

Evaluation of an Intervention to Improve Rectal Screening Rates for *Neisseria gonorrhoeae* and *Chlamydia trachomatis* among HIV-Positive Men Who Have Sex With Men



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BACKGROUND

- The prevalence of rectal infection with *Neisseria gonorrhoeae* (GC) and *Chlamydia trachomatis* (CT) among HIV-positive men who have sex with men (MSM) is nearly twice as high as among HIV-negative MSM.
- Centers for Disease Control and Prevention STI Treatment Guidelines recommend screening sexually active MSM at least annually for GC/CT at sites of exposure.
- Despite this recommendation, rates of rectal screening for GC/CT at HIV clinics remain low.

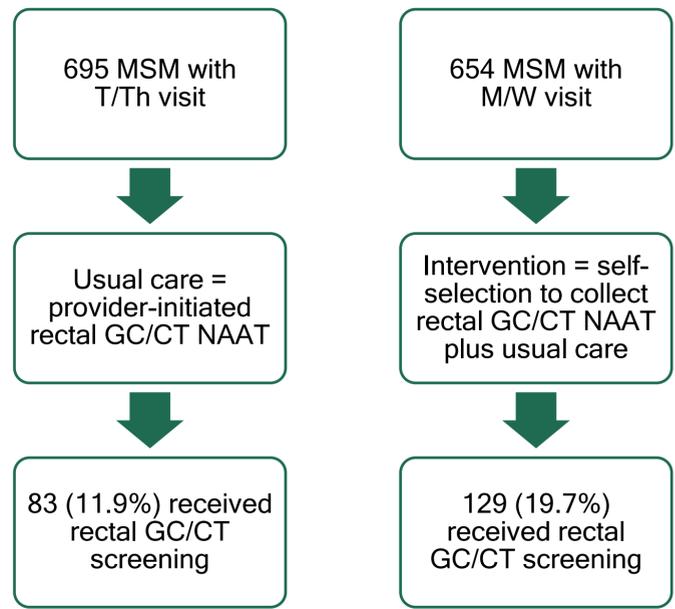
OBJECTIVES

- To evaluate a system-based intervention utilizing routine self-collected rectal swabs for GC/CT screening among MSM

METHODS

- The intervention took place over a 24 week study period from April 8 to September 22, 2015 at the University of Alabama at Birmingham (UAB) HIV Clinic.
- HIV-positive men attending routine HIV provider visits on Monday or Wednesday (M/W) were provided with a swab at clinic intake inviting them to self-collect a sample for rectal GC/CT nucleic acid amplification testing (NAAT) if they met inclusion criteria:
 - MSM
 - Anal receptive intercourse in the prior 12 months
- Eligible patients were also invited to complete an anonymous survey to elicit acceptability or reasons for declining swab collection.
- MSM attending HIV provider visits on Tuesday or Thursday (T/Th) were screened as per usual care.
 - Sexual history obtained at discretion of provider
 - Provider-initiated rectal GC/CT NAAT either collected by provider or self-collected.

Figure 1. Flow diagram for rectal GC/CT screening among MSM



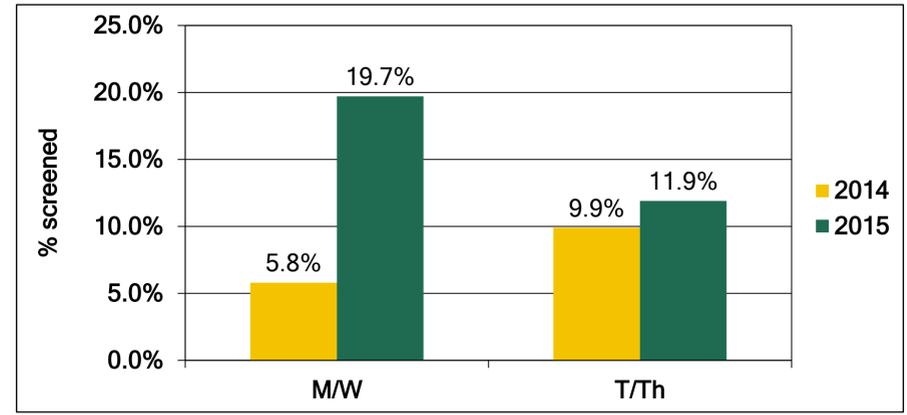
RESULTS

- During the study period 1,349 MSM attended routine HIV provider visits (654 in the intervention group on M/W and 695 in the usual care group on T/Th).
- Patients in the M/W group were more likely to be white and have a nurse practitioner as their primary HIV provider. (Table 1)
- Cumulative incidence of rectal GC/CT screening among the M/W group was 19.7% and among the T/Th group was 11.9% (p<0.001).
- Cumulative incidence of rectal GC/CT screening on M/W increased by 13.9% compared to the same period in 2014 (p<0.001) whereas cumulative incidence increased by 2% for T/Th (p=0.25). (Figure 1)
- In multivariable analysis, attending a visit on a M/W intervention day was associated with increased odds of receiving rectal GC/CT screening (odds ratio [OR] 1.94; 95% confidence interval [CI] 1.43-2.54). (Table 2)
- Among 129 patients tested for rectal GC on M/W, 10 (7.8%) were positive; among 83 patients tested on T/Th, 4 (4.8%) were positive.
- Among 127 patients tested for rectal CT on M/W, 12 (9.5%) were positive, and among 83 patients tested on T/Th 2 (2.4%) were positive.

Table 1: Characteristics of 1,349 MSM with routine HIV provider visits at UAB HIV Clinic, April 8 - September 22, 2016

Characteristics	M/W group (n=654) Mean ± SD or N(%)	T/Th group (n=695) Mean ± SD or N(%)	p-value
Age, years	44.1 (±11.9)	43.0 (±12.2)	0.11
Race			<0.001
White	353 (54.0)	300 (43.2)	
African-American	290 (44.3)	380 (54.7)	
Other/unknown	11 (1.7)	15 (2.2)	
Primary HIV provider			0.01
Physician	292 (44.7)	359 (51.7)	
Nurse practitioner	362 (55.3)	336 (48.3)	
CD4 count, <200 cells/μL	57 (8.8)	65 (9.4)	0.07
Viral load <200 copies/mL	562 (86.5)	588 (84.7)	0.40

Figure 2: Cumulative incidence of rectal screening for GC/CT stratified by visit group and year



- Of MSM self-collecting swabs on M/W, 59 returned the anonymous survey: 81% found the process easy, 12% found it somewhat easy, and 7% found it somewhat difficult. The majority (83%) would definitely be willing to do it again in the future, and an additional 14% would probably be willing to do it again.
- Of MSM not self-collecting swabs on M/W, few returned the anonymous survey regarding reasons for not participating (n=11).

Table 2: Univariate and multivariable analyses of the association of visit group with rectal GC/CT screening, controlling for baseline characteristics

Characteristics	Unadjusted OR (95% CI)	Adjusted OR (95% CI)
Visit group		
T/Th (usual care)	REF	REF
M/W (intervention)	1.81 (1.34-2.44)	1.94 (1.43-2.64)
Age <45 years	2.52 (1.85-3.43)	2.49 (1.79-3.46)
Race		
White	REF	REF
African-American	1.50 (1.11-2.03)	1.24 (0.89-1.72)
Other/unknown	1.21 (0.41-3.61)	1.15 (0.38-3.53)
Primary HIV provider		
Physician	REF	REF
Nurse Practitioner	1.59 (1.18-2.14)	1.74 (1.28-2.37)
CD4 count, <200 cells/μL	1.13 (0.69-1.85)	-
Viral load <200 copies/mL	0.60 (0.42-0.88)	0.74 (0.50-1.10)

Statistical significance indicated by bold type, all p < 0.01

CONCLUSIONS

- A system-based intervention to increase rectal GC/CT screening among MSM at our HIV clinic involving self-selection for participation and self-collection of swabs resulted in a significant improvement in screening rates over usual care, although the effect was moderate.
- The higher prevalence of rectal GC/CT diagnosed on days the intervention was offered suggests high risk patients may have been more likely to participate.
- Self-collection of swabs was acceptable to most patients who performed the test.
- Low return of surveys from patients who declined to participate in the intervention limited our ability to understand reasons for refusal.

Acknowledgments

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