

Rapid Cycle Improvement with PDSA

CPSI Forum
April 30, 2009

Eileen Patterson, MCE
Director - Quality Improvement
Ontario Health Quality Council

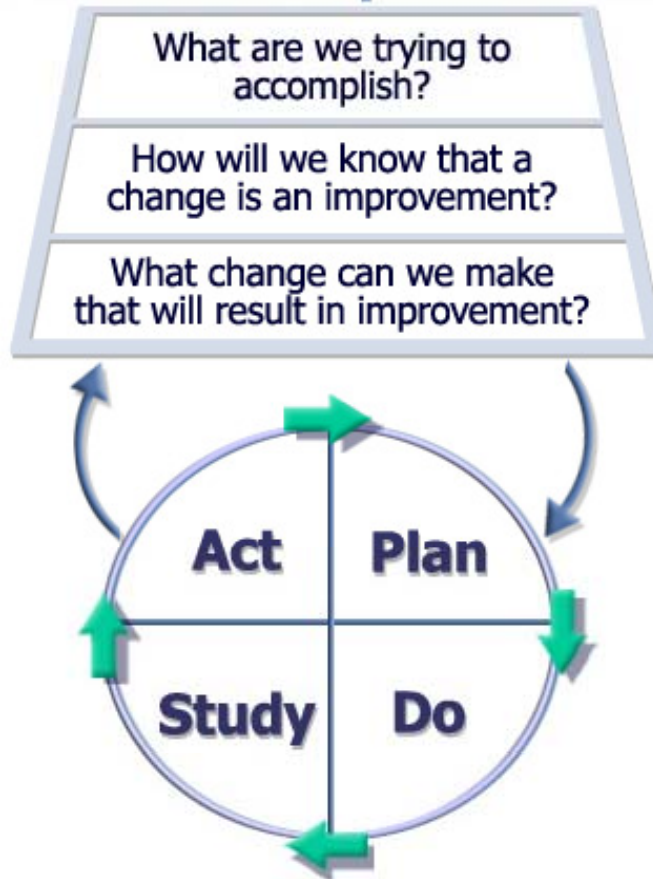


Ontario

Ontario Health Quality Council
Conseil ontarien de la qualité
des services de santé

What is it?

Model for Improvement



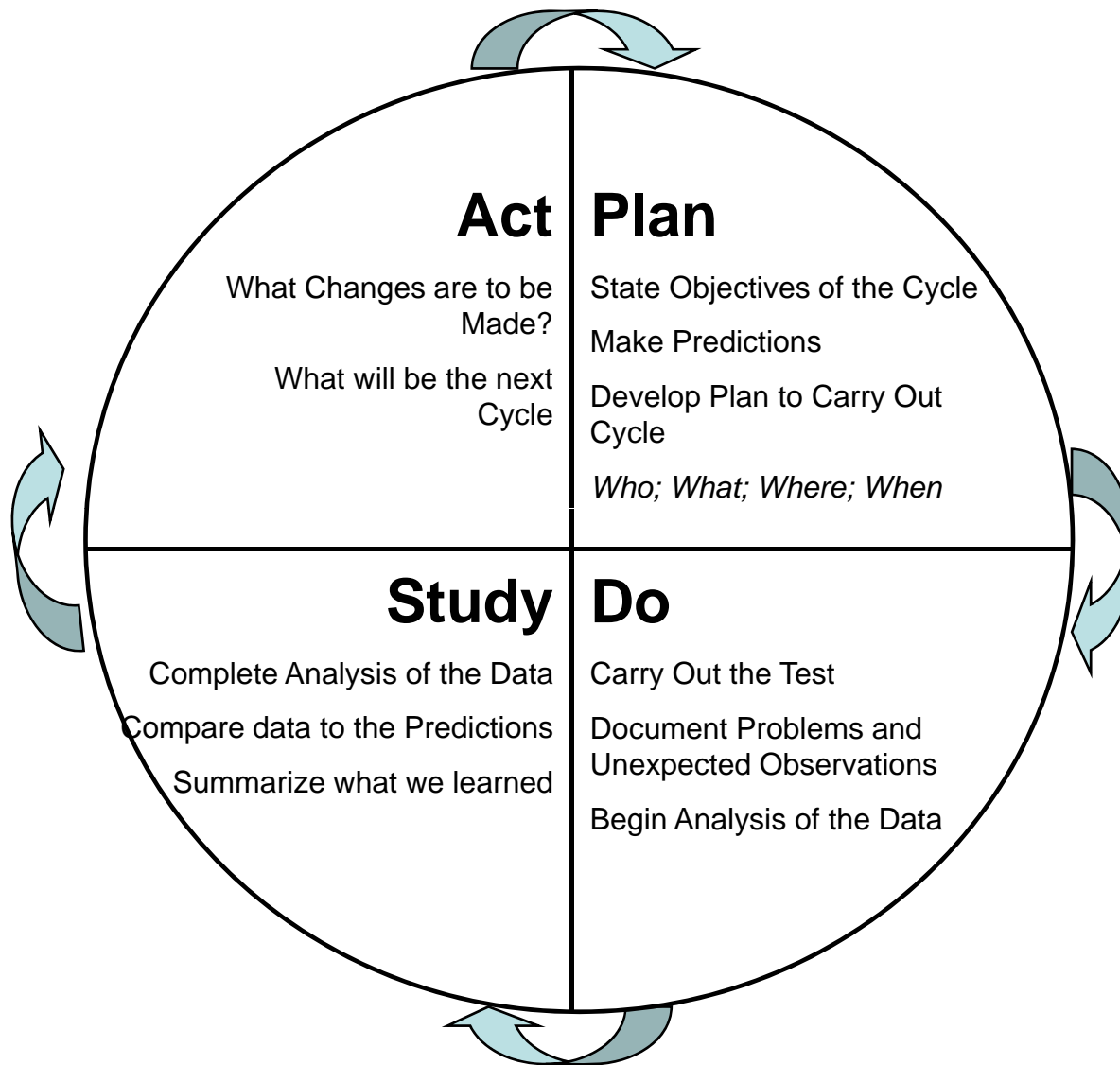
- Roots are within System of Profound Knowledge;
 - Appreciation of a System
 - Understanding Variation
 - Theory of knowledge
 - Psychology

Langley, Nolan, et.al (1996) . *The Improvement Guide: A Practical Approach to Enhancing Organizational Performance*. San Francisco, CA. Jossey-Bass.



Ontario

Ontario Health Quality Council
Conseil ontarien de la qualité
des services de santé



Ontario

Ontario Health Quality Council
Conseil ontarien de la qualité
des services de santé

PDSA Cycles

- Are not plans, but rather a way to learn about changes being developed, tested and implemented.
- **Are small in scale**
 - Thinking months – think weeks; thinking weeks – think days; thinking days – think hours
 - Thinking facility – think unit; thinking unit – think teams; thinking teams - think ONE team
 - Thinking all patients – think a type of patient; thinking a type of patient - think a sample; thinking sample - then 3-5 may be enough

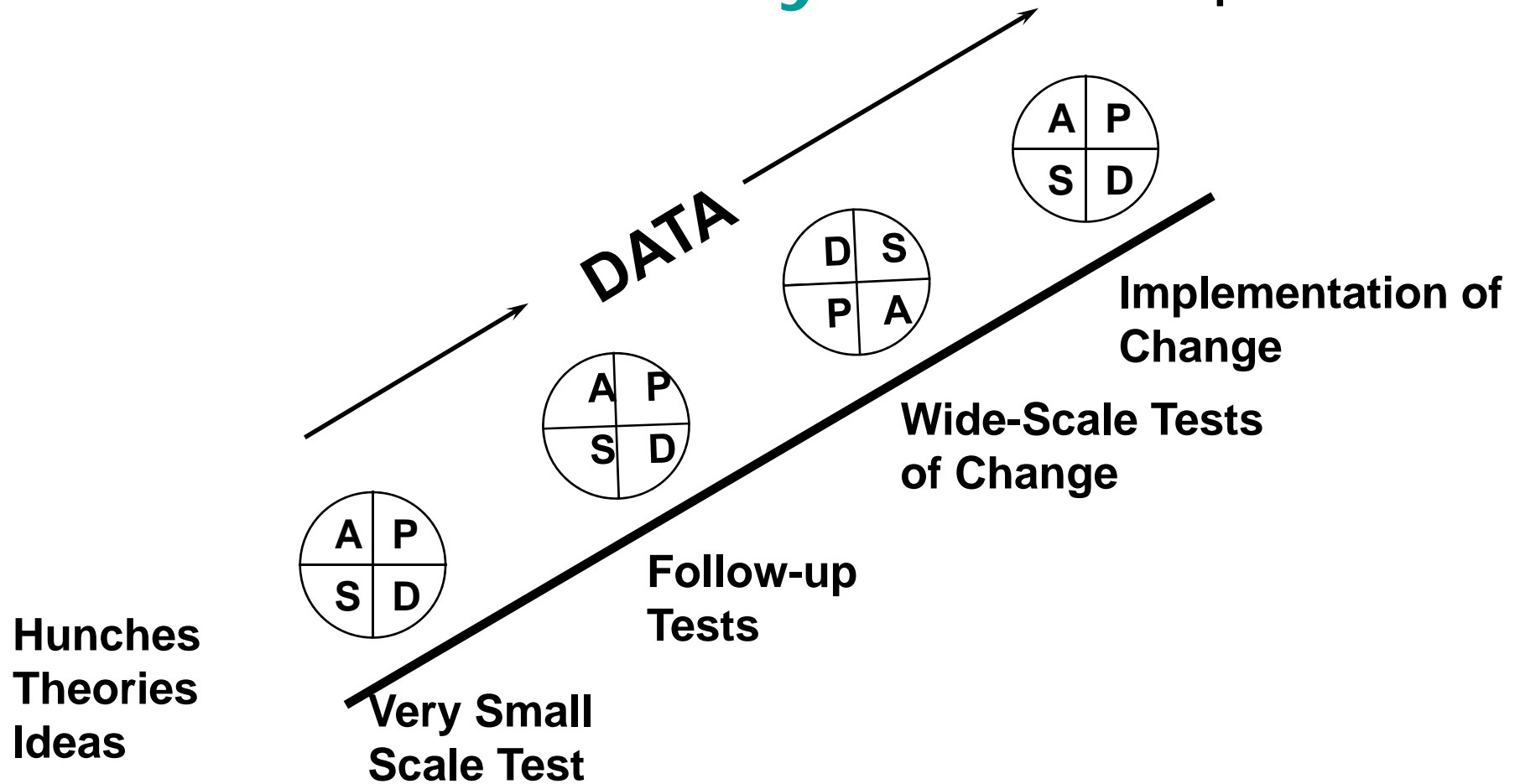


Ontario

Ontario Health Quality Council
Conseil ontarien de la qualité
des services de santé

Repeated Use of the PDSA Cycle

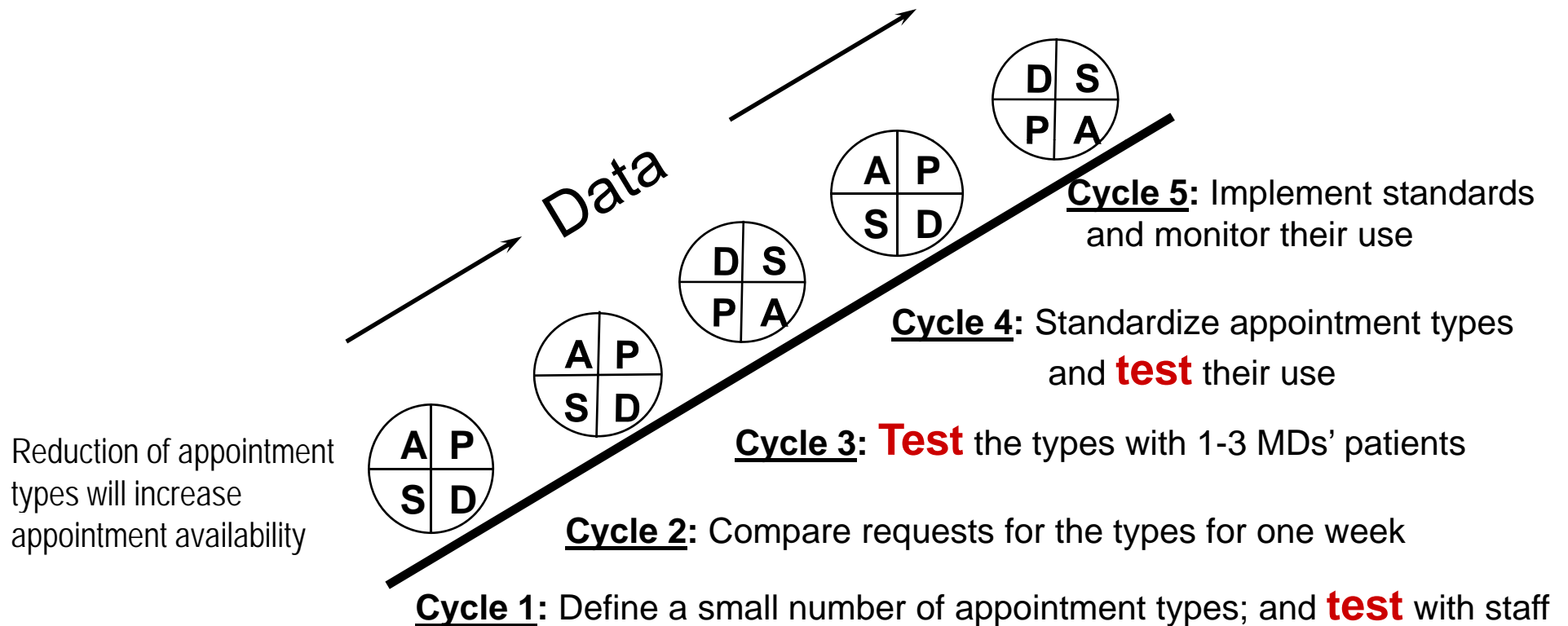
Changes That Result in Improvement



Ontario

Ontario Health Quality Council
Conseil ontarien de la qualité
des services de santé

Series of PDSA Cycles to Improve Access

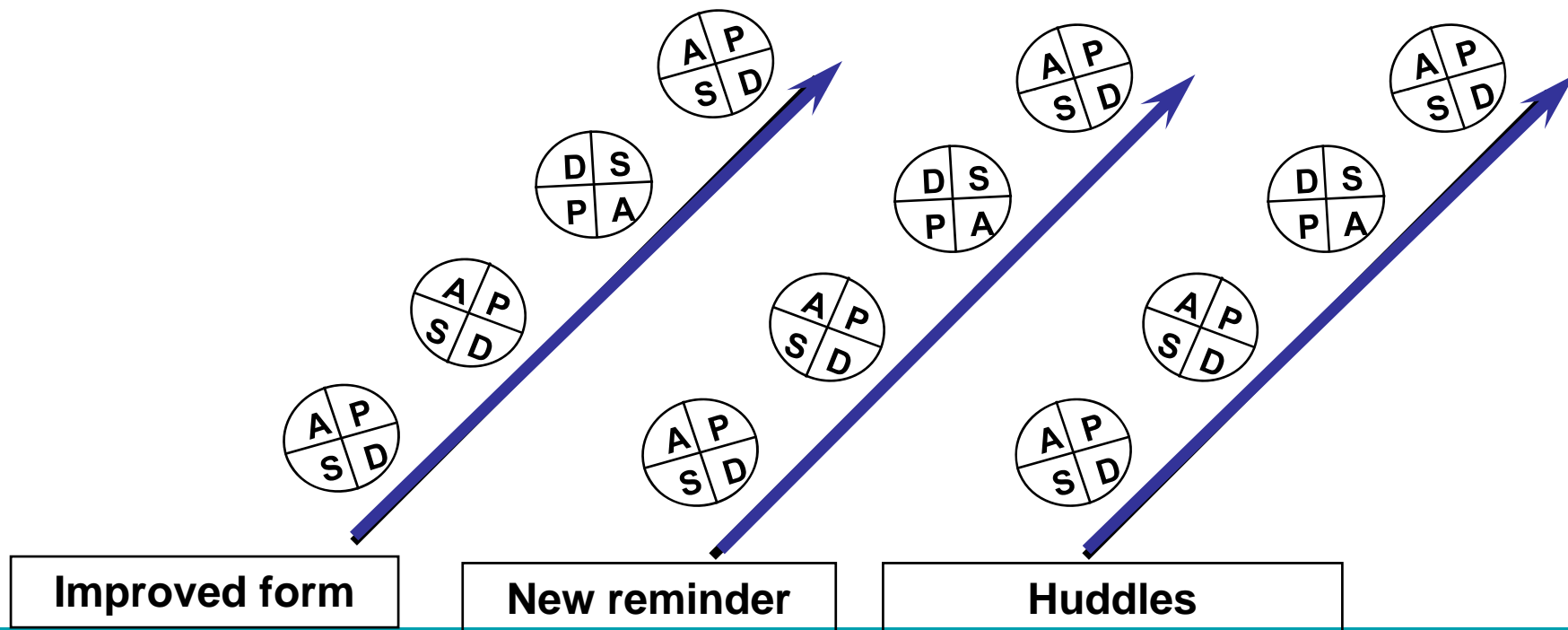


Ontario

Ontario Health Quality Council
Conseil ontarien de la qualité
des services de santé

Multiple PDSA Cycle Ramps

Try different ways of implementing change concept



Ontario

Ontario Health Quality Council
Conseil ontarien de la qualité
des services de santé

PDSA (test) – in LTC

Example Part 1

Objective of cycle 1?

- Determine if it takes significant extra time when ‘skin screening’ is added to daily routine for one PSW?

• Plan

- The Champion PSW will add ‘skin screening’ to morning routine for 8-10 residents for 1 week and determine if it adds significant time (significant = adding 15 min to current 60 minute routine)
- Hypothesis; perception that there is not enough time; resistance

• Do/Study

- It did not add any extra time, just a different way of looking.

• Act

- Because this PSW is a champion, try with two PSWs



Ontario

Ontario Health Quality Council
Conseil ontarien de la qualité
des services de santé

PDSA (test) – in LTC

Example Part 2

Objective of cycle 2?

- Determine if it takes significant extra time when ‘skin screening’ is added to daily routine for two PSW?
- **Plan**
 - The 2 PSWs will add ‘skin screening’ to morning routine for each of their 8-10 residents for 1 week and determine if it adds significant time
 - Hypothesis; perception that there is not enough time; resistance
- **Do/Study**
 - It did not add any extra time, just a different way of looking.
- **Act**
 - Because these PSWs are experienced, try with four PSWs (2 units)



Ontario

Ontario Health Quality Council
Conseil ontarien de la qualité
des services de santé

PDSA (test) – in LTC

Example Part 3

Objective of cycle 3?

- Determine if it takes significant extra time when ‘skin screening’ is added to daily routine for four PSW from 2 units?
- **Plan**
 - The 4 PSWs will add ‘skin screening’ to morning routine for each of their 8-10 residents for 1 week and determine if it adds significant time
 - Hypothesis; perception that there is not enough time; resistance
- **Do/Study**
 - It did not add any extra time; just a different way of looking.
- **Act**
 - Provide education about daily skin screening



Ontario

Ontario Health Quality Council
Conseil ontarien de la qualité
des services de santé

PDSA (implementation)– in LTC

Example Part 4

Objective of cycle 4?

- Determine if it takes significant extra time when 'skin screening' is added to daily routine for four PSW from 2 different units?
- **Plan**
 - The 4 PSWs will add 'skin screening' to morning routine for each of their 8-10 residents for 1 week and determine if it adds significant time
 - Hypothesis; perception that there is not enough time; resistance
- **Do/Study**
 - It did not add any extra time, it merely required a different way of looking.
- **Act**
 - Because these PSWs are experienced, try with four PSWs



Ontario

Ontario Health Quality Council
Conseil ontarien de la qualité
des services de santé

PDSA (implementation)– in LTC

Example Part 5

Objective of cycle 5?

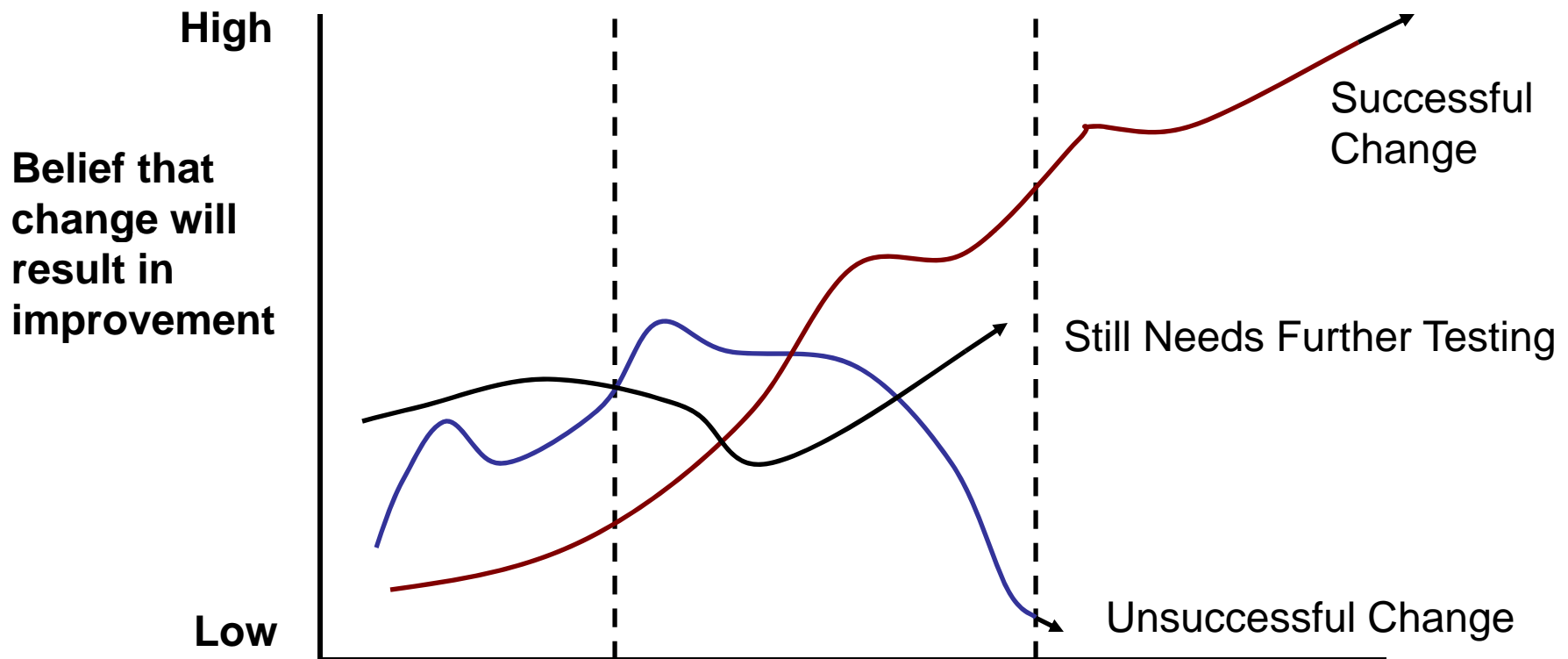
- Determine if staff are willing/able to implement 'daily skin screening' across the home
- **Plan**
 - Provide education to all staff re: daily skin screening
 - Hypothesis; perception that there is not enough time; resistance
- **Do/Study**
 - Staff were resistant, and indicated they did not have time. Based on experiences of test PDSA, staff changed their minds and were willing to add daily skin screening to morning routines.
- **Act**
 - Daily skin screening introduced for one week across the home.



Ontario

Ontario Health Quality Council
Conseil ontarien de la qualité
des services de santé

How to Implement a Change



Developing

Testing

Implementing

From Lloyd Provost



Ontario

Ontario Health Quality Council
Conseil ontarien de la qualité
des services de santé

PDSA Form

- Develop Change
- Test Change
- Implement Change

www.ohqc.ca



Objective for this PDSA Cycle **Date:**

Is this cycle used to:
 develop or test or implement a change?

What question(s) do we want to answer on this PDSA cycle?

PLAN:
Plan to answer questions: Who, What, When, Where?

Plan for collection of data: Who, What, When, Where?


Predictions (for questions above based on plan):

DO:
Carry out the change or test, collect data and begin analysis.

STUDY:
Complete analysis of data.

Compare data to predictions and summarize what was learned.

ACT:
Are we ready to make a change? Plan for the next cycle.



What size test?

Current State		Resistant	Neutral	Ready
Low Confidence that change will lead to improvement	Large cost of failure	Very Small Scale Test	Very Small Scale Test	Very Small Scale Test
	Small cost of failure	Very Small Scale Test	Very Small Scale Test	Small Scale Test
High Confidence that change will lead to improvement	Large cost of failure	Very Small Scale Test	Small Scale Test	Large Scale Test
	Small cost of failure	Small Scale Test	Large Scale Test	Implement

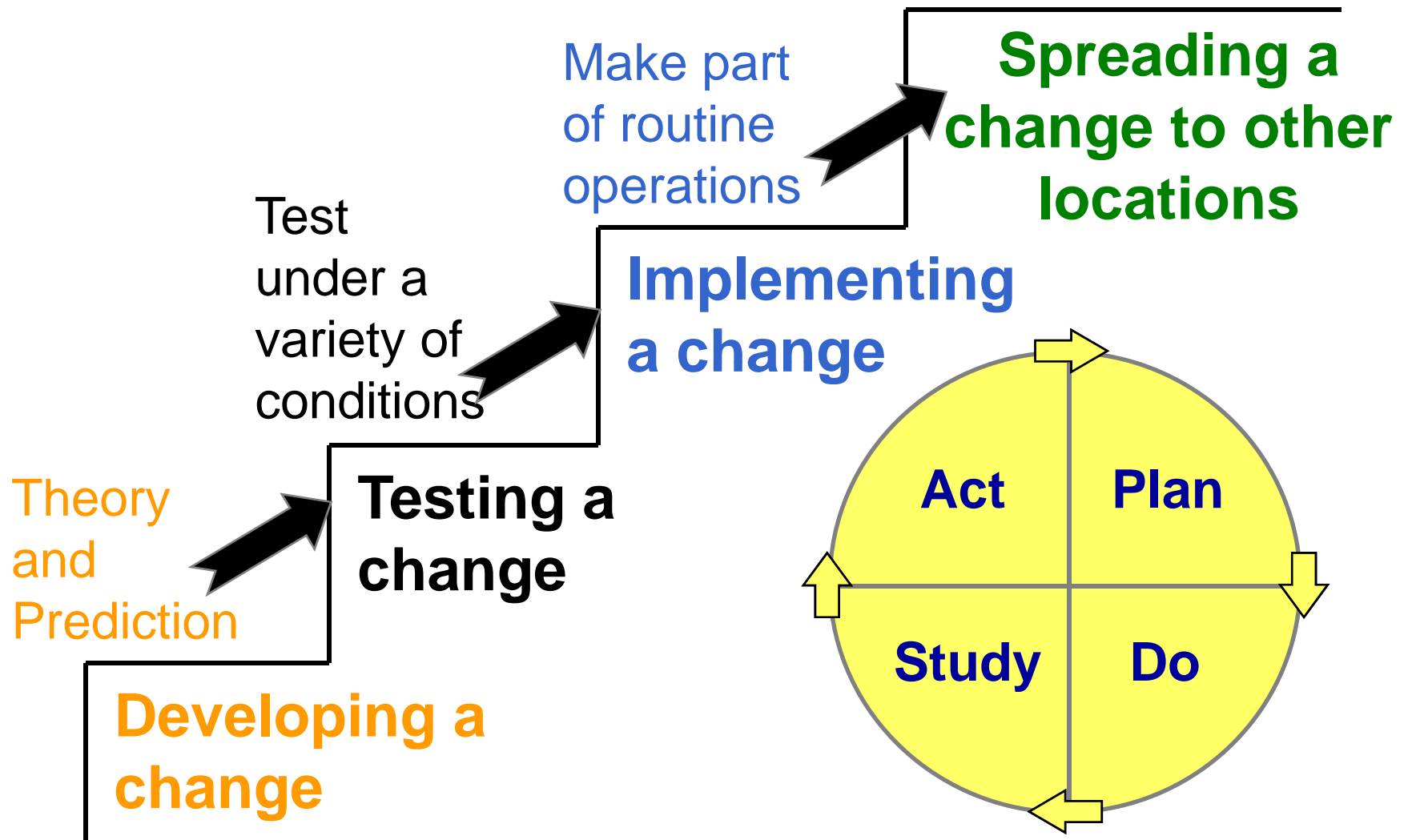
From Lloyd Provost



Ontario

Ontario Health Quality Council
 Conseil ontarien de la qualité
 des services de santé

The Sequence of Improvement and Spread



When to use Rapid Cycle Improvement?

- Roadmap for small, simple projects as well large-system projects
- Is useful for process and system improvement
- Can be used for design of new products and services
- Is applicable to all types of organizations
- Is applicable to all groups and levels in an organization
- Facilitates the use of teamwork to make improvements



Ontario

Ontario Health Quality Council
Conseil ontarien de la qualité
des services de santé

When to use Rapid Cycle Improvement? *(cont'd)*

- Provides a framework for the application of statistical tools and methods
- Encourages planning to be based on theory
- Emphasizes and encourages the iterative learning process
- Allows project plans to adapt as learning occurs
- Provides a simple way to empower people in the organization to take action.



Ontario

Ontario Health Quality Council
Conseil ontarien de la qualité
des services de santé

PDSA Pitfalls ...

- Making the test of change too large, too quickly
- Not writing down the PDSA, and not reviewing it with the team
- Not making a prediction ... we learn more by being surprised than by being correct!

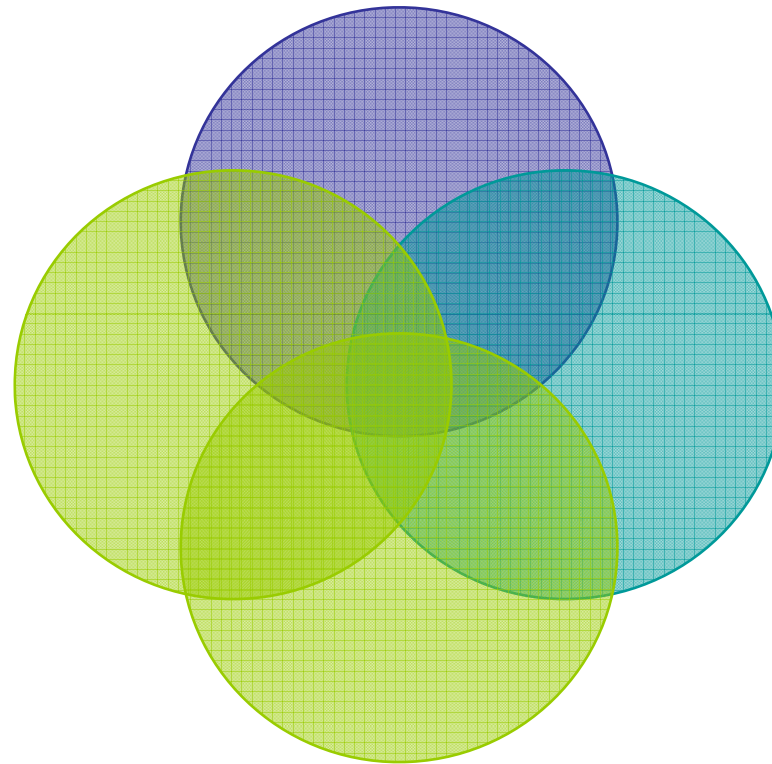


Ontario

Ontario Health Quality Council
Conseil ontarien de la qualité
des services de santé

PROJECT MANAGEMENT

SIX SIGMA



LEAN

RAPID CYCLE IMPROVEMENT (Model for Improvement; PDSA)

