

Assessment of the pan-Canadian Oncology Drug Review Economic Evaluations

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ARCC Conference

May 25th, 2015

Background I

- Expenditures on oncology drugs account for a large proportion of health care spending and this trend is expected to increase.
- As health care budgets are limited, decision makers are faced with difficult decisions of what drugs to fund over others.
- Canada has created a separate reimbursement review process.

Background II

- The pan-Canadian Oncology Review (pCODR) was established in 2011 to assess cancer drugs and make recommendations to provinces and territories (except Quebec) to guide their funding decisions.
- pCODR uses a deliberative framework and takes into consideration the drug's overall clinical benefit, cost-effectiveness, alignment with patient values, and feasibility of adoption into health systems.
- The submitter provides an economic evaluation of the drug and economic reviewers review the submitted model. As part of their guidance to the committee, they may make modifications to the submitters' estimates.

Objectives

- To identify and examine the main methodological issues frequently reported in pCODR economic guidance reports.
- To explore relationships between reported methodological issues and funding recommendations.

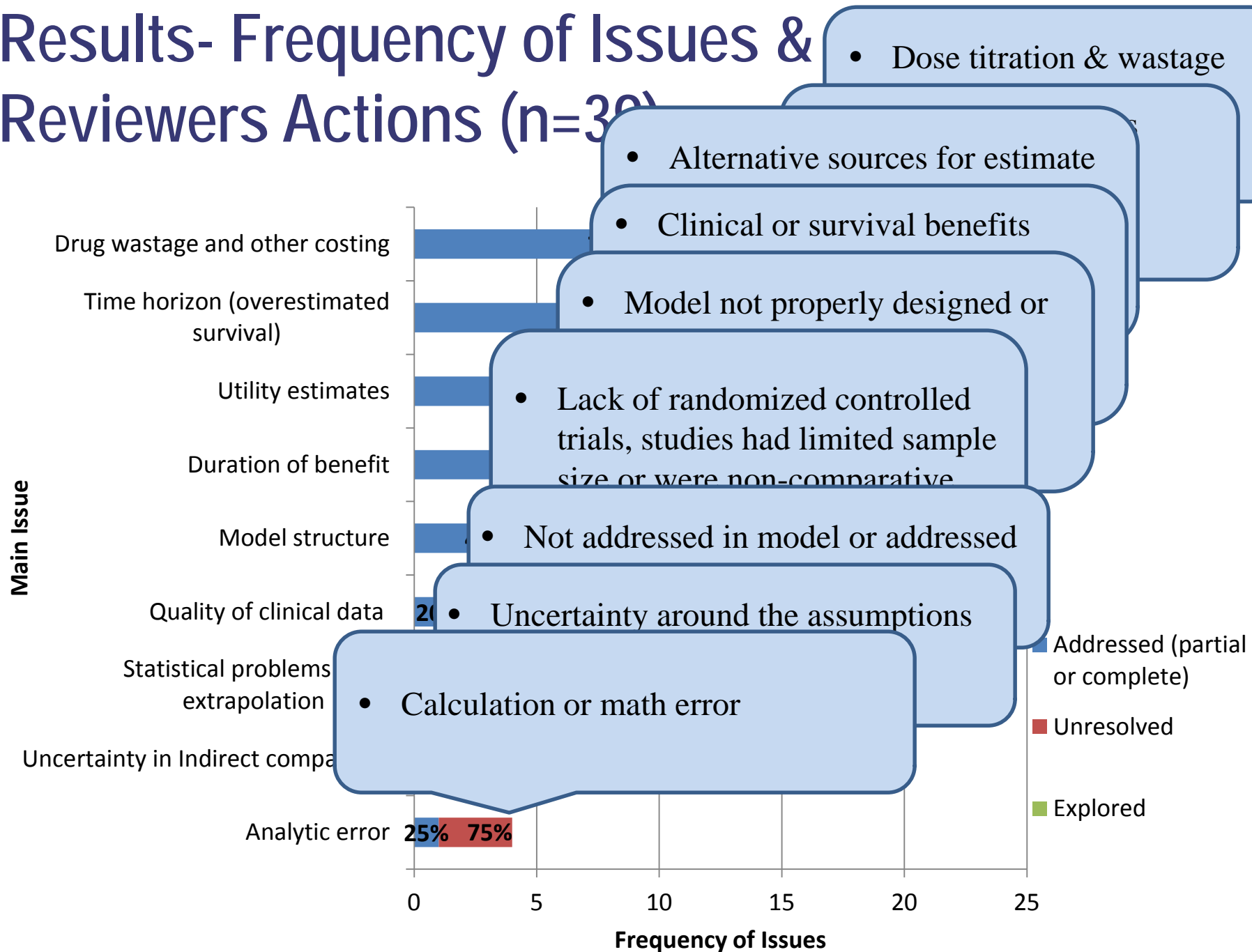
Methods I

- Publicly available Economic Guidance Reports were searched:
 - Published between July 2011 (inception) and June 2014
 - Had a final funding recommendation (34 reviews, 39 indications)
 - Independently examined by two study authors
- Both study authors abstracted the major issues found within the reports and together grouped them into types.
- Each issue was also categorized based on the economic reviewer's actions.

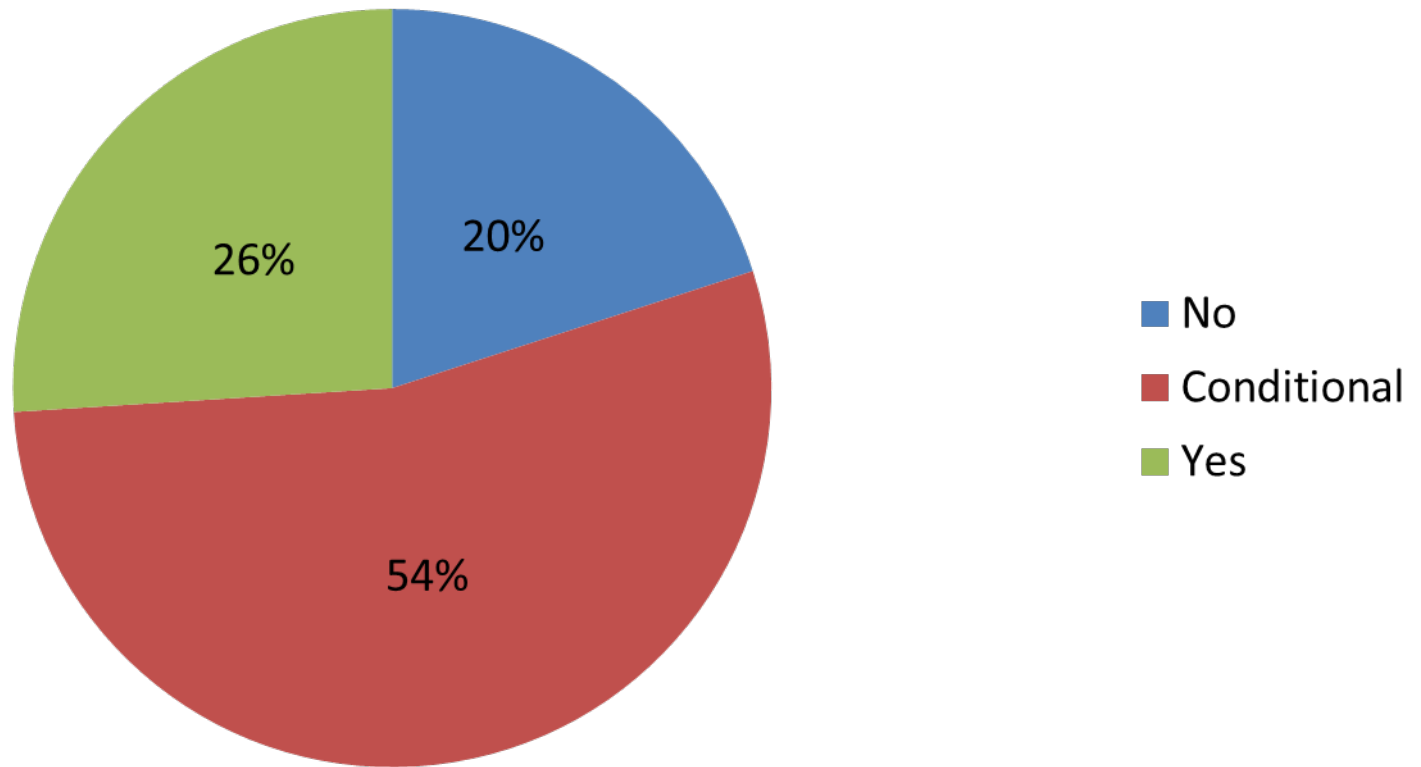
Methods II

- We collected final funding recommendations.
- We assessed relationships between each main issue and the funding recommendations by exploring the data visually and with Fisher's exact tests.

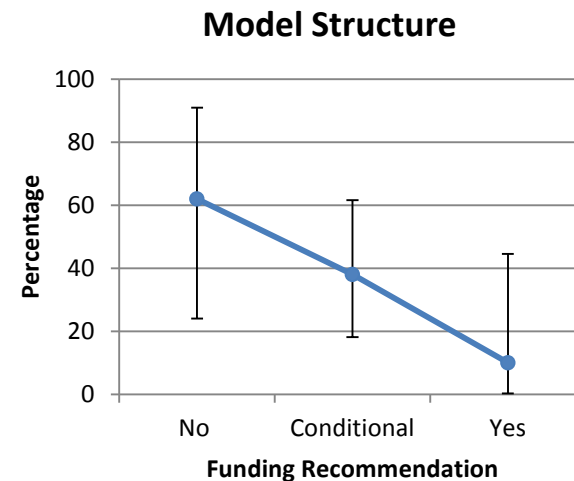
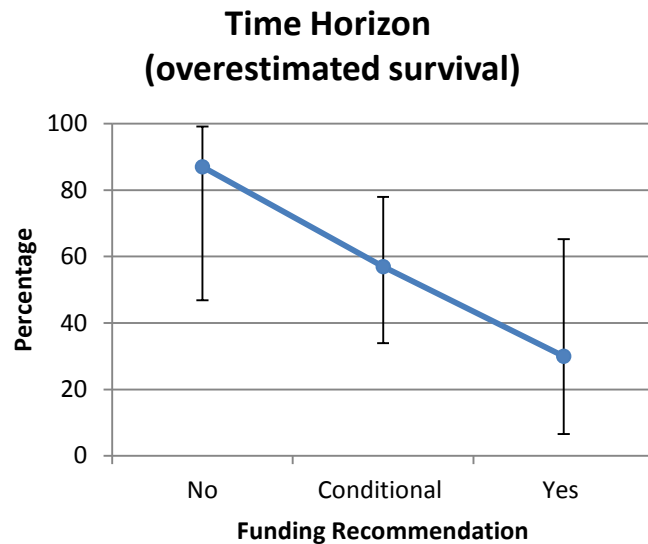
Results- Frequency of Issues & Reviewers Actions (n=30)



Results- Funding Recommendation Type (n=39)



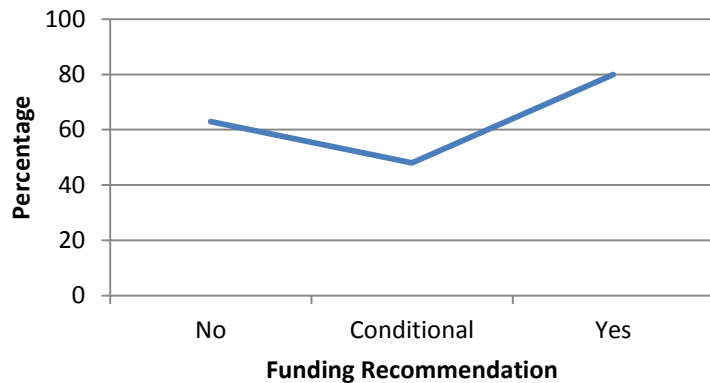
Results- Trends in Funding Recommendation by Each Main Issue



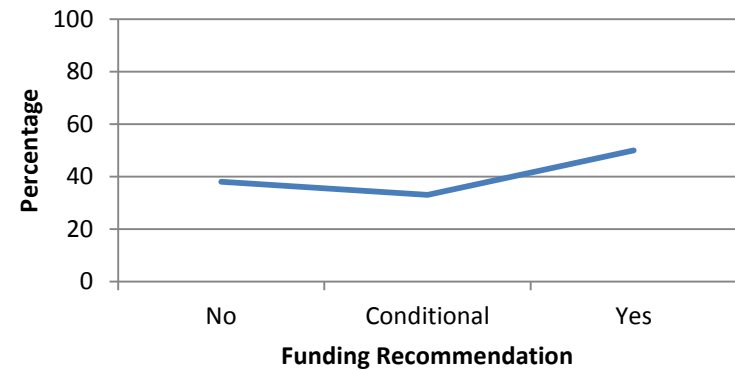
*Interpretation example: among the reviews that were not recommended, 87% mentioned an issue with time horizon (i.e., overestimated survival) in the economic guidance report

Results- Trends in Funding Recommendation by Each Main Issue

Drug Wastage & Other Costing



Utility Estimates

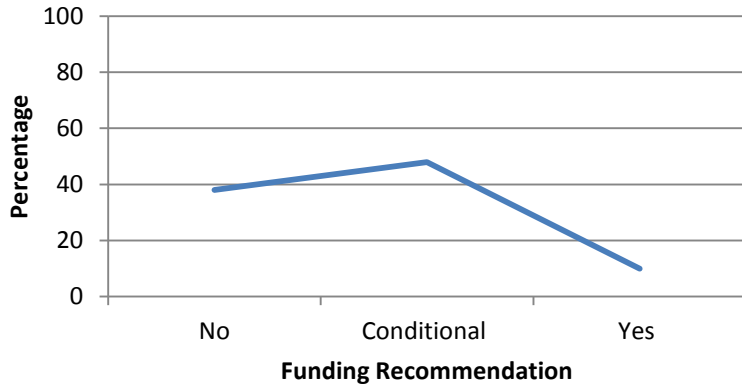


Interpreting graphs

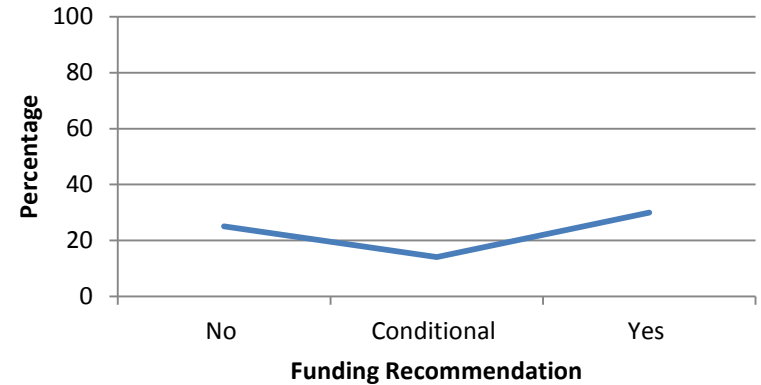
- Does this mean time horizon influences the recommendation while drug wastage does not? No!
- Why not? We are not considering whether the reviewer could modify/explore/improve the estimates. Not accounting for the ICER. Not accounting for other factors in the deliberative framework. These are just **observational** correlations.

Results- Trends in Funding Recommendation by Each Main Issue

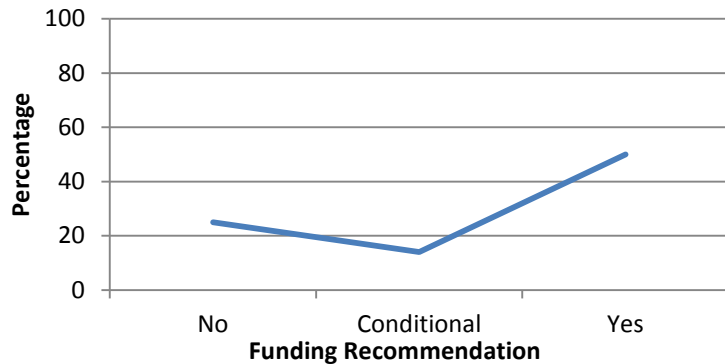
Duration of Benefit



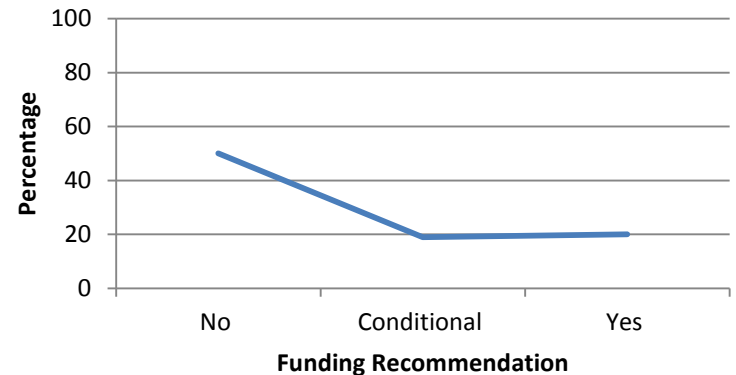
Indirect Comparison



Quality of Clinical Data



Statistical Problems with Extrapolation Method



Limitations

- Small sample size (n=39)
- We only examined publicly available documents and we did not gather additional information from the manufacturers, economic reviewers or the committee to clarify interpretations or assess the importance of each issue to the review.
- There are other major factors that are considered in forming each recommendation - clinical benefit, alignment with patient values, and adoption feasibility into the health care system.

Conclusion

- Many of the submissions had issues reported by reviewers related to time horizon, drug wastage & other costing, and utility estimates; however, the majority of time these issues could be addressed (partially or completely).
- Issues that were frequently reported but could often not be resolved by the economic reviewer were model structure and extrapolation issues, as well as the quality of clinical and comparative data informing the analysis.
- For future research similar work could be conducted in other disease areas besides cancer.

Questions?

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