Systematic review and narrative synthesis of the effectiveness of contraceptive service interventions for young people, delivered in health care settings

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CRD summary
The authors appeared to conclude that evidence was mixed on the effectiveness of contraceptive service provision delivered in health care settings for young people. The success of outreach services, advanced provision of emergency contraception and supply of long-acting reversible contraception were tentatively proposed. The conclusions seem reliable but generalisability beyond specific populations in the United States may be limited.

Authors’ objectives
To evaluate the effectiveness of contraceptive service interventions delivered to young people in health care settings in developed countries.

Searching
Nine electronic data sources – including MEDLINE and The Cochrane Library (including DARE) – were searched from 1995 to 2008 for studies in English. Search terms were reported. Reference lists of included papers and systematic reviews were scanned for further articles and experts were consulted. The authors did not attempt to locate grey literature and unpublished material.

Study selection
All studies of contraceptive service interventions delivered to young people (more than 50% had to be aged over 25 years) in health care settings in developed countries were eligible for inclusion. All comparators were considered. Outcomes of interest were provision of contraception and/or advice (primary outcome), contraception use, pregnancy and behaviour modification (secondary outcomes).

Most studies were conducted in the United States; four were located in the United Kingdom. Health care settings varied. Many studies included a large proportion (or combination) of people with African American, Black, Hispanic and Latino origin. Types of service provided were new adolescent clinic services, outreach to existing services, advanced provision of emergency contraception, condom/general contraceptive provision and advice and services related to repeat pregnancy prevention. Descriptions of the intervention (including how it was delivered), comparators (where applicable) and study populations were generally lacking in detail. The main outcomes reported were pregnancy rates, and sexual behaviour or use of contraceptives measured by self-report. Other outcomes were reported in individual studies (such as sexually transmitted infections).

The authors did not state how many reviewers carried out the study selection.

Assessment of study quality
Study quality was assessed using the National Institute for Health and Clinical Excellence (NICE) checklist. Studies were scored as high, good or poor quality depending on the perceived impact of bias on study conclusions.

Quality assessment was carried out by one reviewer and independently checked by a second reviewer.

Data extraction
Data were extracted on provision/use of contraception, access to services and rates of pregnancy and behaviour modification.

Data were extracted by one reviewer and checked independently by a second reviewer. Disagreements were resolved by consensus and where necessary with a third reviewer.

Methods of synthesis
A narrative synthesis was carried out.
Results of the review
Twenty-three studies (more than 219,068 participants) were included: 10 randomised controlled trials (RCTs); two non-randomised controlled trials (non-RCT); one controlled before-and-after study; seven retrospective cohort studies; and three interrupted time series design. Eight out of 10 RCTs and the before-and-after study were high quality. The non-RCTs were good quality. Most of the retrospective cohort studies and interrupted time series were poor quality. Follow-up (where reported) ranged from six weeks to five years.

The highest quality evidence showed that interventions to provide advanced supply of emergency contraception successfully increased its subsequent use (four RCTs), largely with no effect on alternative contraceptive use or additional risky sexual behaviour. One of the RCTs also measured pregnancy rate and found no difference between study groups. Interventions to promote condom provision and advice were supported largely by moderate quality evidence (three RCTs; one before-and-after study; one retrospective cohort study) in terms of increased condom usage and engagement with clinical services. Some good quality evidence was found for the effects of interventions to promote hormonal contraceptive service use and advice (two RCTs and one non-RCT), particularly through computer-based or nurse-led interventions in specific populations. Moderate quality evidence showed that outreach programmes successfully promoted access to existing sexual health services but failed to show a clear effect in reducing teenage pregnancy rates (one interrupted time series; one non-RCT; three retrospective cohort studies).

Two studies (one interrupted time series and one retrospective cohort study) demonstrated limited impact of new adolescent clinics on reducing pregnancy rates. Evidence was inconclusive for interventions to prevent repeat adolescent pregnancy (one RCT; one interrupted time series; two retrospective cohort studies) but use of long-acting reversible contraception showed promise.

Authors' conclusions
The authors acknowledged that the literature was generally not well-developed in terms of good quality studies and key outcomes. They appeared to conclude that evidence was mixed in relation to the effectiveness of contraceptive service provision delivered in health care settings for young people. The success of outreach services, advanced provision of emergency contraception and supply of long-acting reversible contraception were proposed tentatively.

CRD commentary
The review question was clear. Inclusion criteria were sufficiently detailed to enable replication. Several appropriate data sources were used to identify the included articles. Restrictions to published studies in English may mean that relevant papers were overlooked; the authors considered that a significant number of additional studies would be needed to alter the review conclusions. The processes of quality assessment and data extraction were conducted with attempts to minimise error and bias; it was unclear whether this was also the case for study selection. Appropriate quality assessment criteria were applied to the included studies. Study details were presented but poor reporting of primary studies was evident, along with reliance on self-report measures and small numbers of studies contributing to the outcomes (acknowledged by the authors).

The authors' tentative conclusions reflect the evidence presented and seem reliable. The review findings may have limited generalisability beyond specific populations in the United States.

Implications of the review for practice and research
Practice: The authors stated that interventions that encouraged use of long-acting reversible contraception should be considered a favourable option.

Research: The authors suggested that more research was needed on the effectiveness of bespoke contraceptive services for young people in health care settings. More focus on key outcome measures (such as pregnancy and long term contraceptive use) was needed.

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