Receipt of preventive services among persons receiving HIV care in King County, overall and by HIV care facility type, 2009-2012

Background

HIV-related and unrelated preventive care is an essential component of HIV care. Differences between patient populations, resources available, and care reimbursement profiles at HIV care outpatient facilities may impact the delivery of timely and appropriate preventive services. HIV care is provided by a broad range of facilities in King County, including two who are partially funded by the Ryan White Program, which supports access to medical care for low-income HIV-infected individuals. Using data collected by the Medical Monitoring Project (MMP) we assessed the delivery of preventive services to adults (≥18 years) receiving HIV care in King County (KC) and evaluated whether any differences were observed by facility type.

Methods

MMP uses a 3-stage sampling design to capture nationally and locally representative population-based surveillance data on patients receiving HIV care. MMP collects data on clinical presentation, treatment, behaviors, and outcomes of HIV-infected individuals using both patient interviews and medical record abstraction. We analyzed cross-sectional MMP interview and medical record data collected in KC from 2009-2012. Facility type was categorized as:

- Ryan White Program (RW)-funded: serving low-income people living with HIV (PLWH),
- LGBT-Friendly: predominantly serving lesbian, gay, bisexual, and transgender (LGBT) patients, and
- Other providers: hospitals, private clinics, managed care organizations, and community health centers.

The following types of preventive services were evaluated, listed here according to whether the receipt of service was based upon self-report or medical record documentation:

- Self-reported: HIV/STI risk reduction counseling, smoking cessation advice.
- Documented in medical records: STI screening (chlamydia, gonorrhea, & syphilis), lipids screening, PCP prophylaxis.
- Self-reported or documented in medical records: cervical cancer screening, influenza vaccination.

For each preventive service, we generated weighted prevalence estimates for KC HIV care patients overall and for each facility category. Multivariate weighted Poisson regression models estimated the relative risk of achieving performance measures, comparing RW-funded to non-RW-funded clinics.

Results

Participants in MMP 2009-2012 were sampled from 21 HIV care facilities. The weighted percent of HIV care patients served by RW-funded, LGBT-friendly, and 'other' facilities was 43%, 19%, and 38%, respectively (**Table 1**). Compared to non-RW-funded facilities, RW-funded facilities served proportionately more patients who were Black, female, less educated, lower income, younger, more recently diagnosed with HIV, and had public or RW-only health insurance. MSM comprised 79% of PLWH receiving medical care in KC; 40% of MSM received HIV care at other facilities, 37% at RW-funded facilities, and 24% at LGBT-friendly providers.

Figure 1 describes receipt of preventive health services in prior 12 months unrelated to sexual health. In summary, 80% (95% CI: 76-85%) of all patients received a flu shot and 69% (95% CI: 63-74%) of all patients underwent lipid screening. Among smokers, 78% (95% CI: 70-85%) reported receipt of smoking cessation counseling. Among patients with CD4 counts <200 cells/mm^3, 79% (95% CI: 69-89%) were prescribed PCP prophylaxis. Among women, 68% (95% CI: 58%-79%) had a Pap test. Receipt of these services did not vary significantly by facility type.

Figure 2 describes receipt of sexual health services among sexually active MSM in the prior 12 months. Half (50%, 95% CI: 43-56%) of sexually active MSM reported receipt of HIV/STI risk reduction counseling. Chlamydia, gonorrhea, and syphilis screening were documented for 29% (95% CI: 23-35%), 31% (95% CI: 25%-36%), and 52% (95% CI: 45-59%) respectively of sexually active MSM. In multivariate analyses that controlled for differences in patient demographics and reported risk behaviors, significant differences were observed by facility type: patients at RW-funded facilities were more likely to receive risk reduction counseling and undergo STD screening than patients at LGBT-friendly clinics and 'other' facilities (**Table 2**).

Conclusions

In KC, the majority of HIV care patients received key preventive services, though there is room for improvement. Among sexually active MSM (79% of our HIV care population), receipt of sexual health services was low, especially at non-RW-funded HIV facilities. There are limitations to this analysis: services provided outside of regular HIV care clinics would not be captured in medical record abstractions (thus underestimating receipt of service); self-report may be imperfect (under- or overestimating receipt of service); and sexual behavior may be nuanced beyond the data points collected (numbers of partners and condom use). Strategies to further augment preventive care, including sexual health services, should be implemented in all HIV care settings.

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Table 1. Description of adults receiving HIV care in King County by facility type, 2009-2012

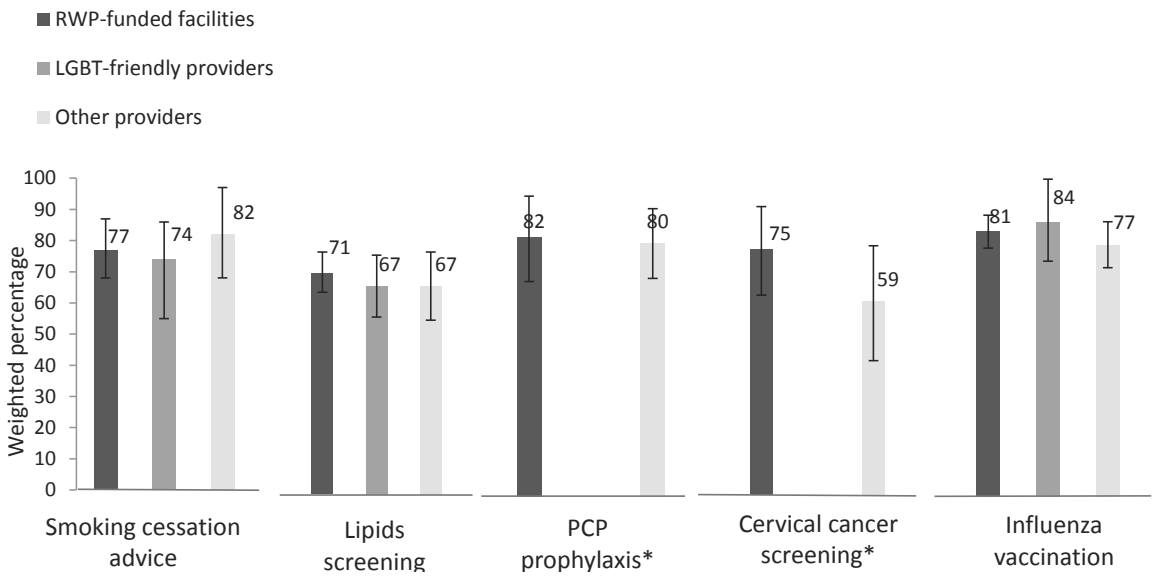
	Ryan White n facilities=2 n respondents=326		LGBT*-friendly n facilities=3 n respondents=123		Other n facilities=16 n respondents=255	
	Weighted % (95% CI)					
Sex†						
Male	85	(80-89)	99	(98-100)	90	(86-92)
Race/ethnicity†						
White	56	(49-62)	83	(75-91)	71	(64-77)
Black	21	(16-26)	--	--	12	(7-17)
Hispanic	11	(7-15)	9	(4-15)	8	(4 -12)
Other	12	(7-18)	--	--	9	(6 -13)
Age†						
<45 years	53	(46-60)	25	(17-33)	31	(23-40)
Risk group†						
MSM	67	(61-73)	99	(97-100)	83	(78-89)
Educational attainment†						
< 4-year college degree	78	(73-83)	57	(48-67)	68	(60-75)
Nativity†						
Foreign-born	18	(14-23)	--	--	17	(11-24)
Any drug use (12 months)						
Yes	47	(41-53)	44	(32-56)	36	(30-42)
Time since HIV diagnosis†						
<5 years	28	(21-35)	16	(4-27)	13	(7-18)
Federal poverty level†						
<139%	69	(64-75)	16	(11-22)	33	(24-41)
Health insurance status†						
Private only	11	(8-15)	61	(53-69)	47	(37-56)
Any public	74	(69-80)	36	(28-44)	48	(37-59)
Uninsured/Ryan White only	11	(7-15)	--	--	4	(1-8)

† Statistically different at $p<0.05$, chi-square test

Data are not presented where the coefficient of variation (CV) is >30% (indicated by --).

* LGBT=lesbian, gay, bisexual, and transgender

Figure 1. Receipt of preventive care services at HIV care facilities by facility type, in King County, 2009-2012



* Data not reported where CV > 30%

Figure 2. Receipt of sexual health services among sexually active MSM by facility type in King County, 2009-2012

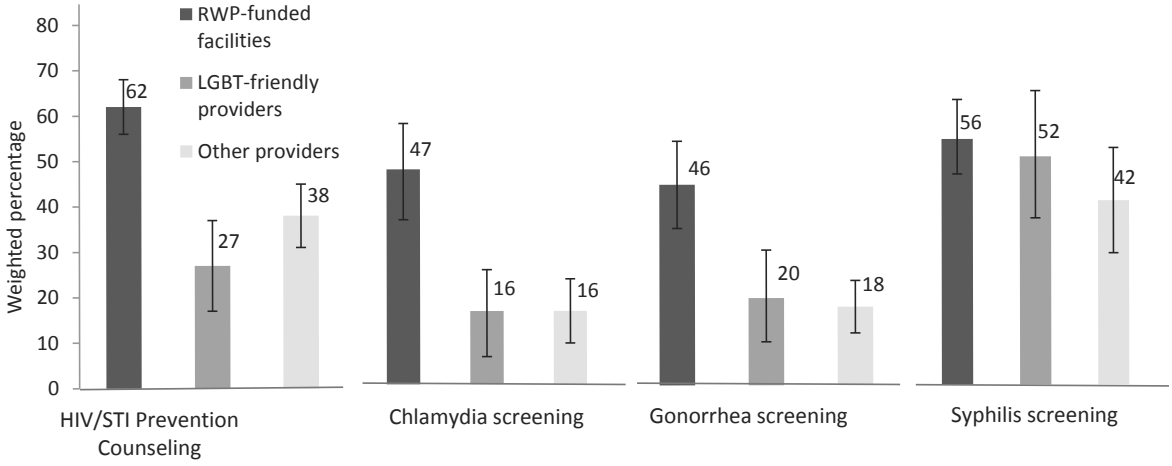


Table 2. Association between facility type and receipt of sexual health services among sexually active MSM, King County (2009-12)

Data source		LGBT*-Friendly† aRR (95% CI)§	Other providers† aRR (95% CI)
Self-report	HIV/STI prevention counseling	**0.53 (0.37-0.76)**	**0.64 (0.50-0.81)**
Medical Record	Chlamydia screening	**0.32 (0.17-0.62)**	**0.35 (0.22-0.56)**
	Gonorrhea screening	**0.41 (0.22-0.74)**	**0.41 (0.27-0.62)**
	Syphilis screening	0.84 (0.61-1.15)	**0.70 (0.51-0.96)**

† Adjusted for age, race, federal poverty level, unprotected sex, total partners, and drug use. Reference group = Ryan White Program-funded HIV clinic; bolded estimates indicate statistical significance (p<0.05)

* LGTB=lesbian, gay, transgender, & bisexual

§ aRR=adjusted relative risk, CI=confidence interval