

Assessing the potential impact of recommendations made through the CADTH Common Drug Review (CDR) program

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CADTH

Disclosure

I have the following relevant financial relationship to disclose:

- Employed by: CADTH

CADTH:

- Funded by federal, provincial, and territorial ministries of health
- Receives application fees from manufacturers for three programs:
 - CADTH Common Drug Review (CDR)
 - CADTH pan-Canadian Oncology Drug Review (pCODR)
 - CADTH Scientific Advice

CADTH: Common Drug Review (CDR)

- Pan-Canadian process to review drugs for public reimbursement introduced in 2003
 - Goal: Provide a common process to improve efficiency and reduce duplication of effort
- Assess clinical effectiveness, cost-effectiveness and patient information for new drugs
- Canadian Drug Expert Committee (CDEC) provides formulary listing recommendations to participating Canadian public drug plans:
 - List
 - List with clinical criteria (or reduced price)
 - Do not List
- CDR has provided recommendations for ~500 drugs since May 2004

Project Objectives

- Expand upon previous pilot project:
 - Purpose: To assess health and cost implications with the uptake of CDR recommendations at a population level (between 2011-2012)
 - Estimated incremental net benefit (INB) of \$460M
 - Limited by small sample size (n=55)
- Current project expands to a 5-year time-frame (2011-2015)
- Objective: Impact of CDR program beyond intended efficiencies is unknown (i.e. value of the recommendations)

Methods

- Identified CDR reviews with recommendations containing a CUA or CMA, as well as BIA, from January 2011 to December 2015 [n=156]

Project Number	Drug Name	Brand name	Indication	Recommendation Date	Recommendation	Criteria	Analysis	Time Frame	Comparator
SR0000	drugA	Drug A	Indicated for disease A	January 1, 2010	DNL	NA	CEA/CUA	1 year	drugB

Manufacturer Info:				Population Numbers		
Manufacturer Info:	Total cost	QALY	ICUR	Province	Individuals eligible for drugA (Year 2)	Individuals prescribed drugA (Year 2)
drugA	\$12,030.00	0.835	\$62,750.00	British Columbia	1,445	194
drugB	\$11,277.00	0.823		Alberta	311	42
				Saskatchewan	165	22
				Manitoba	87	11
				Ontario	1,080	145
				New Brunswick	61	8
				Nova Scotia	150	20
				Prince Edward Island	22	3
				Newfoundland & Labrador	80	11
				NIHB	85	11
				TOTAL	3,486	467

CDR Recommendation

CDR PE Report

Manufacturer BIA

Methods (cont.)

Two scenarios were defined:

- Uptake scenario: public drug plans implement CDR recs.
- Counterfactual scenario: public drug plans do not implement CDR recs.
- For each recommendation, calculated net-costs and net-QALYs for the entire eligible population (difference between uptake and counterfactual scenarios)

CDR Recommendation	Net-costs	Net-QALYs (where applicable)*
List	Total Cost _{listing} – Total Cost _{not listing}	Total QALYs _{listing} – Total QALYs _{not listing}
Do not list	Total Cost _{not listing} – Total Cost _{listing}	Total QALYs _{not listing} – Total QALYs _{listing}
List with criteria	Total Cost _{listing (w/criteria)} - Total Cost _{not listing}	Total QALYs _{listing (w/criteria)} - Total QALYs _{not listing}

Methods (cont.)

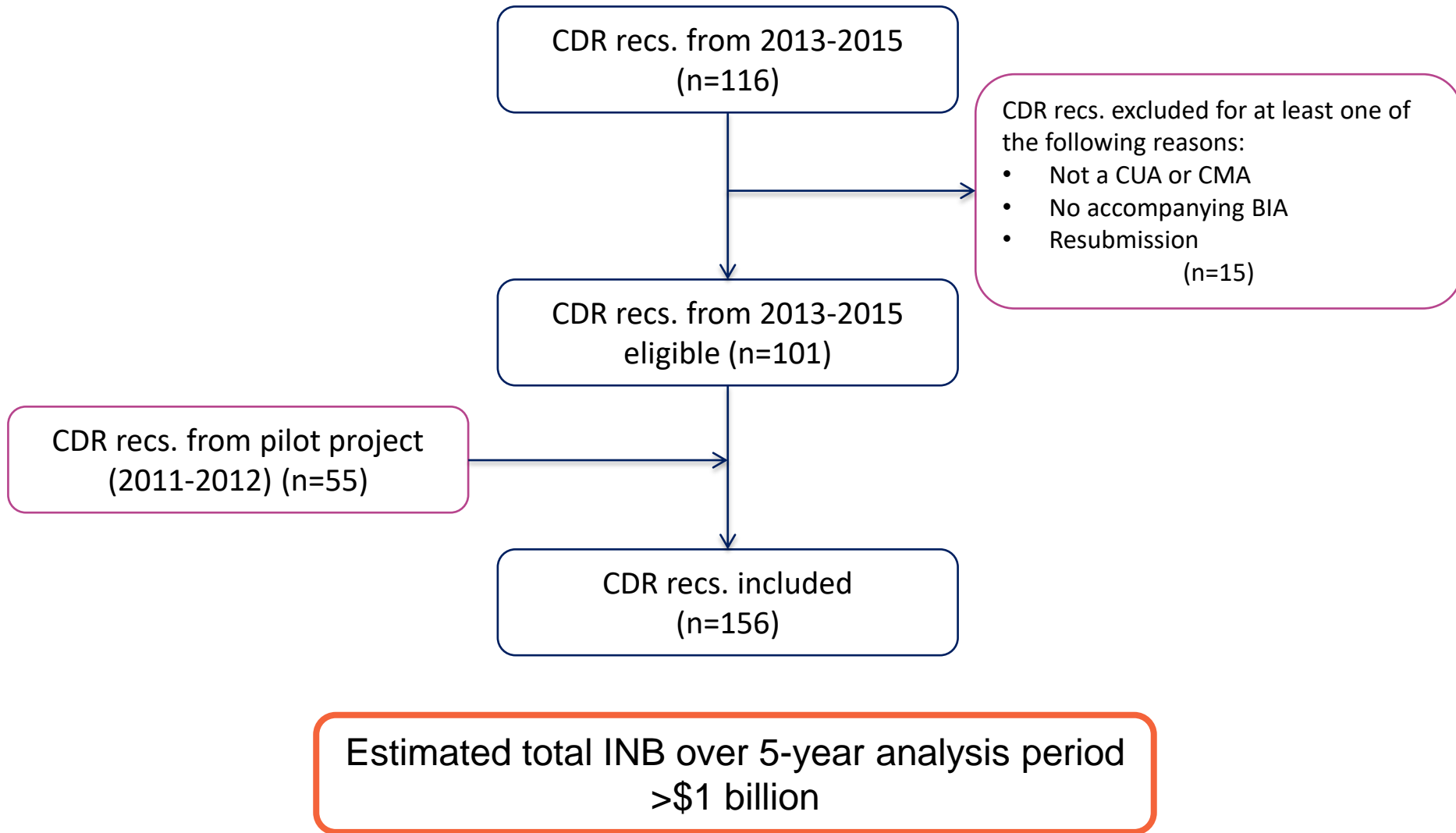
- For each recommendation, we calculated the incremental net benefit (INB) based on a willingness to pay (WTP) threshold of \$50,000 per QALY

$$\text{INB} = (\text{Net_QALYs} \times \$50,000 \text{ per QALY}) - \text{Net_costs}$$

- INB aggregated for all recommendations to derive the INB of implementing all CDR recommendations reviewed in the 5 year study period

⁷ Note: We do not have an empirical estimate of the WTP threshold in Canada. 50k has been convention considered and used in Canada. Sensitivity analyses on this measure are being completed.

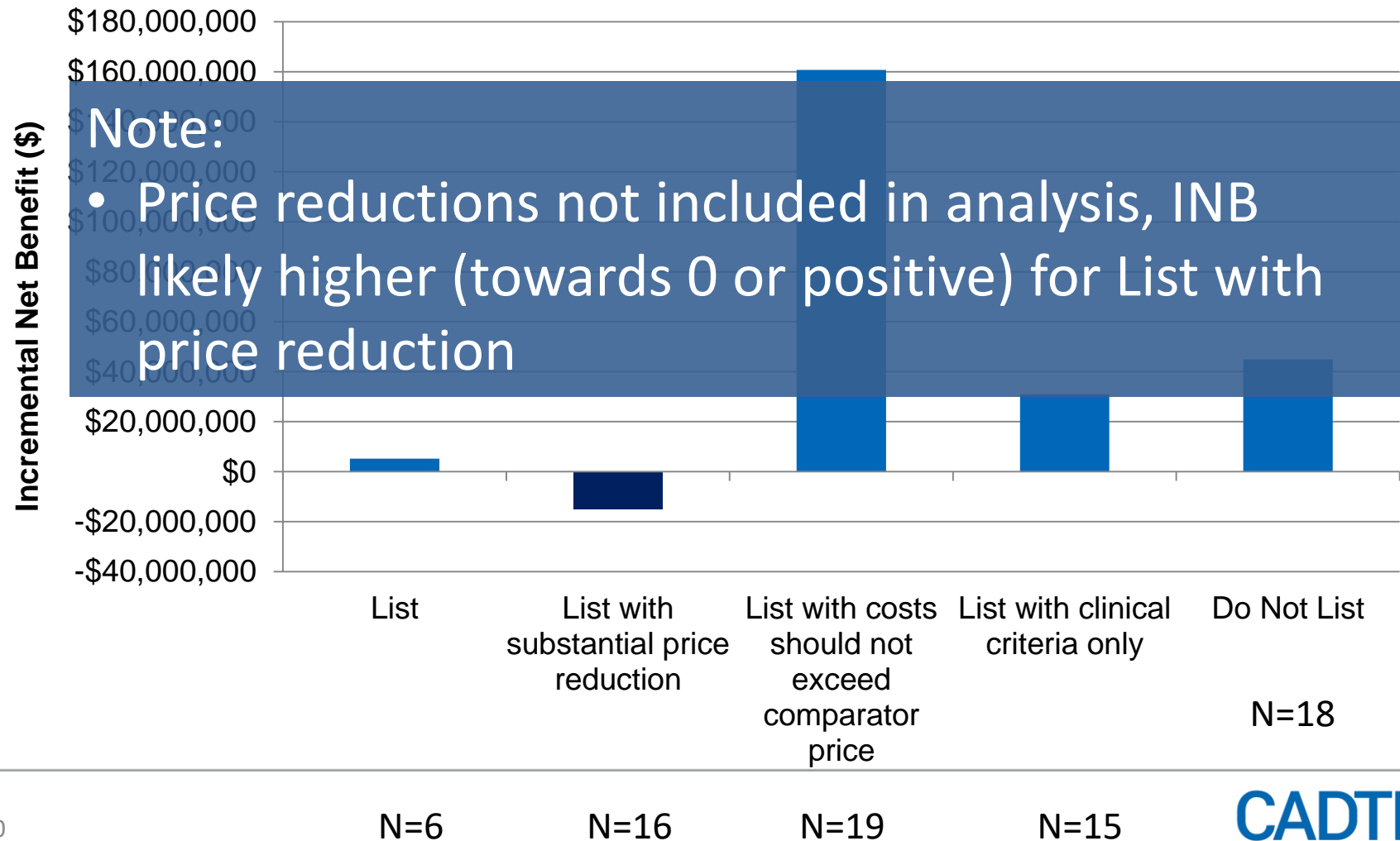
Results – Included Studies + INB



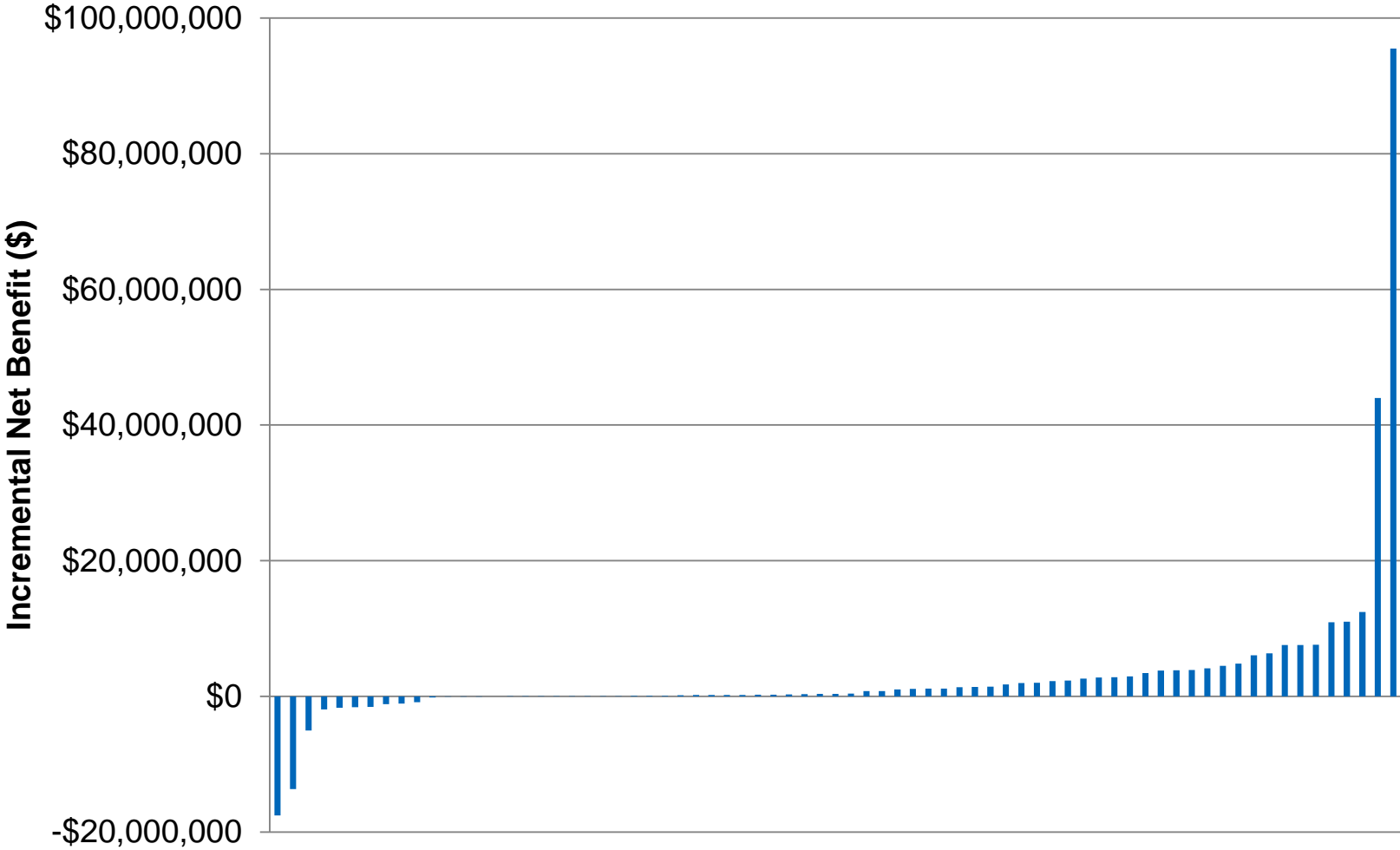
Results - CMAs

- 74 recommendations with CMAs identified over 5 year analysis period
- Over \$200M in estimated INB over 1 year
 - No health gains
 - Cost savings
- Recommendations:
 - List: 6
 - List with criteria: 45
 - Do not list: 23

Results – INB by recommendation type (CMAs)



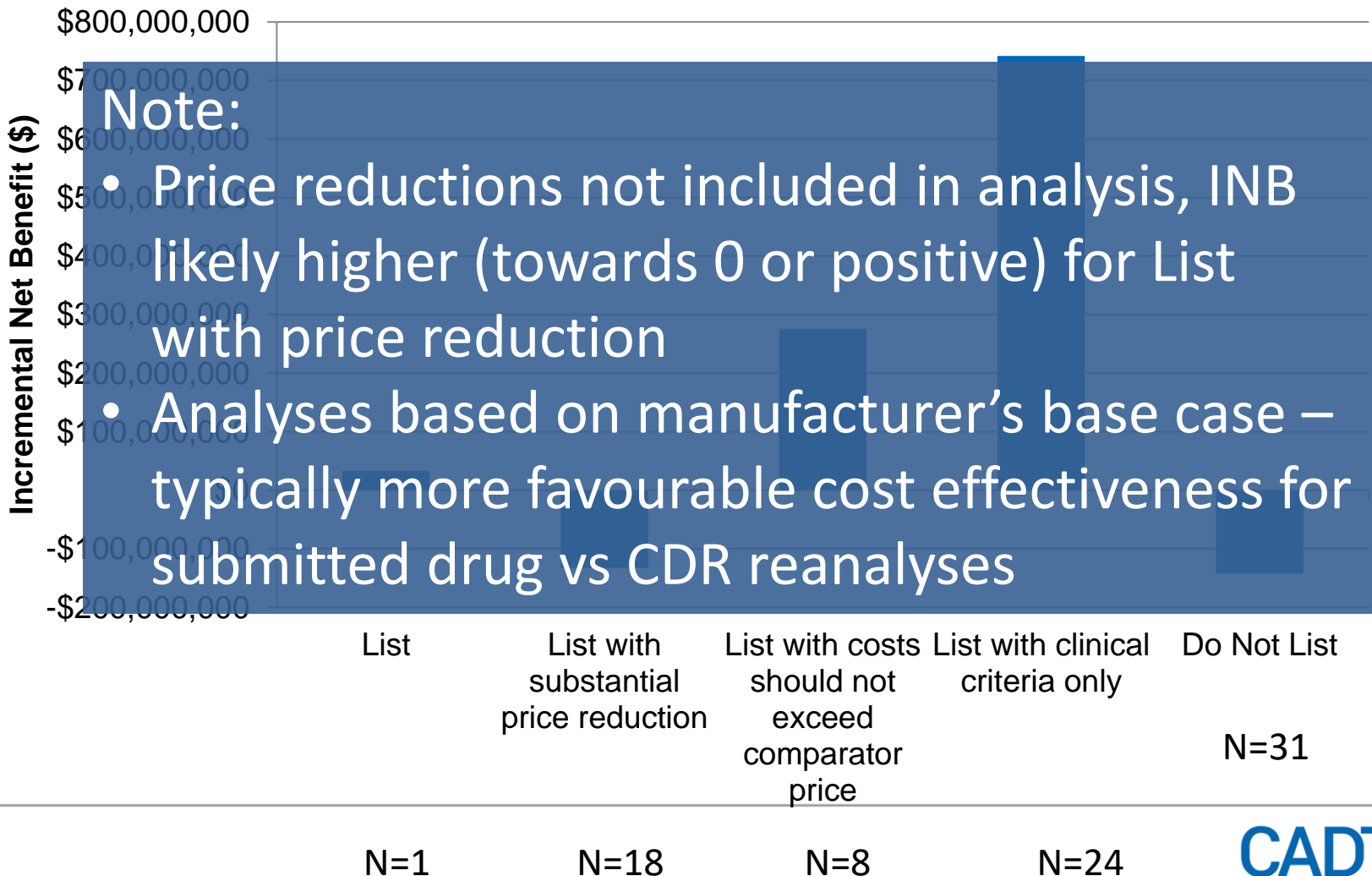
Results – Distribution of INBs (CMAs)



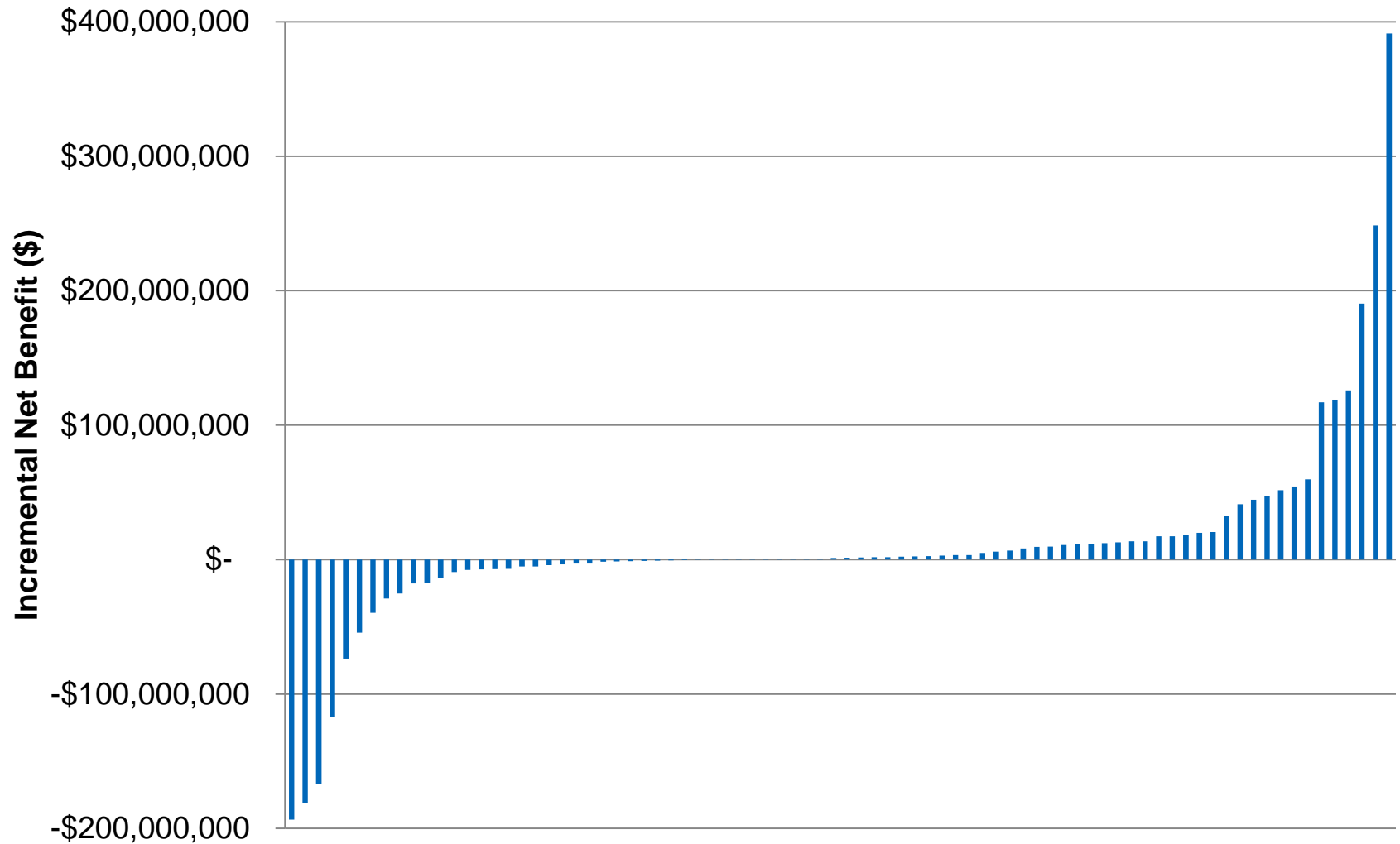
Results - CUAs

- 82 recommendations with CUAs over 5 year analysis period
- Over \$775 million in estimated INB over analysis time frame
 - 37,636 QALYs in health gains
 - Cost of \$1.1 billion
- Recommendations:
 - List: 1
 - List with criteria: 50
 - Do not list: 31

Results - INB by recommendation type (CUAs)



Results - Distribution of INBs (CUAs)



Results – Additional Analyses

- Subgroup analyses by submission characteristics
 - Rarity of condition
 - ATC classification
 - Market listing position
- Sensitivity analyses
 - Population size estimate
 - QALY gain for manufacturer drug
 - WTP threshold

Limitations

- Use of manufacturer submitted costs, benefits, population size estimates
- List with criteria at reduced price – price reductions not considered
- Selection of \$50,000 per QALY as willingness to pay threshold in INB calculations
- Exclusion of select federal drug plans

Conclusion

- Operating budget for CDR over the 5 year study period
~\$36.5M
- Total INB from 156 recommendations: \$1.002 Billion
- Jurisdictions participating in the CDR program are receiving significant benefit through potential cost savings and improved health outcomes when implementing CDR recommendations

Authorship

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- William Amegatse

CADTH Evidence
Driven.

ACMETS Preuves
à l'appui.

Questions? - A Decision Analysis

Easy Question

Success

Outcome



BRACE YOURSELF

QUESTIONS ARE COMING

Difficult Question

Failure

Outcome

