Universal voluntary HIV testing in antenatal care settings: a review of the contribution of provider-initiated testing and counselling


CRD summary
This review found that provider-initiated testing and counselling in antenatal clinics could help achieve universal voluntary HIV testing of pregnant women. Due to some problems with the conduct of the review and the unclear quality of the evidence, this conclusion should be considered with caution.

Authors’ objectives
To assess the contribution of provider-initiated testing and counselling in achieving universal HIV testing for pregnant women and to assess whether this model adheres to good practice in the provision of pre-test information, post-test counselling, and linkage to treatment.

Searching
MEDLINE, EMBASE and Global Health were searched, in December 2010, for studies published in English. Search terms were reported.

Study selection
Randomised controlled trials, non-randomised studies, and studies using time series data, were eligible if they were conducted in antenatal clinics and reported the effects of provider-initiated testing and counselling on the uptake of HIV testing. Studies had to have more than one site per treatment arm and report pre- and post-intervention data; those conducted at a population level were excluded. Provider-initiated testing and counselling was defined as the routine offer of HIV testing, regardless of whether the emphasis for consent was opt-in or opt-out. Lost opportunities for HIV testing were defined as the difference between the percentage of women accepting testing and full uptake.

Most studies were conducted in Africa; two took place in Europe, and one was in the USA. Studies started between 1995 and 2006, and the number of clinics ranged from one to 52. The settings were antenatal clinic, hospital antenatal clinic, referral hospital, or public and private facilities. Training for health care professionals varied as did pre-test patient education. Most studies were in urban settings, one was in a rural setting, and the follow-up period ranged from three months to seven years.

Studies were selected by one reviewer, who was supported by another two reviewers.

Assessment of study quality
Study quality was assessed using a 22-item questionnaire, adapted from the Effective Public Health Practice Project. Studies were rated as weak, moderate, or strong. The number of reviewers who assessed quality was not reported.

Data extraction
Data were extracted for counselling, linkage to antiretroviral therapy for the prevention of mother-to-child transmission, HIV testing uptake, and adjusted odds ratios (where reported). These data were extracted by one reviewer.

Methods of synthesis
The results were presented as a narrative synthesis.

Results of the review
Ten studies, with 782,460 (ranging from 1,456 to 663,603) participants, were included. There were a randomised controlled trial, four before-and-after studies, one retrospective before-and-after study, and four time series studies. Two studies were rated as weak, seven moderate, and one strong quality. Nine studies did not report the inclusion and exclusion criteria, nine did not report the reasons behind clinic selection, and none reported blinding of outcome assessors.
Before provider-initiated testing and counselling was implemented the lost opportunities for HIV testing ranged from 21.3% in Malawi to 94.5% in Scotland. After implementation, the lost opportunities decreased in all 10 studies by between 9.9% and 65.6%. HIV testing uptake was statistically significantly higher for women who received provider-initiated testing and counselling in nine of the 10 studies.

Four studies reported the percentage of women who received pre-test counselling or information. After the introduction of provider-initiated testing and counselling, pre-test counselling or information receipt ranged from 91.5% in Kenya to 100% in Zimbabwe; this was statistically significantly higher than the comparison group in two studies. Four studies reported post-test counselling and the percentages ranged from 82 in Botswana to 99.8 in Zimbabwe with provider-initiated testing and counselling; again statistically significantly higher than the comparison groups in two studies. Five studies reported the linkage to antiretroviral therapy; three reported an increased uptake of treatment and four reported an increase in the number of patients identified as HIV positive and linked to treatment.

Authors' conclusions
The adoption of provider-initiated testing and counselling within antenatal clinics could help achieve universal voluntary testing of pregnant women. There was some evidence that provider-initiated testing and counselling did not hinder good testing conduct, with high uptake of pre-test information and post-test counselling.

CRD commentary
The inclusion criteria for study design, intervention, participants, and the main outcome were stated. The search covered three databases, but only included publications in English and no searches for unpublished studies were made. This increases the chance of language and publication bias, which the authors acknowledged was a limitation of their review. Study selection, data extraction, and quality assessment appear to have been performed by one reviewer, which could have introduced errors or bias into these processes.

Given these limitations and the unclear quality of the evidence, this review's conclusions should be considered with caution.

Implications of the review for practice and research
Practice: The authors did not state any recommendations for practice.

Research: The authors stated that more research was needed into the quality of the components of provider-initiated testing and counselling; personal perceptions of processes; the costs of introducing the package; and how it might contribute to universal voluntary HIV testing in different populations with different clinical contexts. Research into the links between provider-initiated testing and counselling and antiretroviral therapy was also needed.

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