Implementation and evaluation of a clinic-based behavioral intervention: Positive Steps for HIV patients.

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ABSTRACT

Background and Objectives: In 2003 the Centers for Disease Control and Prevention published guidelines for conducting behavioral interventions in HIV care settings. Following these recommendations, we evaluated a risk-reduction intervention delivered by medical providers at 7 sites to test the feasibility of wide-scale implementation.

Methods: Medical providers at 7 HIV clinics in New York, North Carolina, Georgia, Tennessee, Missouri and Colorado delivered a standardized safer sex and drug-use intervention that screened patients for behavioral risks, gave targeted counseling, and delivered prevention messages at all routine patient visits. The intervention was evaluated with a longitudinal cohort of 767 patients who received the intervention (no control group), completed a baseline questionnaire and two follow-up questionnaires at 6 and 12 months. Logistic regression with GEE methods was used in statistical analyses.

Results: The three-month prevalence of unprotected anal or vaginal intercourse (UAVI) with any partners declined significantly ($p < 0.001$) from baseline (42%) to follow-up at 6 months (26%) and 12 months (23%). The decline was significant with all serostatus partners, whether HIV-negative/unknown serostatus or HIV-positive. The percent reductions in UAVI between baseline and 6 months showed a dose-response relationship with patient self-reports of receiving safer-sex counseling: 45% if counseling at all clinic visits, 35% if counseling at some clinic visits, and 19% if counseling at no clinic visits. These findings were confirmed in multivariate models that controlled for demographic factors and HIV clinical status of participants.

Conclusions: Despite receiving only brief training, HIV medical providers in six states successfully conducted an HIV prevention intervention with their clinic patients. We observed significant declines in UAVI among MSM, heterosexual men, and heterosexual women. Our findings constitute a test of the feasibility of wide-scale implementation of the type of safer sex and drug use intervention that was conducted in two U.S. behavioral intervention trials (Options project in Connecticut and Partnership for Health in California). HIV care clinics are an efficient context for delivery of prevention messages because of the repeated routine contacts between patients and their care provider. Clinics that serve HIV patients should incorporate such programs as standard of care in treating those patients.

Background and Objectives

Background

The 13 to 30% prevalence of unsafe sex in HIV-positive persons reported in previous studies underscores the need for behavioral interventions in this population. 'Prevention with positives' programs conducted in previous controlled trials (e.g., Partnership for Health and the OPTIONS project) have now shown efficacy in reducing the prevalence of unsafe sexual behaviors. The present study represents the evaluation of a demonstration project to test the feasibility of a 'prevention with positives' behavioral intervention in diverse HIV care settings in the U.S.

Objectives

- To estimate the prevalence of unprotected anal or vaginal intercourse (UAVI) at baseline, and at six months and twelve months post-baseline.
- To correlate the safer sex findings with patients' self-reports of receiving safer sex counseling.

Methods

General

A "measurement" cohort was screened, enrolled and followed for 12 months in 7 participating HIV primary care clinics. All data reported here were from a self-report Audio-computer-assisted self interview (ACASI) questionnaire. Participants signed an informed consent, were given a small compensation for their time with the questionnaires, and all sites received IRB approval.

Measurement cohort eligibility criteria

- 18 years of age or older
- able to provide informed consent
- anticipate receiving HIV care for the next 12 months
- sexually active (oral, anal or vaginal) or unsafe drug behaviors in the 3 months prior to enrollment

Clinic locations and enrollment totals

• Chapel Hill, NC	190
• Nashville, TN	200
• Atlanta, GA (2)	202
• Denver, CO	198
• Brooklyn, NY	201
• Kansas City, MO	118
Total enrolled	1109
Total enrolled and sexually active	1074
Total completing all 3 interviews	767 (71%)

Intervention

Training. Clinic staff were trained at a 4-hour initial session and a 2-hour booster session approximately one month later.
Delivery. All patients in the clinic received the intervention, which was funded for a 12-month period with no formal end.
Intervention components.

- a nine-question behavioral screener administered to patients by nurses.
- a provider-initiated discussion of safer sex or drug behaviors.
- a provider-initiated risk reduction plan.
- brochures with prevention messages and strategies
- posters in waiting areas, exam rooms and common areas.

Statistical Analysis

- Analysis is based on 767 participants completing all 3 interviews—baseline, 6-month and 12-month.
- Dependent variable is any instance of UAVI in the past 3 months with any partner. Because of the similarity of results for HIV-negative/unknown and HIV-positive partners, results are shown for "any" partner.
- Trend of UAVI (yes/no) with "any" partner is evaluated using logistic regression with GEE for correlated data.

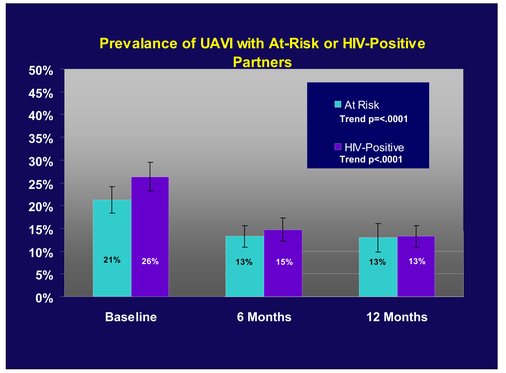
Results

Cohort Demographic Data (N=767*)

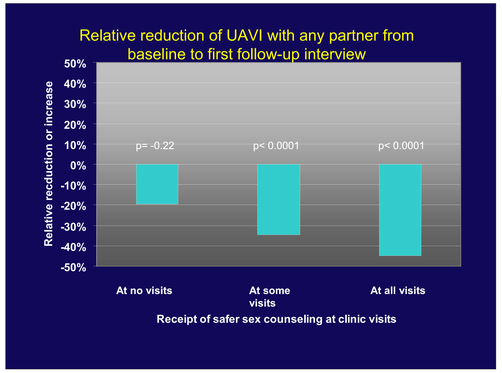
- Age (mean &median)	41 range 21 - 68 years IQR 36 - 47 years	
- Race	N	%
- Black	464	(60.5)
- White	232	(30.3)
- Other	71	(9.3)
- Ethnicity (all races)		
- Hispanic/Latino	77	(10.0)
- Gender (self-designation)		
- Male	522	(68.1)
- Female	245	(31.9)

* 9 transgendered participants (m to f) were eliminated because of small cell numbers

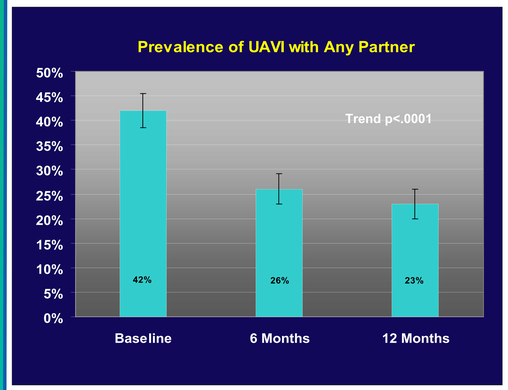
N=767 participants with complete data.
Table shows demographic characteristics of the measurement cohort that was enrolled in 2005 and followed for 12 months.



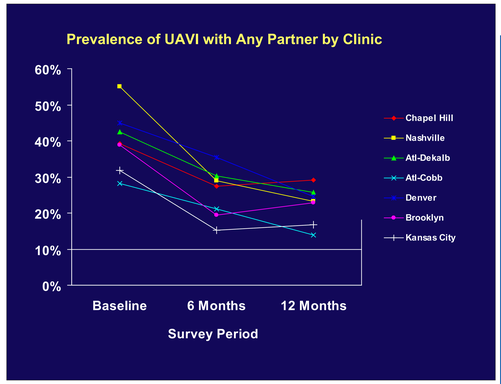
N=767 participants with complete data.
This figure shows the consistency of the decline in UAVI for at-risk and HIV-positive partners from baseline through 6- and 12- month follow-up periods.



N=752 participants with complete data.
This figure shows the relative reduction in UAVI prevalence with any partner from baseline to 6-month follow-up by participants' self-reported receipt of safer sex counseling.
P-value is based on the baseline-to-6-month change in prevalence using logistic regression and GEE for correlated data.



N=767 participants with complete data.
This figure shows the significant decline in the prevalence of unprotected anal or vaginal intercourse (UAVI) from baseline through 6- and 12-month follow-up periods.
P-value is based on the linear trend across 3 time periods in prevalence from logistic regression and GEE for correlated data.
Significant trends also observed for MSM, hetero men and women subsets.



N=767 participants with complete data.
This figure shows the consistency of the decline in UAVI with any partner from baseline through 6- and 12- month follow-up periods for all the seven HIV clinics.

Limitations

- Sexually transmitted infections were too infrequent to be used as supporting data in this cohort. Only 19 of the 767 were diagnosed with an STI in the 6 months prior to baseline.
- The design of the study did not include a control group and caution must be observed in interpreting the before-after changes in UAVI prevalences. This was a demonstration program project and not a controlled trial of counseling messages.
- Socially desirable reporting bias was minimized in this study by the private nature of the ACASI questionnaire. Participants were further informed that providers and clinic staff would not have access to the ACASI data. If SDRB was a major factor, one would have expected greater declines with at-risk than HIV-positive partners. This was not observed.

Conclusions

- Declines in UAVI prevalence were observed for at-risk and HIV-positive partners of these 767 participants.
- Declines in UAVI prevalence were consistently observed for all locations, for MSM, heterosexual men and women.
- The decline in UAVI prevalence showed a dose-response effect of self-report of receiving safer-sex counseling.
- The consistency across risk group and clinic location for the effects of the intervention indicate that a wide application of safer sex counseling delivered by providers with only modest training is feasible and should be encouraged.

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The findings and conclusions in this report are those of the authors and do not necessarily reflect the views of the Centers for Disease Control and prevention.