Persistently high HIV incidence among MSM and PWID attending care centres in India

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BACKGROUND

- Understanding temporal changes in HIV incidence among vulnerable populations is critical for directing and evaluating prevention efforts
- Due to logistical constraints, there are few sources of longitudinal incidence data, particularly among key populations in low-and-middle-income countries

OBJECTIVE

- Estimate HIV incidence over time among men who have sex with men (MSM) and people who inject drugs (PWID) attending integrated care centres (ICCs) across India

METHODS

- ICCs established mid-2014 to 2017 in 15 Indian cities
- ICCs provide rapid onsite HIV testing and other population-specific services to MSM (8 cities) or PWID (8 cities) supported by the Indian national programme – all free-of-charge to clients
- HIV negative clients are tracked and encouraged to repeat testing every 6 months
- Client testing data from ICC establishment thru July 2022
- Client testing data were included in this analysis if they had ≥2 tests and not positive on the first test
- Person-time accrued between HIV test dates except for those with a positive result, for whom the seroconversion date was estimated as the midpoint between the last negative and first positive test and person-time calculated accordingly
- Incidence rates per 100 person-years (PY) calculated overall and stratified by population group, city, and year
- Multi-level Poisson regression used to examine changes in annual incidence stratified by population group

RESULTS

Table 1: ICC client characteristics	MSM	PWID
N clients with ≥2 HIV tests	5722	7379
Median (IQR) age*	26 (22-32)	28 (24-34)
Women	n/a	7%
Recent unprotected sex with men or transgender persons* (among men)	66%	3%
Recent unprotected sex with any gender*	72%	46%
Recently injection drug use*	0.4%	63%
Recently shared injecting paraphernalia*	0.1%	39%

at first test

Table 2: ICC client follow-up and overall incident HIV	MSM	PWID
N	5722	7379
Median (IQR) follow-up time, years	1.6 (0.7-2.9)	2.2 (1.0-3.9)
Incident HIV infections	227	812
Overall incident rate per 100 PY (95% CI)	1.9 (1.7-2.2)	4.1 (3.9-4.4)

Figure 1: 2021-2022 average HIV incidence rate, by city

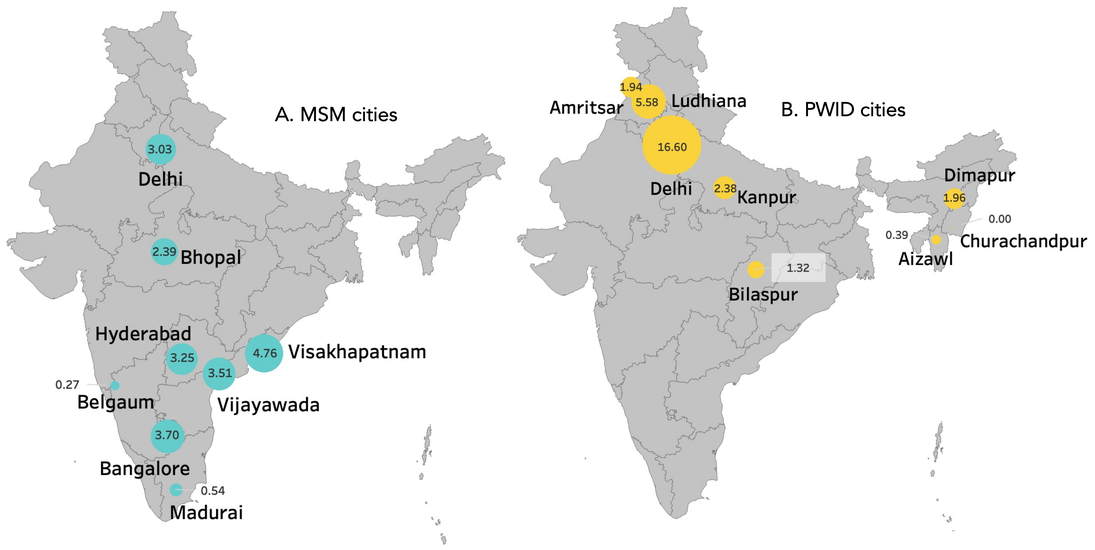
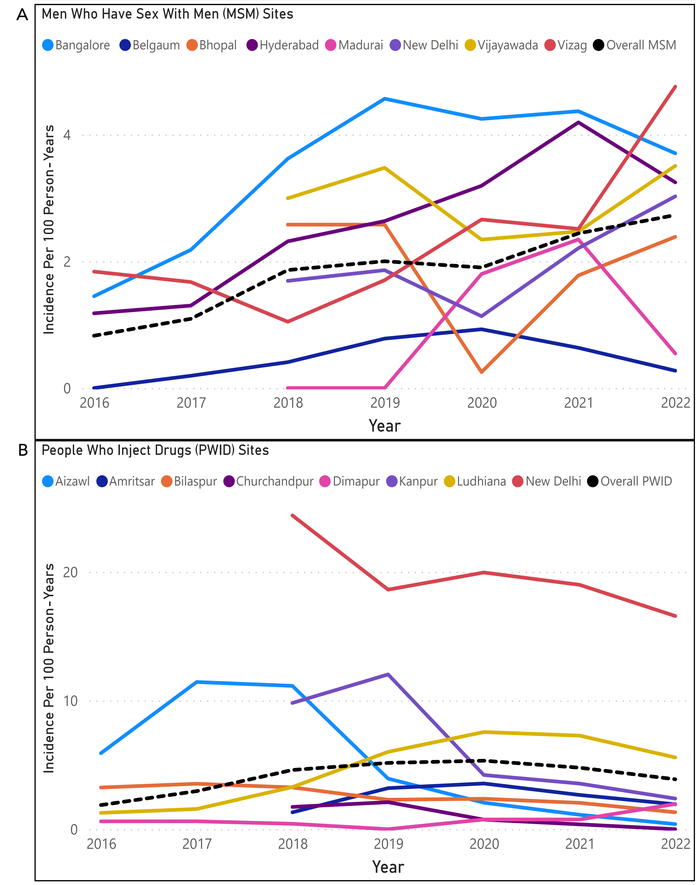


Figure 2: HIV incidence rate over time, by population group and city



NOTES: Lines smoothed using a 2-year moving average & Y-axis for panel A and B differ

Table 3: Change in annual incidence	Incidence rate ratio
MSM	1.18 (1.09-1.27)
PWID	
2015 until 2020	1.16 (1.10-1.22)
2020 until 2022	0.70 (0.60-0.83)

CONCLUSIONS

- There was substantial geographic variability but many populations experienced high incidence (>2/100PY) despite being engaged in a community-based clinic where preventive services are free
- COVID pandemic resulted in fewer HIV tests and may have altered the population accessing HIV testing, especially in 2020 and 2021, thus impacting incidence estimates for those years
- Need to focus on key populations in low-and-middle income countries when considering novel strategies such as long acting PrEP to curtail incidence

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