Cost-utility of repeated screening for chlamydia trachomatis

de Vries R, van Bergen J E, de Jong-van den Berg L T, Postma M J

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 repeated screening for chlamydia trachomatis (CT) at various time intervals in a population of 100,000 heterosexual men and women aged between 15 and 29. The authors concluded that screening every two years for CT was the optimal screening strategy for the Netherlands. This was an extension of a previous evaluation and the level of reporting was sparse. Without the initial paper, the conclusions reached cannot be validated.

Type of economic evaluation
Cost-utility analysis

Study objective
The objective was to assess the cost-effectiveness of repeated screening for chlamydia trachomatis (CT) at various time intervals in a population of 100,000 heterosexual men and women aged between 15 and 29.

Interventions
This study compared one-off screening with screening repeated at intervals of annually, every two years, every five years, and every 10 years.

Location/setting
Netherlands/primary care.

Methods
Analytical approach:
A dynamic model with a 20-year time horizon was used to compare the cost and utility of the various strategies. Full details of the model and the data inputs were provided in another paper (de Vries, et al. 2006, see 'Other Publications of Related Interest' below for bibliographic details). The authors stated that a societal perspective was adopted.

Effectiveness data:
The details on the identification and selection of the clinical data were not provided in this paper (see de Vries, et al. 2006). The main clinical parameters appear to have been the incidence and prevalence of CT and complications arising from CT-infections.

Monetary benefit and utility valuations:
Quality weights were derived from a published study using the Health Utilities Index.

Measure of benefit:
The measure of benefit was the quality-adjusted life-year (QALY). These were discounted at an annual rate of 4%.

Cost data:
The direct medical costs and the costs associated with lost production were included in the analysis. These costs were discounted at an annual rate of 4%. The price year was 2002 and all costs were reported in Euros (EUR). Further details of the cost data, including the source of the resource use data and the prices were reported in de Vries, et al 2006.

Analysis of uncertainty:
The authors did not conduct any analysis of uncertainty.
Results
The incremental cost-effectiveness ratio (ICER) of no screening over one-off screening was a saving of EUR 611 per QALY gained, which was due to the cost savings over time associated with screening. Screening every 10 years was dominated, which meant its ICER was higher than that of the next best alternative, which was screening every five years.

Screening was associated with an ICER of EUR 1,793 for every five years, EUR 6,539 for every two years, and EUR 33,464 for annual screening, when compared with the next less costly alternative.

Authors' conclusions
The authors concluded that screening every two years for CT was the optimal screening strategy for the Netherlands.

CRD commentary
Interventions:
The interventions were well described and represented the potential clinical practice in the authors' setting.

Effectiveness/benefits:
This analysis was an extension of a previous evaluation and, as a result, much of the detail reported in the initial paper was not repeated in this paper. Details on the effectiveness data were not given and the reader was referred to de Vries, et al (2006) for the full details. The primary outcome measure was the QALY, which was appropriate and clearly reported.

Costs:
The costs appear to reflect the perspective stated. However, as above, much of the detail surrounding the cost analysis was not reported in this paper. For example, no details were given on the specific costs included, the sources of these costs and the resource use, or the actual estimates. The price year and discount rate were reported.

Analysis and results:
The authors conducted an appropriate incremental analysis and the full results were presented. However, the impact of uncertainty on the input parameters and the results was not investigated which makes it difficult to assess how robust the results were. The cost data were Dutch values and it is not clear how generalisable these results would be to other settings. The authors did not acknowledge any limitations to their analysis.

Concluding remarks:
The level of reporting in this paper was sparse. To fully appraise this evaluation it would be necessary to acquire the initial evaluation, without which the conclusions reached cannot be validated.

Funding
Not stated.

Bibliographic details

PubMedID
18380639

DOI
10.1111/j.1524-4733.2007.00225.x

Other publications of related interest

**Indexing Status**
Subject indexing assigned by NLM

**MeSH**
Adolescent; Adult; Chlamydia Infections /diagnosis /economics /prevention & control; Chlamydia trachomatis; Cost-Benefit Analysis; Female; Health Policy /economics; Humans; Male; Mass Screening /economics; Models, Economic; Netherlands; Quality-Adjusted Life Years

**AccessionNumber**
22008100470

**Date bibliographic record published**
01/09/2008

**Date abstract record published**
20/05/2009