



# CONTINUING THE QI JOURNEY: DO, STUDY, AND ACT

MLC-3 Webinar I  
July 26, 2010

# Welcome & Introductions

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- Presenters
- Core Team
- MLC-3 Teams

# Agenda

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- ❑ Planning for “Do”
  - ❑ Process Stabilization
  - ❑ Root Cause
  - ❑ Use of Data
  - ❑ Best Practice
  
- ❑ Planning for “Study”
  - ❑ Measuring Process & Outcomes
  - ❑ Sources of Data
  - ❑ The Pre/Post Test
  
- ❑ ACT- Completing the Cycle

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DO

# Planning for “Do”

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## □ Process Stabilization

- ▣ Ensure that your process is implemented in the same way each time (more or less!)

### Tools for studying how your process works

Observation/Interviews

Logic Model

Matrix Diagram

### Tools for studying the results of your process

Control Charts

Scatter Diagram

# Planning for “Do”

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## □ Process Stabilization: Matrix Diagram

	Recruitment	Scheduling	Intake & orientation	Assessment	Home Visits	Office Visits
Clerk	△	⊙	△			△
Para-pro	⊙	○	⊙	△	⊙	○
Nurse			△	⊙	△	⊙

⊙ Primary responsibility

○ Team members

△ Resources

**Finding:** Unpaid, paraprofessionals are responsible for the bulk of the key factors affecting successful implementation of this home visiting program.

# Planning for “Do”

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- Root Cause
  - ▣ Change should target a root cause, not a symptom
  - ▣ Use your data, but ideas should lead the way

## Tools for Root Cause Analysis

Brainstorming

Affinity Diagram

Fishbone

5 Whys

Interviews/focus groups



# Planning for “Do”

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## □ Root Cause: Affinity Diagrams

### Brainstorming Results

- Develop more targeted questions
- Remove double barreled & leading questions
- Make anonymous
- Disseminate at staff meetings & to clients
- Improve question order
- Collect at visit
- Assign responsibility for analysis & reporting & make sure staff have time
- Add open ended item
- Test with target audience
- Give at visit
- Implement follow up
- Develop report template and timeline
- Explain purpose
- Provide incentive
- Enter data in Excel



# Planning for “Do”

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## □ Root Cause: Affinity Diagrams

*What might Sunny Health Department do to get better feedback from our customer satisfaction surveys*

### Improve Quality of Survey

Develop more targeted questions

Remove double barreled & leading questions

Improve question order

Add open ended item

Test with target audience

### Improve Distribution of Survey

Give at visit

Collect at visit

Explain purpose

Make anonymous

Provide incentive

Implement follow up

### Improve Use of Survey Data

Enter data in Excel

Develop report template and timeline

Assign responsibility for analysis & reporting & make sure staff have time

Disseminate at staff meetings & to clients

# Planning for “Do”

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- Testing an Improvement Theory based on a Root Cause
  - ▣ Use of Data
    - Collecting information when you don't have what you need
    - Validate or challenge the ideas you generated
  - ▣ Use of Best Practices
    - What have your colleagues tried?
    - What does the literature suggest might work?
      - Google Scholar
      - State of MI Library – Journal Search
      - University Libraries – Journal Search
  - ▣ Practical constraints & sustainability

# Planning for “Do”

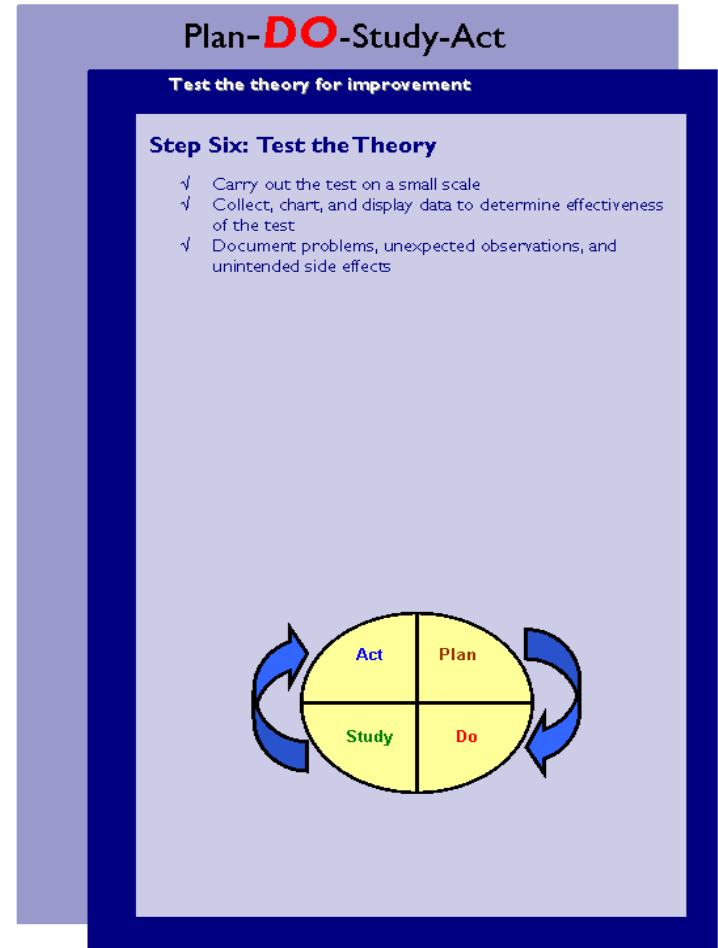
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*Never underestimate the value of an educated guess.*

# “Do” in Summary: Test the theory

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- Carry out the test on a small scale
- Collect, chart, and display data to determine effectiveness of the test
- Document problems, unexpected observations, and unintended side effects



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# STUDY

# Planning for “Study”

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- Deciding what to measure:
  - ▣ Distinguish between measuring process and measuring outcomes
- Identifying sources of data
  - ▣ Existing
  - ▣ New
- Selecting a design
  - ▣ Pre/post cautionary tales

# Planning for “Study”

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- Measures of Process
  - What you do
  - Includes inputs & outputs:
    - Staff, time, materials, money
    - Services, training, advocacy, partnerships

# Planning for “Study”

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- Measures of Outcome
  - ▣ What happens as a result of what you do
  - ▣ Includes changes in:
    - Knowledge, attitude, skill, behavior, expectation, emotional status, life circumstance
    - Policy, systems, environments
    - Social conditions



# Planning for “Study”

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- Process Measure or Outcome Measure?
  - Survey Response Rate
  - Compliance with Treatment
  - Immunization Rate
  - Referrals Completed
  - Trainings Offered
  - Critical Violations
  - Customer satisfaction
  - Dropped Calls

# Planning for “Study”

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- Incorporate both!
  - ▣ Track the change in what you do by capturing measures of process
  - ▣ Track the changes in what results by capturing measures of outcome

# Planning for “Study”








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- Sources of Data
  - ▣ Driven by the measures you need, not the data you have
- What exactly is “data”?
  - ▣ Information you can use to answer questions you have about your program
  - ▣ Data are everywhere & you use data every day.
    - Observation
    - Records
  - ▣ QI uses data in a way that is systematic and strategic.

# Planning for “Study”

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## Sources of Data

-  Face-to-face interviews & focus groups
-  Telephone interviews
-  Written surveys
-  Mail surveys
-  Web-based surveys
-  Existing Records
-  Observation

# Planning for “Study”

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- Selecting a data source
  - ▣ Every option has pros and cons
  - ▣ The choice depends on:
    - The kind of information you need
    - What you already have
    - The resources you have available
    - The context of your QI project

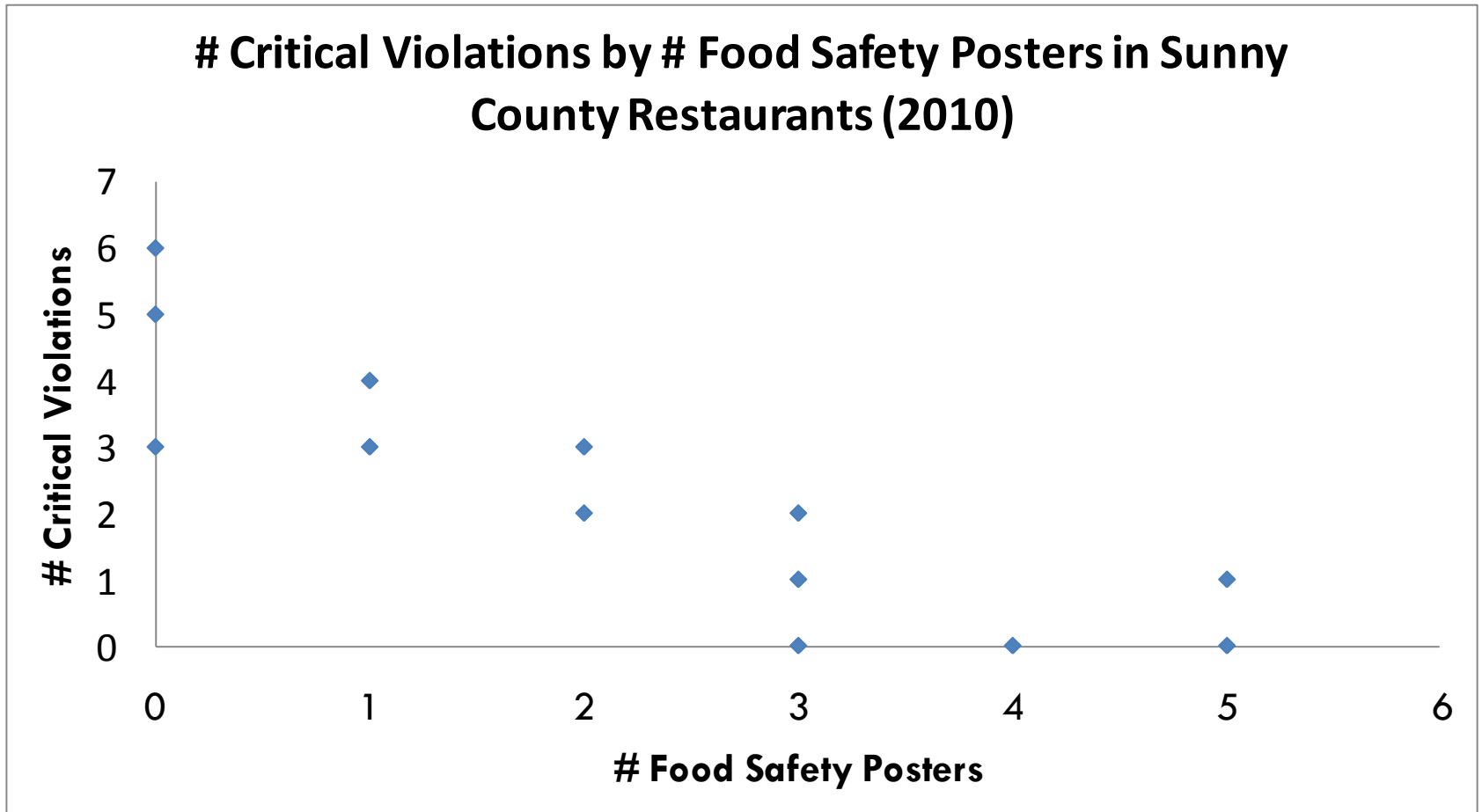
# Planning for “Study”

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- Selecting a measurement design to answer the key question:
  - ▣ How do we know that our change was an improvement?
  
- The Challenge:
  - ▣ Linking process to outcomes in a dynamic environment
    - Correlation is not causation
    - Not all differences in a measure indicate that a real change has occurred

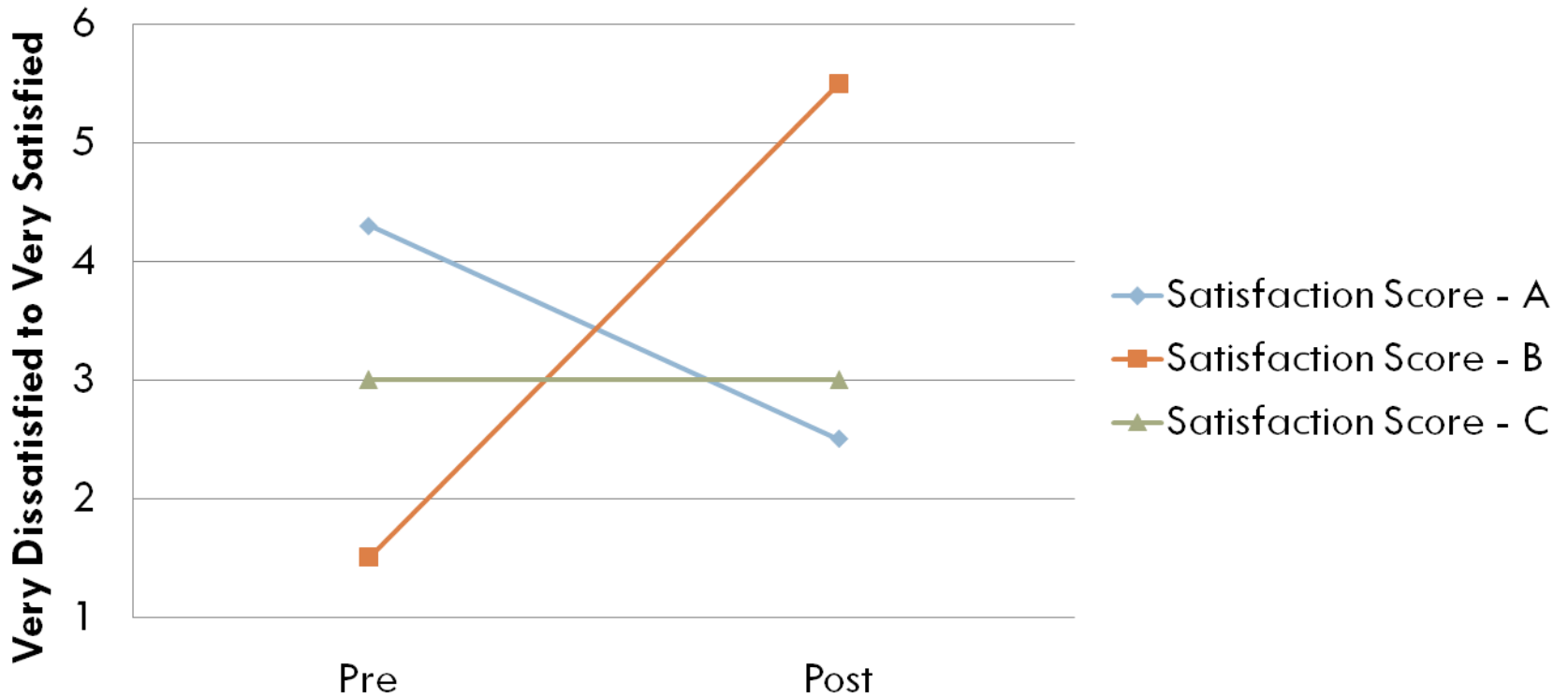
# Planning for “Study”

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# Planning for “Study”

## Clinic Customer Satisfaction Scores Before and After Cultural Competency Training





# Planning for 'Study'

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- The Pre/Post Test
  - ▣ Work with a stable process
  - ▣ Make one change at a time
  - ▣ Measure at multiple time points (not just two) when possible
  - ▣ Establish standards for the degree of change you consider meaningful
  - ▣ Recognize changes/confounding factors you couldn't control

# Variation

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- Every process and measure has variation
  - ▣ There are two types, Common Cause and Special Cause
- Important to understand the differences between Common and Special Cause
  - ▣ Special Cause is unpredictable and can lead to unstable processes
- Improvement should focus on stable processes; data can you help determine stability (Section 3 Guidebook)

# “Study” In Summary: Study the Results

## Step 7

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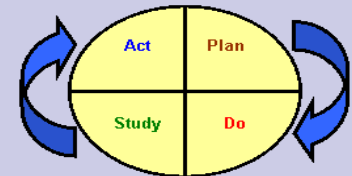
- Determine if your test was successful
  - Compare results against baseline data and the measures of success stated in the Aim Statement
  - Did the results match the theory/prediction?
  - Did you have unintended side effects?
  - Is there an improvement?
  - Do you need to test the improvement under other conditions?
  - Describe and report what you learned

### Plan-Do-**STUDY**-Act

#### Use Data to Study Results of the Test

#### Step Seven: Study the Results

- √ Determine if your test was successful:
  - √ Compare results against baseline data and the measures of success stated in the Aim Statement
  - √ Did the results match the theory/prediction?
  - √ Did you have unintended side effects?
  - √ Is there an improvement?
  - √ Do you need to test the improvement under other conditions?
- √ Describe and report what you learned



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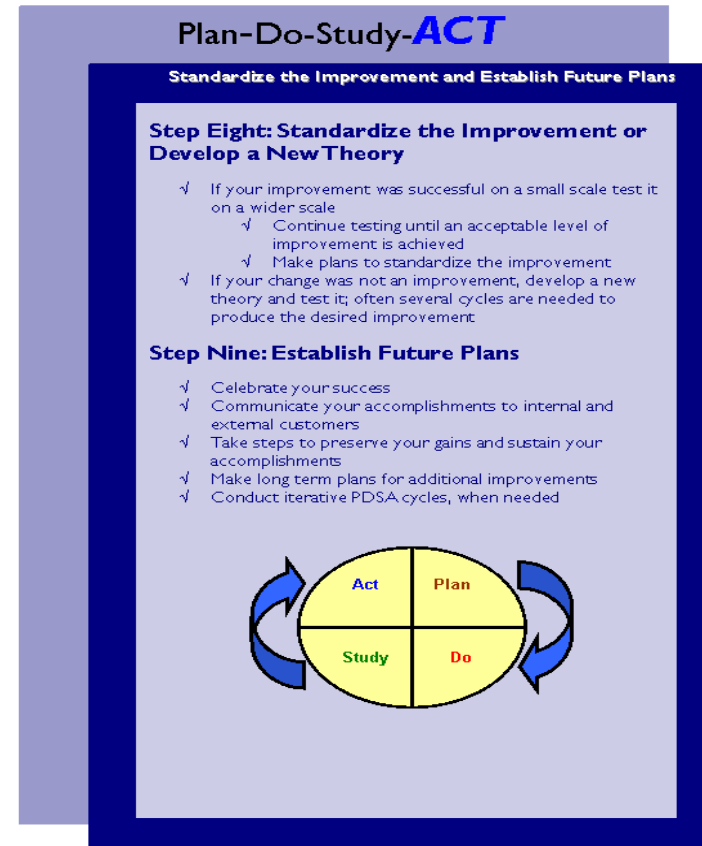
ACT

# “Act” In Summary: Standardize or Repeat

## Step 8

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- If your improvement was successful on a small scale test it on a wider scale
- Continue testing until an acceptable level of improvement is achieved
- Make plans to standardize the improvement
- If your theory was not an improvement, develop a new theory and test it; often several cycles are needed to produce the desired improvement



# “Act” In Summary: Future Plans

## Step 9

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- CELEBRATE your success
- Communicate your accomplishments to internal and external customers
- Take steps to preserve your gains and sustain your accomplishments
- Make long term plans for additional improvements
- Conduct iterative PDSA cycles, when needed



# Fitting the Pieces Together

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- As your project takes shape, be sure that you align the pieces:
  - ▣ The aim statement should align with your if-then theory
  - ▣ The if-then theory should align with your test
  - ▣ The test should align with your strategy for studying your results
  - ▣ The strategy for studying your results should align with your aim statement

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# Questions & Discussion