

# Danish post-exposure prophylaxis (PEP) registry: 10 years experience with the use of PEP following HIV exposure

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## Introduction

Denmark has a population of 5.3 mio. The estimated overall prevalence of HIV is 0,1 % and 5% among men who have sex with men (MSM). National guidelines recommend PEP to persons who are exposed to blood from a person with or in high risk of HIV-infection through percutaneous (PCE) or mucocutaneous exposures (MCE). There are no national guidelines on PEP following sexual HIV-exposure, but the Danish Infectious Diseases Society recommend PEP when the risk of HIV transmission is comparable to that of a needlestick exposure (0,3 %). PEP can only be prescribed by specialists from infectious disease clinics treating HIV-patients (N = 8). From 2004 the recommended PEP regimen is AZT+3TC+LPV+RTV. The majority of patients before 2004 got AZT+3TC+IDV.

## Objectives

To describe the use of PEP in Denmark since the first case in 1997.

## Methods

All clinics in Denmark prescribing PEP participated. Data on all PEP cases were collected by use of a structured questionnaire. Since 2003 the majority of questionnaires has been filled in prospectively. Data on PEP following sexual exposures from 1998 – 2006 and on PEP following PCE or MCE from 1999-2006 are presented. In addition data obtained in a separate study (1) on the incidence of PEP use following PCE or MCE in 1997-1998 are illustrated.

### References:

- Meldgaard Madsen K et al. Antiretroviral prophylaxis after occupational exposure to HIV in Denmark. Ugeskr læger 1999; 161:6619-21
- Lunding S et al. Danish Postexposure Prophylaxis (PEP) registry: Use and failure of antiretroviral chemoprophylaxis following sexual exposure to HIV. AIDS 2006 XVI International AIDS Conference. Abstract no. TUEP0433

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## Results

### PEP incidence and time to initiation

- 374 patients received PEP following sexual exposures, 78 % men and 22 % women. 57 % were MSM. Median time to initiation of PEP (N = 225) was 11,0 hours (0,5 – 60,0).
- 258 patients received PEP following PCE or MCE, 65 % women and 35 % men. Median time to initiation of PEP (N = 152) was 2,0 hours (0,25-37,0).

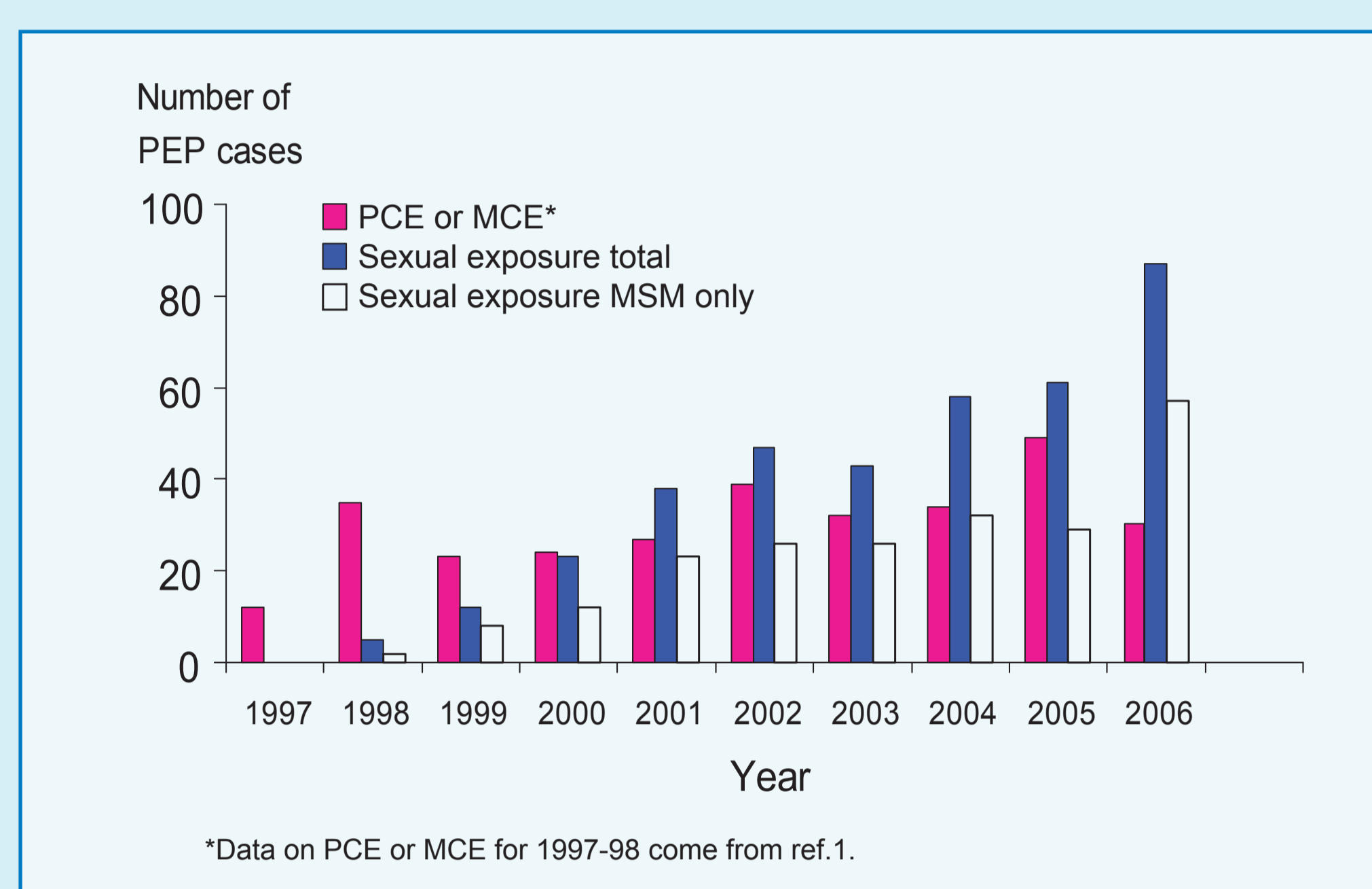


Figure 1. Incidence of PEP.

### PEP following sexual exposures

Table 1. Type of sexual exposure vs. HIV-status of the source patient.

Sexual exposure	HIV-positive N=221	Unknown HIV-status N=153	Total N=374
Receptive anal intercourse	26%	63%	41%
Insertive anal intercourse	17%	14%	16%
Receptive vaginal intercourse	23%	16%	20%
Insertive vaginal intercourse	26%	5%	17%
Other exposures	6%	2%	5%
Data not available	2%	0%	1%
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

- The HIV-status of the source patient was unknown in 153 cases (41 %) of which 90 % belonged to a high risk group. HIV-test was performed in only 17 cases (11 %), mainly because they were anonymous partners. None were found HIV-positive.
- PEP was prescribed more than once to 23 patients of which 13 were MSM. Of the 23, 18 received PEP twice, 3 received PEP 3 times and 2 received PEP 4 and 5 times respectively.

In 2006, 9 patients had had PEP previously, of which 6 were MSM. Only 4/9 had their previous course of PEP within the preceding two years.

- One patient, a 38 years old MSM seroconverted despite PEP. This patient had had repeated unsafe sex before, during and after the course of PEP (2).
- In 32 cases (9 %) the patient had been raped.

### PEP following Percutaneous or Mucocutaneous exposures

- Of the 258 patients 79 % had PCE, 17 % had MCE and 3 % had a bite injury.
- The HIV-status of the source patient was unknown in 91 cases (35 %). In 78 % of these cases the source patient belonged to a high risk group (data not available for 16 %). HIV-test was performed in 60/91 cases (66 %). One source patient tested HIV-positive.

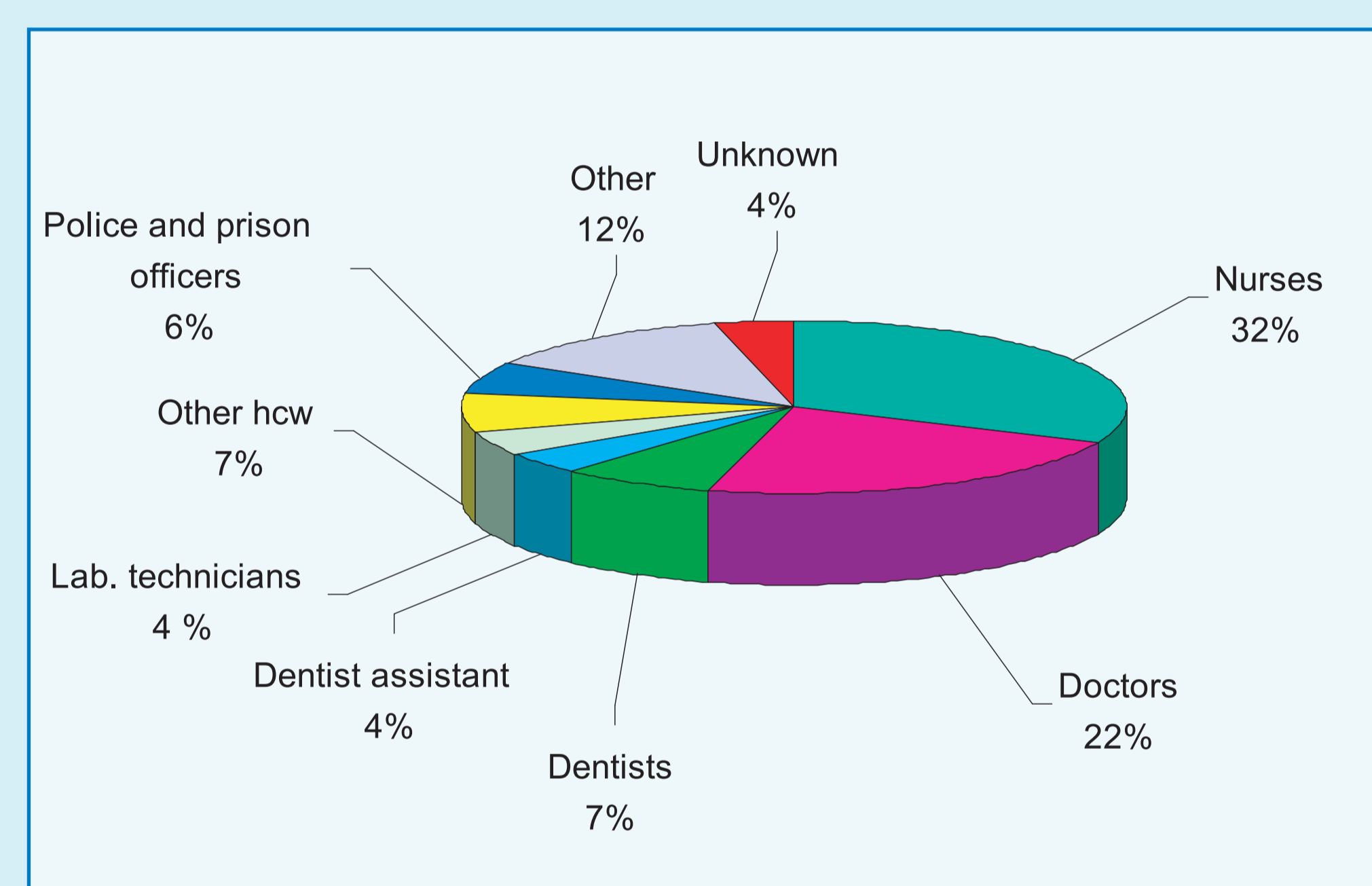


Figure 2. PEP following percutaneous or mucocutaneous exposure to HIV: Occupation.

### PEP compliance

Table 2. Compliance.

	PEP following sexual exposures N = 374	PEP following PCE or MCE N = 258
<b>Completed PEP</b>		
As planned	62%	46%
With a modified PEP-regimen	3%	5%
<b>Interrupted PEP due to</b>		
Adverse effects	4%	7%
Hiv-negative source patient	3%	19%
Other reasons	3%	5%
<b>Compliance data not available</b>	<b>26%</b>	<b>19%</b>

## Conclusions

- The use of PEP following PCE and MCE was fairly stable over the 10 year period. In the majority of cases PEP was administered according to existing guidelines and the time from exposure to PEP initiation is acceptable.
- The use of PEP following sexual exposure to HIV has been increasing with a marked increase in 2006. PEP was used by heterosexuals as well as MSM although the latest increase in 2006 was mainly among MSM. This may be due to increased awareness of PEP among MSM through information campaigns run by AIDS organisations.
- Although cases of repeated PEP following sexual HIV exposure is seen more often, it is still uncommon and more than two PEP courses to the same patient is rare.
- In Denmark PEP can only be prescribed by a small number of infectious disease clinics with experience in HIV treatment. This ensures a qualified risk assessment and a uniform and rational use of PEP.