

PEP study newsletter

January 2001



Non-occupational HIV Post Exposure Prophylaxis study: Issue 2

About the PEP study

"Knowing that PEP exists doesn't mean I'll change my sexual practices. I don't think I'll ever need it, but it's good to know it's there..."

The PEP study was instituted in order to monitor the implementation of guidelines published in 1998 by the NSW Health Department concerning HIV post exposure prophylaxis (PEP) for non-occupational exposures¹. The study has two parts, a brief data collection arm and an interview arm.

Who is eligible to participate?

- People eligible to be prescribed PEP after non-occupational exposures are invited to participate in one or both arms of the study
- Patients who decided *not to take PEP* despite being eligible according to the guidelines

Data Collection

A brief initial data collection form is completed by the prescribing doctor with consent and forwarded to NCHECR. We follow up the participants' progress and HIV status after four weeks and six months using two short questionnaires to their doctors.

Participants in Sydney can take part in a semi-structured interview to explore in greater detail the context of the risk exposure and issues surrounding situations leading to the prescription of PEP. Our research interviewer *Olympia Hendry* meets with participants at a time and place that suits them. If you require more enrolment forms, please contact us when you get a chance and we will forward you some.

Enrolments

The study has been going for two years now, and has 215 people enrolled of whom 66 have been interviewed. Overall the monthly number of people enrolled in the study for non-occupational PEP continues to rise (figure 1).

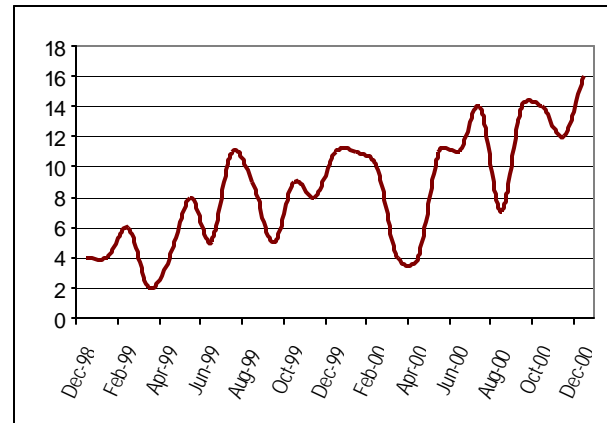


Figure 1: Monthly enrolments to PEP study; December 1998 to December 2000

The PEP study is administered jointly by:

- National Centre in HIV Epidemiology and Clinical Research (NCHECR)
 - National Centre in HIV Social Research
- Should you have any questions regarding the study please call:

Belinda O'Sullivan (Study Coordinator)

Phone: 9332 4648 Fax: 9332 1837
E-mail: bosullivan@nchecr.unsw.edu.au
Alternatively you may contact Dr Andrew Grulich or Dr Don Smith at NCHECR.

Results from the PEP study

No participants who have received PEP have seroconverted in relation to the risk episode. However, one individual became HIV infected several months after the completion of PEP because of ongoing risk behaviour. Results have been reported in the NSW Public Health Bulletin (July 2000), at the 13th World AIDS Conference in Durban and at ASHM 2000 in Melbourne. If you would like to know more about the results of our study, or have us present the results at a meeting you are arranging, please contact us.

Demographics of people enrolled in the PEP study

Most people (89%) enrolled in the study are men with a median age of 34 years (17-57). Many reside in "gay Sydney" (postcodes

2000, 2010, 2011 and 2012), inner, eastern and northern Sydney, with a proportion from rural NSW and Queensland (Figure 2).

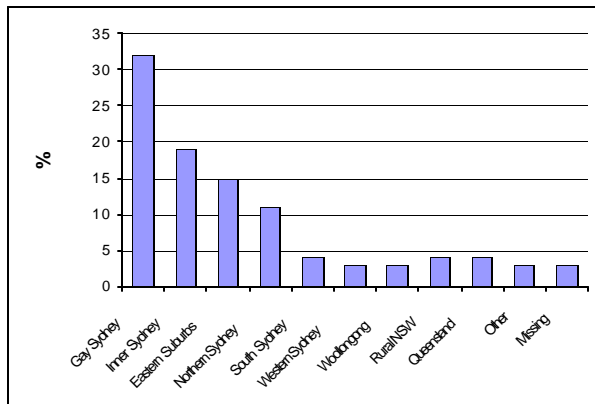


Figure 2: Areas of residence of people enrolled in PEP study

Exposures

"he did pull out but he got excited and left it a bit late"

The majority of exposures have been associated with male homosexual contact (Figure 3).

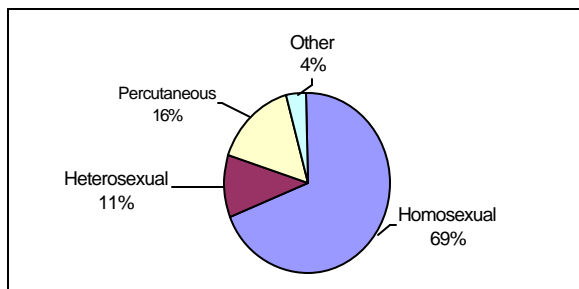


Figure 3: Exposure categories in the PEP study

The proportion of percutaneous exposures among people who present for PEP is higher than we would have expected based on the epidemiology of HIV in Australia. This reflects the people presenting for PEP from assault and accidental injury with a discarded needle. According to the NSW Health guidelines, accidental needle-stick exposure does not warrant PEP in most cases.

HIV positive source

In almost half of the cases (48%), the source person was known to be HIV positive. Among homosexual exposures this was a little higher (51%) and lower among percutaneous exposures (33%).

Where did people find out about PEP?

Most interviewed participants reported finding out about PEP through word of mouth. 33% heard about PEP through their doctor or hospital, 25% through friends but only 17% through the media. 58% of participants received PEP from a GP, 23% from a hospital emergency department and 8% from a sexual health centre.

Time to treatment

Evidence from animal studies of PEP suggest that the time between exposure and initiation of treatment is crucial for PEP to be effective. NSW Health guidelines recommend that PEP be administered as soon as possible and within 72 hours of exposure. Most people presented for PEP within 72 hours. The median time between exposure and presentation for PEP was 23 hours (range=15 minutes – 171 hours).

Drug regimens

"It's better than...thinking there's nothing you can do."

The NSW Health guidelines recommend that two anti-retroviral drugs be prescribed for most exposures. However, the majority of PEP prescriptions (76%) have been for more than two drugs. Nearly all prescriptions have been for twice daily dosing regimens (Figure 4).

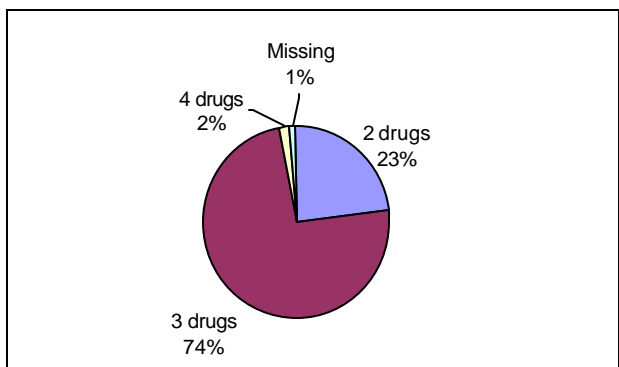


Figure 4: Number of drugs prescribed per person in the PEP study

People who experienced a high risk exposure were more likely to be prescribed three or more drugs for PEP (Figure 5).

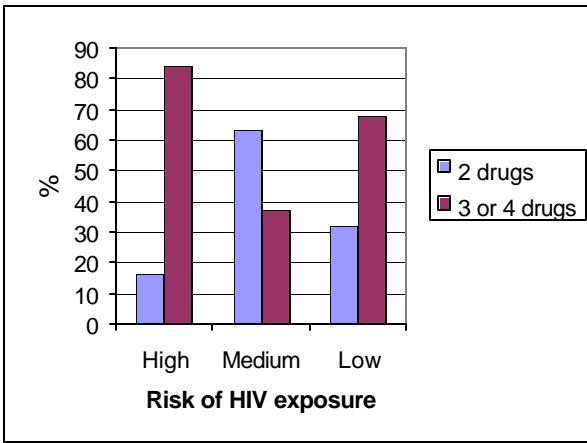


Figure 5: HIV risk and total number of drugs taken for PEP

The most common antiretroviral combinations prescribed for PEP were two NRTIs and one NNRTI or PI. Drug regimens most commonly prescribed were combinations of zidovudine and lamivudine (Combivir) with either nelfinavir or nevirapine (Table 1).

Drug combination	%
Zidovudine and lamivudine	23
Zidovudine, lamivudine and nelfinavir	27
Zidovudine, lamivudine and nevirapine	17
Zidovudine, lamivudine and indinavir	9
Stavudine, lamivudine and nevirapine	8
Other	16

Table 1: Drug combinations prescribed for PEP

RECENT RESEARCH FINDINGS IN PEP

Tolerability and side effects of indinavir

(*Lancet 2000;355:722 and Lancet 2000;355:1556*)

A UK study of 28 people on occupational PEP showed that indinavir-containing regimens were poorly tolerated. Fifteen completed PEP but 13 (all on indinavir) stopped or changed therapy due to intolerable effects: eg. uncontrollable vomiting, nausea, reflux (7), urticaria (1) and galactorrhoea with hyperprolactinaemia (1). These side-effects resolved when indinavir was withdrawn. Another study based on the Italian occupational PEP registry showed 11% of people on indinavir containing regimens discontinued indinavir because of side effects after a median of seven days.

Non-occupational PEP in Europe

(*AIDS Care 2000;12:695-701*)

Of 27 European countries studied, only five (Austria, France, Germany, Luxembourg and Switzerland) have national guidelines offering PEP after some types of non-occupational PEP.

RECENT RESEARCH FINDINGS IN PEP continued

Serious adverse effects seen with nevirapine

(*MMWR 2001;49:1153-115-56*)

In the US, the Food and Drug Administration has documented 22 cases of serious adverse events related to nevirapine for PEP. These have included fulminant hepatitis requiring liver transplantation and rhabdomyolysis. Skin reactions have included Stevens-Johnson syndrome. The dose given varied from 200 to 400 mg a day. Thus, despite the theoretical advantage of nevirapine's more rapid activity after administration great care should be exercised in the use of this drug for PEP.

Effect of protease inhibitors on triglycerides

(*AIDS 2000;14:2407-2408*)

In an Italian PEP register, 133 health care workers (HCW) were prescribed either two NRTIs or two NRTIs and a protease inhibitor after occupational exposure to HIV. Those prescribed a protease inhibitor were significantly more likely to have raised triglyceride levels at 10, 20 and 30 days of treatment. In all cases, the drug-induced increase was mild and reversible.

Compliance

"They weren't the easiest things I've taken"

Compliance was assessed by patient's self-report. The majority of people who took PEP were fully compliant, with only 7% having poor compliance (Figure 6). This level of compliance is greater than that reported after occupational PEP. Compliance was not known for 25% of the cohort for whom follow-up is still underway.

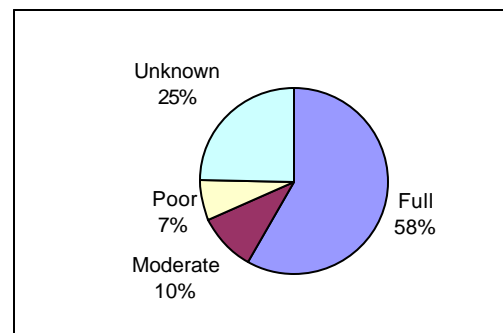


Figure 6: Level of compliance for those who took PEP

Side Effects

"I hope I never become positive because there's no way I want to take these drugs for the rest of my life"

Around 67% of people prescribed PEP reported adverse effects, however these were

mostly reported as mild. Common side effects were nausea, vomiting, headaches, and diarrhoea (Figure 7). Other adverse effects included lethargy, fatigue and muscle soreness. Two serious adverse effects reported in the study were Stevens-Johnson syndrome associated with nevirapine, and myopathy with zidovudine.

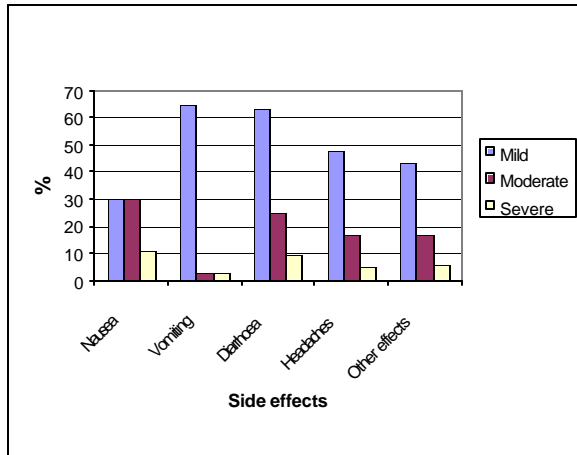


Figure 7: % Severity of different side effects from PEP

Follow up

Whilst the PEP study is ongoing, current follow-up data show that most people currently in the study (44%) have been followed up more than 1 month, with median follow-up being 2 months. Those given 3 or more drugs were more likely to be followed up for longer. NSW Health guidelines recommend a HIV test six months after PEP.

PEP POLICY IN AUSTRALIA

- This PEP study is currently being extended to include other Australian states.
- The Queensland Health Department recently released PEP guidelines and the Victorian Health Department are currently developing guidelines
- An ANCAHRD Bulletin on PEP is due for release shortly.

RECENT RESEARCH FINDINGS ON PEP KNOWLEDGE AND ATTITUDES

Knowledge and attitudes to PEP following sexual exposure

(*Canadian J Inf Dis 2000;11(Supp B):61B*)

In Canada, a self-administered questionnaire to 983 HIV negative homosexual men found that only 22% knew of the availability of PEP following sexual exposure. Fifty percent expressed concern regarding toxicity, and 54% believed that PEP reduced the risk of infection.

PEP availability and sexual risk behaviours in gay men

(*AIDS 2000;14:1035-1039*)

In San Francisco 529 gay men completed face to face street interviews assessing sexual risk behaviours and whether they'd heard of PEP before and after a PEP publicity campaign. Before the campaign, 46% had heard of PEP compared to 54% after the campaign. The researchers concluded that there was little evidence that the availability of PEP for sexual exposures was related to increased sexual risk taking.

People's response to a similar risk event?

73% of participants interviewed in our cohort reported that they would take PEP if they had a similar risk event.

NEW PUBLICITY CAMPAIGN AROUND PEP!!!!

- There will be a publicity campaign around the availability and means of access to PEP in the gay press starting in late January 2001.
- The PEP study will be used as one of the means of monitoring the effects of the campaign.
- For details of the campaign, please contact **Carla Gorton** at ASHM, Phone: 9368 2713

ⁱ NSW Health Department Circular No.99/31, Issued 31 March 1999. Management of non-occupational exposure to blood borne and sexually transmissible diseases. AIDS and Infectious Diseases Branch: Phone: 02-9391-9195 or internet: <http://www.health.nsw.gov.au/fcsd/rmc/cib/circulars/1999/cir99-31.pdf>