Reviewer's report

Title: The benefits and risks of bacille Calmette-Guerin vaccination among infants at high risk for both tuberculosis and severe combined immunodeficiency: assessment by Markov model

Version: 2 Date: 23 November 2005

Reviewer: Neil Hawkins

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General

It is important that the estimated mean QALYS and CIs for the different interventions should be reported and also that phrase 'significant difference' be clearly qualified.

Although the benefits of the treatment may not persist into adulthood the benefits of not dying as a child do (assuming an average life expectancy). Therefore it is not clear to me that using a lifetime time horizon would not have changed the key outcomes bearing in mind differential effects of treatment options on childhood mortality is an factor in this model. If the current time horizon is used I think it would be useful to acknowledge this in the discussion.

Re Sensitivity analysis and uncertainty analysis

I think the paper is clearer now

Re stating difference in QALYs between options

I still feel that the estimates of mean QALYs and uncertainty should be given for each options. The current paper is akin to reporting a P value for a t-test but omitting the means and standard errors or confidence intervals.

I agree that it is important that for certain parameter values the QALY tally is higher or lower but I would argue that the magnitude of the differences is also important and should be reported. One reason for this is that a decision maker may judge that the model does not include all sources of parameter uncertainty and/or estimates from the model may be subject to biases due to factors not accounted for in the model. The magnitude of the difference between the options may influence the reliance a decision-maker places on the model.

Re Significance

The abstract and figure and text legend still talk about 'significant' differences, implying that the magnitude of the differences between options are clinically significant (although the magnitude of the difference is not reported), whereas the significant difference refers
to a form of frequentist hypothesis test.