Common Quality Improvement Tools

2019 Unified Quality Symposium

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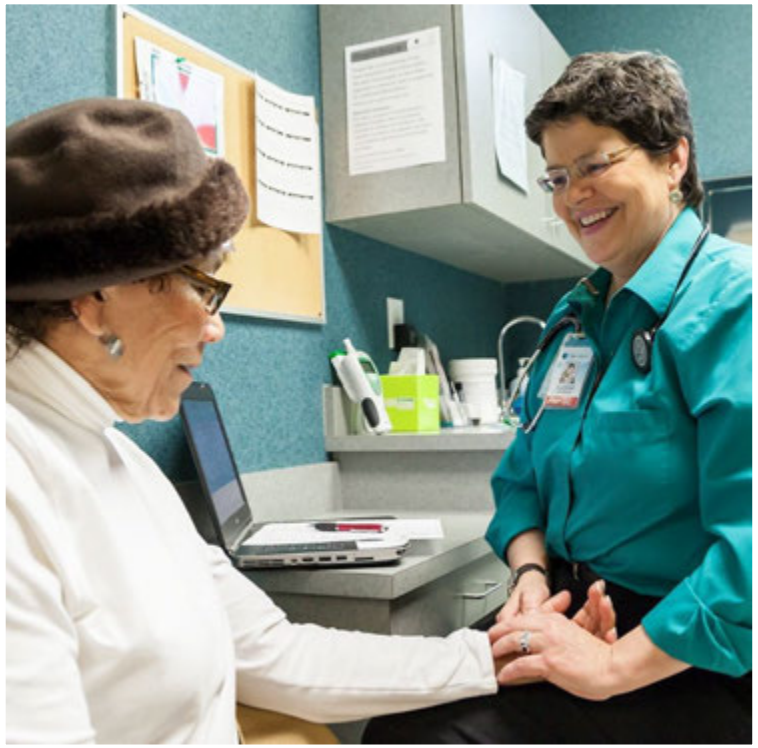

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Conflict of Interest

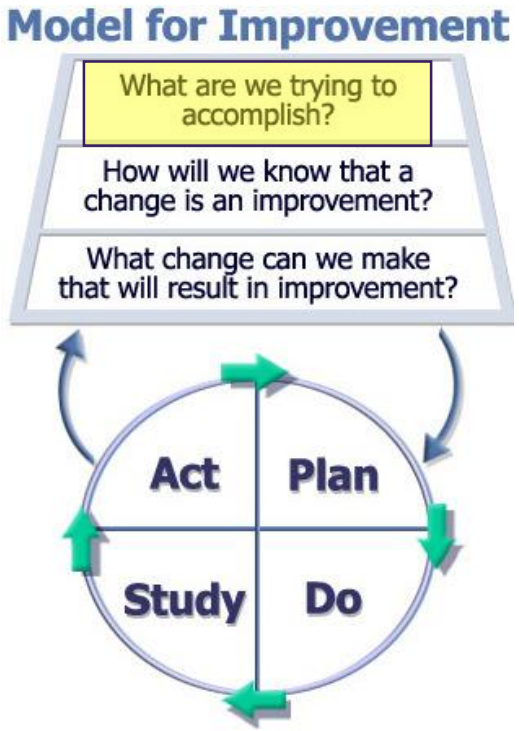
We have no significant conflicts of interest relevant to this presentation.

Agenda

- Aim Statements and Measures
- Process Maps
- Fishbone Diagrams
- PDSA cycles
- Case Study

Aim Statement & Measures

- What's the issue?
- Why is status quo no longer good enough?
- Not too easy, not too hard
- Common pitfalls:
  - Too big
  - Too broad or lacks focus
  - Outside team's ability to influence
  - Achieving 100% (or 0%) may not be feasible
- S-M-A-R-T



Aim Statement & Measures

S- Specific

M- Measurable

A- Actionable

R- Relevant

T- Time-Bound

Aim Statement & Measures

- Keep measures useful and meaningful
- Common mistakes:
  - Cannot easily collect data
  - Not related to aim
  - Numerator/denominator not properly defined
- Collect baseline data
  - Run Charts
  - Control charts
- Process, Outcome, Balancing

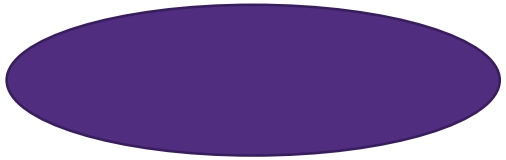
Process Map

- Illustrates steps in a process to concisely document process flow, enables identification of strengths and weaknesses
- Documentation is no substitute for observation
- Means not an end
- Multidisciplinary team should create the map
- Use level of detail that is useful for project

Process Map

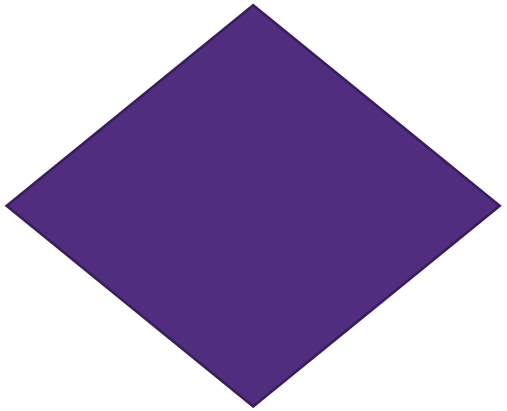
1. Get the “right” people in the room
2. Start by defining the first and the last step in the process — define boundaries
3. Write each step on sticky note
4. Document what is actually done, not what is supposed to be done.
5. Arrange the sticky notes with your team
6. Review the process to check for accuracy and completeness.
7. Convert to standardized chart with shapes
8. When the flowchart is complete and accurate, analyze it, use it, revisit it, and keep it up to date.

Process Map



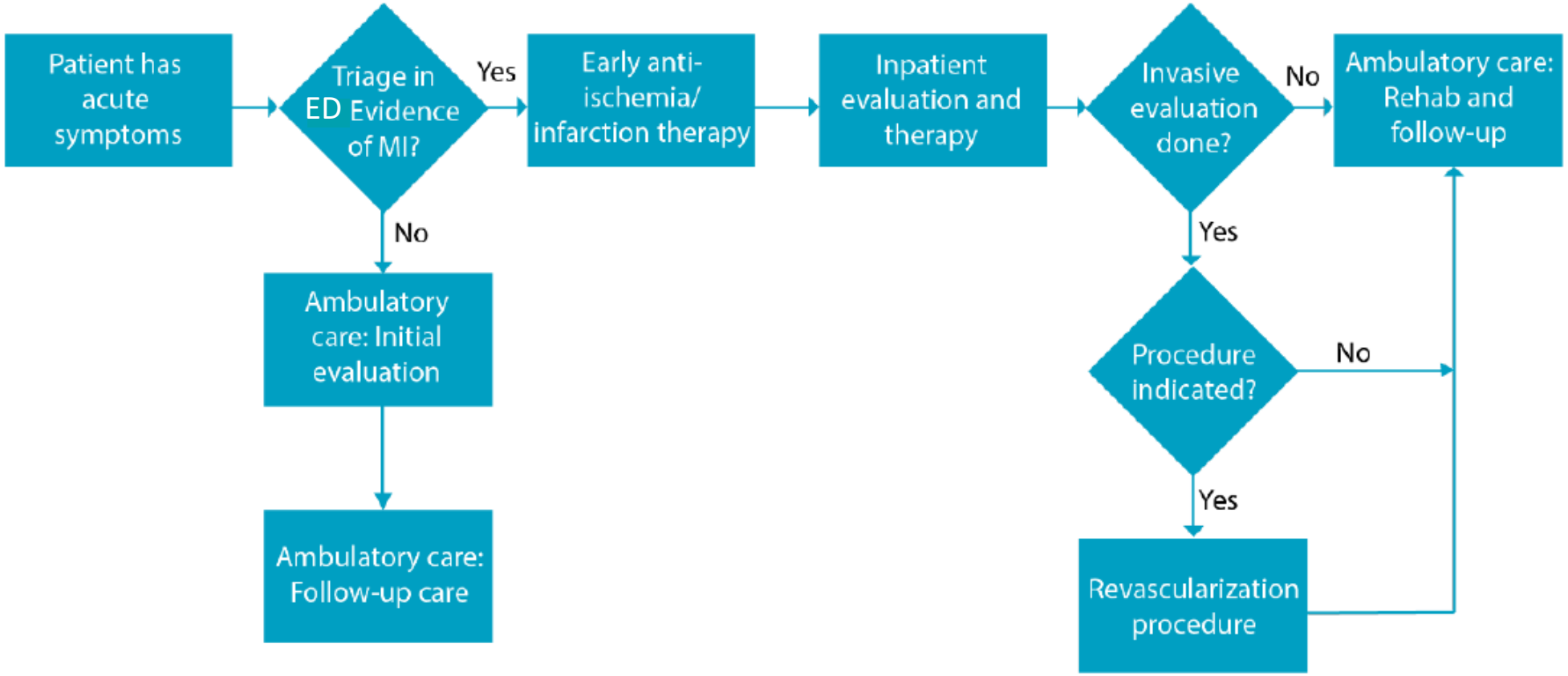
Start and end of a process

Activity or task



Decision point (yes/no question)

Process Map

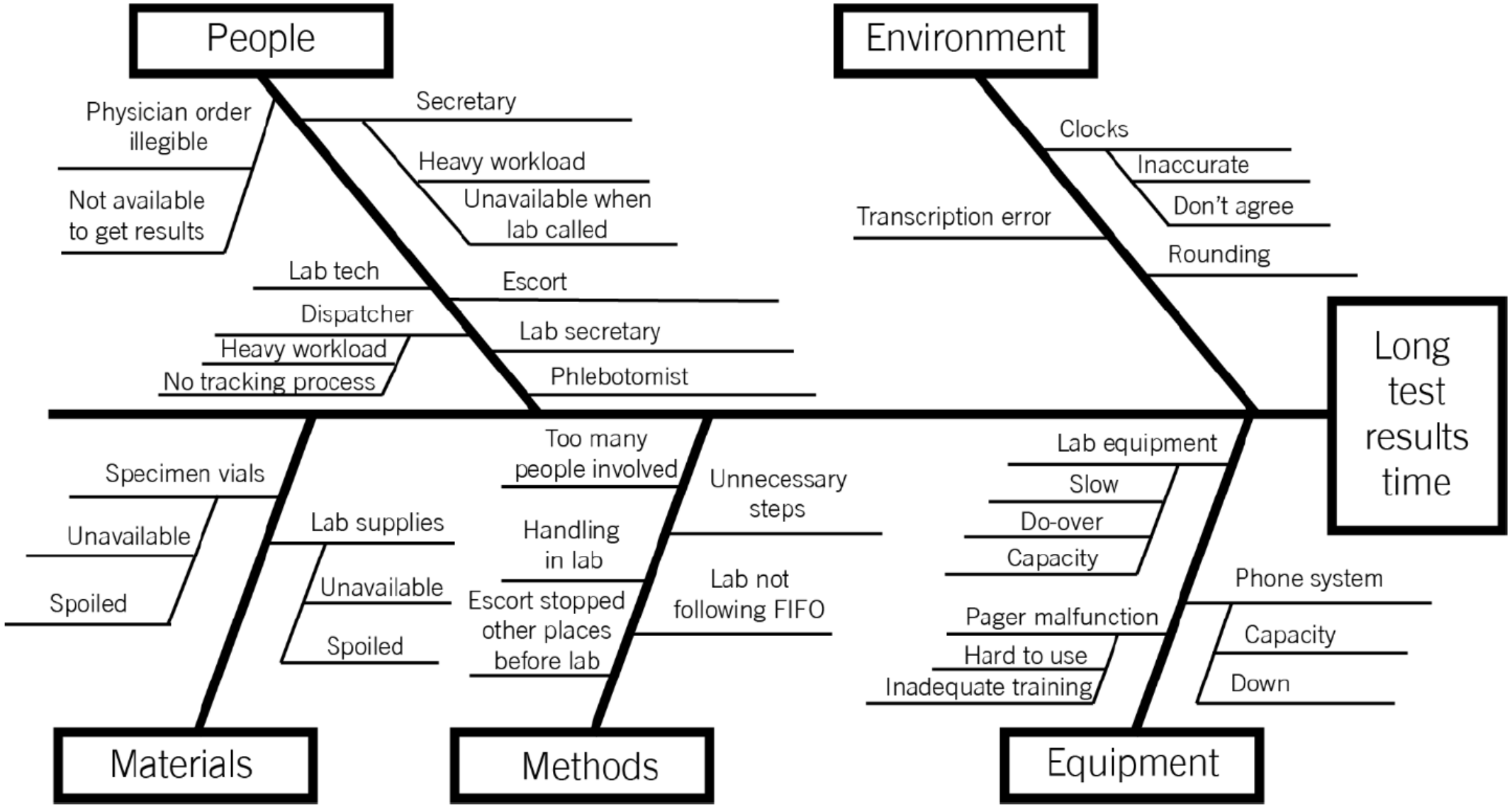

Patient has acute symptoms
Triage in ED Evidence of MI?
Yes
No
Early anti-ischemia/ infarction therapy
Ambulatory care: Initial evaluation
Ambulatory care: Follow-up care
Inpatient evaluation and therapy
Invasive evaluation done?
No
Yes
Ambulatory care: Rehab and follow-up
Procedure indicated?
No
Yes
Revascularization procedure

Fishbone Diagram

- Helps to generate ideas about where changes can be implemented to change outcome
- Process that enables the visualization of multiple causes to an effect
- Encourages broad thinking
- Particularly useful when have good handle of what is the problem

Fishbone Diagram

1. Write the effect you wish to influence in a box on the right-hand side of the page
2. Draw a horizontal line across the page to the left, starting at the box you just drew
3. Decide on five or six categories of causes for the effect
    - Materials, Methods, Equipment, Environment, and People.
4. Create “fishbones,” and label each line at the end with one of the categories you have chosen
    - Draw a box around each label.
5. Generate list of the causes that contribute to the effect on “branch bones”

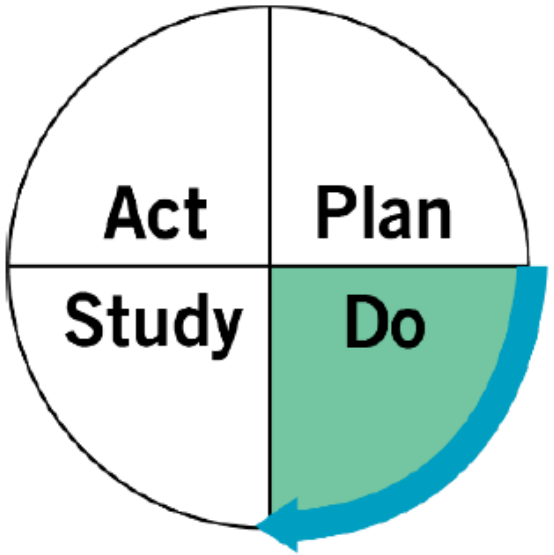

People
Physician order illegible
Not available to get results
Secretary
Heavy workload
Unavailable when lab called
Lab tech
Dispatcher
Heavy workload
No tracking process
Escort
Lab secretary
Phlebotomist
Environment
Transcription error
Clocks
Inaccurate
Don't agree
Rounding
Long test results time
Materials
Specimen vials
Unavailable
Spoiled
Lab supplies
Unavailable
Spoiled
Methods
Too many people involved
Handling in lab
Escort stopped other places before lab
Unnecessary steps
Lab not following FIFO
Equipment
Lab equipment
Slow
Do-over
Capacity
Pager malfunction
Hard to use
Inadequate training
Phone system
Capacity
Down

PDSA Cycles- Plan

- Plan the test, including a plan for data collection
- State the question you want to answer
- Develop a plan to test the change
  - Who? What? When? Where?
- Identify what data you will need to collect

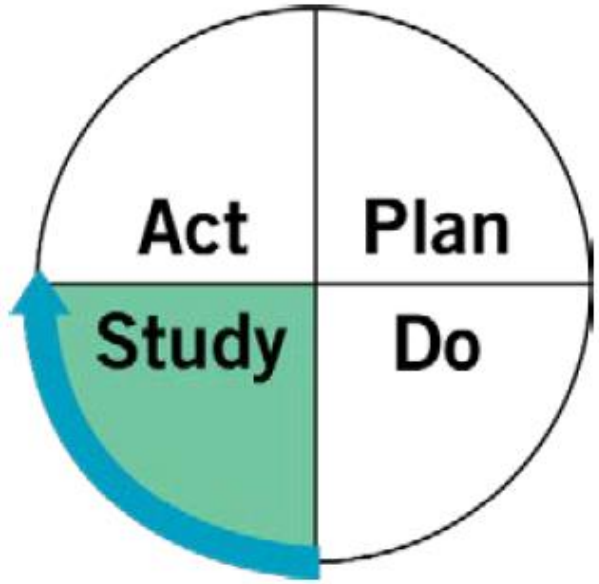
PDSA Cycles- Do

- Run the test on a small scale
- Carry out the test
- Document problems and unexpected observations
- Collect and begin to analyze the data



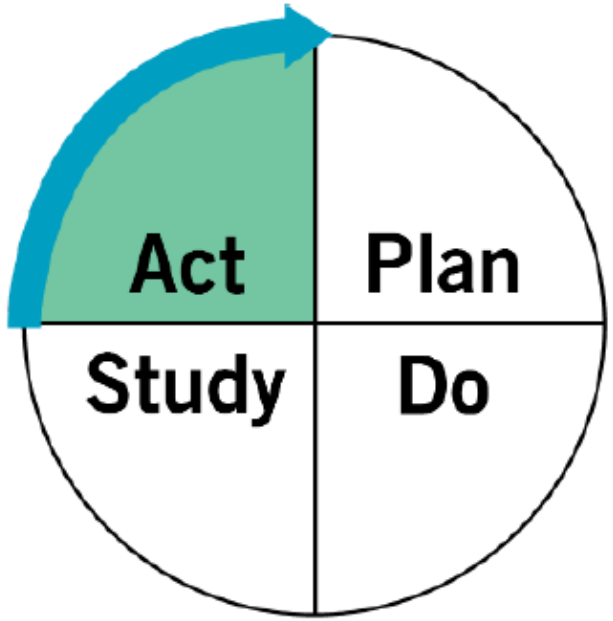
PDSA Cycles- Study

- Analyze the results and compare them to your predictions
- Summarize and reflect on what you learned

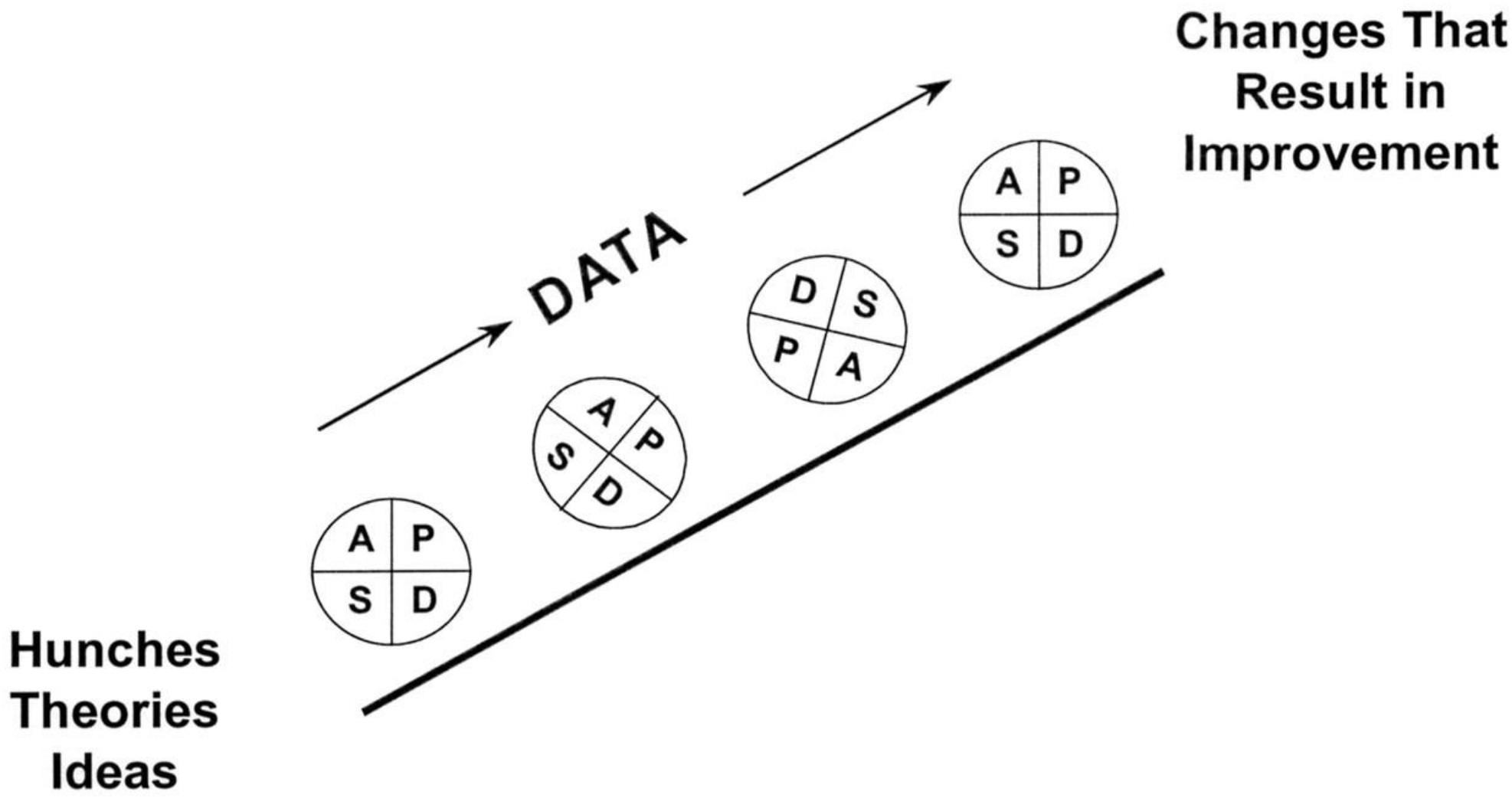


PDSA Cycles- Act

- Based on what you learn, make a plan for next step
- Adapt, adopt, or abandon
- Prepare a plan for the next PDSA



PDSA Cycles


Changes That Result in Improvement
DATA
A P S D
D S P A
A P S D
A P S D
Hunches Theories Ideas

Case Study

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