DoxyPEP Counseling and Use Among PrEP Users: Cross-Sectional Survey in the Italian PrIDE Cohort

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BACKGROUND

-Doxycycline post-exposure prophylaxis (DoxyPEP) can reduce bacterial STIs, but data on counseling and uptake among European PrEP users are limited.[1-4]

-Pending formal national guidelines, the Italian Society of Infectious and Tropical Diseases (SIMIT) has issued a consensus document providing recommendations on DoxyPEP counselling and use.[5-6]

-The aim of this study is to assess the prevalence of DoxyPEP counseling and DoxyPEP use among HIV pre-exposure prophylaxis (PrEP) users in Italy and identify associated factors.

METHODS

-Cross-sectional analysis of PrEP users enrolled in the Italian PrIDE cohort (NCT07186244).

-The PrIDE cohort is a nationwide, multicenter Italian prospective observational cohort of people using PrEP, designed to monitor PrEP delivery, users' characteristics, and related prevention practices.

-*Period:* 1st July 2024 to 30th August 2025.

-*Sites:* 14 hospital-based and 3 community-based PrEP centers.

-Baseline data included demographics, geography, PrEP history (already on PrEP at baseline), and behavioral variables (e.g., HIRI-MSM score, prior STIs, chemsex).

-The HIRI-MSM risk score was based on age, number of sexual partners, type of intercourse, chemsex, and previous STIs.[7]

-DoxyPEP counseling and self-reported DoxyPEP use were captured at enrollment in the PrIDE cohort.

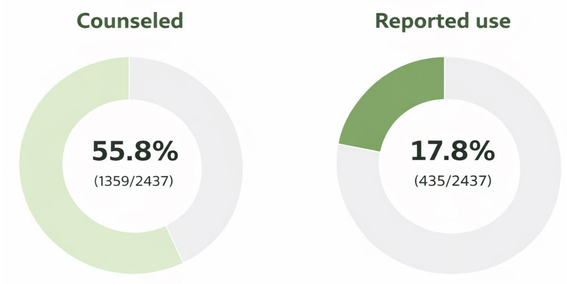
-Groups were compared according to DoxyPEP counseling and use with nonparametric tests, as appropriate.

-Multivariable logistic regressions were applied and adjusted odds ratios (aORs) are presented.

RESULTS

Study population

2,437 PrEP users (98.6% male at birth)
1726 (72.3%): already on PrEP at baseline
DoxyPEP use / counseled: 435/1347 (32.3%)



DoxyPEP counseling (aORs)
Higher in Centre/South: 1.89 (95% CI 1.50-2.40, p<0.001)
Higher with HIRI-MSM ≥10: 1.62 (1.24-2.11, p<0.001)
Lower among females at birth: 0.25 (0.06-0.92, p=0.042)
Marked increase by calendar quarter:
aOR 10.19 in 2024-Q4, 4.72 in 2025-Q1,
7.9 in 2025-Q2, 24.56 in 2025-Q3, versus 2024-Q3; all p<0.001

DoxyPEP use (aORs)
Lower in Centre/South : 0.64 (0.43-0.93, p=0.023)
Higher in community-based: 2.00 (1.28-3.12, p=0.002)
Higher with HIRI-MSM ≥10: 2.85 (1.76-4.89, p<0.001)
Lower among transgender/non-binary people: 0.11 (0.02-0.42, p=0.006)
Higher in sex workers: 2.59 (1.25-5.35, p=0.01)
Higher if already on PrEP at baseline: 8.91 (4.99-17.65, p<0.001)

Characteristics of PrEP users according to DoxyPEP counselling

Characteristics	Overall N = 2437 (100%)[1]	Counselling No N = 1078 (44%)[1]	Counselling Yes N = 1359 (56%)[1]	p-value[2]
Sex at birth *(Male)*	2,402 (98.6%)	1,055 (97.9%)	1,347 (99.1%)	**0,01**
Age *(Years)*	38.0 (32.0, 46.0)	37.0 (31.0, 46.0)	38.0 (33.0, 45.0)	0,246
Sex-worker	68 (2.8%)	30 (2.8%)	38 (2.8%)	**<0.001**
Gender identity *(Transgender/Non-binary)*	58 (2.4%)	30 (2.8%)	28 (2.1%)	0,245
Sexual orientation *(GBMSM)*	2,381 (97.7%)	1,047 (97.1%)	1,334 (98.2%)	0,176
Setting *(Community-based)*	400 (16.4%)	184 (17.1%)	216 (15.9%)	0,437
Geographic area *(North)*	1,869 (76.7%)	861 (79.9%)	1,008 (74.2%)	**<0.001**
Previous STIs	1,747 (71.7%)	758 (70.3%)	989 (72.8%)	0,249
Previous PrEP	1,762 (72.3%)	747 (69.3%)	1,015 (74.7%)	**0,002**
HIRI-MSM score	21.0 (14.0, 28.0)	20.0 (14.0, 25.0)	22.0 (16.0, 28.0)	**<0.001**
Sexual partners *(>30 in 3 months)*	239 (9.8%)	93 (8.6%)	146 (10.7%)	**<0.001**
Chemsex	323 (13.3%)	69 (6.4%)	254 (18.7%)	**<0.001**

Characteristics of PrEP users according to DoxyPEP use

Characteristics	Overall N = 2437 (100%)[1]	DoxyPEP Use No N = 2002 (82%)[1]	DoxyPEP Use Yes N = 435 (18%)[1]	p-value[2]
Sex at birth *(Male)*	2,402 (98.6%)	1,968 (98.3%)	434 (99.8%)	**0,02**
Age *(Years)*	38.0 (32.0, 46.0)	38.0 (32.0, 46.0)	38.0 (33.0, 44.0)	0,863
Sex-worker	68 (2.8%)	51 (2.5%)	17 (3.9%)	0,086
Gender identity *(Transgender/Non-binary)*	58 (2.4%)	56 (2.8%)	2 (0.5%)	**0,004**
Sexual orientation *(GBMSM)*	2,381 (97.7%)	1,949 (97.4%)	432 (99.3%)	**0,037**
Setting *(Community-based)*	400 (16.4%)	303 (15.1%)	97 (22.3%)	**<0.001**
Geographic area *(North)*	1,869 (76.7%)	1,493 (74.6%)	376 (86.4%)	**<0.001**
Previous STIs	1,747 (71.7%)	1,370 (68.4%)	377 (86.7%)	**<0.001**
Previous PrEP	1,762 (72.3%)	1,381 (69.0%)	381 (87.6%)	**<0.001**
HIRI-MSM score	21.0 (14.0, 28.0)	20.0 (14.0, 25.0)	26.0 (20.0, 31.0)	**<0.001**
Sexual partners *(>30 in 3 months)*	239 (9.8%)	144 (7.2%)	95 (21.8%)	**<0.001**
Chemsex	323 (13.3%)	185 (9.2%)	138 (31.7%)	**<0.001**

1 n (%); Median (Q1, Q3); 2 Pearson's Chi-squared test; Wilcoxon rank sum test; Fisher's exact test

IMPLICATIONS

Implementation priorities

-Standardize counseling to all PrEP users.
-Inclusive delivery in hospitals and community-based settings.
-Risk-proportionate use: target users at increased bSTIs risk.
-Stewardship: monitor use, breakthrough infections and resistance trends.

CONCLUSIONS

-In this nationwide PrEP cohort, DoxyPEP counseling expanded rapidly and was preferentially delivered to individuals with higher behavioral bSTI risk.
-About one in six PrEP users reported DoxyPEP use, broadly aligning with risk indicators, but with important differences by setting and geography.
-Lower uptake among transgender/non-binary individuals highlights the need for more inclusive and equity-focused implementation strategies.
-Standardized counseling pathways and risk-proportionate delivery may help optimize scale-up while supporting antimicrobial stewardship.

REFERENCES

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