Population effect of increased access to emergency contraceptive pills: a systematic review

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CRD summary
This review concluded that the available evidence demonstrates that improved access to emergency contraceptive pills increases their use, but no study has shown that this reduces unintended pregnancy or abortion rates at a population level. These conclusions appear to follow from the evidence presented, although the available details of included studies were limited.

Authors' objectives
To review data on the effects of increased access to emergency contraceptive pills on pregnancy rates and pill use.

Searching
MEDLINE, POPLINE, EMBASE and LILACS were searched from inception to August 2006; the search terms were reported. No language restrictions were applied. The reference lists of articles were also checked, and experts were contacted to identify further relevant published or unpublished studies.

Study selection
Studies of any design that provided primary data on the effects of interventions with different levels of access to emergency contraceptive pills were eligible for inclusion in the review.

The participants, where reported, included condom users, spermicide users, postpartum women, adolescents, family planning clients, emergency contraception and abortion clients, and new acceptors of oral contraceptive pills or condoms. The studies were conducted in India, USA, China, Scotland, Zambia and Ghana.

The interventions varied in terms of their aggressiveness (e.g. number of packages of emergency contraceptive pills initially provided, replacement versus non-replacement of lost and used pills) and the emergency contraceptive pill regimen used (i.e. Yuzpe, levonorgestrel or mifepristone regimens). The interventions reported in uncontrolled observational studies included legislation allowing distribution of emergency contraceptive pills (over the counter or from a pharmacist), provision of an advance supply of emergency contraceptive pills, implementation of a telephone prescription service, and the introduction of a dedicated product by a pharmaceutical company.

All included studies evaluated emergency contraception pill use, though not all reported pregnancies. Pregnancies were typically assessed by participant report, in some cases supplemented by chart review and scheduled or indicated pregnancy testing. Emergency contraceptive pill use data were typically obtained through participant report.

Study designs included randomised controlled trials (RCTs), prospective cohort studies and uncontrolled observational studies.

Two reviewers independently selected studies for inclusion in the review.

Assessment of study quality
The authors stated that they assessed the quality of the design, implementation and analysis of the included studies. They did not state how the validity assessment was performed.

Data extraction
Data were extracted on the main study characteristics. Two or three reviewers independently extracted data from the included studies, with any discrepancies resolved through consensus.

Methods of synthesis
The included studies were combined in a narrative.
Results of the review
A total of 23 studies (number of participants unclear) were included in the review: 10 RCTs, 4 cohort studies and 9 uncontrolled observational studies.

Most of the controlled studies were inadequately powered to detect a difference in pregnancy rates, and only four were designed with pregnancy as a planned primary outcome. In several studies the risk of unintended pregnancy or abortion was not particularly high. Uncontrolled studies typically failed to take into account factors other than the intervention that may have influenced outcomes. The length of follow-up among RCTs and cohort studies ranged from 3 to 12 months.

No study reported a clinically or statistically significant difference in pregnancy or abortion rates between the intervention and control groups. All but one of the included studies reporting the amount of emergency contraceptive pill use reported that this was higher in the intervention group than in the control group. Six studies suggested that intervention increased promptness of emergency contraceptive pill use, though this effect was not seen in one large RCT (n=1,948).

Authors' conclusions
These data convincingly demonstrate that improved access to emergency contraceptive pills increases use, but no study has shown that it reduces unintended pregnancy or abortion rates at a population level.

CRD commentary
The review’s limited inclusion criteria seemed appropriate given the breadth of the question being addressed. The search for relevant studies was comprehensive, covering multiple sources and limited neither by language nor publication status. The authors noted the heterogeneity among the data and the poor quality of some included studies, though the method used to assess validity was not stated. The use of a narrative synthesis appeared appropriate given the heterogeneity between the studies, though insufficient details are available to determine whether a subgroup of RCTs might have feasibly been synthesised within a meta-analysis. However, the authors’ conclusions appear broadly appropriate given the evidence presented.

Implications of the review for practice and research
Practice: The authors did not state any implications for practice.

Research: The authors stated that strategies to overcome barriers to women’s use of emergency contraceptive pills need to be developed and evaluated, and that more precise estimates of the efficacy of emergency contraceptive pills are desirable.

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This is a critical abstract of a systematic review that meets the criteria for inclusion on DARE. Each critical abstract contains a brief summary of the review methods, results and conclusions followed by a detailed critical assessment on the reliability of the review and the conclusions drawn.