Provider Uptake of Extragenital Screening for Gonorrhea and Chlamydia in Active Duty Air Force Members with Incident HIV Diagnosis

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Abstract

INTRODUCTION
The prevalence of *Neisseria gonorrhea* (GC) and *Chlamydia trachomatis* (CT) is much higher at extragenital anatomic sites among men who have sex with men (MSM) with HIV infection. National guidelines recommend that all MSM with HIV infection undergo screening for extragenital sexually transmitted infections (EG-STIs), however uptake is low in many primary care settings. We evaluated EG-STI screening by primary care providers (PCPs) for US Air Force (USAF) members with incident HIV infection.

METHODS
All United States Air Force (USAF) members newly diagnosed with HIV infection who received initial HIV specialty care with Infectious Disease (ID) providers at Brooke Army Medical Center from 2016-2018 (n=98) were included. A retrospective chart review was conducted to evaluate STI screening performed by PCPs within 1 week of HIV diagnosis compared to screening at entry into ID care. Demographic, clinical, laboratory and behavioral risk data were collected. STI screening included GC/CT EG-STIs, urethral GC/CT, syphilis, and hepatitis B and C.

RESULTS
Patients were predominantly male (97.9%) with a median age of 26 years (IQR 23-32) at HIV diagnosis (Table 1). A previous history of STIs was reported in 53 (54.1%) patients and most males self-identified as MSM (66.3%) or bisexual (22.5%). The median time from HIV diagnosis to ID evaluation was 26 days (IQR 9-33). PCPs performed any STI screening in 61 (62.2%) patients (Table 2). EG-STI screening was conducted in 3 (3.1%) patients overall and in (3.4%) MSM/bisexuals. A total of 31 (31.6%) patients had missed STIs; the majority due to EG-STIs of the rectum (71%) and pharynx (21.9%). All EG-STIs would have been missed by urethral GC/CT screening alone.

CONCLUSION
EG-STI screening uptake was low among PCPs evaluating USAF members with incident HIV infection. Underutilization of EG-STI screening can result in missed infections and forward transmission of GC/CT. Barriers to low uptake need to be explored. Continued education and training of PCPs may be necessary to improve uptake of EG-STI screening.

Background

- Since 2014, cases of chlamydia (CT) and gonorrhea (GC) have increased by 19% and 63%, respectively
- Extragenital sexually transmitted infections (EG-STIs) with oropharyngeal and/or rectal GC/CT are predominantly asymptomatic and often unrecognized
- CDC recommends annual screening for EG-STIs in all men who have sex with men (MSM), regardless of symptoms, and in all MSM with HIV at initial diagnosis
- EG-STI screening is underutilized in many practice settings despite these recommendations

Methods

- Retrospective chart review of active duty USAF members diagnosed with HIV between 2016-2018
- Data collected:
  - Patient demographics and HIV characteristics
  - STI history prior to HIV diagnosis
  - STI testing for EG and urine GC/CT, syphilis, hepatitis B (HBV), hepatitis C (HCV)
- STI testing uptake by PCPs at HIV diagnosis was evaluated and results were compared with STI testing at initial Infectious Disease (ID) specialty care visit

Results

Table 1: Demographics

Demographic characteristics	No. (%)
Number of patients	98
Age in years, median (IQR)	26 (23-32)
Gender	
Male	96 (97.9)
Female	2 (2.1)
Rank	
Enlisted	90 (91.8)
Officer	8 (8.2)
Race	
White	36 (36.7)
Black	36 (36.7)
Other	26 (22.4)

- Median time from HIV diagnosis to EG-STI screening: 26 (IQR 9-33) days
- All patients with a positive EG-STI test were negative by urine NAAT testing

Results (cont.)

Table 2: Frequency and Results of Sexually Transmitted Infection Screening

STI	Screening by PCP at HIV Diagnosis		Screening at ID Specialty Evaluation[1]	Infections Missed by PCP
	Tested No. (%)	Positive Result No. (%)	Positive Result No. (%)	No.
Urethral GC/CT	52 (53.1)	3 (5.8)	2 (2.0)	2
Pharyngeal GC/CT[2]	3 (3.1)	1 (33.3)	7 (7.1)	7
Rectal GC/CT[2]	3 (3.1)	0 (0.0)	22 (22.4)	22
Syphilis	54 (55.1)	8 (14.8)	14 (14.3)	6
HBV	51 (52.0)	0 (0.0)	0 (0.0)	0
HCV	51 (52.0)	0 (0.0)	0 (0.0)	0
Any STI screening	61 (62.2)	12 (36.1)	45 (45.9)	37[2]

1 – All individuals were tested for the listed infections
2 – Occurred in 31 patients

Discussion

- Most USAF members with newly diagnosed HIV were not screened for EG-STIs at the time of diagnosis
  - Of the 37 total missed infections, 29 (78.4%) were EG-STIs
- The median time from HIV diagnosis to ID specialty evaluation was approximately 4 weeks
  - This delay in STI screening may result in forward transmission of STIs
- Possible reasons for poor screening:
  - Provider lack of knowledge of guidelines
  - Beliefs/attitudes towards screening
  - Assumption ID specialists will perform screening
  - Stigma within the military
- Limitations include:
  - Retrospective data
  - Motivation for decision not to screen is unknown
  - Variation in notification and testing protocols

Conclusions

- Despite CDC guidelines, individuals with newly-discovered HIV were not screened for EG-STIs at the time of diagnosis
- Further studies are needed to evaluate:
  - Provider knowledge of guidelines
  - Provider beliefs/attitudes towards screening
  - Identification of other barriers to EG-STI screening
- Continued education of providers is needed to improve EG-STI screening uptake in the USAF

Disclaimer

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