Interventions to increase rescreening for repeat chlamydial infection


CRD summary
The authors concluded that mailed screening kits were an important strategy to increase rescreening for repeat chlamydial infection. Phone reminders were promising and motivational interviewing deserved further investigation. The conclusions generally reflected the review findings. However, the unclear quality and limited number of studies included the analyses mean that the reliability of the conclusions is unclear.

Authors' objectives
To evaluate the effectiveness of interventions to increase rescreening for repeat chlamydial infection.

Searching
MEDLINE, EMBASE, trials registers and abstracts from several conferences were searched from 2000 to September 2010 for studies in English. Reference lists of relevant articles were searched. Search terms were reported.

Study selection
Studies that evaluated the effect of interventions to increase rescreening rates for repeat chlamydial infection were eligible for inclusion. Rescreening rates for repeat chlamydial infection had to be reported. Interventions had to be compared to a control group which did not receive the intervention or to a comparison period in the same population.

Where reported, ages targeted ranged from 14 to 30 years. Intervention types varied and included reminders, mailed screening kits with or without reminders, patient incentives, motivational interviewing with or without reminders and promotion of guidelines to clinicians. Most interventions were based in sexually transmitted disease (STD) clinics. All were conducted in USA.

Two reviewers independently selected the studies. Disagreements were resolved by consensus.

Assessment of study quality
The authors did not state that they assessed study quality.

Data extraction
Outcomes (rescreening for repeat chlamydial infection rates and repeat infection rates) were extracted to calculate relative risks (RR). Authors were contacted for unpublished data.

Two reviewers independently extracted data. Disagreements were resolved by consensus.

Methods of synthesis
Where possible, studies were pooled in a meta-analysis. Heterogeneity was assessed using $I^2$. Studies were not pooled if $I^2$ was above 75%. A fixed-effect model was used where $I^2$ was below 25% and otherwise a random-effects model was employed. Publication bias was examined using funnel plots. Potential sources of heterogeneity were explored by stratifying results by study design (randomised versus non-randomised) and type of intervention.

Results of the review
Eight studies (12 interventions) were included: four randomised controlled trials (RCTs) with between 102 and 808 participants and four observational studies (controlled or before-after designs) with between 173 to 10,432 participants. Follow-up durations ranged from 28 days to six months.

Mailed screening kits (with or without reminders) were associated with significantly higher rescreening rates compared with control (RR 1.30, 95% CI 1.10 to 1.5; four RCTs; $I^2$=36.9%). Motivational interviewing (with or without reminders) also had higher rates of rescreening but the difference was not statistically significant (RR 2.15, 95% CI 0.92 to 3.37; two RCTs; $I^2$=0%).
Reminders were associated with better results compared to control in one RCT (RR 9.67, 95% CI 1.31 to 71.31) and in two out of three observational studies. One controlled observational study found results that favoured promotion of clinical guidelines but the difference with control was not statistically significant (RR 1.35, 95% CI 0.96 to 1.90). No significant effect was associated with the use of monetary incentives.

Results for repeat infection rates were reported.

**Authors' conclusions**
Mailed screening kits were an important strategy to increase rescreening for repeat chlamydial infection. Phone reminders were promising and motivational interviewing deserved further investigation.

**CRediT commentary**
The review question and selection criteria were clear. Both published and unpublished sources were sought but studies not reported in English may have been missed. Attempts to minimise reviewer error and bias were reported when selecting and extracting data.

The lack of quality assessment made the validity of the studies difficult to interpret. Several studies used before-and-after designs, which are prone to multiple sources of bias. Methods of synthesis appeared generally appropriate. Pooled estimates were based on a limited numbers of studies.

The conclusions generally reflected the review findings. However, the unclear quality and limited number of studies included the analyses mean that the reliability of the conclusions is unclear.

**Implications of the review for practice and research**

**Practice:** The authors stated that interventions should be tailored to patient needs and preferences and put emphasis on meeting diverse needs of males and females, adolescents and adults. They stated that clinic rescreening protocols incorporate one or more evidence-based approaches to enhance rescreening effectiveness.

**Research:** The authors stated that further research was required to evaluate the effectiveness of motivational interviewing on rescreening rates.

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