The impact of programs to increase contraceptive use among adult women: a review of experimental and quasi-experimental studies

Kirby D

CRD summary
The author concluded that very little evidence was available on the impact of programmes and policies that aimed to increase contraceptive use among adult women in the United States, and more research was needed. Although the review had a number of methodological limitations, the evidence presented supported the author’s overall conclusion regarding the need for more research.

Authors’ objectives
To evaluate programmes and policies aimed to increase contraceptive use among adult women in the United States.

Searching
PubMed, PsycINFO and POPLINE were searched for articles published from 1990 to December 2005, as were 16 relevant journals (listed in the review). More than 20 experts in the field were contacted to request information about additional studies (including any published since 2005).

Study selection
Experimental or quasi-experimental studies of programmes or policies implemented in the US and designed to increase contraceptive use in order to prevent unintended pregnancy were eligible for inclusion, provided they had at least 50 participants. Samples had to include adult women and have a mean or median participant age of at least 20 years. Studies were required to include intervention and comparison groups, collect pre- and post-test data and report contraceptive use or pregnancy as outcomes. Studies of interventions to prevent the transmission of sexually transmitted diseases (STDs) or to reduce adolescent pregnancy rates were excluded.

In most of the included studies the mean or median participant age was under 26 years. Participants were from ethnically and racially diverse populations. About half of the studies included only women with low incomes. Interventions included programmes to provide pregnancy and STD counselling in a primary health clinic, contraceptive initiation in alternative settings, initiation of contraception during the medical visit (quick start), advance provision of emergency contraception and reminder systems for injectable contraceptives. Control groups received traditional or less proactive interventions. No studies evaluated state or federal policies. Outcomes reported in the review included contraceptive use (for example, rate, consistency, timeliness), risk-taking behaviour (for example, unprotected sex) and pregnancy rates. Outcomes were ascertained by questionnaire, phone or face-to-face interview and by chart review. Duration of follow up ranged from six weeks to 15 months.

The author stated neither how the papers were selected for the review nor how many reviewers performed the selection.

Assessment of study quality
The author noted that only studies of “a reasonably strong” design were eligible for inclusion. The author did not state how validity assessment was performed.

Data extraction
Where findings were statistically significant, the proportion of each group experiencing the event was reported, with the p value. Other findings were recorded as non-significant. The author stated neither how the data were extracted for the review nor how many reviewers performed the data extraction.

Methods of synthesis
The studies were combined in a narrative synthesis arranged by type of intervention.

Results of the review
Eleven studies were included (n=7,716). Eight studies were experimental (n=7058), including six randomised controlled trials (RCTs) (n=5,198) and three studies were quasi-experimental (n=658).

**Contraceptive outcomes**

**Pregnancy/STD counselling in primary care versus general health counselling (one RCT):** No statistically significant findings were associated with the intervention.

**Contraceptive initiation in a non-family-planning setting (two studies):** Contraceptive initiation in an urban STD clinic (versus less proactive care) was associated with significantly higher rates of contraceptive use at eight months (44 per cent versus 26 per cent, p<0.001, one RCT n=877). There was no statistically significant difference between the two groups at 12 months. Similarly, a quasi-experimental study set in a correctional facility reported higher rates of contraceptive use at four weeks in women receiving the intervention than in controls (39 per cent versus four per cent, p<0.05, n=224).

**Immediate versus later initiation of hormonal contraception (two studies):** One controlled trial found a significantly increased likelihood of starting a second pack of pills in the intervention group (88 per cent versus 74 per cent, p<0.05, n=250). Differences in the third cycle were not statistically significant. A small RCT (n=60) of early initiation of hormonal patches reported no statistically significant findings.

**Advance provision of emergency contraception versus education/advice only (four studies):** Two RCTs (n=3,247) and two experimental studies (n=1,860) all reported significantly higher rates of emergency contraception use in the intervention group over three- to 12-month follow up (p range <0.05 to <0.001). The rate and consistency of (non-emergency) contraceptive use did not differ significantly between the groups.

**Reminder systems for injectable contraception (two studies):** One quasi-experimental study reported that a postcard reminder system significantly increased the proportion of women receiving their repeat injection on time (76 per cent versus 64 per cent, p<0.05, n=184). However an RCT (n=250) using reminder letters reported no statistically significant findings.

**Pregnancy (six studies):** No studies found any statistically significant benefit from the intervention programme.

**Authors’ conclusions**

Very little evidence was available on the impact of programmes and policies aimed to increase contraceptive use among adult women in the United States. More research was needed.

**CRD commentary**

The objectives and inclusion criteria of the review were clear and relevant sources were searched for studies. However, search terms were not reported and the restriction to published studies meant that the review was subject to publication bias. It was not clear whether there was any limitation by language. It was also unclear whether steps (such as having more than one reviewer make decisions independently) were taken to reduce the risk of bias and error in the processes of study selection and data extraction, but this seemed unlikely as the review had a single author. Moreover, it did not appear that study validity was systematically assessed, which made it difficult to assess the reliability of the findings presented, especially as the design of included studies was not reported clearly in all cases. The decision to combine studies in a narrative synthesis seemed appropriate given the clinical and methodological heterogeneity between the studies. Although the review had a number of methodological limitations, the evidence presented supported the author’s overall conclusion regarding the need for more research.

**Implications of the review for practice and research**

**Practice:** The authors did not state any implications for practice.

**Research:** The authors stated that there was a pressing need for experimental studies to assess various approaches to increasing effective contraceptive use among adult women.
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