

# Appropriateness and strategic value of Post-Exposure Prophylaxis (PEP) for HIV today: experience from an Infectious Diseases referral centre, March-October 2023, Italy

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## Introduction

- PEP (Post-Exposure Prophylaxis) is the assumption of drugs to prevent HIV after an occupational or sexual at-risk exposure.
- In recent years, strategies as PrEP and concepts such as U=U are changing the HIV landscape and epidemiology, leading to a lower number of at-risk events. Consequently, the indication to PEP is now limited to few cases compared to the clients asking for it to Emergency Services.
- On the other hand, PEP may still represent a strategy to identify people with at-risk behaviours, increase vaccine coverage, and propose PrEP to those at higher risk.

## Study aim

- We describe prescription appropriateness and additional value of PEP among those referring for at-risk exposure at "D. Cotugno" hospital, a mono-specialistic Infectious Disease centre in Naples, Italy, in March-December 2023.

## Methods

- At "D. Cotugno" an Emergency Department (ED) is operating 24/24h, where people with at-risk exposure for HIV refer for initial evaluation. HIV drugs are dispensed for few days, then exposure is reassessed and PEP confirmed or suspended in a dedicated service operating 2 times/week.
- Appropriateness of PEP is evaluated on the basis of recommendations from "UK Guideline for the use of HIV Post-Exposure Prophylaxis", published in 2021, that represents the most recent international document on PEP.
- Appropriateness rate of PEP prescription is calculated considering the PEP correctly prescribed on the total of PEP prescribed.

## Results

- In March-December 2023, 122 persons referred to ED referring at-risk exposures for HIV (see Table for characteristics). Among these, PEP was started in 115 persons. All referred to dedicated service for reassessment.
- After re-evaluation in dedicated service, PEP was confirmed in 68, including 15 cases in which PEP were not indicated, but the intense concern and anxiety of the exposed person led to the decision to continue.
- Appropriateness rate in ED was 43% (53 appropriate PEP among 122), it increased to 78% (53 appropriate among 68) in dedicated service (see Figure).
- All PEPs were performed using BIC/FTC/TAF. No seroconversion occurred during follow-up for HIV, HCV, HBV, while 3 primary syphilis cases were diagnosed.
- Vaccinations for HBV, HAV, HPV, M-pox was recommended to 47 persons, on the basis of risk profile.
- PrEP was proposed to 44, and 27 among them started it.

## Conclusions

- Appropriateness rate of PEP prescription is low in ED, due to high workload and shortage of time. It significantly increases when exposures are re-assessed in a dedicated service, leading to the interruption of most among PEP not appropriate according to guidelines.
- Even if some PEP were inappropriate, the PEP-related access to hospital helped in finding many people with at-risk behaviours and to take appropriate measures, such as vaccination and PrEP prescription, to reduce their risk.
- In our experience, PEP remains a strategic asset, to identify at-risk people, suggesting vaccination, and as bridge to PrEP.

## Reference

1. <https://www.bhiva.org/file/6183b6aa93a4e/PEP-guidelines.pdf>

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Table – Demographic, clinical and exposure characteristics of 122 people referring to "D. Cotugno" Emergency Department referring a at-risk exposure for HIV, March-December 2023

Demographic characteristics (n. 114)		
Gender:	Male (n,%)	104, 85
	Female (n,%)	18, 15
Age (median, SD)		36, 15
Origin:	Italian (n, %)	113, 93
	Not Italian (n, %)	9, 7
Sexual exposures (n. 92, with 108 reported exposures)		
Gender and orientation:	Men who have Sex with Men (n, %)	53, 58
	Transgender M to F (n, %)	2, 3
	Male, heterosexual (n, %)	29, 32
	Women, heterosexual (n, %)	8, 7
Type of exposure:	Receptive anal sex (n, %)	33, 31
	Insertive anal sex (n,%)	23, 21
	Insertive vaginal sex (n,%)	28, 26
	Receptive vaginal sex (n,%)	6, 4
	Fellatio (n,%)	12, 12
	Receiving fellatio (n,%)	3, 3
	Semen splash into eye (n,%)	3, 3
Use of condom (available for 85 persons):	Yes (n, %)	5, 5
	Yes, with breaking or slipping (n, %)	46, 55
	No (n, %)	34, 40
Occupational or other exposures (n. 30)		
Gender:	Male (n, %)	20, 66
	Female (n, %)	10, 33
Type of exposure:	Needle/Sharp injury in healthcare setting (n, %)	21, 70
	Mucosae splash in healthcare setting (n, %)	2, 7
	Other occupational exposure in community setting (n, %)	3, 10
	Needlestick from abandoned needle in community setting (n, %)	4, 13
Clinical details including serology at T0 (at exposure time)		
Presence of comorbidities:	Yes (n, %)	28, 23
Serologies:	HIV-Ab positive (n, %)	0, 0
	HCV-Ab positive (n, %)	1, 1
	HBsAg positive (n, %)	1, 1
	HBsAb positive (n, %)	64, 52
	HBcAb positive (n, %)	28, 23
	TPHA positive (n, %)	12, 11
	VDRL positive (n, %)	7, 6

