Adherence to Post-Exposure Prophylaxis for Non-Forcible Sexual Exposure to HIV: A Meta-Analysis

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Abstract no. 22
Conflicts of Interest

• None to declare
Post-Exposure Prophylaxis

- Initiated within 72 hours of exposure
- 2- or 3-drug regimen for 28 days
- What proportion of individuals who access PEP for non-forcible sexual exposure successfully complete the 28-day regimen?


Post-exposure prophylaxis to prevent HIV infection: joint WHO/ILO guidelines on post-exposure prophylaxis (PEP) to prevent HIV infection
Search Strategy

• 3 electronic databases searched: MEDLINE, EMBASE, and PsycINFO

• Searched permutations of: post-exposure prophylaxis, adherence, HIV, non-occupational
Eligibility Criteria

Inclusion Criteria:
• Includes primary data
• Includes data on adherence to PEP

Exclusion Criteria:
• Occupational exposure, sexual assault, or injection drug use as primary source of exposure (>25% of mixed cohort due to exposure other than non-forcible sexual exposure)
Outcomes

**Primary outcome:** proportion adherent to 28-day PEP regimen

**Secondary outcomes:** refusals, loss to follow-up
Titles and abstracts retrieved and screened (N=1257)

Excluded based on title and abstract (N=1183)

Assessed for eligibility (N=74)

Not eligible (N=57)
- Review (N=7)
- No primary data (N=5)
- Not in English (N=4)
- Forcible sexual exposure (N=12)
- No adherence data (N=26)
- Qualitative (N=1)
- Overlapping samples (N=2)

Studies included in review (N=17)
Study Characteristics (1)

- Region of origin:
  - Europe: N=8
  - United States: N=6
  - Australia, Brazil, Kenya: N=1 each

- Exposure:
  - MSM: N=7
  - Mixed: N=9
Study Characteristics (2)

• Adherence measure
  • Self-report: N=5
  • Pill count: N=2
  • Self report and pill count: N=3
  • Retention in treatment: N=1

• Treatment regimen
  • Zidovudine-based: N=10
    • Zidovudine/lamivudine: N=6
      • + neflinavir, atazanavir, or ritonavir: N=4
  • Tenofovir-based: N=5
    • Tenofovir/emtricitabine: N=3
      • + raltegravir: N=1
    • Tenofovir + lamivudine: N=1
Adherence

- Overall pooled adherence: 78% (95% CI 72 to 85%)
  - Ranging from 49 to 92% in individual studies
- Randomized-controlled trials: 78% (65 to 91%)
- Prospective observational studies: 77% (68 to 87%)
- Retrospective studies: 81% (65 to 96%)
<table>
<thead>
<tr>
<th>Author</th>
<th>Year</th>
<th>Country</th>
<th>ES (95% CI)</th>
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<tr>
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<td>0.54 (0.38, 0.69)</td>
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<tr>
<td>Day</td>
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<td>UK</td>
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<td>Lacombe</td>
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<tr>
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<td>UK</td>
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<tr>
<td>Rey</td>
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<td>0.81 (0.65, 0.96)</td>
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<td>Overall</td>
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<td>0.78 (0.72, 0.85)</td>
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</table>

NOTE: Weights are from random effects analysis
Meta-Regressions

No significant difference in adherence by:

- RCT (vs. observational)
- Risk reduction intervention (vs. no risk reduction intervention)
- 3-drug regimen (vs. 2-drug)
- MSM (vs mixed cohort)
- Pill count (vs. self-report)
Conclusions

- Adherence to PEP after non-forcible sexual exposure to HIV is moderately high
- Studies were highly heterogeneous
- No studies used biomarkers to validate self-report or pill count measures
- More accurate measures of PEP adherence will improve estimates
Acknowledgements

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