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Background

- UNAIDS has set a 90-90-90 target to curb the HIV epidemic by 2020, but methods used are not standardized.
- HIV surveillance in Austria relies on a hospital-based cohort not taking into account the transfer of care to private physicians in Vienna, which comprised 24% of all patients with cART in 2016.

Summary

- The fraction undiagnosed decreased from 19% (95% CI: 18-21%) in 2010 to 10% (95% CI: 9-13%) in 2016, among MSM from 20% (95% CI: 18-22%) in 2010 to 8% (95% CI: 6-11%) in 2016 (Tab. 1).
- The proportion of diagnosed patients who have ever started ART increased from 83% (80% among MSM) in 2010 to 92% (94% among MSM) in 2016.
- The proportion of individuals virally suppressed improved from 79% to 85% (77% to 86% among MSM).
- The fraction of the virally-suppressed among PLHIV increased from 55% to 74%, among MSM from 51% to 74%.
- Estimates of the number of new HIV infections decreased from 258 (95% CI: 237-282) to 171 (95% CI: 107-262), among MSM from 157 (95% CI: 143-168) to 70 (95% CI: 39-114) (Fig. 1).
- The overall rate of LTFU was 27.5%, multivariable logistic regression revealed three significant factors for LTFU: younger age, residency in Vienna and non-Austrian origin.

Methods

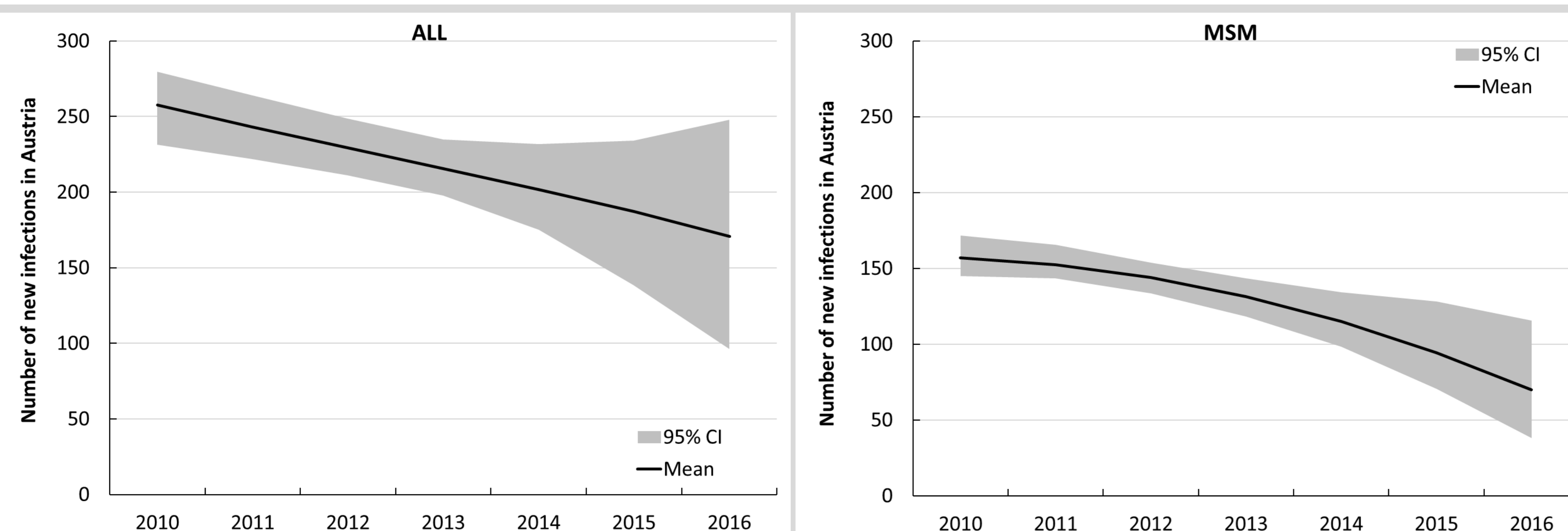
- Data from the Austrian HIV Cohort Study were used to derive the four-stage continuum of HIV care. People living with HIV (PLHIV) estimates were obtained using back-calculation models (ECDC tool 1.3.0) to estimate HIV incidence and the undiagnosed fraction.
- The proportion ever diagnosed who ever initiated ART and the proportion of them who were virally-suppressed (≤ 200 copies/mL) were assessed for all patients and for men who have sex with men (MSM) for the years 2010 to 2016.
- For high estimates patients lost to follow-up (LTFU, no contact 1.5 years before the end of the respective year) were excluded and for low estimates they were included. The preferred estimate was the mid-point between the high and low estimate.
- Missing HIV-RNA was considered as unsuppressed.
- Logistic regression was used to identify factors associated with LTFU.

Results

Tab. 1: Temporal trends of people living with HIV (PLHIV) (a), the percentage diagnosed (b), the proportion on ART of those diagnosed (c), the proportion with suppressed HIV-RNA of those on ART (d) and the proportion suppressed of all PLHIV (e) for all patients in Austria.

Year	(a) PLHIV	(b) Diagnosed [estimated range]	(c) On ART Mean [low, high estimate]	(d) Suppressed Mean [low, high estimate]	(e) Suppressed of all PLHIV
2010	6254	84% [80%, 86%]	83% [76%, 89%]	79% [71%, 86%]	55%
2011	6432	86% [82%, 88%]	85% [79%, 91%]	80% [72%, 88%]	59%
2012	6594	88% [84%, 90%]	87% [81%, 93%]	81% [73%, 89%]	62%
2013	6734	89% [85%, 91%]	89% [83%, 94%]	83% [74%, 91%]	66%
2014	6864	90% [86%, 92%]	91% [85%, 96%]	84% [75%, 92%]	69%
2015	6975	91% [88%, 94%]	92% [87%, 97%]	84% [75%, 93%]	70%
2016	7079	92% [89%, 94%]	94% [89%, 98%]	85% [77%, 93%]	74%

Fig. 1: Number of new HIV infections over time for all patients and for men who have sex with men.



Conclusion

- Austria is nearing the 90-90-90 target.
- Viral suppression was comparatively low and maybe explained substantially by transfer of care in Vienna.
- This and the decrease in HIV incidence supports the hypothesis that the high estimate of being on ART and virally-suppressed is the more likely scenario.
- For more reliable nationwide estimates there is urgent need to include data from private physicians.