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#### Will I? Won't I? Why do men who have sex with men present for postexposure prophylaxis for sexual exposures?

C Sayer, M Fisher, E Nixon, K Nambiar, D Richardson, N Perry, Carrie Llewellyn

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# Will I? Won't I? Why do men who have sex with men present for post-exposure prophylaxis for sexual exposures?

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#### ABSTRACT

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Accepted 18 November 2008 Published Online First 15 December 2008 **Background:** Failures of post-exposure prophylaxis following sexual exposure (PEPSE) to prevent seroconversion have been reported and are often associated with ongoing risk exposure. Understanding why men who have sex with men (MSM) access PEPSE on some occasions and not others may lead to more effective health promotion and disease prevention strategies

**Methods:** A qualitative study design using semistructured interviews of 15 MSM within 6 months of them initiating PEPSE treatment at an HIV outpatient service in Brighton, UK.

**Results:** PEPSE seeking was motivated by a number of factors: an episode that related to a particular sexual partner and their behaviour; the characteristics of the venue where the risk occurred; the respondent's state of mind and influences of alcohol and recreational drug use; and their perceived beliefs on the effectiveness of PEPSE. Help was sought in the light of a "one-off" or "unusual" event. Many respondents felt they were less likely to behave in a risky manner following PEPSE.

**Conclusion:** If PEPSE is to be effective as a public health measure, at risk individuals need to be empowered to make improved risk calculations from an increased perception that they could be exposed to HIV if they continue their current behaviour patterns. The concern is that PEPSE was sought by a low number of MSM implying that a greater number are not using the service based on failure to make accurate risk calculations or recognise high-risk scenarios.

Post-exposure prophylaxis for sexual exposure (PEPSE) is increasingly recommended for men who have sex with men (MSM) following unprotected anal intercourse.<sup>1</sup> There has been a significant increase in the awareness and uptake of PEPSE since high profile health campaigns in the UK and a high volume of discussion around PEP in the gay press<sup>2</sup> predating the publication of UK guidelines for the use of PEPSE in 2006.<sup>2-6</sup>

PEP has been shown to be effective in occupational settings<sup>7</sup> providing plausibility for its use after sexual exposure. Good evidence for the effectiveness of PEPSE has been shown in animal models,<sup>8</sup> and recently prospective data for the prevention of mother-to-child transmission<sup>9 10</sup> has pointed to the feasibility of PEPSE for MSM.<sup>11-14</sup>

However, there have been numerous reports of seroconversion following PEPSE,<sup>13–15 17–19</sup> which has been largely attributed to ongoing risk behaviour and subsequent viral exposure.

There is widespread concern that the availability of PEPSE encourages risk taking among MSM;<sup>13 20 21</sup> however, this is difficult to prove. Some studies suggest there is no change whereas others suggest there is a decrease in risk-taking behaviour in the short term.<sup>14 22-24</sup> Long-term behaviour modification does not appear to be sustained.<sup>13 25 26</sup>

The question remains as to why at-risk individuals choose to take up PEPSE on one occasion over many other possible exposures, what factors contribute to this decision and whether behaviour patterns are influenced by knowledge and experience of PEPSE. The aim of this study is to investigate the factors that led MSM to access PEPSE and to understand their rationale for doing this. This will allow us to develop focused health promotion and target those who are not presenting for PEPSE in this relatively new area of HIV medicine.

#### **METHODS**

#### Design

The study consisted of a qualitative design using semi-structured interviews of 15 MSM within 6 months of them initiating PEPSE treatment at an HIV outpatient service in Brighton, UK. Interviews were tape recorded, transcribed and analysed using framework analysis.

#### **Participants**

Participants were MSM attending a dedicated PEPSE clinic who were currently receiving or had received PEPSE in the last 6 months.

Seventy-five MSM attended the clinic between January 2007 and January 2008 and were given a patient information sheet and consent form by the nurse consultant (EN). The recruitment period was limited to 1 year due to time constraints. The aim was to recruit sufficient numbers to achieve theoretical saturation. Participants were only approached in a nurse-led clinic following verbal consent to being telephoned by the researcher the following day. Altogether, 19 were approached and 15 subsequently agreed to be interviewed.

#### Interviews

Participants undertook a semi-structured interview with a single interviewer (CS) in a designated interview room separate from the HIV outpatient services. The interviewer was not part of the clinic staff and had no contact with the participants outside of the research setting. A topic guide was used to underpin the interviews, although questions were open-ended and non-directive allowing participants to expand on their personal experiences. Data were collected by audio-recording and transcribed verbatim by an independent agency.

#### **Data analyses**

Data were analysed by framework analysis, which seeks to take the accounts and observations of the population being studied and develop categories and themes from the data when and where they arise.<sup>27</sup> This consisted of repeated emersion and reemersion in the transcripts; identification of a thematic framework (table 1); indexing and coding of the data; and mapping and interpretation.<sup>28</sup> CS carried out the principle analysis. Major themes were checked and discussed with MF and CL. The later transcripts failed to issue any novel themes or categories and it was agreed that theoretical saturation had been reached.

#### Results

Of the fifteen MSM interviewed, seven participants were currently taking PEP, four had finished treatment and were awaiting 3 month follow-up and three were awaiting 6 month testing (3 participants were currently taking, or had taken, a previous course of PEPSE). The mean age was 33 years, with a median age of 34 years (range 19–46). Twelve participants were in full-time employment, two were unemployed and one was in full-time education. Ten participants classed themselves as white UK, four as white non-UK and one as black Caribbean. A nationwide survey reported a similar demographic of MSM with a median age of 34 years, although with higher numbers of white British (79.4%) and fewer white non-UK (13.0%) and 1.4% black.<sup>16</sup> These differences could be explained by local population epidemiology.

#### Knowledge and understanding

All the participants were able to talk about their prior knowledge of PEPSE before they presented to HIV/genitourinary medicine (GUM) services. That PEPSE was available and it could potentially prevent HIV seroconversion was the dominant theme; however, indepth knowledge of what PEPSE consisted of was scant (box 1).

Sources of information largely consisted of magazines, posters and leaflets, and the Terrence Higgins Trust campaigns. Again, the details of any information seen was only basic and often highlighted different levels of engagement in the health promotion information when out socially.

All respondents were able to articulate a change in their perceived level of understanding since they had presented for treatment: the length of treatment that they would be taking highly active antiretroviral therapy (HAART) and potential treatment failure were new revelations to most of the participants.

Perceptions of PEPSE effectiveness before and after contact with HIV services were markedly varied. There was no obvious pattern found, with many participants claiming to have "no idea" before presenting. Others, who would not commit to a figure, described a pragmatic belief along the lines of, "they say it works, it's better to be safe than sorry" (respondent 14) or "[I didn't know] figures, just there's a way to stop the spread" (respondent 3). Many respondents recognised, after initiating PEPSE, that success was dependent on other qualifiers; for example, presenting in less than 72 hours, good adherence and if the partner was known HIV positive or not.

#### **Circumstances leading to PEPSE**

The main circumstance leading to presentation for PEPSE was unprotected anal intercourse (UAI); condom failure made up only a small proportion (box 2). That a particular event was worthy of PEPSE due to being a "rare" or a "one-off" event was the dominant theme, as was the use of alcohol or drugs. This was frequently attributed to behaviour that was particularly "unusual" or "out of character" representing a single episode deviating from what was considered "normal" low-risk behaviour. These findings echo previous work on the subject.<sup>2</sup><sup>18</sup>

Commonly, an unusual event was linked to an "unusual partner" or a partner who had not been entirely honest with them or even just receiving particular "feelings" from a person.

Alcohol and recreational drug use was a leading factor in taking a risk worthy of PEPSE. Only a minority claimed not to have drunk alcohol prior to sexual intercourse. Of the majority who did, it was common to ascribe particular significance to this in view of their "unusual" or "rare" behaviour that led to PEPSE.

Most participants were able to articulate times when PEPSE could have been applicable but was not sought. This linked strongly with the themes already explored on the circumstances leading to transmission and often a previous episode did not fulfil the "special" status of being "unusual" or "one-off." Indeed many recipients claimed they would always come for PEPSE if they deemed it necessary. Some respondents said that prior failed considerations to take PEPSE rested on a partner or situation not confirming itself to be of high enough risk or not having a confirmed HIV diagnosis in a partner. Not wanting to "waste" healthcare resources was identified by a minority of the participants, although it was not clear to what extent this influenced the decision not to come for PEPSE. Not knowing about the 72 hour time to presentation rule was a further reason, which highlighted a specific gap in knowledge, rather than a difference in attitude, from some of the participants.

#### **Concepts of risk and HIV**

Type of partner was the major theme to arise (box 3). Participants equated risk with a variety of aspects; for example, having other sexually transmitted diseases, promiscuity, someone who was

	Table	1	Summary	of	master	and	subthemes
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Master theme	Subthemes						
1. Knowledge and understanding of PEP	Prior knowledge	Availability	Knowledge post-PEP	Side effects	Effectiveness		
2. Circumstances leading to presentation	Rare, one-off event	Unusual event or unusual partner	Alcohol/drugs	Why PEP on this occasion and not others	Chances of contracting HIV		
3. Concepts of risk and HIV	General concept of risk	Risk of HIV	Venues	Features of partner	Alcohol		
4. PEPSE and future behaviour	Knowledge of PEPSE and behaviour	Previous behaviour patterns	Modified behaviour	Modified risk in the light of PEPSE			

PEPSE, post-exposure prophylaxis for sexual exposure.

#### Behaviour

Box 1 Knowledge and understanding of post-exposure prophylaxis for sexual exposure (PEPSE)

#### Knowledge prior to presentation for PEPSE

"[I knew that] there was a treatment available. But yeah the actual mechanics of it I wasn't aware of." (Respondent 1)

#### Finding out about PEPSE

"I'd seen a poster in a gay venue... I don't think there's enough info about PEP. Little leaflets on bars, you don't pick them up when you're out drinking with friends. You know posters in venues... I've seen them and you don't pay much attention to them." (Respondent 10)

#### **Realisation of what PEPSE entailed**

"I got home read through the leaflets and basically realised then that it was a medication designed for people with HIV... It was a bit of a slap round the face reading that." (Respondent 1)

#### **Understanding post-PEPSE**

"They were talking about like if you did it within the timescale, like sort of 80% success rate, if not higher really." (Respondent 8) "Well, it's like really not very successful the PEP sometimes, but sometimes very, very successful." (Respondent 13)

into "adventurous sex," "guys who don't do safe sex," casual partners and known HIV positive men. Universally, these were all characteristics that were identified in other people and not themselves. This theme linked strongly with a general theme of "othering" in which participants distanced themselves from proceedings and implied the other party was responsible for the risk, not themselves. This appropriation of responsibility being in the realm of the "other," as we have seen already, extended to the use of alcohol and recreational drugs. These elements making an "unusual event" more likely or being the driving force for "heat of the moment" encounters.

Most participants grouped the general concept of risk with the risk of HIV and articulated this in the terminology of "thrill seeking," gambling or "regrettable" behaviour. Participants frequently recognised themselves as belonging to a high-risk demographic and responses were typically well-rehearsed and informed as would be expected from such a targeted and heavily researched population, although some purported to wanting to rebel against this once in a while.

Risk was coupled to venue by many participants. Certain sex venues, saunas or clubs were associated with risk. Others noted that living in Brighton itself carried an increased risk of HIV.

#### Behaviour modification in the light of PEPSE

All participants stated that taking PEPSE had in some way contributed to perceived modified behaviour (box 4). This was seen in the dramatic reduction in UAI with casual partners since taking PEP to a period of complete celibacy in some (although the majority of participants had continued to have at least one episode of UAI outside of the context of negotiated safety in the last 6 months). Other participants used their experience of PEP to modify certain behaviours that had led to taking it in the first place. However, most considered their behaviours to be low risk before they came for PEPSE.

In other cases PEPSE had changed their outlook on risk, but they still recognised areas where risks could be allowed to occur.

That the existence and provision of PEPSE could have directly influenced a particular risk was abhorrent to all the participants.

#### Out of character behaviour

"I had just separated recently, so it [UAI] was kind of a way of me trying to react, I don't know, trying to, just forget about it, just have fun, you know do drugs and get drunk." (Respondent 4)

#### **Unusual event**

"It was certainly kind of a one-off I think... I was in a sauna, where I'd gone after I'd been out drinking... it was something I wouldn't normally do because, like I said, I'd been in a relationship for the previous six years." (Respondent 9)

#### **Partner characteristics**

"It was his attitude after the event, he was very cagey and went very quiet... our encounter was an accident and he was sort of very strange about it... he got a bit upset then disappeared very quickly... it made alarm bells ring." (Respondent 10)

"He was into the heavier sort of sexual scene, more than I was... through that there was obviously a greater danger... He asked me to fist him after sex, which I was a bit reluctant to do because my nails were sharp and it caused him to bleed... he then wanted to have sex again at which point I refused until he cleaned himself up, at this point I broached him on the subject of HIV status, he told me he was positive." (Respondent 15)

#### Alcohol and recreational drugs

"Actually it was the case that night, I took drugs, I drank a lot, so I wasn't really aware of what I was doing. It just happened you know, it was just more of a one off thing and that's probably why I was so worried about it." (Respondent 4)

"I certainly think [alcohol] was the primary reason for what happened." (Respondent 9)

"I was really drunk and did something that was quite out of character for myself." (Respondent 11]

#### Why on this occasion and not others

"All the circumstances around it which made me think well maybe something's trying to tell me something, that should go and take some action." [Respondent 8]

"What was different? To be honest nothing apart from they didn't tell me they had HIV, so they might as well been positive and they just didn't tell me." (Respondent 4)

Most recounted prior themes of unusual events, alcohol and drugs, or just misfortune as reasons for a particular risk. The concept that PEPSE could be seen by some as a "safety net" or analogous to the morning-after pill was well documented. The participants frequently associated this thinking with other MSM and not themselves, again reinforcing the theme of "othering" found earlier.

The benefit of hindsight weighed heavily on statements of perceived behaviour modification and this followed firsthand experience of length of treatment, potential side-effects and the realisation they were taking HAART.

Participants who identified themselves as sometimes having unprotected sex always qualified it with reference to the partner's status: either a "long-term relationship" or exclusively "trusted" or regular "casual partners". However, these arrangements were rarely confirmed by mutual screening for HIV. In other cases so-called "trusted partners" only later disclosed their positive HIV status highlighting a disparity between subjective and objective views of risk.

#### Box 3 Concepts of risk and contracting HIV

#### **Rebelling against health promotion**

"You must always use a condom,' blah blah blah. You get this kind of drummed into you that maybe some of them, some people will just want to say 'fuck you' basically." (Respondent 3)

#### **Risky venues**

"Regularly going to the 'Brighton cruising ground' and not being that careful... going to one of Brighton's saunas and not being careful. I don't put myself at risk cruising around." (Respondent 10)

#### **Risky partners**

"Guys who don't do safe sex, have multiple partners... it sounds a bit xenophobic, like people from America are more likely to have it than not... some guys just don't like to wear condoms, some guys try to push you into not wearing a condom." (Respondent 10)

"There was a weird rash on the face and part of the body so I was very, very scared." (Respondent 13)

#### **Risky lifestyle**

"Being drunk or on drugs can make you just forget about how big a risk you now take if you are doing unprotected sex." (Respondent 2)

"Taking drugs, alcohol or risking yourself, it's too easy to lose control of yourself, it can leave people to do whatever they want with your body or... you know, it's like you don't pay attention." (Respondent 13)

#### DISCUSSION

Although awareness of PEPSE was high, a detailed knowledge of what it consisted of was lacking. Nonetheless, a substantial change in the level of understanding post-treatment represents the value of face-to-face health promotion in this setting. The assumption is that better education of this population is fundamental in reducing the number of sexual risks resulting in PEPSE uptake; however, as of yet there is no evidence to support this. Not wanting to waste healthcare resources represented a trend amongst some participants that highlights the problem of failing to present for PEPSE following risk. The notion that PEPSE is a "one-off" has been raised by both MSM and healthcare staff,<sup>2</sup> as well as in previous studies,<sup>2</sup> <sup>10</sup> and the extent of this in this study shows that better education is needed to demonstrate that any risk meeting the guidelines is worthy of PEPSE.

It appears to be the case that most of the participants could identify occasions when a risk was worthy of PEPSE but they did not seek help and of those that did an event was described as "unusual". This begs the question: how many other MSM are involved in similar exposure events and yet do not have the same triggers for presenting to clinic? Extra work needs to be targeted at PEPSE understanding among MSM and improving the accuracy of subjective risk calculations.

Although it is difficult to target subtle interactions and subjective risk assessments that result in single episodes of risk, the results found do suggest that more concentration on lifestyle factors could play a part in reducing those needing PEPSE. Risk was equated with alcohol, venue, partner characteristics and life events, and it was these factors that were perceived to have been modified by the participants after taking PEPSE. Improvements in targeting men before they present for PEPSE could be made, for example, by flagging high-risk Box 4 Changes in behaviour and post-exposure prophylaxis for sexual exposure (PEPSE)

#### Modification of sexual behaviour

"I've slowed down a bit, I'm not going to the 'bushes' so much and like maybe I'll be seeing more people that I know better and stuff like that, not too much casual sex now." (Respondent 6)

#### Long term commitment to change

"As time goes by it drifts back into the recesses of your mind rather than the forefront, but I think I will probably be more cautious." (Respondent 15)

"I'll certainly learn from it and hopefully even if I'm blind drunk I'll kind of remember, you know, like to behave myself... [but] if it was like five years later, or whatever, you know, we're all kind of human I guess." (Respondent 9)

#### Knowledge of PEPSE being a catalyst for risky behaviours

"No! [knowing about PEP] wouldn't change anything for me. You can't use it like a morning after pill, they'll stop giving it to you." (Respondent 6)

"[PEP] it's not something that I can say 'oh it's ok I can do what I want because I know I can just be like effing get it and it'll be alright." (Respondent 12)

#### The benefit of hindsight

"I don't think it could make you more risky. I think anything but, you know side-effects, appointments, remembering to take meds... I've seen people in the waiting room I know and they would obviously make like the complete two plus two decision in their heads as soon as they see I'm here." (Respondent 9)

individuals presenting at GUM services and increasing their ability to make risk assessments through risk-reduction counselling and information packs.

Self-reporting of behaviour patterns, particularly the statements that their "normal" behaviour was low risk, mimicked data from other studies.<sup>2 18</sup> It was interesting that the group distanced themselves from what they considered to be high-risk behaviour. As has been seen, a propensity for participants to purport irresponsible behaviours to "others" demonstrates that there is a problem with the subjective view of personal risk. It seems that the key message that UAI is dangerous is embedded within the population of PEPSE patients. However, UAI outside of the context of "negotiated safety" combined with the associated behaviours already mentioned represents a driving reason for presentation. Furthermore, these presentations only came as a result of a real suspicion, or genuine knowledge, that the partner was HIV positive; otherwise the participants simply did not present for PEPSE and continued to put themselves at risk.

The fact that no participant agreed with the statement that knowledge of PEPSE could increase risk behaviour was encouraging, as was the overwhelming consensus that personal experience of PEPSE had changed perceived behaviours for the better. A long-term commitment to recognise that risks are being taken and are not necessarily unusual or one-off is still in doubt and thus far studies have only shown a reduction in risk following PEPSE for 2 years or less.<sup>13 25 26</sup> There are still good grounds for supporting the theory that PEPSE does not increase perceived risk behaviour in MSM and there is evidence that key areas contributing to risk were identified and, subsequently, perceived to be modified by the participants after taking PEPSE: notably, alcohol consumption, partner selection, venues and type of sex. It is important to note that there is a difference between the participants' perception of behaviour modification and actual measurable changes in behaviour.

One of the most powerful implementations that could result from this study is the provision of PEPSE "starter packs" that allow MSM to initiate treatment themselves in the event of sexual risk. This strategy has been trialed previously with some success.<sup>14</sup> By removing the perceived barriers regarding PEPSE, and the concern of not wanting to waste the time and resources of healthcare professionals, this could be a worthwhile strategy. Furthermore, the process of obtaining these packs would provide a point for health promotion and a focus to the individual as to how to reflect differently on their own risk experiences and ultimately avoid having to use them in the first place.

#### Limitations

The use of a sample chosen for its convenience due to resource and logistical restraints is rarely ideal and it must be recognised that the population of MSM in Brighton is an already well searched group. From analysing the data, two major improvements would logically follow: the inclusion of a group of MSM who had not taken PEPSE for sexual exposure and a long-term follow-up of the study population. The former would certainly improve areas where the experience of PEP had coloured the opinions on risk and HIV and modified risk behaviour. The latter would again give a better understanding into the effects of PEPSE on future risk-reduction strategies with the "knee-jerk" element of the responses post-PEPSE counselling removed. However, with these issues aside, this study does add valuable understanding to MSM's experience of PEPSE.

#### CONCLUSION

Individuals can never make entirely objective assessments of risk probability; it is part and parcel of the human condition that we are subjective beings and we make decisions based on our social and sexual contexts. If PEPSE is to be effective as a public health measure, at-risk individuals need to be empowered to make improved subjective risk calculations. By increasing the population of MSM's perception as to the likelihood that they could have been exposed to HIV through identification of triggers that the men in this study identified, health promotion can target additional interventions, information and even starter packs to encourage MSM to reflect differently on their own risk experiences.

#### Key messages

- Previous research has shown that post-exposure prophylaxis for sexual exposure (PEPSE) is prescribed correctly in accordance with current UK guidelines. Men seek PEPSE for a variety of reasons and subsequent risk occurs following its use.
- MSM often seek help due to an "unusual" or "out of character" encounter. MSM do not always present for PEPSE when it may be indicated.
- Health promotion must be centred on improving the accuracy of subjective risk assessments by increasing perception that exposure to HIV may be occurring.
- Uptake of PEPSE and empowerment of MSM to make improved decisions could be achieved through provision of PEPSE "starter packs".

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**Contributors:** CS was principal investigator responsible for study and interview design, data collection, primary analysis and presentation of results. MF was principal supervisor responsible for study conception and contributed to study and interview design and secondary data analysis. EN was clinical nurse consultant involved in recruitment and consent. KN was assistant supervisor and contributed to study and interview design. DR was assistant supervisor responsible for proof reading and amendments. NP was research manager responsible for the logistics of interviewing, transcription and funding. CL was supervisor of ethics, study design and secondary data analysis.

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