Sexually transmitted infections: condom distribution schemes

Evidence statements

Evidence Statement 1: Multicomponent condom distribution programmes in high schools

There was weak evidence from 1 US quasi experimental study [-][1], 1 Swedish controlled trial [+]1[2] and US before and after study [-][3] to suggest that multicomponent interventions that include condom distribution in High Schools increase the number of students (aged 14 – 18) reporting condom use at last intercourse .Where reported, there were no statistically significant difference in levels of sexual activity between intervention and comparison group students.

The studies incorporated condom distribution with lessons on safe sex and having staff available to provide support.

One study[1] reported equal rates of sexual activity to comparison students, but had higher rates of condom use at last intercourse (OR=1.36, p<0.01), whether male (OR=1.29, p<0.01) or female (OR=1.42, p<0.01). For students with 3 or more sexual partners over the previous three months condom use was also greater in the intervention than comparison group (OR=1.85; p<0.01).

One study[2] found statistically significant improvements over time in relation to ever having used a condom (19% increase, p= 0.01), knowledge of effectiveness of emergency contraception (32% increase, p= < 0.01), and, pupil could imagine buying condoms (11% increase, p= 0.03). There were no significant differences between the two groups on intent to use or recommend emergency contraception, or attitudes to condoms and emergency contraception.

The third study[3] was poorly executed and reported, with a high risk of bias, and found no statistically significant changes.

Applicability: The evidence is only partially applicable to the UK because two of the studies were undertaken in the USA and one in Sweden. However, the interventions would be feasible in a UK-based setting.

1. Guttmacher et al 1997 [-]
2. Larsson et al 2006 [+]
3. Furstenberg et al 1997 [-]

Evidence Statement 2: Multicomponent condom distribution programmes delivered through outreach or in community settings

There was weak evidence from 2 quasi experimental studies (both [-])[1,2] with drug users in a broad range of community and outreach settings in the US that multicomponent condom distribution programmes can increase levels of consistent condom use with occasional partners[2] (OR 1.36, 95% CI 3.2 – 58.0), though not with steady partners.

Moderate evidence from 3 studies in the US (1 cross sectional [-][3]; 1 controlled trial [+][4] and 1 quasi experimental [-][5]) suggests that participatory and theory based multicomponent educational/condom distribution interventions (including health advice, advocacy and health education, for example) can have a statistically significant impact on: movement along the stages of change towards consistent condom consistent use with main and non-main partner3 ; consistent condom use (OR 2.3, 95% CI 1.2 – 4.3; p=0.01), HIV testing (OR 2.5, 95%CI 1.5 – 4.3; p=0.001), knowledge of HIV (OR 1.7 95%CI 1.4 – 2.1; p= 0.001), and self-efficacy to use condoms (OR 1.6, 95% CI 1.1 – 2.6; p= 0.01)4 ; and, likelihood of using a condom (OR1.37, 95% CI 1.20, 1.56; p<0.001), used condom at last encounter (OR 1.4, 95% CI 1.25,1.27), knowing where to get free condoms (OR 3.2, 95% CI 2.75,3.73)5.

Applicability: The evidence is only partially applicable to the UK because all of the studies were undertaken in the USA. However, the interventions would be feasible in a UK-based setting.

1. Anderson et al, 1998 [-]

2. Rietmeijer et al, 1996 [-]

3. Anonymous 1998 [-]

4. Rhodes 2009 [+]

5. Wendell 2003 [-]

Evidence Statement 3: Multicomponent condom distribution programmes delivered in healthcare settings

There was weak evidence from 1 RCT[-][1] that providing female condoms and supporting frontline staff can increase client's knowledge of the female condom and intention to use them.

Weak evidence from 1 CT [-][2] supports the use of a video intervention in sexual health settings to reduce STIs (HR, 0.63; 95% CI, 0.49–0.81; P = 0.001), and improve STI knowledge (4.89 vs. 3.87, p =0.001); condom knowledge, attitude, and efficacy (10.98 vs. 9.16, p = 0.001), and were more likely to redeem condom coupons (27.6% vs. 24.3%, p = 0.05).

Strong evidence from 1 UK RCT [++][3] indicates that a condom education and distribution programme in general practice increased the number of women receiving advice on STIs (27% versus 10%, CI 3-29) and condom distribution (28% versus 1%, $p < 0.05$, CI 8-40), but did not have an effect on subsequent condom use.

Applicability: The evidence is only partially applicable to the UK because 2 of the studies were undertaken in the USA. However, the interventions would be feasible in a UK-based setting. 1 study was undertaken in the UK so its findings are directly relevant.

1. Exner et al, 2012 [-]
2. Neumann et al, 2011 [-]
3. Oakeshott et al 2000 [++]

Evidence Statement 4: Interventions to improve existing area wide high school single component condom distribution schemes

There was moderate evidence from 1 US cRCT [+][1] that an intervention to improve compliance with elements of an existing area wide high school condom distribution scheme amongst 14-17 year olds can: increase acquisition of condoms amongst students (both sexually inexperienced and sexually experienced/active students): 4 year follow-up (OR: 1.69; 95% CI: 1.23, 2.32) and 5 year follow-up (OR:1.81; 95% CI: 1.32, 2.49); improve awareness of the scheme: 4 year follow-up (OR: 2.17; 95% CI: 1.70, 2.76) and 5 year follow-up (OR: 2.78; 95% CI: 2.18, 3.56). The intervention does not increase condom use at last sex amongst students (both sexually inexperienced and sexually experienced/active high school students).

Applicability: The evidence is only partially applicable to the UK because the intervention was conducted in the USA. It is unclear to what extent this intervention to improve delivery of a condom distribution scheme would be feasible in a UK-based setting, given that area wide school based schemes are not common.

1. De Rosa 2012 [+]

Evidence Statement 5: Single component condom distribution programmes in high schools.

There was conflicting evidence from 1 US quasi experimental study [-][1], and two US BA studies [+][2] [-][3] about the effects of single component condom distribution schemes in US high schools.

One study of a city wide free or reduced price condom distribution scheme [-] [1] in high school students aged 14-18, reported that the percentage of sexually experienced students who used a condom the last time they had sex decreased statistically significantly (*p*= 0.042) when compared to a matched area with no scheme two years after the scheme was introduced. There was no difference in onset of sexual activity or age at first intercourse. The intervention area had lower rates of: students who had sex in the previous three months (p =0.024), and students who reported having sex with 4 or more partners in the last 3 months (p= 0.015).

A study of a condom distribution scheme where condom packs (with an honesty payment box) were made available in a single high school to students aged 14-17 years [+] [2] found that one year after the introduction of the scheme males reported a a statistically significant 13% increase in using condoms every time they had vaginal intercourse (from 37% to 50%, p=0.005), and a 15 % increase at recent first vaginal intercourse (from 65% to 80% p=0.038). There was no statistically significant change for females (from 27 to 32%). There was no difference in intention to use a condom amongst, sexually experienced students, but a statistically significant increase in intention to use a condom amongst non-sexually experienced females (21% increase, 73% to 94%, p<0.001) and males (28% increase, 62% to 90%, p=0.001).There was no difference in onset of, or increase in sexual activity

A study of a city-wide high school condom distribution scheme to prevent STIs (not further described) ([-])[3] reported no difference in annual male or female cases of gonorrhoea, or chlamydia in any of the three years of follow-up after the introduction of the scheme. However there was a statistically significant decline in combined STI rates for males (p < .01), but not for females.

Applicability: The evidence is only partially applicable to the UK because the schemes were conducted in high schools in the USA.

1.Kirby et al 1999 [-], 2. Schuster et al 1998 [+], 3. Wretzel et al 2011 [-]

Evidence Statement 6: Single component condom distribution programmes in commercial and other community venues.

There was weak evidence from one UK BA study [+][1,] and two US controlled studies [-][2,3], about targeted single component condom distribution programmes impact on: condom availability, acquisition, or use; STI knowledge; and rates of STI cases. A diverse range of commercial and other community venues were involved in these three schemes.

One UK study[1] of a free condom distribution scheme in London commercial gay venues (cafes and bars) found that one year post-intervention: condoms were most frequently obtained from those made available in the bathrooms; respondents were statistically significantly more likely to have condoms at home ($p<0.0001$); be carrying condoms whilst out in gay venues (from 21.6% to .7%); statistically significantly fewer condoms were being purchased; the proportion of participants obtaining free condoms rose statistically significantly ($p< 0.01$); statistically significantly more men ($p<0.0001$) had received condoms from a gay venue. There was no statistically significant change in frequency of unprotected anal intercourse: 9.5% (pre-intervention) and 9.9% (post-intervention).

One US study[2] of a state-wide targeted large-scale condom distribution to increase accessibility of condoms through health care facilities (public health clinics, community mental health centres, substance abuse treatment centres, private physicians community health care centres, and housing projects); and private commercial venues (convenience stores, bars nightclubs, and liquor stores, beauty salons and barbershops, tattoo parlours, dry cleaners, and low-cost motels); and community based organizations involved in HIV/STD prevention activities found: no difference in self-reported condom use at the last sexual encounter among white women, and increased condom use among African American women (from 28% to 36%); and, an increase in condom use among all women with 2 or more sex partners (OR = 1.36; 95% CI = 1.10, 1.67).

One US study[3] of a dual-component small media and condom distribution campaign to reduce syphilis presented limited evidence of the impact of the intervention two years after the scheme was introduced. The authors note statistically significant increases in both condom use in last sexual act, and some aspects of knowledge of syphilis but do not present clear data to support these findings. The impact of the intervention is uncertain due to the high number of comparison group participants that also received the intervention.

Applicability: The evidence is limited in its current applicability to the UK because two studies were conducted in the US, and two were conducted at a time when HAART was not widely available.

1. Weatherburn et al 1998 [+] 2. Cohen et al 1999 [-] 3. Ross et al 2004 [-]

Evidence Statement 7: Single component reduced price condom distribution programmes in commercial and other venues.

There was weak evidence from a Canadian comparative observational study [-][1] to evaluate the viability and effectiveness of using high-value discount coupons targeted towards sexually active 18 - 30 year olds , to induce condom purchases.

There was minimal redemption of either the 10% or 75% redemption coupons whether distributed widely or in drugstores only. In the drugstore distribution group, the number of condoms purchased during the coupon promotion was statistically significantly greater than the baseline purchase level 2 months earlier:

10% coupon (male purchases: 8.0 vs 5.3, p<.01; female purchases: 6.0 vs 1.3, p<.001)

75% coupon (male purchases: 47.0 vs 5.3, p <.001; female purchases: 18.0 vs 1.3, p<.001).

The 75% coupon was more likely to induce purchases.

Applicability: The evidence is limited in its current applicability to the UK because the study was conducted in the Canada.

1. Dahl et al 1999

Evidence Statement 8: Single versus multi-component condom distribution schemes

There was moderate evidence from 1 Swedish three-armed RCT [+][1] that a motivational brief intervention and/or the provision of free condoms in a hospital-based travel clinic did not modify risky sexual behaviours of young people travelling abroad without their usual sexual partner .There was no statistically significant difference in the numbers of participants who reported inconsistent condom use between the three groups: BI group 28% (95% CI 16-40); condom group 24% (95% CI 10-37); and control group 24% (95%CI14- 33) (p = 0.42).

Applicability: The evidence is only partially applicable to the UK because the intervention was conducted in Switzerland. However, it is possible that this could feasibly be delivered in a similar setting where they exist.

Senn et al 2011 [+]

Evidence statement 9: cost-effectiveness of a large-scale targetedcondom distribution scheme in areas of high HIV prevalence.

There is moderate evidence from 1 US study (a cost utility analysis [+])[1] which showed that a large-scale targeted condom distribution scheme was cost-effective in an African-American population. 170 HIV infections were averted resulting in savings of 1909 QALYS, with an estimated $33 million in direct costs being averted.

Applicability: The evidence is only partially applicable to condom distribution schemes in the UK because the study was undertaken in the USA. Furthermore it was conducted prior to the widespread availability of HAART.

1. Bedimo et al. 2002 [+]

Evidence statement 10: cost-effectiveness of a targeted female condom education and distribution scheme in areas of high female HIV prevalence.

There is good evidence from 1 US study (a cost utility analysis [++])[1] which showed that a targeted female condom education and distribution scheme was cost-effective in an area of high female HIV prevalence. 23 HIV infections were averted resulting in savings of 124 QALYs, and an estimated $7 million net savings from a societal perspective, and $5 million net savings from the provider perspective.

Applicability: The evidence is only partially applicable to females condom distribution schemes in the UK because the study was undertaken in the USA.

1. Holtgrave et al 2012 [++]