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Developmental Systems Science
and Evaluation Research Lab

Evaluation in the context of lifecycles: “A place for everything, everything in its place”

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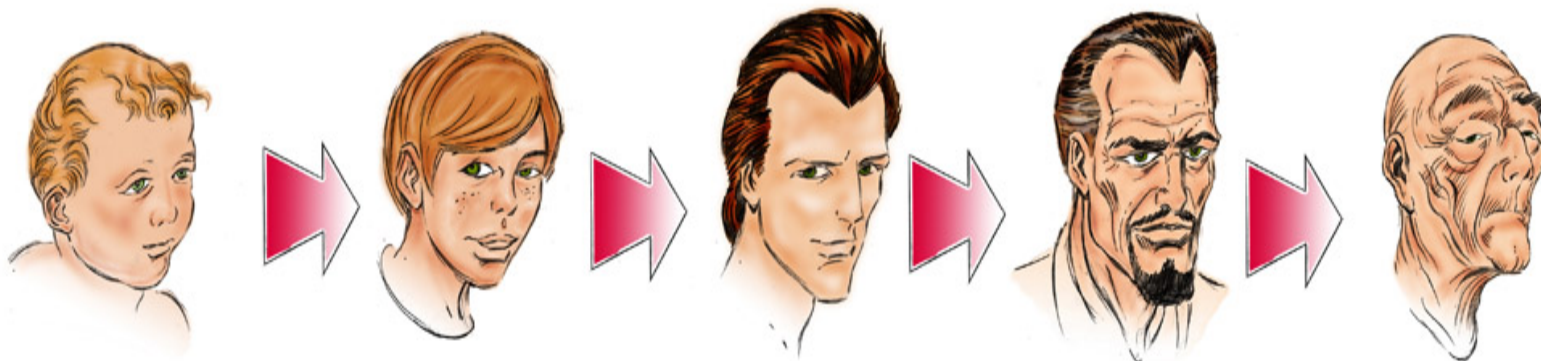
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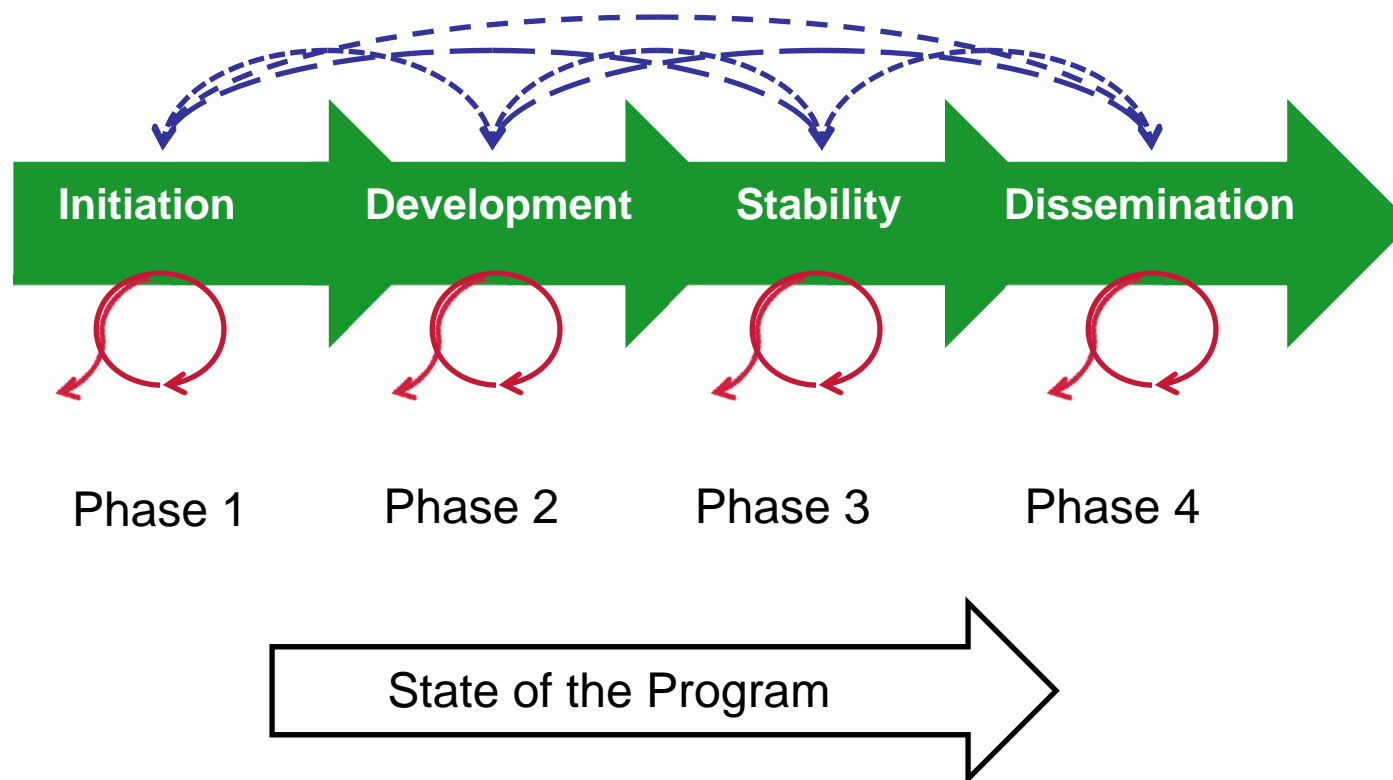
Ontogeny

- The origin and the development of an organism – for example: from the fertilized egg to mature form
- Programmatic ontogeny = Program lifecycle(s)
 - Programs are not static entities





Characterizing a Program's Evolution



Program evolution is a continuous dynamic process





Program Lifecycle		
Phase I	Initiation	Program is in <i>initial implementation(s)</i> , either as a brand new program or as an adaptation of an existing program.
		Program still undergoing <i>rapid or substantial change</i> or revision, after initial trials.
Phase II	Development	<i>Scale and scope of revisions are smaller</i> ; most program elements are still developing while a few may be implemented consistently.
		<i>Most program elements are implemented consistently</i> ; minor changes may still take place as some elements may still be developing.
Phase III	Stability	<i>Program is implemented consistently</i> ; participant experience from one implementation to the next is relatively stable (formal lessons or curricula exist).
		Program has <i>formal written procedures/protocol</i> and can be implemented consistently by new facilitators.
Phase IV	Dissemination	Program is being <i>implemented in multiple sites</i> ; adaptations to new contexts have been made.
		Program is <i>fully protocolized and is being widely distributed</i> .





Program Lifecycle

Phase I Initiation

Program is in *initial implementation(s)*, either as a brand new program or as an adaptation of an existing program.

Phase IA

Program still undergoing *rapid or substantial change* or revision, after initial trials.

Phase IB

Phase II Development

Program may be implemented consistently.

Most program *elements* are implemented consistently; minor changes may still take place as some elements may still be developing.

Phase IIB

Phase III Stability

Program is implemented consistently; participant experience from one implementation to the next is relatively stable (formal lessons or curricula exist).

Phase IIIA

Program has *formal written procedures/protocol* and can be implemented consistently by new facilitators.

Phase IIIB

Phase IV Dissemination

Program is being *implemented in multiple sites*; adaptations to new contexts have been made.

Phase IVA

Program is *fully protocolized* and is being widely distributed.

Phase IVB





Program Lifecycle

Phase I

Initiation

Program is in *initial implementation(s)*, either as a brand new program or as an adaptation of an existing program.

Phase IA

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Phase IB

Phase II

Development

Scale and scope of revisions are smaller; most program elements are still developing while a few may be implemented consistently.

Phase IIA

Most program elements are implemented consistently; minor changes may still take place as some elements may still be developing.

Phase IIB

Phase III

Stability

Program is *implemented consistently*; participant experience from one implementation to the next is relatively stable (formal lessons or curricula exist).

Phase IIIA

Program has *formal written procedures/protocol* and can be implemented consistently by new facilitators.

Phase IIIB

Phase IV

Dissemination

Program is being *implemented in multiple sites*; adaptations to new contexts have been made.

Phase IVA

Program is *fully protocolized* and is being widely distributed.

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Program Lifecycle

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Phase IIIB

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Program is being *implemented in multiple sites*; adaptations to new contexts have been made.

Phase IVA

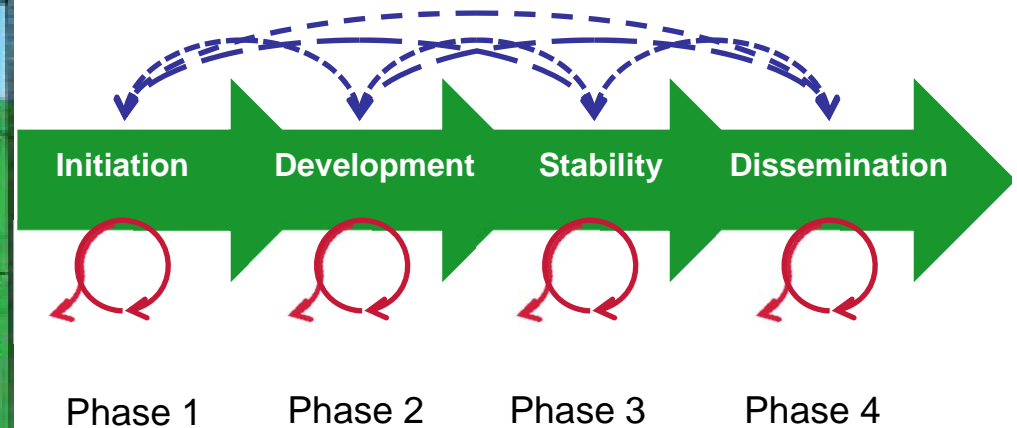
Program is *fully protocolized and is being widely distributed*.

Phase IVB





Role of Evaluation in Program Evolution





Phased Clinical Trials

PHASE 0 TRIALS: Whether the drug affects the human body, determine what should be further developed.

Target/Focus = Exploratory on humans.

PHASE I TRIALS: Assess safety, find safe dosage range, identify side effects.

Target/Focus = Test on small groups.

PHASE II TRIALS: Determine effectiveness, evaluate safety.

Target/Focus = Larger group testing

PHASE III TRIALS: Fully examine the risk/benefit. Seek FDA approval.

Target/Focus = Broader, longer-term testing

PHASE IV TRIALS: Assess how it can be used optimally, further provide evidence on the risks and benefits.

Target/Focus = Post-marketing





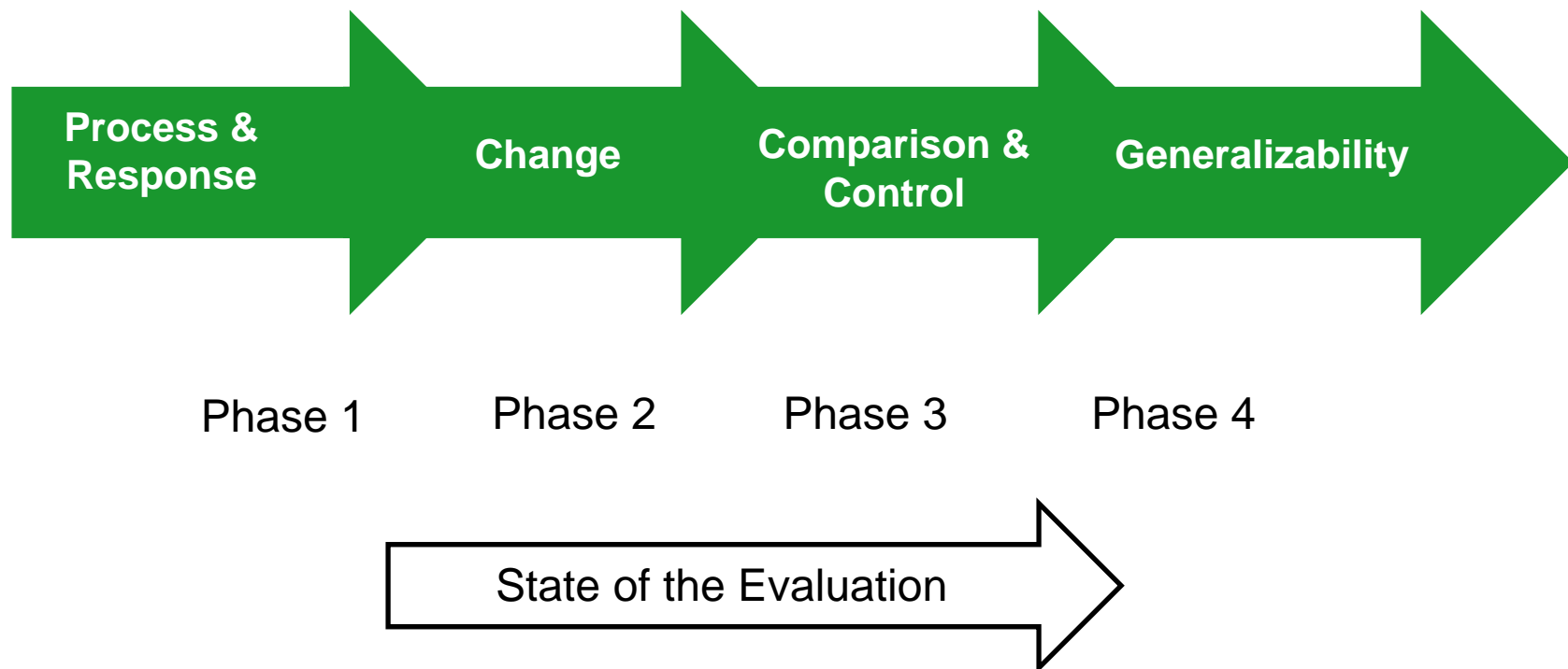
Phased Clinical Trials

- In true evolutionary fashion, not all treatments survive
 - Nearly 3/4 of all treatments are abandoned before a Phase III randomized experiment is ever mounted (Mayo Clinic, 2007)
- This strategy of phased clinical trials embeds the principle that different designs are appropriate at different phases of a treatment's development





Application to Program Evaluation



Evaluation is a continuous dynamic process





Evaluation Lifecycles		
Phase I Process & Response	Phase IA	Examines <i>implementation, participant and facilitator satisfaction</i> . Uses process and participant <i>documentation</i> and assessment and <i>post-only evaluation of reactions and satisfaction</i> .
	Phase IB	Focuses on <i>implementation</i> , and increasingly on <i>presence or absence of selected outcomes</i> . Evaluation is <i>post-only</i> ; outcome measures are under development with attention to internal consistency (reliability).
Phase II Change	Phase IIA	Examines <i>program's association with change in group outcomes</i> , for these participants in this context. Uses <i>unmatched pre- and post-test of outcomes</i> , quantitative/qualitative assessment of change, assessment of measure reliability and validity.
	Phase IIB	Examines <i>program's association with change in group (and/or individual) outcomes</i> , for these participants in this context. Uses <i>matched pre- and post-test of outcomes</i> , quantitative/qualitative assessment of change, verifying measure reliability and validity.
Phase III Comparison & Control	Phase IIIA	Assesses <i>effectiveness</i> using design and statistical controls and comparisons (<i>control groups, control variables or statistical controls</i>).
	Phase IIIB	Assesses <i>effectiveness</i> using <i>controlled experiments or quasi-experiments (randomized experiment; regression-discontinuity)</i> .
Phase IV Generalizability	Phase IVA	Examines <i>outcome effectiveness across wider range of contexts</i> . Multi-site analysis of integrated large data sets over multiple waves of program implementation.
	Phase IVB	Formal assessment across multiple program implementations that enable general assertions about this program in a wide variety of contexts (e.g., meta-analysis).





Evaluation Lifecycles

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Evaluation Lifecycles

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Phase III
Comparison
& Control

Phase IIIB

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Phase IV
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Phase III Comparison & Control

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Assesses *effectiveness* using *controlled experiments or quasi-experiments (randomized experiment; regression-discontinuity)*.

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Relationship between Program and Evaluation Lifecycles

- Program evolution driven, in part, by evaluation evolution
- Evaluation evolution driven, in part, by program evolution

For any given program lifecycle phase or state of the program, there is an appropriate evaluation lifecycle phase - ALIGNMENT



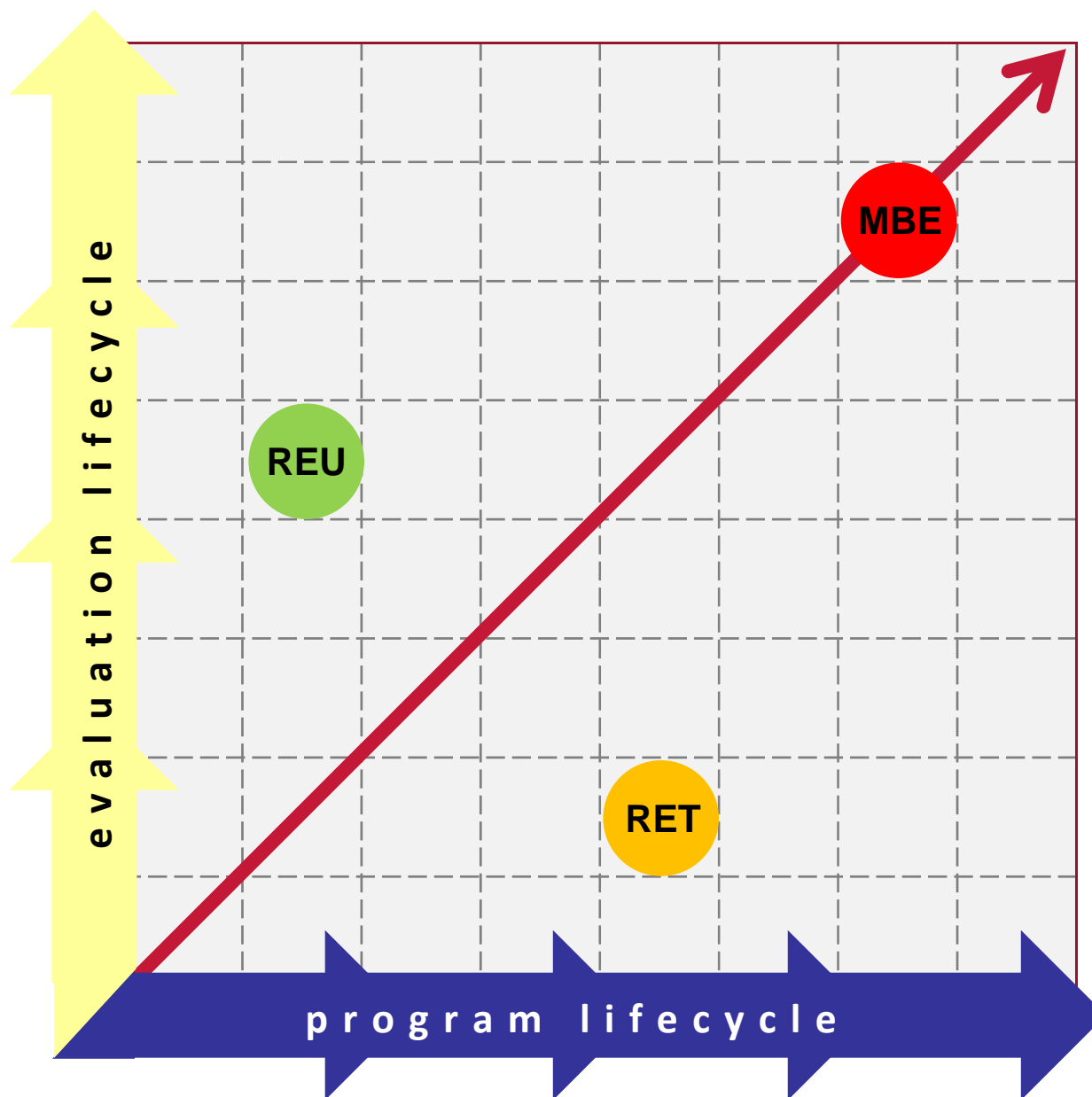


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Program and Evaluation Lifecycle Alignment

- Moving toward alignment should be treated as a key goal of evaluation planning
- Alignment does not necessarily happen after one evaluation cycle
- Evaluations and programs are developmental and grow over time





Conclusions

- Evaluation methods have a particular time and place when they are appropriate depending upon a program's lifecycle phase
- There are advantages to the co-evolution of programs and evaluations
 - Evaluation and program lifecycle alignment promote *successful* program evolution
 - Effective use of resources
 - Societal well-being





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