IPECAD workshop model cross-comparison

Workshop meeting, 5 and 6 June 2023 Stockholm, Sweden

Research question and focus of workshop

The following **research question** was set: What are differences in key health-economic outcomes across models that assess the cost-effectiveness of a hypothetical disease-modifying AD drug treatment, and what factors explain those differences?

The **focus of the workshop** is on the challenges of using trial outcomes in a decision model. Specifically, we seek to investigate the use of outcomes from short-term detailed trial efficacy evidence and their translation to long-term patient-relevant outcomes in a decision analytic framework. Our goal is to describe how treatment efficacy is implemented into the models and discuss how they translate into differences in health-economic model outcomes (taking into account the specific model design, parameterization and model assumptions).

Submit to organizers

Submit the following information to the organizers of the workshop **before 25 May 2023**:

1. Your model outcomes (use template 1 Excel on www.ipecad.org/workshop).
2. Your description of how you implemented the benchmark scenario into your model (use template 2 Word on www.ipecad.org/workshop).
3. Your feedback on a summary of your model that the IPECAD workshop organizers will draft.

Preparation before the workshop

- Model descriptions: please read all participants short model descriptions. We consider this pre-knowledge important for a productive discussion.
- Cross-comparison results: please make yourself familiar with the cross-comparison results, which will be shared by the IPECAD steering group prior to the workshop.

Agenda

Day 1 (5 June 2023)

Time	*Topic*	*Notes by Anders G*
09:00	**Welcome & introductions**	**Bengt & Linus**
09:30	**Cross-comparison results** Explain approach for today's discussion. Describe cross-comparison results (graphs/tables) (~20m). Organize output per model type (Markov, micro). ~10m for clarifications.	**Ron**
10:00	**Discussion on MARKOV type model results**	**Chair: Ron**
30 mins	Summary of 6 models and benchmark implementations: IPECAD, ADDITION, Spackman, Biogen, SveDem, CPEC Summarize models and summarize benchmark implementations. Clarifications by model developers.	Ashley
15 mins	Comments by 3 participants (5m each) Comment on the treatment implementations in these set of models, highlighting what they found interesting.	Chelsea and Peter?
15 mins	**Break**	
45 mins	General discussion • For each comparison outcome: judge model differences as small, moderate, large. • What model characteristics (starting population, model type, disease progression source, mortality, Tx implementation, assumptions Tx after trial, other assumptions, calibrations, etc.) could explain the differences (i.e., what are drivers of variation)? • Can any model characteristics be recommended to implement the benchmark scenario (i.e., is there an 'advised implementation')?	All
15 mins	Summary and short reflection on discussion	All
12:00	**Lunch**	
13:30	**Discussion on MICROSIMULATION type model results**	**Chair: Linus**
30 mins	Summary of 5 models and benchmark implementations: TCPS, MISCAN, AD-ACE, Herring, FEM (same as previous)	Will
15 mins	Comments by 3 participants (same as previous)	Jakub/Bryan, Chiara/Inge?
45 mins	General discussion (same as previous)	All
15 mins	Summary and short reflection on discussion	All
30 mins	**Break**	
15:45	**Learnings for upcoming AD treatments**	**Chair: Anders G**

	• Question round for all participants to flag/update on recent developments related to evaluation of new AD drug treatments.
	• Any learnings/recommended from our cross-comparison for evaluation new AD treatments in terms of:
	    ○ model characteristics
	    ○ reporting results (standardized table to support comparison)
	• Learnings from CISNET.	

16:30	**Re-cap / discussion topics / what's to come tomorrow**	**Linus**
17:00	**End meeting day 1**	
19:00	**Dinner**	

Day 2 (6 June 2023)

Time	Topic	Notes by Anders G
09:00	**Re-cap Day 1: Observations, challenges, ambitions**	**Anders G**
09:30	**Subgroup discussions (~4 groups of ~4 persons, 1 summarizer per group)**	**Chair: Anders W (A), Will (B)**
45 mins	Discussion A. Extrapolate from trial: a. How to do this? b. What evidence is currently available? c. What starting/stopping rules to apply? d. Difference extrapolating beyond trial versus simulating beyond treatment discontinuation? e. What sensitivity analysis to advise? f. What future evidence to collect? g. What can we do in the meantime? B. Future steps for IPECAD: a. Next workshop (hypothetical scenario, validate to trial/cohort, extreme scenario, replication from publication, probabilistic analysis / one-way sensitivity analysis). b. How to organize a next cross-comparison (single-moment workshop versus open continuous comparison)? c. Suggestions for benchmark scenario. d. Other suggested future steps for IPECAD (workshop)?	
15 mins	Summary from summarizers	
30 mins	Break	
45 mins	Subgroup discussions Switch group and repeat discussion	
15 mins	Summary from summarizers	
12:00	**Closing**	**IPECAD steering**
12:30	**Lunch**	
14:00	**Opportunity for participants to self-organize any additional engagement, let us know in advance if we can support a meeting room**	

PARTICIPANT LIST

Model	Participant	In person
Spackman et al	Chelsea Bedrejo Stellick	Yes
Spackman et al	Eldon Spackman	No
FEM	Jakub Hlavka	Possibly
FEM	Bryan Tysinger	
ADACE	Amir Tahami	No
ADACE	Henri Folse	No
BASQDEM	Javier Mar	No
BASQDEM	Myriam Soto-Gordoa	No
MISCAN	Inge de Kok	Yes
MISCAN	Chiara Brück	Yes
CPEC	Robert Anderson	No
CPEC	Raphael Wittenberg	No
Biogen	Peter Pemberton Ross	
ADDITION	Linus Jönsson*	Yes
ADDITION	Ashley Tate*	Yes
Herring et al	Will Herring*	Yes
IPECAD	Colin Green*	Possibly
IPECAD	Anders Gustavsson*	Yes
IPECAD, also for SveDem	Ron Handels*	Yes
SveDem	Anders Wimo*	Yes
	Bengt Winblad*	Yes
	Anders Sköldunger*	Yes
Martins et al	Rui Martins	Withdrew
Davis et al	Scott Johnson	Withdrew

* IPECAD workshop steering group