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Uptake and predictors of PEP uptake in the SEARCH Dynamic Choice HIV Prevention trials

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Background

- Post-exposure prophylaxis (PEP) remains underutilized in sub-Saharan Africa.
- PEP could respond to user preferences for on-demand biomedical prevention, including for vaginal exposures, and could serve as a gateway to PrEP.
- However, data on this strategy are limited.
- **We sought to evaluate PEP uptake and differences in prevention coverage in an intervention presenting dynamic choice vs. the standard-of-care (SoC).**

Methods

- In rural western Kenya and Uganda communities (**SEARCH**; NCT04810650), we assessed PEP use in 3 randomized trials of Dynamic Choice HIV Prevention (DCP) intervention vs. SoC.
- Participants were ≥15 years with current or anticipated HIV risk and recruited from antenatal clinics, outpatient departments, and the community.
- **The DCP intervention had structured participant choice:**
  1) PrEP or PEP, with option to change over time
  2) Service location, with option to change over time
  3) HIV self-testing, with option to change over time
  4) 24/7 phone access to clinician.
- In the DCP arm, providers were trained on client-centered care, emphasizing support for flexible product choice (PrEP or PEP).
- In the DCP arm, PEP pill-in-pocket was offered (5 pills with HIV self-testing) for rapid PEP start; participants notified the provider for HIV testing and refill of the remaining PEP supply.
- Over an 18-month follow-up period we measured use of biomedical HIV prevention (through self-report) and assessed drug toxicity and seroconversions.

Analysis

- In this pre-specified secondary analysis, we characterized PEP use over time and compared biomedical covered time by arm.

Results

	DCP (intervention)	SoC (control)	Overall
	N=612	N=621	N=1233
Recruitment setting			
- Antenatal clinic	203/612 (33%)	197/621 (32%)	400/1233 (32%)
- Outpatient department	197/612 (32%)	206/621 (33%)	403/1233 (33%)
- Community	212/612 (35%)	218/621 (35%)	430/1233 (35%)
Women	447/612 (73%)	442/621 (71%)	889/1233 (72%)
Aged 15-24 years	258/612 (42%)	249/620 (40%)	507/1232 (41%)
Enrollment criteria			
-Ministry of Health (MOH)	21/612 (3%)	30/620 (5%)	51/1232 (4%)
-Self-assessed	74/612 (12%)	74/620 (12%)	148/1232 (12%)
-MOH & Self-assessed	517/612 (84%)	516/620 (83%)	1033/1232 (84%)
HIV risk by sexual partners			
-Partner with HIV/unknown status[1]	485/612 (79%)	481/621 (77%)	966/1233 (78%)
-Primary partner with HIV[2]	72/379 (19%)	84/423 (20%)	156/802 (19%)
-Primary partner with HIV on ART[3]	69/70 (99%)	74/76 (97%)	143/146 (98%)
Alcohol use (any, prior 3mo)	58/612 (9%)	58/620 (9%)	116/1232 (9%)
Pregnant (women only)	94/440 (21%)	84/433 (19%)	178/873 (20%)
Circumcised (men only)	98/165 (59%)	104/177 (59%)	202/342 (59%)
PrEP or PEP use (any, prior 6mo)	35/612 (6%)	27/621 (4%)	62/1233 (5%)

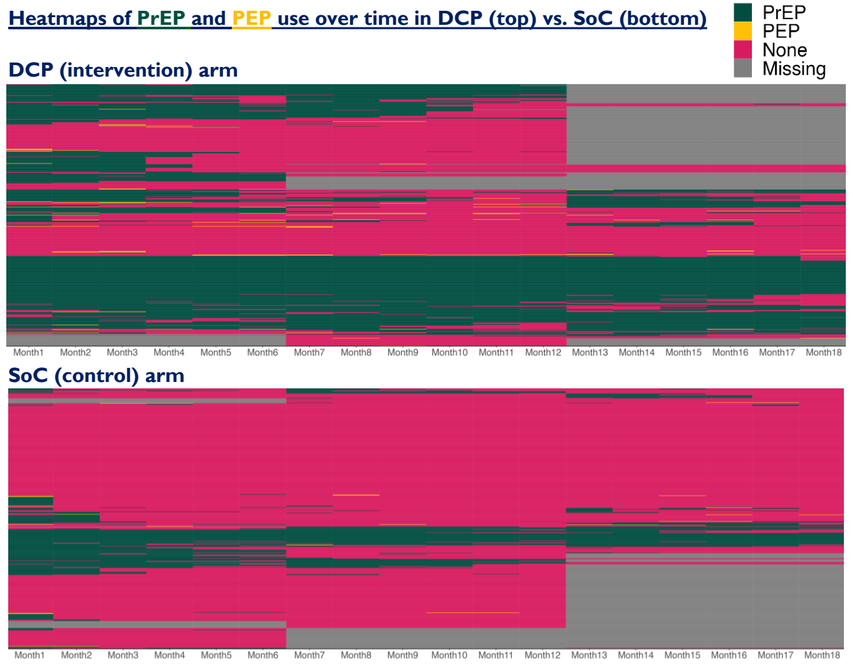
[1]Any past 6 months; [2]Among participants reporting a primary partner; [3]Among participants reporting their primary partner with HIV

Over 18 months of follow-up, 129 courses of PEP were dispensed.

- **In DCP arm**: 101 PEP courses among 50 participants; 28 participants used multiple PEP courses; 10 transitioned to PrEP the month after PEP start.
- **In SoC arm:** 28 PEP courses among 20 participants; 8 participants used multiple PEP courses; 2 participants transitioned to PrEP the month after PEP start.

- **Biomedical covered time** (% of follow-up time using PrEP or PEP) was 51% (4422/8712) in DCP vs. 16% (1424/8994) in SoC.

Heatmaps of PrEP and PEP use over time in DCP (top) vs. SoC (bottom)



- **DCP significantly increased PEP covered time** (% of follow-up time when using PEP): 1.1% (DCP) vs. 0.3%(SoC) for a difference of 0.8% (95%CI: 0.1-1.15%); p=0.03.
- Among DCP participants, PEP covered time was highest in the community (2.2%), men (1.8%), and participants aged 15-24 years (1.1%).
- There were no discontinuations for drug toxicity or seroconversions among those who used PEP.

Conclusions

- **Across 3 settings in rural Africa, PEP was feasible to deliver, a desired choice for some individuals, and a gateway to PrEP.**
- **PEP increased biomedical covered time for those at risk of HIV acquisition**
- **Event-driven interventions, such as PE,P should be included in prevention choice approaches.**

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