Choosing the right <u>quantitative</u> evaluation design

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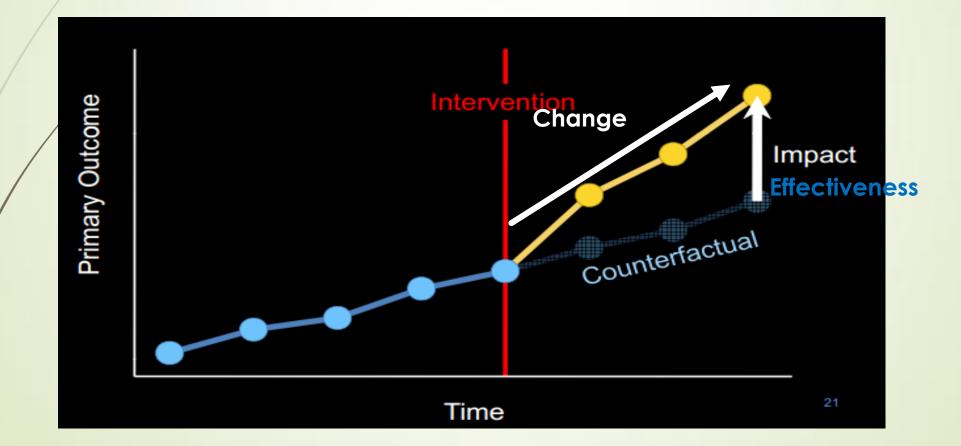
Content

A HOW-TO GUIDE in deciding the right design!

- Research questions
- Various other factors!
- More rigour!
- Awareness to conclusions we were making using designs

Communicating with meaning

Change. Effectiveness. Impact

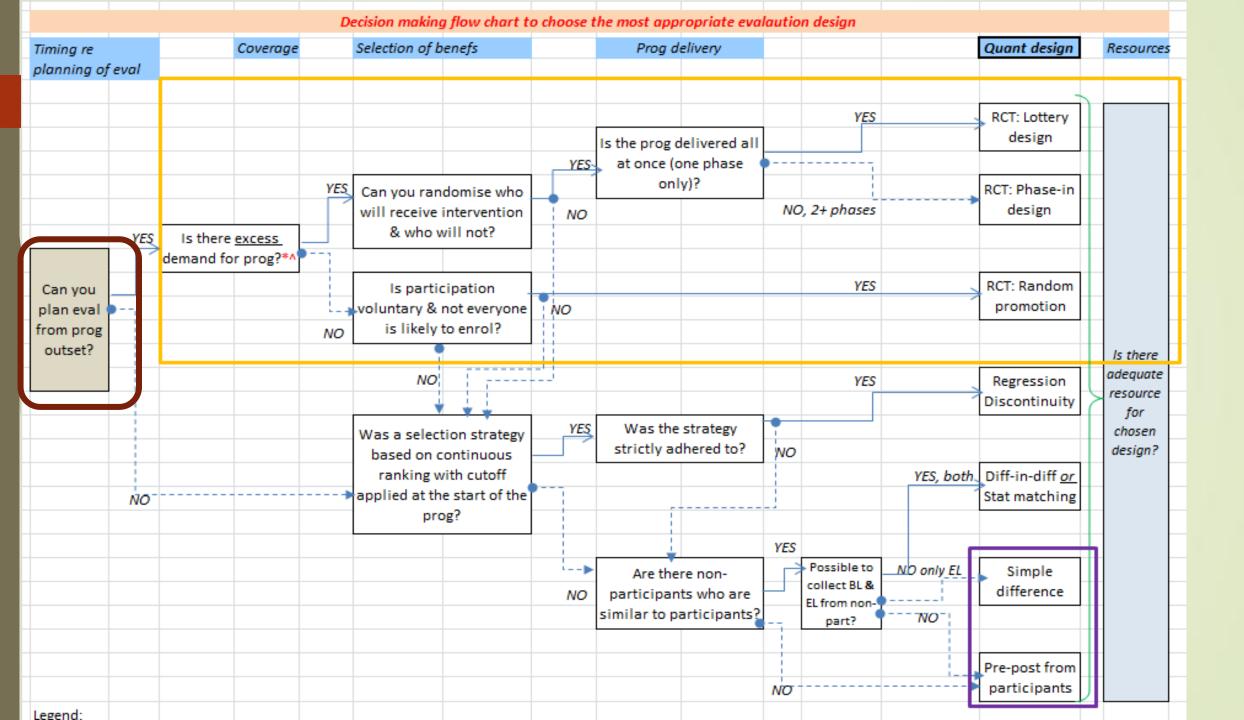


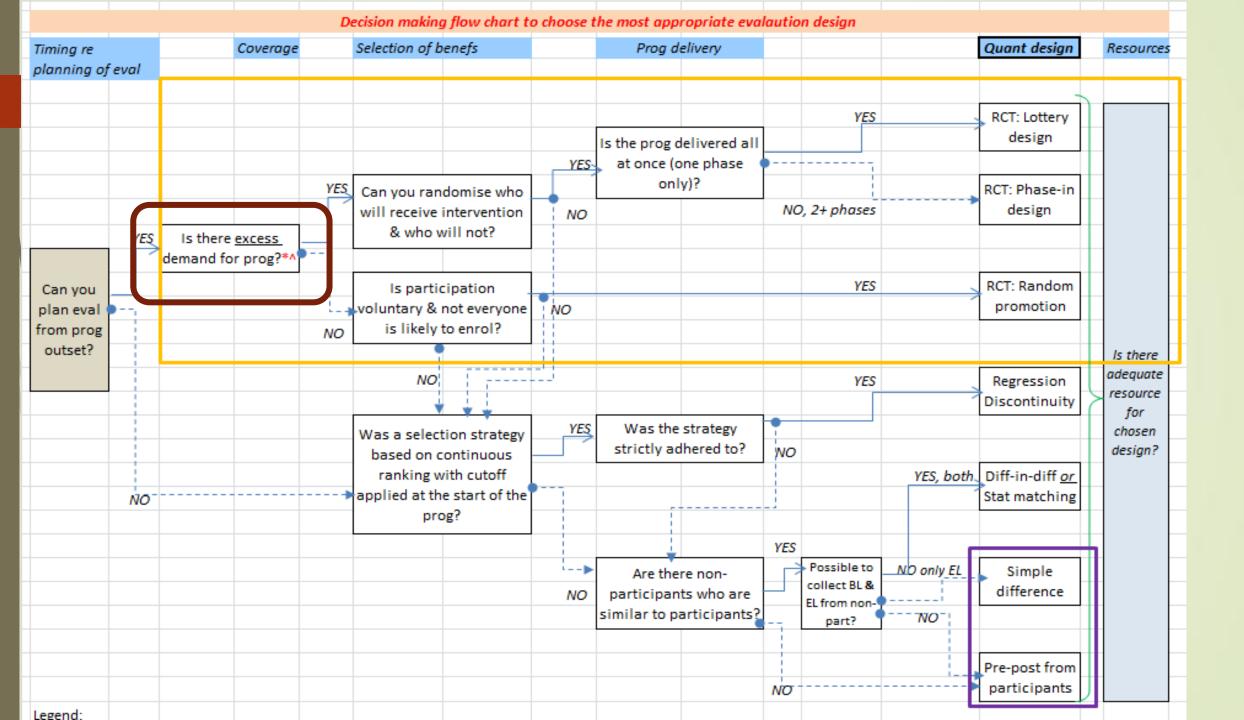
Evaluation question should ALWAYS guide evaluation design...

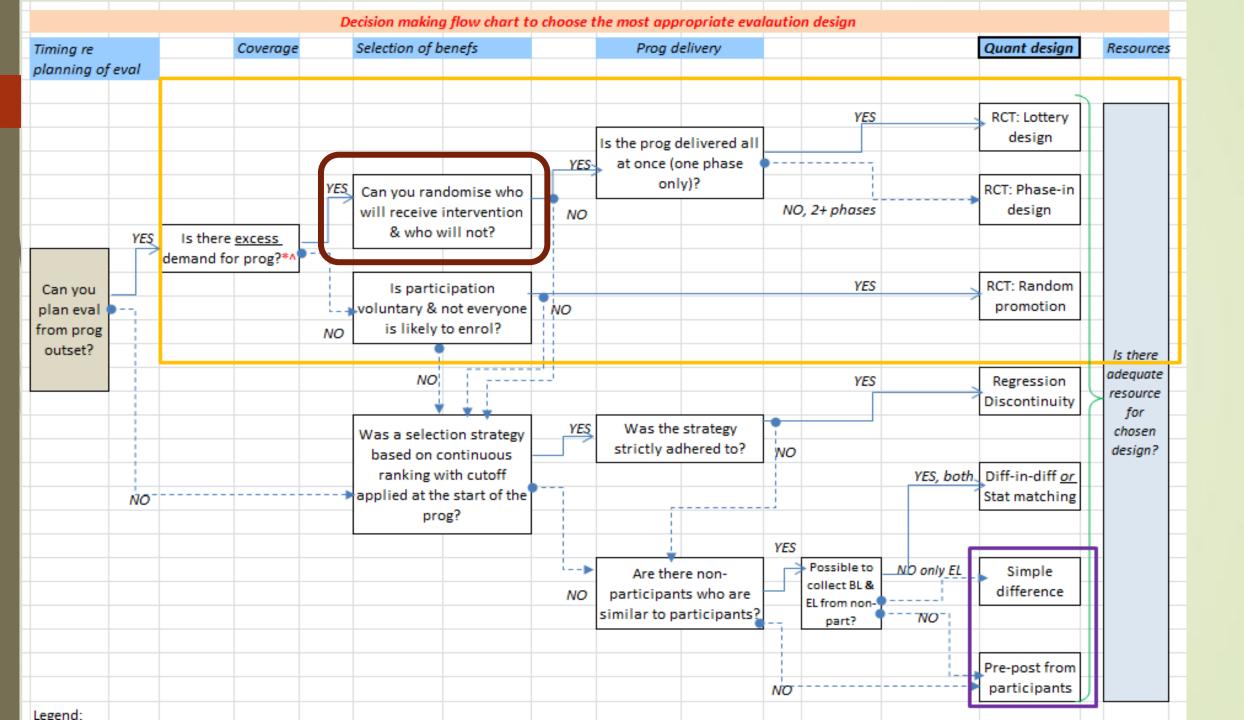
..... HOWEVER.....

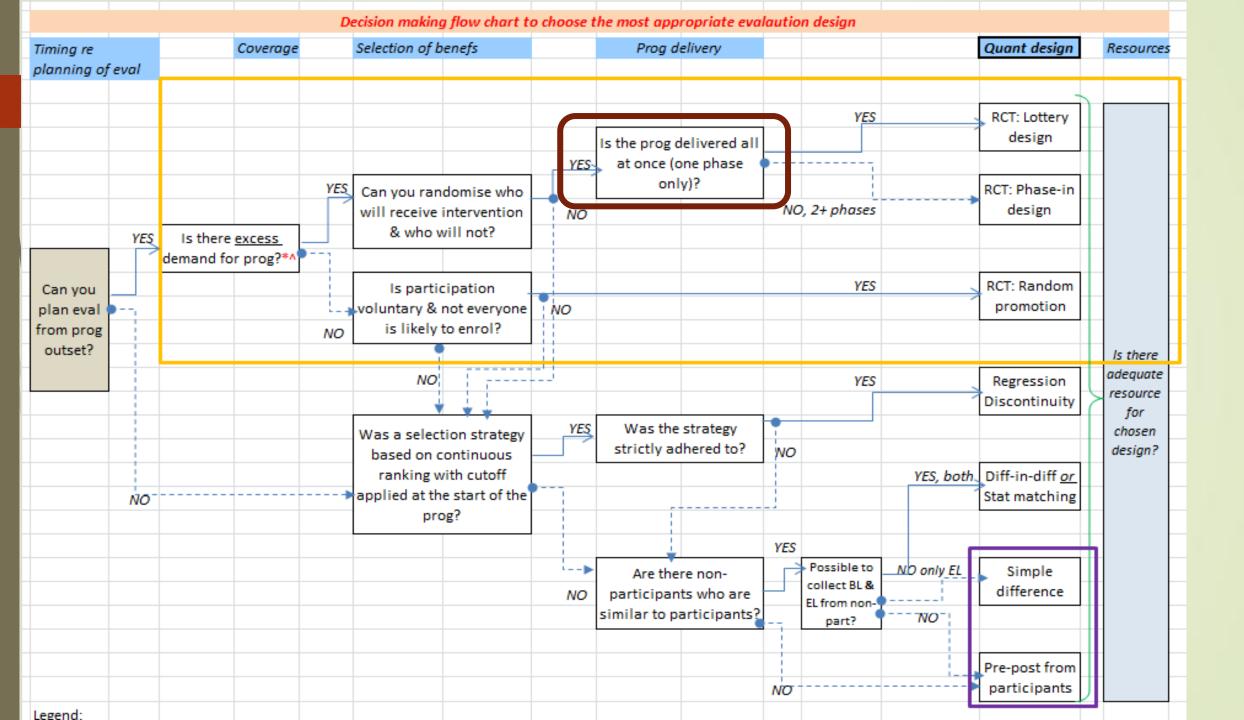
- timing of the evaluation?
- coverage of your programme?
- how beneficiaries were selected into the programme?
- how the programme is being delivered?
- financial and human resources available?

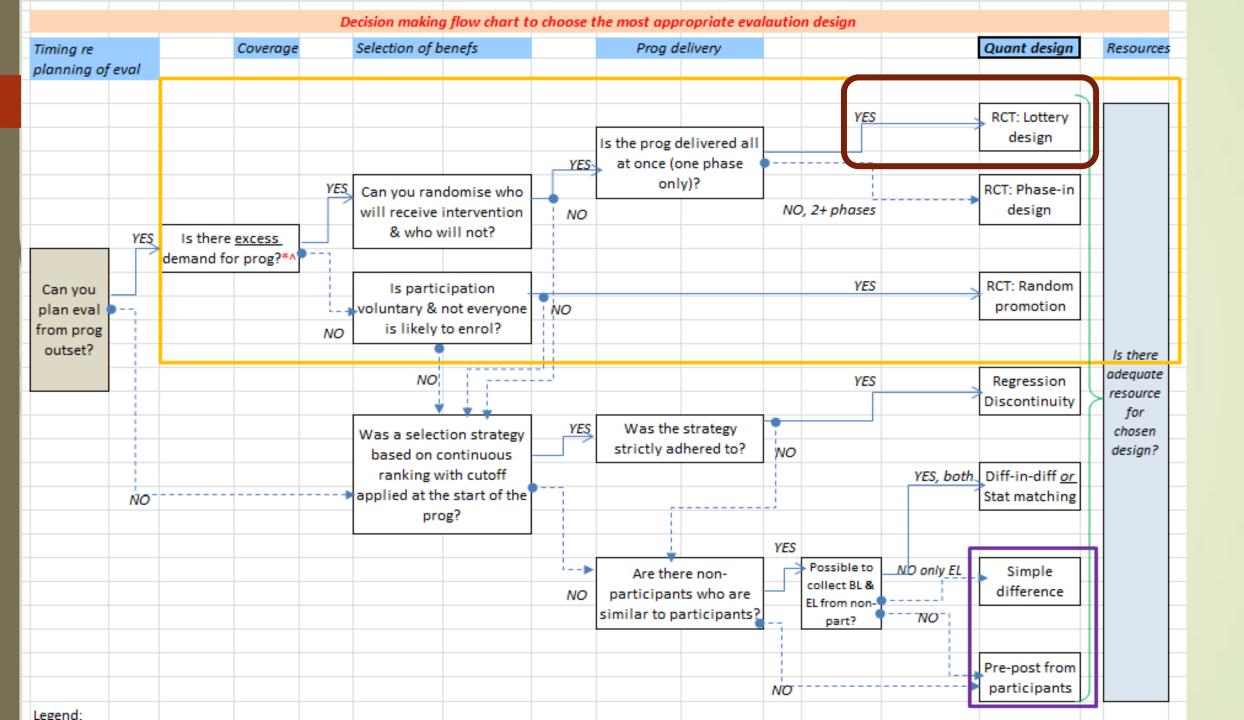
		D	ecision making flow chart t	o choose t	the most appropriate eva	alaution design			
Timing re	Coverage Selection of benefs Prog deliv		Prog delivery			Quant design	Resources		
planning of eval									
								-	
						YES		RCT: Lottery	
					Is the prog delivered all			design	
				YES		•			
		YES	Can you randomise who		only)?			RCT: Phase-in	
			will receive intervention	NO		NO, 2+ phases	,	design	
YES	Is there <u>excess</u>		& who will not?						
	demand for prog?*^								+-1 +-
						YES		RCT: Random	+-1 ++
Can you plan eval 🗭			Is participation voluntary & not everyone	NO		123	>	promotion	+-1 ++
from prog		NO	is likely to enrol?						+-1 ++
outset?		NO	•						Is there
			NO	-		YES		Degracian	adequate
			140			TES		Regression Discontinuity	resource
			* * *					Discontinuity	for
			Was a selection strategy	YES	Was the strategy strictly adhered to?	Ĩ.			chosen
			based on continuous		strictly adhered to?	NO			design?
			ranking with cutoff applied at the start of the				YES, both	Diff-in-diff <u>or</u>	+
NO			prog?			!		Stat matching	
			P. 05:						
					÷	YES	- r		h
				>	Are there non-	Possible to collect BL &	ND only EL	Simple	
				NO	participants who are	EL from non-		difference	
					similar to participants?	part?	10-		
								Pre-post from	
						No		participants	
Legend:									-



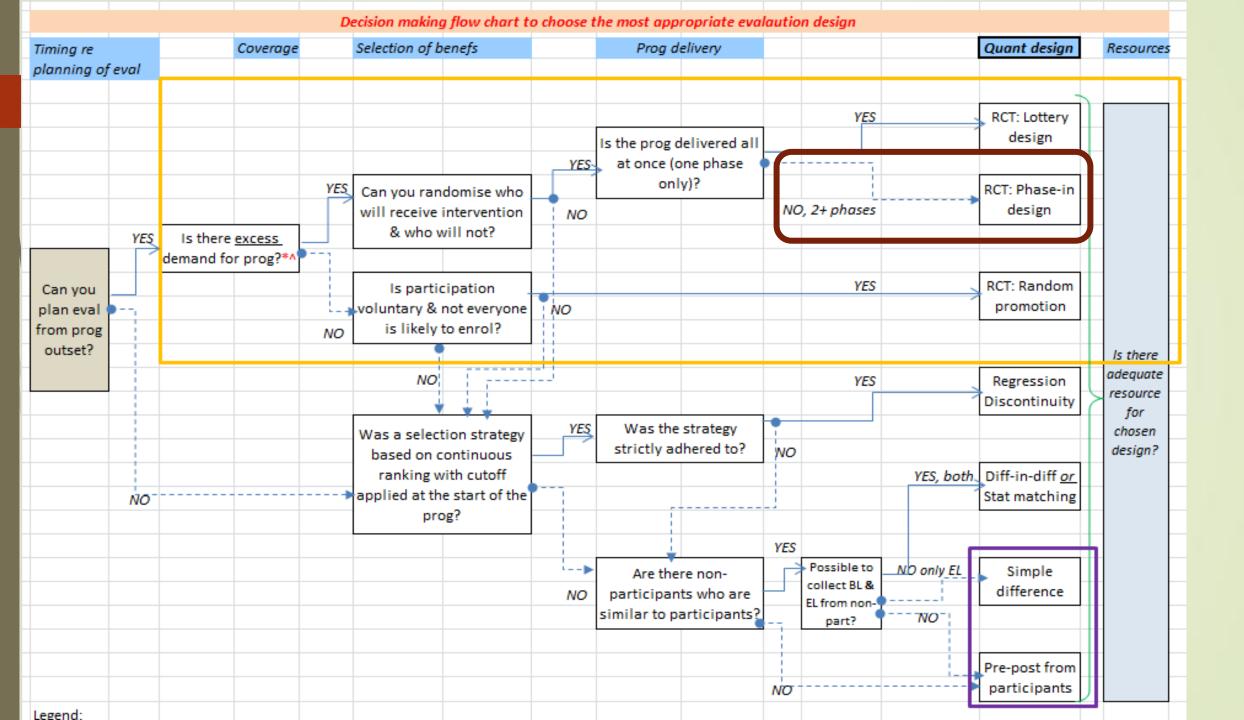




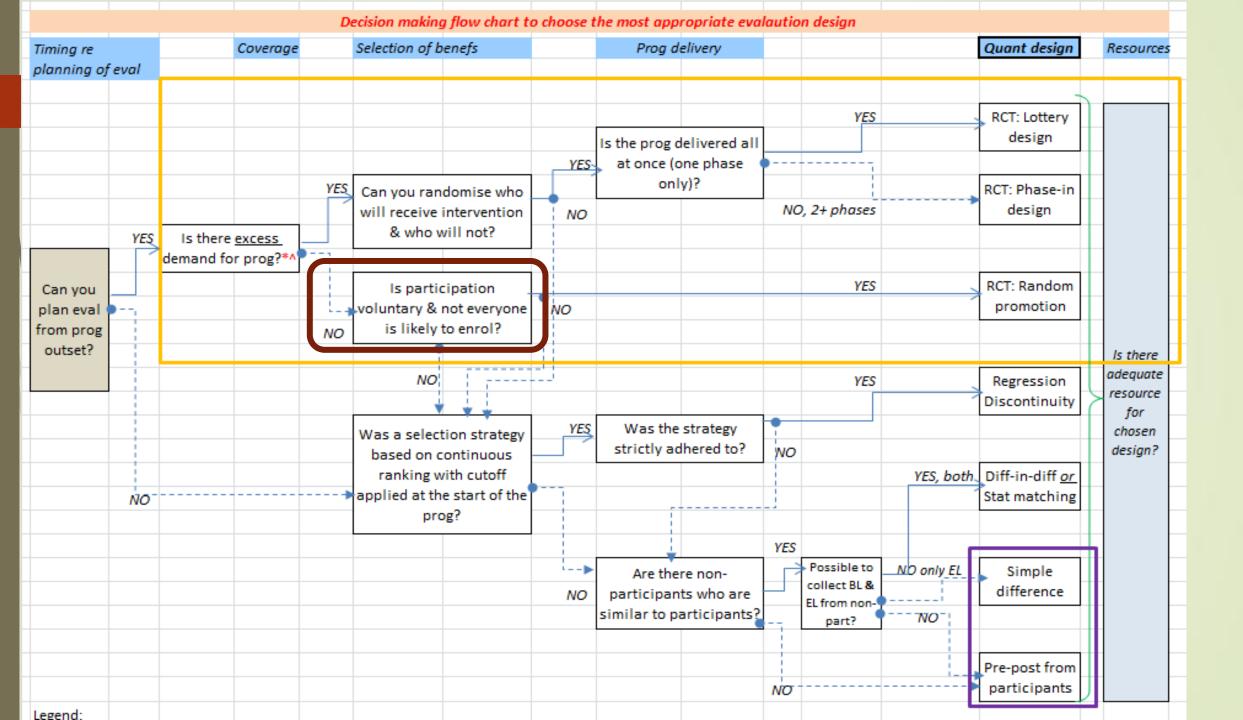


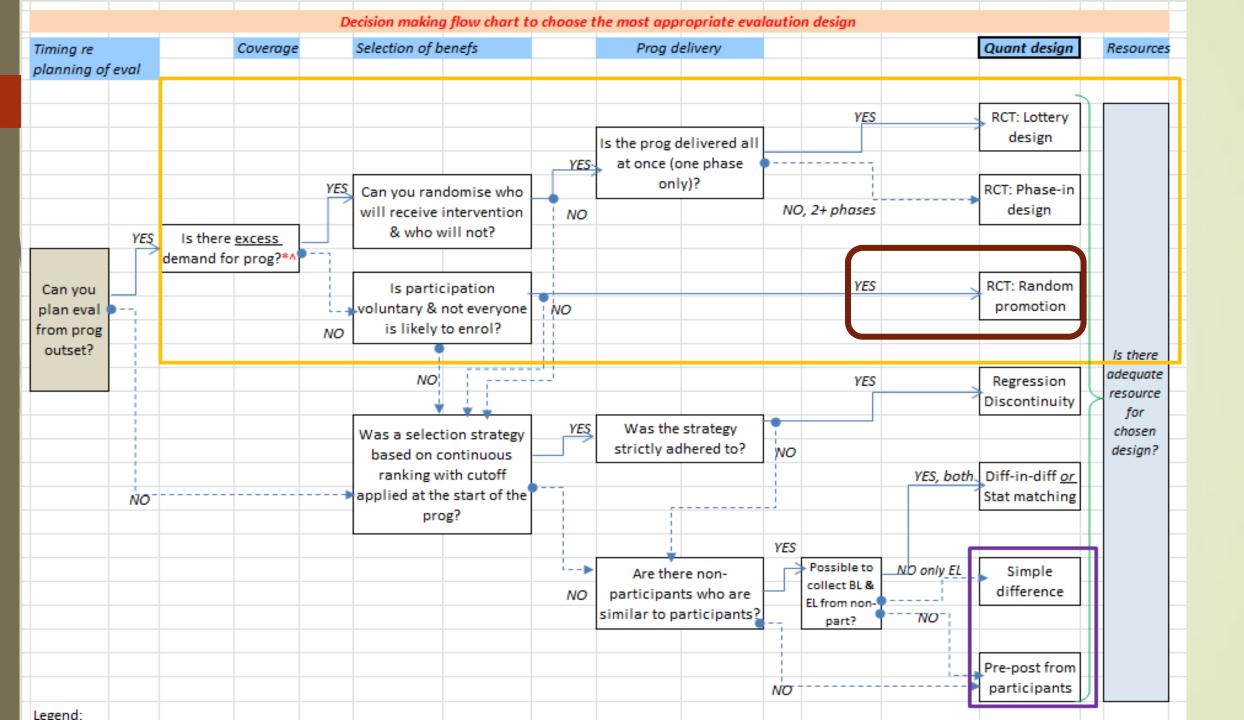


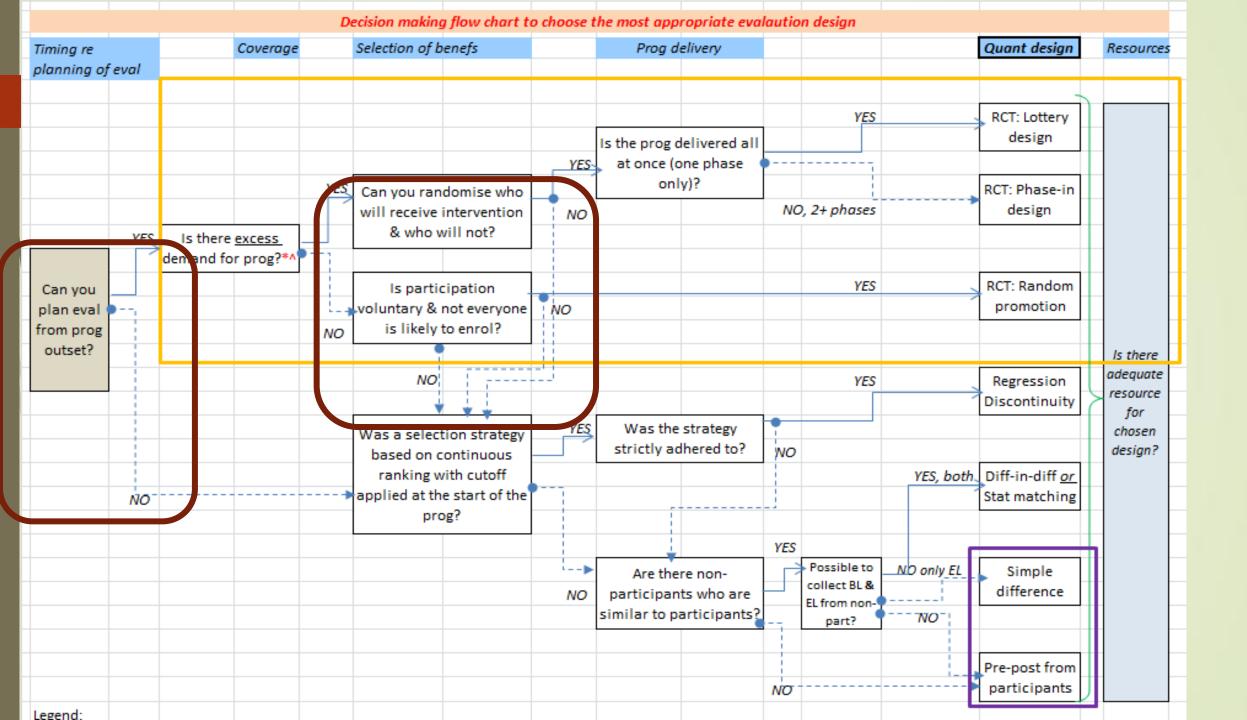
									_			
PLANNING				PRE-I			IMPLEMENTATION	ANALYSI	S			
					TIME							
												→
	1	2	3	4	5		6	7		8	9	
See					Decide on:							
diagram A					1. Unit of							
			Not in		randomisati	on						
			prog/		2.							
	Total		/ eval		Randomisati	on	Α	Iternative assignr	nent			
	available	Random			method						Follow-u	p
	population	sampling			3. Stratificat	ion		treatment 1	1	1. Monitor	survey: C8	
				Baseline			_	treatment 2		implementation	,	
			Prog /	survey	Random		Treatment	treatment n	1	2. Conduct x2	Statistica	
			Eval		assignment			OR		stress tests	analysis	
			sample			cointoss	r Control	Control		3. Conduct		
									Ť	continuous qual	Conclusion	
		External validit	y check		Internal validity	/ check				reseach	Conclusion	
		r			EXAMPLE	···		···				
	5000		Random		1. Measure cla		Treatment	T1: Extra				
	primary		sample		2. Randomly a		schools	OR math books				
	schools		lof 200		13. Compare cla		receive	12: Extra				
			schools		C & T groups -		extra	Eng books				
					to be balance	<u>ا</u>	textbooks	T3: etc				

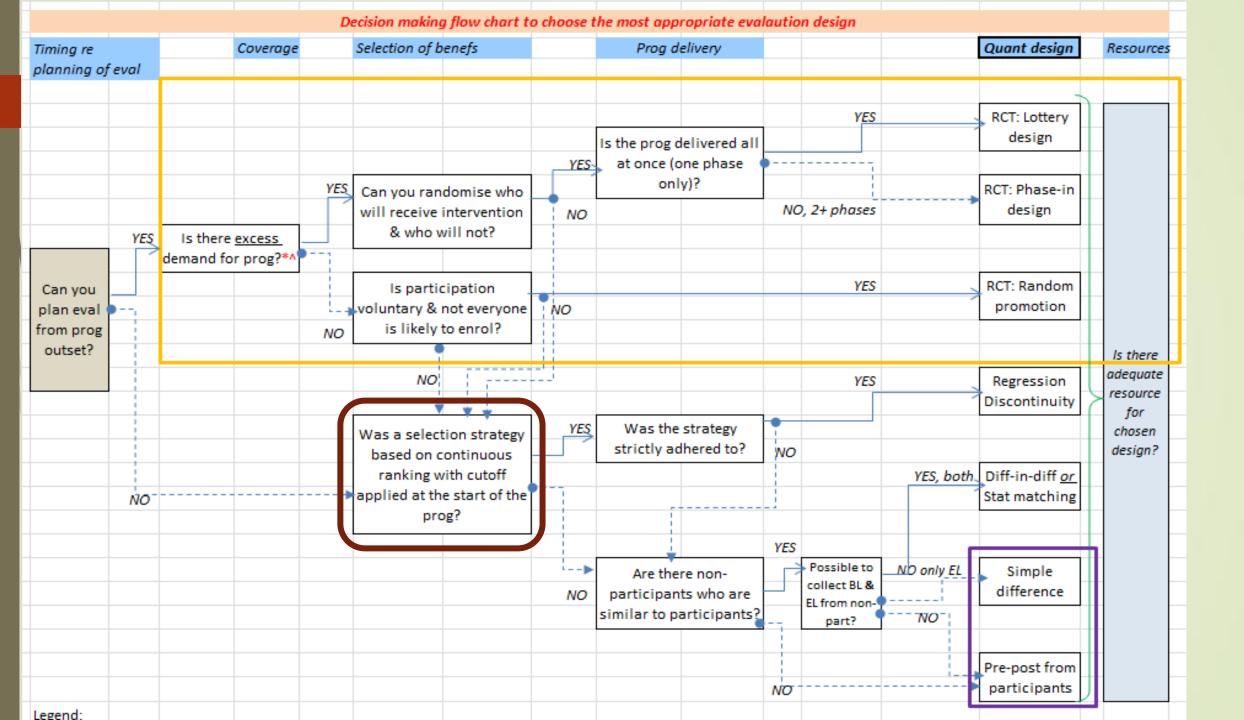


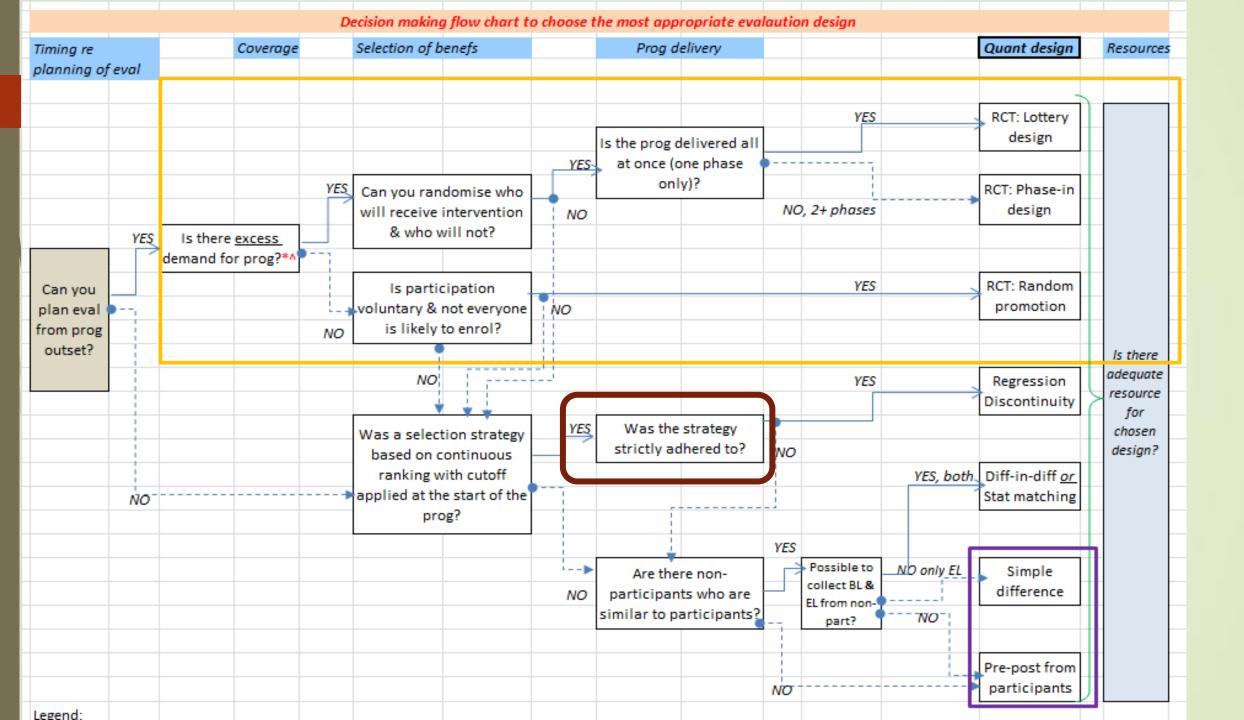
PRE-IMPLEMENTATION			YR 1 IMPLEI	MENTATION	ANALYSIS	ANALYSIS YR 2 IMPLEMENTATION ANALYSIS YR 3 IMPLEMENTATION			EMENTATION	ANALYSIS					
			T	IME											
1	2	3	4	5			6			7			8		
Total available pop- ulation	Random sampling	Not in prog / eval Prog / Eval sample	Baseline survey	Random assign ment Co	Din toss	Group A: Starts treatment Group B: Control group to A Group C: Control group to A	1. Monitor implemt. 2. Conduct stress test 3. Conduct qual research	s Survey of all 3 groups	Group A: Continues treatment Group B: Starts treatment Group C: Remains control for A & B	1. Monitor implemt. 2. Conduct stress test 3. Conduct qual research	^S Follow-up survey for all 3 groups	Group A: Stays on treatment Group B: Continues treatment Group C: Starts treatment	1. Monitor implemt. 2. Conduct stress test 3. Conduct qual research	S Follow-up survey for all 3 groups	
Legend:								Statistical analysis			Statistical analysis			Statistical analysis	
	Random sampling would occur only IF prog has limited resources & it's not imperative that everyone gets the treatm It may be required that total available population be put into prog (due to kind of treatment being provided; e.g pot then this block would read ' total available population' (i.e. the digram would start from here)									live)	Preliminary conc			Conclusions	
	Note this d	liagram ass	umes that th	iis is a 3 year	impler	nentation prog.									

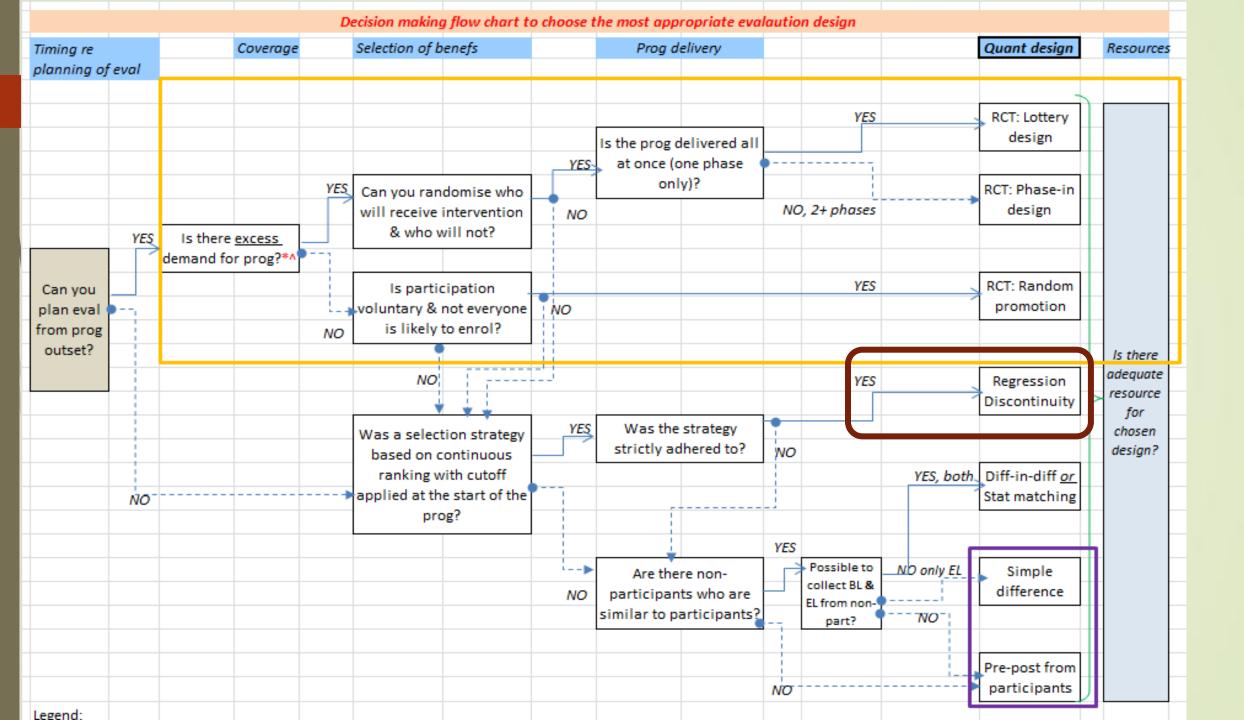






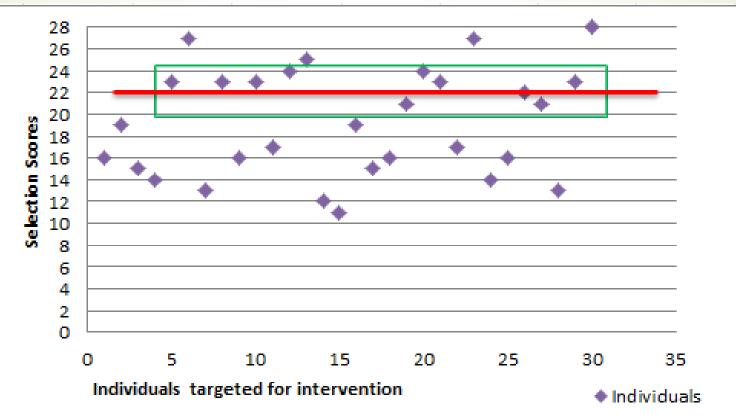


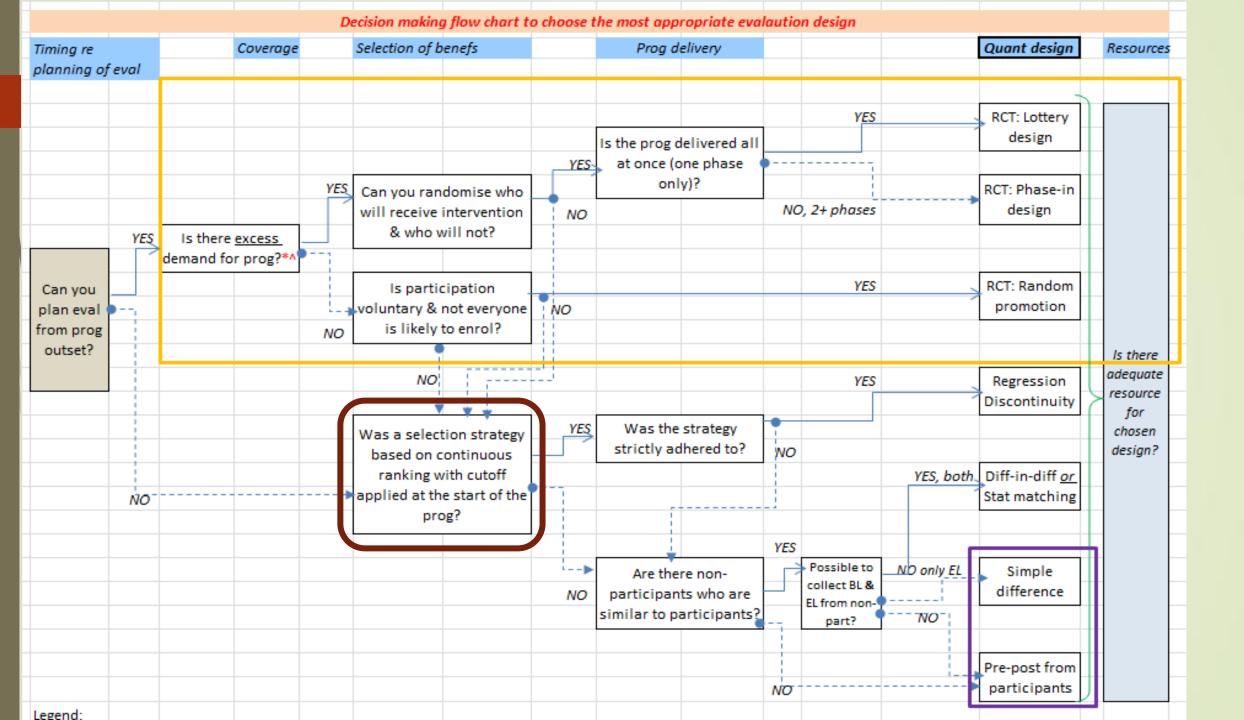


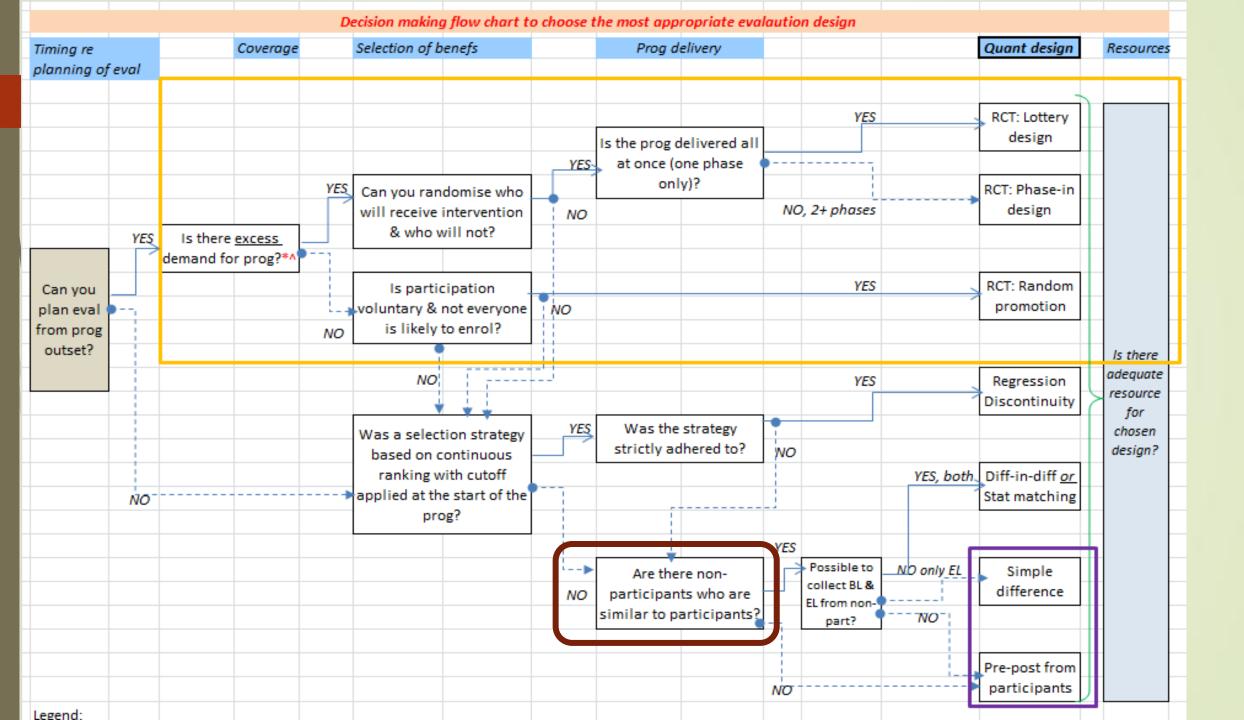


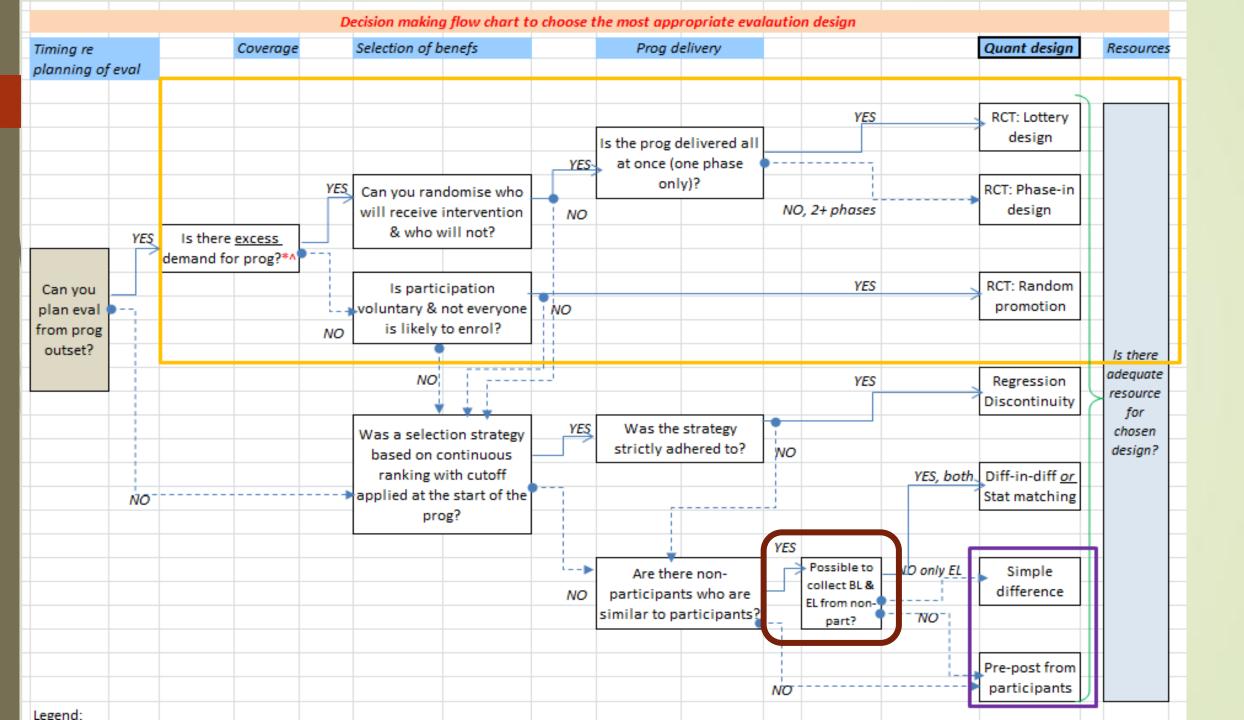
Regression-Discontinuity

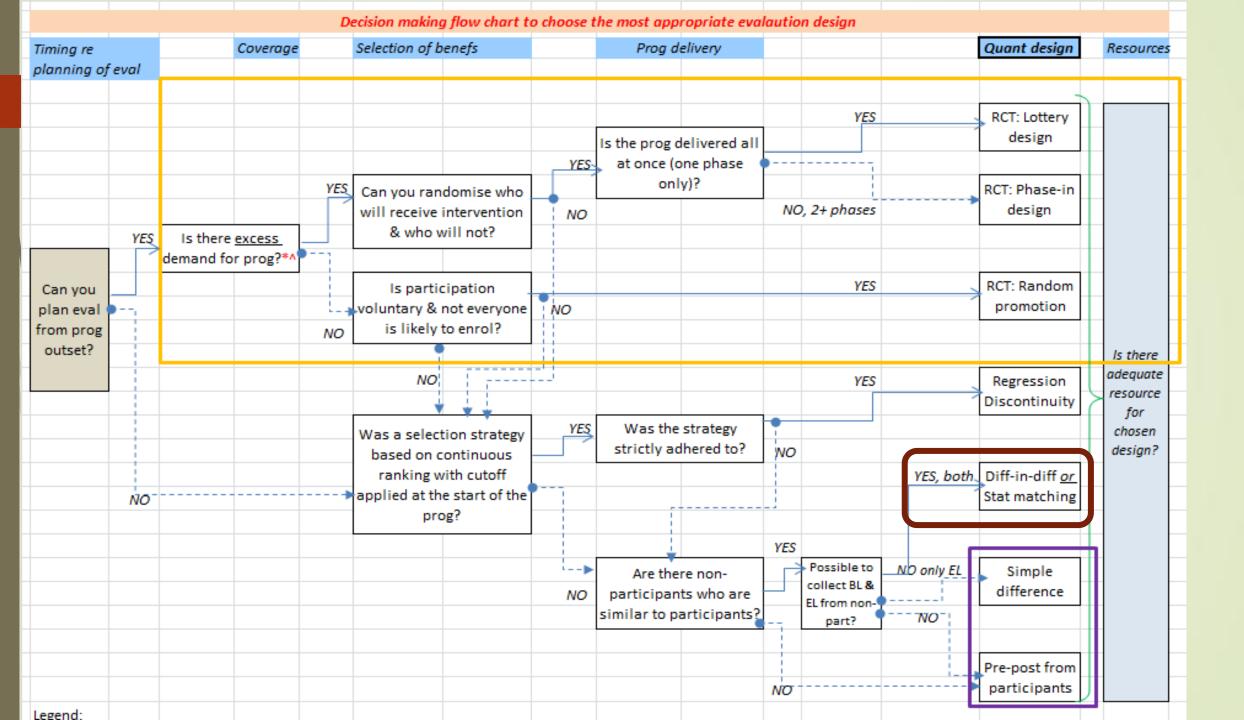
- Selection into prog by assigning (often arbitrary) cut-off grade
- Individuals below or above the cut-off are essentially the same
- Could either be diff-in-diff, simple diff measurement...





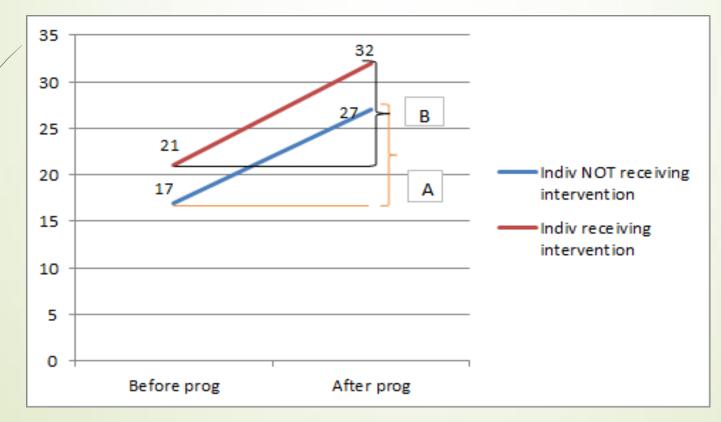


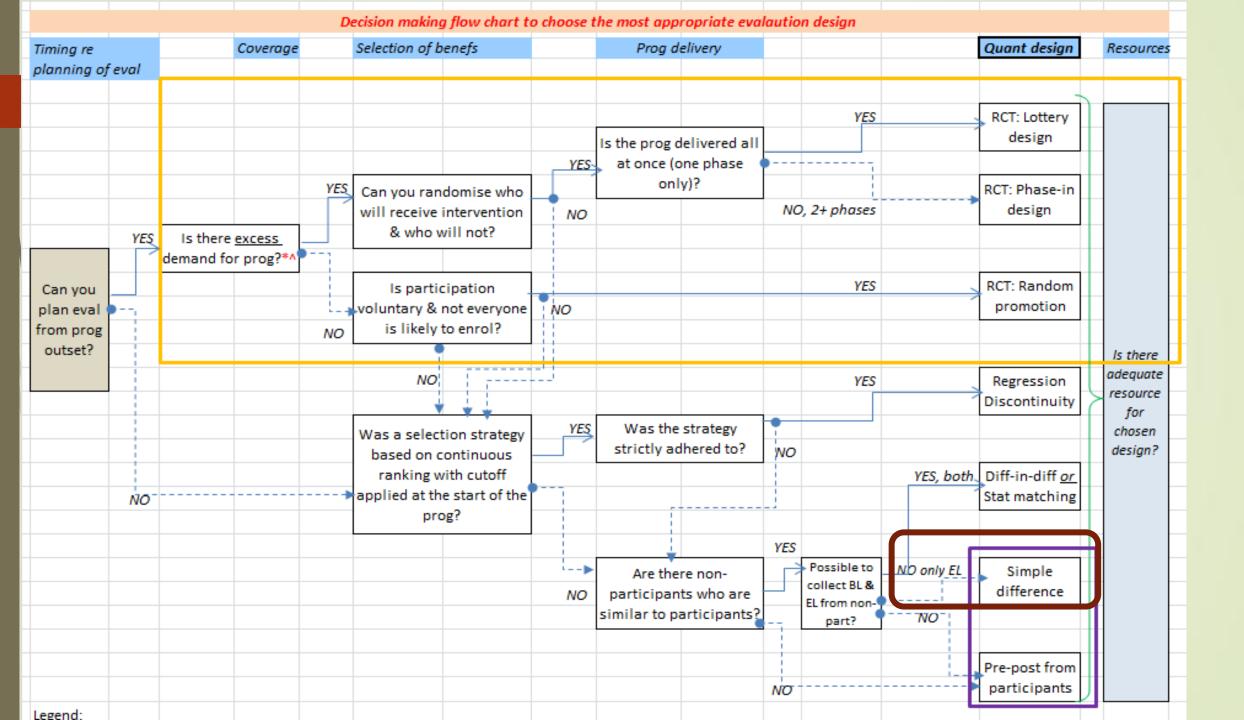




Difference-in-difference

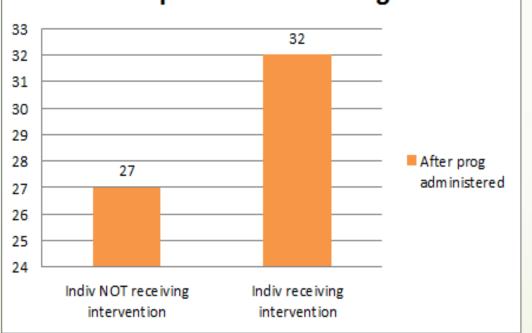
- Relative change in the outcome of interest, over a period of time, between individuals that were part of the programme and those that were not.
- 2 readings are taken from both types of individuals and the relative difference between the two is considered to be the effect size



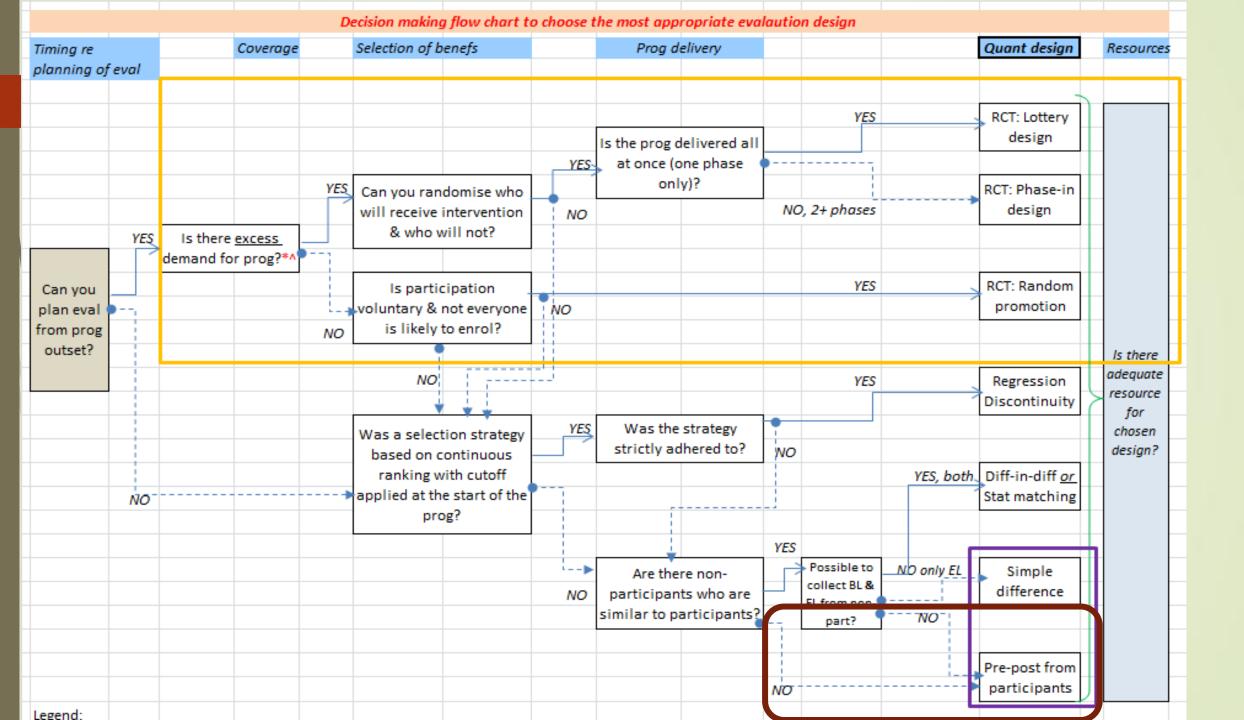


Simple difference

Endline comparison between beneficiaries and non-beneficiaries

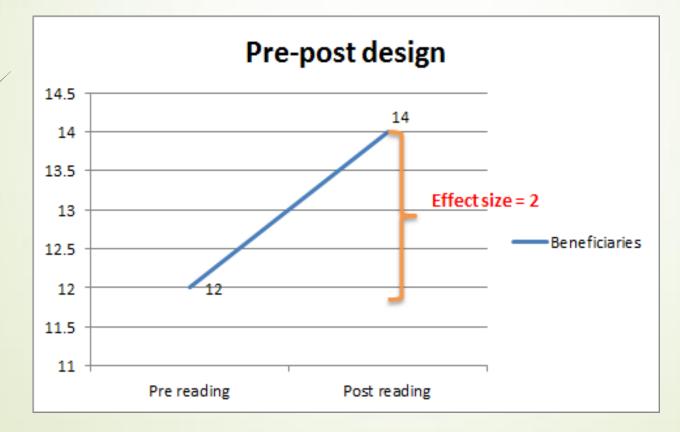


SImple difference design

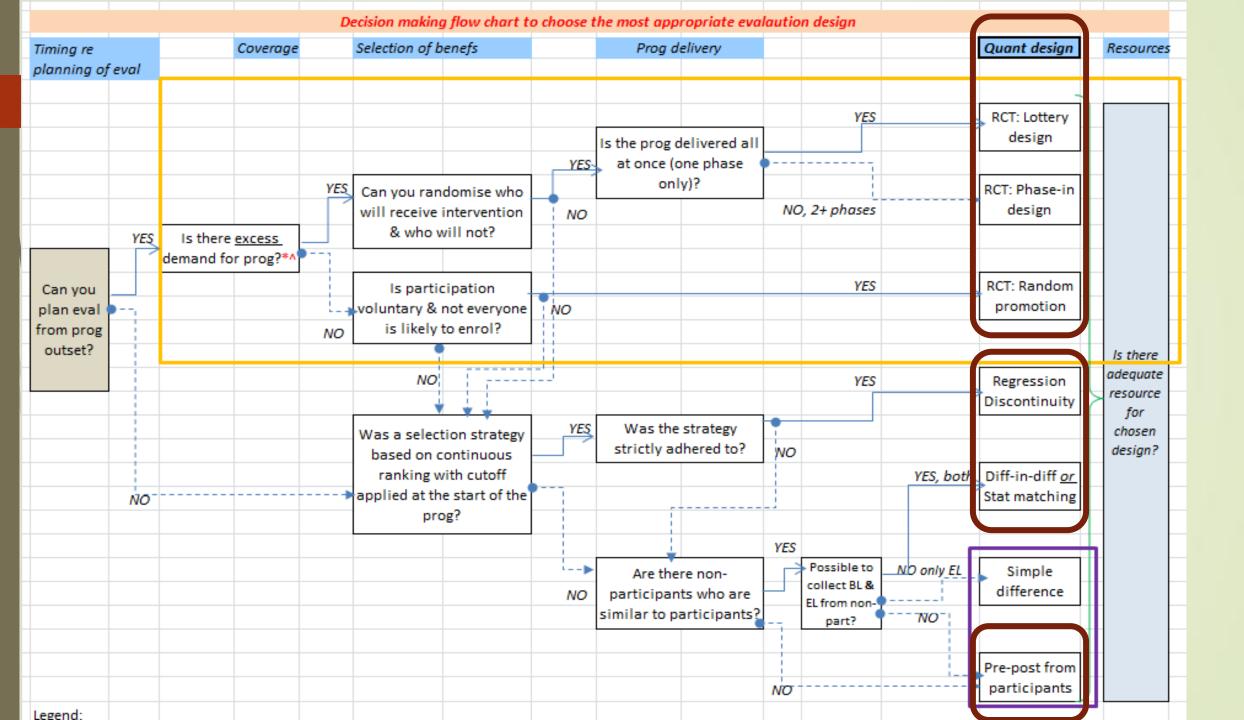


Pre-post

Baseline vs endline in beneficiaries only



				D	ecision making	g flow chart t	to choose t	he most app	ropriate eva	lautio	n design			
Timing re	Timing re Coverage Selection of benefs			Prog d	elivery				Quant design	Resources				
planning o	of eval													
													_	
											YES		RCT: Lottery	
								Is the prog o	delivered all				design	
							YES		one phase	•				
				YES	Can you ran	domise who		onl	y)?			_	RCT: Phase-in	
					will receive		NO			NC), 2+ phases	•••••	design	
	YES	Is there	excess		& who v	vill not?								
		demand fo												
Canavar					ls partie	ipation				_	YES		RCT: Random	
Can you plan eval					voluntary &	-	NO					>	promotion	
from prog				NO	-	to enrol?								
outset?				110										Is there
					NO						YES		Regression	adequate
											123	>	Discontinuity	> resource
						**	VEC	Was the	strategy	•			,	for
					Was a select		YES	1	thered to?	NO				chosen design?
					based on c	ontinuous /ith cutoff		Janeary ac		NO			Diff in diff on	ucsign:
	10-				applied at th		•					YES, both	Diff-in-diff <u>or</u> Stat matching	
	NO ⁻				pro								stat matering	-
						_				MEE				-
								+		YES	Possible to	ND orth El		
							-	Are the			collect BL &	ND only EL	Simple difference	
							NO	participan similar to p			EL from non-		unterence	
								sinnar to p	articipants		part?	10-		-
														-
													Pre-post from	
										NO			participants	
Legend:														



Considering YOUR current situation...

Which design will you choose?

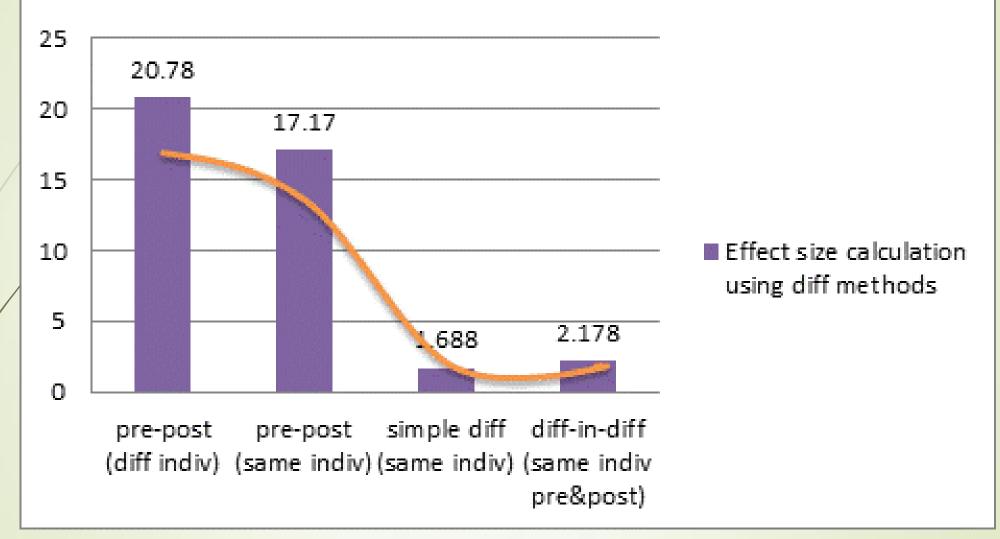
Do you know the effects of the decisions you are making? (based on what the design is able to give you in return?!)

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								Pre-post from	
						No		participants	
Legend:									-

NOT DONE YET.... Analysis matter!

Descriptive statistics are useful, but not enough!
Statistical analysis required!!

Effect size calculation using diff methods



Qualitative methods

- Understanding the HOW and the WHY of the change
- Do it AFTER <u>quant</u> analysis completed!
 - formulate better questions
 - Info you need to make DECISIONS.

Questions?

