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Poster category
Focus on vulnerable populations and specific settings for interventions

The paradox of high coverage: persistent HCV reinfection in care-engaged MSM networks

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INTRODUCTION & OBJECTIVE

Direct-acting antivirals (DAAs) can clear HCV, but cure does not prevent subsequent exposure. Reinfection persists among men who have sex with men (MSM) already engaged in HIV care and pre-exposure prophylaxis (PrEP) services. High clinical coverage may therefore coexist with continued transmission in connected sexual and chemsex networks.

We examined the gap between individual biomedical coverage and network-level transmission control by contrasting European national or multicentre cohorts with metropolitan hubs. The implementation question is how HIV and PrEP services can use their existing contact with patients to identify reinfection earlier and reconnect diagnosis with retreatment.

METHODS

We conducted a structured review of post-2010 European studies identified through PubMed and Europe PMC and checked in full text. Studies from Germany, Switzerland, France, Italy, the Netherlands and Spain described primary infection, incident HCV, reinfection, repeated episodes or phylogenetic clustering.

Populations included MSM living with HIV, MSM using PrEP and MSM with prior HCV exposure. We classified evidence by national/multicentre or metropolitan-hub setting and contextualised it using a 2023 systematic review [1]. The synthesis is descriptive. Cohort rates retain their original population, period and outcome definitions, without new pooling or causal comparisons.

RESULTS

Low incidence in broad programmes can coexist with recurrent infection in selected networks

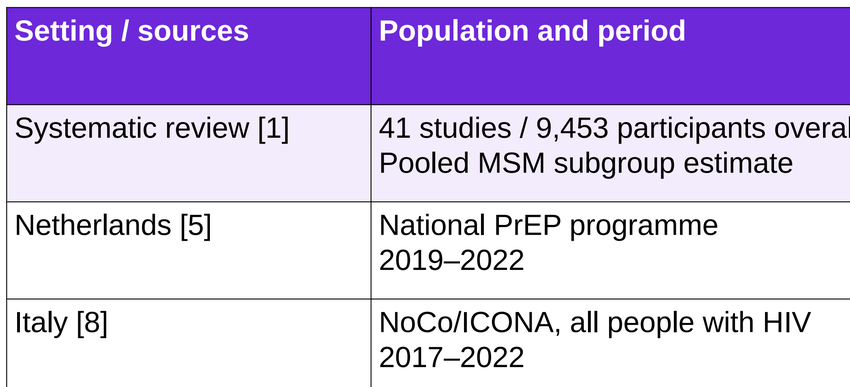
The 2023 systematic review included 41 studies and 9,453 participants. Its pooled MSM reinfection estimate was 7.37/100 person-years (PY) [1]. The Dutch national PrEP programme reported low incident HCV, while the German recent-HCV cohort reported reinfection of 15.5/100 PY and multiple episodes in 31.3% of those with reported infection history [2,5].

Metropolitan cohorts identified a concentration of recurrent infection: MOSAIC reported 11.5 reinfections/100 PY overall and 38.3 for second to fourth episodes [3]. Madrid reported primary infection of 0.79/100 PY versus reinfection of 4.32 overall and 12.92 among PrEP users [4]. Phylogenetic evidence describes persistent clusters and links across HIV status and countries [6,7].

Setting / sources	Population and period	Infection / incidence per 100 person-years (PY)*	Reinfection per 100 person-years (PY)
Systematic review [1]	41 studies / 9,453 participants overall Pooled MSM subgroup estimate	Not assessed	7.37 95% CI 5.09–9.65
Netherlands [5]	National PrEP programme 2019–2022	0.37 primary HCV	NR
Italy [8]	NoCo/ICONA, all people with HIV 2017–2022	0.48 seroconversion	1.40
Germany [2]	MSM with recent HCV 2014–2021	Annual: 0.28–0.43% (2014–2019) 0.02% (2021)	15.5
Amsterdam / MOSAIC (NL) [3,9]	MSM without HIV, 2012–2021 / MOSAIC MSM with HIV, 2003–2017	0.05 in MSM without HIV	11.5 overall 38.3 second–fourth episodes
Madrid [4]	MSM with HIV and PrEP users 2022–2024	Primary: 0.79 overall 0.65 with HIV / 0.94 PrEP	4.32 overall 4.05 with HIV / 12.92 PrEP

*German infection estimates are annual percentages (%), not PY rates. Amsterdam/MOSAIC estimates use different populations and periods, including pre-DAA follow-up. Italian estimates include all people with HIV. NR = not separately reported here. Cross-study contrasts are descriptive.

DAA scale-up: conceptual pattern



Conceptual illustration, not measured time-series data.
No shared numerical scale. Reinfection trends vary by cohort. [2,3,5,6]

CONCLUSIONS & TESTING IMPLICATIONS

HCV cure should lead to continued testing

HCV transmission persists among MSM engaged in HIV and PrEP services. Chemsex, including slamming (injecting drugs during sex), and unprotected fisting have been associated with HCV acquisition or reinfection. Group-sex settings may create opportunities for repeated exposure and blood contact. [2–4,10]

For MSM with ongoing exposure, cure should lead to continued HCV-RNA testing. Regular post-cure testing should be complemented by low-threshold, patient-triggered testing after self-reported exposure and community-developed exposure indicators. Earlier diagnosis should connect directly with rapid retreatment.

Services should implement targeted, non-judgemental harm reduction addressing injecting and sexual practices, co-developed with affected communities and linked to peer-led support. Connected urban hubs may sustain HCV transmission despite high engagement in care, supporting coordinated repeat testing, rapid retreatment and targeted harm reduction across HIV, PrEP and community services. [6,7] This review does not establish an optimal testing interval or demonstrate intervention effectiveness.

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