Is it worth paying more for emergency hormonal contraception? The cost-effectiveness of ulipristal acetate versus levonorgestrel 1.5 mg

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Record Status
This is a critical abstract of an economic evaluation that meets the criteria for inclusion on NHS EED. Each abstract contains a brief summary of the methods, the results and conclusions followed by a detailed critical assessment on the reliability of the study and the conclusions drawn.

CRD summary
The objective was to assess the cost-effectiveness of ulipristal acetate as emergency contraception following unprotected sexual intercourse. The authors concluded that ulipristal acetate was cost-effective, compared with levonorgestrel, for all women requesting emergency hormonal contraception. On the whole, the study was well reported and the methods were valid; the authors’ conclusions seem appropriate.

Type of economic evaluation
Cost-effectiveness analysis

Study objective
The objective was to assess the cost-effectiveness of ulipristal acetate as emergency contraception following unprotected sexual intercourse.

Interventions
The emergency hormonal contraceptive, ulipristal acetate 30mg, which was licensed for use up to 120 hours after unprotected sexual intercourse was compared with levonorgestrel 1.5mg. Levonorgestrel was licensed for use up to 72 hours after unprotected sexual intercourse and was the standard care in the UK at the time.

Location/setting
UK/primary care.

Methods
Analytical approach:
A decision-tree model was used to combine data from published studies. The time horizon was until abortion, miscarriage, or childbirth, for those who became pregnant despite treatment. The authors reported that the perspective of the NHS was adopted.

Effectiveness data:
The effectiveness estimates were from published studies. The efficacy of ulipristal acetate and levonorgestrel were from a meta-analysis of data from two UK clinical trials. The main measure of effectiveness was the probability of pregnancy.

Monetary benefit and utility valuations:
Not relevant.

Measure of benefit:
The measure of benefit was the pregnancy rate.

Cost data:
The economic analysis included the costs of the intervention (drugs and general practitioner consultation), the hospital costs of abortion or miscarriage, and the hospital and direct health care costs (including antenatal care) of childbirth. The unit costs and resource use data were from well-established sources, including the British National Formulary, the National Schedule of Reference Costs, and the National Institute for Health and Clinical Excellence (NICE). The price
year was 2008 and all costs were reported in UK pounds sterling (£).

Analysis of uncertainty:
The analysis of uncertainty involved varying the time frame, over which the drug could be taken, and the cost of an unintended pregnancy.

Results
The probability of pregnancy was 1.28% with ulipristal acetate and 2.20% with levonorgestrel, if taken between zero and 120 hours after unprotected sexual intercourse. The total cost of ulipristal acetate was £65.08, while the cost of levonorgestrel was £62.22.

The cost therefore of preventing one additional pregnancy with ulipristal acetate, compared with levonorgestrel, was £311. In the sensitivity analysis, varying the time frame and costs, the cost of preventing one unintended pregnancy ranged from £183 to £500.

Authors' conclusions
The authors concluded that ulipristal acetate was cost-effective, compared with levonorgestrel, for all women requesting emergency hormonal contraception.

CRD commentary
Interventions:
The interventions were adequately reported and appear to have been appropriate in the authors' setting. The comparator was usual practice and the alternative was a new option for emergency hormonal contraception.

Effectiveness/benefits:
The authors reported that the efficacy estimates for the two drugs were from a meta-analysis of the only two trials that compared them. Few details of these trials and the meta-analysis methods were provided, making it difficult to comment on the validity of the estimates. It was unclear if a systematic review was undertaken to ensure that all the best available evidence was analysed. The benefit measure was appropriate for the intervention, but will not allow comparisons with other health care interventions, with different outcome measures.

Costs:
The categories of costs were consistent with the stated perspective. The unit costs, resource use, and their sources were reported and appear to have been appropriate. Discounting was not necessary as the time horizon was less than one year.

Analysis and results:
The costs and benefits were synthesised, using an incremental approach and the results were clearly presented and discussed. A limited sensitivity analysis was performed, varying two of the model parameters; it remains unclear how robust the results were to changes in the other model inputs. The authors noted some omissions to their analysis, including the costs of home birth and neonatal care, but these were omitted for both the intervention and the comparator, making it unlikely to have affected the study results.

Concluding remarks:
On the whole, the study was well reported and the methods were valid; the authors' conclusions seem appropriate.

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Bibliographic details