

ECONOMIC EVALUATION — AND THE ASSESSMENT OF RESOURCE COSTS — OF IMPLEMENTATION STRATEGIES

Zuleyha Cidav

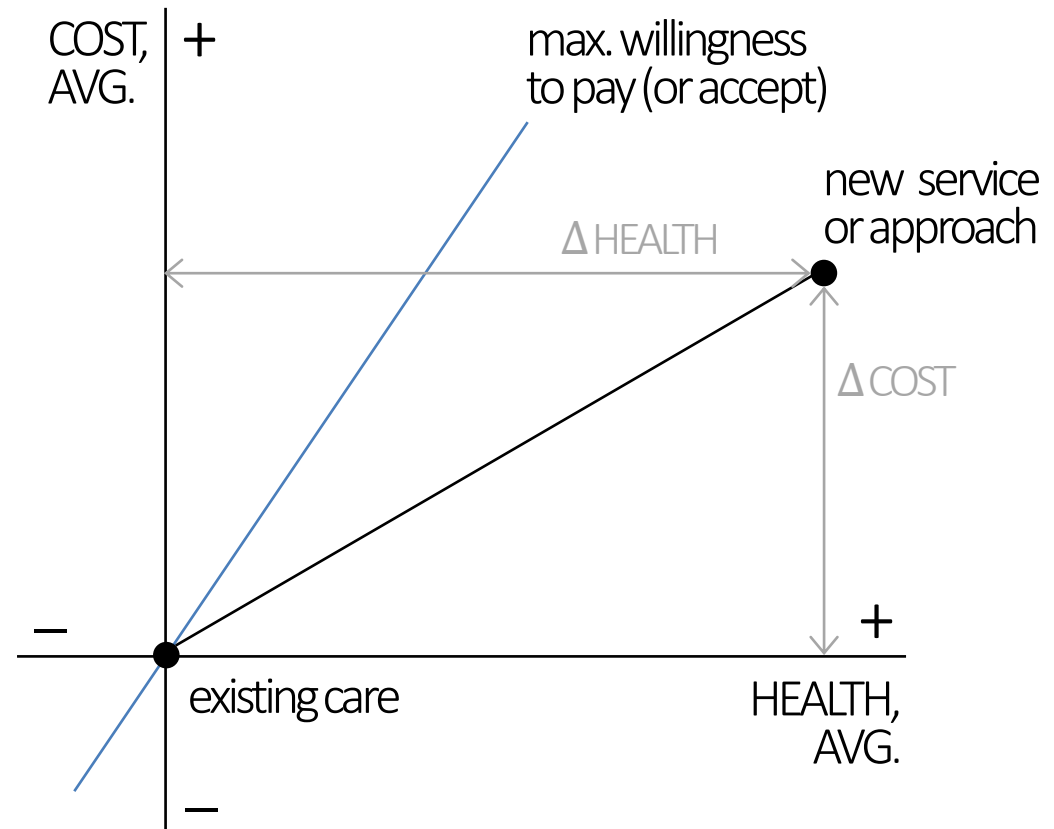
University of Pennsylvania

Ties Hoomans

London School of Economics and Political Science

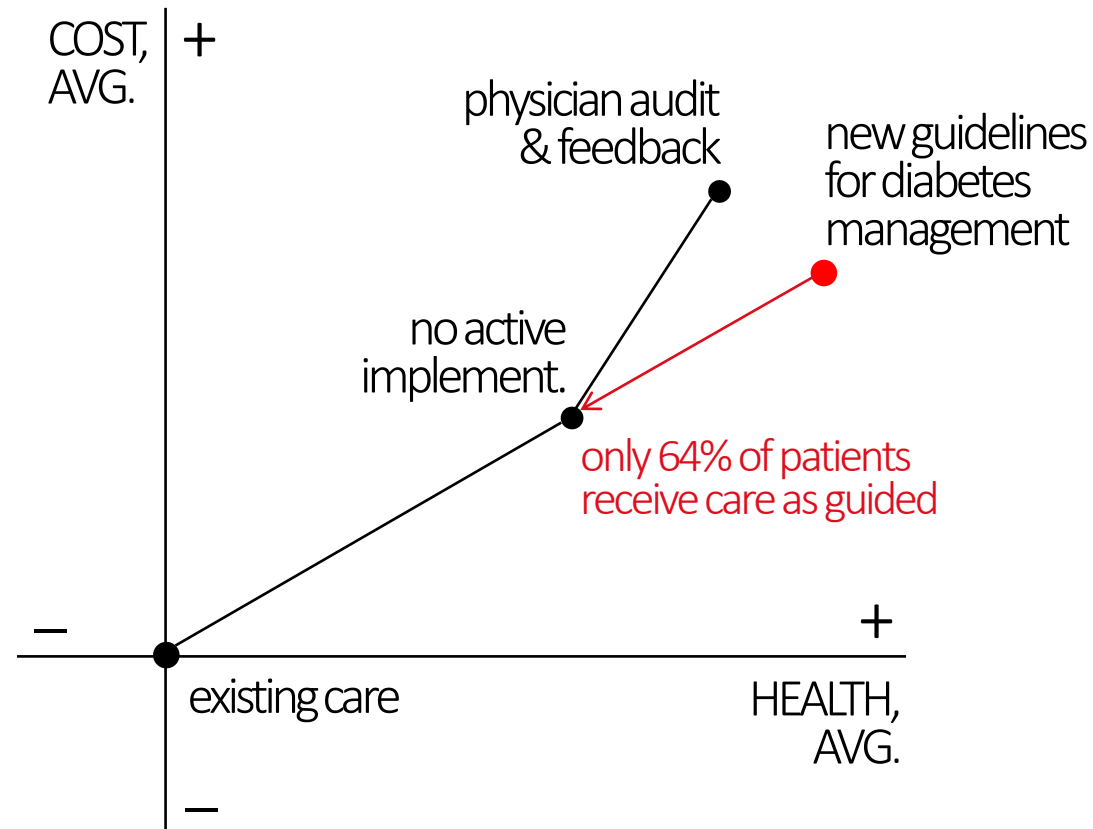
ECONOMIC EVALUATION

- ❓ compares **alt. interventions** to improve population health (or welfare), by **diffs. in benefits and resource costs**, to inform **decision-making**
- ❓ allows for **diff. perspectives** and **time horizons**
- ❓ common form: **cost-effectiveness analysis**



ECONOMIC EVALUATION

- ❓ can incorporate **“imperfect implementation”** into comparisons
- ❓ can **consider alt. implement. strts.**, incl. **“letting nature take its course”**
- ❓ can help establish **opportunity costs** **diff. parties** incur in process of improving population outcomes



Resource costs associated with active implement. phases

	Implement. problem inventory – and devt. of implement. strtgs.	Small-scale exec. of strtgs, locally, in research context – and eval. of impacts diffs.	Sel. and sustain. of implement. strt(s), locally, in daily practice – and cont'd monitoring	Scale-up of implement. strt(s) – to other practices, populations, e.g. – and further evaluation
(Local) govt., health authority	M, L, K	M, L, K, O	C, M, L, K, O	C, M, L, K, O
Insurance plans	“	“	“	“
Care organisation	“	“	“	“
Frontline worker	T, (H, W)	T, (H, W)	T, (H, W)	T, (H, W)
Individual, carer	T, H, W	T, H, W	T, H, W	T, H, W

} Care system or society*

M: Material; L: Labour; K: Knowledge; O: Organisation; C: Capital

T: Time; H: Health; W: Welfare;

* Cost of care provision – direct, indirect – may accrue to various parties

Time Driven Activity Based Costing and Proctor Rubric for Costing Implementation Strategies

TDABC: process mapping

Proctor rubric: strategy name, actors, actions, temporality, dosage, action target, justification, outcome

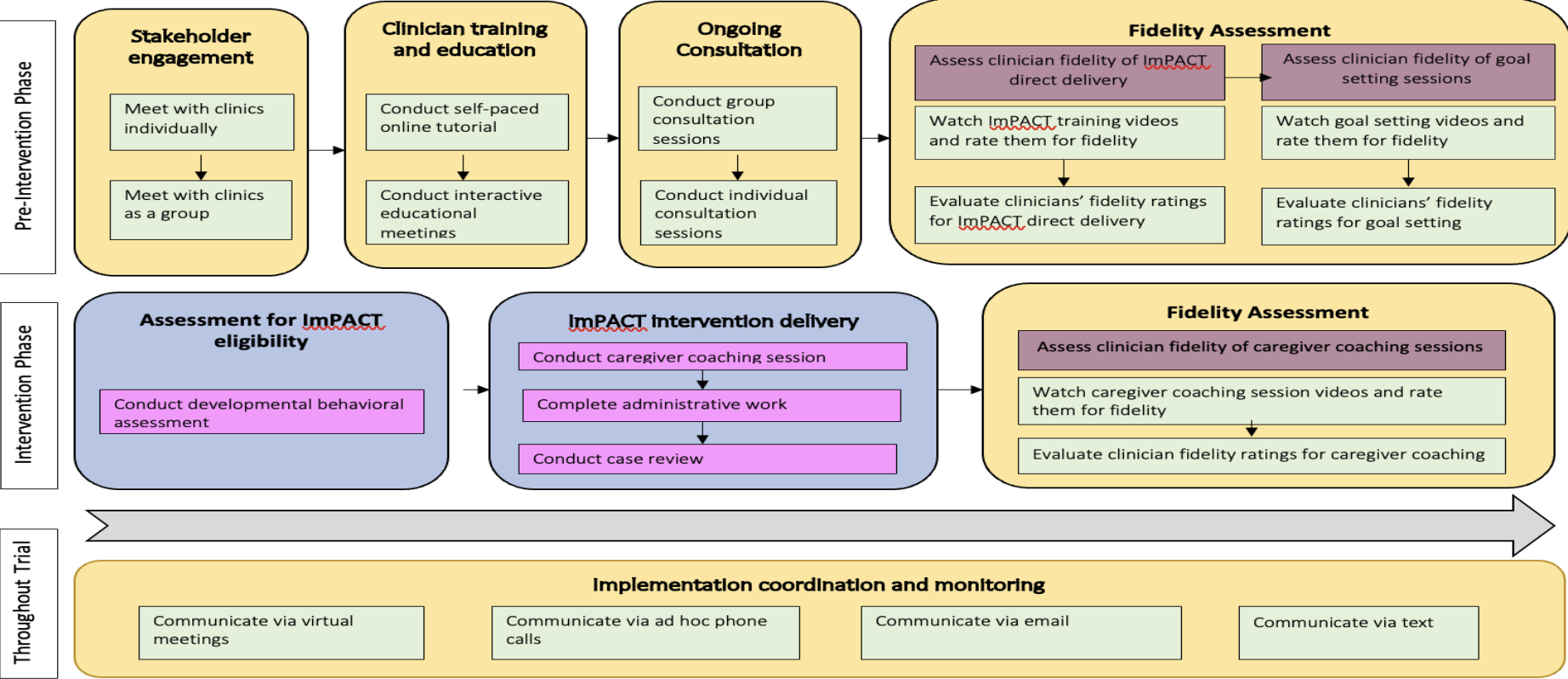
Cidav et al. 2020, 2021, 2023:

TDABC+Proctor rubric → 5-step approach to costing implementation strategies

1. Name/identify the implementation strategies and list the associated actions, actors, and temporality.
2. Determine the frequency & average duration of implementation actions by actors; calculate actors' total time spent on each action.
3. Determine the price per hour of each actor.
4. Determine non-personnel and their associated expenses.
5. Calculate total costs.

Reporting: resource units (hours),
unit prices (hourly wage rate),
total costs by actor, action, implementation strategy, implementation initiative

Figure 1. Process Map of Implementation and Delivery of the Project ImPACT



Yellow: Implementation strategies
 Purple: Implementation sub-strategies
 Green: Implementation strategy actions
 Blue: Intervention activities
 Pink: Intervention actions

Table S1. Resource Use and Costs of Project IMPACT Implementation Strategies

Implementation Strategies	Actions	Action description	Action temporality	Actors	Number of actors in unit action	Time driver	Time driver frequency	Time driver unit duration (hours)	Total hours	Wage rate (\$)	Total cost (\$)	Action time (hours)	Action cost (\$)	Implementation strategy time (hours)	Implementation strategy cost (\$)		
A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P		
Stakeholder engagement	Meet with clinics individually	Project manager and project coordinators have remote individual meetings with leaders at each clinic.	Pre-implementation. April 2020	Clinic leader	2	Number of meetings	4	1	8	82	656	20	1,228	31	2,027		
				Project manager	1		4	1	4	81	324						
				Project coordinator	2		4	1	8	31	248						
	Meet with clinics as a group	Project manager and project coordinators have one remote meeting with all clinic leaders.	Pre-implementation. May 2020	Clinic leader	8	Number of meetings	1	1	8	82	656	11	799				
				Project manager	1		1	1	1	81	81						
				Project coordinator	2		1	1	2	31	62						
Clinician training and education	Conduct self-paced online training	Each clinician watches a one-time 6h online training.	Pre-implementation. July 2020	Clinician	1	Number of online tutorials completed	12	6	72	125	9,000	72	9,000	296	32,436		
				Conduct interactive educational meetings	Pre-implementation. July 2020	Clinician	12	Number of meetings	4	3.5	168	125	21,000	224	23,436		
						Consultant	1		4	3.5	14	56	784				
						External trainer	1		4	3.5	14	56	784				
Project coordinator	2		4	3.5	28	31	868										
Ongoing consultation	Conduct group consultation sessions	Consultant, external trainer, project coordinators and clinicians meet for supervision and case discussion.	Implementation. August 2020 - July 2021.	Clinician	12	Number of group consultation sessions	18	1	216	125	27,000	288	30,132	504	45,954		
				Consultant	1		18	1	18	56	1,008						
				External trainer	1		18	1	18	56	1,008						
				Project coordinator	2		18	1	36	31	1,116						
	Conduct individual consultation sessions	Each clinician separately meets with consultant for a live coaching observation and feedback.	Implementation. August 2020 - July 2021.	Clinician	1	Number of individual consultation sessions	108	0.5	54	125	6,750	216	15,822				
				Consultant	1		108	1.5	162	56	9,072						

Table S2. Resource Use and Costs of Low Dose Project IMPACT Per-Child when delivered virtually

Intervention Activities	Actions	Action description	Action temporality	Actors	Number of actors in unit action	Time driver	Time driver frequency	Time driver unit duration (hours)	Total hours	Wage rate (\$)	Total cost (\$)	Action time (hours)	Action cost (\$)	Activity time (hours)	Activity cost (\$)
A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
Assessment for IMPACT eligibility	Conduct developmental-behavioral assessment	Clinician meets a family to conduct a developmental behavioral assessment for the child.	Implementation. August 2020 - July 2021.	Clinician	1	Number of developmental-behavioral assessments conducted	2	1	2	125	250	2	250	2	250
IMPACT delivery	Conduct caregiver coaching session	Clinician meets with a family to deliver IMPACT.	Implementation. August 2020 - July 2021.	Clinician	1	Number of IMPACT caregiver sessions	14	1	14	125	1,750	14	1,750	19	2,326
	Complete administrative work	Clinician writes progress notes after each session with families.	Implementation. August 2020 - July 2021.	Clinician	1	Number of IMPACT caregiver sessions	14	0.25	3.5	125	438	4	438		
	Conduct case review	Clinician meets with a supervisor from their clinic, to discuss child's progress during a quarterly review.	Implementation. August 2020 - July 2021.	Clinician	1	Number of meetings	4	0.17	0.67	125	83	1.3	138		
				Clinic leader	1		4	0.17	0.67	82	55				
														Total hours per-child	21
														Personnel time cost per-child	2,576
														Non-Personnel Costs per-child (IMPACT manual)	43
														Total IMPACT Delivery Cost per-child	2,619
														Total IMPACT Delivery Cost per hour	126