**SUPPLEMENT TABLE 2.** Intervention Impact on Rapid Repeat Pregnancy or Birth, by Level of Impact and Quality of the Evaluation (N=40)

| **Evaluation and Country** | **Outcome Measured and Time Frame After Index Birth** | **Sample Size and Study Design** | **Intervention Description** | **Impact** |
| --- | --- | --- | --- | --- |
| **STATISTICALLY SIGNIFICANT IMPACT (N=17)**  |
| **High-Quality Evaluations (n=14)** |
| Ahmed 201539Bangladesh | Birth24 months | 4,083 women QED | Community-based postpartum FP; strong SBC component focused on healthy spacing/fertility return before menses return targeted to woman and family; strong LAM education and transition to another modern method at 6 months | Rate of reporting a short birth interval of <24 months was significantly lower in intervention (14%) vs. control (17%) (*P*<.01). The CPR was significantly higher in the first 24 months postpartum in intervention (46%) vs. control (35%) (*P*<.001), and the odds of a short birth interval of <24 months were reduced by 23%. |
| Shaaban 201222Egypt | Pregnancy6 months | 1,158 womenRCT | LAM and EC provision to, and training on use of EC, should intercourse occur when one of the LAM conditions is not met, for postpartum women in intervention group. LAM-only training in comparison group | I=2 pregnancies (0.8%)C=29 pregnancies (5.0%) *P*<.001 |
| Sullivan 199218US | Pregnancy18 months | 243 adolescents RCT | Health care model delivered at teen baby clinic for teen mothers including social workers, pediatrician, and referral for contraceptive service provision, focused on prevention of repeat pregnancy, return to school, immunizations, and reduced use of emergency room. | I=13/108 (12%)C=32/113 (28%)*P*<.003 |
| Black 200619US | Birth24 months | 149 adolescents RCT | Postpartum home-visitation mentoring intervention; curriculum delivered every other week until infant’s first birthday by women from community who served as mentors. Curriculum emphasized negotiation skills, adolescent development, and parenting. | I=8/70 (11%)C=19/79 (24%)*P*<.05Having ≥2 intervention visits increased the odds of not having a second infant more than threefold. Only 1 mother who had 6 visits had a second birth. |
| Barnet 200920US | Birth24 months | 235 adolescents RCT | Computer-assisted motivational interviewing intervention (counseling style that emphasizes personal goals and self-efficacy) coupled with home visitation to prevent rapid repeat pregnancies.  | Controlling for baseline group differences, the HR for repeat births was significantly lower in 1 of 2 intervention groups vs. control; HR=0.4 (*P*<.05)  |
| Martin 201121UK | Pregnancy24 months | 227 adolescents RCT | Training for adolescents in “implementation intention formation” (if-then planning) in relation to use of contraceptives. | I=14/115 (7%)C= 8/112 (12%)*P*<. 02 |
| Katz 201123US | Pregnancy24 months | 249 adolescents RCT | Intensive cell phone counseling intervention to prevent subsequent teen pregnancies by strengthening healthy relationships and reproductive practices, positive youth assets, and teen’s own goals and needs. | Ages 15–17:I=26%C=39%Participants ages 15–17 at delivery showed significant reduction in subsequent pregnancy with increased levels of intervention exposure (*P*<.01). |
| Olds 200224US  | Pregnancy24 months | 735 women with no previous live birth RCT | Nurse home-visitation intervention to plan the next pregnancy, improve health behaviors, prevent rapid repeat pregnancies, improve parent care of children, and maternal life course development. | I=29% C=41%*P*<.02 |
| Drayton 200040Jamaica | Pregnancy | 260 adolescents Historical cohort study (calculated cumulative incidence of repeat pregnancy during program follow-up period, 1995–1998) | Classroom instruction, skills training, and job placement | I=32/87 (37%)C=104/173 (60%)Program participation linked with significant independent effect on incidence of repeat pregnancies (*P*<.05). |
| Kincaid 200057Bangladesh | Continued use of contraception over 2.5 years | 860 women Longitudinal cohort study | Social networks model in which clients discussed topics related to contraception, emphasizing discussion with husband and family, in the homes of village influentials; discussions led by trained government field workers. | Continuation rates over 2.5 years: I=43.9%C=25.5%*P*<.001After adjustment, the impact of the social network approach on contraceptive use was almost double that of conventional field worker visits. |
| Kitzman 199725US | Pregnancy24 months | 1,139 womenRCT | Home visitation by nurses to improve newborn and child health and mental development, prevent injuries, and rapid repeat pregnancies. | I=36%C=47%*P*<.01 |
| Seitz 199333US | Birth24 months | 102 adolescents QED | Separate school for pregnant students integrated into the city school system in which social and medical services were provided in addition to educational classes. Counseling included helping parents plan for immediate and long-term future, and for adolescents participating >7 weeks, a requirement for postpartum checkup before exiting the school. | I=6/50 (12%)C=19/52 (36%)*P*<.005 |
| Rabin 199136US | Pregnancy occurring over 9 program years | 589 adolescents QED | Comprehensive services including sexual education coupled with contraceptive education, the importance of sexual responsibility, and contraceptive availability and utilization/postpartum family planning provided by multidisciplinary team. | For all 9 years of the program:I=9% repeat pregnancyC=70% repeat pregnancyPregnancy declined significantly with each successive year of the program(*P*<.001). |
| Sebastian 201237India | Pregnancy9 months  | 959 women aged 15–24QED | Community-based postpartum and behavior change intervention with strong emphasis on education on healthy pregnancy spacing. | I=10.5% C=16.4%*P*<.01 |
| **Moderate Quality (n=3)** |
| Key 200834US | Births Followed mothers for at least 24 months | Subjects=63 adolescentsPropensity-matched comparison group=252QED | Comprehensive services including intensive case management by school social worker, home visitation, peer education, and medical care. | Births by 30 months:I=14% C=26%*P*<.05 |
| Solomon 199835US | Pregnancyapproximately 2 and 3 years after initial recruitment | 63 adolescents QED | Family support center required to provide comprehensive services that include pregnancy testing, contraceptive services, primary health care services, educational services, and vocational services. | 2 years after recruitment:I=3/34 (8%)C=11/29 (37%)*P*<.0063 years after recruitment:I=7/34 (20%)C=11/29 (48%)*P*<.02 |
| Kan 201241US | Pregnancywithin 12 months and after 12 months of program intake | 1,038 adolescents QED | Cross-site evaluation of 12 projects required to offer 10 comprehensive health, child welfare, and contraceptive services. | Impact achieved within 12 months but not after 12 months.Within 12 months:I=9.8%C=19.5%*P*<.05After 12 months:I=16.4%C=12.8% |
| **POSITIVE TRENDS OR OUTCOMES BUT NOT A STATISTICALLY SIGNIFICANT IMPACT (N=13)** |
| **High-Quality Evaluations (n=3)** |
| Koniak-Griffen 200326US | Pregnancy and birth24 months | 101 adolescents RCT  | Home visitation using case management approach through 1 year postpartum to improve maternal health, build maternal caretaking skills, prevent rapid repeat pregnancy, and build social competence. | I=18/56 (32%)C=21/45 (47%)*P*>.10  |
| Ford 200227US | Pregnancy12 months | 282 adolescents RCT | Peer-support intervention designed to improve long- and short-term perinatal outcomes | I=13.4% C=15.9% Not significant |
| Lewis 201238US | Births36 months | 144 adolescents QED | Intensive case management to prevent 3-year subsequent births for low-income adolescent mothers. | I=9/55 (16%)C=10/32 (31%)Not significant |
| **Moderate Quality (n=8)** |
| Sangalang 200649 US | Births24 months | 1,260 first-time adolescent mothers Retrospective study using North Carolina birth certificate records | Case management by social workers and services by health professionals, including goal to prevent repeat pregnancy. | Risk of 2nd birth was about 20% less in intervention group88% of intervention mothers did not have a second birth85% of control mothers did not have a second birth |
| Ruch-Ross 199242US | Birth12 months | 1,794 adolescents QEDAnalysis of participant records/comparison group drawn from National Longitudinal Survey of Youth | Home visitation for 2 years after birth and peer-support model; specific goals included delaying subsequent pregnancy. | After adjustment, comparison participants were about 1.4 times more likely to experience a subsequent pregnancy at 12 months after program enrollment than intervention participants. |
| Omar 200848US | Pregnancy12 months | 1,004 adolescent program participants compared with 790 adolescent mothers included in national survey Retrospective review of clinic data | Clinical health services and comprehensive care for teen mother and baby, including prenatal and postnatal care, mental health services, and extensive contraceptive counseling prior to start of contraceptive use and at every clinic visit. | Of 1,386 mothers, only 11 (0.79%) experienced repeat pregnancy during 3-year program period. |
| Carvalho Sant’Anna 200751Brazil | Pregnancy23 months | 85 adolescents under age 18Prospective analysis based on program data | Open group discussions every other week with multidisciplinary team for pregnant teens, their partners, and adolescents who had recently given birth with goal of improving contraceptive use and preventing repeat pregnancy during adolescence. | At 2 years postpartum, only 3.5% of 85 adolescent subjects had experienced a repeat pregnancy. Use of contraceptives increased from 35.4% pre-intervention to 77% post-intervention (*P*<.05). |
| Cox 201253US | Pregnancy 24 months | 144 adolescents Prospective single-cohort demonstration project | Comprehensive medical and social services for teen mothers provided in a “medical home” including case management, promoting prevention of subsequent pregnancies, and improving life skills. | I=24%Compared with higher 24-month pregnancy rates found in other studies |
| Sadler 200754US | BirthWithin 2 years of the index birth | Convenience sample of 65 volunteer teen mothers, aged 14–19Descriptive study | School-based services including daily parenting classes, outreach, transportation, legal services, family counseling, liaison with health care providers, and child care. | Overall rate of subsequent childbearing in the sample of mothers was 6% (4 students) within 2 years of the index birth. |
| Kuziel-Perri 199256US | Pregnancy4 years | 52 adolescents 4-year follow-up evaluation impact study | Eight services, including comprehensive pre- and post-birth services, including family planning methods, provided by nonprofit agency that had reputation of effective service provision. | Over 4 years, 13.5% of 52 adolescents experienced a repeat pregnancy, 57% within 24 months of first delivery. |
| Fischer 199752US | Pregnancy12 months | School setting=311 adolescentsHealth setting=230 adolescents Analysis of program data | Social work intervention with case management delivered in school and health settings to help teen mothers complete high school, develop parenting skills, and avoid additional pregnancy. | In school setting, 9% of 311 subjects experienced repeat pregnancy, while in health setting 3% of 230 subjects experienced repeat pregnancy. |
| **Less Rigorous (n=2)** |
| Brown 199955USDescriptive study | Pregnancy5 years | 65 adolescents | Weekly meetings and an informal program based on needs of members with an award of $1 for each day that participants did not become pregnant. |  Of 65 adolescents enrolled in the program, 10 became pregnant (15% repeat pregnancy rate). This rate was substantially lower than the 30%–35% rates reported by other programs. |
| Schaeffer 200850USDescriptive study | Pregnancy9 years | 276 adolescents | US school-based model, with emphasis on planning the next pregnancy. Included monthly pregnancy testing and repeated asking of question: How many children do you want to have? Model included collaboration of and multidisciplinary services provided by school, health department, and community hospital, including case management, counseling, referral, and classes in school on contraception. | Over 9 years, 20 pregnancies occurred among 276 participants, resulting in a repeat pregnancy rate of 7.2%. |
| **NO IMPACT (N=10)** |
| **High-Quality Studies (n=7)** |
| Stevens-Simon 199731US | Pregnancy6, 12, and 24 months | 286 adolescents RCT | Participants were randomized to 4 interventions: monetary incentive and peer-support group; peer-support group only; monetary incentive only; or no intervention. | Incidence of repeat pregnancy in 3 intervention groups at 24 months:I (1)=34/97=35.1% (peer and incentive)I (2)=13/23=56.5% (peer only)I (3)=35/84=41.7% (incentive only)C=15/44=34.1% |
| Sims 200232US | Pregnancy24 months | 99 adolescents RCT | Intensive family support services, including weekly home visits from paraprofessional family advocate with the goals of high school completion and limiting further childbearing; barriers to using contraceptives were removed (e.g., free medical and transport services). | I=58% repeat pregnancyC=63% repeat pregnancy |
| Barnet 200728US | Pregnancies and births24 months | 84 adolescents RCT | Community-based home visitation until child’s second birthday, mentoring, case management, and skills-based interactive instruction. | I=14/31, 45% repeat pregnancyC=12/32, 38% repeat pregnancy |
| Jones 199444US | Pregnancy24 months | 399 adolescents QED  | Prenatal education for pregnant adolescents taught by trained volunteers. | No significant group differences were found in recorded pregnancy outcome within 2 years.  |
| Cherniss 199630US | Pregnancy24 months after entrance into program | 116 adolescents RCT | Intensive home-based family therapy intervention to increase family support for teen to ensure medical care, transportation, better housing and improved communication, and to prevent repeat pregnancy. | Intervention did not prevent high repeat pregnancy rates. Overall rate exceeded 50% 2 years following entrance in the program. |
| El-Kamary 200429US | Pregnancy24 months after entrance into program | 643 women RCT | Hawaii’s Healthy Start Program: home visitation to prevent abuse, neglect, and rapid repeat pregnancy, and to promote child health and development. | There was no program impact on rapid repeat pregnancy:I=21% repeat pregnancyC=20% repeat pregnancy |
| Feldman 200943Mexico | Births At 1, 2, and 3 years | Women QED | Cash transfers to female heads of household conditional upon attendance at health education sessions, children enrolled in school, and family members obtain health checkups. | The program influenced contraceptive use but did not influence birth spacing.Both intervention and comparison groups had similar likelihood of experiencing subsequent birth (HR=1.04, *P*<.04). |
| **Moderate Quality (n=3)** |
| Donnelly 199445US | Births12, 24 months | 248 adolescents QED | Case management, counseling, information and education to encourage family involvement and support of adolescent mother. | The intervention did not reduce repeat pregnancy at 12 or 24 months.At 24 months:I=51% repeat pregnancyC=62% repeat pregnancy |
| Marsh 199146US | Pregnancy3 years | 335 adolescents Institutional cohort QED | Comprehensive service program for adolescents: health, nutrition, family planning, child care, job training, housing assistance, parenting and life skills. Program goal was to delay initial and repeat pregnancies. | “The number of repeat pregnancies in one year was completely unaffected by the program.” Over 3 years, the average number of repeat pregnancies was 18%. |
| Maynard 199447US | Pregnancy24 months | 5297 adolescents QED | Case management was the cornerstone of the intervention; case managers were especially trained to work with teen parents and handled 50–60 cases and helped teen parents decide on education and training opportunities. All teens required to attend a series of workshops designed specifically to help teens delay subsequent pregnancies. Case managers trained to provide family planning counseling. | “Two years after enrollment, half had become pregnant within two years after the birth of their first child.” |

Abbreviations: C, control; CPR, contraceptive prevalence rate; EC, emergency contraception; FP, family planning; HR, hazard ratio; I, intervention; LAM, Lactational Amenorrhea Method; QED, quasi-experimental design; RCT, randomized controlled trial; SBC, social and behavior change.