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Rural Latino Men’s Knowledge, Attitudes, and Beliefs Towards HIV Prevention: Findings from the Benton County Health Department HIV Integration Project*

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Abstract

This article examines preliminary findings from an innovative HIV Integration Project that incorporates HIV prevention strategies and sexual health services. The HIV prevention intervention utilizes Promotores de Salud to provide HIV testing and counseling, sexual health education, and follow-up to a population of Hispanic males ages 18 to 45 living in a rural community. A main component of the project is education regarding abstinence, monogamy, and condom use as effective strategies for HIV prevention. Initial results from this project demonstrate that Hispanic men are receptive to concepts of abstinence and monogamy as HIV prevention methods. Moreover, the project results indicate that Hispanic men are willing to use condoms with a casual partner as a method of HIV prevention. These results suggest

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that health educators and clinicians working in the area of HIV prevention and reproductive health should encourage and reinforce concepts of abstinence, monogamy, and condom use as HIV prevention strategies for Hispanic men. Furthermore, combining outreach services by utilizing Promotores de Salud with more traditional clinician services can be effective HIV prevention and sexual health service interventions for traditionally underserved populations, such as Hispanic men.

**Introduction**

By the year 2010, it is estimated that Hispanics will become the largest minority group in the United States, an estimated 13 percent of the U.S. population (CDC 2003). The increase in the Hispanic population in the United States parallels an increase in health disparities among Hispanics who are rapidly becoming a high-risk group for HIV/AIDS and comprise 18 percent of the AIDS cases in the United States (CDC 2000). Hispanic men are at risk for HIV infection due to a confluence of factors which include constant mobility; common health compromising factors such as hazardous working conditions, low wages, chronic underemployment and substandard housing; limited education; and cultural, linguistic and geographical barriers to health services (Organista and Organista 1997). These factors prohibit Hispanic men from utilizing HIV prevention services and participating in HIV prevention programs (Courtenay 2000; McQuiston and Flaskerud 2000; Williams 2003). In response to these challenges the US Office of Population Affairs has implemented an HIV prevention initiative to identify new approaches that incorporate concepts of abstinence, monogamy and condom use as three strategies to reduce HIV transmission into family planning services. In addition, many family planning programs have made it a priority to offer reproductive health services to males (Sonenstein, Punja, and Scarcella 2004). Over the past 30 years, only 2-4 percent of family planning clinic clients have been males (DHHS 2003). Furthermore, STIs, such as HIV, are more prevalent among men from minority racial groups than white males (CDC 2000). Public health practitioners in the field of reproductive health are in a unique position to provide HIV prevention services for males because of their expertise in the areas of pregnancy prevention, sexually transmitted infection (STI) prevention and contraceptive methods (Boonstra 2004). Thus, the purpose of this article is to provide preliminary findings from an innovative HIV integration project in rural Oregon that integrates HIV prevention and reproductive health services for Hispanic males.
Overview of the HIV Integration Project

The Benton County Health Department HIV Integration Project utilizes *promotores de salud* to provide HIV testing and counseling, reproductive health education and referral to family planning services to Hispanic males ages 18 to 45. These men predominately work as migrant and seasonal farmer workers in agricultural production in Oregon’s Willamette Valley. The *promotores de salud* are bilingual-bicultural community health workers specifically trained in HIV prevention methods and reproductive health who serve as a cultural and professional bridge between family planning services and the Hispanic population. The *promotores de salud* perform HIV prevention outreach at various locations such as schools, tree farms, nurseries, labor camps, and churches, as well as, at two satellite medical clinics in the county.

The Benton County HIV Integration Project consists of an intervention of 6-to-8-weeks, which includes individual counseling, health education and follow-up. Previous research of Hispanic males suggests that implementing HIV prevention projects with a highly transient population, such as those engaged in agricultural work, presents many challenges particularly to follow up and referral for services (Denner et al., 2005; Ford et al. 2001; Marin, Gomez, and Tschann 1993). For this reason the intervention is divided into three steps in order to ensure repeated contact with the *promotores de salud* over a short period of time. Step one consists of obtaining informed consent and conducting a pre-assessment survey, pre-assessment sexual history, and an Oraquick Advance Rapid HIV testing and counseling. Given that a large portion of the Hispanic male population is mobile due to seasonal agricultural work, the Oraquick Advance Rapid HIV–1/2 Antibody Test is used to conduct HIV testing and counseling. The Oraquick Advance Rapid HIV-1/2 Antibody Test allows the *promotores de salud* to return results to clients within 20 minutes during their counseling session. Step two includes an educational session that addresses abstinence, monogamy and condom use as effective HIV prevention methods. A pre- and post-test is administered as part of the HIV educational session. Step three involves a follow-up session one-month post HIV test in order to obtain a post-assessment survey and post-assessment sexual history. Referrals for medical or other services are made at any step during the intervention as indicated.

Measures

The initial data from this project comes from Hispanic males living in rural Benton County. The HIV Intervention Project instruments are designed for interviews to take forty-five to sixty
minutes. The *promotores de salud* prepared the Spanish versions of the instruments. Measures of variables that have been used in other research have been adopted or adapted for use in this project when appropriate.

*Pre/Post Assessment* surveys have been designed to measure: abstinence beliefs, be faithful - mutual monogamy, condom use (steady and casual partner), self-efficacy to use condoms, normative beliefs about condoms, and perceived normative condom use behavior among peers (Gillmore et al. 2003; Marin et al. 1993). The *Pre/Post Assessment* survey is structured into eight areas of questions surrounding the measures listed above. The questions are formatted into a four point Likert scale: would, probably would, probably would not, and would not.

*Pre/Post Sexual History* surveys have been designed to measure: sexual history and risk behaviors, last sexual encounter, number of sexual partners, use of condom at last sexual encounter, and frequency of carrying a condom (Ford et al. 2001; Pettifor et al. 2004). The *Pre/Post Sexual History* is a combination of direct number answers and Likert scale questions surrounding the measures listed previously.

*Pre/Post Education* surveys have been designed to measure: HIV knowledge, AIDS knowledge and condom beliefs (Ford et al. 2001). The *Education Session* has been designed to take sixty minutes with the goal of increasing knowledge of HIV prevention behaviors. Using a Popular Education Model, equal time has been given to protective factors of: abstinence/not having sexual intercourse, being faithful/mutual monogamy and condom use/negotiating sexual encounters. Pre and post education tests are a combination of true/false questions regarding HIV and AIDS knowledge and Likert scale questions related to beliefs and normative beliefs about condom use.

After six months of initial testing, the instruments showed a modest degree of reliability for measures of abstinence (Cronbach’s $\alpha = 0.704$), monogamy (Cronbach’s $\alpha = 0.702$), condom use with a steady partner (Cronbach’s $\alpha = 0.700$) or casual partner (Cronbach’s $\alpha = 0.744$), and post-assessment HIV/AIDS knowledge (Cronbach’s $\alpha = 0.729$).

**Results**

*Demographics*

The HIV Integration Project has served 100 male clients during the first 8 months of the project (April – December 2005). Seventy-two percent of male clients have completed the education session, and 60 percent of clients have completed the entire project through to the post-assessment. Of the men who attended the
education session, 48 percent were single, 45 percent were married, 3 percent were divorced, and 5 percent were living with a partner. Almost all clients identified as Hispanic/Latino (99 percent), with the majority identifying their origin of birth as Mexico (85 percent).

HIV Testing

The majority of HIV tests were the HIV Rapid Test/OraQuick Advance (95 percent). Almost all clients’ reason for testing was self-initiated and asymptomatic (97 percent). The predominant risk behaviors identified were sex with female (91 percent). The majority of clients (83 percent) chose an anonymous test, while the rest chose a confidential test (17 percent). Through December 2005, all HIV tests results were negative. Sixteen percent of the male clients required a referral for additional services (primary care physician, Male Advocates for Responsible Sexuality (MARS) program, STI clinic).

Sexual History

At the post assessment, 60 percent of clients had had a sexual encounter within one week, 18 percent within one month, 4 percent within six months, and 18 percent more than six months. The mean number of sexual partners in the past twelve months was approximately 1 (1.42). For those male clients that had a recent sexual encounter, seventy-two percent were with a regular partner, while 28 percent were with a casual partner. The mean age at first sexual encounter was 17.41 years old (median age 17 years old). Five and a half percent of the first sexual encounters among men were forced. At the post-assessment, only 38 percent had used a condom at last sexual encounter. Thirty-two percent of male clients responded that they always wore or used a condom during sex, 45 percent occasionally wore/used a condom, and 23 percent never wore/used a condom. Thirty-eight percent of male clients always carry a condom with them, 32 percent occasionally carry a condom, and 30 percent never carry a condom.

Pre/Post Assessment

Correlations between the pre and post assessment were statistically significant (p<0.05) for monogamy, condom beliefs and normative condom beliefs. A statistically significant correlation score indicates that the mean difference score statistic can be considered a reliable test to determine significance.

Table 1 shows the mean difference scores and statistical significance (p<0.05) for the pre and post assessment composite measures. The only mean difference score that was statistically significant was for using condoms with a casual partner. However, using condoms with a casual partner cannot be considered a reliable
test since the correlation was not statistically significant for this measure. Thus Wilcoxon signed-ranks was run to confirm. See Table 1.

Given that the data seemed not to be normally distributed, Wilcoxon Signed-Ranks tests were performed for all measures (Table 2). It confirms the significant change in using condoms with a casual partner detected in Table 1. See Table 2

At post-assessment men are changing their knowledge, attitudes and beliefs about using a condom with a casual partner. Even though the mean difference scores/Wilcoxon signed-ranks scores for the remaining measures were not statistically significant for change in beliefs, at the post-assessment, a majority of male participants knew that they could protect themselves from HIV/AIDS through abstinence (92 percent), monogamy (97 percent), use of a male condom with a steady partner (85 percent), and use of a male condom with a casual partner (97 percent). At post-assessment 85 percent of men stated they would wear a condom during sex. Ninety percent of men stated they would use a condom if they were going to have sex with someone other than their spouse or primary partner, which corresponds with a statistically significant change in beliefs about using a condom with a casual partner.

Pre/Post Education Session

As shown in Table 3, in general, a significant increase was found in the participants’ pre versus post HIV/AIDS knowledge scores (z = -5.96, p<0.0001). There was a significant change (p<0.05) in the number of participants who know that a person cannot get infected with HIV/AIDS by kissing someone on the mouth that has HIV/AIDS (p<0.001) or from a mosquito bite (p<0.001), HIV and AIDS are not the same (p<0.001), and Bleach can kill the HIV/AIDS virus in needles used to take drugs or vitamins (p<0.001). After the education session, participants had a statistically significant better understanding that HIV could not be transmitted through saliva (p<0.001) or by using public restrooms (p<0.01). Almost all participants knew what a condom was (99 percent), and a little less than half (44 percent) reported to know friends who use condoms. A good proportion of respondents thought that condoms were a good way to protect against pregnancy (82 percent) and against HIV/AIDS (86 percent). See Table 3
Discussion

The Benton County HIV Integration Project served 100 male clients over an eight-month period. Hispanic males in Benton County identify their origin of birth as Mexico. The mean age of the male clients is 26.75 years old and they are initiating sex around the age of 17 years old. Most Hispanic male clients who are seeking an HIV test are asymptomatic. Heterosexual sexual intercourse with a female is identified as their primary risk factor. Clients have a high frequency of sex, but usually with a steady partner. Although 85 percent of males stated that they would wear a condom during sex, only 38 percent of clients had used a condom at last sexual encounter, and only 32 percent stated that they always used a condom during sex. These data imply a potential disconnect between Hispanic males intention to use a condom and their actual condom use behavior. However, the HIV Integration Project’s initial results show that Hispanic males’ beliefs about condom use have changed, specifically surrounding use of a condom with a casual partner as method of HIV prevention. In addition, the results from the HIV prevention education session demonstrate that Hispanic male clients are increasing their knowledge about HIV transmission as well as learning how to protect themselves better against HIV infection by using condoms. These findings indicate that Hispanic men are open to education and encouragement about the importance of condom use with a casual partner as a method of HIV prevention. The data from this project also indicate that Hispanic men already have positive beliefs surrounding abstinence and monogamy. These findings are supported by previous research conducted by Gillmore et al. (2003) that found favorable attitudes towards abstinence and monogamy among heterosexual males and suggest that prevention efforts that address abstinence and monogamy as methods of HIV prevention may be worthwhile concepts to encourage with Hispanic men.

The initial findings from this project are promising in that they highlight Hispanic men’s receptiveness to consider abstinence, monogamy and condom use as methods of HIV prevention. Findings suggest that clinicians and health educators should provide information and reinforcement for remaining abstinent from sexual intercourse, having sexual intercourse with only one partner in a monogamous relationship and using a condom during sexual intercourse as potential HIV prevention options for Hispanic men to consider. Furthermore, sexual health clinics that wish to increase awareness about HIV prevention strategies, as well as, increase HIV testing and counseling among Hispanic males may be most likely to succeed if outreach workers are incorporated into the clinic’s HIV prevention efforts. Outreach workers, such as promotores de salud, can serve as an effective link between the community and clinical services, especially
for Hispanic males who traditionally do not seek HIV prevention and sexual health services.

Some limitations regarding this project bear mentioning. One concern at this point in the project is loss to follow-up in the Hispanic male population due in part to the seasonal nature of employment for a sizeable portion of the population. The *Promotores de Salud* are finding it difficult to track the Hispanic male population in order for them to complete the post-assessment, making it difficult to determine any change in behavior among the Hispanic men. This project does not take into consideration partner compliance, which cannot be underestimated as sexual activity takes place within the context of a relationship that requires partner participation when considering different methods of HIV prevention. This project also does not provide a thorough investigation of the extent to which cultural norms and beliefs may be incorporated into HIV prevention strategies in sexual health clinics that wish to provide services to Hispanic men. Further examinations that incorporate cultural practices of how HIV prevention interventions can be integrated into sexual health services for Hispanic men are warranted.

References


DHS. 2003. “Announcement of availability of funds for family planning male reproductive research grants; notice.” Federal Register 68.


## Tables

### Table 1. Correlations between pre and post assessment measures

<table>
<thead>
<tr>
<th>Measures</th>
<th>N</th>
<th>Correlation</th>
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<tbody>
<tr>
<td>Abstinence</td>
<td>50</td>
<td>.176</td>
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<tr>
<td>Monogamy</td>
<td>58</td>
<td>.291*</td>
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<tr>
<td>Using condoms with a steady partner</td>
<td>48</td>
<td>.076</td>
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<tr>
<td>Using condoms with a casual partner</td>
<td>51</td>
<td>.142</td>
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<tr>
<td>Condom beliefs</td>
<td>52</td>
<td>.399***</td>
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<tr>
<td>Normative condoms beliefs</td>
<td>49</td>
<td>.468***</td>
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*p<0.05, ***p<0.001

### Table 2. Mean difference scores between pre and post assessment measures

<table>
<thead>
<tr>
<th>Measures</th>
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<th>Mean Diff.</th>
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<tbody>
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<td>Abstinence</td>
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<td>Monogamy</td>
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<tr>
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<tr>
<td>Using condoms with a casual partner</td>
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<td>-.4150***</td>
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<tr>
<td>Condom beliefs</td>
<td>52</td>
<td>.0615</td>
</tr>
<tr>
<td>Normative condom beliefs</td>
<td>49</td>
<td>-.1326</td>
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***p<0.001

### Table 3. Wilcoxon Signed-Ranks Tests performed for measures

<table>
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<tr>
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<tbody>
<tr>
<td>Abstinence</td>
<td>-.257(a)</td>
</tr>
<tr>
<td>Monogamy</td>
<td>-1.377(a)</td>
</tr>
<tr>
<td>Using male condoms with a steady partner</td>
<td>-.376(a)</td>
</tr>
<tr>
<td>Using male condoms with a casual partner</td>
<td>-3.564(a)***</td>
</tr>
<tr>
<td>Condom beliefs</td>
<td>-.539(b)</td>
</tr>
<tr>
<td>Normative beliefs</td>
<td>-.789(a)</td>
</tr>
</tbody>
</table>

***p<0.001
### Table 4. Education session scores

<table>
<thead>
<tr>
<th>Measures</th>
<th>N</th>
<th>Sig. (p)</th>
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</thead>
<tbody>
<tr>
<td><strong>HIV/AIDS Knowledge</strong>^a^</td>
<td></td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Pre/Post Questions^b^</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A person cannot get infected with HIV/AIDS by kissing someone on the mouth that has HIV/AIDS</td>
<td>64</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>A person cannot get infected with HIV/AIDS by a mosquito bite</td>
<td>66</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>HIV and AIDS are not the same</td>
<td>64</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Bleach can kill the HIV/AIDS virus in needles used to take drugs or vitamins</td>
<td>66</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>HIV could not be transmitted through saliva</td>
<td>62</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>HIV cannot be transmitted by using public restrooms</td>
<td>61</td>
<td>&lt;0.001</td>
</tr>
</tbody>
</table>

^a Wilcoxon Signed-Ranks test performed.
^b McNemar tests performed (using binomial distribution).