

Age-related Incidence of Anal Human Papillomavirus Infection Among Sexually Active Men Who Have Sex With Men: the EXPLORE study

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Background

- HPV-associated anal cancer is more common among men who have sex with men (MSM) than is cervical cancer among women in the United States.
- Cervical HPV infection peaks early and falls after age 30 in women.
- Previous cross-sectional analyses have shown that anal HPV prevalence is similar across age groups.
- Little is known about the age-specific incidence of anal HPV infection in MSM.

Results

Table 1. Baseline characteristics of participants

- **64%** of participants were HPV-infected at baseline

Characteristic	N = 1409
Age, median (IQR)	36 (30–43)
Caucasian, %	78
College degree, %	64
No. male sexual partners ¹ , median (IQR)	6 (2–14)
Ecstasy use ¹ , %	22
“Poppers” use ¹ , %	35

IQR Interquartile ratio; ¹Previous 6 months

Conclusions

- A high and similar proportion of urban MSM acquire incident anal HPV infection at all age groups.
- These results differ substantially from the epidemiology of cervical HPV infection in women and confirm previous cross-sectional analyses of anal HPV in MSM.
- This may reflect differences between these populations in the number of new sex partners after age 30.

Objective

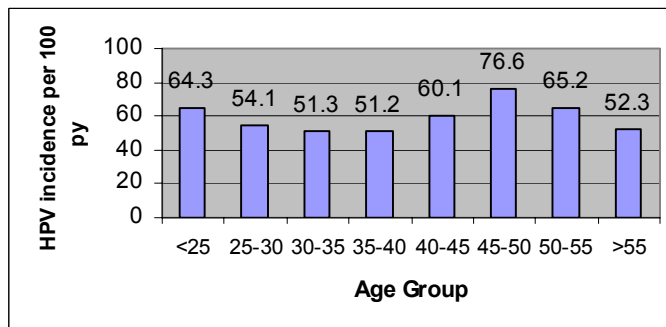
- To determine the incidence and determinants of incident anal HPV infection in MSM.

Methods

- Between January 2001 and October 2002, 1409 men were enrolled in four U.S. cities (Boston, Denver, New York and San Francisco)
- All were participants in the HIVNET/HPTN EXPLORE trial, a randomized clinical trial of the efficacy of a behavioral intervention to reduce the risk of HIV acquisition among sexually active HIV-negative MSM
- We assessed anal HPV infection status by polymerase chain reaction using MY09/MY11/HMB01.
- We used generalized estimating equation (GEE) regression analyses to account for repeated measures.

Figure 1. HPV incidence by age group

- 1409 participants were followed for up to 36 months
- The overall incidence of HPV was **57 per 100 person-years (py)**



*Test of trend not statistically significant

Implications for Policy and Research

- Anal HPV infection in MSM has a unique epidemiology that must carefully be explored in future studies particularly in the face of promising new HPV therapeutic and prophylactic vaccines.

Table 2. Predictors of incident HPV infection

Variable	Multivariable OR	95% CI	P
Age	1.0	0.98–1.0	0.91
No. male sexual partners^{1,2}	1.2	1.0–1.3	0.03
Unprotected anal sex¹	2.1	1.3–3.2	0.001
Ecstasy use¹	1.9	1.1–3.6	0.03
“Poppers” use ¹	1.5	0.9–2.4	0.12

OR Odds Ratio; CI Confidence Interval; ¹Previous 6 months; ²per increase in 10 partners

Acknowledgements

- This research was supported by the Universitywide AIDS Research Program, the UCSF GCRC, the HIV Network for Prevention Trials and in part by a NIAID mentored career award K23 AI054157. We also acknowledge the support of CYTYC corporation.