

# Review: School-based sex education linked to access to contraceptive services may reduce teenage pregnancy

Dickson R, Fullerton D, Eastwood A, Sheldon T, Sharp E, and the information staff of CRD. **Preventing and reducing the adverse effects of unintended teenage pregnancies.** *Effective Health Care.* 1997 Feb;3:1-12.

## Objective

To summarise the evidence on the effectiveness of various approaches used to prevent teenage pregnancy and to alleviate the negative health and social effects of teenage pregnancy.

## Data sources

[Studies were identified by searching MEDLINE, CINAHL, EMBASE, Applied Social Science, ERIC, PsycLit, DHSS Data, Sigle, Conference Proceedings, Dissertation Abstracts, Care Data, Social Science Citation Index, the Cochrane Library, and Health Place from 1980 to August 1996. Additional articles were identified by hand searching 9 key journals, scanning the bibliographies of retrieved articles, and contacting experts.]\*

## Study selection

[Review articles were included if they summarised the evidence of the effectiveness of primary prevention strategies for reducing teenage pregnancy and included  $\geq 1$  of the following out-

### Commentary

Adolescent pregnancy rates are high, especially in the United States (116/1000 females 15 to 19 years old), the United Kingdom (56.8/1000 females 16 to 19 years old), and Canada (49.5/1000 females 15 to 19 years old). Dickson and colleagues outline the adverse health, social, and economic outcomes of adolescent pregnancy for both mother and child, substantiating the implementation of effective antenatal and postnatal programmes.

The authors identified 42 studies that evaluated prevention programmes, 15 of which were randomised trials. Rather than drawing conclusions from meta-analyses of the 15 trials, the authors chose to rely on the results of less rigorous cohort studies and concluded that "school-based sex education can be effective in reducing teenage pregnancy especially when linked to access to contraceptive services." In fact, if the analy-

comes: time to initiation of sexual activity, use of contraception, number of sexual partners, and incidence of teenage pregnancy. Primary studies not included in the reviews were included if they evaluated the effectiveness of education programmes designed to reduce teenage pregnancy, included the same types of outcomes as in review articles, and had an experimental or quasi-experimental study design.]\*

## Data extraction

Data were extracted on characteristics of the study population, duration of follow-up, programme description, and outcomes.

## Main results

42 studies evaluating the effectiveness of educational programmes in reducing teenage pregnancy were included; 15 were randomised controlled trials. There was consistent evidence that sex and contraceptive education within the school setting did not lead to increased sexual activity or incidence of pregnancy. The provision of clear information about contraceptive methods appeared important to the success of school-based programmes. The few studies that have shown a reduction in teenage pregnancy (none of which

sis had been limited to randomised trials, the authors would have concluded that interventions have not been effective in reducing teenage pregnancy. Although the authors correctly identified limitations of the trials, including small sample sizes, short follow-up, weak interventions, and the absence of no-intervention control groups, this does not substantiate the decision to base conclusions on even weaker cohort studies with a substantial risk for selection bias.

Given that no intervention has yet to be rigorously shown to reduce adolescent pregnancy, should we discontinue all current interventions to address this problem? In most trials, comparisons were made with control groups that received some type of intervention, and therefore, at minimum, the control group programs should continue. Do we then accept that this is the best we can do?

were randomised controlled trials) provided multifaceted programmes with links to contraceptive services or work experience. Economic evaluations indicated that the provision of contraceptive services was cost-saving to the health care system. The health and development of teenage mothers and their children have been shown to benefit from programmes promoting access to antenatal care, support by health visitors or social workers, educational opportunities for the mother, and preschool education for the child.

## Conclusions

School-based sex education can be effective in reducing teenage pregnancy, especially when linked to access to contraceptive services. Programmes promoting access to antenatal care, educational opportunities, and targeted support by health visitors improve the health and development of teenage mothers and their children.

*Sources of funding: National Health Service Executive and the Health Departments of Scotland, Wales, and Northern Ireland.*

*For article reprint: NHS Centre for Reviews and Dissemination, University of York, York YO1 5DD, England, UK. FAX 44-1904-433661.*

\*Information provided by the author.

There has yet to be a long-term trial of an intervention that combines the provision of contraceptive services in a confidential, accessible, affordable manner with an educational programme that provides a risk-free environment for sharing knowledge and developing skills and is reinforced annually through booster sessions. This multifaceted approach is used in the Netherlands, where the rate of adolescent pregnancy is 8.1/1000 females 15 to 19 years old (1).

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## Reference

1. Ketting E, Visser AP. Contraception in the Netherlands: the low abortion rate explained. *Patient Educ Couns.* 1994;23:161-71.