

Abstract 532

LONG-TERM COST-EFFECTIVENESS OF ACTIVE CASE-FINDING FOR COELIAC DISEASE IN CHILDREN IN THE NETHERLANDS

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Objectives and Study

A cost-utility analysis was conducted to assess the long-term cost-effectiveness of various case-finding strategies (vs. standard care) for detecting coeliac disease (CD) in children at Dutch Preventive Youth Health Care Centers.

Methods

The cost-effectiveness of various case-finding strategies was modelled using decision trees and a Markov model over the average lifespan of individuals, assuming children were aged two at testing. The competing strategies differed in the selection criteria applied before testing (i.e. from mass-screening to testing only highly symptomatic children). The development of long-term consequences (e.g. iron-deficiency anemia, osteoporosis, gastrointestinal cancer) and the chance of being clinically detected were modeled as annual probabilities based on available literature/data. Costs and quality-of-life measures associated with being (un)diagnosed with CD and developing long-term consequences were sourced from literature and data reported by 2,700 members of the Dutch Coeliac Society. Other model parameters were derived from data gathered during the GLUTENSCREEN project, where case-finding was implemented at Dutch Preventive Youth Health Centers (www.glutenscreen.nl).

Results

At the commonly-applied willingness-to-pay threshold of €20,000 per quality-adjusted life-year (QALY) for prevention interventions, every strategy had a >95% probability of being cost-effective compared to standard care. The most cost-effective strategy was mass-screening regardless of symptoms. The improved cost-effectiveness of the strategies compared to standard care was largely driven by the QALY gains associated with spending more time in the diagnosed health states. Cost differences between all strategies were not large, in part because the increased costs of being undiagnosed (and developing long-term consequences) offset some of the costs of following a gluten-free diet after diagnosis.

Conclusions

Given the outcome of the cost-effectiveness analysis, the preferred strategy was mass-screening, which may also be easier to implement/integrate into regular pediatric care.

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