



# An economic evaluation of school-based skills building behavioural interventions for preventing sexually transmitted infections in young people

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## Objectives

- An economic evaluation of behavioural interventions for the prevention of STIs in young people was made using decision analytic models.

## Background

- Rates of STIs continue to increase, particularly amongst young people, and there is a need for effective strategies to reduce risky sexual behaviour.
- School based skills building behavioural interventions aim to reduce the incidence of STIs by improving on existing sexual health education by:
  - Teaching of skills associated with the practice of safer sex
  - Delaying initiation of sexual intercourse
  - Reducing the frequency of sexual partners and sexual episodes

## Methods

- Two types of school-based skills building behavioural interventions were assessed:
  - 1) A teacher-led curriculum spread over 20 sessions (based on the Scottish SHARE trial) (1)
  - 2) A brief peer-led classroom curriculum spread over 3 sessions (based on the RIPPLE trial in Central and Southern England) (2)
- These interventions were compared with standard sexual health education provided by teachers in schools as part of PSHE curriculum. Standard sexual health education is assumed to teach information on STIs and sexual health but not skills training
- A decision tree model was constructed to estimate the total number of STI cases averted for one year and consequent Quality Adjusted Life Year (QALY) gain and savings in medical costs, based on potential changes in sexual behaviour for the UK NHS and PSS.
- The parameters for the model were derived from a systematic search of the literature on the effectiveness of interventions (see poster by Shepherd et al (3) at this conference), natural history and epidemiology of STIs, sexual behaviour and lifestyles, health related quality of life, and costs.
- The Bernoulli statistical model estimates the STI incidence for a cohort of young people, based upon STI prevalence, transmission probability, condom use, condom effectiveness, number of sexual episodes and partners.
- Model estimates STI cases averted for intervention for HIV, chlamydia, gonorrhoea, genital warts
- For these cases, the subsequent cost and utility loss of STI complications, such as PID and infertility, is estimated.
- Further details on the methods will be available in the fully report (4).

Table 1 Main model parameters

Intervention	Parameter value
Cost of teacher led intervention, per child	£4.30
Cost of peer led intervention, per child	£15
Risk ratio of intervention effect on condom use (CI)	1.05 (0.92 – 1.2)
Medical cost per chlamydia case (female)	£753.37
QALY loss per chlamydia case (female)	0.27
STI prevalence for chlamydia (male < 16y)	0.1%

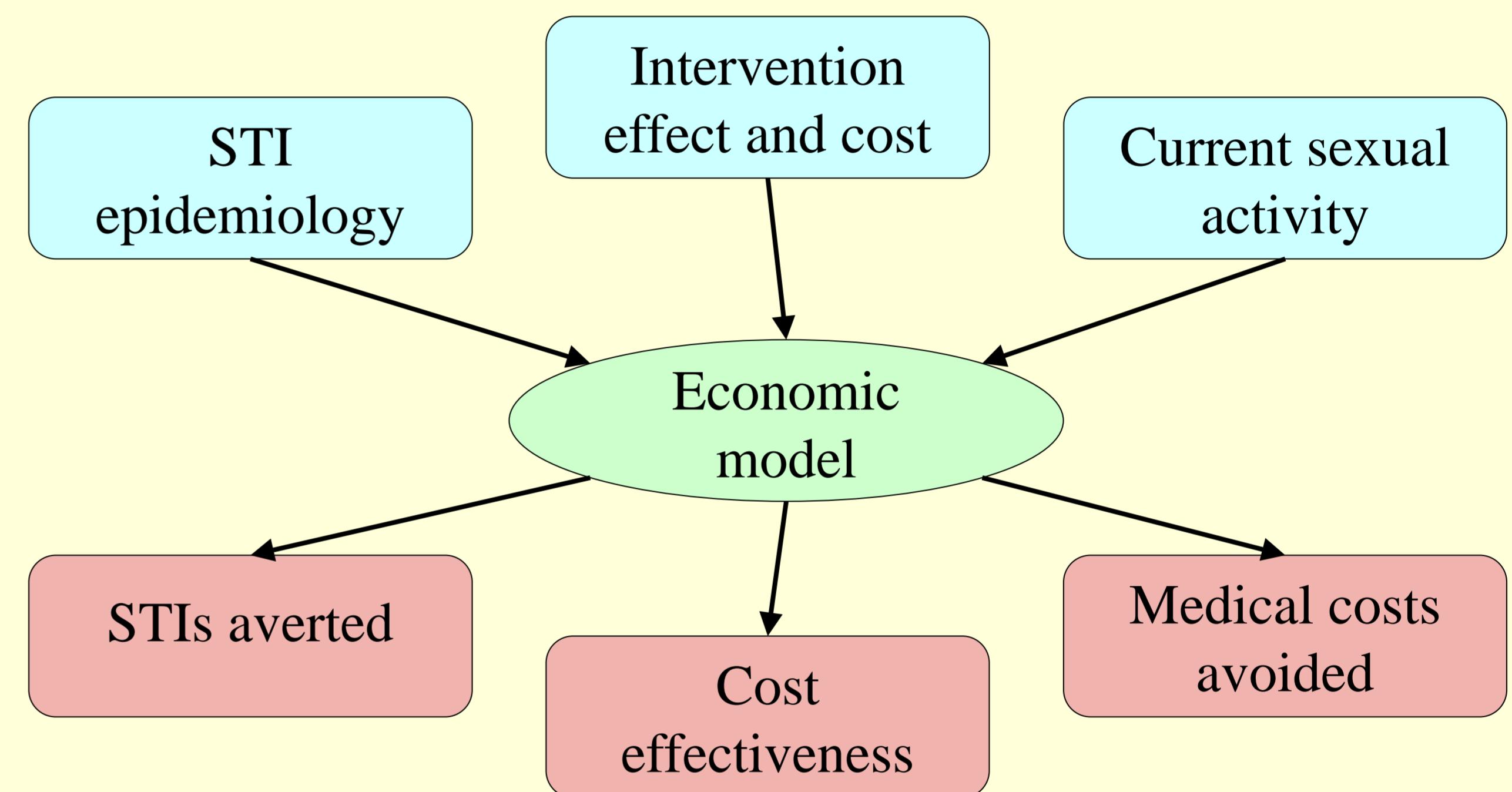


Figure 1 Economic evaluation model diagram

## Results

For a cohort of 1000 males and females aged 15 years, the teacher-led intervention would:

- avert two STI cases, increase quality of life by 0.35 QALY and
- cost an extra £7,146, and have cost effectiveness of £20,223 per QALY gained.
- The peer-led intervention has cost effectiveness of £80,782 per QALY gained.
- Results were most sensitive to the intervention effect, the transmission probability and the number of sexual partners in the base case.

## Conclusions

- The behavioural intervention has a limited effect on changing sexual behaviour.
- There is a paucity of data for other input parameters.
- Teacher-led interventions are likely to be cheaper than peer-led interventions.

## References

- SHARE study: Wight D et al. Limits of teacher delivered sex education: interim behavioural outcomes from randomised trial. *BMJ* 2002;324:1430.
- RIPPLE study: Stephenson, J.M. et al. Randomised Intervention trial of PuPil-Led sex Education in England (RIPPLE). *Lancet* 2004; 364:338-346