

# Rapid Cycle Improvement and PDSA Cycles

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REACH-NOLA Mental Health Infrastructure &  
Training Project

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# Why Rapid Cycle Improvement?

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- The idea behind rapid cycle improvement is to first try a change idea on a small scale to see how it works, and then modify it and try it again until it works very well for staff and customers. Then, and only then, does a change become a permanent improvement.
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# Rapid Cycle Improvement

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- ❑ *What* are we trying to accomplish?
  - ❑ *How* will we know we've reached our goal?
  - ❑ *What's* the process?
  - ❑ *Plan*
  - ❑ *Do*
  - ❑ *Study*
  - ❑ *Act*
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# RCI Question 1

## What Are We Trying to Accomplish?

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- Establish the goal
  - Goals should be small and *smart*
    - *Specific*
    - *Measurable*
    - *Achievable*
    - *Realistic*
    - *Timely*
  - It may take a few trials of testing an aim before it becomes truly focused
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# RCI Question 2

## How Will We Know We've Reached Our Goal?

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### ■ Measurement!

- Inputs (new hires, IT tools)
  - Process (new procedures, training)
  - Output (patients enrolled, screens administered, prescriptions written, PHQ-9's logged)
  - **OUTCOMES** – patients with clinically significant response to treatment
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## RCI Question 3

# What Change(s) Can We Make That Result In An Improvement?

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- This is the who, what, when, and how of doing the actual experiments
  - Use the Project Planning Tool
    - Timing
  - Use the Worksheet for Testing Change to
    - Documents the specific tasks
    - Intended and actual impact
    - Conclusions drawn
    - Follow up action plan
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# The PDSA Cycle for Learning and Improvement

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## 1. Plan

- State Goal
- Questions and predictions (why)
- Plan to carry out the cycle (who, what, where, when)
- Plan for data collection

## 2. Do

- Carry out the plan
- Document problems and unexpected observations
- Begin analysis of the data

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## 3. Study

- What was learned

## 4. Act

- What changes are to be made?
  - Next cycle?
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# Developing A Change: Natural Tendencies

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- Tendency to search for the perfect change, to solve all the problems with one change
  - Tendency to minimize risks and do more of the same
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# Testing A Change: Principles

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- ❑ Test on a small scale over a short period of time
  - ❑ Have consultants comment on feasibility
  - ❑ Anticipate a sequence of tests on one change idea
  - ❑ Build knowledge sequentially with multiple cycles
  - ❑ Include a wide range of conditions in the sequence of tests
  - ❑ Test the change on team members who develop it before introducing the change to others
  - ❑ Incorporate redundancy in the test by making the change side-by-side with the existing system
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# Testing A Change: Tips

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- Move from ideas to action quickly (e.g. Are you in disagreement? Then test and see the results!)
    - Decrease the scope of the test
      - If it feels like too much work or too burdensome, go back to design and make it doable. Downsize it, shorten it, minimize burden. Make it as doable as possible with minimal effort in the course of day to day work
    - Test of oneness: One patient, one doctor, one day
    - As you are designing the test, ask 'What design would enable us to do this test now, tomorrow or next week?'
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# Do More Testing -How?

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- ❑ Smaller scale tests-but more of them!
  - ❑ Stay small and rapid; push to design PDSAs according to what you could do today, tomorrow or by “next Tuesday”
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# Sequential Testing...When Do You Move To Implementation (Act)?

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- Choices after each PDSA...
    - Implement as is
    - Abandon it
    - Increase in scope (e.g. more patients, more physicians)
    - Modify it and test again
    - Test under different conditions
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# Implementing A Change

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- Ways to implement
    - If simple—just do it
    - If not simple
      - Implement in parallel with existing processes
      - Implement in phases using many PDSA cycles. PDSA cycles for implementation may take more time than for testing
      - Work to minimize resistance
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# Accelerating Improvement: How?

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- ❑ Do more simultaneous testing
  - ❑ Understand and remember the difference between testing and implementation
  - ❑ Using measurement for learning
  - ❑ Use PDSA cycles for learning
  - ❑ Team collaboration
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# Key Lessons from RCI

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- ❑ The rapid improvement work must be seen as The Work and not a separate project
  - ❑ Implementation and holding the gains requires integration into daily work and meetings
  - ❑ Start work with those interested in change
  - ❑ Communicate what is happening persistently
  - ❑ Provide support to providers and staff who take on this new work
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# Using Planning Tools

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- ❑ Project Planning Tool provides an overall work plan regarding the PDSA cycles you intend to test
  - ❑ Worksheet for Testing Change provides a way to document the detail of the test and your expected impact and how you will measure it (P), what actually happened when you ran the test (D), the actual impact based on measurement (S), and your plan for revising/implementing (A)
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## PDSA Worksheet for Testing Change

**Aim:** (overall goal you wish to achieve)

*Every goal will require multiple smaller tests of change*

Describe your first (or next) test of change:	Person responsible	When to be done	Where to be done

### **Plan**

List the tasks needed to set up this test of change	Person responsible	When to be done	Where to be done

Predict what will happen when the test is carried out	Measures to determine if prediction succeeds

### **Do**

Describe what actually happened when you ran the test

### **Study**

Describe the measured results and how they compared to the predictions

### **Act**

Describe what modifications to the plan will be made for the next cycle from what you learned