The cost and cost-effectiveness of expedited partner therapy compared with standard partner referral for the treatment of chlamydia or gonorrhea

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
This study assessed the cost-effectiveness of expedited partner treatment compared with unassisted standard partner referral, for the treatment of chlamydia or gonorrhoea. The authors concluded expedited treatment was cost-effective under a wide range of assumptions. The cost-effectiveness framework was conventional and various areas of uncertainty were considered. The authors’ conclusions appear to be robust.

Type of economic evaluation
Cost-utility analysis

Study objective
This study assessed the cost-effectiveness of expedited partner treatment compared with unassisted standard partner referral, for the treatment of chlamydia or gonorrhoea.

Interventions
For standard referral, patients with a sexually transmitted disease were advised to refer their partners for examination and treatment. With expedited treatment, patients were given medication for their sex partners.

Location/setting
USA/primary care and clinics.

Methods
Analytical approach:
The analysis followed a cost-effectiveness framework, with data from multiple sources. A 10-year time horizon was considered. The authors stated that they adopted three perspectives: the health care system, society, and the individual insurer or organisation payer (with a five-year time horizon).

Effectiveness data:
The clinical inputs were from relevant published studies. The key data were the proportion of partners treated with each strategy. These were from two randomised controlled trials funded by the Centers for Disease Control and Prevention (CDC) and the National Institutes of Health (NIH) in the USA. One trial was conducted in Seattle clinics and included both men and women, while the other was conducted in New Orleans clinics and involved only men. The probabilities of sequelae from chlamydia and gonorrhoea, with or without treatment, were from published studies.

Monetary benefit and utility valuations:
The utility values were from published sources.

Measure of benefit:
Quality-adjusted life-years (QALYs) were the summary benefit measure.

Cost data:
The included costs depended on the perspective. The health care costs were for notification (staff time and overheads), treatment, and the management of the sequelae of chlamydia and gonorrhoea in women (pelvic inflammatory disease and its sequelae of chronic pelvic pain, ectopic pregnancy, and infertility). These costs were from the two clinical
trials, and other published sources. The societal costs additionally included lost productivity while attending health care visits or for sequelae. These were from the literature. The payer perspective included the direct medical costs for the initial patients, expedited treatment, and partner visits and sequelae only where partners sought clinical care from the same payer. All costs were in US dollars ($) and the price year was 2008.

Analysis of uncertainty:
A Monte Carlo simulation was carried out to investigate the uncertainty, using conventional probability distributions for the model inputs. One-way sensitivity analyses were performed, varying the clinical and economic assumptions by published or assumed ranges of values, for selected parameters.

Results
Using data from the Seattle trial for men, the health care system costs were $453.17 with standard referral and $399.88 with expedited treatment. The societal costs were $592.43 with standard referral and $488.34 with expedited treatment. The QALYs lost were 0.0308 with standard referral and 0.0272 with expedited treatment.

Expedited treatment was dominant, as it was more effective and cheaper than standard referral from each perspective.

Using data from the Seattle trial, for women, and using data from the New Orleans trial, expedited treatment was dominant. The probabilistic analysis confirmed that expedited treatment was likely to be dominant in almost all simulations. The conclusion was the same in most of the univariate sensitivity analyses.

From the payer perspective, the proportion of partners receiving care from the same payer was crucial, as this affected the magnitude of the cost saving. Expedited treatment was dominant if 32% to 37% or more of female partners of male patients or 29% or more of male partners of female patients received care from the same payer. The incremental cost per QALY saved with expedited treatment did not exceed $13,000 in any scenario.

Authors' conclusions
The authors concluded expedited treatment was cost-effective under a wide range of assumptions. From the perspectives of society or the health care system, more partners were treated at lower costs than with standard referral. Additional costs could be incurred by individual payers, depending on how many of their patients’ partners received care from the same payer.

CRD commentary
Interventions:
The comparators were appropriately selected as the proposed treatment strategy was compared against the usual approach. These two strategies were described.

Effectiveness/benefits:
No systematic search was reported to identify the clinical data sources. The key clinical inputs were from two randomised controlled trials that directly compared the two strategies and should have had high internal validity. These two trials were not described and no details were provided on the other sources of clinical inputs. This makes it difficult to objectively assess the validity of these data, but most of them were varied in the sensitivity analysis. QALYs were an appropriate benefit measure given the impact of the diseases on quality of life, but the derivation of utility values was not reported. Discounting of the health benefits was not reported.

Costs:
The use of various perspectives makes the results relevant for different payers. The resource consumption and costs were appropriately derived from the two clinical trials, using a micro-costing approach. Individual cost items were not reported; the costs were presented as category totals. The long-term costs were from published sources relevant to the USA. The price year was reported, allowing reflation exercises. The long-term costs were discounted, but the rate was not stated. The key costs were varied in the sensitivity analyses.

Analysis and results:
The results were extensively presented. An incremental approach was used to identify the best strategy. For most simulations, incremental cost-utility ratios were not required because expedited treatment was dominant. Valid
approaches were used to assess uncertainty, and the results were reported for most scenarios. The authors did not discuss the transferability of their results and they appear to have been specific to their setting, with the payment systems used in the USA. They acknowledged that a limitation of their analysis was the exclusion of the effects of a reduction in general population transmission of the diseases, with the intervention.

Concluding remarks:
The cost-effectiveness framework was conventional and various areas of uncertainty were considered. The authors’ conclusions appear to be robust.

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