

# Post-exposure prophylaxis after sexual exposure (PEPSE) awareness in a HIV positive cohort

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## BACKGROUND

✦ The updated BASHH guidelines recommend PEPSE in insertive and receptive vaginal and anal sex when the source individual has a detectable viral load, and in receptive anal sex when the source individual has an undetectable viral load<sup>1</sup>.

✦ It remains imperative that all HIV+ patients are informed about PEPSE.

✦ Little is known about the awareness of PEPSE among large cohorts of HIV positive patients in London.

✦ Owing to recent increases in PEPSE-related campaigns, and improved information provision, it was hypothesised that there would be high levels of awareness, with greatest awareness in patients who were diagnosed since 2006 when the guidelines were first published, in men who have sex with men (MSM) and also in younger patients.

## METHODS

A prospective patient questionnaire as part of the patient annual review was carried out between Apr-Nov 2011 on a cohort of 1199 patients attending the clinic. Patients were asked if they were aware of PEPSE, and those unaware were provided relevant health education. Data collected also included consistency in condom usage, last episode of sexual intercourse, sexual orientation, and patients' viral load closest to the date of the health assessment. Data were uploaded onto an MS Excel® database along with patient demographics, year of diagnosis, and route of infection transmission. 828/1199 (69%) answered the question on PEPSE awareness, and for these patients the relevant data was extracted and then analysed.

## RESULTS

Of the 828 patients in total, 403 (48.7%) were PEPSE aware.

✦ **Table 1. Comparing PEPSE awareness in different variables.**

	Total Patients(%)	PEPSE Aware(%)
<b>Men</b>	491 (59.3)	274 (55.8)
<b>Women</b>	337 (40.7)	129 (38.3)
<b>Ethnic Group</b>		
Caucasian	305 (36.8)	193 (63.3)
Black-Caribbean	55 (6.6)	24 (43.6)
Black-African	390 (47.1)	142 (36.4)
Black-Other/Unspecified	14 (1.7)	7 (50.0)
Indian/Pakistani/Bangladeshi	17 (2.1)	10 (58.8)
Other/Mixed	28 (3.4)	19 (67.9)
Other Asian/Oriental	19 (2.3)	8 (42.1)
<b>Infection Route</b>		
MSM	281 (33.9)	191 (68.0)
Injecting Drug Use	7 (0.8)	2 (28.6)
Heterosexual	529 (63.9)	203 (38.4)
Blood/Blood products	5 (0.6)	3 (60.0)
Mother-to-Child	3 (0.4)	3 (100.0)
Other/Not known	3 (0.4)	1 (33.3)
<b>Last Episode S.I</b>		
≤3 months	433 (60.7)	253 (58.4)
>3 months-1year	101 (14.1)	54 (53.5)
>1 year-3 years	107 (15.0)	34 (31.8)
>3 years	73 (10.2)	20 (27.4)
<b>Condom Use</b>		
Always	504 (70.0)	280 (55.6)
Sometimes	150 (20.8)	73 (48.7)
Never	66 (9.2)	19 (28.8)
<b>Detectable Viral Load</b>		
>400copies/mL	78 (9.4)	50 (64.1)

### PEP Awareness and Demographics:

▪ Awareness was higher in men (55.8%) than women (38.3%).  
▪ Of the 2 ethnic groups with the highest prevalence of HIV in this cohort, awareness was lower (36.4%) in Black-Africans compared to Caucasians (63.3%).

### PEPSE Awareness, Sexual Activity and Condom Use:

(where information was available)  
• Awareness was 58.4% in patients who were sexually active within the last 3 months.  
• 70% of patients reported consistent use of condoms.  
• Awareness was 48.7% in the patients who occasionally use condoms (20.8%), and 28.8% in the patients who never use condoms (9.2%).

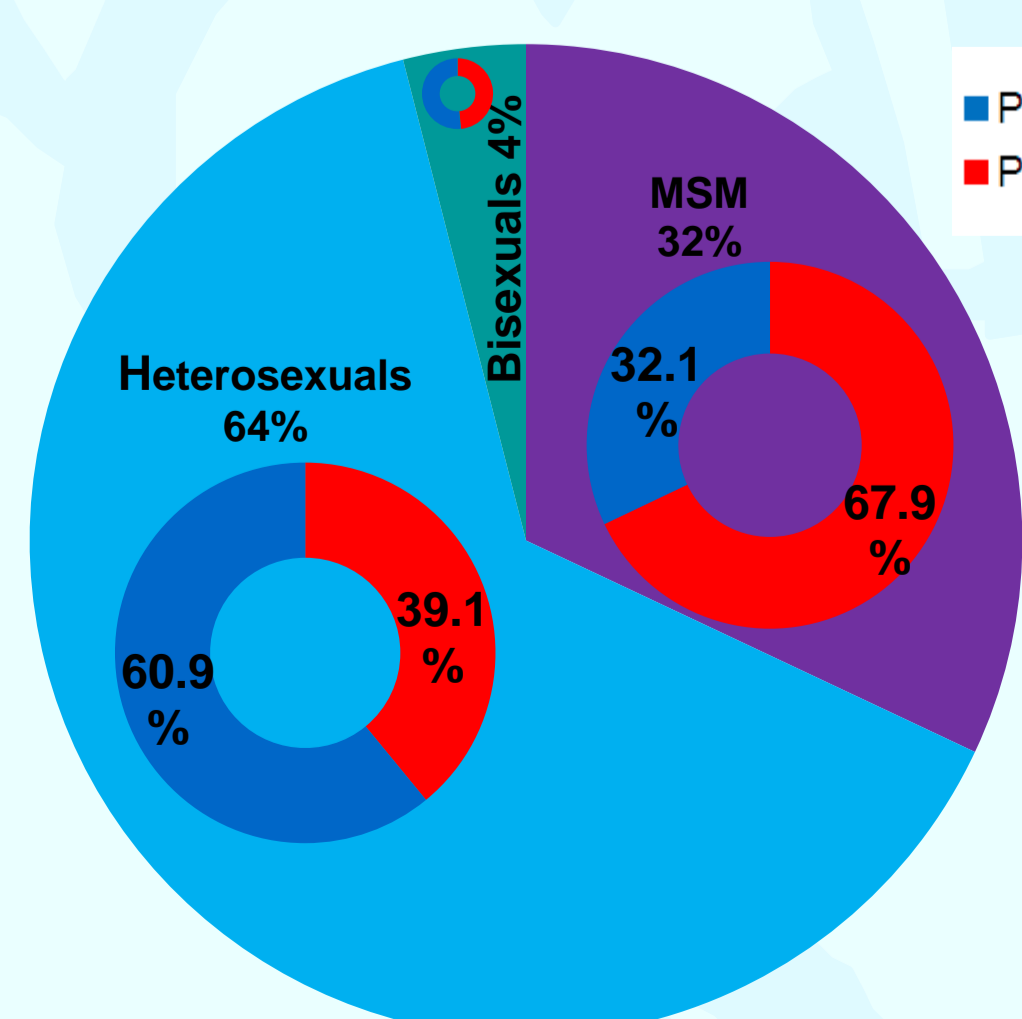
### PEPSE Awareness and Viral Load :

▪ Awareness was 64.1% in patients with a detectable viral load.

✦ **Figure 1 & Table 2. PEPSE awareness and Sexual Orientation**

Sexual Orientation:	Total No. Patients (%)	PEPSE Aware (%)
MSM (including bisexuals)	298 (36.0)	196 (65.8)
Heterosexuals	530 (64.0)	207 (39.1)

p<0.0001

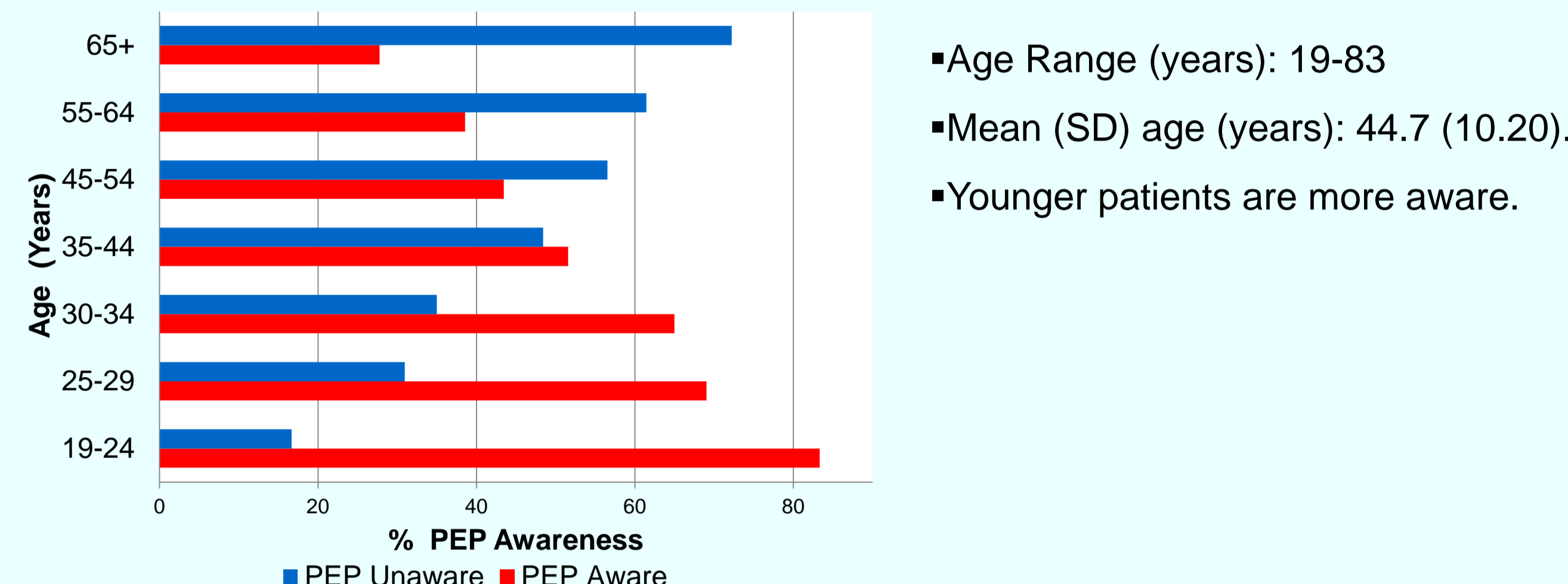


▪ Awareness was 67.9% in MSM compared to 39.1% in heterosexuals, which were the 2 major routes of infection transmission in this cohort (Table 1).

✦ **Figure 2 & Table 3. PEPSE awareness and Age**

Age (years):	Total No. Patients (%)	PEPSE Aware (%)
19-34	110 (13.3)	75 (68.1)
≥35	718 (86.7)	328 (45.7)

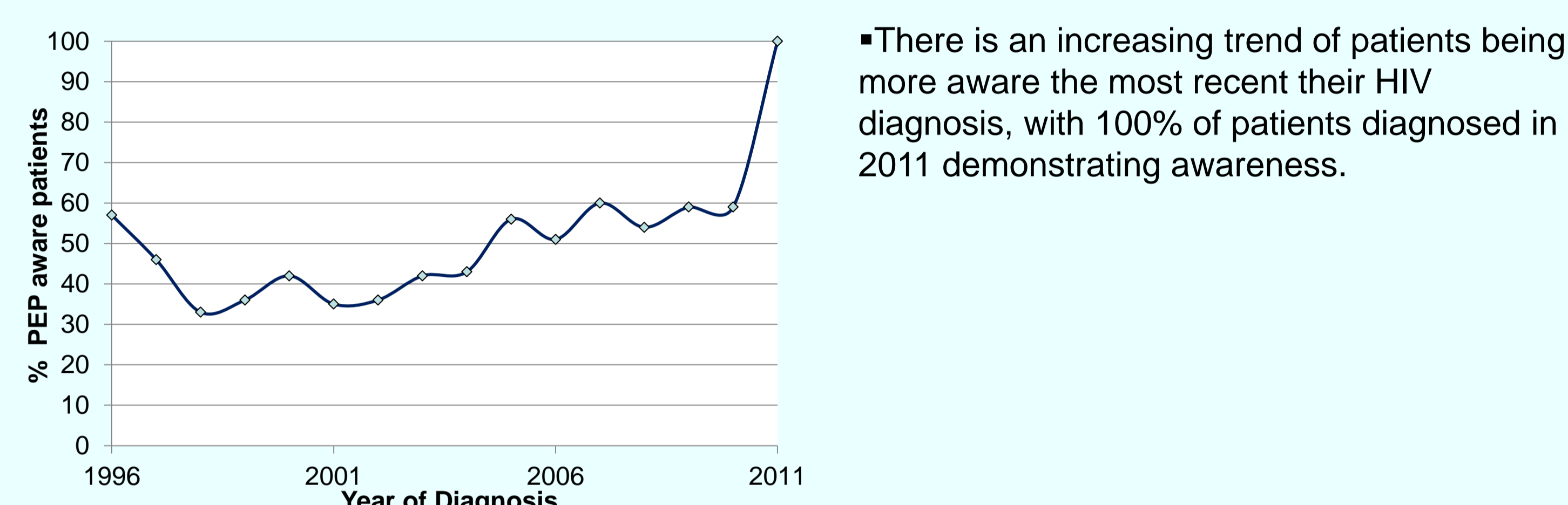
p<0.0001



✦ **Figure 3 & Table 4. PEPSE awareness and Year of Diagnosis**

Year of Diagnosis:	Total No. Patients (%)	PEPSE Aware (%)
1985-2005	543 (65.6)	240 (44.2)
2006-2011	285 (34.4)	163 (57.2)

p= 0.0004



## DISCUSSION

✦ Increased awareness regarding PEPSE in patients diagnosed after the BASHH guidelines were published may reflect an increase in information promotion by NHS staff since 2006<sup>2</sup>.

✦ MSM had greater awareness as campaigns have been targeted at this vulnerable population by third sector organisations. However, this may also reflect that information regarding HIV transmission prevention may not have been evenly disseminated in the HIV clinic.

✦ Recent changes in the BASHH guidelines recommend PEPSE in fewer circumstances<sup>1</sup>. This reflects the results of the HPTN052 study, and the Swiss Statement, which give credence to the notion that patients who have an undetectable viral load on antiretroviral treatment are not infectious and cannot transmit HIV to their uninfected partners<sup>3,4</sup>. Despite this, PEPSE awareness remains important as many patients go through periods of detectable viraemia due to treatment failure or interruption. Furthermore, relationship status can also change from serocordant to discordant.

✦ Study limitations include:

- The HIV serostatus of the partners was unknown, and awareness would be most useful for patients in serodiscordant relationships.
- Confounders such as the patients' educational statuses were unknown.

## CONCLUSION

✦ PEPSE awareness was unexpectedly low at 48.7%.

✦ MSM, younger patients, and those diagnosed post-2006 were more likely to be PEPSE aware.

✦ 1 in 3 of those with detectable viraemia were PEPSE unaware.

✦ Screening HIV positive patient populations can be useful in identifying health promotion needs and addressing them.

## REFERENCES

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