



CAH Quality Improvement and Care Transitions Collaborative

Using Quality
Improvement Tools

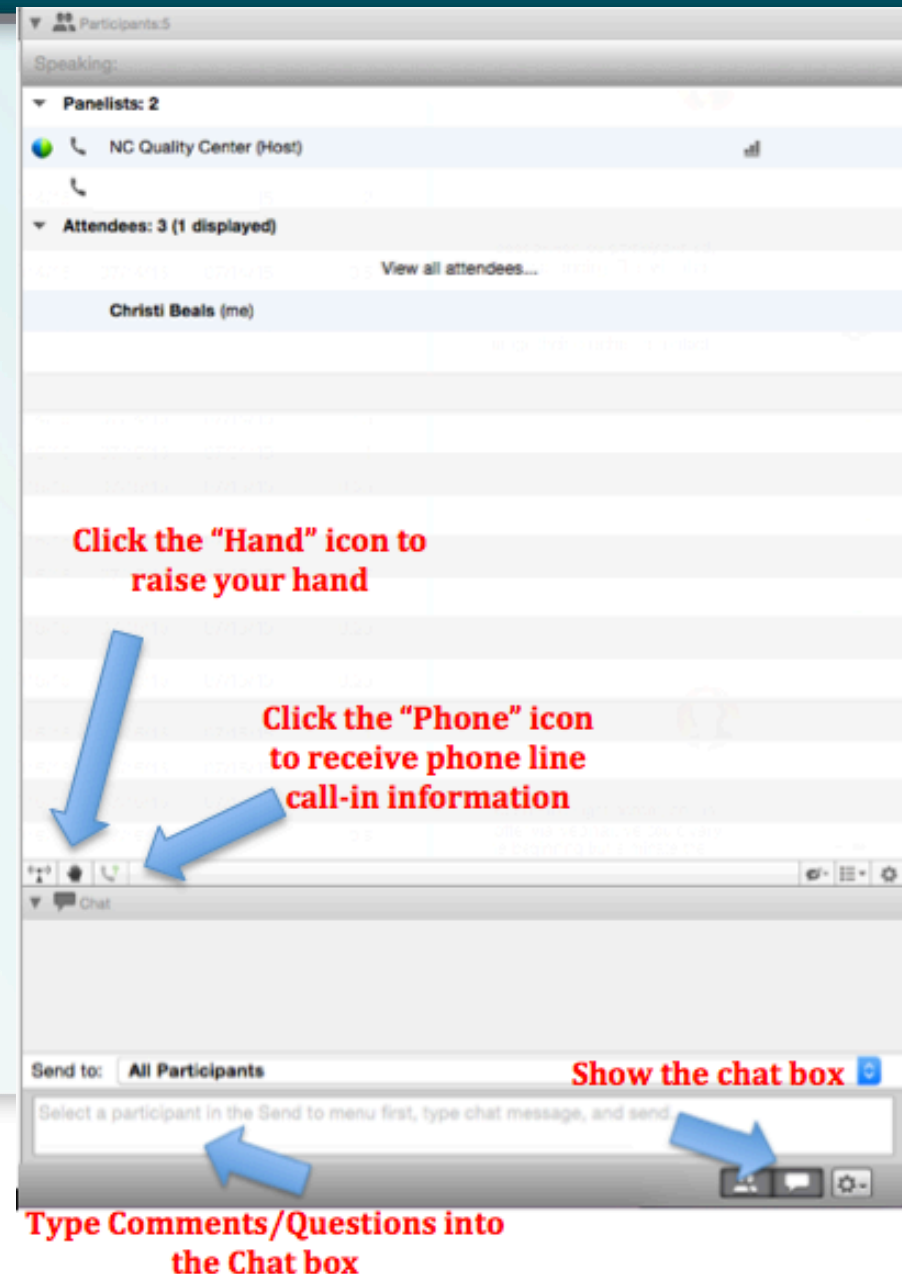
March 15, 2016



North Carolina
Quality Center

How to Participate in the Session

- If you have called in by phone, you can “raise your hand” by selecting the hand icon
- If you would like to call in by phone, select the “phone” icon to receive call in information
- Select the “Chat Bubble” icon to show the comments box and type your comments and questions in the chat box throughout the session



CAH Collaborative Activity Timeline

Activity	January	February	March	April	May	June
Content and Networking Webinars	01/14 Topic: Care Transitions Toolkit Overview and First Sections	03/03 Topic: QI - Immunization Best Practices in Gaining Immunization Compliance	03/15 Topic: QI - ED	04/14 Topic: Care Transitions	05/12 Topic: QI - Immunization	06/09 Topic: QI - ED
In-Person Learning Session	Attendance at PFE/NCAC Summit					
Individual Coaching Calls	1 PFE Coaching Call 1 Coaching Call - Care Transitions/Immunizations/ED			1 PFE Coaching Call 1 Coaching Call - Care Transitions/Immunizations/ED		
Site Visits						

Activity	July	August	September	October	November	December
Content and Networking Webinars	07/14 Topic: Care Transitions	08/11 Topic: QI - Immunization	09/08 Topic: QI - ED	10/13 Topic: Care Transitions	11/10 Topic: QI - Immunization	12/08 Topic: QI - ED
In-Person Learning Session						
Individual Coaching Calls	1 PFE Coaching Call 1 Coaching Call - Care Transitions/Immunizations/ED			1 PFE Coaching Call 1 Coaching Call - Care Transitions/Immunizations/ED		
Site Visits						

Agenda

- Review Model for Improvement
 - Aims
 - Measures
 - Drivers
 - Change concepts
 - PDSA cycles
- QI Tool Spotlight: Process Maps
- Share and discuss quality improvement methods and tools
- Open forum discussion

Quality Improvement Methods

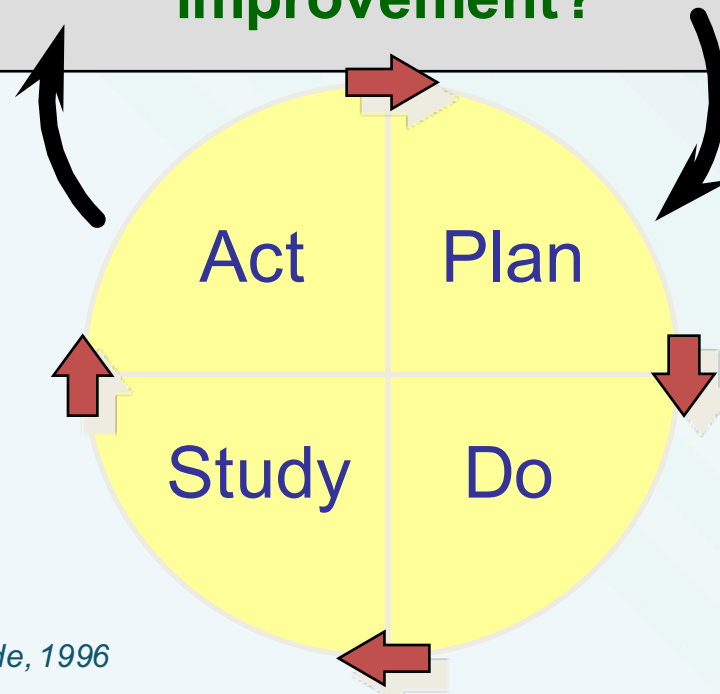
Quality improvement methods provide the tools to:

- (i) identify a problem;
- (ii) measure the problem;
- (iii) develop a range of interventions designed to fix the problem; and
- (iv) test whether the interventions worked.



The Model for Improvement

The three questions provide the strategy



The PDSA cycle provides the tactical approach to work

What are we trying to accomplish?

This is all about setting aims...

The **Project Aim** is not just a vague desire to do better

It is a commitment to achieve measured improvement

- In a specific **system**
- With a definite **timeline**
- And numeric **goals**

*Hope is not a plan.
“Some” is not a number.
“Soon” is not a time.*

Aim Statements

Commitment to achieve measured improvement

- In a specific **system**
- With a definite **timeline**
- And numeric **goals**



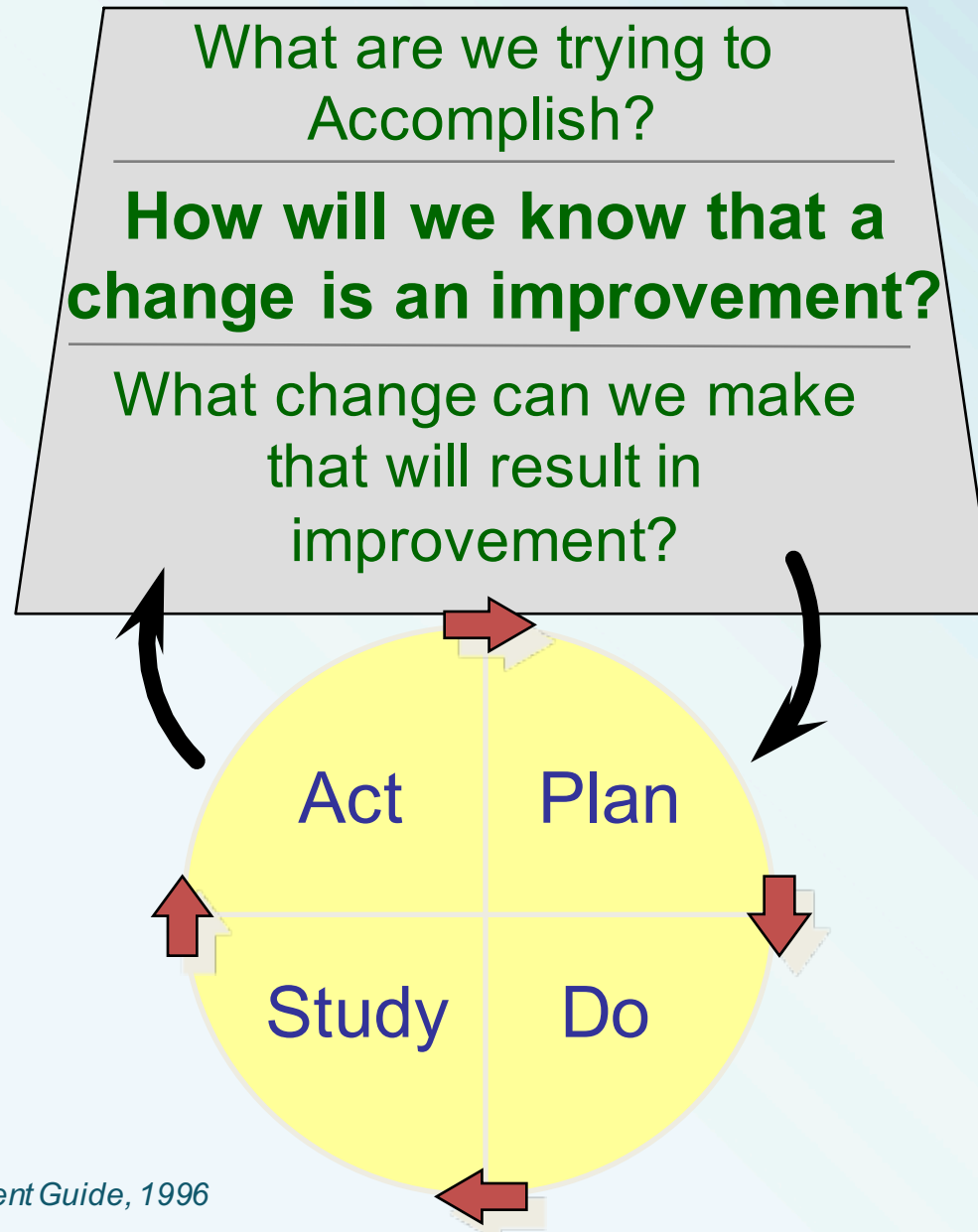
Examples of an Aim Statement

- Reduce waiting time to see a physician to less than 15 minutes within 9 months.
- Reduce adverse drug events (ADEs) on all medical and surgical units by 75 percent within 11 months.
- Improve medication reconciliation at transition points by 75 percent within 1 year.

What is the aim of your project?



The Model for Improvement



How will we know a change is an improvement?

Establishing Measures

Teams use quantitative measures to determine if a specific change actually leads to an improvement.



Types of Measures

Outcome Measures

How does the system impact the values of patients, their health and wellbeing? What are impacts on other stakeholders such as payers, employees, or the community?

Examples include:

- For diabetes: Average hemoglobin A1c level for population of patients with diabetes
- For access: Number of days to 3rd next available appointment
- For critical care: Intensive Care Unit (ICU) percent unadjusted mortality
- For medication systems: Adverse drug events per 1,000 doses

Types of Measures

Process Measures

Are the parts/steps in the system performing as planned?
Are we on track in our efforts to improve the system?

Examples include:

- For diabetes: Percentage of patients whose hemoglobin A1c level was measured twice in the past year
- For access: Average daily clinician hours available for appointments
- For critical care: Percent of patients with intentional rounding completed on schedule.

Types of Measures

Balancing Measures

Are changes designed to improve one part of the system causing new problems in other parts of the system?

Examples include:

- For reducing time patients spend on a ventilator after surgery: Make sure re-intubation rates are not increasing
- For reducing patients' length of stay in the hospital: Make sure readmission rates are not increasing

Tips for Effective Measures

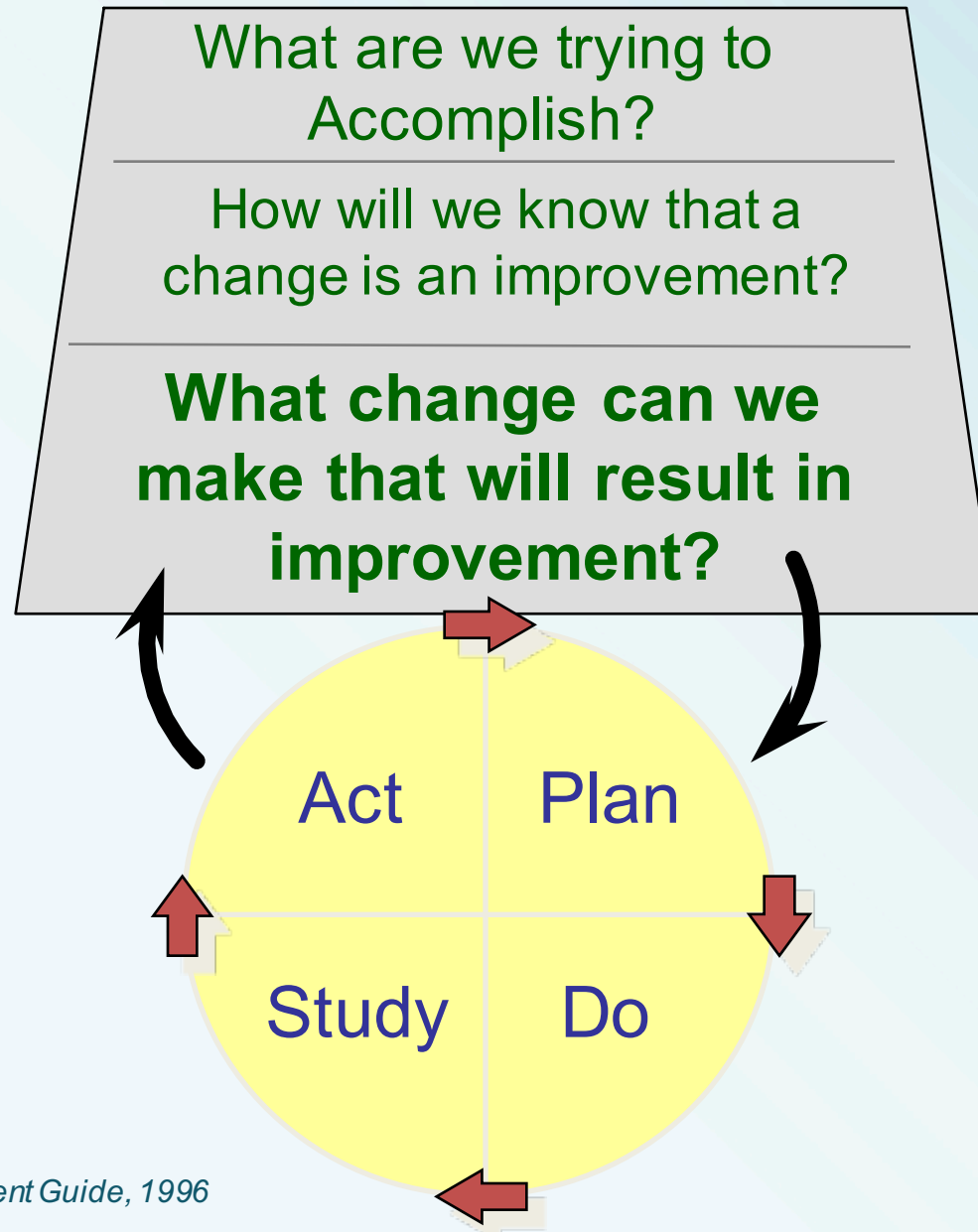
- Plot data over time
- Seek usefulness, not perfection
- Use sampling
- Integrate measurement into the daily routine
- Use qualitative and quantitative data

Data Collection

You need a plan

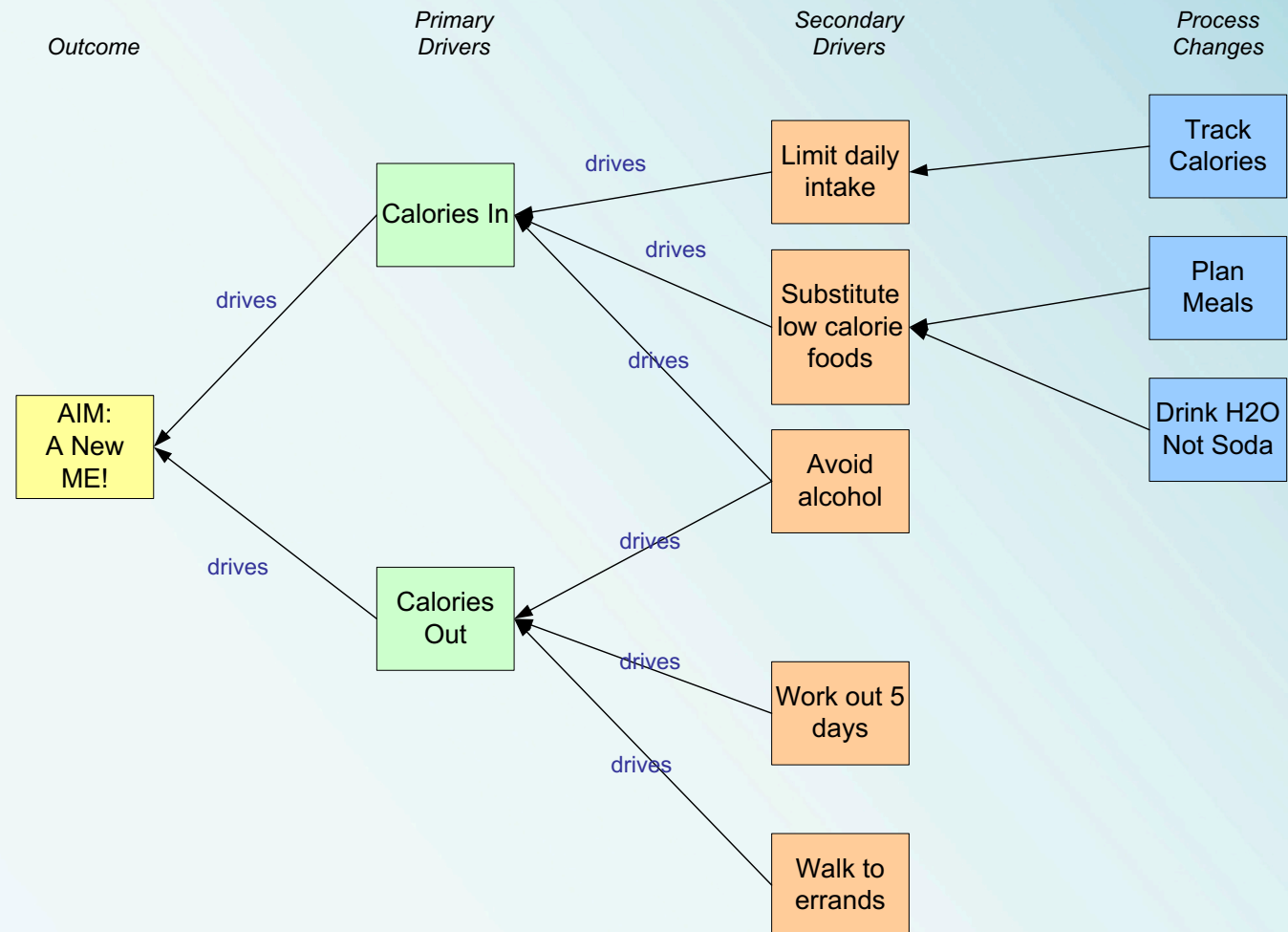
- Ensures the data you collect is useful and reliable without being costly and time-consuming
- Helps ensure the data gathered contains real information that is useful to the improvement effort
- Prevents errors in the data collection process
- Saves time and money that might be spent on repeated or failed attempts to collect useful data

The Model for Improvement



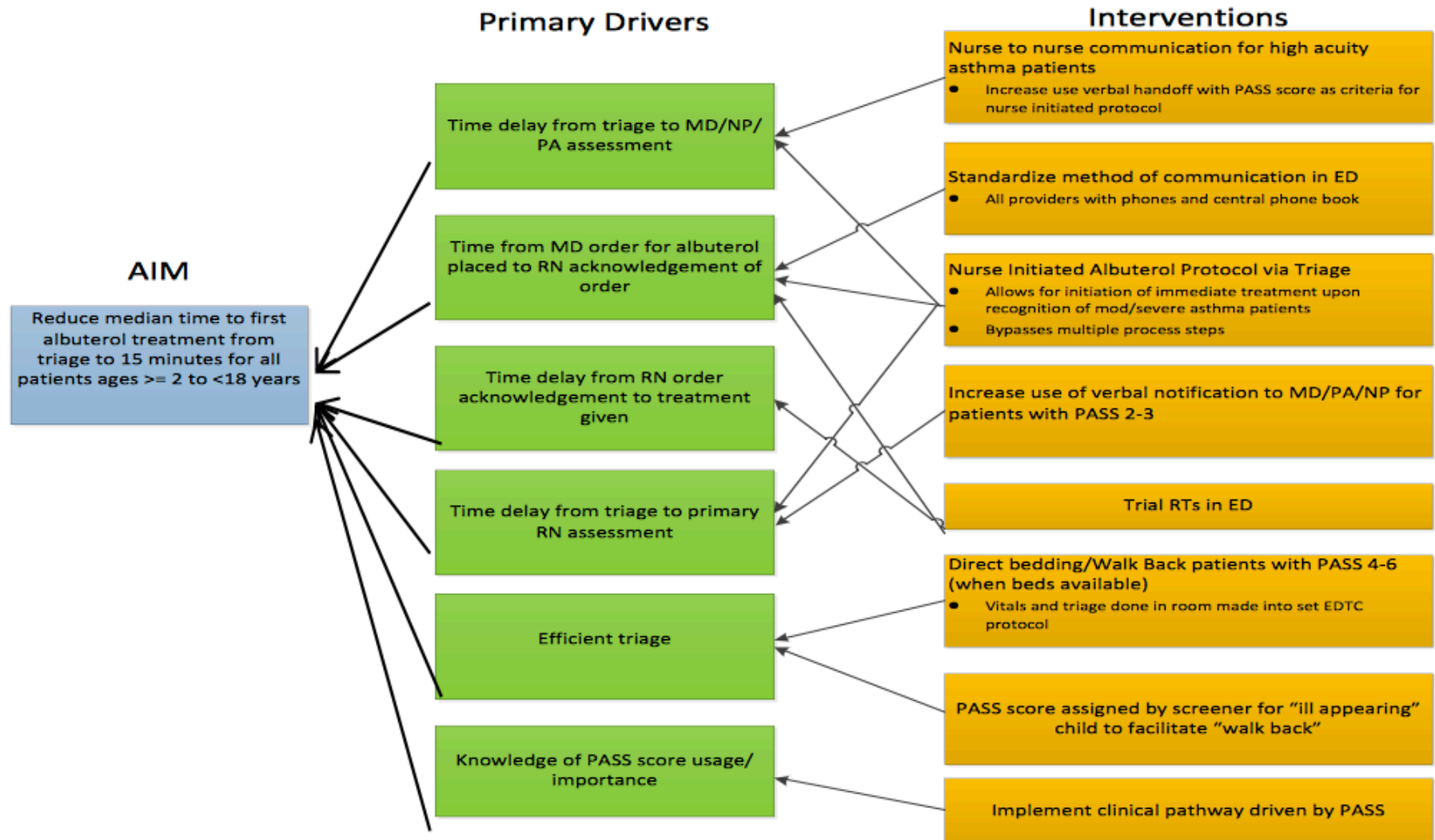
What change can we make that will result in an improvement?

Understanding the Systems for Weight Loss





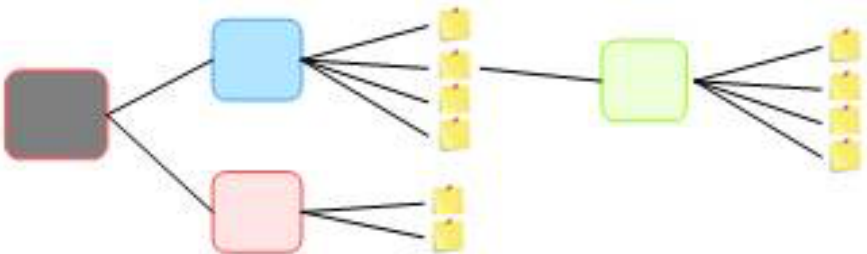



Attribution Carol Haraden, PhD

Driver Diagram Example: ED Asthma Project



How to construct a driver diagram...

Gather together the subject matter experts	
Brainstorm "to achieve our goal, the things we need to improve are ..."	
Cluster the ideas to see if groups represent a common driver	
Expand the groups (or single ideas) to see if new drivers come to mind	
Logically link together the groups into a driver diagram format	
(Work backwards from project ideas if that helps!)	

What changes can we make that will result in an improvement?

Start with your aim and drivers!

Eliminate Waste
Improve Work Flow
Optimize Inventory
Change the Work Environment
Producer/Customer Interface
Manage Time
Reduce Variation
Error Proofing
Improve Product or Service

Associates in Process Improvement. *The Improvement Guide*
(Langley GJ, Nolan KM, Nolan TW, Norman CL, Provost LP.
San Francisco: Jossey-Bass Publishers, Inc.; 2009)

Change Concepts

- **Eliminate Waste**
Look for ways of eliminating any activity or resource in the hospital or clinic that does not add value to patient care.
- **Improve Workflow**
Improving the flow of work in processes is an important way to improve the quality of patient care delivered by those processes.
- **Optimize Inventory**
Inventory of all types is a possible source of waste in organizations; understanding where inventory is stored in a system is the first step in finding opportunities for improvement.

Change Concepts

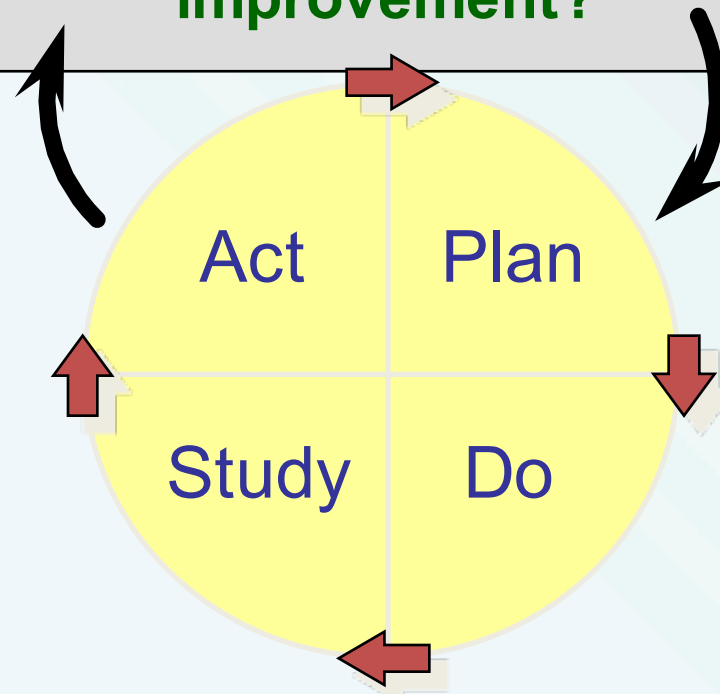
- **Change the Work Environment**
Changing the work environment itself can be a high-leverage opportunity for making all other process changes more effective.
- **Enhance the Health Provider/Patient Relationship**
To benefit from improvements in quality and safety of health care, the health-care professionals and patients must recognize and appreciate the improvements.
- **Manage Time**
An organization can get more achieved by reducing the time to deliver health care, develop new ways of delivering health care, reducing waiting times for services and cycle times for all services and functions in the organization.

Change Concepts

- **Reduce Variation**
Reducing variation improves the predictability of outcomes and helps reduce the frequency of adverse outcomes for patients.
- **Design Systems to Avoid Mistakes**
Organizations can reduce errors by redesigning the system to ensure that there is redundancy i.e. multiple checks and balances to combat human error.
- **Focus on the Product or Service**
Although many organizations focus on ways to improve processes, it is also important to address improvement of products and services.

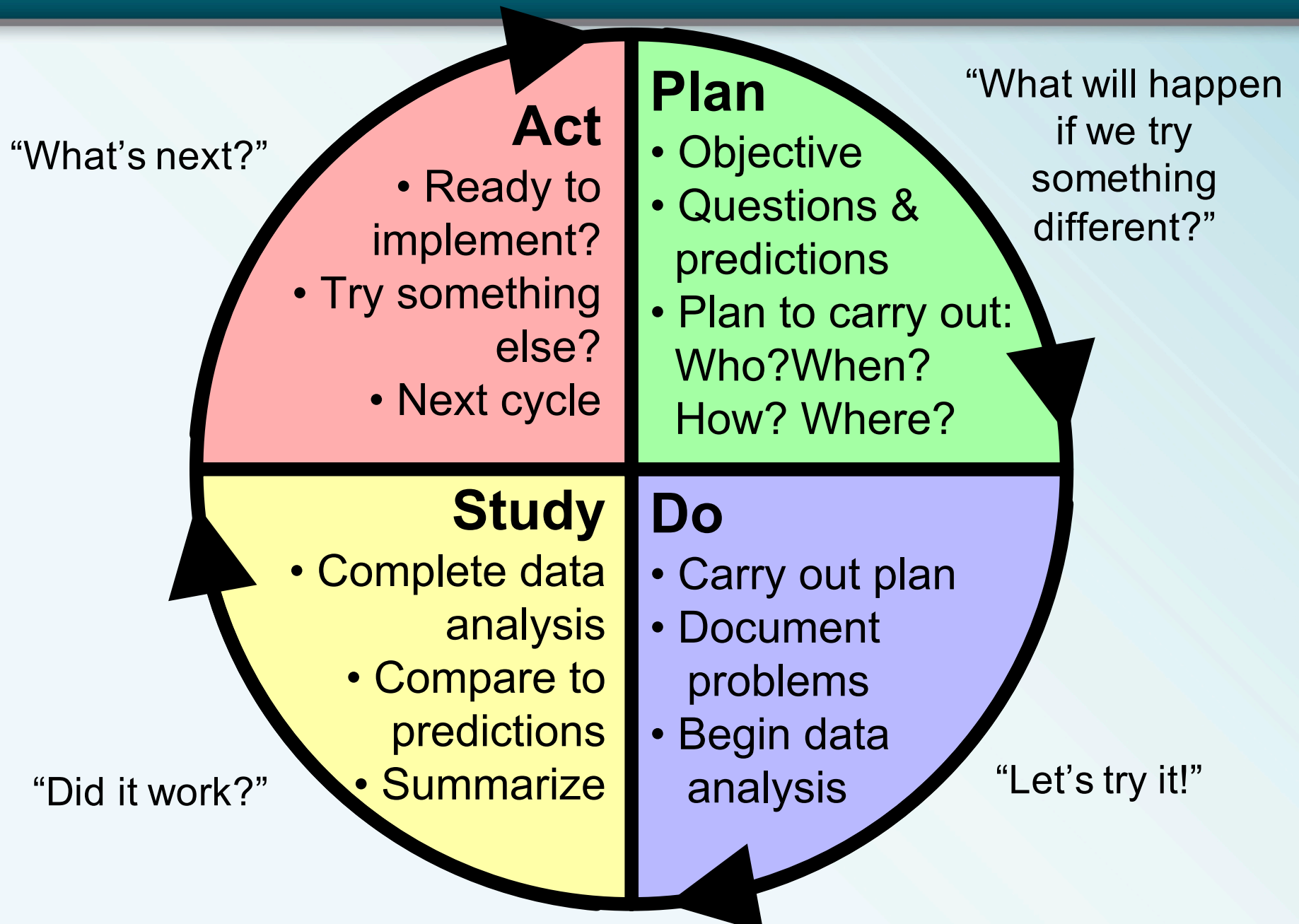
The Model for Improvement

The three questions provide the strategy



The PDSA cycle provides the tactical approach to work

The PDSA Cycle



Key Language for Stating the Objective of the Test

Probably Change

Test

Redesign

Eliminate

Reduce

Deliver

Relocate

Probably No Change

Recruit

Distribute

Continue

Examine

Discuss

Teach

PDSA Documentation

Aim:

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

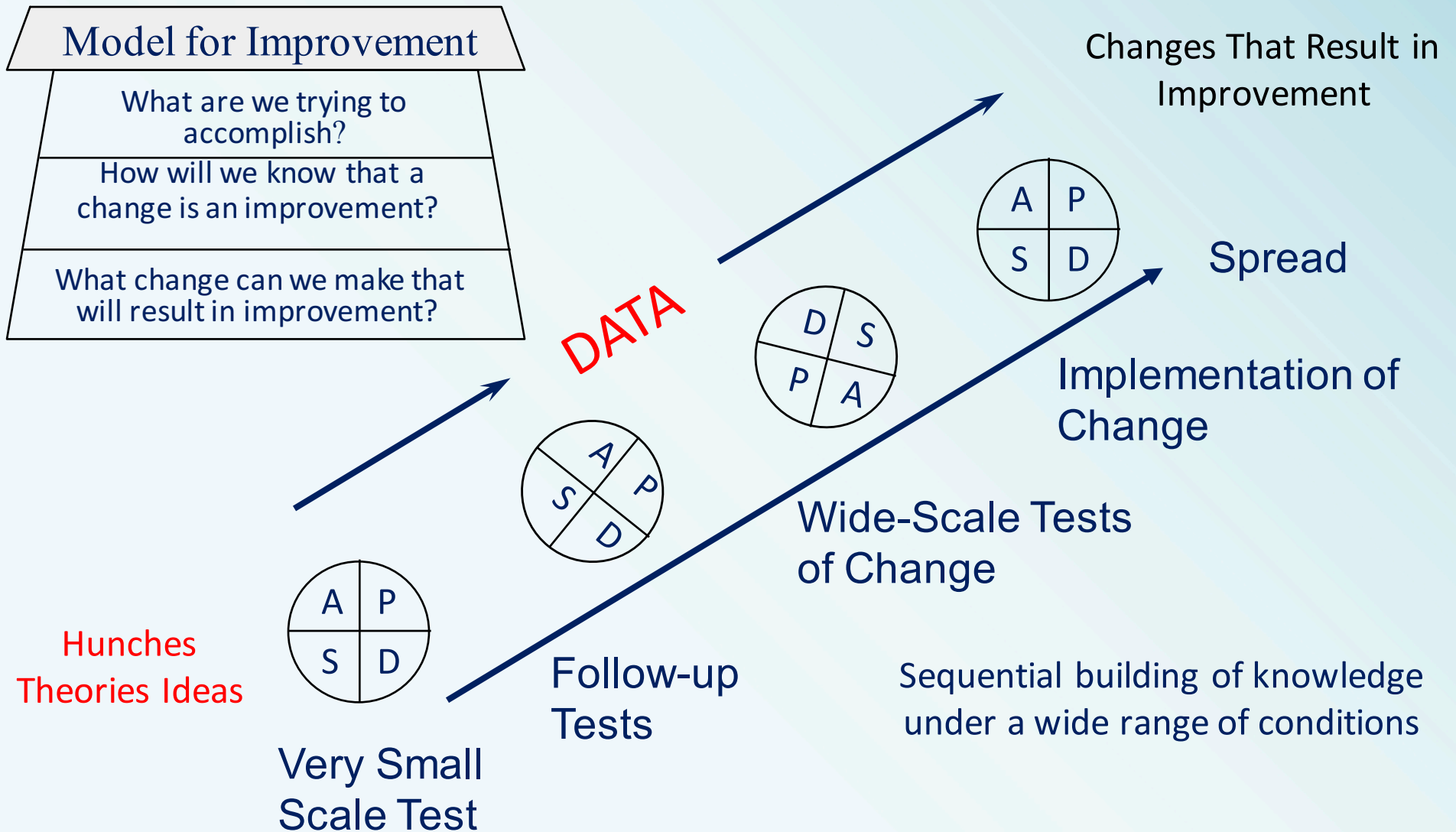
Act

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



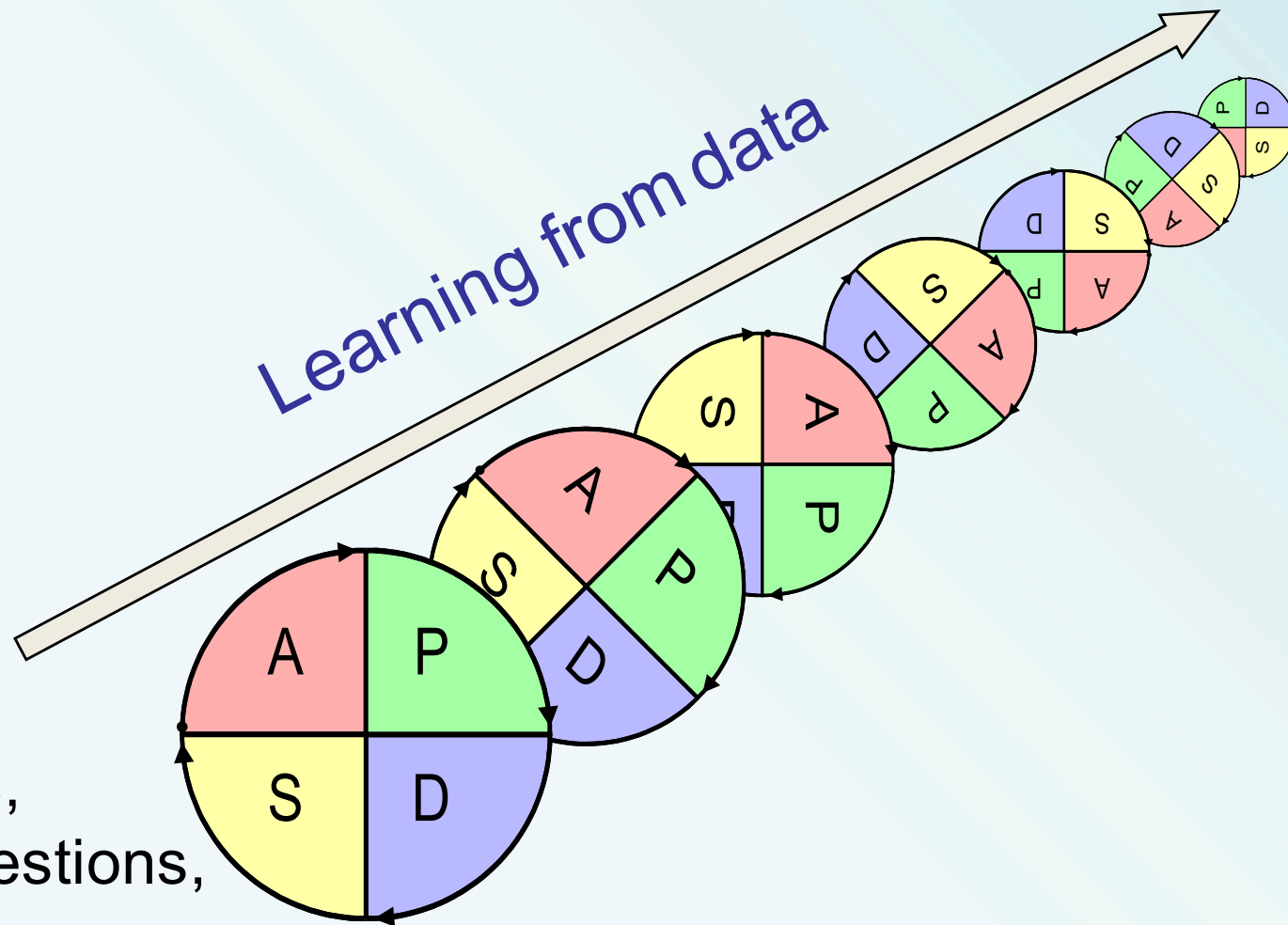
North Carolina
Quality Center

Repeated Use of the PDSA Cycle



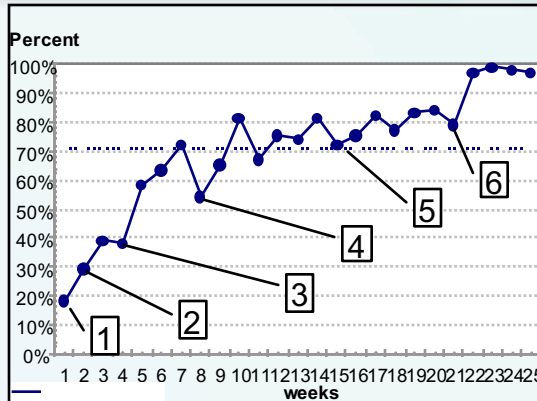
Building Confidence for Change

Ideas,
suggestions,
intuition



System
changes that
will result in
improvement

Change Idea: Include patients and families in briefing, huddles and debriefing

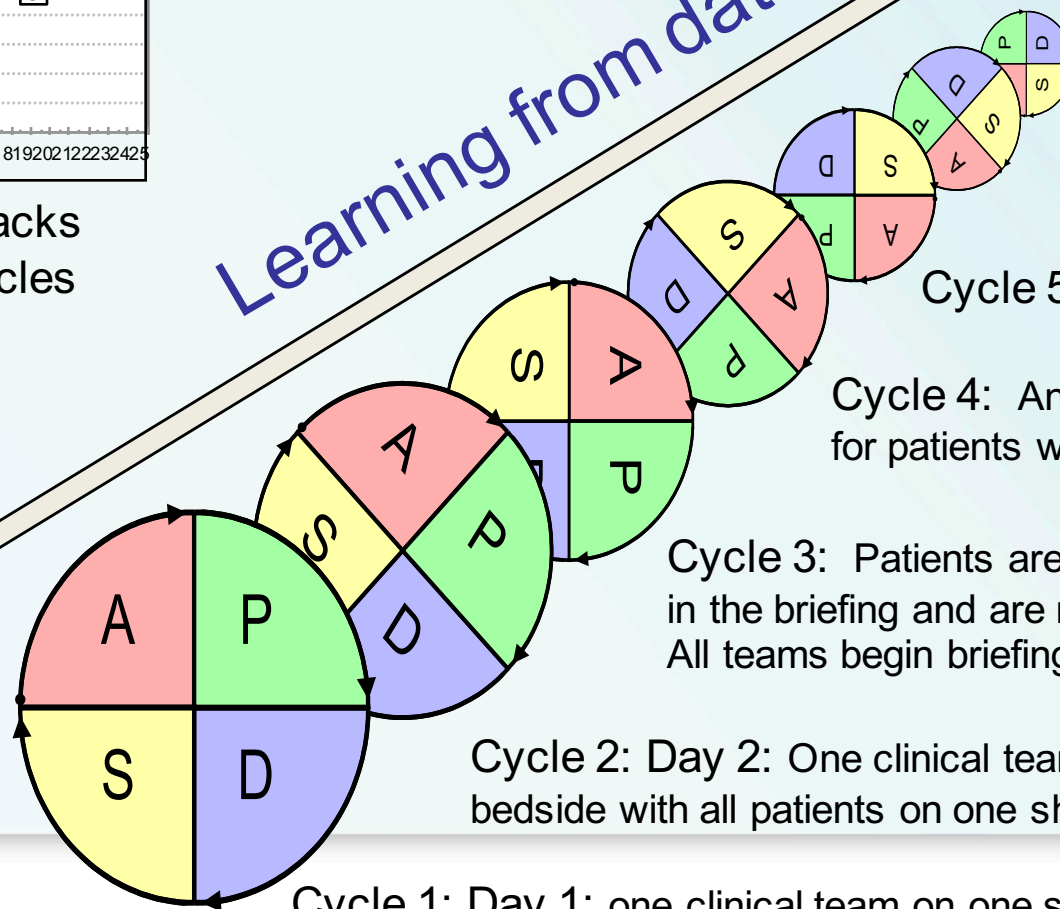


Mini-measure tracks improvement cycles

Learning from data

99% Reliability

If we include patients & families in planning & learning, they will take a more active role in safety...



Cycle 1: Day 1: one clinical team on one shift does their briefing at the bedside with one patient and asks the patient and family to participate

More Tips for Testing

- Test with volunteers
- Use simulation
- Do not try to get buy-in, consensus, etc.
- Be innovative to make test feasible
- Collect useful data during each test
- As cycles proceed, test over a wider range of conditions



Testing: Start small

- 1 patient
- 1 day
- 1 admission
- 1 physician

Testing: 1 → 3 → 5 → All

Why Test?

Why Not Just Implement then Spread?

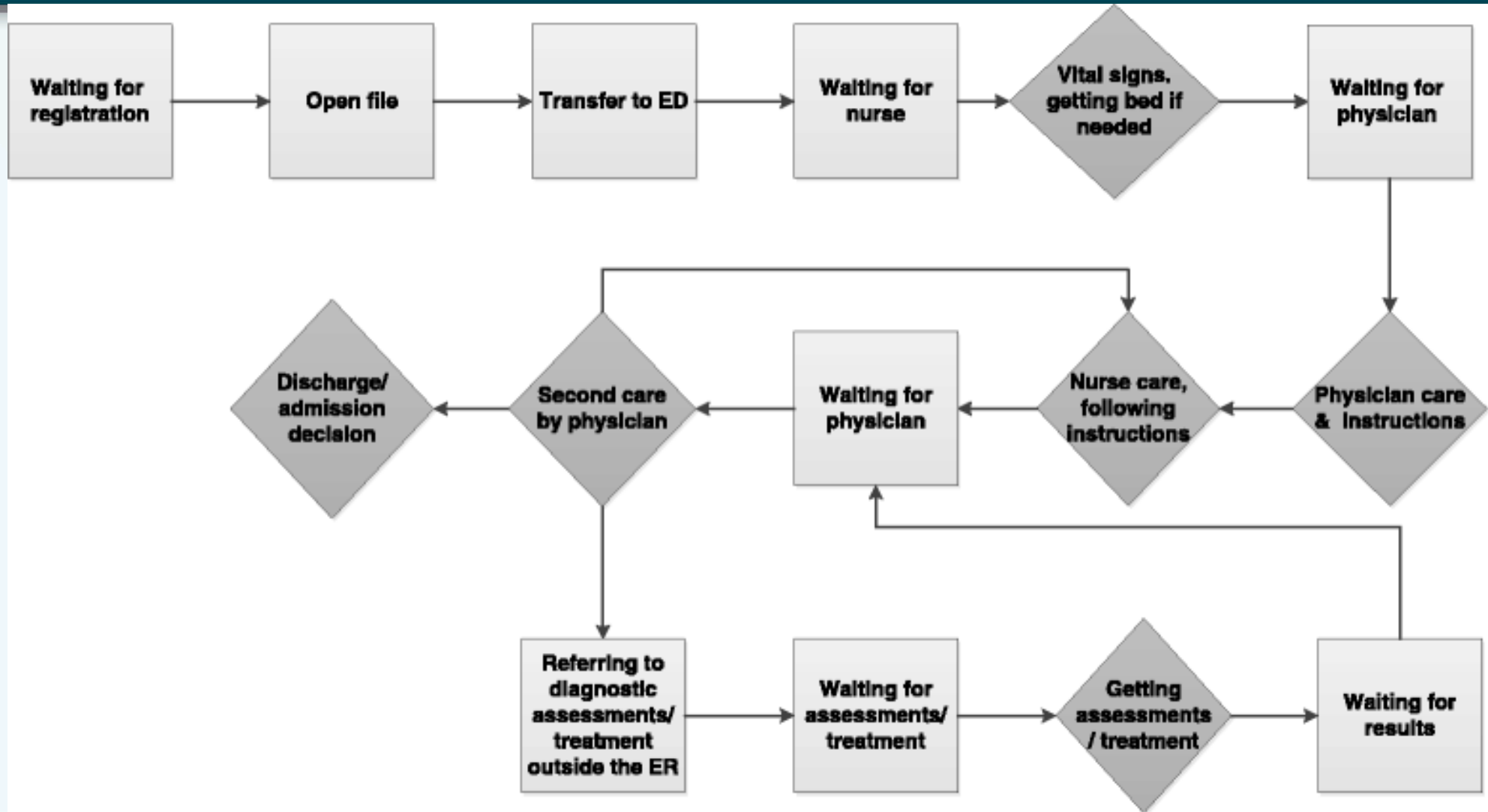
- Increase degree of belief in the change idea
- Document expectations and results
- Build a common understanding
- Evaluate costs and side-effects
- Explore theories and predictions
- Test ideas under different conditions
- Learn and adapt for the next test

QI Tool Spotlight

Process Mapping



Process Mapping



Why is process mapping important?

- It provides an opportunity to learn about work that is being performed
- Most processes today are undocumented

*You don't learn to Process Map,
You Process Map to learn.*

Dr. Myron Tribus

Process maps are used to...

- Document processes
 - Provide a reference to discuss how things get done
 - Describe and understand the work we do
- Analyze and improve processes
 - Identify areas of complexity and re-work
 - Generate ideas for improvement
 - Illustrate process improvements

Preparing to process map

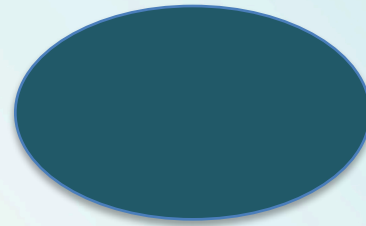
- Assemble the team

Identify other people who should be involved in the process map creation, or asked for input, or to review drafts as they are prepared

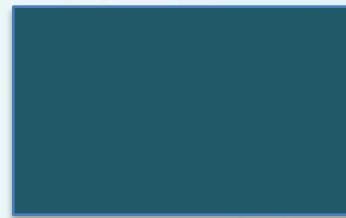
- Agree on which process you wish to map
- Agree on the purpose of the process
- Agree on beginning and end points
- Agree on the level of detail to be displayed
- Start by preparing a narrative outline of steps

Basic Symbols Used to Process Map

- Start & End



- Activity



- Decision



Important Points

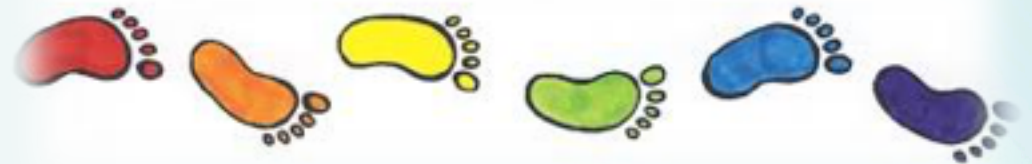
- **Process map what is, not what you would like the process to be—current state**
- Process mapping is dynamic— use post-it notes, dry erase markers, pencil, etc.
- All process maps must have start and stop points



Gemba Walks

GEMBA = where the work is done

- Patient first—walk in their steps
- Staff next – most valuable resource, consider their perspective



Observing the Process: Keeping it Real

- Avoid assumptions and bias
- Follow the process through at the front line
- Follow the process from the patient perspective (tracer)
- Include a patient advisor on the improvement team, or ask a patient advisor to review the process map and provide feedback

Considering Value in the Process

Value Added

Anything the patient thinks is necessary or is willing to pay for (direct care, lab tests)

Non-Value Added

Anything the patient considers unnecessary and is unwilling to pay for (errors, waiting)

Non-Value Added but Necessary

Anything that supports the patient and is needed but is not considered of value by the patient (regulations, billing, staff training)

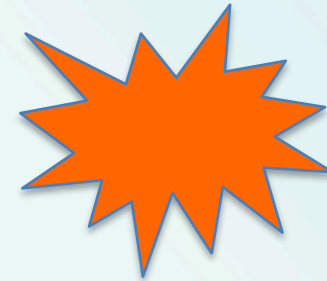
Non-Value Added Activity

The Eight Wastes

- **D**efects
- **O**verproduction
- **W**aiting
- **N**on value-added processing
- **T**ransportation
- **I**nventory
- **M**otion
- **E**mployee (underutilized knowledge, skills)

Enhance Your Process Map

- Adjust the process, if necessary, with learnings from your Gemba walk.
- Add starbursts to the process map to indicate places where you find non-value added steps, waste or problems.



The QI Process

- Aims
- Measures
- Drivers
- Value/Waste Identification
- PDSA Cycles
- Document Improvements – Test More Widely
- Implement Changes

QI efforts and the Patient Voice

Why?

1. Understand the ACTUAL patient experience
2. Identify gaps you may have missed
3. Address core/key issues
4. Reduce waste

How?

Evolution of PFA role and training:

- PFACs
- Quality Observers
- PFAs in RIEs
- PFAs in RCAs

Discussion Questions

1. What quality improvement methods have you employed in your hospital?
2. What successes have you experienced with quality improvement?
3. What are your biggest challenges with quality improvement?
4. What quality improvement tools have you found to be most effective?

Open Forum



Reminders



Reminder

April 15th – Submission Deadline for
Q1 / 2016 **EDTC** Measures via QDS

May 15th – Submission Deadline for
IMM2 Measure to QualityNet

May 15th – Submission Deadline for
OP-27 Measure via NHSN

Thank You!

QUESTIONS?



North Carolina
Quality Center

NC Quality Center Team

Debbie Hunter, MBA

Performance Improvement
Specialist

dhunter@ncha.org

919-677-4103

Christi Beals, MSL

Project Manager

cbeals@ncha.org

919-677-4136

Amy Smith

Project Coordinator

asmith@ncha.org

919-677-4140

Tiffany Christensen, BFA

Performance Improvement
Specialist – PFE

tchristensen@ncha.org

919-677-4119

Elizabeth Mizelle, MPH

Healthcare Data Analyst

emizelle@ncha.org

919-677-4124

Sharon McNamara

Coach

sambossmom@nc.rr.com



North Carolina
Quality Center