Incorporating Health Economics into Grant Proposals

Health Economics Short Course

For more information and course dates, please visit our website: http://go.unimelb.edu.au/i8ba
Or email us: health-economics@unimelb.edu.au

Guidance on the Health Economics paragraph for grant applications

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What do you need to include?

- The relevance of the health economics should be included at many points in the application;
  - You may point to the large potential cost savings of an intervention versus current practice in the introduction
  - You will include information about collecting costs and outcomes information relevant to the economic evaluation
- In addition you are likely to have a paragraph detailing the planned economic evaluation

What you need to include

- What decision/s is this hoping to inform?
- What perspective? (Societal, Healthcare, Government)
- How are key cost drivers (and future cost savings) being collected?
- How outcomes are being collected and what outcomes?
- How costs and outcomes post trial are going to be modelled (Markov, simulation methods, observational data analysis etc.) or justify why extrapolation is not important for decision making in this context
- How will cost-effectiveness or cost-benefit be presented?
- Report about capturing uncertainty
  - Probabilistic sensitivity analysis (PSA), bootstrapping
  - Threshold analysis

Other things we’ve seen mentioned in grants we’ve reviewed:

- Cost of a disease in background to justify significance of research
- Using the literature to synthesize QALYs for disease states or costs of disease states
- Discounting (what rates will be used)
- Specified sub-group analysis (and justification on why there may be differences) – may include potential effects on health inequalities
- Capturing structural uncertainty (what if the assumed model structure is wrong)
- Methods to reduce bias if not a pure RCT (propensity score matching)
- Methods to deal with missing data (multiple imputation)
- What other Economic Evaluations have been conducted on this or a similar topic?
The economic evaluation will take a societal perspective and will model the potential cost-effectiveness of the intervention assuming an Australian-wide implementation. Resources relating to both recruitment strategies will be collected within the trial in addition to the projected resources required to implement the intervention nationally. Quality Adjusted Life Years (QALYs) will be measured by the EQ-5D (Rabin, 2001, AM). Assaults, disorderly behaviour, contacts with police/criminal justice, plus accident and emergency and other health care usage will be measured by the widely used short Service Use Questionnaire (University of York).

The longer term impact on Quality Adjusted Life Years (QALYs) and other harms will be modelled using quantified relationships between consumption (mean weekly consumption and peak daily consumption) and alcohol attributable harms (Purshouse et al. 2009). The cost-effectiveness will then be presented in terms of both the cost per person reducing their binge drinking and in terms of cost per QALY saved and compared to a $50,000 threshold for adoption. Subgroup differences in cost-effectiveness will be explored for the two recruitment strategies. A probabilistic sensitivity analysis will be conducted to assess the robustness of the conclusions reached to the uncertainty in the parameters.

Not enough detail
- With space limitations it is always going to be difficult to exactly specify all the relevant assumptions
- Why aren’t you developing your own models for extrapolating
  - It is very costly/time consuming to do this
  - It’s only worth the cost to do this if the current models mean that we are very uncertain whether the intervention should be implemented or not

Data about intervention costs for both arms of the study will be collected from a health sector perspective. Process data will be collected from a subset of GP practices, including estimates of time spent reviewing and responding to feedback. This will be used to estimate the resources and therefore cost associated with the intervention for each GP practice (and modelled for those practices who don’t respond to the survey). Combining this with changes in prescribing outcomes for each practice, the “cost per high risk prescription avoided” will be calculated, with a sensitivity analysis around these estimates, for both the comparative and simple feedback arms of the intervention against standard practice (no feedback).

Depending on the measures included, the potential of additionally collecting practice level hospital admissions data at baseline and during intervention will be examined (for example, if the measures focus on NSAIDs, then emergency admissions with gastrointestinal bleeding are relevant). This will explore the extent to which changes in the intermediate outcome (changes in high-risk prescribing) translate into changes in more final outcomes in terms of hospitalisations. This along with evidence from the literature will allow a more detailed economic evaluation to be explored.