



Incident Sexually Transmitted Infections among Southern Men Who Have Sex with Men Living with HIV in the Era of Biomedical Prevention

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Introduction

- HIV and sexually transmitted infections (STI) disproportionately affect men who have sex with men (MSM)
- HIV virologic suppression effectively prevents HIV sexual transmission (U=U, treatment as prevention)
- STIs increase the risk for HIV transmission
- Our objective is to describe STI trends among MSM living with HIV in the modern U=U era

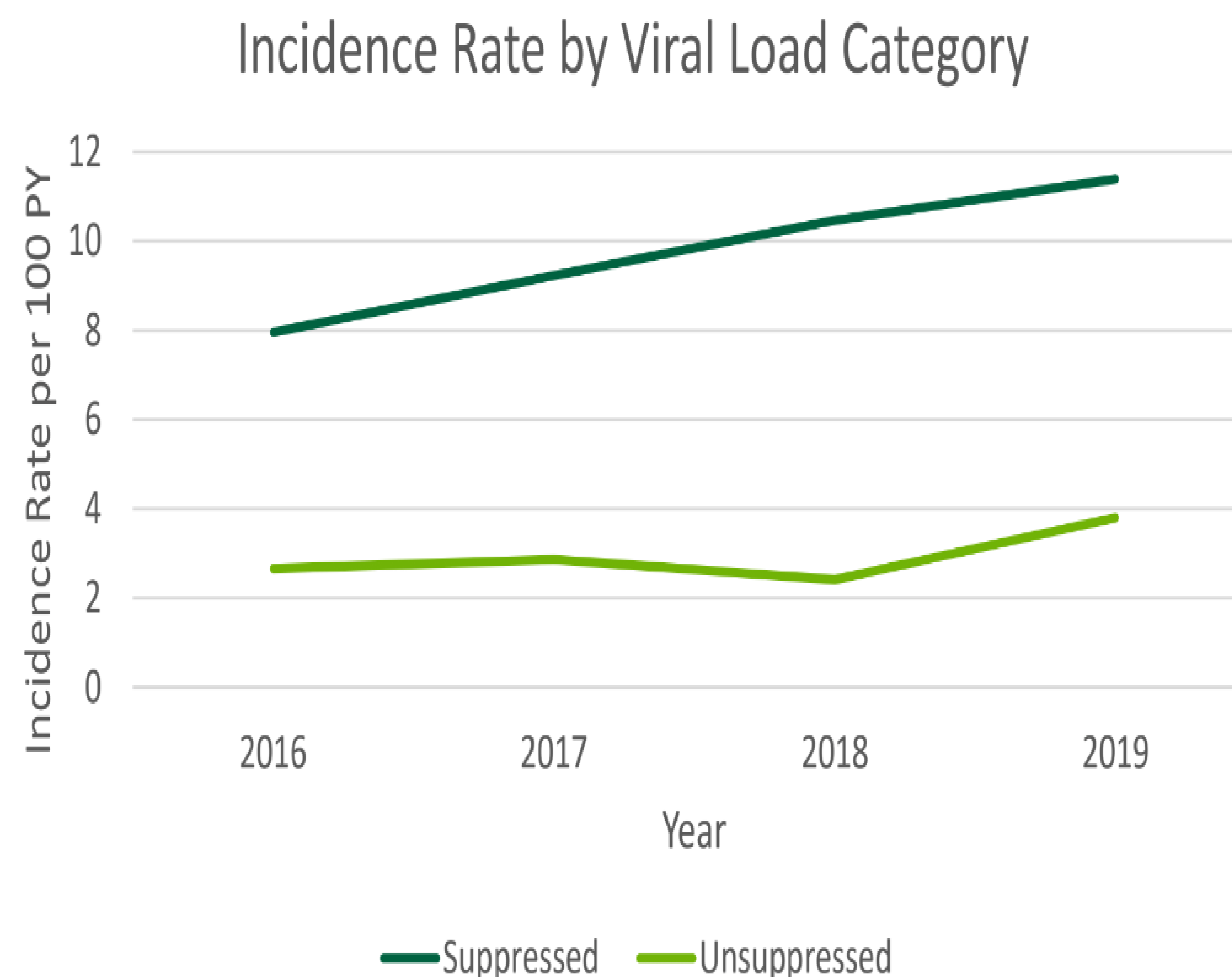
Methods

- Retrospective cohort analysis of MSM living with HIV between 2016-2019 in one HIV clinic in Birmingham, AL
- Eligible MSM were enrolled in the CFAR Network of Integrated Clinical Systems (CNICS)
- MSM had at least one viral load (VL) and STI test at least 1 year after engagement in care
- VL categorized as Suppressed (VL <200 copies/ml) or Unsuppressed (VL >200 copies/ml)
- STI defined as positive *Chlamydia trachomatis* (CT) or *Neisseria gonorrhoea* (NG) test (PCR or culture) at any site
- Incidence rates (IR) in 100 person-years (PYs) were calculated for each year
- Incidence Rate Ratio (IRR) with 95% confidence interval were calculated to compare suppressed IR to unsuppressed IR

Results

Table 1. Participant Demographics, Viral Load, and STI by Year

	2016	2017	2018	2019
Total MSM	943	1084	1080	1106
Age, mean yr (SD)	46 (12)	45 (12)	44 (13)	43 (13)
Race, n(%)				
Asian	1 (0.1)	2 (0.2)	3 (0.3)	3(0.3)
Black/AA	551 (58.4)	623 (57.5)	639 (59.2)	676 (61.1)
Multiracial	6 (.6)	12 (1.1)	13 (1.2)	20 (1.8)
Other/Unknown	3 (.3)	4(.4)	7 (.6)	6(0.5)
White	381 (40.4)	440 (40.6)	413 (38.2)	399 (36.1)
Hispanic Ethnicity	1 (0.1)	3 (0.3)	4 (0.4)	1 (0.1)
Incident STI n(%)	100 (10.6)	131 (12.1)	139 (12.9)	168 (15.2)
Viral Load, n(%)				
Suppressed	741 (78.6)	874 (80.6)	886 (82.0)	889 (80.4)
Unsuppressed	202 (21.4)	210 (19.4)	194 (18.0)	217 (19.6)



Results

Table 2. Incident Rates per 100 PYs & IRR by VL

	Suppressed	Unsuppressed	IRR (95% CI)
2016	7.95	2.65	3.00 (1.91-4.72)
2017	9.23	2.86	3.22 (2.16-4.83)
2018	10.46	2.41	4.34 (2.83-6.65)
2019	11.93	3.8	3.14 (2.21-4.45)

Conclusion

- Incident bacterial STIs with NG/CT were very common in this cohort and increased each year in the analysis
- MSM with suppressed VL had higher STI IR compared to MSM with unsuppressed VL
- HIV and STIs must be approached as a syndemic to make impacts in either epidemic
- Novel approaches to STI prevention, such as pre-exposure prophylaxis or vaccination, are necessary to alter the STI epidemic in this population in order to limit STI impact on HIV transmission

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