need to address the concern for their child's safety and protection.

Participants also requested statistics about the prevalence of STDs in their racial/ethnic group and in their cities. Many wanted to know how much they and their community were being affected by STDs. This information was perceived as making the issue more personally relevant and meaningful than statistics at the national level. This finding was reinforced as participants stated that, in general, they sought out health information when *they or their families* are personally affected or when a health issue receives media attention.

Participants also noted that embarrassment or shame might inhibit some people from seeking out information about STDs and from taking steps to protect themselves. By fostering open communication among parents and children, between sexual partners, and within communities, the stigma associated with STDs can be reduced. This requires teaching people appropriate strategies and creating opportunities for them to rehearse these behaviors. For example, health care providers can play a significant role in helping their patients prepare for discussions with partners and children. Bandura's Social Cognitive Theory suggests that rehearsal of behaviors through role plays is an effective

means of reducing anxiety, increasing self-efficacy, and increasing the likelihood of performing the practiced behavior.¹⁸

Participants viewed STDs as a serious issue and discussed the importance of educational materials reflecting this perspective. Participants found humor to be inappropriate. They suggested materials use simple, clear, straightforward, and easy to understand language. Across all segments participants stated that the main point of materials should be factual information about the diseases, their symptoms, and means to prevent them. Participants expressed that prevention information should focus on abstinence, safe sex, and condom usage. In addition, participants noted the importance of including resource information about whom to contact with questions or when experiencing symptoms.

Participants recognized the need for materials to be developed in different languages. While they themselves were comfortable reading materials in English, they noted that there were members of their communities who would prefer materials in other languages. It should be noted that if materials are developed in languages other than English, formative testing should be conducted with individuals who are native speakers of that language.

The lack of awareness and knowledge about HPV was of concern to participants, raising many questions and producing fear. Across all the groups, participants wanted to know more about the nature of the disease, its symptoms, consequences, and treatment. Materials about HPV developed for the general public need to first focus on raising awareness and stimulating curiosity to encourage people to seek out additional information. These materials should also inform people that Pap smears detect HPV. Complementary materials should be developed to provide accurate information while reducing fear and anxiety and encouraging protective action.

Within these focus groups, several women who knew of HPV through a friend who was diagnosed with HPV or through their own personal experience shared their experiences with the other members. Few of these women said that their health care providers provided detailed information about HPV. This indicates that information about this disease is starting to be shared on a personal level, yet factual information about HPV is limited. This sharing is likely to result in increased awareness due to interpersonal communication among friends. Within these focus groups, the disclosures produced fear, confusion, empathy, and interest in learning more about HPV. This suggests that personal testimonials are an effective route for increasing information seeking.

Participants were hesitant to accept vaccination for HPV. This was due to three reasons. First, few participants had heard or knew much about HPV, its severity, and its consequences. This raised concerns about a need to be vaccinated against an unknown threat. Second, participants wanted to know more about the safety and effectiveness of the vaccine itself. Third, participants wanted more information about their personal susceptibility to contracting HPV. Those who were married and believed their partner

¹⁸ Bandura, A. 1997. *Self-Efficacy: The Exercise of Control*. New York: Freeman.

was faithful believed that they would not need the vaccine. Those who were single and abstinent also did not believe that they were at risk. These beliefs pose challenges for creating messages to persuade these groups to consider vaccination. Such messages would need to convey a value in protecting oneself for events that may occur in the future (e.g., divorce, a new spouse who is already infected). However, it is highly likely that individuals would be resistant to this type of message, and use of this type of appeal would likely be unsuccessful.

Similar to how participants wanted local prevalence information, they indicated that people and organizations from the community would be more effective as sources of STD information. Examples of these organizations included churches, health care providers, health departments, health clinics, community-based organizations, and beauty salons/barbershops. Participants indicated that information from these local resources would be more trustworthy. They recognized the role of national organizations, such as CDC, in developing and disseminating this information to these local organizations. For a number of participants who seek out health information on their own (via Internet, health care providers), they viewed CDC as a reliable, trustworthy source of information. Often, CDC's information was used to verify information they received through other channels. These two points suggests that CDC needs to work with local agencies to assist them in disseminating STD information. CDC should ensure that the information provided by these local organizations is consistent with the most recent information CDC has available.

More participants stated they would trust information from someone personally affected by an STD. Personal testimonials from "real" people were preferred over testimonials from celebrities. The one caveat was the recognition that teens and young adults may be more likely to attend to messages from celebrities. Participants also expressed a desire that visual images show people who looked like they do, in terms of race/ethnicity, age, and gender. Materials that are developed should consider this when selecting appropriate visual or audio images.

Participants in these groups strongly believed that STD prevention information should be shared with teens. There were a variety of channels suggested, including parents and schools. Caucasian participants generally described schools as well as parents as appropriate sources of the information. Hispanic participants, on the other hand, generally described parents as the most appropriate source. Across the groups, additional sources included churches, community-based organizations, health care providers, and organizations such as Planned Parenthood. There was consensus that these messages include both abstinence and condom use as methods for preventing STDs. The current research did not include teenagers; to understand teens' preferences for STD prevention information, primary research with teenagers needs to be conducted.

The question regarding whether to present individual STDs or STDs in general seemed to be difficult for participants to conceptualize and respond to. During discussion, many participants suggested campaigns for individual diseases; however, in the drawing activity participants offered materials for STDs in general. There were persuasive

arguments on both sides of this question. The same behaviors (e.g., abstinence or consistent condom use) result in STD prevention regardless of the disease. On the other hand, to increase awareness, one particular disease may need to be singled out. This suggests that future concepts and messages need to be tested to determine their appeal and effectiveness with different audiences. The choice will be dependent upon the overall communication objective CDC wants to achieve.

Implications for Communication Strategies

Based on the findings from this study, specific recommendations can be made for developing communication strategies for the general public about STD prevention. The main finding suggests the need for a communication strategy targeting the general public to increase knowledge about all STDs. Across the groups, awareness of diseases was high, but participants lacked specific information about the symptoms, treatments, and prevention of STDs. Participants expressed concern about STDs in the discussion and wanted additional information to educate themselves.

Based on this research, the following implications for communication strategies can be offered:

Materials

- Materials should be developed to increase levels of knowledge about specific STDs of importance to CDC.
 - Materials should contain correct information and dispel incorrect information and myths about STDs. Dispelling incorrect information can be attained by providing factual information. For example, in the current research, participants confused genital warts and herpes. A possible strategy is to create a set of materials addressing both STDs simultaneously and describing how they are distinct. Another strategy is to develop a true/false knowledge test about genital warts and herpes to include in health brochures.
 - A caution is not to emphasize myths and misconceptions about STDs. While a certain portion of the population holds these beliefs, a different segment may not. There is greater value in providing factual information that everyone can use.
- Materials should be serious, contain facts about STDs, and include statistics demonstrating the extent of the problem within specific communities.
- Materials should convey information in a manner that increases personal relevance in the reader.
 - There likely are several segments of the general public for whom STDs will not be viewed as personally relevant (e.g., married individuals, abstinent individuals). Other segments may see themselves at greater risk of contracting STDs. Across the segments, consideration must be given to strategies that will personalize the prevention message. With limited resources, targeting groups who are at least risk and who do not feel susceptible to STDs is not advisable.

- Materials should utilize personal testimonials from homophilous sources, as the general public is more likely to be receptive to these messages.
 - Preferences were for “real people” who were like the participants themselves.
 - Celebrities were not recommended as spokespeople for STDs.
 - Materials should reflect the reason the individual is seeking the information. The visual images, language, and recommended behaviors should be in line with that purpose, providing concrete suggestions, language, and opportunities for skill building. For example, based on this research, two different purposes for seeking STD prevention information are:
 - Parents seeking information to educate their children.
 - Adults who want to establish open communication and learn to negotiate STD prevention behaviors with their sexual partners.

Themes

As next steps in the message development process, core themes for further consideration include:

- Parental responsibility for discussing sex and STDs with your children
 - Participants in this study expressed the desire and obligation to teach their children about sexual health, STD prevention methods and sexual responsibility within the context of their family values.
- Personal responsibility for understanding the risk of contracting and methods to prevent STDs
 - Participants in this study recognized that STDs are a common risk associated with sexual behavior, but not necessarily an eventuality. Participants noted that a variety of precautionary behaviors exist and that it is the individuals’ responsibility to educate themselves about these behaviors and to choose the one that is right for them.
- De-stigmatize, don’t glamorize
 - Participants viewed STDs as a serious health issue. They acknowledged that shame is often tied to being diagnosed with an STD. Several participants expressed the opinion that shame and embarrassment can inhibit a person from seeking treatment and communicating with others about an STD, but that it should not be the case. Participants also recognized that STDs are not limited to high-risk populations (e.g., prostitutes, intravenous drug users, inmates). Providing statistics about the prevalence of STDs can demonstrate the idea that STDs do not discriminate and that all sexually active persons are at risk.
 - A few participants believed that current advertising for herpes medications somewhat glamorizes or makes light of the condition. Others found these advertisements to have a positive impact in creating awareness about herpes and conveying the message that people with herpes live normal lives. This indicates a bifurcation in the general public that must be considered as materials are developed.

- STDs are more common than you think
 - Participants wanted to know prevalence information for their communities. This knowledge would increase their perceived susceptibility to STDs and desire to take precautionary action.

Sources and Channels

Significant sources and channels of information about STDs that were discussed as reliable and trustworthy by focus group participants included:

- Health care providers
- Internet including CDC website
 - The Internet was discussed as a reliable channel of information slightly more often in the urban groups compared with the rural groups. This channel should be used in conjunction with others in any communication campaign.
- Specific individuals within their own support network such as family members and friends.
- Individuals and settings recognized as trustworthy by their community such as members of the clergy, beauty and barbershops, health departments, community-based organizations, and schools.
 - African-American participants most often mentioned beauty and barbershops and members of the clergy as reliable sources for STD information.

Special Considerations for HPV

Participants' lack of knowledge about HPV in this study presents significant issues that include:

- The link between HPV and cervical cancer produces anxiety and fear, while creating interest to find out more information.
 - People are more likely to go online or to ask their health care provider for more information about the disease.
- The public's prior lack of awareness of HPV (a virus that is highly prevalent and linked to cancer) also produces public suspicion of government and CDC (i.e., concerns of government conspiracy)
- Awareness of HPV is increasing, but knowledge is not increasing at the same rate.
- Prevalence rates of HPV are increasing.
 - This leads to an increased need for factual, up-to-date information about the disease and methods to prevent it.
- Participants in these focus groups were reluctant to make a decision about the HPV vaccine without more information on the disease and the vaccine itself.
- As a result of the factors listed above, it will be important to inform the general public about HPV in a manner that promotes accurate understandings of the virus without causing undue fear and anxiety about its potential consequences, which are preventable. Messages should be based on current scientific facts and admit current limitations of the science. Such an effort must be approached carefully, with extreme caution, given:

- a) That HPV is invisible, easily transmitted and widespread, potentially fatal, and incurable (i.e., could cause undue audience anxiety & suspicion of government);
 - b) There are few effective action steps audiences can take to prevent, diagnose, or cure HPV, and recommendations to abstain from sexual contact altogether might push audiences to reject or deny messages, distrust message source, or deliberately engage in sexual risk behaviors;
 - c) The potential for stigmatizing both HPV and cervical cancer, which could negatively impact cervical screening and morbidity/mortality rates, as well as future vaccine acceptability;
 - d) An unprepared health care system (lack of HPV diagnostic, prevention, or curative technologies; no medical consensus on HPV testing guidelines, etc.) and health care providers (who are unprepared to answer patient questions about HPV);
 - e) The lack of accurate and complete HPV information currently available to the public through the news and online media;
 - f) The incomplete and evolving state of HPV science; and
 - g) The environment of government suspicion and distrust, in which such a campaign would take place
- The communication strategy and campaign messages will have to consider the above-stated challenges, involving extensive message and audience testing before implementation. Such a campaign, if effectively executed, could establish a foundation for factual information, without which acceptance of an eventual vaccine cannot occur.

Limitations

This study has several limitations. First, focus groups rely on convenience samples. As such, the generalizability of these findings is limited. There was no attempt to recruit a statistically representative random sample of individuals. The choice of cities in which to hold the groups, though based on prevalence rates, was also a convenience sample to allow the research to be conducted in different regions of the country. This research was conducted as an exploration of key factors affecting communication preferences for STD prevention information. The results reported can be used for additional investigation and insight that may help shape communication activities. As in any focus group research, statistically significant results cannot be drawn from this research.

Second, all of the participants were willing to participate in the focus groups. It is not known how, if at all, these participants differ from those who did not participate.

Third, the topic of discussion may have made individuals uncomfortable and unwilling to express their ideas and opinions. The focus group moderators worked to set a comfortable, relaxed tone in the groups and employed facilitation techniques to minimize this dynamic. With the exception of the Hispanic male groups, female moderators were

used for all of the focus groups. This may have lead to different dynamics in the African American and Caucasian male groups.

Fourth, in this study, groups were segmented by sex, race/ethnicity and geography. This precludes being able to examine differences among people based on marital status or based on having a child. Some of the comments participants made suggest that marital status and being a parent are two key variables that may affect communication preferences and information needs.

Defining geography (urban/rural) by location introduces a confounding variable. It is possible that the differences in urban and rural locations are due to the city in which the groups were held rather than a true difference. As such, caution must be taken in drawing conclusions based on this variable.

Sixth, as a result of participating in a 1½ hour discussion about this topic, participants are likely very different than those who did not participate. They may have become more open and willing to discuss sex, STDs, and prevention methods. As a result, participants in these groups may have found different concepts and strategies acceptable; however, others may not share this feeling. While the information gleaned from these focus groups can be helpful in developing communication concepts, materials, and strategies, public health professionals should interpret them with caution. When developing materials, additional concept testing should be conducted.

Recommendations

This focus group study offers an initial exploration of the knowledge, attitudes, beliefs, and communication preferences of the general public related to STDs and STD prevention. The results suggest that campaigns need to focus on increasing knowledge of STDs. To do this, materials should use straightforward language, personal testimonials. Trusted sources for the information should include local organizations such as churches, community-based organizations, health care providers, and businesses such as beauty parlors and barber shops. Separate materials should be developed for people who want to learn information to protect themselves and for people who want to educate others. This speaks to the need to develop materials targeted to specific audiences. The data from this study suggest that interpersonal and mediated communication (Internet, television, radio) are channels through which individuals seek out and receive health-related information, including information on STDs.

Recommendations for future research include:

- Focus groups segmenting the audience by marital status and presence of children in household; based on this research we would expect to see differences among these segments of the population which would be helpful in designing a prevention campaign;

- Focus groups with women infected with HPV to determine the information given to them by their health care providers and their reactions to this information. This would help determine the most effective ways to communicate around such a diagnosis.
- Focus groups with teenagers to determine their communication preferences for STD prevention information. In the current research, many participants (including those with and without children of their own) believed that parents should be the primary source of information for their teens about STDs and sexual health. Focus groups with teenagers would indicate whether or not teens were most comfortable hearing this information from their parents. Also in this research, many participants thought that schools were an appropriate source of information about STDs. Focus groups with teenagers would also help determine if they concurred with this idea.
- Quantitative study of the general population to determine susceptibility to STDs, risk factors, risk perceptions, and media preferences for STD prevention information;
- Concept testing based on the major themes and findings from this research prior to developing and disseminating STD prevention materials.