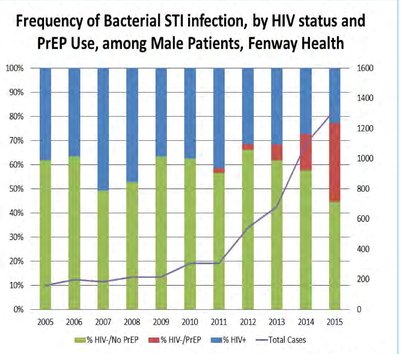
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TRENDS IN BACTERIAL STI IN AT RISK BOSTON MEN: MORE SREENING PLUS HIGHER PREVALENCE

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Background



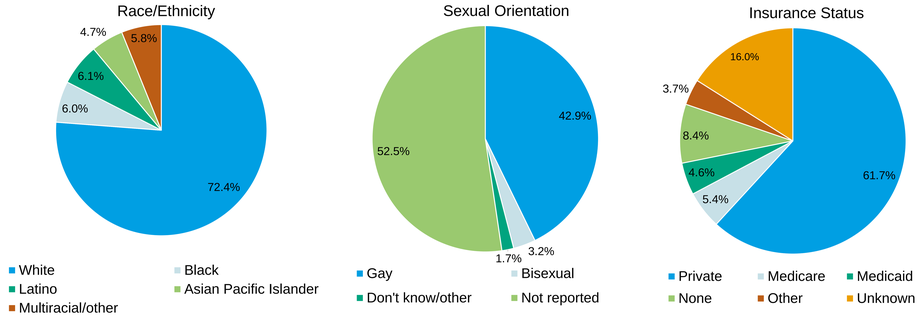
- Since the advent of HAART and PrEP, STI rates have increased in high risk MSM
- However, it has not been clear if these increases were due to more screening of HIV-infected and PrEP using patients, or due to absolute increases in STI prevalence, or both
- The purpose of the current study was to better understand the secular increases in bacterial STI among MSM screened at a Boston community health center

Methods

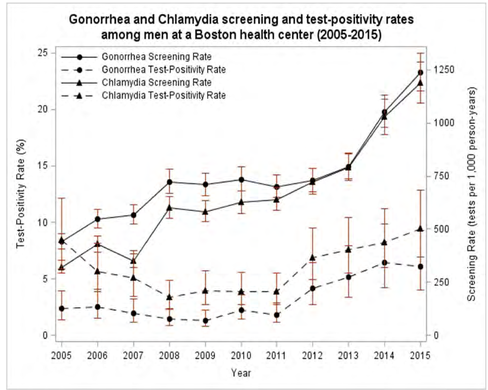
- Participants were cisgender males seen for at least one medical visit at Fenway Health (www.fenwayhealth.org), a Boston community health center (CHC) specializing in LGBT and HIV primary care, between 2005-2015
- Participants contributed person-time to any year in which a medical visit occurred
- The CHC has used a single electronic health record, Centricity™, since 1997
- Gonorrhea (GC) and Chlamydia (CT) were diagnosed by NAAT. GC and CT tests from different sites in the same day were considered one test in calculating screening (S) and diagnosis (D) ratios
- We calculated
  - Test positivity rate (TP) = # positive tests / # screening tests
  - S rate = # tests / 1,000 py
  - D rate = # positive tests / 1,000 py
- All rates were adjusted for race, ethnicity, insurance status, sexual orientation, age, year, and evaluated overall, and stratified by PrEP and HIV status

Results

- Between 2005 and 2015: 19, 232 cisgender men had at least one clinic visit



- GC and CT diagnoses increased > 12 and almost 8 fold between 2005 and 2015, respectively
  - GC ↑ from 40 to 554 annual cases
  - CT ↑ from 91 to 697 annual cases
- Screening (S rates) also ↑ between 2005 and 2015
  - From 386 to 1244 per 1000 py for HIV- men (>3 fold)
  - From 646 to 1231 per 1000 py for HIV+ men (2 fold)
- Diagnoses (D rate) also increased between 2005-2015 for GC:
  - 8/1000 to 69/1000 (+) tests for HIV- men (>8 fold)
  - 19/1000 to 95/1000 (+) tests for HIV+ men (5 fold)
- Comparable changes were seen with CT



- In 2015, the test positivity rate for GC was:
  - 4.8% for HIV negative men not using PrEP, 6.8% for PrEP users, 7.7% for HIV positive men
- In 2015, the test positivity rate for CT was:
  - 7.3% for HIV negative men not using PrEP, 10.8% for PrEP users, 10.4% for HIV positive men

Adjusted[1] GC and CT Screening Test Positivity Rates Among Men Screened at a Boston Community Health Center

		Gonorrhea				Chlamydia			
		HIV- Men		HIV+ Men		HIV- Men		HIV+ Men	
		Rate or %	95% CI	Rate or %	95% CI	Rate or %	95% CI	Rate or %	95% CI
Screening Rate[2]	2005	386	353, 422	646	576, 724	293	256, 24	424	370, 486
	2010	702	649, 759	861	780, 950	608	557, 664	689	617, 769
	2015	1244	1157, 1338	1231	1130, 1342	1193	1100, 1295	1177	1072, 1293
TPR[3]	2005	2.1%	1.2, 3.5	2.8%	1.4, 5.5	8.0%	5.6, 11.3	7.1%	4.2, 11.7
	2010	1.69%	1.2, 3.1	3.2%	1.8, 5.6	3.8%	2.6, 5.4	3.5%	22.0, 6.0
	2015	5.4%	3.6, 8.0	7.5%	4.9, 11.3	8.2%	6.2, 10.9	10.2%	7.4, 13.8
TPRR[4]	2010 vs 2005	0.92	0.58, 1.48	1.13	0.57, 2.26	0.45	0.32, 0.63	0.48	0.25, 0.93
	2015 vs 2005	2.70	1.80, 4.04	2.76	1.53, 4.98	1.04	0.79, 1.36	1.48	0.89, 2.45
	2015 vs 2010	2.92	2.18, 3.91	2.44	1.54, 3.87	2.30	1.8, 2.93	3.10	1.87, 5.14

1. Adjusted for age, race, insurance status, and sexual orientation
2. Tests per 1,000 person-years
3. Test-positive rate = (# diagnoses) / (# screening tests)
4. Test-positive rate ratio

Conclusions

- Between 2005 and 2015, GC S and TP rates increased significantly in at-risk men in care at a Boston CHC
- **Even though S rates increased, test positivity also increased, so the STI increases reflect an absolute increase in community infection burden.**
- Similar trends were seen for CT, starting in 2010
- Test positivity rates were highest in HIV-positive and PrEP patients, underscoring the need for ongoing regular screening and risk reduction counseling to decrease the increasing community burden of bacterial STI

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