Key Messages

- The lifetime costs of care for a child infected with HIV have been estimated at £178 300
- Screening pregnant women for HIV can avert this cost and lead to gains in life years for both mothers and children
- Universal, voluntary antenatal HIV screening is estimated to be a cost effective intervention with cost saving potential in areas in which there is a high prevalence of HIV infection among pregnant women
- In areas with lower prevalence rates, cost effectiveness could be well below £20 000 per life year gained, and universal, voluntary antenatal screening could be considered

lence rates. These conclusions confirm the recent recommendations of the Intercollegiate Working Party for Enhancing Voluntary Confidential HIV Screening in Pregnancy.[27]

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Contributors: MJP and EJB conceived the idea for the project. MJP developed the cost effectiveness model in conjunction with EJB, SM, LS, MDSW, HH, and JCJ. EJB and SM provided the cost data that were used in the model. LS provided particular input on the social context. MDSW provided specific input on the clinical context relevant to the analyses as well as providing clinical care to many of the children who participated in the original study. MJP and EJB were primarily responsible for writing the paper; the paper was written in conjunction with SM, LS, MDSW, HH, and JCJ. MJP and EJB are guarantors of the study.

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Antenatal HIV testing: assessment of a routine voluntary approach

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The benefits of testing pregnant women for HIV are increasingly assured, particularly with regard to reducing vertical transmission.[1] Yet uptake of antenatal HIV testing in Britain remains low.[2] Our previous study examined an opt-in approach (women had to make an active choice to be tested).[3] Some women were uncomfortable with this, feeling that it indicated high risk behaviour. We therefore assessed an approach based on similar requirements for information and consent but with a change in emphasis, in that testing was routine unless the woman declined.

Subjects, methods, and results

The testing programme was conducted during February to April 1998. Before their booking appointment, all women were sent a leaflet about blood tests to be conducted, including HIV testing. At the antenatal

Comparison of uptake rates and anxiety among women offered HIV testing through different approaches in the same hospital's antenatal clinic

Approach	Time period	No of women having test/No of women attending clinic (% uptake)	Scaled mean anxiety¶
Control*	May 1996 to Feb 1997	55/994 (6)	36.8 (10.8)
Opt-in†	May 1996 to Feb 1997	707/2030 (35)§	36.4 (10.9)
Routine voluntary‡	Feb to May 1998	816/924 (88)	33.2 (10.6)
Significance		χ^2=1413.6, df=2, P<0.0001	F (2, 3448)=32.3, P<0.0001

*Test available on request only.
†Information given about testing and woman asked to choose whether she wanted test.
‡Information given about testing, but with testing presented as part of routine testing of blood and women given the opportunity to decline the test.
§Combined result for four different levels of an opt-in approach, which did not result in significantly different uptake rates.[3]
¶Scores out of 24 have been scaled with a denominator of 80 to be comparable to the original 20 item anxiety scale used in previous study.[3]

clinic they were offered an HIV test by midwives who had been trained to use a printed discussion protocol that emphasised the benefits and presented the test as routine, making it clear that the woman could decline. As with the other blood tests, consent was given orally. The midwives noted uptake, time taken to discuss the test, and whether the woman or her partner was at risk of HIV from injecting drug use (this used to be the main local source of HIV transmission, although sexual transmission now predominates[4]). Women were then asked to complete a questionnaire measuring attitudes, satisfaction, anxiety,[5] knowledge about the test, and reasons for agreeing to or declining the test. Key outcomes were compared with those observed in the same setting during 1996-7.[3]

Of the 924 women who booked at the clinic, 816 (88.3%) had an HIV test; one woman not at high risk was found to be HIV positive. One woman was already known to be HIV positive and was not tested. The prevalence of HIV positivity was therefore 2/817 (0.2%). The mean time taken to offer the test was 2 minutes 34 seconds (range 1-15 minutes). One of the eight women at high risk because of injecting drug use declined to be tested.

The questionnaire response rate was 99.1% (916/924). Most women (793/904 (87.7%)) answered yes to the question, "Do you think the HIV test should be a routine test like all the other blood tests during pregnancy (i.e. it's done unless you say you don't want it)?" The mean anxiety score was 33.2 (SD 10.6; maximum possible 80). A question about reducing vertical transmission with zidovudine elicited a correct response by 69% of women (628/905). The most frequent reasons given for declining the test were, "Not necessary as I've no chance of being positive" (n=28) and "I've been in a stable relationship for a long time" (n=15).

Comment

The uptake of the HIV test (88%) in this study is more than double the rate (35%) achieved in the 1996-7 opt-in study[3] (table). During the year between the two studies, the attitude of women and midwives to HIV testing may have changed owing to increasing knowledge about effective treatment and considerable media exposure. Yet despite these possible changes, the magnitude of the increase in uptake suggests that this approach is more effective than an opt-in approach, and those who decline testing do not seem to be doing so because of high risk status. Moreover, this approach was not time consuming, required no extra staff, and was positively endorsed by most women. Compared with women in the opt-in study, the women were significantly less anxious and more knowledgeable about the protective effects of zidovudine; there was no evidence that women found it difficult to decline a est.

We cannot conclude that this approach will achieve a similar outcome in London, where there are more complex issues of language and cultural heterogeneity. But provided that safeguards are in place to ensure that women can make a fully informed choice, our routine voluntary approach is in keeping with recent guidelines[1] and may be acceptable and appropriate in other clinics in high prevalence areas.

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Contributors: WMS designed, developed, and coordinated the study, carried out the data analysis, and interpreted the data. FDJ, the principal investigator, designed the study, and had input into development, data analysis, and interpretation. DJG designed the study and was involved throughout in study supervision and data interpretation. SG supervised the recruitment of pregnant women at the antenatal clinic, the questionnaire returns, and the recording of information by the midwives and helped with data collection. GJH designed the study and was involved throughout in study supervision and data interpretation. WMS wrote the paper jointly with FDJ, with input from the other authors. WMS and FDJ are guarantors for the paper.

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Endpiece

Unimpressed

My life is a constant fight against Doctors' follies, it seems to me.

Virginia Woolf to Violet Dickinson, 26 November 1904

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