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| **Reference** | Aslam et al., 2017 |
| **score** | 4 |
| **rating** | high |
| **Published Year** | 2017 |
| **Abstract** | Background: Unintended repeat conceptions can result in emotional, psychological and educational harm to young women, often with enduring implications for their life chances. This study aimed to identify which young women are at the greatest risk of repeat unintended pregnancies; which interventions are effective and cost-effective; and what are the barriers to and facilitators for the uptake of these interventions. Methods: We conducted a mixed-methods systematic review which included meta-analysis, framework synthesis and application of realist principles, with stakeholder input and service user feedback to address this. We searched 20 electronic databases, including MEDLINE, Excerpta Medica database, Applied Social Sciences Index and Abstracts and Research Papers in Economics, to cover a broad range of health, social science, health economics and grey literature sources. Searches were conducted between May 2013 and June 2014 and updated in August 2015. Results: Twelve randomised controlled trials (RCTs), two quasi-RCTs, 10 qualitative studies and 53 other quantitative studies were identified. The RCTs evaluated psychosocial interventions and an emergency contraception programme. The primary outcome was repeat conception rate: the event rate was 132 of 308 (43%) in the intervention group versus 140 of 289 (48%) for the control group, with a non-significant risk ratio (RR) of 0.92 [95% confidence interval (CI) 0.78-1.08]. Four studies reported subsequent birth rates: 29 of 237 (12%) events for the intervention arm versus 46 out of 224 (21%) for the control arm, with an RR of 0.60 (95% CI 0.39-0.93). Many repeat conceptions occurred in the context of poverty, low expectations and aspirations and negligible opportunities. Qualitative and realist evidence highlighted the importance of context, motivation, future planning and giving young women a central and active role in the development of new interventions. Conclusions: Little or no evidence for the effectiveness or cost-effectiveness of any of the interventions to reduce repeat pregnancy in young women was found. Qualitative and realist evidence helped to explain gaps in intervention design that should be addressed. More theory-based, rigorously evaluated programmes need to be developed to reduce unintended repeat pregnancy in young women. Trial registration: PROSPERO, CRD42012003168. Cochrane registration number: i=fertility/0068 © 2017 The Author(s). |

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| **Reference** | Bennett et al., 2005 |
| **score** | 4 |
| **rating** | high |
| **Published Year** | 2005 |
| **Abstract** | We compared school-based abstinence-only programs with those including contraceptive information (abstinence-plus) to determine which has the greatest impact on teen pregnancy. The United States has one of the highest rates of teen pregnancy in the industrialized world. Programs aimed at reducing the rate of teen pregnancy include a myriad of approaches including encouraging abstinence, providing education about birth control, promoting community service activities, and teaching skills to cope with peer pressure. We systematically reviewed all published randomized controlled trials of secondary-school-based teen pregnancy prevention programs in the United States that used sexual behavior, contraceptive knowledge, contraceptive use, and pregnancy rates as outcomes. © 2005 Society for Adolescent Medicine. All rights reserved. |

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| **Reference** | Blank et al., 2010 |
| **score** | 4 |
| **rating** | high |
| **Published Year** | 2010 |
| **Abstract** | Study Objective: This review was undertaken to determine the effectiveness of contraception service interventions for young people that were delivered in educational settings. Design: We conducted a systematic review and narrative synthesis. Setting: Interventions were included where they were delivered in educational institutions, including schools, colleges, and pupil referral units. Participants: Young people aged 19 and under. Studies of wider age groups were included if the majority of participants were aged under 19 years. Interventions: We included interventions which consisted of contraceptive service provision, and also interventions to encourage young people to use existing contraceptive services. Main Outcome Measures: The main outcome measures used in the studies were: rate of teenage pregnancy, rate of contraceptive use, and sexual behavior. Many outcome measures were self reported. Results: Twenty-nine papers were included which reported on interventions to prevent adolescent pregnancy (and repeat pregnancy), school-based health centers, contraceptive use in college students, and multicomponent interventions. Intensive case management intervention conducted by a culturally matched school-based social worker (along with other components including peer education) were shown to be effective in preventing repeat adolescent pregnancy, at least for the duration of the intervention. Also, school-based health centers appear to be most effective when contraception provision is made available on site. Conclusions: The evidence from these papers is limited, in terms of both quality and quantity, along with consistency of findings, but some recommendations in relation to effective interventions can be made. © 2010 North American Society for Pediatric and Adolescent Gynecology. |

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| **Reference** | Blank et al., 2012 |
| **score** | 4 |
| **rating** | high |
| **Published Year** | 2012 |
| **Abstract** | A systematic review and narrative synthesis to determine the effectiveness of contraception service interventions for young people delivered in health care premises was undertaken. We searched 12 key health and medical databases, reference lists of included papers and systematic reviews and cited reference searches on included articles. All retrieved literature was screened at title and abstract levels, and relevant articles were taken through to full paper appraisal. Data relating to study design, outcomes and quality were extracted by one reviewer and independently checked by a second reviewer. We included interventions that consisted of contraceptive service provision for young people, and also interventions to encourage young people to use existing contraceptive services. The searches identified 23 studies that met the inclusion criteria. The papers focused on: new adolescent services, outreach to existing services, advanced provision of emergency contraception, condom/contraceptive provision and advice and repeat pregnancy prevention. The literature in general is not well developed in terms of good quality effectiveness studies and key outcome measures. However, it is possible to make recommendations in terms of outreach versus targeted young people's services in health care settings, advanced provision of emergency contraception and long-acting reversible contraception to prevent repeat adolescent pregnancy. © 2012 The Author 2012. |

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| **Reference** | Charania et al., 2011 |
| **score** | 4 |
| **rating** | high |
| **Published Year** | 2011 |
| **Abstract** | This systematic review examines the overall efficacy of U.S. and international-based structural-level condom distribution interventions (SLCDIs) on HIV risk behaviors and STIs and identifies factors associated with intervention efficacy. A comprehensive literature search of studies published from January 1988 through September 2007 yielded 21 relevant studies. Significant intervention effects were found for the following outcomes: condom use, condom acquisition/condom carrying, delayed sexual initiation among youth, and reduced incident STIs. The stratified analyses for condom use indicated that interventions were efficacious for various groups (e.g., youth, adults, males, commercial sex workers, clinic populations, and populations in areas with high STI incidence). Interventions increasing the availability of or accessibility to condoms or including additional individual, small-group or community-level components along with condom distribution were shown to be efficacious in increasing condom use behaviors. This review suggests that SLCDIs provide an efficacious means of HIV/STI prevention. |

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| **Reference** | Chin et al., 2012 |
| **score** | 4 |
| **rating** | high |
| **Published Year** | 2012 |
| **Abstract** | Context: Adolescent pregnancy, HIV, and other sexually transmitted infections (STIs) are major public health problems in the U.S. Implementing group-based interventions that address the sexual behavior of adolescents may reduce the incidence of pregnancy, HIV, and other STIs in this group. Evidence acquisition: Methods for conducting systematic reviews from the Guide to Community Preventive Services were used to synthesize scientific evidence on the effectiveness of two strategies for group-based behavioral interventions for adolescents: (1) comprehensive risk reduction and (2) abstinence education on preventing pregnancy, HIV, and other STIs. Effectiveness of these interventions was determined by reductions in sexual risk behaviors, pregnancy, HIV, and other STIs and increases in protective sexual behaviors. The literature search identified 6579 citations for comprehensive risk reduction and abstinence education. Of these, 66 studies of comprehensive risk reduction and 23 studies of abstinence education assessed the effects of group-based interventions that address the sexual behavior of adolescents, and were included in the respective reviews. Evidence synthesis: Meta-analyses were conducted for each strategy on the seven key outcomes identified by the coordination teamcurrent sexual activity; frequency of sexual activity; number of sex partners; frequency of unprotected sexual activity; use of protection (condoms and/or hormonal contraception); pregnancy; and STIs. The results of these meta-analyses for comprehensive risk reduction showed favorable effects for all of the outcomes reviewed. For abstinence education, the meta-analysis showed a small number of studies, with inconsistent findings across studies that varied by study design and follow-up time, leading to considerable uncertainty around effect estimates. Conclusions: Based on these findings, group-based comprehensive risk reduction was found to be an effective strategy to reduce adolescent pregnancy, HIV, and STIs. No conclusions could be drawn on the effectiveness of group-based abstinence education. |

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| **Reference** | Dean et al., 2014 |
| **score** | 4 |
| **rating** | high |
| **Published Year** | 2014 |
| **Abstract** | Introduction. Preconception care recognizes that many adolescent girls and young women will be thrust into motherhood without the knowledge, skills or support they need. Sixty million adolescents give birth each year worldwide, even though pregnancy in adolescence has mortality rates at least twice as high as pregnancy in women aged 20-29 years. Reproductive planning and contraceptive use can prevent unintended pregnancies, unsafe abortions and sexually-transmitted infections in adolescent girls and women. Smaller families also mean better nutrition and development opportunities, yet 222 million couples continue to lack access to modern contraception. Results: Comprehensive interventions can prevent first pregnancy in adolescence by 15% and repeat adolescent pregnancy by 37%. Such interventions should address underlying social and community factors, include sexual and reproductive health services, contraceptive provision; personal development programs and emphasizes completion of education. Appropriate birth spacing (18-24 months from birth to next pregnancy compared to short intervals <6 months) can significantly lower maternal mortality, preterm births, stillbirths, low birth weight and early neonatal deaths. Method. A systematic review and meta-analysis of the evidence was conducted to ascertain the possible impact of preconception care for adolescents, women and couples of reproductive age on MNCH outcomes. A comprehensive strategy was used to search electronic reference libraries, and both observational and clinical controlled trials were included. Cross-referencing and a separate search strategy for each preconception risk and intervention ensured wider study capture. Conclusion: Improving adolescent health and preventing adolescent pregnancy; and promotion of birth spacing through increasing correct and consistent use of effective contraception are fundamental to preconception care. Promoting reproductive planning on a wider scale is closely interlinked with the reliable provision of effective contraception, however, innovative strategies will need to be devised, or existing strategies such as community-based health workers and peer educators may be expanded, to encourage girls and women to plan their families. © 2014Dean et al; licensee BioMed Central Ltd. |

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| **Reference** | DiCenso et al., 1999 |
| **score** | 4 |
| **rating** | high |
| **Published Year** | 1999 |
| **Abstract** | Issue The rate of teenage pregnancy in Canada is rising. Adolescent pregnancy is associated with physical, emotional and financial consequences. Background In 1994, the most recent year for which Statistics Canada figures are available, there were 48.8 pregnancies per 1000 Canadian females aged 15 to 19. This translates into 46,800 teen pregnancies, an increase of more than 20% since 1987. Pregnancy before age 20 is associated with a number of medical risks for both the mother and child, loss of educational and occupational opportunities, and diminished socioeconomic status. Public Health Mandate Public Health Units are responsible for reducing the rate of adolescent pregnancy. One of the target groups is school-aged children in Grades 7 to 9 who should receive three hours annually of sexual health education. What’s the Evidence · Some adolescent pregnancy prevention programs have been effective in delaying initiation of intercourse, improving birth control use, and reducing pregnancies. However, the only studies available are of poorly designed evaluations. · Programs that focus on sexuality, including school, community and clinic-based interventions do not increase sexual activity. · No evidence was located to indicate that abstinence-only programs have delayed the onset of sexual intercourse or reduced pregnancies. · Programs that showed a positive impact were quite substantial in duration; focused on behaviours; were theory-based; actively involved participants; shared facts; focused on social pressures, modeling and skill rehearsal; and, included trained adult or peer leaders. Implications · There is a crucial need for the careful design and evaluation of a multicomponent pregnancy prevention intervention for adolescents. The program should be designed with extensive input from adolescents, community partners, and key informants. |

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| **Reference** | DiCenso et al., 2002 |
| **score** | 4 |
| **rating** | high |
| **Published Year** | 2002 |
| **Abstract** | Objective: To review the effectiveness of primary prevention strategies aimed at delaying sexual intercourse, improving use of birth control, and reducing incidence of unintended pregnancy in adolescents. Data sources: 12 electronic bibliographic databases, 10 key journals, citations of relevant articles, and contact with authors. Study selection: 26 trials described in 22 published and unpublished reports that randomised adolescents to an intervention or a control group (alternate intervention or nothing). Data extraction: Two independent reviewers assessed methodological quality and abstracted data. Data synthesis: The interventions did not delay initiation of sexual intercourse in young women (pooled odds ratio 1.12; 95% confidence interval 0.96 to 1.30) or young men (0.99; 0.84 to 1.16); did not improve use of birth control by young women at every intercourse (0.95; 0.69 to 1.30) or at last intercourse (1.05; 0.50 to 2.19) or by young men at every intercourse (0.90; 0.70 to 1.16) or at last intercourse (1.25; 0.99 to 1.59); and did not reduce pregnancy rates in young women (1.04; 0.78 to 1.40). Four abstinence programmes and one school based sex education programme were associated with an increase in number of pregnancies among partners of young male participants (1.54; 1.03 to 2.29). There were significantly fewer pregnancies in young women who received a multifaceted programme (0.41; 0.20 to 0.83), though baseline differences in this study favoured the intervention. Conclusions: Primary prevention strategies evaluated to date do not delay the initiation of sexual intercourse, improve use of birth control among young men and women, or reduce the number of pregnancies in young women. |

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| **Reference** | Gavin et al., 2010 |
| **score** | 4 |
| **rating** | high |
| **Published Year** | 2010 |
| **Abstract** | PurposePositive youth development (PYD) may be a promising strategy for promoting adolescent health. A systematic review of the published data was conducted to identify and describe PYD programs that improve adolescent sexual and reproductive health.MethodsEight databases were searched for articles about PYD programs published between 1985 and 2007. Programs included met the following criteria: fostered at least one of 12 PYD goals in multiple socialization domains (i.e., family, school, community) or addressed two or more goals in at least one socialization domain; allocated at least half of the program activities to promoting general PYD outcomes (as compared with a focus on direct sexual health content); included youth younger than 20 years old; and used an experimental or quasi-experimental evaluation design.ResultsThirty programs met the inclusion criteria, 15 of which had evidence of improving at least one adolescent sexual and reproductive health outcome. Program effects were moderate and well-sustained. Program goals addressed by approximately 50% or more of the effective programs included promoting prosocial bonding, cognitive competence, social competence, emotional competence, belief in the future, and self-determination. Effective programs were significantly more likely than those that did not have an impact to strengthen the school context and to deliver activities in a supportive atmosphere. Effective programs were also more likely to build skills, enhance bonding, strengthen the family, engage youth in real roles and activities, empower youth, communicate expectations, and be stable and relatively long-lasting, although these differences between effective and ineffective programs were not statistically significant.ConclusionPYD programs can promote adolescent sexual and reproductive health, and tested, effective PYD programs should be part of a comprehensive approach to promoting adolescent health. However, more research is needed before a specific list of program characteristics can be viewed as a “recipe” for success. |

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| **Reference** | Goesling et al., 2014 |
| **score** | 4 |
| **rating** | high |
| **Published Year** | 2014 |
| **Abstract** | Purpose: This systematic review provides a comprehensive, updated assessment of programs with evidence of effectiveness in reducing teen pregnancy, sexually transmitted infections (STIs), or associated sexual risk behaviors. Methods: The review was conducted in four steps. First, multiple literature search strategies were used to identify relevant studies released from 1989 through January 2011. Second, identified studies were screened against prespecified eligibility criteria. Third, studies were assessed by teams of two trained reviewers for the quality and execution of their research designs. Fourth, for studies that passed the quality assessment, the review team extracted and analyzed information on the research design, study sample, evaluation setting, and program impacts. Results: A total of 88 studies met the review criteria for study quality and were included in the data extraction and analysis. The studies examined a range of programs delivered in diverse settings. Most studies had mixed-gender and predominately African-American research samples (70% and 51%, respectively). Randomized controlled trials accounted for the large majority (87%) of included studies. Most studies (76%) included multiple follow-ups, with sample sizes ranging from 62 to 5,244. Analysis of the study impact findings identified 31 programs with evidence of effectiveness. Conclusions: Research conducted since the late 1980s has identified more than two dozen teen pregnancy and STI prevention programs with evidence of effectiveness. Key strengths of this research are the large number of randomized controlled trials, the common use of multiple follow-up periods, and attention to a broad range of programs delivered in diverse settings. Two main gaps are a lack of replication studies and the need for more research on Latino youth and other high-risk populations. In addressing these gaps, researchers must overcome common limitations in study design, analysis, and reporting that have negatively affected prior research. © 2014 Society for Adolescent Health and Medicine. All rights reserved. |

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| **Reference** | Harden et al., 2006 |
| **score** | 4 |
| **rating** | high |
| **Published Year** | 2006 |
| **Abstract** | This report presents the findings from a systematic review of the research evidence relating to teenage pregnancy, parenting and social exclusion. It contributes a new focus to the wealth of existing research on teenage pregnancy by locating it within the context of social disadvantage and exclusion. The review systematically examines research relating to policy initiatives aimed at tackling the social exclusion associated with unintended teenage pregnancy and young parenthood. It concludes that there are strong grounds for investing in early childhood and youth development programmes as strategies for reducing unintended teenage pregnancy rates. Happiness, enjoyment of school and ambition can all help to delay early parenthood. The available research evidence also points both to daycare and to education and career development programmes as promising ways of supporting young parents. Holistic support programmes appear to be appropriate but have not yet been shown to be effective. However, studies of young people’s views suggest many important research gaps. These include the development and evaluation of policies to promote young people’s involvement in schooling, further education and training, and to support families experiencing problems linked with social disadvantage and poverty. |

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| **Reference** | Hieftje et al., 2013 |
| **score** | 4 |
| **rating** | high |
| **Published Year** | 2013 |
| **Abstract** | Little research has been done on the efficacy of electronic media–based interventions, especially on their effect on health or safety behavior. The current review systematically identified and evaluated electronic media–based interventions that focused on promoting health and safety behavior change in youth.To assess the type and quality of the studies evaluating the effects of electronic media–based interventions on health and safety behavior change.Studies were identified from searches in MEDLINE (1950 through September 2010) and PsycINFO (1967 through September 2010). The review included published studies of interventions that used electronic media and focused on changes in behavior related to health or safety in children aged 18 years or younger.Nineteen studies met the criteria and focused on at least 1 behavior change outcome. The focus was interventions related to physical activity and/or nutrition in 7 studies, on asthma in 6, safety behaviors in 3, sexual risk behaviors in 2, and diabetes mellitus in 1. Seventeen studies reported at least 1 statistically significant effect on behavior change outcomes, including an increase in fruit, juice, or vegetable consumption; an increase in physical activity; improved asthma self-management; acquisition of street and fire safety skills; and sexual abstinence. Only 5 of the 19 studies were rated as excellent.Our systematic review suggests that interventions using electronic media can improve health and safety behaviors in young persons, but there is a need for higher-quality, rigorous interventions that promote behavior change. |

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| **Reference** | Jackson et al., 2012 |
| **score** | 4 |
| **rating** | high |
| **Published Year** | 2012 |
| **Abstract** | ABSTRACT Aims? To identify and assess the effectiveness of experimental studies of interventions that report on multiple risk behaviour outcomes in young people. Methods? A systematic review was performed to identify experimental studies of interventions |

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| **Reference** | Johnson et al., 2011 |
| **score** | 4 |
| **rating** | high |
| **Published Year** | 2011 |
| **Abstract** | To provide an updated review of the efficacy of behavioral interventions to reduce sexual risk of human immunodeficiency virus (HIV) among adolescents.We searched electronic databases, leading public health journals, and the document depository held by the Synthesis of HIV/AIDS Risk Reduction Project. Studies that fulfilled the selection criteria and were available as of December 31, 2008, were included.Studies that investigated any behavioral intervention advocating sexual risk reduction for HIV prevention, sampled adolescents (age range, 11-19 years), measured a behavioral outcome relevant to sexual risk, and provided sufficient information to calculate effect sizes.Data from 98 interventions (51 240 participants) were derived from 67 studies, dividing for qualitatively different interventions and gender when reports permitted it.Condom use, sexual frequency, condom use skills, interpersonal communication skills, condom acquisition, and incident sexually transmitted infections (STIs).Relative to controls, interventions succeeded at reducing incident STIs, increasing condom use, reducing or delaying penetrative sex, and increasing skills to negotiate safer sex and to acquire prophylactic protection. Initial risk reduction varied depending on sample and intervention characteristics but did not decay over time.Comprehensive behavioral interventions reduce risky sexual behavior and prevent transmission of STIs. Interventions are most successful to the extent that they deliver intensive content.Arch Pediatr Adolesc Med. 2011;165(1):77-84--> |

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| **Reference** | Kim and Free 2008 |
| **score** | 4 |
| **rating** | high |
| **Published Year** | 2008 |
| **Abstract** | CONTEXT: Peer-led interventions have become a popular method of providing sexual health education to adolescents, but the efficacy of this approach and the methodological quality of recent trials have not been systematically reviewed. METHODS: Electronic and hand searches were conducted to identify quasi-randomized and randomized controlled trials of peer-led adolescent sexual health education published from 1998 to 2005. Studies were eligible if they had an appropriate comparison group, provided preintervention and postintervention data, and reported all outcomes. Study results were summarized and, where appropriate, pooled; in addition, 10 aspects of studies' methodological quality were assessed. RESULTS: Thirteen articles met the inclusion criteria. Pooled, adjusted results from seven trials that examined the effects of peer-led interventions on condom use at last sex found no overall benefit (odds ratio, 1.0). None of the three trials that assessed consistent condom use found a benefit. One study reported a reduced risk of chlamydia (0.2), but another found no impact on STD incidence. One study found that young women (but not young men) who received peer-led education were more likely than nonrecipients to have never had sex. Most interventions produced improvements in knowledge, attitudes and intentions. Only three studies fulfilled all 10 of the assessed quality criteria; two others met nine criteria. CONCLUSIONS: Despite promising results in some trials, overall findings do not provide convincing evidence that peer-led education improves sexual outcomes among adolescents. Future trials should build on the successful trials conducted to date and should strive to fulfill existing quality criteria. |

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| **Reference** | Lin et al., 2008 |
| **score** | 4 |
| **rating** | high |
| **Published Year** | 2008 |
| **Abstract** | Background: Despite advances in prevention and treatment, sexually transmitted infections (STIs) remain an important cause of morbidity and mortality in the United States. Purpose: To systematically review the evidence for behavioral counseling interventions to prevent STIs in adolescents and adults (nonpregnant and pregnant). Data Sources: English-language articles in MEDLINE, PsycINFO, the Centers for Disease Control and Prevention's Prevention Synthesis Research Project database, and Cochrane databases (1988 through December 2007), supplemented with expert recommendations and the bibliographies of previous systematic reviews. Study Selection: Reviewers included 21 articles representing 15 fair- or good-quality randomized, controlled trials that evaluated behavioral counseling interventions feasible in primary care and 1 fair-quality and 1 good-quality controlled trial with study samples representative of primary care populations in English-speaking countries. Comparative effectiveness trials that did not include a true control group were excluded. Data Extraction: Investigators abstracted, critically appraised, and synthesized 21 articles that met inclusion criteria. Data Synthesis: Most evidence suggests a modest reduction in STIs at 12 months among high-risk adults receiving multiple intervention sessions and among sexually active adolescents. Evidence also suggested that these interventions increase adherence to treatment recommendations for women in STI clinics and general contraceptive use in male adolescents and decrease nonsexual risky behavior and pregnancy in sexually active female adolescents. No evidence of substantial behavioral or biological harms for risk reduction counseling was found. Limitation: Significant clinical heterogeneity in study populations, interventions, and measurement of outcomes limited the reviewers' ability to meta-analyze trial results and to suggest important intervention components. Conclusion: Good-quality evidence suggests that behavioral counseling interventions with multiple sessions conducted in STI clinics and primary care effectively reduces STI incidence in "at-risk" adult and adolescent populations. Additional trial evidence is needed for both lower-intensity behavioral counseling interventions and lowerrisk patient populations. © 2008 American College of Physicians. |

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| **Reference** | Lopez et al., 2009 |
| **score** | 4 |
| **rating** | high |
| **Published Year** | 2009 |
| **Abstract** | Background: Theories and models help explain how behavior change occurs. We systematically reviewed randomized controlled trials that examined theory-based interventions for improving contraceptive use. Study Design: We searched electronic databases for eligible trials. Primary outcomes included pregnancy and contraceptive use. We calculated the odds ratio for dichotomous outcomes and the mean difference for continuous data. Results: Of 14 included trials, 10 showed positive results for a theory-based group: 2 of 10 studies with pregnancy or birth data, 4 of 9 addressing contraceptive use (for contraception) and 5 of 9 with condom use (to prevent HIV/sexually transmitted infections). An experimental group had favorable results for six of seven trials based on Social Cognitive Theory, two based on other social cognition models and two using motivational interviewing. Most interventions focused on adolescents and involved multiple sessions. Conclusions: Effects were not consistent across outcomes and comparisons. The field could benefit from thorough use of single theories and better reporting on intervention implementation. © 2009 Elsevier Inc. All rights reserved. |

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| **Reference** | Lopez et al., 2016a |
| **score** | 4 |
| **rating** | high |
| **Published Year** | 2016 |
| **Abstract** | The explicit use of theory in research helps expand the knowledge base. Theories and models have been used extensively in HIV-prevention research and in interventions for preventing sexually transmitted infections (STIs). The health behavior field uses many theories or models of change. However, educational interventions addressing contraception often have no stated theoretical base. Review randomized controlled trials (RCTs) that tested a theoretical approach to inform contraceptive choice; encourage contraceptive use; or promote adherence to, or continuation of, a contraceptive regimen. We searched computerized databases for trials that tested a theory-based intervention for improving contraceptive use (MEDLINE, POPLINE, CENTRAL, PsycINFO, EMBASE, ClinicalTrials.gov, and ICTRP). We also wrote to researchers to find other trials. Trials tested a theory-based intervention for improving contraceptive use. We excluded trials focused on high-risk groups and preventing sexually transmitted infections or HIV. Interventions addressed the use of one or more contraceptive methods for contraception. The reports provided evidence that the intervention was based on a specific theory or model. The primary outcomes were pregnancy, contraceptive choice, initiating or changing contraceptive use, contraceptive regimen adherence, and contraception continuation. The primary author evaluated abstracts for eligibility. Two authors extracted data from included studies. We calculated the odds ratio for dichotomous outcomes. No meta-analysis was conducted due to intervention differences. Fourteen RCTs met our inclusion criteria. In 2 of 10 trials with pregnancy or birth data, a theory-based group showed better results. Four of 10 trials with contraceptive use data (other than condoms) showed better outcomes in an experimental group. For condom use, a theory-based group had favorable results in three of eight trials. Social Cognitive Theory was the main theoretical basis for five trials, of which three showed positive results. Two based on other social cognition models had favorable results, as did two of four focused on motivational interviewing. Thirteen trials provided multiple sessions or contacts. Of seven effective interventions, five targeted adolescents, including four with group sessions. Three effective trials had individual sessions. Seven trials were rated as having high or moderate quality; three of those had favorable results. Family planning researchers and practitioners could adapt the effective interventions. Reproductive health needs high-quality research on behavior change, especially for clinical and low-resource settings. More thorough use of single theories would help, as would better reporting on research design and intervention implementation. |

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| **Reference** | Lopez et al., 2016 |
| **score** | 4 |
| **rating** | high |
| **Published Year** | 2016 |
| **Abstract** | Background: Young women, especially adolescents, often lack access to modern contraception. Reasons vary by geography and regional politics and culture. The projected 2015 birth rate in 'developing' regions was 56 per 1000 compared with 17 per 1000 for 'developed' regions. Objectives: To identify school-based interventions that improved contraceptive use among adolescents Search methods: Until 6 June 2016, we searched for eligible trials in PubMed, CENTRAL, ERIC, Web of Science, POPLINE, ClinicalTrials.gov and ICTRP. Selection criteria: We considered randomized controlled trials (RCTs) that assigned individuals or clusters. The majority of participants must have been 19 years old or younger. The educational strategy must have occurred primarily in a middle school or high school. The intervention had to emphasize one or more effective methods of contraception. Our primary outcomes were pregnancy and contraceptive use. Data collection and analysis: We assessed titles and abstracts identified during the searches. One author extracted and entered the data into RevMan; a second author verified accuracy. We examined studies for methodological quality. For unadjusted dichotomous outcomes, we calculated the Mantel-Haenszel odds ratio (OR) with 95% confidence interval (CI). For cluster randomized trials, we used adjusted measures, e.g. OR, risk ratio, or difference in proportions. For continuous outcomes, we used the adjusted mean difference (MD) or other measures from the models. We did not conduct meta-analysis due to varied interventions and outcome measures. Main results: The 11 trials included 10 cluster RCTs and an individually randomized trial. The cluster RCTs had sample sizes from 816 to 10,954; the median number of clusters was 24. Most trials were conducted in the USA and UK; one was from Mexico and one from South Africa. We focus here on the trials with moderate quality evidence and an intervention effect. Three addressed preventing pregnancy and HIV/STI through interactive sessions. One trial provided a multifaceted two-year program. Immediately after year one and 12 months after year two, the intervention group was more likely than the standard-curriculum group to report using effective contraception during last sex (reported adjusted ORs 1.62 ï¿½ standard error (SE) 0.22) and 1.76 ï¿½ SE 0.29), condom use during last sex (reported adjusted ORs 1.91 ï¿½ SE 0.27 and 1.68 ï¿½ SE 0.25), and less frequent sex without a condom in the past three months (reported ratios of adjusted means 0.50 ï¿½ SE 0.31 and 0.63 ï¿½ SE 0.23). Another trial compared multifaceted two-year programs on sexual risk reduction and risk avoidance (abstinence-focused) versus usual health education. At 3 months, the risk reduction group was less likely than the usual-education group to report no condom use at last intercourse (reported adjusted OR 0.67, 95% CI 0.47 to 0.96) and sex without a condom in the last three months (reported adjusted OR 0.59, 95% CI 0.36 to 0.95). At 3 and after 15 months, the risk avoidance group was also less likely than the usual-education group to report no condom use at last intercourse (reported adjusted ORs 0.70, 95% CI 0.52 to 0.93; and 0.61, 95% CI 0.45 to 0.85). At the same time points, the risk reduction group had a higher score than the usual-education group for condom knowledge. The third trial provided a peer-led program with eight interactive sessions. At 17 months, the intervention group was less likely than the teacher-led group to report oral contraceptive use during last sex (OR 0.57, 95% CI 0.36 to 0.91). This difference may not have been significant if the investigators had adjusted for the clustering. At 5 and 17 months, the peer-led group had a greater mean increase in knowledge of HIV and pregnancy prevention compared with the control group. An additional trial showed an effect on knowledge only. The group with an emergency contraception (EC) session was more likely than the group without the EC unit to know the time limits for using hormonal EC (pill) and the non-hormonal IUD as EC. Authors' conclusions: Since most trials addressed preventing STI/HIV and pregnancy, they emphasized condom use. However, several studies covered a range of contraceptive methods. The overall quality of evidence was low. Main reasons for downgrading the evidence were having limited information on intervention fidelity, analyzing a subsample rather than all those randomized, and having high losses. ï¿½ 2016 The Cochrane Collaboration. |

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| **Reference** | Maravilla et al., 2016 |
| **score** | 4 |
| **rating** | high |
| **Published Year** | 2016 |
| **Abstract** | Intervention by community health workers (CHWs) is believed to prevent repeated childbearing among teenagers. This review investigated the effectiveness of CHWs in reducing repeated pregnancies and births among adolescents aged <20 years, 2 years after the delivery of their first child. Through electronic database and hand searching, experimental and/or observational studies were screened with their results undergoing systematic review and meta-analyses. Subgroup analyses were performed to further assess how study characteristics affected the pooled estimates and heterogeneity. A total of 11 eligible articles, from January 1980 to May 2015, were included. Seven studies evaluated repeated births and eight measured repeated pregnancies. Studies showed relevant disparities in terms of selected methodological aspects and program characteristics. Although most studies (n = 9) were either of “strong” or of “moderate” quality, only two of five finding a significant reduction exhibited a high level of quality as the other three failed to adjust results for confounders. Random effects modeling revealed an overall 30% decrease in repeated adolescent births (odds ratio =.70, confidence interval =.49–.99) among CHW-visited areas relative to nonvisited sites. On the other hand, no significant association was detected in terms of repeated pregnancies (odds ratio =.96, confidence interval =.70–1.28). © 2016 The Society for Adolescent Health and Medicine |

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| **Reference** | Marseille et al., 2018 |
| **score** | 4 |
| **rating** | high |
| **Published Year** | 2018 |
| **Abstract** | School-based programs have been a mainstay of youth pregnancy prevention efforts in the USA. We conducted a systematic review and meta-analysis to assess their effectiveness. Eligible studies evaluated the effect on pregnancy rates of programs delivered in elementary, middle, or high schools in the USA and Canada, published between January 1985 and September 2016. The primary outcome was pregnancy; secondary outcomes were delay in sexual initiation, condom use, and oral contraception use. Randomized controlled trials (RCTs) and non-RCTs with comparator groups were eligible. We developed a comprehensive search strategy, applied to major bibliographic databases, article bibliographies, gray literature, and contact with authors. We calculated risk ratios (RR) with 95% confidence intervals (CI) for each outcome and pooled data in random effects meta-analysis. We used Grading of Recommendations Assessment, Development and Evaluation (GRADE) to assess evidence quality. Ten RCTs and 11 non-RCTs conducted from 1984 to 2016 yielded 30 unique pooled comparisons for pregnancy, of which 24 were not statistically significant. Six showed statistically significant changes in pregnancy rates: two with increased risk (RR 1.30, 95% CI 1.02–1.65; and RR 1.39, 95% CI 1.10–1.75) and four with decreased risk ranging from RR 0.56, 95% CI 0.41–0.77, to RR 0.75, 95% CI 0.58–0.96. All studies were at high risk of bias, and the quality of evidence was low or very low. Identified evidence indicated no consistent difference in rates of pregnancies between intervention recipients and controls. © 2018, Society for Prevention Research. |

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| **Reference** | Matthias, 2002 |
| **score** | 4 |
| **rating** | high |
| **Published Year** | 2002 |
| **Abstract** | Evidence strongly supports enhanced access and utilisation of primary care and mental health services within primary care, by young people through youth-specific services. primary care can reduce emergency department use. It suggests youth-specific Currently, there is insufficient evidence to demonstrate changes in physical or mental health status through youth-specific primary health care.There is, therefore, an urgent need for further New Zealand based and international research to determine the effectiveness of youth-specific primary health services. It should address limitations in study design and types of evaluation discussed in this review.  These should include appropriate matched comparator groups. Importantly, studies are needed that evaluate health outcomes of attendance at youth-specific primary health services. If funds are invested into programmes, it is essential to know what effect these have on health status |

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| **Reference** | Meyer et al., 2011 |
| **score** | 4 |
| **rating** | high |
| **Published Year** | 2011 |
| **Abstract** | Objective: The purpose of this review is to summarize the findings of randomized controlled trials assessing the advance provision of emergency contraception (EC) to women 24 years of age or younger. Design: We conducted a comprehensive search of the PubMed database from 1950 to November 11, 2009. This review includes seven studies that randomly assigned women aged 24 and younger to advance provision of EC or a control group. Results: All studies reviewed found that women assigned to advance provision were more likely to use EC, though not all reached statistical significance. Furthermore, studies assessing time to EC use (N = 4) found that those with advance provision used EC sooner following intercourse. Most studies found that women assigned to advance provision of EC did not engage in more sexual risk taking behaviors (assessed by reported number of sexual partners, number of episodes of unprotected intercourse, and acquisition of sexually transmitted infections) or switch to less reliable contraceptive methods. Despite increased use and decreased time to use, women who were provided EC in advance did not report significantly lower pregnancy rates. Conclusions: The existing literature suggests that among women 24 years of age or younger, advance provision has a positive impact on use and time to use of EC. Most findings indicate that increased use of EC does not have significant negative effects for ongoing contraceptive use or sexual risk taking behaviors. Despite increased use, advanced provision of EC has not been associated with a significant corresponding decrease in pregnancy. © 2011 North American Society for Pediatric and Adolescent Gynecology. |

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| **Reference** | O'Connor et al., 2014 |
| **score** | 4 |
| **rating** | high |
| **Published Year** | 2014 |
| **Abstract** | Sexually transmitted infections (STIs) are common and preventable.To update a previous systematic review about the benefits and harms of sexual risk-reduction counseling to prevent STIs for the U.S. Preventive Services Task Force.Selected databases from January 2007 through October 2013, manual searches of references lists and gray literature, and studies from the previous review.English-language fair- or good-quality trials conducted in adolescents or adults.One investigator abstracted data and a second checked the abstraction. Study quality was dual-reviewed.31 trials were included: 16 (n = 56 110) were newly published and 15 (n = 14 214) were from the previous review. Most trials targeted persons at increased risk for STIs based on sociodemographic characteristics, risky sexual behavior, or history of an STI. High-intensity (&gt;2 hours) interventions reduced STI incidence in adolescents (odds ratio, 0.38 [95% CI, 0.24 to 0.60]) and adults (odds ratio, 0.70 [CI, 0.56 to 0.87]). Lower-intensity interventions were generally not effective in adults, but some approaches were promising. Although moderate-intensity interventions may be effective in adolescents, data were very sparse. Reported behavioral outcomes were heterogeneous and most likely to show a benefit with high-intensity interventions at 6 months or less. No consistent evidence was found that sexual risk-reduction counseling was harmful.Low-risk populations and male adolescents were underrepresented. Reliability of self-reported behavioral outcomes was unknown.High-intensity counseling on sexual risk reduction can reduce STIs in primary care and related settings, especially in sexually active adolescents and in adults at increased risk for STIs.Agency for Healthcare Research and Quality. |

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| **Reference** | Rodriguez et al., 2013 |
| **score** | 4 |
| **rating** | high |
| **Published Year** | 2013 |
| **Abstract** | Background: Emergency contraceptive pills (ECPs) are an underutilized means to reduce unintended pregnancy. Advance provision of ECPs may increase timely use, thereby decreasing risk of unintended pregnancy. Study Design: We searched MEDLINE and EMBASE through February 2012 for randomized, controlled trials (RCTs) pertaining to safety and efficacy of advance provision of ECP. The quality of each individual study was evaluated using the United States Preventive Services Task Force evidence grading system. Results: The search strategy identified 714 articles. Seventeen papers reported on safety or efficacy of advance ECPs in adult or adolescent women. Any use of ECPs was two to seven times greater among women who received an advanced supply of ECP. However, a summary estimate (RR 0.90, 95% CI 0.69-1.18) of four RCTs did not demonstrate a significant reduction in unintended pregnancy over 12 months when advance provision was compared with standard provision of ECPs. Patterns of contraceptive use, pregnancy rates and incidence of sexually transmitted infections did not vary between treatment and control groups in the majority of studies among either adults or adolescents. Conclusion: Available evidence supports the safety of advance provision of ECPs. Efficacy of advance provision compared with standard provision of ECPs in reducing unintended pregnancy rates at the population level has not been demonstrated. © 2013 Elsevier Inc. |

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| **Reference** | SmithBattle et al., 2017 |
| **score** | 4 |
| **rating** | high |
| **Published Year** | 2017 |
| **Abstract** | The purpose of this study was to perform an umbrella review of meta-analyses of intervention studies designed to improve outcomes of pregnant or parenting teenagers. An extensive search retrieved nine reports which provided 21 meta-analyses analyses. Data were extracted by two reviewers. Methodological quality was assessed using the AMSTAR Instrument. Most effect sizes were small but high quality studies showed significant outcomes for reduced low birth weight (RR = 0.60), repeat pregnancies/births (OR = 0.47–0.62), maternal education (OR = 1.21–1.83), and maternal employment (OR = 1.26). Several parenting outcomes (parent-child teaching interaction post-intervention [SMD = -0.91] and at follow-up [SMD = -1.07], and parent-child relationship post-intervention [SMD = -0.71] and at follow-up [SMD = -0.90]) were significant, but sample sizes were very small. Many reports did not include moderator analyses. Behavioral interventions offer limited resources and occur too late to mitigate the educational and social disparities that precede teen pregnancy. Future intervention research and policies that redress the social determinants of early childbearing are recommended. © 2017 |

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| **Reference** | Steenland et al., 2013 |
| **score** | 4 |
| **rating** | high |
| **Published Year** | 2013 |
| **Abstract** | Background: We conducted a systematic review to assess whether follow-up visits or contacts after a woman begins using contraception improve method continuation and correct use. Study Design: We searched the PubMed database for all peer-reviewed articles in any language published from database inception through May 2012 that examined the effect of a structured follow-up schedule of visits or contacts on contraceptive use. We included studies that compared women who initiated a method of contraception with a certain follow-up schedule compared to women with a different follow-up schedule or no follow-up at all. To be included, studies must have compared groups on a measure of contraceptive use (e.g., pregnancy, correct use, consistent use, method discontinuation including expulsion). Though not ideally suited to answer our review question, studies in which women used a variety of contraceptive methods but results were not stratified by method type were included. Results: Four studies met our inclusion criteria (Level I, poor to II-2, poor). Two studies examined the effect of a specific follow-up visit schedule on intrauterine device (IUD) continuation: one examining frequency of visits and one examining the timing of the first follow-up visit. Women with more frequent follow-up visits did not have a statistically significant difference in proportion of removals for medical reasons compared with women who had fewer follow-up visits; among women who had their IUDs removed for medical reasons, those who had more frequent follow-up visits had a longer mean time of use prior to removal. The other study found more removals and shorter continuation among women with a follow-up visit at 1 week compared to women with a follow-up visit at 1 month after IUD insertion (no statistical tests reported). Two studies examined the effect of follow-up phone calls compared to no follow-up phone calls after an initial family planning visit among adolescents initiating a variety of contraceptive methods. Neither of the two studies found any differences in method continuation or correct use between study groups. Conclusions: It is difficult to determine what effect, if any, follow-up visits or contacts have on contraceptive method continuation or correct use. Few studies were identified, and those that were identified were mostly of poor quality, were not method specific and had either poor patient compliance with follow-up visits or poor phone contact completion rates. © 2013 Elsevier Inc. All rights reserved. |

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| **Reference** | Sutton et al., 2014 |
| **score** | 4 |
| **rating** | high |
| **Published Year** | 2014 |
| **Abstract** | PurposeWe reviewed human immunodeficiency virus (HIV) and sexually transmitted infection (STI)- behavioral interventions implemented with disproportionately affected black/African-American and Hispanic/Latino youth and designed to improve parent-child communications about sex. We compared their effectiveness in improving sex-related behavior or cognitive outcomes.MethodsA search of electronic databases identified peer-reviewed studies published between 1988 and 2012. Eligible studies were U.S.-based parent-child communication interventions with active parent components, experimental and quasiexperimental designs, measurement of youth sexual health outcomes, and enrollment of =50% black/African-American or Hispanic/Latino youth. We conducted systematic, primary reviews of eligible papers to abstract data on study characteristics and youth outcomes.ResultsFifteen studies evaluating 14 interventions were eligible. Although youth outcome measures and follow-up times varied, 13 of 15 studies (87%) showed at least one significantly improved youth sexual health outcome compared with controls (p < .05). Common components of effective interventions included joint parent and child session attendance, promotion of parent/family involvement, sexuality education for parents, developmental and/or cultural tailoring, and opportunities for parents to practice new communication skills with their youth.ConclusionsParent-child communication interventions that include parents of youth disproportionately affected by HIV/STIs can effectively reduce sexual risk for youth. These interventions may help reduce HIV/STI-related health disparities and improve sexual health outcomes. |

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| **Reference** | Tang et al., 2012 |
| **score** | 4 |
| **rating** | high |
| **Published Year** | 2012 |
| **Abstract** | Women between the ages of 15 and 24 years have high rates of unintended pregnancy; over half of women in this age group want to avoid pregnancy. However, women under age 25 years have been found to have higher typical contraceptive failure rates within the first 12 months of use than older women. High discontinuation rates may also be a problem in this population. Concern that adolescents and young women will not find hormonal or intrauterine contraceptives acceptable or effective might deter healthcare providers from recommending these contraceptive methods.  This review examined randomized controlled trials of hormonal or intrauterine methods used for contraception in women aged 25 years and younger. In February 2012, we searched the computerized databases Cochrane Register of Controlled Trials (CENTRAL), MEDLINE, EMBASE, POPLINE, CINAHL, and LILACS for randomized controlled trials that compared hormonal or intrauterine methods used for contraception in women aged 25 years and younger. We also searched for current trials via ClinicalTrials.gov and the World Health Organization International Clinical Trials Registry Platform (ICTRP). We considered all randomized controlled trials in any language that reported the contraceptive failure rates for hormonal or intrauterine contraceptive methods, when compared to another contraceptive method, for women aged 25 years and younger. The other contraceptive method could be another intrauterine method, another hormonal method, or a non-hormonal method. Treatment duration must have been at least three months. The first author extracted the data and entered the information into RevMan. Another author performed an independent data extraction and verified the initial entry. Because of disparate contraceptive exposures, we were not able to combine the studies in meta-analysis. Four trials met the inclusion criteria. The trials compared the combined oral contraceptive versus the transdermal contraceptive patch, the combined oral contraceptive versus the vaginal contraceptive ring, the combined oral contraceptive versus the levonorgestrel intrauterine system, and the levonorgestrel intrauterine system versus the copper T380A intrauterine device. Because of small numbers of participants, the trials were not informative regarding contraceptive efficacy. Data on continuation rates were also limited. In one of these trials, the levonorgestrel intrauterine system was found to have a similar 12-month continuation rate as the combined oral contraceptive (odds ratio (OR) 1.48; 95% CI 0.76 to 2.89). In that trial, a higher proportion of women discontinued the levonorgestrel intrauterine system because of pain (OR 14.62; 95% CI 0.81 to 263.16), whereas a higher proportion of women discontinued the combined oral contraceptive for personal reasons (OR 0.27; 95% CI 0.09 to 0.85). Current evidence is insufficient to compare contraceptive efficacy and continuation rates for hormonal and intrauterine methods in women aged 25 years and younger. Limited data suggests that the levonorgestrel intrauterine system may be an acceptable alternative to the combined oral contraceptive in this population. |

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| **Reference** | Tolli, 2012 |
| **score** | 4 |
| **rating** | high |
| **Published Year** | 2012 |
| **Abstract** | Peer education remains a popular strategy for health promotion and prevention, but evidence of its effectiveness is still limited. This article presents a systematic review of peer education interventions in the European Union that were published between January 1999 and May 2010. The objective of the review is to determine the effectiveness of peer education programs for human immunodeficiency virus (HIV) prevention, adolescent pregnancy prevention and promotion of sexual health among young people. Standardized methods of searching and data extraction were utilized and five studies were identified. Although a few statistically significant and non-significant changes were observed in the studies, it is concluded that, overall, when compared to standard practice or no intervention, there is no clear evidence of the effectiveness of peer education concerning HIV prevention, adolescent pregnancy prevention and sexual health promotion for young people in the member countries of the European Union. Further research is needed to determine factors that contribute to program effectiveness. © The Author 2012. Published by Oxford University Press. All rights reserved. |

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| **Reference** | Underhill et al., 2007[1]b |
| **score** | 4 |
| **rating** | high |
| **Published Year** | 2007 |
| **Abstract** | Background: Abstinence-only interventions promote sexual abstinence as the only means of preventing sexual acquisition of HIV; they do not promote safer-sex strategies (e.g., condom use). Although abstinence-only programs are widespread, there has been no internationally focused review of their effectiveness for HIV prevention in high-income countries. Objectives: To assess the effects of abstinence-only programs for HIV prevention in high-income countries. Search strategy: We searched 30 electronic databases (e.g., CENTRAL, PubMed, EMBASE, AIDSLINE, PsycINFO) ending February 2007. Cross-referencing, handsearching, and contacting experts yielded additional citations through April 2007. Selection criteria: We included randomized and quasi-randomized controlled trials evaluating abstinence-only interventions in high-income countries (defined by the World Bank). Interventions were any efforts to encourage sexual abstinence for HIV prevention; programs that also promoted safer-sex strategies were excluded. Results were biological and behavioral outcomes. Data collection and analysis: Three reviewers independently appraised 20,070 records and 326 full-text papers for inclusion and methodological quality; 13 evaluations were included. Due to heterogeneity and data unavailability, we presented the results of individual studies instead of conducting a meta-analysis. Main results: Studies involved 15,940 United States youth; participants were ethnically diverse. Seven programs were school-based, two were community-based, and one was delivered in family homes. Median final follow-up occurred 17 months after baseline. Results showed no indications that abstinence-only programs can reduce HIV risk as indicated by self-reported biological and behavioral outcomes. Compared to various controls, the evaluated programs consistently did not affect incidence of unprotected vaginal sex, frequency of vaginal sex, number of partners, sexual initiation, or condom use. One study found a significantly protective effect for incidence of recent vaginal sex (n=839), but this was limited to short-term followup, countered by measurement error, and offset by six studies with non-significant results (n=2615). One study found significantly harmful effects for STI incidence (n=2711), pregnancy incidence (n=1548), and frequency of vaginal sex (n=338); these effects were also offset by studies with non-significant findings. Methodological strengths included large samples, efforts to improve self-report, and analyses controlling for baseline values. Weaknesses included underutilization of relevant outcomes, underreporting of key data, self-report bias, and analyses neglecting attrition and clustered randomization. Authors' conclusions: Evidence does not indicate that abstinence-only interventions effectively decrease or exacerbate HIV risk among participants in high-income countries; trials suggest that the programs are ineffective, but generalizability may be limited to US youth. Should funding continue, additional resources could support rigorous evaluations with behavioral or biological outcomes. More trials comparing abstinence-only and abstinence-plus interventions are needed. Copyright © 2008 The Cochrane Collaboration. Published by John Wiley & Sons, Ltd. |

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| **Reference** | Underhill et al., 2007[1]a |
| **score** | 4 |
| **rating** | high |
| **Published Year** | 2007 |
| **Abstract** | Objective: To assess the effects of sexual abstinence only programmes for HIV prevention among participants in high income countries. Design: Systematic review. Data sources: 30 electronic databases without linguistic or geographical restrictions to February 2007, contacts with experts, hand searching, and cross referencing. Review methods: Two reviewers independently applied inclusion criteria and extracted data, resolving disagreements by consensus and referral to a third reviewer. Randomised and quasirandomised controlled trials of abstinence only programmes in any high income country were included. Programmes aimed to prevent HIV only or both pregnancy and HIV. Trials evaluated biological outcomes (incidence of HIV, sexually transmitted infection, pregnancy) or behavioural outcomes (incidence or frequency of unprotected vaginal, anal, or oral sex; incidence or frequency of any vaginal, anal, or oral sex; number of partners; condom use; sexual initiation). Results: The search identified 13 trials enrolling about 15 940 US youths. All outcomes were self reported. Compared with various controls, no programme affected incidence of unprotected vaginal sex, number of partners, condom use, or sexual initiation. One trial observed adverse effects at short term follow-up (sexually transmitted infections, frequency of sex) and long term follow-up (sexually transmitted infections, pregnancy) compared with usual care, but findings were offset by trials with non-significant results. Anothertrial observed a protective effect on incidence of vaginal sex compared with usual care, but this was limited to short term follow-up and countered by trials with non-significant findings. Heterogeneity prevented meta-analysis. Conclusion: Programmes that exclusively encourage abstinence from sex do not seem to affect the risk of HIV infection in high income countries, as measured by self reported biological and behavioural outcomes. |

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| **Reference** | Underhill et al., 2007[2]a |
| **score** | 4 |
| **rating** | high |
| **Published Year** | 2007 |
| **Abstract** | Background: Abstinence-plus (comprehensive) interventions promote sexual abstinence as the best means of preventing HIV, but also encourage condom use and other safer-sex practices. Some critics of abstinence-plus programs have suggested that promoting safer sex along with abstinence may undermine abstinence messages or confuse program participants; conversely, others have suggested that promoting abstinence might undermine safer-sex messages. We conducted a systematic review to investigate the effectiveness of abstinence-plus interventions for HIV prevention among any participants in high-income countries as defined by the World Bank. Methods and Findings: Cochrane Collaboration systematic review methods were used. We included randomized and quasi-randomized controlled trials of abstinence-plus programs for HIV prevention among any participants in any high-income country; trials were included if they reported behavioural or biological outcomes. We searched 30 electronic databases without linguistic or geographical restrictions to February 2007, in addition to contacting experts, hand-searching conference abstracts, and cross-referencing papers. After screening 20,070 abstracts and 325 full published and unpublished papers, we included 39 trials that included approximately 37,724 North American youth. Programs were based in schools (10), community facilities (24), both schools and community facilities (2), health care facilities (2), and family homes (1). Control groups varied. All outcomes were self-reported. Quantitative synthesis was not possible because of heterogeneity across trials in programs and evaluation designs. Results suggested that many abstinence-plus programs can reduce HIV risk as indicated by self-reported sexual behaviours. Of 39 trials, 23 found a protective program effect on at least one sexual behaviour, including abstinence, condom use, and unprotected sex (baseline n = 19,819). No trial found adverse program effects on any behavioural outcome, including incidence of sex, frequency of sex, sexual initiation, or condom use. This suggests that abstinence-plus approaches do not undermine program messages encouraging abstinence, nor do they undermine program messages encouraging safer sex. Findings consistently favoured abstinence-plus programs over controls for HIV knowledge outcomes, suggesting that abstinence-plus programs do not confuse participants. Results for biological outcomes were limited by floor effects. Three trials assessed self-reported diagnosis or treatment of sexually transmitted infection; none found significant effects. Limited evidence from seven evaluations suggested that some abstinence-plus programs can reduce pregnancy incidence. No trial observed an adverse biological program effect. Conclusions: Many abstinence-plus programs appear to reduce short-term and long-term HIV risk behaviour among youth in high-income countries. Programs did not cause harm. Although generalisability may be somewhat limited to North American adolescents, these findings have critical implications for abstinence-based HIV prevention policies. Suggestions are provided for improving the conduct and reporting of trials of abstinence-plus and other behavioural interventions to prevent HIV. © 2007 Underhill et al. |

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| **Reference** | Underhill et al., 2007[2]b |
| **score** | 4 |
| **rating** | high |
| **Published Year** | 2008 |
| **Abstract** | Background: Abstinence-plus interventions promote sexual abstinence as the best means of preventing acquisition of HIV, but also encourage safer-sex strategies (eg condom use) for sexually active participants. Objectives: To assess the effects of abstinence-plus programs for HIV prevention in high-income countries. Search strategy: We searched 30 electronic databases (eg CENTRAL, PubMed, EMBASE, AIDSLINE, PsycINFO) ending February 2007. Cross-referencing, hand-searching, and contacting experts yielded additional citations. Selection criteria: We included randomized and quasi-randomized controlled trials evaluating abstinence-plus interventions in high-income countries (as defined by the World Bank). Interventions were any efforts that encouraged sexual abstinence as the best means of HIV prevention, but also promoted safer sex. Results were self-reported biological outcomes, behavioral outcomes, and HIV knowledge. Data collection and analysis: Three reviewers independently appraised 20070 citations and 325 full-text papers for inclusion and methodological quality; 39 evaluations were included. Due to heterogeneity and data unavailability, we presented the results of individual studies instead of a meta-analysis. Main results: Studies enrolled 37724 North American youth; participants were ethnically diverse. Programs took place in schools (10), community facilities (24), both schools and community facilities (2), healthcare facilities (2), and family homes (1). Median final follow-up occurred 12 months after baseline. Results showed no evidence that abstinence-plus programs can affect self-reported sexually transmitted infection (STI) incidence, and limited evidence that programs can reduce self-reported pregnancy incidence. Results for behavioral outcomes were promising; 23 of 39 evaluations found a significantly protective intervention effect for at least one behavioral outcome. Consistently favorable program effects were found for HIV knowledge. No adverse effects were observed. Several evaluations found that one version of an abstinence-plus program was more effective than another, suggesting that more research into intervention mechanisms is warranted. Methodological strengths included large samples and statistical controls for baseline values. Weaknesses included under-utilization of relevant outcomes, self-report bias, and analyses neglecting attrition and clustered randomization. Authors' conclusions: Many abstinence-plus programs appear to reduce short-term and long-term HIV risk behavior among youth in high-income countries. Evidence for program effects on biological measures is limited. Evaluations consistently show no adverse program effects for any outcomes, including the incidence and frequency of sexual activity. Trials comparing abstinence-only, abstinence-plus, and safer-sex interventions are needed. Copyright © 2008 The Cochrane Collaboration. Published by John Wiley & Sons, Ltd. |

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| **Reference** | Wakhisi et al., 2011 |
| **score** | 4 |
| **rating** | high |
| **Published Year** | 2011 |
| **Abstract** | The aim of this study was to determine the effectiveness of a social marketing approach in reduction of unintended teenage pregnancies. We identified studies undertaken between 1990 and 2008 through electronic searches of databases, manual searches of bibliographies, and consultations with experts. Twelve studies that met the inclusion criteria were selected for further analysis. Results showed variation in intervention effects across specified outcomes (reduction in unintended pregnancies, delayed sexual initiation, contraceptive use at last intercourse, knowledge of contraception and reproductive health, and self-efficacy to refuse unwanted sex). Of the 12 studies, 9 reported significant effects on at least one of the outcomes. Long-term interventions were generally more effective than short-term ones for most outcomes. The impact on male participants' sexual behavior was minimal in most studies. Overall, social marketing appears to be an effective approach in reducing teenage pregnancies and influencing sexual behavior change, but the evidence is limited to particular outcomes and context. There is, therefore, need for more primary studies specifically designed around social marketing principles for more robust evaluations. The minimal impact on male participants' behavior also warrants further investigation. |

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| **Reference** | Whitaker et al., 2016 |
| **score** | 4 |
| **rating** | high |
| **Published Year** | 2016 |
| **Abstract** | Background: The UK has one of the highest rates of teenage pregnancies in Western Europe. One-fifth of these are repeat pregnancies. Unintended conceptions can cause substantial emotional, psychological and educational harm to teenagers, often with enduring implications for life chances. Babies of teenage mothers have increased mortality and are at a significantly increased risk of poverty, educational underachievement and unemployment later in life, with associated costs to society. It is important to identify effective, cost-effective and acceptable interventions. Objectives: To identify who is at the greatest risk of repeat unintended pregnancies; which interventions are effective and cost-effective; and what the barriers to and facilitators of the uptake of these interventions are. Data sources: We conducted a multistreamed, mixed-methods systematic review informed by service user and provider consultation to examine worldwide peer-reviewed evidence and UK-generated grey literature to find and evaluate interventions to reduce repeat unintended teenage pregnancies. We searched the following electronic databases: MEDLINE and MEDLINE In-Process & Other Non-Indexed Citations, PsycINFO, Cumulative Index to Nursing and Allied Health Literature, The Cochrane Library (Cochrane Database of Systematic Reviews, Database of Abstracts of Reviews of Effects and the Health Technology Assessment Database), EMBASE (Excerpta Medica database), British Nursing Index, Educational Resources Information Center, Sociological Abstracts, Applied Social Sciences Index and Abstracts, BiblioMap (the Evidence for Policy and Practice Information and Co-ordinating Centre register of health promotion and public health research), Social Sciences Citation Index (supported by Web of Knowledge), Research Papers in Economics, EconLit (American Economic Association’s electronic bibliography), OpenGrey, Scopus, Scirus, Social Care Online, National Research Register, National Institute for Health Research Clinical Research Network Portfolio and Index to THESES. Searches were conducted in May 2013 and updated in June 2014. In addition, we conducted a systematic search of Google (Google Inc., Mountain View, CA, USA) in January 2014. Database searches were guided by an advisory group of stakeholders. Review methods: To address the topic’s complexities, we used a structured, innovative and iterative approach combining methods tailored to each evidence stream. Quantitative data (effectiveness, cost-effectiveness, risk factors and effect modifiers) were synthesised with reference to Cochrane guidelines for evaluating evidence on public health interventions. Qualitative evidence addressing facilitators of and barriers to the uptake of interventions, experience and acceptability of interventions was synthesised thematically. We applied the principles of realist synthesis to uncover theories and mechanisms underpinning interventions (what works, for whom and in what context). Finally, we conducted an overarching narrative of synthesis of evidence and gathered service user feedback. Results: We identified 8664 documents initially, and 816 in repeat searches. We filtered these to 12 randomised controlled trials (RCTs), four quasi-RCTs, 10 qualitative studies and 53 other quantitative studies published between 1996 and 2012. None of the RCTs was based in the UK. The RCTs evaluated an emergency contraception programme and psychosocial interventions. We found no evidence for effectiveness with regard to condom use, contraceptive use or rates of unprotected sex or use of birth control. Our primary outcome was repeat conception rate: the event rate was 132 of 308 (43%) in the intervention group versus 140 of 289 (48%) for the control goup, with a non-significant risk ratio (RR) of 0.92 [95% confidence interval (CI) 0.78 to 1.08]. Four studies reported subsequent birth rates: 29 of 237 (12%) events for the intervention arm versus 46 out of 224 (21%) for the control arm, with a RR of 0.60 (95% CI 0.39 to 0.93). Many repeat conceptions occurred in the context of pov rty, low expectations and aspirations, and negligible opportunities. Service user feedback suggested that there were specific motivations for many repeat conceptions, for example to replace loss or to please a partner. Realist synthesis highlighted that context, motivation, planning for the future and letting young women take control with connectedness and tailoring provide a conceptual framework for future research. Limitations: Included studies rarely characterised adolescent pregnancy as intended or unintended, that is interventions to reduce repeat conceptions rarely addressed whether or not pregnancies were intended. Furthermore, interventions were often not clearly defined, had multiple aims and did not indicate which elements were intended to address which aims. Nearly all of the studies were conducted in the USA and focused largely on African American or Hispanic and Latina American populations. Conclusions: We found no evidence to indicate that existing interventions to reduce repeat teenage pregnancy were effective; however, subsequent births were reduced by home-based interventions. Qualitative and realist evidence helped to explain gaps in intervention design that should be addressed. More theory-based, rigorously evaluated programmes need to be developed to reduce repeat teenage pregnancy in the UK. © Queen’s Printer and Controller of HMSO 2016. |

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| **Reference** | Widman et al., 2018 |
| **score** | 4 |
| **rating** | high |
| **Published Year** | 2018 |
| **Abstract** | Purpose: Technology-based interventions to promote sexual health have proliferated in recent years, yet their efficacy among youth has not been meta-analyzed. This study synthesizes the literature on technology-based sexual health interventions among youth. Methods: Studies were included if they (1) sampled youth ages 13–24; (2) utilized technology-based platforms; (3) measured condom use or abstinence as outcomes; (4) evaluated program effects with experimental or quasi-experimental designs; and (5) were published in English. Results: Sixteen studies with 11,525 youth were synthesized. There was a significant weighted mean effect of technology-based interventions on condom use (d =.23, 95% confidence interval [CI] [.12,.34], p <.001) and abstinence (d =.21, 95% CI [.02,.40], p =.027). Effects did not differ by age, gender, country, intervention dose, interactivity, or program tailoring. However, effects were stronger when assessed with short-term (1–5 months) than with longer term (greater than 6 months) follow-ups. Compared with control programs, technology-based interventions were also more effective in increasing sexual health knowledge (d =.40, p <.001) and safer sex norms (d =.15, p =.022) and attitudes (d =.12, p =.016). Conclusions: After 15 years of research on youth-focused technology-based interventions, this meta-analysis demonstrates their promise to improve safer sex behavior and cognitions. Future work should adapt interventions to extend their protective effects over time. © 2018 The Society for Adolescent Health and Medicine |

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| **Reference** | Wight et al., 2013 |
| **score** | 4 |
| **rating** | high |
| **Published Year** | 2013 |
| **Abstract** | PurposeTo assess the effectiveness of interventions involving parents or carers intended to improve the sexual health of their children.MethodsEleven databases were searched for evaluations of interventions with some parental involvement and with outcomes related to the sexual health of the parents' children. Studies had to be experimental, quasi-experimental, or of the before-and-after type. Results were analyzed in a narrative systematic review, taking account of methodological quality.ResultsWe identified adequately robust evaluations of 44 programs, delivered in diverse settings. In nearly all cases, the parenting component focused on improving parent–child communication about sex. In general, where measured, parent–child interaction and adolescents' knowledge and attitudes improved, but sexual behavior outcomes only improved in approximately half the studies. Three programs in which the parenting component made up at least one-fourth of the overall program were found, through randomized controlled trials, to modify some aspect of adolescents' sexual behavior. All programs involved parents for at least 14 hours, were community-based, and encouraged delayed sex.ConclusionsTargeted programs with intensive parental involvement can modify adolescents' sexual behavior, although the review was limited by the lack of rigorous evaluations. Few programs addressed behavioral control, parent–child connectedness, or parental modeling, all suggested by observational research. |

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| **Reference** | Wilson et al., 2015 |
| **score** | 4 |
| **rating** | high |
| **Published Year** | 2015 |
| **Abstract** | Objective Effective contraceptive use has the potential to prevent around 230 million births each year. An estimated 222 million women want to delay pregnancy or cease childbearing, but are not actively using contraception. Lack of education is a known barrier for effective contraceptive use. Motivational interviews are presumed to improve effective contraceptive use, but studies to date report varied findings. Some studies demonstrate an improvement and others report no effect. Study design A systematic review of evidence on the impact of motivational interviews on contraceptive use in women of childbearing age was carried out using MEDLINE, EMBASE, BNI, Cochrane library, CINHAL, African Index Medicus, Web of Science, the Reproductive Health Library, and the Science Citation Index (inception-January 2013) without language restriction. Search terms included 'motivational interview\*AND contraception OR family planning OR maternal OR pregnancy'. Randomised controlled trials comparing the effect of motivational interviews with standard practice on effective contraception use in women of reproductive age were included. The outcome measures were use of effective contraception or use of high-level contraception, and subsequent births or pregnancies. The random effects model was used to pool the risk ratios from individual studies. Results Eight randomised controlled trials were included in the review with a total of 3424 women at high risk of pregnancy. Meta-analysis showed an increase in effective contraceptive use with motivational interviews when compared with control (RR 1.32 95%CI 1.11, 1.56: P = 0.002) in the period of zero to four months post intervention. No difference in effective contraceptive use was shown at four to eight months (RR 1.10, 95%CI 0.93, 1.32: P = 0.27), and between eight to twelve months (RR 1.18 95%CI 0.96, 1.46: P = 0.12). No evidence of effect in the reduction of subsequent pregnancies or births at twelve to twenty-four months was seen with motivational interviews (RR 0.80 95%CI 0.51, 1.26: P = 0.34). Conclusion Motivational interviews significantly increase effective contraceptive use immediately after and up to four months post-intervention. The effect without reinforcement is short lasting as no evidence of effect is seen after four months post-intervention. © 2015 Elsevier Ireland Ltd. All rights reserved. |

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| **Reference** | Zapata et al., 2015 |
| **score** | 4 |
| **rating** | high |
| **Published Year** | 2015 |
| **Abstract** | Context This systematic review evaluated the evidence on the impact of contraceptive counseling provided in clinical settings on reproductive health outcomes to provide information to guide national recommendations on quality family planning services. Evidence acquisition Multiple databases were searched during 2010-2011 for peer-reviewed articles published in English from January 1985 through February 2011 describing studies that evaluated contraceptive counseling interventions in clinical settings. Studies were excluded if they focused primarily on prevention of HIV or sexually transmitted infections, focused solely on men, or were conducted outside the U.S., Canada, Europe, Australia, or New Zealand. Evidence synthesis The initial search identified 12,327 articles, of which 22 studies (from 23 articles) met the inclusion criteria. Six studies examined the impact of contraceptive counseling among adolescents, with four finding a significant positive impact on at least one outcome of interest. Sixteen studies examined the impact of counseling among adults or mixed populations (adults and adolescents), with 11 finding a significant positive impact on at least one outcome of interest. Conclusions Promising components of contraceptive counseling were identified despite the diversity of interventions and inability to compare the relative effectiveness of one approach versus another. The evidence base would be strengthened by improved documentation of counseling procedures; assessment of intervention implementation and fidelity to put study findings into context; and development and inclusion of more RCTs, studies conducted among general samples of women, and studies with sample sizes sufficient to detect important behavioral outcomes at least 12 months post-intervention. © 2015 Published by Elsevier Inc. on behalf of American Journal of Preventive Medicine. |

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| **Reference** | Zoritch et al., 1998 |
| **score** | 4 |
| **rating** | high |
| **Published Year** | 1998 |
| **Abstract** | Day-care has long been a controversial aspect of social policy in countries such as the U.K. What evidence is there about the effects of out-of-home day-care on educational, health and welfare outcomes for children and their families? This paper applies to day-care studies, the methodology of the systematic review as pioneered in the health care field, in order to establish the evidence-base for day-care provision. Randomised controlled trials of day-care for pre-school children were identified using electronic databases, hand searches of relevant literature and contacts with authors. A total of 8 trials were identified after examining 920 abstracts and 19 books. All the trials were carried out in the U.S.A. European research on this topic is extensive but we did not identify any studies using trial design. Instead observational, case controlled and cohort studies were prominent. The trials were assessed for methodological quality. Results showed that day-care promotes children's intelligence, development and school achievement. Long-term follow up demonstrates increased employment, lower teenage pregnancy rates, higher socio-economic status and decreased criminal behaviour. There are positive effects on mothers' education, employment and interaction with children. Effects on fathers have not been examined. Few studies look at a range of outcomes spanning the health, education and welfare domains. Most of the trials combined non-parental day-care with some element of parent training or education (mostly targeted at mothers); they did not disentangle the possible effects of these two interventions. The trials had other significant methodological weaknesses, pointing to the importance of improving on study design in this field. There is a need for well designed research on day-care to provide an evidence-base for British social policy. |

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| **Reference** | Andrzejewski et al., 2018 |
| **score** | 3 |
| **rating** | high |
| **Published Year** | 2018 |
| **Abstract** | OBJECTIVE: This review synthesizes findings from the peer-reviewed evaluation literature on condom availability programs (CAPs) in secondary schools. DATA SOURCE: Peer-reviewed evaluation literature indexed in MEDLINE, EMBASE, PsychINFO, ERIC, CINAHL, Sociological Abstracts, SCOPUS, and POPLINE. STUDY INCLUSION AND EXCLUSION CRITERIA: Manuscripts had to be, written in English, and report evaluation data from a US school-based CAP. DATA EXTRACTION: Articles were coded independently by 2 authors. Discrepancies were resolved through open discussion. DATA SYNTHESIS: We grouped findings into outcome evaluation and process evaluation findings. Outcome evaluation findings included sexually transmitted infections (STIs), pregnancy rates, condom use, contraception use, sexual risk, and substance use. Process evaluation findings included awareness of CAPs, attitudes toward CAPs, attitudes toward condoms, and receipt of education and instruction. RESULTS: Of the 138 citations reviewed, 12 articles published between 1995 and 2012 met the inclusion criteria, representing 8 programs. Evaluations indicate CAPs yield condom acquisition rates between 23% and 48%, have mixed results related to condom use, and are not associated with increases in sexual and other risk behaviors. One program found CAPs were associated with a decrease in a combined rate of chlamydia and gonorrhea. One program found no association between CAPs and unintended pregnancy. Students' attitudes toward CAPs were favorable and awareness was high. CONCLUSIONS: Condom availability programs are accepted by students and can be an appropriate and relevant school-based intervention for teens. Condom availability programs can increase condom use, but more evaluations are needed on CAP impact on rates of HIV, STIs, and unintended pregnancy. |

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| **Reference** | Baxter et al., 2011b |
| **score** | 3 |
| **rating** | high |
| **Published Year** | 2011 |
| **Abstract** | Background and methodology: Despite widespread availability of contraceptives and increasing service provision in the UK, rates of teenage pregnancy remain a concern. It has been suggested that young people face particular obstacles in accessing services, leading to a need for specialist provision. This systematic review examined the literature reporting views of service providers and young people. Data were synthesised in order to develop key themes to inform the development of contraceptive services for this population. Results: A total of 59 papers reporting studies carried out within the UK were included. Forty-five of these provided qualitative or mixed method data and 14 reported survey findings. Seven key themes were identified: perceptions of services; accessibility; embarrassment; anonymity and confidentiality; the clinic environment; the consultation; and service organisation. Conclusions: This review suggests that the most significant concern for young people is the preservation of anonymity and confidentiality. There seems to be a need for young people to be given greater assurances about this, with process and environmental changes suggested. The fear of staff being critical or unfriendly also presents a considerable obstacle to some young people. Issues of service accessibility - such as convenience of location and opening hours - are also highlighted, with lifestyle factors and restrictions on where under-18s can go suggested as important aspects. The review suggests that varying preferences among young people with regard to which service to access requires choice to be preserved and, where possible, extended. This requires services to work effectively together to consider provision across a locality. |

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| **Reference** | Brittain et al., 2015b |
| **score** | 3 |
| **rating** | high |
| **Published Year** | 2015 |
| **Abstract** | Context "Youth-friendly" family planning services, services tailored to meet the particular sexual and reproductive health needs of young people (aged 10-24 years), may improve reproductive health outcomes, including reduction of unintended pregnancy. The objectives of this systematic review were to summarize the evidence of the effect of youth-friendly family planning services on reproductive health outcomes and to describe key characteristics of youth-friendly family planning interventions. The review, conducted in 2011, was used to inform national recommendations on quality family planning services. Evidence acquisition Several electronic bibliographic databases, including PubMed, PsycINFO, and Popline, were used to identify relevant articles published from January 1985 through February 2011. Evidence synthesis Nineteen articles met the inclusion criteria. Of these, six evaluated outcomes relevant to unintended pregnancy, contraceptive use, and knowledge or patient satisfaction. The 13 remaining studies identified perspectives on youth-friendly characteristics. Of the studies examining outcomes, most had a positive effect (two of three for unintended pregnancy, three of three for contraceptive use, and three of three for knowledge and/or patient satisfaction). Remaining studies described nine key characteristics of youth-friendly family planning services. Conclusions This review demonstrates that there is limited evidence that youth-friendly services may improve reproductive health outcomes for young people and identifies service characteristics that might increase their receptivity to using these services. Although more rigorous studies are needed, the interventions and characteristics identified in this review should be considered in the development and evaluation of youth-friendly family planning interventions in clinical settings. © 2015 Published by Elsevier Inc. on behalf of American Journal of Preventive Medicine. |

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| **Reference** | Cardoza et al., 2012 |
| **score** | 3 |
| **rating** | high |
| **Published Year** | 2012 |
| **Abstract** | Study Objective: To identify sexual health behavior interventions targeting U.S. Latino adolescents. Design: A systematic literature review. Setting: Peer-reviewed articles published between 1993 and 2011, conducted in any type of setting. Participants: Male and female Latino adolescents ages 11-21 years. Interventions: Interventions promoting sexual abstinence, pregnancy prevention, sexually transmitted infection (STI) prevention, and/or HIV/AIDS prevention. Main Outcome Measures: Changes in knowledge, attitudes, engagement in risky sexual behaviors, rates of STIs, and/or pregnancy. Results: Sixty-eight articles were identified. Fifteen were included in this review that specifically addressed Latino adolescent sexual health behavior. Among the reviewed interventions, most aimed to prevent or reduce STI and HIV/AIDS incidence by focusing on behavior change at two levels of the social ecological model: individual and interpersonal. Major strengths of the articles included addressing the most critical issues of sexual health; using social ecological approaches; employing different strategies to deliver sexual health messages; and employing different intervention designs in diverse geographical locations with the largest population of Latino communities. Most of the interventions targeted female adolescents, stressing the need for additional interventions that target Latino adolescent males. Conclusions: Latino adolescent sexual health is a new research field with gaps that need to be addressed in reducing negative sexual health outcomes among this population. More research is needed to produce new or validate existing, age-specific, and culturally-sensitive sexual health interventions for Latino male and female adolescents. Further, this research should also be conducted in areas of the U.S. with the newest Latino migration (e.g., North Carolina). © 2012 North American Society for Pediatric and Adolescent Gynecology. |

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| **Reference** | Cooper et al., 2014 |
| **score** | 3 |
| **rating** | high |
| **Published Year** | 2014 |
| **Abstract** | Background Throughout the last decade substantial research has been undertaken to develop evidence-based behaviour change interventions for sexual health promotion. Primary care could provide an opportunistic entry for brief sexual health communication. Objectives We conducted a systematic review to explore opportunistic sexual and reproductive health services for sexual health communication delivered at primary health care level. Search strategy We searched for studies on PubMed, ProQuest, CINAHL, Jstor, Scopus/Science Direct, Cochrane database of systematic reviews, EBSCO, CINAHL, PsychoInfo, and Web of Knowledge. Both published and unpublished articles were reviewed. Selection criteria All randomised controlled trials and controlled clinical trials were included. Participants of all ages, from adolescence onwards were included. Brief (10-60 minutes) interventions including some aspect of communication on sexual health issues were included. Data collection and analysis Data were extracted by two reviewers independently using a standardised form. Interventions differed from each other, hence meta-analysis was not performed, and results are presented individually. Main results A total of 247 articles were selected for full-text evaluation, 31 of which were included. Sexually transmitted infections (STIs)/HIV were less often reported in the intervention group compared with the control group. Condom use was higher in most studies in the intervention group. Numbers of sexual partners and unprotected sexual intercourse were lower in the intervention groups. Conclusions There is evidence that brief counselling interventions have some effect in the reduction and prevention of STIs/HIV. Some questions could not be answered, such as the effect over time and in different settings and population groups. © 2014 Royal College of Obstetricians and Gynaecologists. |

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| **Reference** | Denno et al., 2012 |
| **score** | 3 |
| **rating** | high |
| **Published Year** | 2012 |
| **Abstract** | PurposeMany young people, particularly those who are marginalized and most at risk for HIV and reproductive health-related problems, cannot or will not seek traditional facility-based health services. Policies and programs are being implemented to provide them with these health services in the community. We sought to review the effectiveness of such approaches in increasing HIV and reproductive health service use.MethodsA systematic literature review was undertaken to identify policies promoting or programs delivering HIV or reproductive health services in the community. We reviewed studies that evaluated uptake of services or commodities. Data from studies meeting inclusion criteria were qualitatively analyzed.ResultsTwenty studies met inclusion criteria, including 10 containing comparative data (e.g., before and after study or control study design). The studies generally demonstrated positive impact, although results varied across settings and approaches. The most successful approaches included mail-based chlamydia screening in the Netherlands, condom distribution via street outreach in Louisiana, home-based HIV counseling and testing in Malawi, and promotion of over-the-counter access to emergency contraception in various countries.ConclusionOverall, this review suggests that out-of-facility approaches can be important avenues to reach youth. Continued evaluation is necessary to better understand specific approaches that can successfully deliver health services. |

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| **Reference** | DeSmet et al., 2015 |
| **score** | 3 |
| **rating** | high |
| **Published Year** | 2015 |
| **Abstract** | OBJECTIVE: Serious games may be effective in promoting sexual health behavior. Their confidential nature may encourage users to discuss sensitive sexuality topics. Furthermore, they can tailor messages to the individual's needs and may be intrinsically motivating. This meta-analysis investigates the effectiveness of interventions for sexual health promotion that use serious games. MATERIALS AND METHODS: A database search was conducted in PubMed, Web of Science, CINAHL, and PsycINFO for publications before the end of July 2013. Serious digital games studies measuring effects on behavior or its determinants, using a control condition, allowing the calculation of an effect size (Hedges' g, random-effects model) were included. RESULTS: Seven game studies for sexual health promotion were included. These showed positive effects on determinants (g=0.242; 95 percent confidence interval, 0.129, 0.356), albeit of small effect size. The effects on behavior, measured in only two studies, were not significant (g=0.456; 95 percent confidence interval, -0.649, 1.561). Most games did not use many game features that are considered to be immersive or enhancing flow. Instead, there was a strong reliance on pure gamification features, such as rewards and feedback. CONCLUSIONS: The effectiveness of the next generation of games may be enhanced by building on the behavioral change and educational gaming literatures (e.g., using role-play and simulation game formats, individual tailoring, offering adaptation in the difficulty of the challenge, and amount and timing of the feedback). There is a need for studies with rigorous evaluations of game effectiveness, longer-term follow-up, and using measures of behavior rather than merely their determinants. |

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| **Reference** | Downing et al., 2011 |
| **score** | 3 |
| **rating** | high |
| **Published Year** | 2011 |
| **Abstract** | Limited evidence exists about the effectiveness of parent/family-based interventions for preventing poor sexual health outcomes, thus a systematic review was conducted as part of a wider review of community-based sex and relationships and alcohol education. Method guidance from the UK’s National Institute for Health and Clinical Excellence was adhered to. Overall, 18 databases were searched. In total, 12 108 references were identified, of which 440 were retrieved and screened. Overall, 17 studies met the inclusion criteria. Findings showed that parent-based interventions were inconsistently effective at reducing young people’s sexual risk behaviours. Parent-based interventions had greater impact on parent/child communication than family-based interventions, which showed no evidence of effectiveness. However, increasing parent/child communication showed no effect on sexual risk behaviours. Preliminary evidence suggests that effectiveness was greater in those studies aiming to affect multiple risk behaviours. However, this may be due to longer programme delivery and follow-up times; further evidence is required. Sexual health communication was sensitive to intervention. Studies addressing multiple risk behaviours may be as effective as targeted interventions at affecting sexual risk behaviours. Longitudinal controlled studies, examining broader sexual activity outcomes, are needed in countries such as the United Kingdom to inform the evidence base, which is primarily US based, and contribute to related policies and practices. |

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| **Reference** | Franklin et al., 1997 |
| **score** | 3 |
| **rating** | high |
| **Published Year** | 1997 |
| **Abstract** | Using meta-analysis, we analyzed 32 outcome studies on the primary prevention of adolescent pregnancy and examined several moderator variables in relationship to the findings. Three outcome variables - sexual activity, contraceptive use, and pregnancy rates or childbirths - were analyzed as three separate and independent meta-analyses, Results indicate that the pregnancy prevention programs that we examined have no effect on the sexual activity of adolescents. We found sufficient evidence to support the efficacy of pregnancy prevention programs for increasing use of contraceptives. A smaller but significant amount of evidence supports program effectiveness in reducing pregnancy rates. |

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| **Reference** | Gavin et al., 2015 |
| **score** | 3 |
| **rating** | high |
| **Published Year** | 2015 |
| **Abstract** | Context When caring for an adolescent client, providers of contraceptive services must consider whether and how to encourage parent/guardian-child communication about the adolescent's reproductive health. The objective of this systematic review was to summarize the evidence on the effectiveness of programs designed to increase parent-child communication about reproductive health. The review was used to inform national recommendations on quality family planning services. Data analysis occurred from mid-2011 through 2012. Evidence acquisition Several electronic bibliographic databases were used to identify relevant articles, including PubMed, CINAHL, PsycINFO, and Popline, published from January 1985 through February 2011. Evidence synthesis Sixteen articles met the inclusion criteria: all studies examined the impact on at least one medium- or short-term outcome, and two studies assessed the impact on teen pregnancy. One study examined the impact of a program conducted in a clinic setting; the remainder examined the impact of programs in community settings. All studies showed a positive impact on at least one short-term outcome, and 12 of 16 studies showed an increase in parent-child communication about reproductive health. Four of seven studies found an impact on sexual risk behavior. Conclusions Most programs increased parent-child communication, and several resulted in reduced sexual risk behavior of adolescents. This suggests that delivering a clinic-based program that effectively helps parents/guardians talk to their adolescent child(ren) about reproductive health, or referring parents/guardians to an evidence-based program in the community, may be beneficial. However, further rigorous research on delivery of these programs in clinical settings is needed. © 2015 Published by Elsevier Inc. on behalf of American Journal of Preventive Medicine. |

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| **Reference** | Guse et al., 2012 |
| **score** | 3 |
| **rating** | high |
| **Published Year** | 2012 |
| **Abstract** | New digital media (e.g., the Internet, text messaging, and social networking sites [SNS]) have dramatically altered the communication landscape, especially for youth. These communication platforms present new tools for engaging youth in sexual health promotion and risk reduction. We searched eight public databases across multiple disciplines for all peer-reviewed studies published between January 2000 and May 2011 that empirically evaluated the impact of digital media-based interventions on the sexual health knowledge, attitudes, and/or behaviors of adolescents aged 13-24 years. Of 942 abstracts, 10 met inclusion criteria. Seven studies were conducted in the United States. Eight described Web-based interventions, one used mobile phones, and one was conducted on an SNS. Two studies significantly delayed initiation of sex, and one was successful in encouraging users of an SNS to remove sex references from their public profile. Seven interventions significantly influenced psychosocial outcomes such as condom self-efficacy and abstinence attitudes, but at times the results were in directions unexpected by the study authors. Six studies increased knowledge of HIV, sexually transmitted infections, or pregnancy. This area of research is emerging and rapidly changing. More data from controlled studies with longer (>1 year) follow-up and measurement of behavioral outcomes will provide a more robust evidence base from which to judge the effectiveness of new digital media in changing adolescent sexual behavior. © 2012 Society for Adolescent Health and Medicine. |

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| **Reference** | Jones et al., 2014 |
| **score** | 3 |
| **rating** | high |
| **Published Year** | 2014 |
| **Abstract** | Abstract Despite the increased use of social media and text messaging among adolescents, it is unclear how effective education transmitted via these mechanisms is for reducing sexual risk behavior. Accordingly, we conducted a systematic review of the lite |

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| **Reference** | Kirby et al., 1994 |
| **score** | 3 |
| **rating** | high |
| **Published Year** | 1994 |
| **Abstract** | This review was undertaken in recognition of the mounting public health and social problems associated with adolescent sexual behavior and the importance of basing school-affiliated programs designed to reduce sexual risk-taking behavior on sound research. The authors were commissioned by the Division of Adolescent and School Health within the Centers for Disease Control and Prevention, Public Health Service, to review carefully the research on these programs and to assess their impact on behavior. The authors identified 23 studies of school-based programs that were published in professional journals and measured program impact on behavior. They then summarized the results of those studies, identifying the distinguishing characteristics of effective programs, and citing important research questions to be addressed in the future. Not all sex and AIDS education programs had significant effects on adolescent sexual risk-taking behavior, but specific programs did delay the initiation of intercourse, reduce the frequency of intercourse, reduce the number of sexual partners, or increase the use of condoms or other contraceptives. These effective programs have the potential to reduce exposure to unintended pregnancy and sexually transmitted disease, including HIV infection. These programs should be replicated widely in U.S. schools. Additional research is needed to improve the effectiveness of programs and to clarify the most important characteristics of effective programs. |

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| **Reference** | Kirby 2001 |
| **score** | 3 |
| **rating** | high |
| **Published Year** | 2001 |
| **Abstract** | In 1997, I wrote No Easy Answers: Research Findings on Programs to Reduce Teen Pregnancy for the National Campaign to Prevent Teen Pregnancy. At that time, with only a few exceptions, most studies assessing the impact of programs to reduce teen sexual risk-taking failed either to measure or to find sustained long-term impact on behavior. Now, 4 years later, the research findings are definitely more positive, and there are at least five important reasons to be more optimistic that we can craft programs that help to reduce teen pregnancy. First, teen pregnancy, abortion, and birth rates began to decrease about 1991 and have continued to decline every year since then. Second, larger, more rigorous studies of some sex and HIV education programs have found sustained positive effects on behavior for as long as 3 years. Third, there is now good evidence that one program that combines both sexuality education and youth development (i.e., the Children's Aid Society—Carrera Program) can reduce pregnancies for as long as 3 years. Fourth, both service learning programs (i.e., voluntary community service with group discussions and reflection) and sex and HIV education programs (i.e., Reducing the Risk) have been found to reduce sexual risk-taking or pregnancy in several settings by independent research teams. Fifth, there is emerging evidence that some shorter, more modest clinic interventions involving educational materials coupled with one-on-one counseling may increase contraceptive use. Given the stronger and more consistent research findings demonstrating program effectiveness, this report has been titled Emerging Answers. |

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| **Reference** | Kirby, 2002b |
| **score** | 3 |
| **rating** | high |
| **Published Year** | 2002 |
| **Abstract** | In the United States, there exist a multitude of different approaches to reducing adolescent sexual risk-taking, unintended pregnancy, childbearing, and sexually transmitted disease, including HIV. While many of these approaches have some positive effects upon some outcomes (such as greater knowledge), only some of these programs actually delay the initiation of sex, increase condom or contraceptive use, and reduce unprotected sex among youth. This article summarizes a review of 73 studies and their respective programs, and describes four groups of programs which have reasonably strong evidence that they delay sex, increase condom or contraceptive use, or reduce teen pregnancy or childbearing. These four groups of programs include (a) sex and HIV education curricula with specified characteristics, (b) one-on-one clinician-patient protocols in health settings with some common qualities, (c) service learning programs, and (d) a particular intensive youth development program with multiple components. |

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| **Reference** | L'Engle et al., 2016 |
| **score** | 3 |
| **rating** | high |
| **Published Year** | 2016 |
| **Abstract** | CONTEXT: Interventions for adolescent sexual and reproductive health (ASRH) are increasingly using mobile phones but may not effectively report evidence. OBJECTIVE: To assess strategies, findings, and quality of evidence on using mobile phones to improve ASRH by using the mHealth Evidence Reporting and Assessment (mERA) checklist recently published by the World Health Organization mHealth Technical Evidence Review Group. DATA SOURCES: Systematic searches of 8 databases for peer-reviewed studies published January 2000 through August 2014. STUDY SELECTION: Eligible studies targeted adolescents ages 10 to 24 and provided results from mobile phone interventions designed to improve ASRH. DATA EXTRACTION: Studies were evaluated according to the mERA checklist, covering essential mHealth criteria and methodological reporting criteria. RESULTS: Thirty-five articles met inclusion criteria. Studies reported on 28 programs operating at multiple levels of the health care system in 7 countries. Most programs (82%) used text messages. An average of 41% of essential mHealth criteria were met (range 14%- 79%). An average of 82% of methodological reporting criteria were met (range 52%-100%). Evidence suggests that inclusion of text messaging in health promotion campaigns, sexually transmitted infection screening and follow-up, and medication adherence may lead to improved ASRH. LIMITATIONS: Only 3 articles reported evidence from lower- or middle-income countries, so it is difficult to draw conclusions for these settings. CONCLUSIONS: Evidence on mobile phone interventions for ASRH published in peer-reviewed journals reflects a high degree of quality in methods and reporting. In contrast, current reporting on essential mHealth criteria is insufficient for understanding, replicating, and scaling up mHealth interventions. © Copyright 2016 by the American Academy of Pediatrics. |

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| **Reference** | Lazarus et al., 2010 |
| **score** | 3 |
| **rating** | high |
| **Published Year** | 2010 |
| **Abstract** | AIM: To examine the effectiveness of interventions seeking to prevent the spread of sexually transmitted infections (STIs), including HIV, among young people in the European Union. METHODS: For this systematic review, we examined interventions that aimed at STI risk reduction and health promotion conducted in schools, clinics, and in the community for reported effectiveness (in changing sexual behavior and/or knowledge) between 1995 and 2005. We also reviewed study design and intervention methodology to discover how these factors affected the results, and we compiled a list of characteristics associated with successful and unsuccessful programs. Studies were eligible if they employed a randomized control design or intervention-only design that examined change over time and measured behavioral, biologic, or certain psychosocial outcomes. RESULTS: Of the 19 studies that satisfied our review criteria, 11 reported improvements in the sexual health knowledge and/or attitudes of young people. Ten of the 19 studies aimed to change sexual risk behavior and 3 studies reported a significant reduction in a specific aspect of sexual risk behavior. Two of the interventions that led to behavioral change were peer-led and the other was teacher-led. Only 1 of the 8 randomized controlled trials reported any statistically significant change in sexual behavior, and then only for young females. CONCLUSION: The young people studied were more accepting of peer-led than teacher-led interventions. Peer-led interventions were also more successful in improving sexual knowledge, though there was no clear difference in their effectiveness in changing behavior. The improvement in sexual health knowledge does not necessarily lead to behavioral change. While knowledge may help improve health-seeking behavior, additional interventions are needed to reduce STIs among young people. |

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| **Reference** | Manlove et al., 2015 |
| **score** | 3 |
| **rating** | high |
| **Published Year** | 2015 |
| **Abstract** | Background: US adolescents have high rates of teen pregnancy, childbearing, and sexually transmitted infections (STIs), highlighting the need to identify and implement effective programs that will help improve teen sexual and reproductive health. Materials and methods: This review identified 103 random-assignment evaluations of 85 programs that incorporated intent-to-treat analyses and assessed impacts on pregnancy, child-bearing, STIs, and their key determinants - sexual activity, number of sexual partners, condom use, and other contraceptive use - among teens. This review describes the evidence base for five broad program approaches, including abstinence education, comprehensive sex education, clinic-based programs, youth development programs, and parent-youth relationship programs. We also describe programs with impacts on key outcomes, including pregnancy/childbearing, STIs, and those that found impacts on both sexual activity and contraceptive use. Results: Our review identified 52 effective programs: 38 with consistent impacts on reproductive health outcomes, and 14 with mixed findings (across subpopulations, follow-ups, or multiple measures of a single outcome). We found that a variety of program approaches produced impacts on sexual and reproductive health outcomes. Parent-youth relationship programs and clinic-based program evaluations more frequently showed impacts than other program approaches, although we also identified a number of abstinence-education, comprehensive sex education, and youth-development programs with impacts on sexual and reproductive health outcomes. Overall, we identified nine program evaluations with impacts on teen pregnancies or births, five with impacts on reducing STIs, and 15 with impacts on both delaying/reducing sexual activity and increasing contraceptive use (including condom use). Conclusion: Future efforts should conduct replications of existing program evaluations, identify implementation components linked to impacts, rigorously evaluate programs that appear promising, and expand the evidence base on programs that impact hormonal and long-acting contraceptive method use. Copyright © 2015 Manlove et al. |

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| **Reference** | Mason-Jones et al., 2012 |
| **score** | 3 |
| **rating** | high |
| **Published Year** | 2012 |
| **Abstract** | Accessible sexual, reproductive, and mental healthcare services are crucial for adolescent health and wellbeing. It has been reported that school-based healthcare (SBHC) has the potential to improve the availability of services particularly for young people who are normally underserved. Locating health services in schools has the potential to reduce transport costs, increase accessibility and provide links between schools and communities. |

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| **Reference** | McLellan et al., 2013 |
| **score** | 3 |
| **rating** | high |
| **Published Year** | 2013 |
| **Abstract** | Technology is increasingly used as a method to engage young people in health issues. This review aimed to assess the effectiveness of technology interventions in preventing and reducing substance use and risky sexual health behaviours in young people. The following databases were searched via Ovid: Psychinfo, Medline, Embase. Studies were systematically screened by title, abstract and 2 reviewers assessed the full papers and discrepancies discussed. Inclusion criteria: young people (aged 12–25 years) that constituted at least 50 % of the population; any technological component including telecommunication, computer and internet that constituted at least 50 % of the intervention; any sexual health or substance use outcome; studies meeting evidence level one-four. 1603 papers were identified by the original search. Of these, 30 were included in the review. The majority of studies showed positive intervention effects, however, most targeted educated young people, such as university students. Additionally, the outcome measures were often psychological determinants of behaviour rather than actual behaviours. Technology has a significant role to play in this field. The review identifies components of effective interventions for young people. However more research is required to target vulnerable populations in order reduce inequalities. Studies are required that involve a wider variety of participants with behavioural outcomes. |

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| **Reference** | Usinger et al., 2016 |
| **score** | 3 |
| **rating** | high |
| **Published Year** | 2016 |
| **Abstract** | Study Objective Adolescents are at high risk for unintended pregnancies. Although intrauterine devices (IUDs), long-acting reversible contraceptives (LARCs), are known to be highly effective in preventing pregnancy, little is known about IUD adherence in adolescents. In this systematic review (SR) we examined IUD continuation rates compared with other forms of contraception in young women aged 25 years and younger. Design, Setting, Participants, Interventions, and Main Outcome Measures A systematic search of Ovid Medline, Cochrane Library, and Embase was conducted for the years 1946-2015. Included studies examined IUD use in women 25 years of age and younger, compared IUD use with another form of contraception, and measured continuation rates at 12 months. The quality of each study was appraised using the Downs and Black criteria, and 12-month continuation rates among studies were pooled and analyzed according to contraceptive type. Results Of 3597 articles retrieved, 9 studies met criteria for SR. Synthesized across studies, 12-month continuation was significantly higher for IUD users (86.5%, 12,761/14,747) compared with oral contraceptives (39.6%, 1931/4873), Depo-Provera (Pfizer Inc, New York, NY) hormonal injection (39.8%, 510/1282), vaginal ring (48.9%, 196/401), and transdermal patch (39.8%, 37/93; all P values < .001). There was no statistically significant difference in 12-month continuation between the IUD and another LARC method, the subdermal etonogestrel implant (85.3%, 4671/5474). Conclusion Findings of this SR suggest that continuation rates for IUDs are generally higher compared with other contraceptive methods for women aged 25 years and younger. In a population with high rates of unintended pregnancies, generally low adherence, and imperfect use with other non-LARCs, IUD use should be encouraged. © 2016 North American Society for Pediatric and Adolescent Gynecology |

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| **Reference** | Allen-Meares et al., 2013 |
| **score** | 2 |
| **rating** | low |
| **Published Year** | 2013 |
| **Abstract** | Across the globe, social workers serve schools in a variety of capacities, providing services such as skills training; individual, group, and family counseling; crisis intervention; home visits; parent support and education; and advocacy for students, families, and school systems. To date, no synthesis of the literature exists examining tier 1 and tier 2 cross-national school-based social work interventions. Therefore, the purpose of this systematic review was twofold: (1) to identify tier 1 and tier 2 school-based interventions that involve social workers and (2) to examine the extent to which the interventions are efficacious with school-based youths. A computerized search with inclusion and exclusion criteria was conducted using several databases. Eighteen studies were included for the final sample in this review. Effect sizes were calculated for all outcomes to determine magnitude of treatment effect. Results indicated that most of the studies were conducted in the United States (n = 14) and half (n = 9) of the included interventions were tier 1. Many positive effect sizes were found. Interventions aimed to treat a variety of outcomes such as sexual health, aggression, self-esteem, school attendance, identity, and depression. More research is needed to determine the effectiveness of school-based social work worldwide. |

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| **Reference** | Beltz et al., 2015 |
| **score** | 2 |
| **rating** | low |
| **Published Year** | 2015 |
| **Abstract** | Teen childbearing is affected by many individual, family, and community factors; however, another potential influence is state policy. Rigorous studies of the relationship between state policy and teen birth rates are few in number but represent a body of knowledge that can inform policy and practice. This article reviews research assessing associations between state-level policies and teen birth rates, focusing on five policy areas: access to family planning, education, sex education, public assistance, and access to abortion services. Overall, several studies have found that measures related to access to and use of family planning services and contraceptives are related to lower state-level teen birth rates. These include adolescent enrollment in clinics, minors' access to contraception, conscience laws, family planning expenditures, and Medicaid waivers. Other studies, although largely cross-sectional analyses, have concluded that policies and practices to expand or improve public education are also associated with lower teen birth rates. These include expenditures on education, teacher-to-student ratios, and graduation requirements. However, the evidence regarding the role of public assistance, abortion access, and sex education policies in reducing teen birth rates is mixed and inconclusive. These conclusions must be viewed as tentative because of the limited number of rigorous studies that examine the relationship between state policy and teen birth rates over time. Many specific policies have only been analyzed by a single study, and few findings are based on recent data. As such, more research is needed to strengthen our understanding of the role of state policies in teen birth rates. Copyright © 2015 Society for Adolescent Health and Medicine. |

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| **Reference** | Fleming et al. 2015 |
| **score** | 2 |
| **rating** | low |
| **Published Year** | 2015 |
| **Abstract** | Objective: To describe the needs and evidence-based practice specific to care of the pregnant adolescent in Canada, including special populations. Outcomes: Healthy pregnancies for adolescent women in Canada, with culturally sensitive and age-appropriate care to ensure the best possible outcomes for these young women and their infants and young families, and to reduce repeat pregnancy rates. Evidence: Published literature was retrieved through searches of PubMed and The Cochrane Library on May 23, 2012 using appropriate controlled vocabulary (e.g., Pregnancy in Adolescence) and key words (e.g., pregnancy, teen, youth). Results were restricted to systematic reviews, randomized control trials/controlled clinical trials, and observational studies. Results were limited to English or French language materials published in or after 1990. Searches were updated on a regular basis and incorporated in the guideline to July 6, 2013. Grey (unpublished) literature was identified through searching the websites of health technology assessment and health technology-related agencies, national and international medical specialty societies, and clinical practice guideline collections. Values: The quality of evidence in this document was rated using the criteria described in the Report of the Canadian Task Force on Preventive Health Care (Table 1). Benefits/Harms/Costs: These guidelines are designed to help practitioners caring for adolescent women during pregnancy in Canada and allow them to take the best care of these young women in a manner appropriate for their age, cultural backgrounds, and risk profiles. © 2015 Society of Obstetricians and Gynaecologists of Canada. |

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| **Reference** | Robin et al., 2004 |
| **score** | 2 |
| **rating** | low |
| **Published Year** | 2004 |
| **Abstract** | Purpose: To review adolescent sexual risk-reduction programs that were evaluated using quasi-experimental or experimental methods and published in the 1990s. We describe evaluated programs and identify program and evaluation issues for health educators and researchers. Methods: We systematically searched seven electronic databases and hand-searched journals to identify evaluations of behavioral interventions to reduce sexual risk behaviors among adolescents. Articles were included if they were published in the 1990s, provided a theoretical basis for the program, information about the interventions, clear aims, and quasi-experimental or experimental evaluation methods. We identified 101 articles, and 24 met our criteria for inclusion. Results: We reviewed these evaluations to assess their research and program characteristics. The majority of studies included randomized controlled designs and employed delayed follow-up measures. The most commonly measured outcomes were delay of initiation of sexual intercourse, condom use, contraceptive use, and frequency of sexual intercourse. Programs ranged from 1 to 80 sessions, most had adult facilitators, and commonly included skills-building activities about sexual communication, decision-making, and problem solving. The programs included a wide range of strategies for content delivery such as arts and crafts, school councils, and community service learning. Conclusions: Analysis of these programs suggest four overall factors that may impact program effectiveness including the extent to which programs focus on specific skills for reducing sexual risk behaviors; program duration and intensity; what constitutes the content of a total evaluated program including researchers' assumptions of participants' exposure to prior and concurrent programs; and what kind of training is available for facilitators. |

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| **Reference** | Spear et al., 2003 |
| **score** | 2 |
| **rating** | low |
| **Published Year** | 2003 |
| **Abstract** | This study examined qualitative research on adolescent pregnancy to determine designs and methods used and to discover emergent themes across studies. Most of the 22 studies reviewed were described as qualitative or phenomenological by design and included samples comprising either African-American and Caucasian participants or African-Americans exclusively. Based on analysis of the collective primary findings of the sample articles, four themes were identified: (a) factors influencing pregnancy; (a) pregnancy resolution; (c) meaning of pregnancy and life transitions; and (d) parenting and motherhood. Overall, the studies revealed that most adolescent females perceive pregnancy as a rite of passage and a challenging yet positive life event. More qualitative studies are needed involving participants from various ethnic backgrounds, on males' perceptions relative to adolescent pregnancy and fatherhood, and about decision-making relevant to pregnancy resolution, intimacy, and peer relationships. © 2003 Elsevier Inc. All rights reserved. |

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| **Reference** | Strunk, 2008 |
| **score** | 2 |
| **rating** | low |
| **Published Year** | 2008 |
| **Abstract** | Teenage pregnancy outcomes have become an increasing concern in the United States. Education and support of pregnant teens are critical factors that may determine good or poor pregnancy outcomes. Poor outcomes may include low birth weight, developmental delays, and poor academic performance. Although the number of teenagers experiencing pregnancy and parenting has declined in the U.S., school-based health clinics can be used to provide support and guidance designed to avoid the negative outcomes associated with teenage pregnancy and parenting. By having school-based health clinics, nurse practitioners and school nurses can provide much needed services to pregnant and parenting teens. These services should include educational support, counseling, and community resources. This inquiry provides a metasynthesis of the literature and will review, examine, and summarize the literature relating to the effect of school-based clinics on teenage pregnancy and parenting outcomes. |

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| **Reference** | Trivedi et al., 2009 |
| **score** | 2 |
| **rating** | low |
| **Published Year** | 2009 |
| **Abstract** | Teenage pregnancy prevention programmes targeted at young women have received considerable attention from researchers and programme developers. However, to date, relatively limited information is available on preventing teenage fatherhood or improving outcomes for young fathers. A notable gap is concerned with understanding the forms of sexual health programmes that are most effective from the perspective of young men. We conducted a systematic mapping to identify studies involving young men aimed at preventing teenage pregnancy, improving outcomes for teenage fathers or exploring the perspectives of young men around pregnancy and fatherhood. We searched a wide range of electronic databases from January 1996 to August 2008. Three quantitative and 15 qualitative studies were identified, of which nine were UK based. Key themes related to the inappropriateness of current sexual health promotion to respond to the needs of young men. While young men often possessed very similar ideals to young women, existing programmes were problematic when they negatively stereotyped young men and ineffectively addressed models of masculinity or the difficulties young men may have forming meaningful relationships. Further investigations are required on programme development for young men, particularly on sexual health promotion interventions for 'looked-after' young men and those from unstable childhoods. |

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| **Reference** | Grunseit et al., 1997 |
| **score** | 1 |
| **rating** | low |
| **Published Year** | 1997 |
| **Abstract** | Sexuality education for children and young adults is one of the most heavily debated issues facing policy-makers, national AIDS program planners, and educators, provoking arguments over how explicit education materials should be, how much of it there should be, how often it should be given, and at what age instruction should commence. In this context, the World Health Organization's Global Program on AIDS' Office of Intervention Development and Support commissioned a comprehensive literature review to assess the effects of HIV/AIDS and sexuality education upon young people's sexual behavior. 52 reports culled from a search of 12 literature databases were reviewed. The main purpose of the review is to inform policy-makers, program planners, and educators about the impact of HIV and/or sexuality education upon the sexual behavior of youth as described in the published literature. Of 47 studies which evaluated interventions, 25 reported that HIV/AIDS and sexuality education neither increased nor decreased sexual activity and attendant rates of pregnancy and sexually transmitted diseases (STDs). 17 reported that HIV and/or sexuality education delayed the onset of sexual activity, reduced the number of sex partners, or reduced unplanned pregnancy and STD rates Only 3 studies found increases in sexual behavior associated with sexuality education. Inadequacies in study design, analytic techniques, outcome indicators, and the reporting of statistics are discussed. eng |

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| **Reference** | Kao et al., 2012 |
| **score** | 1 |
| **rating** | low |
| **Published Year** | 2012 |
| **Abstract** | The purpose of this integrative review is to describe, compare, and synthesize traditional and computer-based family interventions that aim to change adolescents? risky sexual behaviors and substance abuse. Family interventions have been shown to generate |

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| **Reference** | Kerr et al., 1998 |
| **score** | 1 |
| **rating** | low |
| **Published Year** | 1998 |
| **Abstract** | This article reviews recent (post-1990) literature which investigates the relationship of alcohol use to risky sexual behaviors among 11- to 19- year-olds. The review highlights the current status of alcohol use and sexual behavior among adolescents and summarizes research which investigates the relationship between these behaviors. Studies with a sample size of at least 100 are included. The article describes the literature in table form by sample size, age, type, and location; measures of alcohol and sexual risk used; and results. Conclusions, gaps, and weaknesses in the literature base are cited and recommendations for future research and prevention programming are made. |

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| **Reference** | Kirby, 1997 |
| **score** | 1 |
| **rating** | low |
| **Published Year** | 1997 |
| **Abstract** | Youth development programs represent an alternative way to reduce teenage pregnancy. These programs do not focus on sexuality, as do traditional pregnancy prevention programs. Instead, they strive to improve adolescents' life skills, belief in their future, opportunities, or “life options” more generally. That is, they address motivation to avoid early childbearing. Research on the antecedents of adolescent sexual behaviors and pregnancy rates, as well as the experience in this country and other countries, suggest that youth development approaches may be effective. We review eight studies that have evaluated youth development programs. Although the rigor of these studies varies greatly, they collectively suggest that some youth development programs may effectively reduce adolescent pregnancy or birth rates. |

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| **Reference** | American Academy of Pediatrics (Kaplan), 2001 |
| **score** | 0 |
| **rating** | low |
| **Published Year** | 2001 |
| **Abstract** | The use of condoms as part of the prevention of unintended pregnancies and sexually transmitted diseases (STDs) in adolescents is evaluated in this policy statement. Sexual activity and pregnancies decreased slightly among adolescents in the 1990s, reversing trends that were present in the 1970s and 1980s, while condom use among adolescents increased significantly. These trends likely reflect initial success of primary and secondary prevention messages aimed at adolescents. Rates of acquisition of STDs and human immunodeficiency virus (HIV) among adolescents remain unacceptably high, highlighting the need for continued prevention efforts and reflecting the fact that improved condom use can decrease, but never eliminate, the risk of acquisition of STDs and HIV as well as unintended pregnancies. While many condom education and availability programs have been shown to have modest effects on condom use, there is no evidence that these programs contribute to increased sexual activity among adolescents. These trends highlight the progress that has been made and the large amount that still needs to be accomplished. |

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| **Reference** | Baldwin et al., 2013 |
| **score** | 0 |
| **rating** | low |
| **Published Year** | 2013 |
| **Abstract** | Repeat pregnancy within 2 years of a previous birth or abortion occurs in approximately 35% of recently pregnant female adolescents. The majority of these pregnancies are classified as unintended with about half ending in births and the remainder in abortions. Rapid repeat pregnancy (RRP) is associated with increased maternal and neonatal morbidity and continues a cycle of economic deprivation for young women and their families. Immediately following a pregnancy, most young women report an intention to avoid pregnancy in the near future, but many change their minds or become ambivalent within months. Lack of contraceptive use is more common among those teens that resume sexual intercourse earlier, live with a male partner, had a preterm delivery, or had an intended teen pregnancy. Adolescents who do not initiate a long-acting reversible contraceptive (LARC) method (intrauterine device or contraceptive implant) have up to a 35 times increased risk of RRP compared with their peers using LARC. Risk of RRP is decreased when LARC methods are initiated earlier after an abortion or within the postpartum period. This review will focus on the prevalence of RRP, the risk factors for RRP, and the effectiveness of strategies to reduce unintended RRP including counseling and early initiation of long-acting contraceptive methods. © 2013 Society for Adolescent Health and Medicine. All rights reserved. |

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| **Reference** | Cheyne, 1999 |
| **score** | 0 |
| **rating** | low |
| **Published Year** | 1999 |
| **Abstract** | The United States continues to have the highest rate of adolescent pregnancy in the western industrialized world. This review focuses on the recent decline in adolescent pregnancy rates and the recent slight decline in the number of sexually experienced youths. Risk factors for adolescent pregnancy, such as history of forced sexual intercourse and lack of connectedness with parents, are discussed. Various strategies to decrease the adolescent pregnancy rate and the effectiveness of these strategies are reviewed. The unique role of the primary health care provider in the prevention of adolescent pregnancy is also addressed. |

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| **Reference** | Coyne and D'Onofrio, 2012 |
| **score** | 0 |
| **rating** | low |
| **Published Year** | 2012 |
| **Abstract** | In the decade and a half since Coley and Chase-Lansdale's (1998) review of teenage childbearing, there have been a number of studies investigating teenage childbearing from a developmental psychological perspective. Many of these studies have focused primarily on identifying individual, familial, and socioeconomic risk factors in childhood and adolescence that are highly correlated with teenage sexual behavior and teenage childbearing. We have an emerging understanding of teenage childbearing as the culmination of a complex cascade of experiences and decisions that overlap greatly with the risks for antisocial behavior. Much of this research, however, is limited by its reliance on correlational and cross-sectional research designs, which are not able to rigorously test causal inferences or to identify mechanisms associated with teenage childbearing. Innovative studies using large, nationally representative samples with quasi-experimental and longitudinal designs can expand on such descriptive studies. In particular, quasi-experimental studies can help answer questions about which risk factors are causally associated with teenage childbearing and suggest potential mechanisms that can explain how teenage childbearing is associated with poor outcomes. Future studies also will need to incorporate more precise measures of developmental processes and explore heterogeneity among adolescent mothers. Although advances have been made in the psychological study of teenage childbearing, more research is needed in order to answer important questions about which psychological processes are causally related to teenage childbearing and how teenage childbearing is associated with poor outcomes for young mothers and their offspring. © 2012 Elsevier Inc. |

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| **Reference** | Eshre Capri Workshop Group, 2015 |
| **score** | 0 |
| **rating** | low |
| **Published Year** | 2015 |
| **Abstract** | Emergency contraception (EC) prevents pregnancy after unprotected sex or contraceptive failure. Use of EC has increased markedly in countries where a product is available over the counter, yet barriers to availability and use remain. Although effective in clinical trials, it has not yet been possible to show a public health benefit of EC in terms of reduction of unintended pregnancy rates. Selective progesterone receptor modulators developed as emergency contraceptives offer better effectiveness than levonorgestrel, but still EC is less effective than use of ongoing regular contraception. Methods which inhibit ovulation whenever they are taken or which act after ovulation to prevent implantation and strategies to increase the uptake of effective ongoing contraception after EC use would prevent more pregnancies. |

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| **Reference** | Fletcher et al., 2007 |
| **score** | 0 |
| **rating** | low |
| **Published Year** | 2008 |
| **Abstract** | Purpose - The limited evidence of effectiveness of existing teenage pregnancy strategies which focus on sex education, together with growing evidence that factors such as poor school ethos, disaffection, truancy, poor employment prospects and low expectations are associated with teenage pregnancy, has increased interest in interventions which target these "wider" social determinants. This paper aims to identify promising interventions and priorities for future research and to make recommendations for policy and practice in the UK. Design/methodology/approach - This paper discusses the evidence regarding the potential of interventions which target determinants of teenage pregnancy relating to school disaffection and low expectations, drawing on recent systematic reviews and trials to consider future directions for research, policy and practice. Findings - High-quality research evidence illustrates the potential of two approaches to address determinants of teenage pregnancy relating to disaffection and low expectations. These are school-ethos interventions, which aim to facilitate a positive and inclusive school-ethos, strengthen school relationships and reduce disaffection; and targeted, intensive youth work interventions, which aim to promote positive expectations, vocational readiness and self-esteem through vocational and life-skills education, volunteering and work experience. Practical implications - Two forms of intervention which address key social determinants of teenage pregnancy - school-ethos interventions and targeted youth work interventions - require more attention from researchers and policy-makers. Originality/value - This paper calls for a shift in the research and policy agenda. In addition to interventions that aim to address proximal, individual factors, such as sexual health-related knowledge, there should be a more complementary focus on socio-environmental as well as targeted individual-focused interventions aiming to address the wider social determinants of teenage pregnancy. © Emerald Group Publishing Limited. |

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| **Reference** | Franklin and Corcoran, 2000 |
| **score** | 0 |
| **rating** | low |
| **Published Year** | 2000 |
| **Abstract** | This article reviews literature on the programs and practices available for the primary prevention of adolescent pregnancy. Using the outcomes from research studies, the review defines some of the "best practices" available for the purpose of guiding practitioners in their selection of programs and interventions. Prevention programs, their major components, and curricula are discussed. Best practices discussed include community-based and school-based clinics, programs offering contraceptive knowledge-building along with comprehensive sex education and skills training, and sex education curricula based on social learning theory and skills training. |

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| **Reference** | Hawes et al., 2010 |
| **score** | 0 |
| **rating** | low |
| **Published Year** | 2010 |
| **Abstract** | First sexual intercourse is an event of immense social and personal significance, which also has major health implications. However, there has been no recent review of the literature in the United Kingdom specifically relating to this event. This review addresses this gap, examining the timing, circumstances, and consequences of first heterosexual intercourse. Studies were identified by electronic search, as well as through contact with experts in the field. Academic literature published from 1960 and pertaining to the UK context was included. A dominant focus of the literature is on the timing of the event, which shows that the age at which young people become sexually active has fallen in recent decades. In addition, much of the literature is concerned with the risk of adverse outcomes, and a young age at first sex is often associated with more negative consequences. There is evidence to suggest that age may not be the most useful criterion for judging optimal timing for first having sex. It is proposed that a more promising concept in relation to first sexual intercourse is that of sexual readiness. |

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| **Reference** | Hoyt and Broom, 2002 |
| **score** | 0 |
| **rating** | low |
| **Published Year** | 2002 |
| **Abstract** | Teenage pregnancy is a well-documented problem in the United States, with approximately 890,000 teenage pregnancies occurring each year. Although teen pregnancy rates have declined since 1991, rates remain higher than the mid-1970s and are fourfold those of European countries. Substantial morbidity and social problems result from these pregnancies, affecting the mother, her children, other family members, and society. Multiple educational approaches have been used, with few demonstrating significant reductions in teen pregnancy. School-based programs have been diverse and multifaceted. Recently, programs with a comprehensive approach have shown potential for success. In this article, characteristics and elements of promising school-based programs are identified and discussed. It is imperative that school nurses play an active role in developing and implementing prevention programs that incorporate rigorous evaluation. As health educators, school nurses are in a prime position to implement and evaluate the effectiveness of teen pregnancy prevention programs. |

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| **Reference** | Card, 1999 |
| **score** | 0 |
| **rating** | low |
| **Published Year** | 1999 |
| **Abstract** | <U+25AA> Abstract This paper begins with a review of the problem of teen pregnancy in the United States. Domestic trends are compared with those of other developed countries. Antecedents of the problem are discussed. New developments in addressing the problem are then described, including the following: (a) a renewed emphasis on abstinence on the one hand; (b) a move toward a more positive view of teen sexuality on the other; (c) the development of new prevention initiatives such as STD/HIV/AIDS prevention programs, community-wide teen pregnancy prevention collaboratives, broad-based youth development programs, and state and local government initiatives; and (d) the lauching of the National Campaign to Prevent Teen Pregnancy. An analysis of the different ways in which the problem can be framed and the implications for solutions of the problem follow. Examples of promising teen pregnancy and STD/HIV/AIDS prevention programs are provided. The paper ends with a recommendation for an eclectic approach to framing the problem and possible solutions. |

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| **Reference** | Kirby, 2002a |
| **score** | 0 |
| **rating** | low |
| **Published Year** | 2002 |
| **Abstract** | Because most youth are enrolled in school for many years before they initiate sex and when they initiate sex, schools have the potential for reducing adolescent sexual risk-taking. This paper reviews studies which examine the impact upon sexual risk-taking of school involvement, school characteristics, specific programs in school that do not address sexual behavior, and specific programs that do address sexual risk-taking. Multiple studies support several conclusions. First, involvement in and attachment to school and plans to attend higher education are all related to less sexual risk-taking and lower pregnancy rates. Second, students in schools with manifestations of poverty and disorganization are more likely to become pregnant. Third, some school programs specifically designed to increase attachment to school or reduce school dropout effectively delayed sex or reduced pregnancy rate, even when they did not address sexuality. Fourth, sex and HIV education programs do not increase sexual behavior, and some programs decrease sexual activity and increase condom or contraceptive use. Fifth, school-based clinics and school condom-availability programs do not increase sexual activity, and either may or may not increase condom or contraceptive use. Other studies reveal that there is very broad support for comprehensive sex- and HIV-education programs, and accordingly, most youth receive some amount of sex or HIV education. However, important topics are not covered in many schools. |

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| **Reference** | Kirchengast 2012 |
| **score** | 0 |
| **rating** | low |
| **Published Year** | 2012 |
| **Abstract** | Adolescence is life stage typical of Homo sapiens. Reproduction during adolescence, i.e. teenage pregnancies is still listed among the most important public health problems of the 21rst century, although low maternal age may be a marker for social rather than biological or medical disadvantage. Data from developed countries indicate that an optimal prenatal program eliminates obstetrical risks among adolescent mothers and adverse pregnancy outcome is mainly due to socioeconomic cofactors. Most teenage pregnancies are unplanned and result often in a social disaster. It is well documented that teenage mothers are more likely to drop out of school and have a low educational level. They are faced with unemployment and poverty. Consequently nearly all developed countries try to reduce teenage pregnancies and teenage motherhood effectively. The different countries however, use different strategies and these strategies differ regarding their effectiveness. In this review beside general aspects of pregnancies during adolescence, strategies to reduce teenage pregnancy rates are discussed. In particular the decline in teenage motherhood in Austria since the 1970s and is highlighted. © 2012 Bentham Science Publishers. |

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| **Reference** | Nitz, 1999 |
| **score** | 0 |
| **rating** | low |
| **Published Year** | 1999 |
| **Abstract** | Adolescent pregnancy is a significant social concern. Although rates of adolescent pregnancy have decreased in recent years, they are higher than in any other industrialized nation. Adolescent pregnancy increases the risk of negative consequences for mothers and their children. With little theory to guide practice, pregnancy prevention programs have had little success. The most effective programs have extended beyond reproductive health to include life options, such as education and job skills. Future research is needed to understand factors that predispose teens to early childbearing and to develop developmentally and culturally appropriate disincentives to pregnancy. Roles for psychologists are reviewed in program development, evaluation, and implementation. |

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| **Reference** | Ott and Santelli, 2007 |
| **score** | 0 |
| **rating** | low |
| **Published Year** | 2007 |
| **Abstract** | PURPOSE OF REVIEW: To review recent literature on medical accuracy, program effectiveness, and ethical concerns related to abstinence-only policies for adolescent sexuality education. RECENT FINDINGS: The federal government invests over 175 million dollars annually in 'abstinence-only-until-marriage' programs. These programs are required to withhold information on contraception and condom use, except for information on failure rates. Abstinence-only curricula have been found to contain scientifically inaccurate information, distorting data on topics such as condom efficacy, and promote gender stereotypes. An independent evaluation of the federal program, several systematic reviews, and cohort data from population-based surveys find little evidence of efficacy and evidence of possible harm. In contrast, comprehensive sexuality education programs have been found to help teens delay initiation of intercourse and reduce sexual risk behaviors. Abstinence-only polices violate the human rights of adolescents because they withhold potentially life-saving information on HIV and other sexually transmitted infections. SUMMARY: Federal support of abstinence-only as an approach to adolescent sexuality education is of much concern due to medical inaccuracies, lack of effectiveness, and the withholding and distorting of health information. © 2007 Lippincott Williams & Wilkins, Inc. |

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| **Reference** | Pierre et al., 1997 |
| **score** | 0 |
| **rating** | low |
| **Published Year** | 1997 |
| **Abstract** | Teen pregnancy is a multifaceted problem closely connected to economic, education, social, cultural, and political factors. Adolescents in the United States have the highest pregnancy rates in the Western world. Teen parenthood is associated with discontinued or delayed education, reduced employment opportunities, low wages, unstable marriages, and prolonged welfare dependency. Prevention of teen pregnancy has become an important national agenda. The purpose of this paper is to provide a review of teen pregnancy prevention programs and strategies and to highlight some of the most promising interventions. |

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| **Reference** | Sedlecky and Stancovic, 2016 |
| **score** | 0 |
| **rating** | low |
| **Published Year** | 2016 |
| **Abstract** | Introduction Preventing repeated unplanned pregnancy among adolescents is still a challenge because many of them fail to use effective contraception after abortion.Objective To review currently recommended options of methods and counselling for effective prevention of repeat pregnancies in adolescents.Methods Review of the literature that was identified through the Medline, ScienceDirect, Google and Popline databases and relevant expert opinions.Results Counselling needs to be adapted to the needs, values and lifestyle of adolescents. The best results are achieved with nondirective or active contraceptive counselling, followed by regular check-ups and cautious and attentive approach in the management of doubts, prejudices and side effects related to the contraceptive chosen. Adolescents should initiate contraception immediately after abortion: the motivation for choosing an efficacious method is highest at that time; resumption of ovulation following induced abortion occurs on average after three weeks; more than half of these girls will resume sexual activity within two weeks after pregnancy termination. Long-acting reversible contraception use during adolescence is safe and most effective. However, achieving a high long-term continuation rate is especially challenging in adolescents; this is due to developmental and environmental characteristics that influence their contraceptive behaviour.Conclusion Adolescents should immediately after abortion initiate a reliable contraceptive method, preferably one whose efficacy is not user-dependent. Providing an appropriate health care would contribute to achieving continuity in the prevention of repeat pregnancy. © 2015 The European Society of Contraception and Reproductive Health. |

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| **Reference** | Thomas 2000 |
| **score** | 0 |
| **rating** | low |
| **Published Year** | 2000 |
| **Abstract** | This article assesses the abstinence-based programs developed by family life educators and the factors associated with positive results through a review of abstinence promotion programs of the federal government. In 1996, Section 510 was added to Title V of the Social Security Act allocating US$50 million annually from 1998-2000 to fund abstinence education programs, while in 1997, a National Strategy to Prevent Teen Pregnancy was launched by the Office of Adolescent Pregnancy Prevention to provide teen pregnancy programs to at least 25% of the communities. Presented in this paper is a discussion of the Abstinence Only programs, which focus on the prevention of pregnancy and sexually transmitted disease among adolescents, and the Abstinence Plus programs, which emphasize other prevention methods as well as abstinence. Evaluation of Abstinence Only programs include Success Express, Project Taking Charge, Sex Respect, Teen Aid, Values and Choices and Facts and Feelings. Moreover, programs such as Reducing the Risk, Postponing Sexual Involvement, Project Education Now, and Babies Later were evaluated under the Abstinence Plus programs. Several programs evaluated have shown to have a positive effect on attitudes among adolescents, but are not proven to have a significant effect on sexual behavior. In conclusion, this article encourages exploration of new approaches to address teen pregnancy and the increasing incidence of sexually transmitted diseases among adolescents, while the federal government must utilize the implementation of existing programs with positive effects. eng |