Doxy-PEP Knowledge, Attitudes, and Practices among HIV and PrEP Providers

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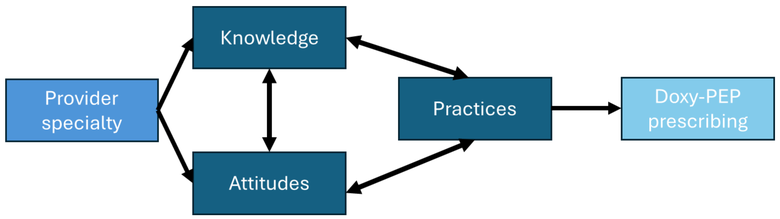
BACKGROUND

- Doxycycline post-exposure prophylaxis (doxy-PEP) reduces bacterial STIs among MSM and TGW [1,2]
- Real-world impact depends in part on provider knowledge, attitudes, and prescribing practices
- Little is known about knowledge and attitudes of HIV and PrEP providers towards doxy-PEP prescribing, especially among those without infectious disease or HIV specialty training

OBJECTIVES

- Compare doxy-PEP knowledge, attitudes, and practices among HIV and PrEP providers, by provider specialty

Figure 1. Conceptual model of impact of provider specialty on doxy-PEP knowledge, attitudes, and prescribing.



METHODS

- Cross-sectional survey of HIV and PrEP providers (May–September 2025)
- Eligible providers prescribed ART or PrEP to ≥5 MSM/TGW patients in prior year
- Online questionnaire adapted from a validated PrEP acceptability tool[3] assessed:
  1) Provider knowledge of STI trends
  2) Self-rated doxy-PEP awareness
  3) Objective doxy-PEP knowledge
  4) Doxy-PEP attitudes and beliefs
  5) Doxy-PEP practices
- STI trends and objective knowledge questions were binary; self-rated knowledge and attitudes questions used 4-point Likert scales (strongly agree, somewhat agree, somewhat disagree, strongly disagree)
- Knowledge scores were summed from correct responses; attitude scores were transformed to reflect positive views and summed
- Comparison between **non-specialists** (primary care, general internal medicine, or family medicine trained without HIV certification) vs **specialists** (ID/HIV medicine-trained)
- Knowledge and attitude scores compared using one-sided Mann–Whitney U-tests to assess whether non-specialists had lower knowledge and attitude scores
- Prior doxy-PEP prescribing practices compared using Fisher's exact test

PLAIN LANGUAGE SUMMARY

- Primary care providers generally had positive views about doxy-PEP but knew less about how it works compared to HIV specialists
- Concerns about side effects and antibiotic resistance were common and may limit providers from prescribing doxy-PEP to patients

REFERENCES

1. Luetkemeyer AF, Donnell D, Dombrowski JC, et al. Postexposure Doxycycline to Prevent Bacterial Sexually Transmitted Infections. N Engl J Med. 2023;388(14):1296-1306. doi:10.1056/NEJMoa2211934.
2. Molina JM, Bercot B, Assoumou L, et al. Doxycycline prophylaxis and meningococcal group B vaccine to prevent bacterial sexually transmitted infections in France (ANRS 174 DOXYVAC): a multicentre, open-label, randomised trial with a 2 × 2 factorial design. Lancet Infect Dis. Published online May 23, 2024. doi:10.1016/S1473-3099(24)00236-6.
3. Bil JP, Hoornenborg E, Prins M, et al. The Acceptability of Pre-Exposure Prophylaxis: Beliefs of Health-Care Professionals Working in Sexually Transmitted Infections Clinics and HIV Treatment Centers. Front Public Health. 2018;6:5. Published 2018 Feb 9. doi:10.3389/fpubh.2018.00005

KEY FINDINGS

- Providers without HIV/ID training have less doxy-PEP knowledge but positive attitudes towards prescribing
- Targeted educational interventions addressing concerns regarding antimicrobial resistance, microbiome effects, and adverse reactions may improve doxy-PEP prescribing comfort among HIV/PrEP providers without specialty training

RESULTS: Provider characteristics

- Non-specialists (N=10) vs specialists (N=28)
- Median years in practice differed modestly (p=0.12)
- Specialists prescribed ART/PrEP to more patients annually (p<0.01)

Table 1. Provider characteristics (N=38).

	Non-specialist† (N=10)	Specialist† (N=28)	p*
Sex/Gender			1.00
Male, cis	50%	46%	
Female, cis	50%	50%	
Transgender/NB	0%	4%	
Site			0.29
Columbia University	40%	61%	
Weill Cornell	60%	39%	
Provider type			0.56
Physician	100%	86%	
Nurse practitioner	0%	14%	
Years in practice			0.12
Under 5 years	20%	14%	
5-15 years	30%	64%	
More than 15 years	50%	21%	
Number of patients prescribed ART/PrEP‡ in last year			**<0.01**
5-20	70%	7%	
21-50	10%	39%	
51-100	10%	21%	
More than 100	10%	32%	

†Specialist = ID/HIV medicine-trained providers; Non-specialist = primary care, general internal medicine, or family medicine providers. ††ART = antiretroviral therapy, PrEP = HIV pre-exposure prophylaxis. *Fisher's exact test used to compare distribution of frequencies by provider specialty.

RESULTS: Doxy-PEP Knowledge and Attitudes

- Self-rated knowledge and attitudes were high in both groups but favored specialists
- Non-specialists had lower scores on items regarding doxy-PEP efficacy for gonorrhea prevention (p=0.04) and options for daily doxy-PEP dosing (p <0.01)

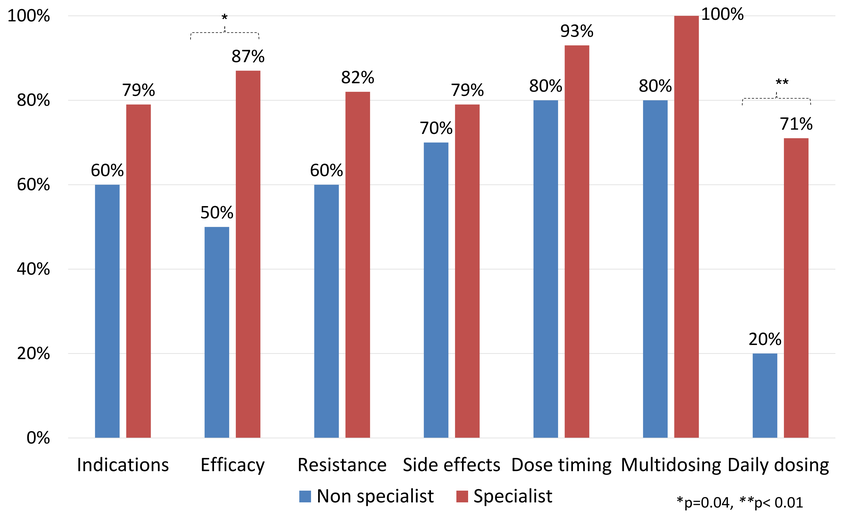
Table 2. Composite doxy-PEP knowledge and attitude scores, median/max possible score (IQR), by provider specialty.

	Non-specialist	Specialist	p
STI knowledge	2/4 (1-3)	3/4 (3-4)	**0.02**
Self-rated doxy-PEP knowledge	11/12 (10-11)	12/12 (11-12)	**<0.01**
Objective doxy-PEP knowledge	4/7 (4-6)	6/7 (5-7)	**<0.01**
Doxy-PEP attitudes and beliefs	49/60 (46-50)	51/60 (49-52.5)	**0.047**

*A Mann-Whitney U test with an exact distribution was used. Because a directional hypothesis was specified a priori (non-specialists < specialists), the reported one-sided p-value was obtained by halving the two-sided exact p-value.

RESULTS: Doxy-PEP Knowledge

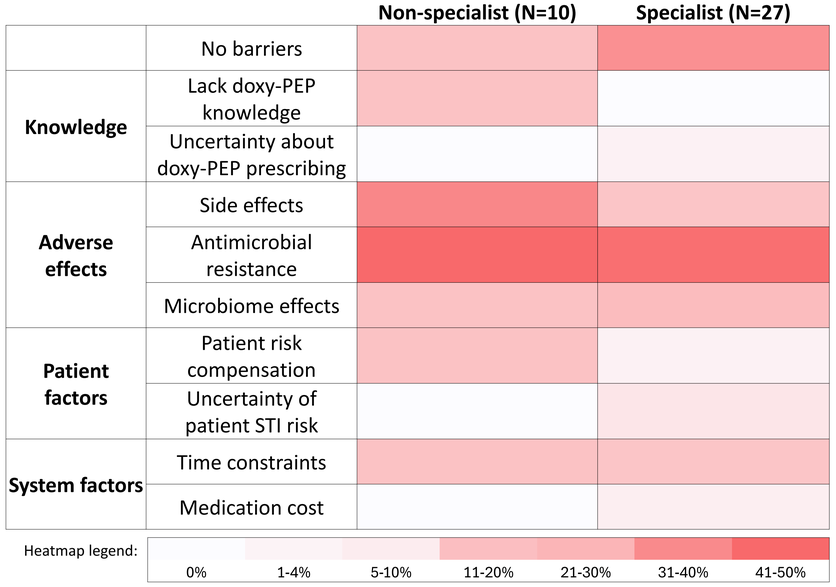
Figure 2. Objective doxy-PEP knowledge scores, percent correct, by provider specialty.



RESULTS: Doxy-PEP Practices

- Most providers (97%) had prescribed doxy-PEP previously
- Three providers (n=2 specialists, n=1 non-specialist) had prescribed doxy-PEP to non-MSM/TGW patients
- **Majority of non-specialists (60%) reported that additional training would improve doxy-PEP prescribing comfort compared to 39% of specialists (p=0.2)**

Figure 3. Self-reported potential barriers to doxy-PEP prescribing.



CONCLUSIONS

- Non-specialists demonstrated positive attitudes but lower objective doxy-PEP knowledge
- Concerns regarding antimicrobial resistance and adverse effects were common
- Targeted education may improve confidence and appropriate doxy-PEP prescribing

ADDITIONAL KEY INFORMATION

Author Contact Information: Yotam Arens, yoa4003@med.cornell.edu.

Other Key Information: WCM IRB 24-09027950-02. This study was unfunded.

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