Appendix A. List of Community Education Search Terms

Family planning terms plus:

Pubmed

—Public Relations‖[Mesh] OR —Community-Institutional Relations‖[Mesh] OR —Health Education‖[Mesh] OR —Health Promotion‖[Mesh] OR —Marketing‖[Mesh] OR —Marketing of Health Services‖[Mesh] OR —Public Relations‖[All Fields] OR —Community-Institutional Relations‖[All Fields] OR —Health Education‖[All Fields] OR —Health Promotion‖[All Fields] OR —Health Services Marketing‖[All Fields] OR (Outreach) OR (—Health Educator‖)

—Communication‖[Mesh] OR —Communications Media‖[Mesh] OR —Internet‖[Mesh] OR —Communication‖[All Fields] OR —Communications Media‖[All Fields] OR —Internet‖[All Fields] OR —Mass Media‖ OR —Traditional Media‖[All Fields] OR —Multimedia‖[All Fields] OR —Information Technology‖[All Fields] OR —Social media‖[All Fields] OR —Social marketing‖[All Fields]

CINAHL

((MH "Public Relations+") OR (MH "Community-Institutional Relations") OR (MH "Community Health Services+") OR (MH "Community Programs") OR (MH "Health Education+") OR (MH "Patient Education+") OR patient education OR (MH "Patient Education (Iowa NIC) (Non-Cinahl)+")) or (outreach or "health educator")

((MH "Communication+") OR communication OR (MH "Communications Media+")) or (Published "mass media" OR "social media" OR "social marketing" OR mulitimedia OR "traditional media" OR "information technology")

PsychInfo

((((DE "Community Services" OR DE "Home Visiting Programs" OR DE "Public Health Services") OR (DE "Outreach Programs")) OR (DE "Health Education" OR DE "Sex Education")) OR (DE "Health Literacy")) or outreach or "health educator"

(((DE "Communication" OR DE "Augmentative Communication" OR DE "Electronic Communication" OR DE "Interpersonal Communication" OR DE "Nonverbal Communication" OR DE "Persuasive Communication" OR DE "Scientific Communication" OR DE "Verbal Communication") OR (DE "Communications Media" OR DE "Audiovisual Communications Media" OR DE "Mass Media" OR DE "Multimedia" OR DE "Telecommunications Media")) OR (DE "Communication Barriers")) or "mass media" or "traditional media" or multimedia

Popline

communication programs

Appendix B. Electronic Databases Searched for Systematic Review

Database	URL for Search Platform
Cumulative Index to Nursing and Allied Health Literature	http://ebscohost.com/
The Campbell Library	http://www.campbellcollaboration.org/library.php
The Cochrane Library	www.thecochranelibrary.com
Database of Abstracts of Reviews of Effects	http://www.crd.york.ac.uk/crdweb/
EMBASE	http://ebscohost.com/
MEDLINE	http://ebscohost.com/
PsycINFO	www.apa.org/psychinfo
PubMed (pre MEDLINE)	http://ebscohost.com/
U.K. National Health Service Economic Evaluation Database	http://www.crd.york.ac.uk/crdweb/
U.S. National Guideline Clearinghouse	www.guidelines.gov
HealthSTAR	http://www.kfinder.com/newweb/Products/hstar.html
POPLINE	http://www.popline.org/
Education Resource Information Center	http://www.eric.ed.gov/
UK National Institute of Clinical Excellence	http://www.nice.org.uk/
Evidence for Policy and Practice Information and Coordinating Centre	http://eppi.ioe.ac.uk/cms/
TRIP	http://tripdatabase.com/

Appendix C. Summary of Articles Included in Systematic Review of Community Education in Family Planning

Citation, funding	Study design	Population	Intervention	Results	Assessment of study
Alstead, 1999, U.S. Funding from the Washington State Health Department	Time series cross-sectional 3 independent surveys conducted at baseline, 2 months into intervention, and 7 months into intervention; 1 intervention conducted in 3 communities	Adolescents aged 15-17 years from 3 communities within King County, WA (U.S.) Baseline: n=341 2-month: n=478 7-month: n=606 Respondent characteristics across surveys: Female (48%, 53%, 50%); African American (30%, 21%, 27%); White (38%, 43%, 39%); 100% urban Random sampling of interviewees at various locations where youth congregate (e.g. parks, malls, school ground) 69% of those approached were willing to be interviewed	Aim: To increase condom use Two, 2-month campaign waves involving (1) placement of posters, billboards, a public mural, exterior and interior bus signs, radio spots; (2) provision of condom vending machines and free condom bins; and (3) distribution of ancillary materials (e.g., t-shirts, booklet in schools and health fairs.)	Exposure 73% of youth interviewed in either follow-up survey recognized any component of the campaign, with no significant differences in exposure by age, gender, race/ethnicity, or other measured factors Other psychosocial outcomes Intention to use condoms consistently in the future did not differ by exposure to the media campaign, among sexually-active youth Barriers Some adults were concerned about sexually-explicit messaging would encourage sexual activity Some local officials and businesses did not support the program, given its focus on condom use Costs were high and made use of TV prohibitive, though they obtained pro-bono contributions from ad agencies Facilitators Extensive community involvement in campaign development and implementation	Strengths Study groups comparable in terms of demographic characteristics across survey waves Weaknesses No control group Quality of study Level II-3 Risk of bias: high
Baraitser, 2002 UK	Time series cross-sectional 1 intervention in 1 community	2,978 of 3,908 new clients completed the questionnaire (76% response rate)	Aim: To increase service utilization Consolidated services from 4 clinics into the largest	Exposure An increasing proportion of new, young users heard about the new service from sex education classes, comparing	Strengths Anonymous, self-administered questionnaire

Citation, funding	Study design	Population	Intervention	Results	Assessment of study
Funding source not noted	All new patients were administered a questionnaire, from 6 months prior to service change to 18 months after They also tracked number of new clients over time, compared to other sites, using administrative data	Demographic characteristics not reported (but samples included both men and women, all ages; all urban)	one and expanded the hours of service availability, including drop-in appointments. They combined these changes with a clinic outreach program that actively promoted new service with local partners (e.g., schools, youth employment programs, etc.), using a clinical staff person as the outreach representative.	baseline and follow-up (e.g., 3.6% vs. 7.8% at 1st 6-months) Use of services Number of new clients increased at the expanded clinic, from 280 during 6 months prior to change, 708 in 1st 6 months after change, 872 in 2nd 6 months after change, and 959 in 3rd 6 months after change. Increases were seen across all age groups and was particularly significant among those under age 20 years (i.e., 24.6% of new clients were under age 20 in 6 months prior to change, compared to 30.9% in 1st 6 months after change, 29.9% in 2nd 6 months, and 32.05 in 3rd 6 months after change) Facilitators Having a dedicated outreach nurse who offered a flexible program of interventions Using a clinical outreach worker (vs. a youth worker, for example) as the lead on outreach, making expertise more widely available and referrals more possible during outreach efforts Having relationships with a wide variety of local organizations working with young people	Large population tracked over long time period Weaknesses No control group Not possible to distinguish between the impact of the outreach efforts from the changes in clinic hours with the current study design Quality of study Level II-3 Risk of bias: high
Brindis, 2005, U.S.	Retrospective Cohort Study	Males and female adolescents visiting one	Aim: To increase adolescents' clinic visit	Use of services	Strengths

Citation, funding	Study design	Population	Intervention	Results	Assessment of study
Funding from the California Wellness Foundation	3 intervention groups and 1 control group (assigned retrospectively) 3 year study period Peer providers surveyed clients at in-take visit on sexual behaviors	of 5 family planning centers in California 1,424 females, 166 males (47% Hispanic; all under age 20 with about~50% aged 15-17 years) Urban/rural not reported	patterns and increase contraceptive and condom use Among women, 3 peer intervention models tested against a control group Group 1 (Control): Peer providers meet with clients prior to meeting with health care provider to conduct in-take session Group 2 (Clinic-telephone): Group 1 + peer provider follow-up phone calls after visit and quarterly thereafter to provide support Group 3 (Clinic-outreach): Group 1 + exposure to teams of young adult outreach health educators providing group outreach in schools and individually (for males, particularly) in community setting Group 4 (Full model): Group 1 + Group 2 + Group 3 Among men, comparisons were only made between Group 1 (clinic services	Compared to control group, Group 2 females were more likely to return for an annual exam (AOR 1.43, ***p*<0.05**) Compared to control group, Group 4 females were more likely to return for an annual exam and make 3 or more visits (AOR 2.19, ***p*<0.01** and 1.70, ***p*<0.05**, respectively)	Analyses controlled for confounding variables <u>Weaknesses</u> Potential for recall bias, particularly for recall of exposure to outreach component The inclusion criteria reduced the final sample size to only 19% of the initial female population and 8% of the initial male population. All groups received some level of peer provider services <u>Quality of study</u> Level II-3 Risk of bias: High

Citation, funding	Study design	Population	Intervention	Results	Assessment of study
			only and Group 3 (Clinic-outreach)		
Bull, 2008, U.S.	Group –level RCT 6 intervention areas and 6 control areas Assessment at baseline and 4 months post-campaign Select neighborhoods randomized to receive campaign	English-speaking females, aged 15-25 years, who lived in 12 neighborhoods in 2 states N=3,407 pre-campaign (33% African American, 42% Latina) N=3,003 post-campaign (32% African American, 35% Latina); urban Participants recruited from venues popular among age group; time-space sampling Pre-campaign: Of 10, 136 women approached, 6,122 (60%) agreed to screen. Of those, 4,032 were eligible, and 85% of those (3,427) completed the baseline survey Post-campaign: Of 6, 682 women approached, 4,228 (64%) agreed to screen. Of those, 3,920 were eligible, and 3,036 of those agreed to	Aim: Increase knowledge, attitudes, and use of condoms (both male and female) Social marketing campaign conducted in 6 neighborhoods over 6 months, involving posters and take-away cards that included a coupon to redeem for a special package of condom materials; posters and such were placed in bathrooms and bulletin boards in community sites frequented by young women Coupon was redeemable at 3-5 sites in each campaign neighborhood	Exposure 46,602 take-away cards were distributed, and 3.5% of those were redeemed for gift incentive Post-campaign, 11% of women reported being familiar with campaign materials. Knowledge and awareness No differences in condom-related knowledge or attitudes between campaign or comparison neighborhoods Facilitators Building partnerships within communities to leverage support for the issue and getting corporate sponsorship for public service announcements or other campaign elements The use of time–space sampling to enumerate women for evaluation helped to identify key placement opportunities for the campaign.	Strengths High participation rate Used validated survey measures Analysis controlled for confounding variables Weaknesses Evidence of exposure to the intervention in the control group Quality of study Level I Risk of bias: Moderate

Citation, funding	Study design	Population	Intervention	Results	Assessment of study
		complete the survey (92%).			
Doniger, 2001, U.S. Funding source not noted	1 intervention in 1 county Part of the evaluation involved a time series cross-sectional study design, using the pre-exposure community as baseline and involving surveys at baseline, 1 year and 3 year follow-up (middle school survey) or at baseline, 2 years and 4 years follow-up (high school survey) Impact was assessed among middle-school students through a dedicated survey, and impact among high school students was assessed	Youth aged 9-14 years in 1 county in NYC were the primary target of the intervention. Middle school survey conducted among convenience sample of children in 7th and 8th grades from 9 schools Baseline n=2,324 1 year n=2,083 3 year n=1,578 Age, race/ethnicity, gender not reported High school survey through the YRBS Samples (grades 9-12); Baseline: 1,395 (51% female) 2 year: 1,703 (54% female) 4 year: 1,737 (51% female) Race/ethnicity not reported; urban/suburban settings County-wide teen pregnancy rates were	Aim: To promote delayed sexual initiation and reduce the teen pregnancy rate Branded, multi-year mass media communications campaign including paid television and radio advertising, and billboards. Posters and related discussion guides were distributed to local elementary and middle schools, and educators trained to utilize them in appropriate classes. Related educational materials were distributed to parents through local libraries and CBOs, and presentations and events were conducted in schools and community settings	Exposure Awareness of at least some element of the campaign was 95% at 1 and 3 years, among middle school students Other psychosocial outcomes Percent of middle school students who reported that they could handle the consequences of sex decreased from 34% to 22% (***p*<0.05**) from survey wave 1 to wave 3. Percent of middles school students who reported they would have sex with a boy/girlfriend who kept asking them for sex decreased (from 21% to 16%, ***p*<0.01**) from survey wave 1 to wave 3. Parent-child communication There was no statistically significant increase in the percent of middle school students who reporting they would talk to a parent or guardian about sex if they had a question. Facilitators A community advisory group helped link the project to stakeholders in the local community The local television and radio stations discounted the cost of airing the commercials as a community service	Strengths Used validated survey for high school survey (the YRBS) Assessed changes in pregnancy rates, using vital statistics, with comparison groups Multiple methods used to triangulate program effect Weaknesses No control group for short- and medium-term outcomes assessed Convenience sample of middle school students Survey recruitment methods not described Survey response rates not reported Quality of study Level II-3 & Level II-2 Risk of bias: high

Citation, funding	Study design	Population	Intervention	Results	Assessment of study
	through use of the YRBS surveys. The other part involved a prospective cohort study using vital statistics.	compared to those reported to vital statistics for the entire state and two large nearby counties over the project period			
DuRant et al. 2006, U.S. Funding from the North Carolina Department of Health and Human Services and the Adolescent Pregnancy Prevention Coalition of North Carolina	Retrospective Cohort Study 1 intervention of varying intensity in 32 counties Assessment during the last month of the campaign (9 months)	Parents of adolescents aged 12-18 years living in 20 counties in North Carolina 1,132 parents interviewed across 32 counties (approximately 35 in each county), post-exposure, using a random sample of telephone numbers (sample of 9,002 numbers obtained) 73% female parents interviewed; 85% white non-Hispanic; mean age 44 years; Rural/urban split not reported	Aim: To increase parent communication with their adolescent children about sex 9 month campaign providing exposure to paid TV PSAs, radio PSA, billboards, and/or bus signs with the campaign messages Message intensity varied across counties, ranging from no exposure to just one media, up to having all media	<u>Exposure</u> Exposure to TV PSAs was high (64% in counties where it aired), exposure to radio PSAs was low (15%), and exposure to billboards was moderate (27%). Parents outside counties where these media were aired also reported seeing/hearing those media messages. <u>Parent-child communication</u> Frequency of exposure to radio (***p*<0.01**) and TV PSAs (***p*<0.001**) about sex and to billboards (***p*<0.05**) about teen pregnancy were each positively associated with parents having talked to their adolescent children about sexual issues in the past 6 months. Frequency of exposure to billboards about sex and to TV PSA's about teen pregnancy were not associated with this outcome. Frequency of exposure to billboards (***p*<0.05**), radio (***p*<0.01**) and TV PSAs (***p*<0.05**) about sex were each positively associated with parents' intentions to do so in the next month. Exposure to billboards, radio, and TV PSA's about	<u>Strengths</u> Analysis controlled for confounding variables <u>Weaknesses</u> Only post-intervention data available Only parents living in homes with working phones were included <u>Quality of study</u> Level II-2 Risk of bias: high

Citation, funding	Study design	Population	Intervention	Results	Assessment of study
				teen pregnancy were not associated with this outcome. Frequency of exposure to the billboards and TV PSAs was not significantly associated with parents' attitudes about communicating with their children about sexual issues (based on an 8-point attitude scale)	
Evans, 2009, U.S. Funding from the Office of Population Affairs, HHS	RCT 3 groups: 2 interventions and 1 control Online surveys administered at baseline, 4 weeks, and 6 months	Random sample of parents of children aged 10-14 years across the U.S. who were involved in the Knowledge Networks online research panel (a nationally-representative sample of adults) N=811 Mothers were randomly assigned to 1 of 3 groups (e.g. In control group: 87% white, 78% with some college or more) N=645 Fathers assigned to control or Group 1 only (no booster) (e.g. In control group: 87% were white, 83% with some college or more) Rural/urban: not reported	Aim: To increase parental communication with children about sex and to increase use of online resources for parent-child communication by parents Intervention group 1 viewed or listened to 2 print PSAs, 1 radio PSA, and 1 TV PSA, including promotion of the use of online parenting resources. All were tailored to participants' race/ethnicity, and were provided immediately after baseline survey and immediately prior to both follow-up surveys Intervention group 2 (Booster) received: the Group 1 package as well as 2 additional print PSAs, 1 additional radio PSA and 1 TV PSA, which was provided immediately prior	Use of services Use of the recommended, online parent website increased among both mothers and fathers in treatment groups, at both follow-up points (e.g., AOR of visiting the website was 7.8, ***p*<0.01**, among mothers in treatment group at 4 weeks) Parent-child communication Fathers in intervention group increased initiation of conversations with their children about sex at 4 weeks after exposure (AOR 1.76, ***p*<0.01**). No effect on conversation initiation found among mothers. Both mothers and fathers increased recommendations to their children to wait before becoming sexually active at 6 months (AOR 2.35, ***p*<0.05** and 2.33, ***p*<0.01**, respectively) No effects on frequency of talking to child about being sexually active among mothers or fathers Booster sessions showed no additional effect on communication behavior	Strengths Study groups comparable in terms of demographic characteristic and overall attrition rates Analyses adjusted for various confounding variables Weaknesses Self-report data provided immediately after viewing materials at follow-up visits Potential contamination of control group with exposure to messages outside of study High attrition rates of the treatment group at 6 month test point (e.g., 30% of treatment mothers and 23% of control mothers, and 28% of treatment

Citation, funding	Study design	Population	Intervention	Results	Assessment of study
			to the second follow-up survey Control group: No intervention		fathers vs. 18% of control fathers) Quality of study Level I Risk of bias: Moderate
Gee, 2007, U.S. Funding from NARAL Pro-Choice Massachusetts, the EC Network, and Brigham and women's Hospital Obstetrics and Gynecology Department	Time series cross-sectional 1 intervention in 1 community Assessment at baseline and then 2 years later	Childbearing women aged 18-44 in a Boston community with high percentages of Hispanic residents Participants recruited at public locations frequented by local residents Pre-intervention n=188 (57% white, 29% Hispanic) Post-intervention n=290 (56% white, 24% Hispanic) Urban	Aim: To increase knowledge of EC, access to and education about EC, and willingness to use EC Community campaign including educational signs placed in community settings, distribution of pamphlets to local businesses; educational-promotional packets on EC provided to local health centers and pharmacies; lectures and one-on-one detailing offered to pharmacists and health center staff; peer-to-peer outreach with pharmacists Conducted from 2003-2005	Knowledge and awareness Comparing the sample after the campaign with the baseline sample, there were significant increases in percent of women who had heard of EC (91% vs. 82%, ***p*<0.01**); who had correct knowledge of EC (49% vs. 39%, ***p*<0.05**), who had discussed EC with a health care provider (38% vs. 25%, ***p*<0.01**), who had received an advance prescription (22% vs. 12%, ***p*<0.01**), and who intended to use EC in the future if needed (79% vs. 63%, ***p*<0.01**). Disparities in awareness of EC remained, with Hispanic and black women less likely to know about EC than white women (79% and 88% vs. 97%, respectively). However Hispanic women's awareness rose significantly from 51% to 88% during the campaign. Facilitators Intervention was low-cost	Strengths Community-based sampling Study groups comparable in terms of age and race/ethnicity Weaknesses Convenience sampling method No control group Participation rates not reported Quality of study Level II-3 Risk of bias: High
Gold 2010, Australia Funding from the Windermere Foundation,	Pre-post study evaluation 1 intervention in 1 group	Young people aged 16-29 years in Melbourne Participants were recruited at a large, annual music festival	Aim: To promote sexual health knowledge and behavior A total of 12 catchy text messages about STIs and	Exposure 80% of respondents at follow-up reported they found the text messages entertaining or interesting, and 68% learned something from them Use of services	Strengths Natural program setting, not an artificial study environment Weaknesses No control population

Citation, funding	Study design	Population	Intervention	Results	Assessment of study
Pierce Armstrong Trust, and the Burnet Institute, with other support from the Australian Government	Assessment at baseline and 2 weeks after last broadcast	1,771 were both eligible and enrolled to receive the texts; 319 dropped out, and 587 completed the post-intervention survey (40%), which was on-line Pre-intervention survey n=1,765 (55% women) Post-intervention survey n=587 (64% women) Ethnicity/race not reported; Rural/urban not reported	promoting STI testing and condom use were sent about every 2 weeks	Reported STI testing in the previous 6 months increased from baseline to follow-up (8% vs. 10% for males, ***p*<0.05**, 18% vs. 23% for females, ***p*<0.01**) Knowledge and awareness Knowledge of sexual health based on 6 questions increased (56% vs. 27% for males, 71% vs. 41% for females, both ***p*<0.01**) Facilitators Use of funny, catchy messages Text messaging was inexpensive	The response rate to the follow-up survey was low Those who were lost to follow-up were significantly different from those who completed the follow-up survey, in terms of gender, education, or health service use in the past 12 months Short follow-up period Quality of study Level II-3 Risk of bias: High
Hall, 1996, UK Funding source not noted	Time series cross-sectional with comparison 1 intervention area and 1 control area Survey assessment during 8 weeks from the start of the campaign Assessment of prescriptions for one year prior,	57 women who attended a family planning clinic for EC during 8 weeks from the start of the campaign were administered a questionnaire about source of information on EC Prescription records kept by family planning clinics and sexual health services were used to asses prescriptions for EC dispensed in period before and after the campaign	Aim: To increase knowledge of EC, requests for information about EC, and use of EC, among young women Radio PSA about EC was broadcast 4 times a day over a period of 4 weeks in the local stations, with supplemental advertising through posters, beer mats, promotional packages mailed to general practitioners, and press releases to local media	Exposure Few women interviewed reported that they heard about EC on the radio (2/59) Use of services There were 44 calls to the EC hotline during main hours, and 233 calls out of main hours Comparing 4-month time periods before and after the campaign, there was a 17% increase in mean EC prescriptions per month by General Practitioners in intervention area, compared to a 4% increase in control area; however, all areas were experiencing some increase in prescriptions Knowledge and awareness	Strengths Use of administrative data to assess EC prescriptions Weaknesses Small sample of women interviewed Quality of study Level II-2 Risk of bias: High-moderate

Citation, funding	Study design	Population	Intervention	Results	Assessment of study
	and one year after intervention (family planning clinics) and for 4 months prior and after intervention (general practitioner data)	Calls to an EC hotline were tracked Control group: another health authority without the intervention Age, ethnicity of population not reported; urban		Knowledge of EC among 57 women surveyed was already high (29/57) 93% increase in EC prescriptions at family planning clinics in the intervention area compared to previous year (800 vs. 425), and the increase was continuing. <u>Barriers</u> EC hotline only open during business hours Radio PSA was not able to mention EC explicitly due to advertising regulations <u>Facilitators</u> Collaboration among clinics in the region reached by the radio campaign helped to share the costs of the advertisement campaign.	
Hillman, 1991, U.S.	Pre-post study 1 intervention, 1 group Assessment done immediately prior and after intervention	143 teens aged 13-19 years who were in the audience of one of seven performances 38% white, 20% black, 22% Hispanic; 51% female; rural/urban not reported	Aim: To increase knowledge of sexual health and increase comfort and willingness to discuss sexual issues with parents or friends One-hour presentation of skits and monologues, performed in 4 churches and 3 schools	<u>Other psychosocial outcomes</u> Following the performance, teens were significantly more likely to report more willingness to discuss sexual topics with others (based on 4-item scale, mean 11.4 vs. 13.5, ***p*>0.01**), greater intention to use contraception (mean 3.7 vs. 4.3, ***p*<0.01**) No significant changes in comfort level discussing sexual issues (based on 4-item scale), intention to use condoms, or intention to delay sex. <u>Knowledge and awareness</u> Teens showed greater sexual health knowledge after the performance (based	<u>Weaknesses</u> Convenience sample Small sample Short follow-up time Recruitment strategy not described <u>Quality of study</u> Level II-3 Risk of bias: High

Citation, funding	Study design	Population	Intervention	Results	Assessment of study
				on 6-item scale, mean 20.5 vs. 24.8, ***p*<0.01**).	
Kirby, 1989, U.S. Funding from Population Planning Associates	RCT 1 intervention and 1 control group Assessment at 5 weeks post-mailing	Low-income, teen males in school, aged 16-17 years old Random sample drawn from mailing lists to represent low-income adolescent males nationally Survey conducted 5 weeks after mailing, by telephone, to assess exposure and impact Intervention group n=985 Control group n=1,033 Race/ethnicity: 82% white and 12% black (in both group)	Aim: To increase knowledge attitudes related to sexual activity and condom use and to increase condom use among sexually-active boys One-time mass mailing of a 12-page pamphlet about STI and pregnancy risk and promoting contraceptive and condom use, along with an order coupon for free condoms	<u>Exposure</u> 713/985 (72%) of the intervention group reported receiving the mailing and of those, 91% read it, 44% talked about it with friends, and 50% showed it to parents <u>Use of services</u> Intervention group was significantly more likely to have ordered condoms by mail (7% vs. 1%, ***p*<0.01**) <u>Knowledge and awareness</u> Knowledge score based on 11-item scale were slightly higher among intervention group (83% vs. 80%, ***p*<0.01**). <u>Other psychosocial outcomes</u> No significant differences in STD and pregnancy-related attitude measures (5 scales assessed) between groups <u>Facilitators</u> Direct mail was relatively inexpensive, for the numbers of people reached and speed of reaching them	<u>Strengths</u> Anonymous, self-administered survey Participants unlikely to have known they were a part of research project and thus less likely to provide socially-desirable results Participation rate among those reached by phone was 86% Study groups comparable in measured characteristics <u>Weaknesses</u> Potential for non-response bias given that survey only administered to individuals who answered phones Response rate for interviews was 53%, Short follow-up period <u>Quality of study</u> Level 1 Risk of bias: low
Larsson, 2004, Sweden	Longitudinal cohort with comparison	Women aged 16-30 years in two counties	Aim: To increase knowledge and attitudes	<u>Exposure</u> Baseline awareness of EC was high in both groups (>97%).	<u>Strengths</u> 1 year follow-up

Citation, funding	Study design	Population	Intervention	Results	Assessment of study
Funding from the Swedish National Institute of Public Health and the Family Planning Fund of Uppsala	1 intervention county and 1 control county Assessment at baseline and 1 year	Random sample of individuals taken from national tax registry was mailed surveys pre-campaign and same respondents were sent survey post-campaign Baseline N=564, mean age 23 years Follow-up N=467, mean ages 23 years Urban and rural	about EC and intention to use EC Media campaign involving 3, 2-3 week phases, over 1 year period and including newspaper ads, posters at youth clubs, and bus ads Intervention also included a brochure, which was provided to nurse-midwives working in family planning clinics, to provide to women; an EC website was also made available; and women requesting an abortion were offered 1 package of EC to take home	64% of women in intervention group had received information about EC in the previous year through some channel, vs. 29% of women in control group (***p*<0.01**). Similar percentages of women received no information about EC during a family planning visit in the previous year, in the control and intervention groups (87% and 84% among women who visited a FP clinic, respectively). <u>Knowledge and awareness</u> Knowledge index (based on 6 items) increased significantly (from 2.03 to 2.17, ***p*<0.05**) in intervention group, while it did not in comparison group (1.69 to 1.78, *p*=0.47). However, there was no significant difference in change between groups (*p*=0.37). <u>Other psychosocial outcomes</u> Attitudes about EC (based on 7 items), willingness to use EC (1 item), and ever use of EC (1 item) remained mostly stable in both groups, with no difference in change between comparison groups Group assignment not a significant predictor of future intention to use EC, in multiple regression. Among women in the intervention group, having received receiving information in the previous year was significantly associated with intention to use EC, (AOR 2.39, ***p*<0.05**).	Analysis controlled for confounding variables Intervention group had better knowledge of EC at baseline than control group <u>Weaknesses</u> Secular trends in knowledge/attitudes about EC likely interacted with campaign <u>Quality of study</u> Level II-2 Risk of bias: Moderate

Citation, funding	Study design	Population	Intervention	Results	Assessment of study
				Barriers Engaging health personnel in information campaigns is a demanding task that requires careful planning and allocation of resources. Intervention at health facility level for providers was not intensive	
Larsson, 2006, Sweden Funding from the Swedish National Institute of Public Health and the Family Planning Fund of Uppsala	Time series cross-sectional w/ Comparison Group 1 intervention county and 1 control county Assessments at baseline (over 2 month period) and 1 year (over a 5-month period)	Women aged 16-30 years Anonymous questionnaires given to all women seeking abortion in waiting rooms of 2 family planning centers, 1 in the intervention area and 1 in the control area Baseline N=182 (mean age 27) Follow-up N=449 (mean age 27) Rural/urban not reported Consecutive sampling strategy Of 251 women requesting an abortion during baseline survey period, 197 were invited to participate, and 93%	Aim: To increase knowledge and attitudes about EC and intention to use EC, and use of EC Media campaign involving 3 2-3 week phases, over 1 year period and including newspaper ads, posters at youth clubs, bus ads Intervention also included a brochure, which was provided to nurse-midwives working in family planning clinics, to provide to women; also and EC website was made available; and women requesting an abortion were offered 1 package of EC to take home	Exposure 63% of women in intervention group reported some kind of information about EC during the previous year, vs. 41% of control group women. No statistically significant difference between groups in the percent of women who recalled receiving information about EC from a health care provider, among those who saw a family planning provider in the previous year. Knowledge and awareness After the intervention, women in the intervention group were more aware of EC, more knowledgeable than women in the control group (e.g., correct answer for timeframe for use increased from 49% to 59% in the intervention group, compared to 48% to 43% in the control group, ***p*<0.01**)	Strengths Study groups comparable in terms of demographic characteristic High participation rates Weaknesses Relatively small sample size for baseline survey Quality of study Level II-2 Risk of bias: Moderate

Citation, funding	Study design	Population	Intervention	Results	Assessment of study
		completed the questionnaire Of 556 women requesting an abortion during follow-up survey period, 509 were invited to participate and 88% completed the questionnaire			
Lim 2011, Australia Funding from the Australian Health Ministers Advisory Council Priority Driven Research Program, 2005	RCT 1 intervention and 1 control group Assessment at baseline, 3, 6, and 12 months	Young people aged 16-29 years in Melbourne Participants recruited at a large, annual music festival Participants randomized into intervention or control group after recruitment N=949 completed the baseline survey and were randomized. 59% (587) completed at least one follow-up questionnaire; 34% (337) completed all three follow-up questionnaires. 2/3 urban; 58% female; 58% and 55% aged 16-19 years (intervention and control, respectively)	Aim: To increase STI knowledge, health-seeking behavior, and condom use Intervention group received 8 emails and 14 text messages over 12 months, which provided catchy messages about STIs and which promoted health-seeking behavior and condom use with new or casual partners Control group received no emails or text messages	<u>Use of services</u> At 12 months, females in the intervention group were significantly more likely to have had an STI test in the prior 6 months (18% vs. 9%) and to have discussed sexual health or contraception with a health care provider in the past year (60% vs. 37%), compared to females in the control group. <u>Knowledge and awareness</u> Both groups showed improvements in knowledge across the time points, but knowledge (based on 8-item scale) was significantly higher in the intervention group, for both sexes (AOR for high knowledge was 2.36 for intervention group at 12 months.)	<u>Strengths</u> Real world study context Study groups comparable in terms of demographic and behavioral measures at enrollment Analyses controlled for confounding variables <u>Weaknesses</u> Substantial loss to follow-up <u>Quality of study</u> Level I Risk of bias; Moderate

Citation, funding	Study design	Population	Intervention	Results	Assessment of study
Trussell 1998, 2001, U.S. Funding for the evaluation came from the Henry J. Kaiser Family Foundation; the intervention received funding from numerous private foundations	Time series cross-sectional 1 intervention group, but with varying levels of exposure Surveys at baseline and at end of campaign (1 year) Evaluation also involved tracking calls to an EC Hotline over time	Women aged 18-44 years, living in 5 of 6 cities targeted in the intervention, from across the U.S. Participants were randomly sampled through a telephone survey in each city designed to represent telephone households Baseline n=1,248 Follow-up n=1,248 Race/ethnicity and average age not reported; urban	Aim: To increase knowledge of EC and increase volume of calls to the Emergency Contraception Hotline One-year national media campaign involving both paid advertising (TV and radio) and public media (radio and print PSAs), as well as some local media coverage and grassroots outreach to providers and related community coalitions, in 6 cities Intervention intensity varied across cities; 2 had intensive efforts	<u>Use of services</u> The number of calls to the Hotline more than doubled once the campaign started Paid advertising resulted in larger increases in the volume of calls to the Hotline (e.g., 5247% increase in 1 paid ad city, vs. 191% increase from PSA campaign) <u>Knowledge and awareness</u> Correct responses to three of four knowledge/awareness questions related to EC increased in all cities over the course of the campaign, among both minority and non-minority women (e.g., percent who had heard of EC was 55% pre-campaign and 64% post-campaign in 3 cities, ***p*<0.01**; and 55% and 77%, respectively, in 2 cities with intensive campaigns, ***p*<0.01**). Exception was knowledge of the 72-hour limit. Pooled regression analysis found that paid advertising (vs. just PSA) resulted in larger increases in knowledge, except on one knowledge item (related to the 72 hour limit of effectiveness for EC) (e.g. AOR for interaction term for post-campaign and paid advertising was 1.86, ***p*<0.01**, for having ever heard of EC) <u>Barriers</u> Constraints were placed on the campaign's messaging and images to ensure they did not arouse a backlash, given their sensitive content	<u>Strengths</u> Large sample size <u>Weaknesses</u> Low response rates (from 35% to 49%, across cities and survey phases) No control group <u>Quality of study</u> Level II-3 Risk of bias: Moderate

Citation, funding	Study design	Population	Intervention	Results	Assessment of study
				Facilitators Partnerships with local media, and with local clinicians and EC advocates helped promote accurate dissemination of information on EC during campaign through news media	
Zimmerman, 2007, U.S.	Time series cross-sectional with comparison 1 intervention city and 1 control city Data collected continuously on a monthly basis with independent random samples over 21-month period, covering 8 months prior to campaign, 3 months during, and through 10 months after completion	Random sample of sexually-active university students aged 18-23 years who were registered at universities in two cities were screened by phone. Eligible participants later completed a self-administered survey at home or at a survey research center. 100 students recruited in each month in each community Urban N=4,032 (50% in each city) 199,940 phone numbers were called, 94% of those did not yield participants. 60% of those remaining completed the screener, and 82% of eligible	Aim: To increase condom use 10 TV PSAs promoting safer sex aired in one city market over 3 months	Exposure About 85% of the target audience reported seeing at least one PSA Other psychosocial outcomes Time series regression found that the campaign was associated with higher condom self-efficacy (assessed through 5-item scale) and intentions to use condoms (1 item) among higher risk students in the intervention community, but the increases were not sustained after campaign Trend line for control city had no similar effects No effects evident among low-risk students Facilitators Extensive formative research utilized to develop and test campaign messages likely contributed to campaign success	Strengths Study groups were comparable in terms of most demographics and sexual behaviors at baseline Analyses adjusted for confounding variables Weaknesses Possible response bias due to phone sampling Secular trends in condom use the two cities were different, pre-campaign Quality of study Level II-2 Risk of bias: Moderate

Citation, funding	Study design	Population	Intervention	Results	Assessment of study
		participants completed the survey.			