Appendix 3: Risk of Bias Assessments

Non-Randomized Trials (n=18): Evidence Project Risk of Bias Tool

Citation ID	Pre/Post	Comp. group	Cohort	Baseline Equivalence		Random selection	Random allocation	Control for confounders	Follow-up >=75%	Specific Concerns
				Demos	Outcome					
Arnet et al. 2009 [23]	Yes	No	No	NA	NA	No	No	No	NA	Lack of comparison group, no control for confounding
Atkins & Bradford 2015 [25]	Yes	No	No	NA	NA	No	No	Yes	NA	Lack of comparison
Atkins 2014 [24]	Yes	No	No	NA	NA	No	No	Yes	NA	Lack of comparison
Bumbul et al. 2013 [26]	No	Yes	No	No	NA	NR	No	No	NA	No pre/post, no control for confounding
Cintina & Johansen 2015 [28]	No	Yes	No	NR	NA	No	No	Yes	NA	No pre/post
Cintina 2017 [27]	Yes	No	No	NA	NA	No	No	Yes	NA	Lack of comparison
Durrance 2013 [29]	Yes	No	No	NA	NA	No	No	Yes	NA	Lack of comparison
Falah-Hassani,et al. 2007 [30]	Yes	No	No	NA	NA	Yes	NA	No	NA	Lack of comparison, no control for confounding

										(though random selection)
Girma & Paton 2011[31]	No	Yes	No	No	NA	No	No	Yes	NA	No pre/post
Killick & Irving 2004 [33]	No	Yes	No	NR	NR	No	No	No	NA	No pre/post, no control for confounding
Marston et al. 2005 [34]	Yes	No	No	NA	NA	Yes	No	Yes	NA	Lack of comparison
Moreau et al. 2006 [35]	Yes	No	No	NA	NA	Yes	No	Yes	NA	Lack of comparison
Mulligan 2016 [36]	Yes	No	Yes	NA	NA	NR	No	Yes	NR	Lack of comparison
Novikova et al. 2009 [37]	Yes	No	No	NA	NA	No	No	No	NA	Lack of comparison group, no control for confounding
Payakachat et al. 2010 [38]	Yes	No	No	NA	NA	No	No	No	NA	Lack of comparison group, no control for confounding
Pentel et al. 2004 [39]	Yes	No	No	NA	NA	No	No	No	NA	Lack of comparison group, no control for confounding
Rubin et al. 2011 [42]	No	Yes	No	NA	NA	No	No	Yes	NA	No pre/post
Soon et al. 2005 [43]	Yes	No	No	NA	NA	No	No	No	NA	Lack of comparison group, no control for confounding

Randomized Controlled Trials (n=3 papers reporting 1 RCT): Cochrane Collaboration Tool

Study ID : Harper et al. 2005 [32]; Raine et al. 2005 [40]; Rocca et al. 2007 [41]

Domain 1: Risk of bias arising from the randomization process

Signalling questions	EC use	Pregnancy	Unprotected sex	Consistent condom use	Condom use last sex	Multiple partners	Contraceptive method change	Missed pills	Comments
1.1 Was the allocation sequence random?	Y	Y	Y	Y	Y	Y	Y	Y	
1.2 Was the allocation sequence concealed until participants were enrolled and assigned to interventions?	Y	Y	Y	Y	Y	Y	Y	Y	
1.3 Did baseline differences between intervention groups suggest a problem with the randomization process?	N	N	N	N	N	N	N	N	There was also a slightly higher proportion of blacks in the clinic access group (P=.045), but no other notable differences
Risk-of-bias judgement	Low	Low	Low	Low	Low	Low	Low	Low	
Optional: What is the predicted direction of bias	NA	NA	NA	NA	NA	NA	NA	NA	

arising from the randomization process?									

Domain 2: Risk of bias due to deviations from the intended interventions (*effect of assignment to intervention*)

Signalling questions	EC use	Pregnancy	Unprotected sex	Consistent condom use	Condom use last sex	Multiple partners	Contraceptive method change	Missed pills	Comments
2.1. Were participants aware of their assigned intervention during the trial?	Y	Y	Y	Y	Y	Y	Y	Y	Blinding not possible given the intervention
2.2. Were carers and people delivering the interventions aware of participants' assigned intervention during the trial?	Y	Y	Y	Y	Y	Y	Y	Y	
2.3. If Y/PY/NI to 2.1 or 2.2: Were there deviations from the intended intervention that arose because of the trial context?	N	N	N	N	N	N	N	N	California legalized pharmacy access six months into the trial, but this is not related to trial context
2.4 If Y/PY to 2.3: Were these deviations likely to have affected the outcome?	NA	NA	NA	NA	NA	NA	NA	NA	
2.5. If Y/PY/NI to 2.4: Were these deviations from intended intervention balanced between groups?	NA	NA	NA	NA	NA	NA	NA	NA	
2.6 Was an appropriate analysis used to estimate the effect of assignment to intervention?	Y	Y	Y	Y	Y	Y	Y	Y	Modified ITT used

2.7 If N/PN/NI to 2.6: Was there potential for a substantial impact (on the result) of the failure to analyse participants in the group to which they were randomized?	NA	NA	NA	NA	NA	NA	NA	NA	
Risk-of-bias judgement	Low	Low	Low	Low	Low	Low	Low	Low	
Optional: What is the predicted direction of bias due to deviations from intended interventions?	NA	NA	NA	NA	NA	NA	NA	NA	

Domain 2: Risk of bias due to deviations from the intended interventions (*effect of adhering to intervention*)

Signalling questions	EC use	Pregnancy	Unprotected sex	Consistent condom use	Condom use last sex	Multiple partners	Contraceptive method change	Missed pills	Comments
2.1. Were participants aware of their assigned intervention during the trial?	Y	Y	Y	Y	Y	Y	Y	Y	Blinding not possible given the intervention
2.2. Were carers and people delivering the interventions aware of participants' assigned intervention during the trial?	Y	Y	Y	Y	Y	Y	Y	Y	
2.3. [If applicable:] If Y/PY/NI to 2.1 or 2.2: Were important non-protocol interventions balanced across intervention groups?	NA	NA	NA	NA	NA	NA	NA	NA	
2.4. [If applicable:] Were there failures in implementing the intervention that could have affected the outcome?	Y	Y	Y	Y	Y	Y	Y	Y	Yes, deviations because of change in CA law but rerandomized
2.5. [If applicable:] Was there non-adherence to the assigned intervention regimen that could have affected participants' outcomes?	PY	PY	PY	PY	PY	PY	PY	PY	Contamination between groups due to change in law

2.6. If N/PN/NI to 2.3, or Y/PY/NI to 2.4 or 2.5: Was an appropriate analysis used to estimate the effect of adhering to the intervention?	Y	Y	Y	Y	Y	Y	Y	Y	
Risk-of-bias judgement	Some concerns	Some concerns	Some concerns	Some concerns	Some concerns	Some concerns	Some concerns	Some concerns	
Optional: What is the predicted direction of bias due to deviations from intended interventions?	Favors experimental	Favors experimental	Favors experimental	Favors experimental	Favors experimental	Favors experimental	Favors experimental	Favors experimental	

Domain 3: Missing outcome data

Signalling questions	EC use	Pregnancy	Unprotected sex	Consistent condom use	Condom use last sex	Multiple partners	Contraceptive method change	Missed pills	Comments
3.1 Were data for this outcome available for all, or nearly all, participants randomized?	PY	PY	PY	PY	PY	PY	PY	PY	814/889 pharmacy access; 826/884 advance provision; 310/344 clinic access
3.2 If N/PN/NI to 3.1: Is there evidence that the result was not biased by missing outcome data?	NA	NA	NA	NA	NA	NA	NA	NA	
3.3 If N/PN to 3.2: Could missingness in the outcome depend on its true value?	NA	NA	NA	NA	NA	NA	NA	NA	
3.4 If Y/PY/NI to 3.3: Is it likely that missingness in the outcome depended on its true value?	NA	NA	NA	NA	NA	NA	NA	NA	
Risk-of-bias judgement	Low	Low	Low	Low	Low	Low	Low	Low	
Optional: What is the predicted direction of bias due to missing outcome data?	NA	NA	NA	NA	NA	NA	NA	NA	

Domain 4: Risk of bias in measurement of the outcome

Signalling questions	EC use	Pregnancy	Unprotected sex	Consistent condom use	Condom use last sex	Multiple partners	Contraceptive method change	Missed pills	Comments
4.1 Was the method of measuring the outcome inappropriate?	N	N	N	N	N	N	N	N	
4.2 Could measurement or ascertainment of the outcome have differed between intervention groups?	N	N	N	N	N	N	N	N	
4.3 If N/PN/NI to 4.1 and 4.2: Were outcome assessors aware of the intervention received by study participants?	Y	Y	Y	Y	Y	Y	Y	Y	
4.4 If Y/PY/NI to 4.3: Could assessment of the outcome have been influenced by knowledge of intervention received?	PN	PN	PN	PN	PN	PN	PN	PN	
4.5 If Y/PY/NI to 4.4: Is it likely that assessment of the outcome was influenced by knowledge of intervention received?	PN	PN	PN	PN	PN	PN	PN	PN	

Risk-of-bias judgement	Low	Low	Low	Low	Low	Low	Low	Low	
Optional: What is the predicted direction of bias in measurement of the outcome?	NA	NA	NA	NA	NA	NA	NA	NA	

Domain 5: Risk of bias in selection of the reported result

Signalling questions	EC use	Pregnancy	Unprotected sex	Consistent condom use	Condom use last sex	Multiple partners	Contraceptive method change	Missed pills	Comments
5.1 Were the data that produced this result analysed in accordance with a pre-specified analysis plan that was finalized before unblinded outcome data were available for analysis?									
	Y	Y	Y	Y	Y	Y	Y	Y	
Is the numerical result being assessed likely to have been selected, on the basis of the results, from...									
5.2. ... multiple eligible outcome measurements (e.g. scales, definitions, time points) within the outcome domain?	N	N	N	N	N	N	N	N	
5.3 ... multiple eligible analyses of the data?	N	N	N	N	N	N	N	N	
Risk-of-bias judgement	Low	Low	Low	Low	Low	Low	Low	Low	
Optional: What is the predicted direction of bias due to selection of the reported result?	NA	NA	NA	NA	NA	NA	NA	NA	

Overall risk of bias

Overall assessment	**EC use**	**Pregnancy**	**Unprotected sex**	**Consistent condom use**	**Condom use last sex**	**Multiple partners**	**Contraceptive method change**	**Missed pills**	**Comments**
Risk-of-bias judgement	Low	Low	Low	Low	Low	Low	Low	Low	
Optional: What is the overall predicted direction of bias for this outcome?	NA	NA	NA	NA	NA	NA	NA	NA	