

ECONOMIC EVALUATION: IMPLICATIONS FOR STUDYING THE DESIGN OF INTERVENTIONS AND IMPLEMENTATION STRATEGIES

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OVERVIEW

1. What is economic evaluation?
2. How does economic evaluation apply to implementation research?
3. How does economic evaluation apply to human-centered design (HCD)?
4. **Discussion:** How can you incorporate economic evaluation into UW ALACRITY research studies?

ECONOMIC EVALUATION METHODS

Seek to calculate and compare the costs and returns of alternative courses of action to guide efficient allocation of resources.

Cost of Intervention



vs.

Value Produced by Intervention



		Outcomes	Type of Analysis	Metric
COST (\$)	vs	---	Cost analysis	Costs
		Clinical outcomes	Cost-effectiveness analysis	Cost-effectiveness ratios (\$ per unit change)
		QALY/DALY	Cost-utility analysis	
		Monetized outcomes	Benefit-cost analysis	Benefit-cost ratios (return per \$ spent)
		Budget savings	Budget impact analysis	Net budget impact

METHODOLOGICAL CONSIDERATIONS

- What costs and returns should be included/excluded?
- To what alternative use of resources are you comparing?
- Monetization: what is the value of resources involved?
 - Consider direct and indirect, fixed vs. variable costs
 - Adjust to account for inflation, cost of living, and time
- Over what period do costs/returns accrue?
- What points of uncertainty exist in your model, and what is the potential impact on conclusions?

ECONOMIC EVALUATION IN IMPLEMENTATION RESEARCH

Cost of
Intervention

vs.

Value Produced
by Intervention

+

+

Cost of
Implementation
Activities

vs.

Value Produced
by Implementation

Adjunct
Services

Resources
and
Materials

Care
Coord-
ination

Quality
Assur-
ance

DIFFERENCES FROM TRADITIONAL ECONOMIC EVALUATION

Characteristic	Economic evaluation of interventions	Economic evaluation of implementation
Relevant costs	Discrete costs of intervention	Expansive costs of intervention (i.e., costs for replication) + implementation strategy
Relevant benefits	Clinical outcomes	Implementation, service, and clinical outcomes
Time horizon	Variable, but can be brief (< 1 year)	Often multi-year, can include short-term implementation and long-term sustainment
Perspective	Variable, but full societal perspective often encouraged	Health care system perspective is often most relevant
Study design	Research methods are chosen to maximize internal validity, rigor, comprehensiveness	“Minimum acceptable” research methods; must be pragmatic, feasible for practice settings
Impact of context	Minimized; often standardized interventions delivered in ideal settings	Variable; often multi-site studies with variability in intervention, implementation across settings
Relevant decision-makers	Health care payers (invest in clinical care)	Health system payers (invest in infrastructure)

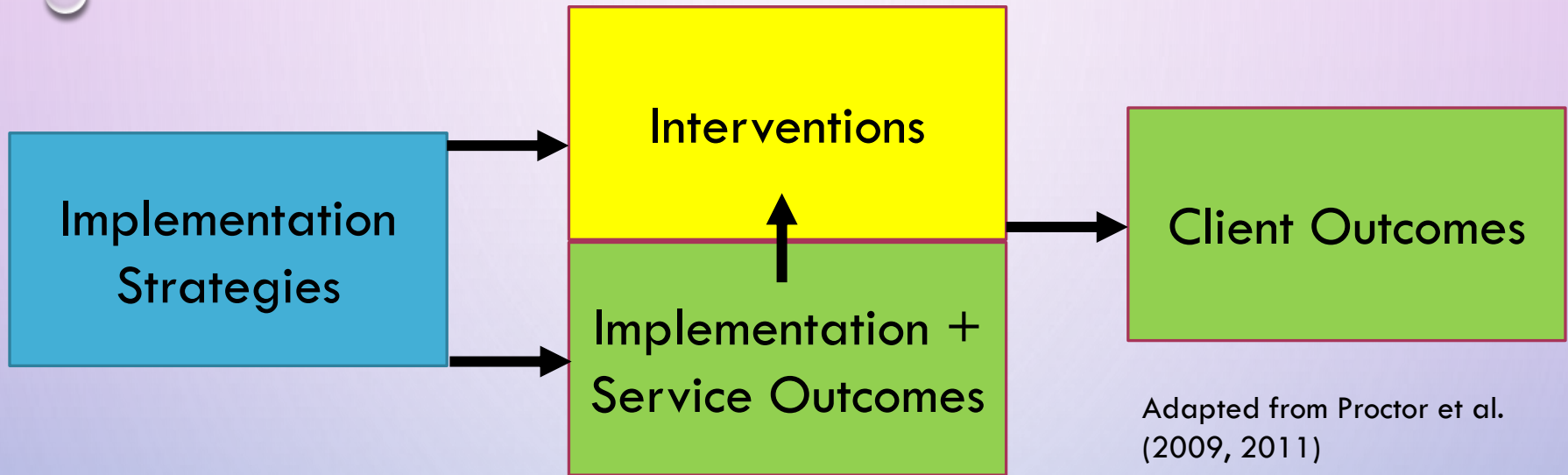
MIXED METHODS TO STRENGTHEN ECONOMIC EVALS OF IMPLEMENTATION

- Quantitative economic evaluations are limited by a “qualitative residual” of contextual information, particularly in implementation research

Structure (what)	subtype	Function (why)	Process (how)
Sequential	Qual → QUAN	Convergence	Merge Connect (transform)
	QUAN → Qual	Complementarity	Embed Connect (elaborate)
Simultaneous	Qual + QUAN	Expansion	Connect (expand)
	QUAN + QUAL	Development	Connect (initiate)
		Sampling	Connect (sample)

Dopp et al. (2019), *Implementation Science*

ECONOMIC EVALUATION AND HCD



Adapted from Proctor et al.
(2009, 2011)

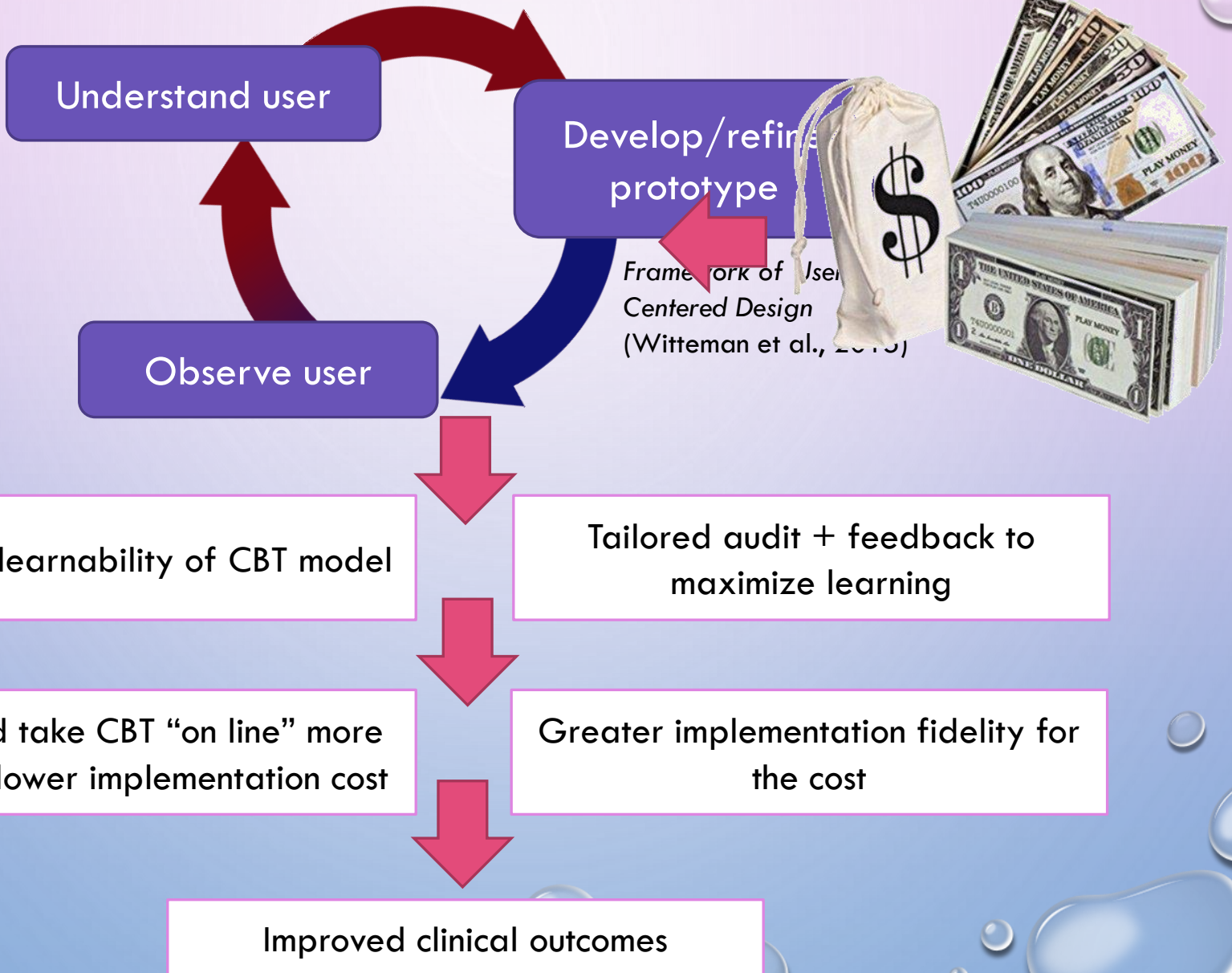
HCD can affect costs and returns by...

Improving
efficiency, resource
use (lower costs)

Affecting outcomes
at each level
(improved ROI)

Introducing new
costs of
implementation

HYPOTHETICAL EXAMPLES



IN YOUR ALACRITY PROJECTS...

How might we capture the value of HCD's impact?

What types of intervention and implementation costs would you like to measure?

How might we measure the cost of using HCD?

Thank you!

ANY
QUESTIONS
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