APPENDIX: STUDY PROTOCOL

ADHERENCE TO HIV POST-EXPOSURE PROPHYLAXIS (PEP) IN VICTIMS OF SEXUAL ASSAULT: A SYSTEMATIC REVIEW AND META-ANALYSIS

BACKGROUND

Sexual assault is a worldwide public health concern that places victims at risk of unplanned pregnancies, psychological morbidity, and sexually-transmitted infections including HIV.

HIV post-exposure prophylaxis (PEP) is a short course of antiretroviral therapy offered to individuals at risk of acquiring HIV through occupational or non-occupational routes. Current World Health Organisation (WHO) guidelines recommend a 28-day course of treatment, to be administered within 72 hours of exposure, using a combination of 2 or 3 anti-retroviral drugs.\(^1\)

Adherence to PEP is a concern, with studies from a diversity of settings indicating that PEP acceptance, completion and HIV testing rates are generally lower following sexual assault compared to consensual sexual exposures.\(^2-9\)

This protocol is for a systematic review to assess rates and determinants of PEP adherence.
SEARCH STRATEGY

1. Sexual Assault
2. Post-exposure Prophylaxis
3. Adherence
4. 1 AND 2
5. 1 AND 3
6. 2 AND 3
7. 4 OR 5 OR 6

The following synonyms were used across databases. Appropriate MeSH terms and truncation symbols were used as per database.

**Sexual Assault:** Sex offense, rape, sexual violence, sexual abuse, child sexual abuse, sexual crime

**Post-exposure Prophylaxis:** Post exposure Prophylaxis, Postexposure Prophylaxis, PEP

**Adherence:** Adhere, compliance, comply, concordance, capacitance, conform, medication adherence, treatment compliance, patient compliance

DATASETS

- MEDLINE <1948 to Present>
- EMBASE Classic + EMBASE <1947 to 2011 April 14>
- Health Management Information Consortium <1979 to March 2011>
- PsycInfo <1806 to April Week 2 2011>
INCLUSION CRITERIA

Types of participants
Victims of sexual assault, irrespective of age or sex

Types of intervention
PEP, defined as provision of 28-days antiretroviral therapy, irrespective of drug class or number

Types of outcomes
Primary:
- Adherence to 28-day course of PEP

Secondary:
- Refusal to initiate PEP treatment
- Defaulting from PEP
- Side-effects

Restrictions: No date or language restriction applied

DATA EXTRACTION

The following data will be extracted from papers:10,11

- Study characteristics
- Method of adherence measurement
- Number of patients that started PEP
• Number of patients that adhered to the full course of PEP
• Adverse events
• Method of dispensing PEP
• PEP regimens
• Number lost to follow-Up
• Primary outcomes
• Secondary outcomes
• Author’s interpretation of results

QUALITY ASSESSMENT

The following indicators will be used as determinants of methodological quality:

• Study participation rate. (An arbitrary proportion of under 80% was considered poor quality)
• Defaulting rate from the study. (Greater than 20% was considered poor quality)\textsuperscript{12}
• Were side effects reported?
• Were inclusion and exclusion criteria specified for patient recruitment?
• If the studies were experimental- were participants randomised?
• If studies were experimental-were participants and researchers blinded?
• Was a statistical analysis carried out?
• Handling of defaulters
  ▪ Were reasons for discontinuation reported?
  ▪ Was there any attempt to trace defaulters?
  ▪ Was an intention-to-treat analysis carried out?
• Outcome measurement
  ▪ How was adherence defined?
    For this quality assessment adherence was defined as greater than or equal to
    95% of PEP doses taken (based on the required minimum adherence rates
    for antiretroviral treatment to be maximally beneficial.2
  ▪ How was adherence measured? (Pill count is considered more accurate than
    self-reporting)
  • Did the author interpret their results in view of study limitations?

DATA ANALYSIS

Prevalence estimates

Point estimates and 95% confidence intervals will be calculated for the proportion
of patients adhering to PEP at various stages in the care pathway from acceptance
to end-of treatment adherence. The variance of the raw proportions will be
stabilised using a Freeman-Tukey type arcsine square-root transformation

Meta-analysis

Estimates will be pooled using a DerSimonian-Laird random effects model for the
overall proportion of adherence and defaulting. Subgroup analyses will compare
studies from developed and developing countries, and studies in adults only
compared to studies amongst children and/or adolescents. A p-value of <0.05 will
be considered significant.
Heterogeneity

The $\tau^2$ statistic will be reported to assess between-study heterogeneity as this is less affected by the number of studies than the more commonly used $I^2$ statistic.

Statistical software

Analyses will be conducted using Stata (version 11, www.stata.com) and StatsDirect (version 2.5.2).

References


