

HOW TO APPLY THE MULTIPHASE OPTIMIZATION STRATEGY (MOST) IN YOUR INTERVENTION DEVELOPMENT RESEARCH

Module 1
MOST is a different way of thinking

Lesson 7: Why MOST is a different way of thinking



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Intervention Optimization Initiative

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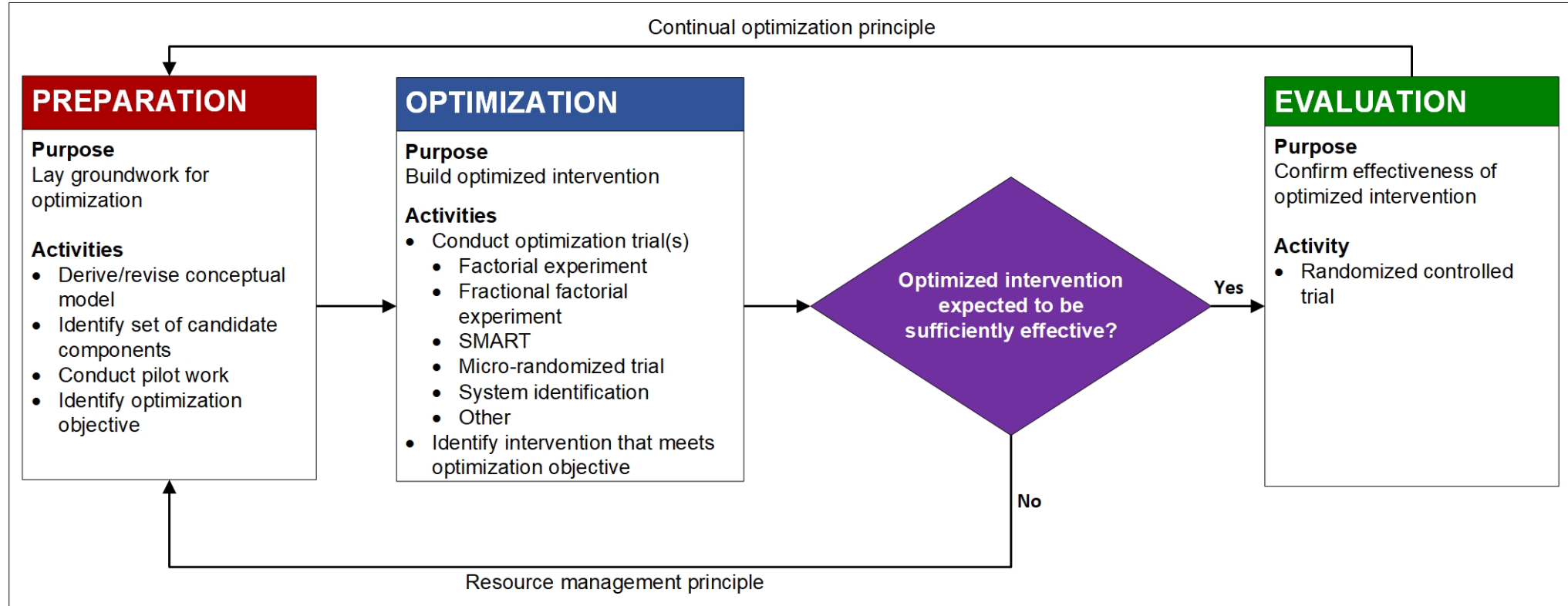
In the previous lesson you learned how to

- Define the three phases of MOST: preparation, optimization, evaluation
- Apply the two fundamental principles of MOST
 - Resource management
 - Continual optimization

In this lesson you will learn how to:

- Contrast the MOST perspective to that of the classical treatment package approach
- Articulate why MOST is a different way of thinking

Let's review how you would optimize an intervention



Flow chart of the three phases of the multiphase optimization strategy (MOST). Rectangle = action. Diamond = decision.

Figure adapted with permission from Collins (2018).

Differences in perspective between the classical approach and MOST

Overall objective

- Classical approach
 - To develop an intervention that demonstrates a statistically and clinically significant effect
- MOST
 - To develop an intervention that BOTH:
 - Achieves **EASE**: effectiveness, affordability, scalability, efficiency
 - AND
 - Demonstrates a statistically and clinically significant effect

Differences in perspective between the classical approach and MOST

Next steps after pilot testing

- Classical approach
 - Assemble intervention and then evaluate as a package in an RCT
- MOST
 - Conduct an optimization trial and identify optimized intervention

Differences in perspective between the classical approach and MOST

Experimental designs used

- Classical approach
 - Primarily the RCT and its variants
- MOST
 - For the optimization trial, experimental designs selected based on resource management principle
 - For evaluation of intervention as a package, primarily the RCT and its variants

Differences in perspective between the classical approach and MOST

Examination of effectiveness of individual components

- Classical approach
 - Accomplished primarily via post-hoc analyses on data from RCT
- MOST
 - Accomplished primarily via experimental manipulation of components

Differences in perspective between the classical approach and MOST

Examination of interactions among components

- Classical approach
 - Not possible because RCT does not enable this
- MOST
 - Experimental designs for optimization trial selected to enable this wherever feasible

Differences in perspective between the classical approach and MOST

Inert/counterproductive components

- Classical Approach
 - Generally tolerated as long as overall effectiveness of intervention can be demonstrated
- MOST
 - Generally not tolerated because this reduces the efficiency of the intervention

Differences in perspective between the classical approach and MOST

Scalability and sustainability

- Classical Approach
 - Usually dealt with after evaluation of intervention, sometimes via ad hoc modifications
- MOST
 - Intervention built for immediate scalability and long-term sustainability

MOST is a different way of thinking about intervention development and evaluation

- Engineering-inspired
- Iterative and discovery-based
- Emphasizes looking inside the “black box”

MOST is a different way of thinking about intervention development and evaluation

- Aims to establish a cumulative knowledge base
- Focused on immediate scalability
- Provides a framework for ongoing, programmatic improvement of interventions

In this lesson you learned how to:

- Contrast the MOST perspective to that of the classical treatment package approach
- Articulate why MOST is a different way of thinking

In the next lesson you will:

- Review what you have learned in Module 1



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