Putting it Together: Assessing an Economic Analysis

Kevin Schwartzman MD, MPH, FRCPC

McGill Tuberculosis Research Methods Course July 18, 2014

Assessing an analysis

- What is the health problem targeted?
- Is the question clearly stated?
- Is it relevant and timely?
- Have the authors clearly identified and described the strategies/interventions being compared?
- What evidence supports the interventions being compared?
- What is the health outcome considered? Is it relevant and appropriate?
- What perspective is used? Is it appropriate to the study question and the target audience?
- What is the time frame of the analysis?

Assessing an analysis

- How were health outcome data obtained?
 - If quality weights were used, where did they come from?
- How were cost data obtained?
 - Was relevant resource use properly tabulated?
 - Do the costs seem credible and internally consistent?
- How do the authors account for timing of future costs and outcomes (discounting)?
- If a cost-effectiveness or cost-utility analysis, do the authors present an appropriate incremental costeffectiveness ratio if one is needed?

Assessing an analysis

- How did the authors address uncertainty in their measurements and/or model inputs?
- Did the analysis answer the stated research question?
- Do the authors appropriately identify and handle potential weaknesses?
- How likely are the study findings to influence practice and/or policy?

Drummond checklist (1996): Study design

- The research question is stated.
- The economic importance of the research question is stated.
- The viewpoint(s) of the analysis are clearly stated and justified.
- The rationale for choosing alternative programmes or interventions compared is stated.

Study design

- The alternatives being compared are clearly described.
- The form of economic evaluation used is stated.
- The choice of form of economic evaluation is justified in relation to the questions addressed

- The source(s) of effectiveness estimates used are stated.
- Details of the design and results of effectiveness study are given (if based on a single study).
- Details of the methods of synthesis or meta-analysis of estimates are given (if based on a synthesis of a number of effectiveness studies).

- The primary outcome measure(s) for the economic evaluation are clearly stated.
- Methods to value benefits are stated.
- Details of the subjects from whom valuations were obtained were given.
- Productivity changes (if included) are reported separately.
- The relevance of productivity changes to the study question is discussed.

- Quantities of resource use are reported separately from their unit costs.
- Methods for the estimation of quantities and unit costs are described.
- Currency and price data are recorded.
- Details of currency of price adjustments for inflation or currency conversion are given.

- Details of any model used are given.
- The choice of model used and the key parameters on which it is based are justified.

Analysis and interpretation of results

- Time horizon of costs and benefits is stated.
- The discount rate(s) is stated.
- The choice of discount rate(s) is justified.
- An explanation is given if costs and benefits are not discounted.
- Details of statistical tests and confidence intervals are given for stochastic data.

Analysis and interpretation

- The approach to sensitivity analysis is given.
- The choice of variables for sensitivity analysis is justified.
- The ranges over which the variables are varied are justified.
- Relevant alternatives are compared.
- Incremental analysis is reported.

Analysis and interpretation

- Major outcomes are presented in a disaggregated as well as aggregated form.
- The answer to the study question is given.
- Conclusions follow from the data reported.
- Conclusions are accompanied by the appropriate caveats.