# Welcome to the OPQC Webinar Series:
The Model for Improvement: Standardizing the Care of Pregnant Women and their Infants

- Thank you for joining; our webinar will start shortly!

- In the mean time; please sign in the chat box the names of all webinar participants and full name of hospital or organization affiliation.

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WELCOME
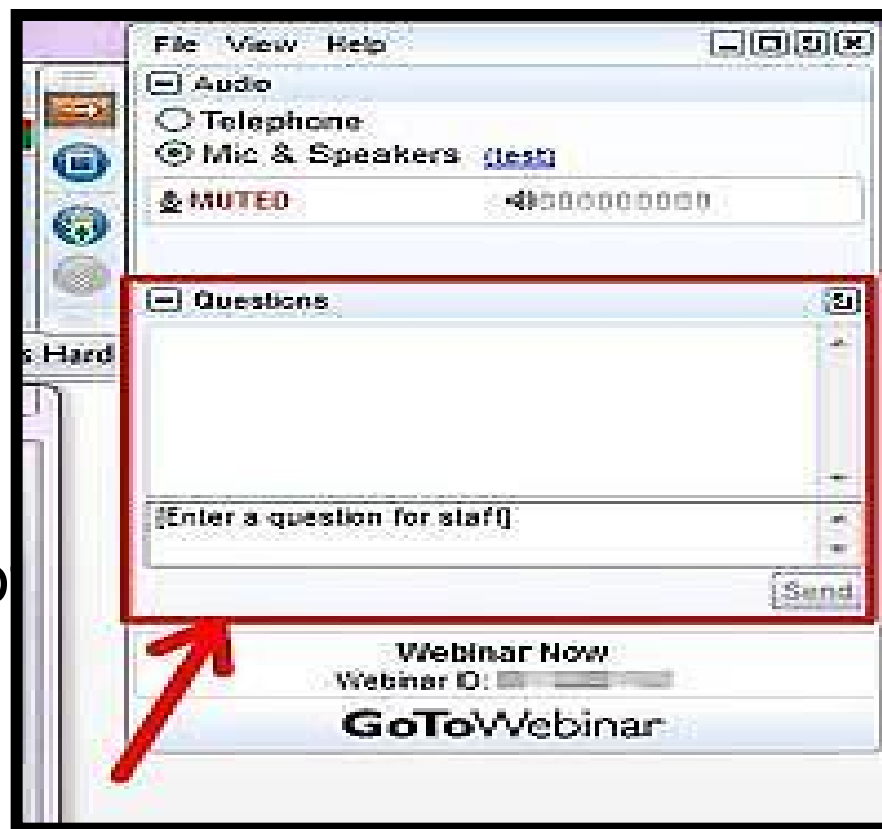
The Model for Improvement: Standardizing the Care of Pregnant Women and their Infants

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Maternal-Fetal Medicine Specialist

Director of Quality and Safety for Women's Services

TriHealth Cincinnati,Ohio

OPQC OB Faculty

March 10, 2015

March 24, 2015

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CME Requirements for Internet-based Activities

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OPQC Continuing Education Program for Level 1 Hospitals in Ohio:

The Model for Improvement:
Improving and Standardizing the Care of Pregnant Women and their Newborn Infants

Presenters:

Michael Marcotte, MD

Facilitator: Raj Narang

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Objectives:

- Discuss the central role of data collection in evaluating the presence and direction of change.
- Use specific examples of PDSA cycles from OPQC project teams to demonstrate small tests of change.
- Describe how an interdisciplinary team improves the quality of tests of change.
- Describe the benefit of a QI mentor for a novice team.
- Define the acronym SMART.
- Demonstrate a SMART Aim.
- Define Quality health care.
- Define Value as it relates to Quality health care.

Hardware/Software Requirements**:**
Compatible with Mac and Window users and common web browsers. High-speed access recommended though not required (responsiveness may be noticeably slower using dial-up connection).
Adobe Flash Player 9.x is required and Speakers/headphones required to listen to audio

Provider Contact Information:
If you should have any questions about the content of the meeting, please contact Dr. Michael Marcotte.
If you should have any questions regarding CME credit, please contact the CME office at cme@cchmc.org.

Introduction to Faculty

Dr. Michael Marcotte
Ob-Gyn at TriState Maternal-Fetal Medicine Associates
Good Samaritan Hospital-Seton Center
Director of Quality and Safety for Women's Services, TriHealth

- He has been an obstetric expert working with OPQC since 2008 and a national expert for the March of Dimes since 2013.

- Dr. Marcotte received is MD at the University of Toledo Medical School, formerly called the Medical College of Ohio.

Agenda

Time	Topic	Presenter
Noon	Welcome, Introductions and Review of agenda	Raj Narang
12:05 pm	The Importance of Standardizing Quality in Perinatal Care	Michael Marcotte, MD
12:15 pm	The Model for Improvement : 3 Questions and Plan-Do-Study-Act cycles	Dr. Marcotte
12:35 pm	The Importance of the Interdisciplinary Team in Perinatal Quality Improvement	Dr. Marcotte
12:45 pm	Q&A	Dr. Marcotte
12:55 pm	Wrap up	Raj Narang

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Muting and Recording

➢ Use the **MUTE** button on your phone or

➢ You can use *6 to place the call **on MUTE** and *6 to **come off of MUTE**

- We will mute all lines and begin recording when the presentation begins

- During Q&A we will unmute lines

Objectives for today's call:

- Discuss standardization and quality as essential components of perinatal health care
- Review the Model for Improvement: 3 questions and PDSA Cycles
- Discuss specific examples of PDSA cycles from OPQC project teams to demonstrate small tests of change
- Describe how an interdisciplinary team improves the quality of tests of change

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Change = Part of Life

- We want things to be:
  - Better
  - Faster
  - Stronger
  - Cheaper
  - Higher
  - Stronger

  We want all change to result in Improvement!

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Change and Improvement are Not the Same Thing!

A Change

Good change and definite improvement

Shocking change and questionable improvement

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QI is the right way to make change

- Patient focused
- Team approach
- Proactive versus reactive
- Efficiency and cost savings

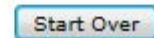$$value = \frac{quality(perceived\ \&\ technical) \times accessibility}{cost}$$

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It takes a village…

ANCS as a Measure of Hospital Quality

Set Measure ID	Measure Short Name
PC-01	Elective Delivery
PC-02	Cesarean Section
PC-03	Antenatal Steroids
PC-04	Health Care-Associated Bloodstream Infections in Newborns
PC-05	Exclusive Breast Milk Feeding

5 Fundamental Principles of Improvement

- Knowing what you need to improve
- Having a way to get feedback so you know if you are improving
- Developing a change that will effectively result in improvement
- ❖ **Testing the change a little at a time and adapting the change as needed**
- Implementing or making the change permanent

The Improvement Guide
Associates in Process Improvement

This is not about just working harder

This is about ---

- Making sure that the right thing happens for patients every time: reliable health care

- A preoccupation with failure

- Empowering clinical and clerical staff at the unit level as the first line of defense

- Recognizing the importance of support from senior medical and administrative leadership

- Learning and practicing improvement science

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In Health Care
It is True that…

- Variations in outcomes between and within hospitals are real

- Variations can be measured

- A systematic approach to decreasing variation is needed for successful standardization of care

- Standardized care will mean that every patient will get the same quality, evidence based care every single time

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"**If you don't know where you are going, any road will get you there.**"

Lewis Carroll

The Model for Improvement

Aim Statement

What are we trying to accomplish?

S - Specific

M - Measurable

A – Actionable

R – Relevant

T – Time bound

Examples of Aims

- By January 1, 2016, reduce *to 3% or less,* the number of women who are 37.0 to 38.6 weeks gestation for whom delivery is scheduled in the absence of appropriate medical indication at The Best Ever Hospital

- By June 30, 2015, improve birth registry accuracy so that Progesterone administration will be documented accurately in 95% of OB medical records at St. Excellent Hospital

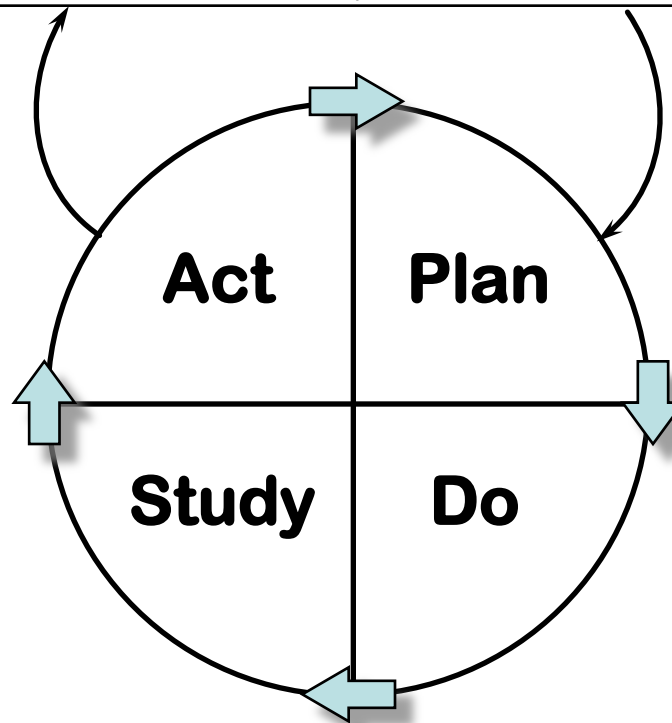# The Model for Improvement

Measures →

Model for Improvement

What are we trying to accomplish?

How will we know that a change is an improvement?

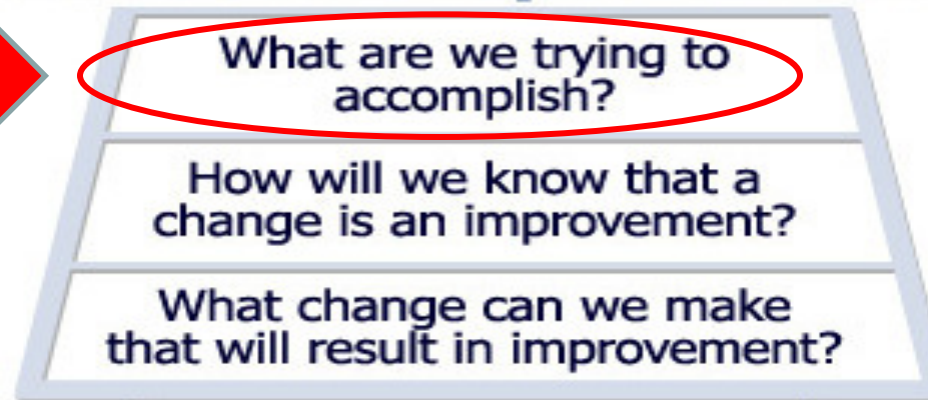What change can we make that will result in improvement?

Act | Plan

Study | Do

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Measurement

"Suspecting and knowing are not the same."
Rick Riordan, *The Lightning Thief*
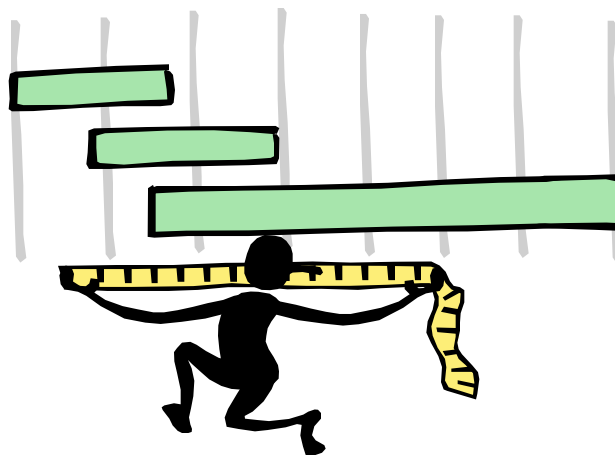
Measurement

- Having a way of getting feedback to let you know improvement is happening

- Creates a sense of urgency for change, improvement, for getting started with a test of change

How will Improvement be Measured?

- Birth Certificate/Registry is a publically reported data source
- Your medical records
- Patient feedback, verbal or written
- Feedback from other departments, other shifts

EED Inductions

Births induced at 37-38 weeks with no apparent medical indication for early delivery, by month, 2006-2014
Aggregate of Ohio maternity hospitals

Source: Ohio Department of Health, Vital Statistics

Monthly Percent — Baseline Average Percent — - - - Control Limits
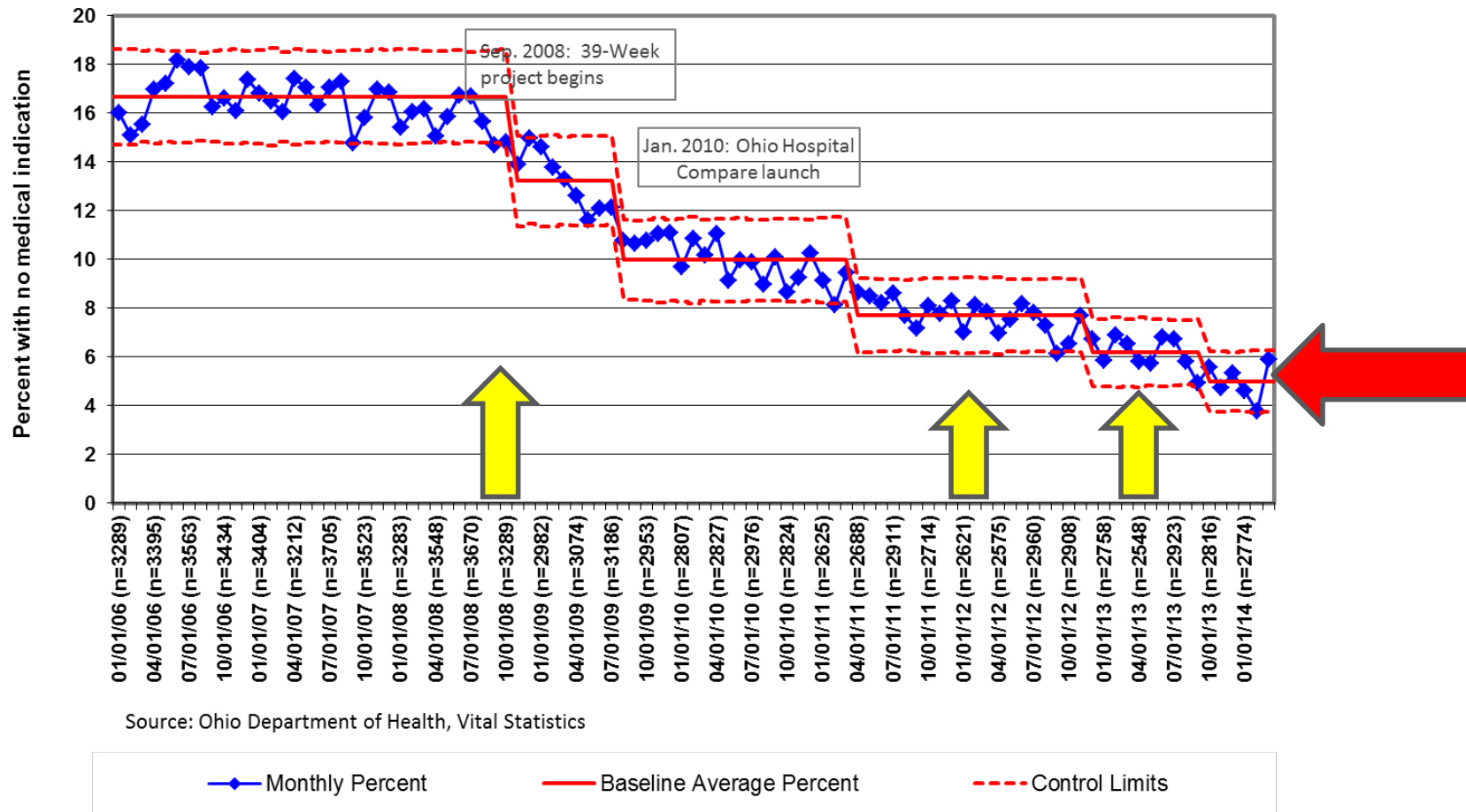
ANCS Project Results

- Birth Registry Data now more closely matches hand collected data

Births at 24-33 completed weeks receiving any antenatal steroids, by quarter, Aggregate results for 19 OPQC charter sites

January 2010: Ohio Hospital Compare launched

January 2012: OPQC ANCS project begins

Source: Ohio Department of Health, Vital Statistics
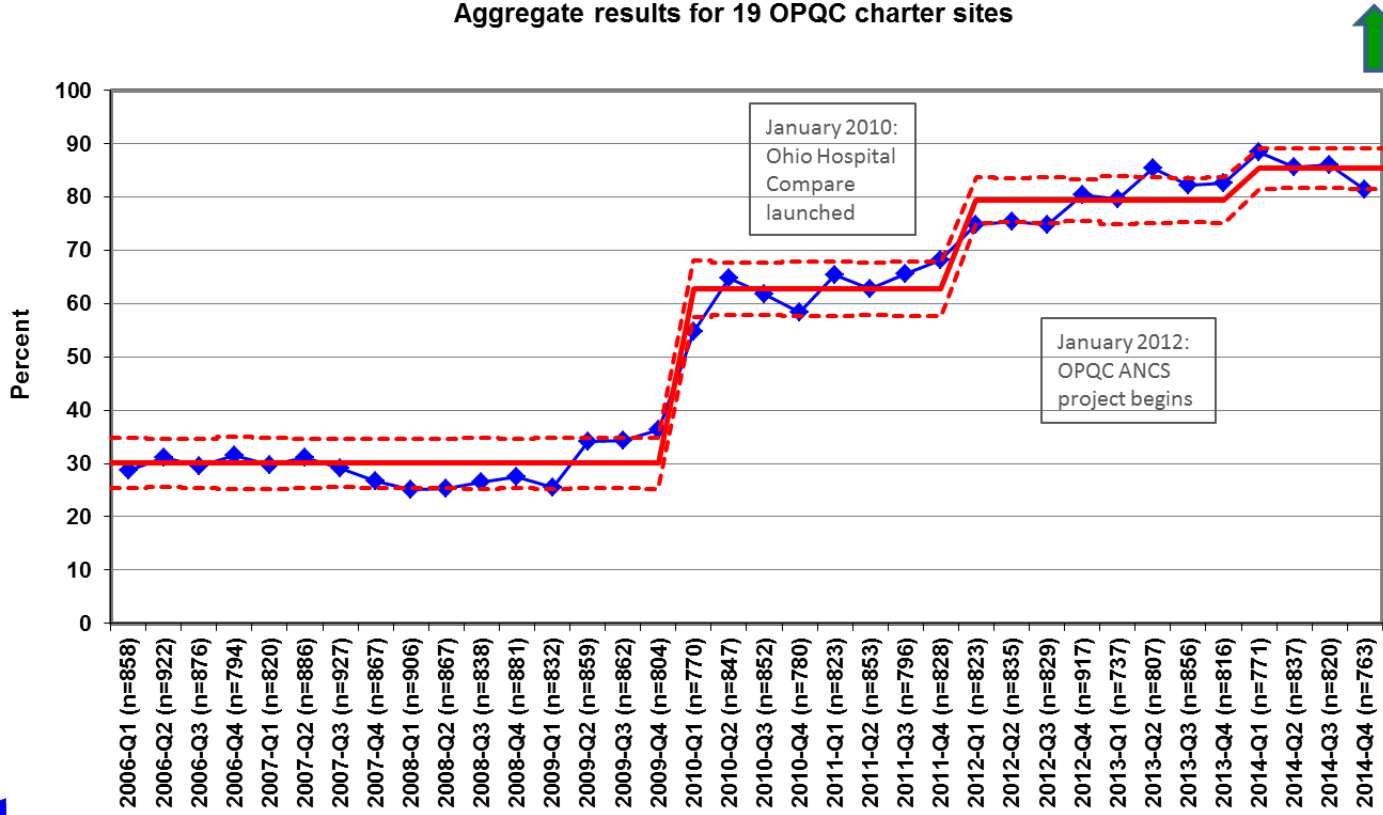
Quarterly Percent — Baseline Average Percent ---- Control Limits

Impact of Ohio OCHA Weaning Protocol

Neonatal Abstinence Syndrome Length of Treatment
2012-2014
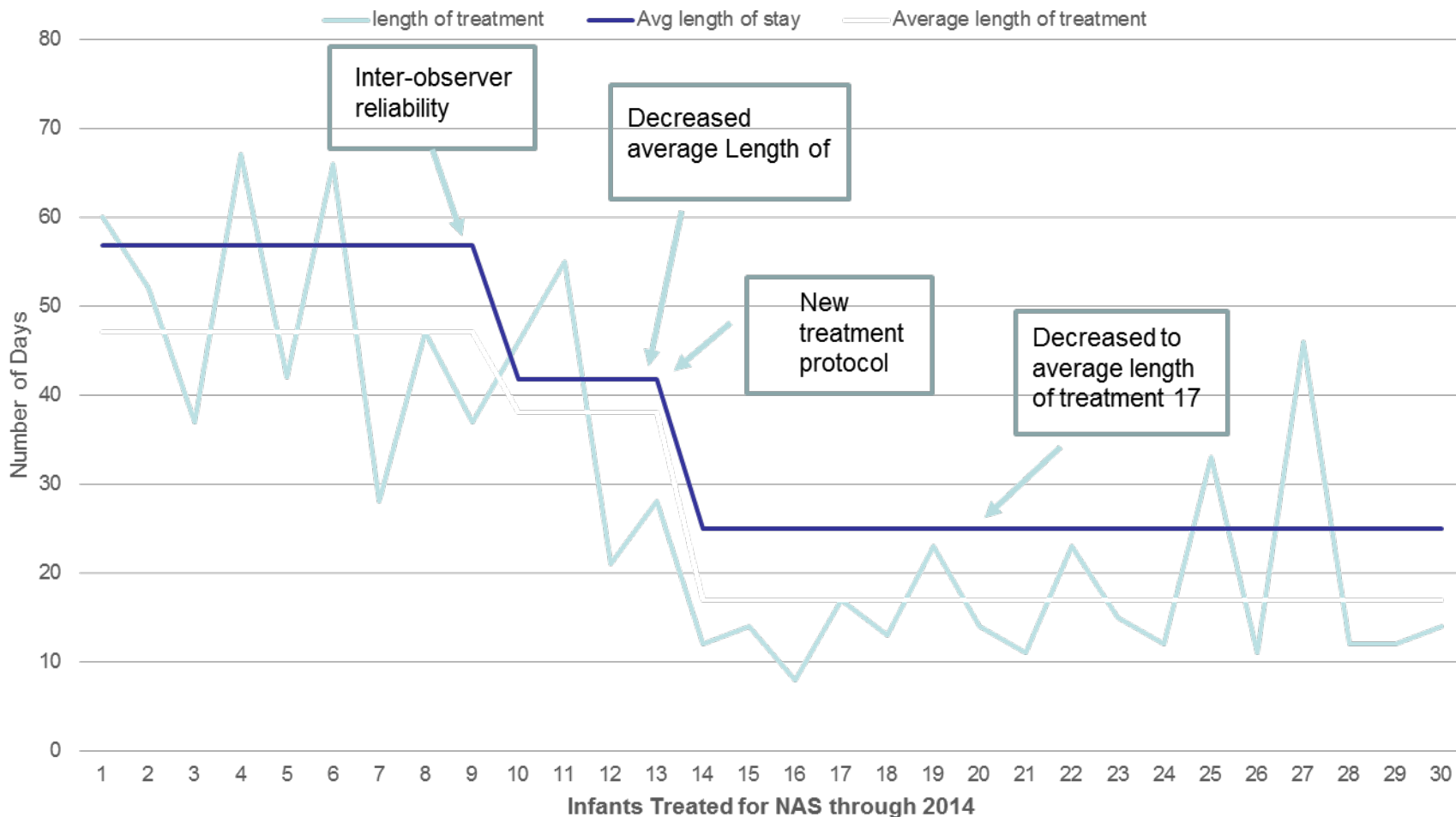
Collaborative Aggregate

OPQC NAS Project
Collaborative Aggregate
Average Length of Stay for Pharmacologically Treated Babies
n=Denominator, Nm=Number of NICUs included in the denominator
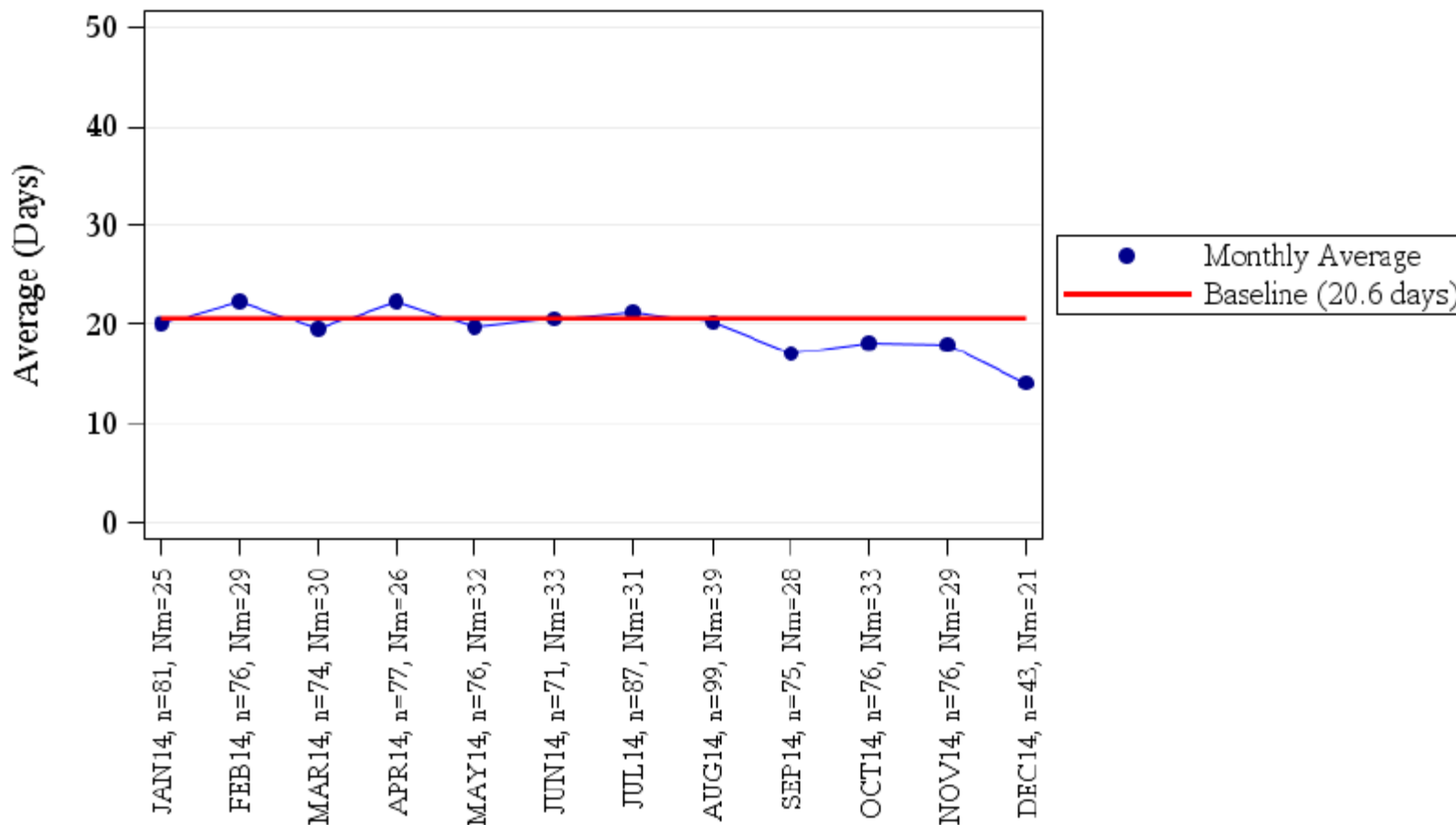
The Model for Improvement
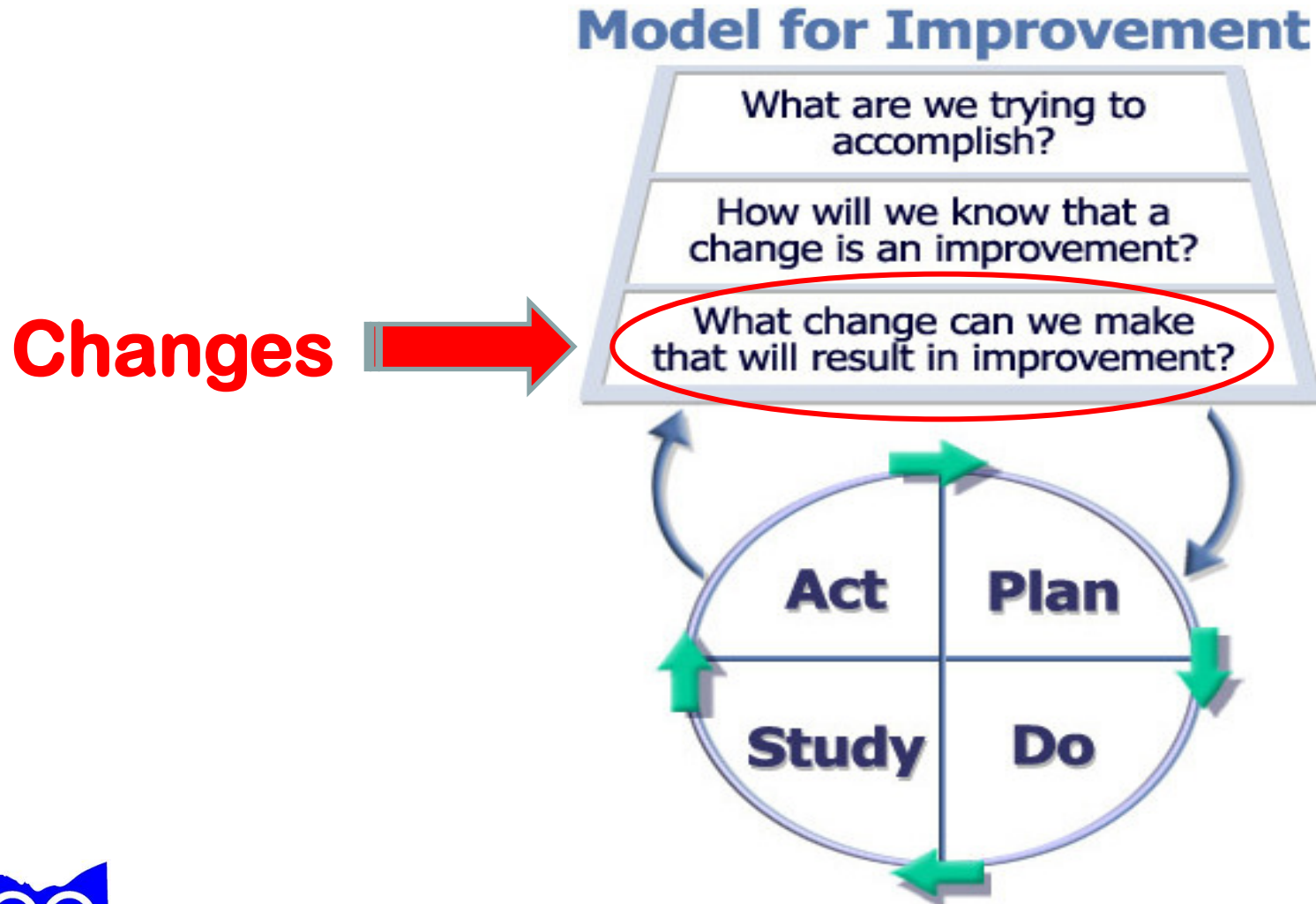
Ideas for change

- Think about ideas you've been wanting to try

- Group created ideas are best: more creativity and better chance for buy-in
  - include people that will be involved in testing the change or will be impacted by the change

- "Steal shamelessly"
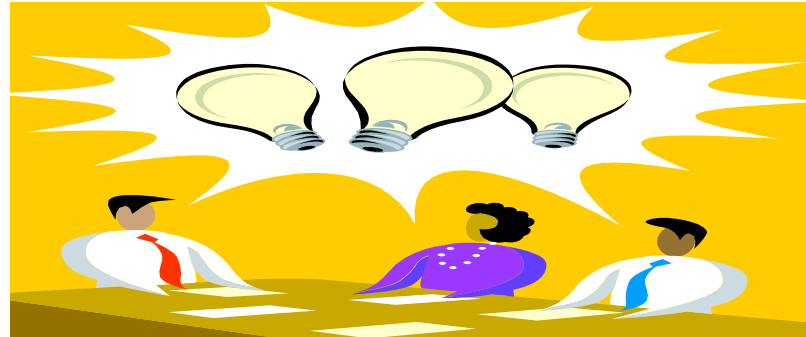
The PDSA cycle: Where changes are tested

ACT
Plan the next cycle
Decide whether the change cna be implemented

PLAN
Define the objective, questions and predictions. Plan to answer the questions (who? what? where? when?)
Plan data collection to answer the questions

STUDY
Complete the analysis of the data
Compare data to predictions
Summarise what was learned

DO
Carry out the plan
Collect the data
Begin analysis of the data

What is a test?

Putting a change into effect on a temporary basis and learning about its impact.

What is <u>Not</u> a Test?

- Data collection
- Implementing a solution by memo or policy
- An educational program
- Getting a form, policy or procedure approved by official committees

Courtesy of CCHMC I2S2 Course

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Why Test?

1. To reduce the risk/cost of implementing an intervention→ testing provides an opportunity to learn without severely impacting day to day practice

2. To increase (or decrease) your belief that the change will result in improvement

3. To learn how to adapt the change to other conditions in your environment

4. To minimize staff resistance to implementation

Courtesy of CCHMC I2S2 Course

Smaller Scale Tests: The Power of "One"

Keep the first test small

- **one day**
- **one physician**
- **one patient**

Key Driver Diagram (Learning Structure)

Aim

Key Drivers
(Measures)

Design Changes/Interventions

AIM: Goal of the project
"What are we trying to
accomplish?"
S.MA.R.T
S = Specific
M = Measurable (Outcome)
A = Actionable
R = Relevant
T = Time bound

Key Drivers: Identified components
of the system or process that are
vital to achieving the
Aim

Interventions: Change concepts
that impact **Key Drivers**:
"What changes can we make that will
result in improvement?

Measures: A means to quantify
the **Aim** and **Key Drivers**;
"How will we know that a change is an
improvement?" Identify *process* and *outcome*
measures

Cincinnati Children's

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Draft PROGESTERONE PROJECT KEY DRIVER DIAGRAM

Revision Date: 09-19-14

SMART AIM

BY July 1, 2016, DECREASE THE RATE OF PREMATURE BIRTHS in Ohio less than 37 weeks by 10%, and less than 32 weeks by 10%

GLOBAL AIM

REDUCE INFANT MORTALITY IN OHIO BY REDUCING PREMATURE BIRTHS

Key message: Women at risk of preterm birth are a high-risk population that needs to be identified and actively managed.

DRIVERS

Consistent and early recognition of prior preterm birth

Adopt a cervical length ultrasound screening protocol

Expedite progesterone supplementation

Use patient-centered medication management

INTERVENTIONS

- Screen women for OB history of preterm birth
- Align and communicate with EDs, WIC, etc. to screen and refer when history of preterm birth
- Facilitate rapid new OB appointments
- Postpartum counseling on progesterone for those eligible in next pregnancy

- Use sonographers trained in cervical length measurement
- Develop a practice protocol to selectively or universally screen cervical length (consider population risk)

- Create a written protocol for identified candidates
- Start progesterone as soon as possible (according to ACOG and SMFM guidelines) after identification of eligible woman
- Follow up with women to check on continued use of progesterone as prescribed

- Educate on benefits of progesterone and use evidence-based counseling methods (e.g. Motivational Interviewing) if there are concerns
- Involve key support individuals
- Connect women to insurance, home care, social services, etc. to ensure progesterone available &administered

Key Driver Diagram

Project Name: OPQC Neonatal NAS — Leader: Walsh

GLOBAL AIM

To reduce the number of moms and babies with narcotic exposure, and reduce the need for treatment of NAS.

SMART AIM

By increasing identification of and compassionate withdrawal treatment for full-term infants born with Neonatal Abstinence Syndrome (NAS), we will reduce length of stay by 20% across participating sites by June 30, 2015.

KEY DRIVERS

- Prenatal Identification of Mom Implement Optimal Med Rx Program
- Improve recognition and non-judgmental support for Narcotic addicted women and infants
- Attain high reliability in NAS scoring by nursing staff
- Optimize Non-Pharmacologic Rx Bundle
- Standardize NAS Treatment Protocol
- Connect with outpatient support and treatment program prior to discharge
- Partner with Families to Establish Safety Plan for Infant
- Partner with other stakeholders to influence policy and primary prevention.

INTERVENTIONS

- •All MD and RN staff to view "Nurture the Mother- Nurture the Child"
  •Monthly education on addiction care

- Fulltime RN staff at Level 2 and 3 to complete D'Apolito NAS scoring training video and achieve 90% reliability.

- •Swaddling, low stimulation.
  •Encourage kangaroo care
  •Feed on demand- MBM if appropriate or lactose free, 22 cal formula

- • Initiate Rx If NAS score > 8 twice.
  •Stabilization/ Escalation Phase
  •Wean when stable for 48 hrs by 10% daily.

- • Establish agreement with outpatient program and/or Mental Health
  •Utilize Early Intervention Services

- Collaborate with DHS/ CPS to ensure infant safety.

- Engage families in Safety Planning.

- Provide primary prevention materials to sites.

PDSA

- Test an intervention in your system/hospital/practice
- Keep the overall aim and key driver in mind when designing test
- Test other's successful interventions

Plan

- *Plan is the longest and most important part of a PDSA test.*

- Briefly describe the test (related to your Aim)

- How will you know that the change is an improvement? (Measurement)

- What do you predict will happen? (Do you think it will work? What do you think will happen?)

Plan (continued)

- List the tasks necessary to complete this test (What exactly are you going to do?)
- Person(s) responsible (Who is going to do it?)
- Time of the test? (When will it be done?)
- Location of the test (Where are you testing?)
- Data collection (What precise data will be collected to show if the test was a success and by who?)
- *If Plan isn't precise, you won't be able to know with certainty if a change worked*

Do

- <u>Test the changes</u>
  - To begin keep the test small and build upon successes
  - Ask yourself: Was the test (PDSA cycle) carried out as planned?
  - Record data and observations.
    - **very important to remember what worked…or didn't
 - What did you observe that was not part of your plan?

Study

- <u>Learn from your experience</u>--Huddle with team
  - Did the results match your predictions? _Yes _No
  - Compare the result of your test to your previous performance: Did this test give you more improvement? What was better? What was not as good as you had predicted?
  - What did you learn?

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Act

Act gives you three options:

- **Adapt** – Make changes (or try under different conditions) and try again

- **Abandon** – "What you thought was a good idea was not such a good idea after all…"

- **Adopt --** Do the same test on a larger scale, implement or plan for sustainability
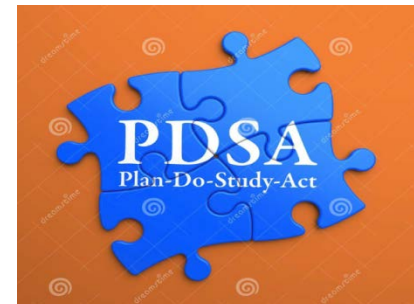
Trial and Learning

- Continuous cycles allow you to test your idea, learn from it and try again

- Continue testing until you find the solution that helps you reach your objective

- "No improvement" is not a failure, it's a source of learning

Key Points for PDSAs

- Do initial PDSAs on smallest scale possible
  - A "cycle of one" usually best
  - "Failed" cycles are good learning opportunities, particularly when small
- As you move to standardizing (implementation) test under as many conditions as possible: different shifts, more staff, weekends
  - Think about factors that could lead to breakdowns, supports needed, "naysayers"

Examples of an OPQC Team's PDSA cycles

With sincere thanks to the OPQC Progesterone team at:

Women's Health Center, Doctor's Hospital, Columbus

- Michele Ross, RN
- Mary Ann Cain, RN, BSN, MSA
- Heather Tabor, RN, BSN, EFM-C
- Diana Topolnycky, D.O.

Improving the Identification of Women with History of Prior Spontaneous Preterm Birth

- PDSA #1
  - Identifying women with history of prior preterm birth at time of call for first OB appointment

    P = Taught staff to ask about OB history of SPTB

    D = Schedulers asked all first appointment callers if history of SPTB. 1 week

    S = Schedulers forgot to ask 100% of time; average of 10 new appointments scheduled each week

    A = <u>Adapt</u> test to include a simple algorithm for schedulers

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Improving the Identification of Women with History of Prior Spontaneous Preterm Birth

- PDSA #2: Adapt
  - Identifying women with history of prior preterm birth at time of call for first OB appointment
    - **P** = Simple algorithm for screening questions was posted on scheduling board*: Can't make an appointment without looking at it. *Master list of new OB appointments*
    - **D** = Schedulers asked all first appointment callers "Have any of your babies been born early?" 1 week
    - **S** = Schedulers remembered to ask 100% of time; 2/10 or 20% callers didn't understand the screening question
    - **A** = Adapt test to include clarifying terminology what is meant by "early?"

Improving the Identification of Women with History of Prior Spontaneous Preterm Birth

PDSA #3: Adapt

– Identifying women with history of prior preterm birth at time of call for first OB appointment

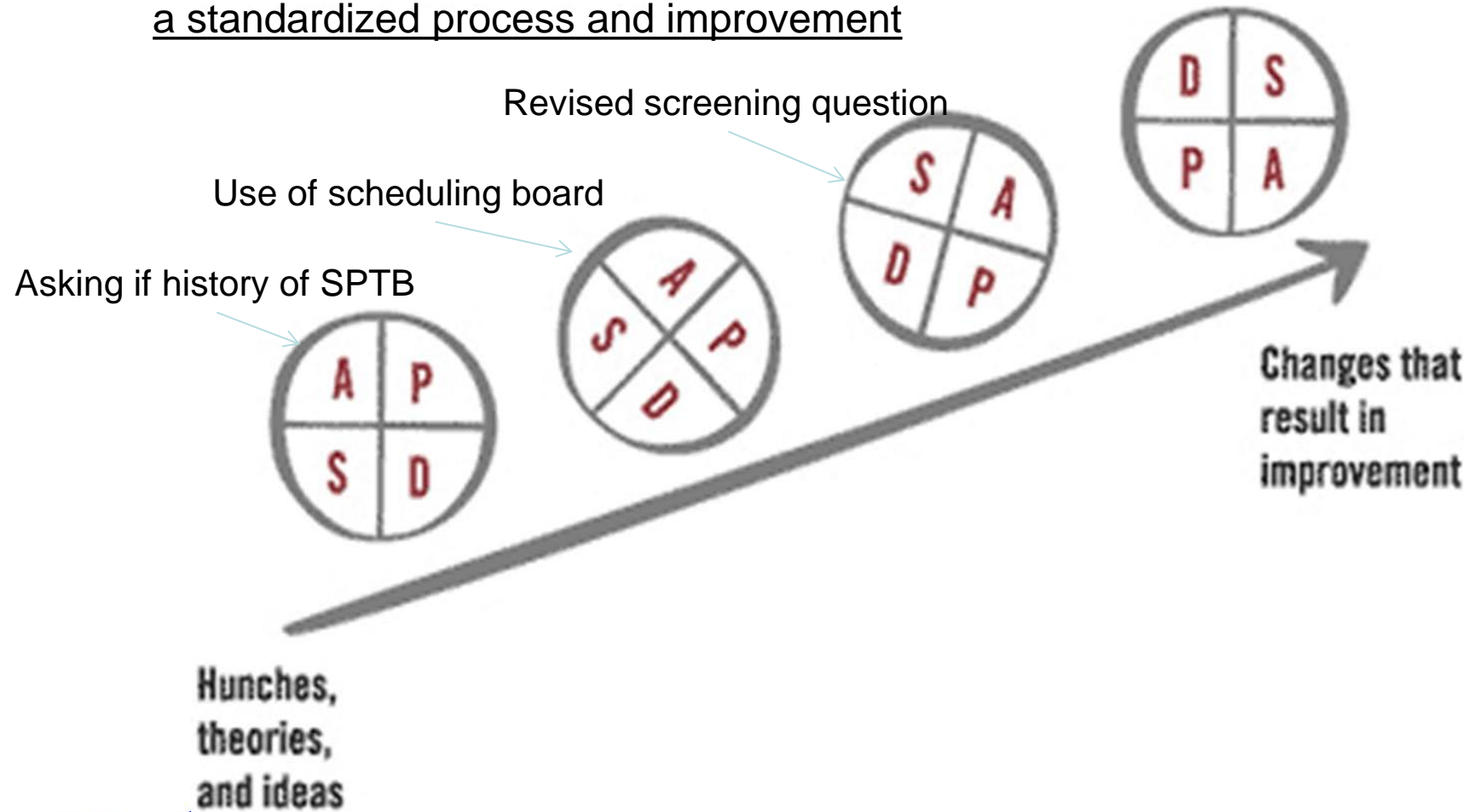**P** = Schedulers to use simple algorithm and revised question

D = Schedulers asked all first appointment callers: Did you ever deliver any of your babies early? If yes, did your baby go to the NICU?

S = 3/10 new patients were identified as needing expedited first OB appointment. No callers voiced confusion about questions. Data showed some of the callers were patients who had received progesterone in prior pregnancies

A = <u>Adopt</u> this process for all first appointments. Begin to test ways to standardize identification of patients who had received progesterone previously and didn't deliver early, but needed an expedited appointment

Repeated Testing

Repeating or Ramping changes resulted in
a standardized process and improvement

Revised screening question

Use of scheduling board

Asking if history of SPTB

Changes that
result in
improvement

Hunches,
theories,
and ideas

Now what?

- Think a couple of cycles ahead
- Look at Ideas or Interventions again
- Plan multiple cycles to test and adapt change
- Collect useful and only just enough data during each test
- Learn from failures as well as successes
- Communicate what you've learned

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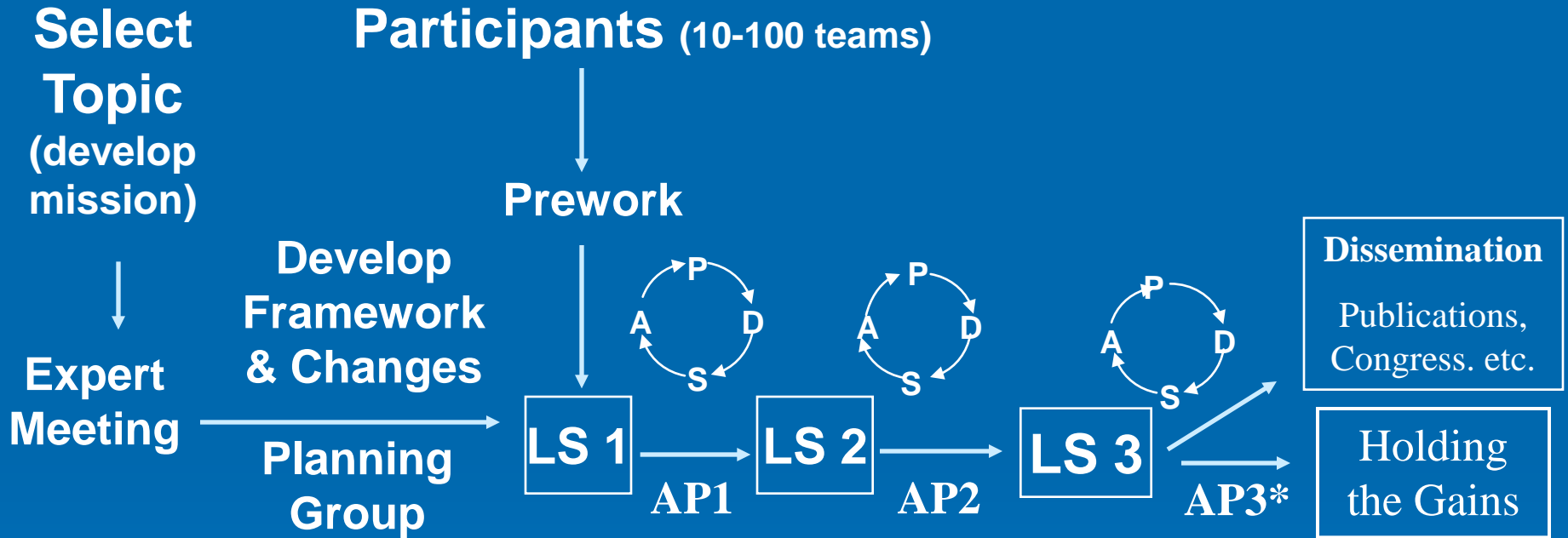Ohio Perinatal Quality Collaborative

Summary

- Change as an improvement depends on careful planning
- Change as an improvement requires documentation of:
  - What is needed (*Aim)*
  - The impact of the difference (*Measuring)*
  - What was done differently (*Change idea)*
  - Repeated tests of the change idea under different circumstances *(PDSA)*

Working with a Collaborative like OPQC Improves Care

- Interdisciplinary team work <u>and</u> support from leadership are closely tied to positive change in health care

- Networking Works - Sharing lessons learned increases speed of change and credibility

- A collaborative like OPQC provides QI support for the novice and the expert
  - Nationally recognized faculty
  - QI coordinators
  - Participation in evidence based projects

IHI Breakthrough Series
(6 to 18 months time frame)

Select Topic (develop mission)

Participants (10-100 teams)

Develop Framework & Changes

Prework

Expert Meeting

Planning Group

LS 1 → AP1 → **LS 2** → AP2 → **LS 3** → AP3*

PDSA cycles (P D S A) between learning sessions

Dissemination

Publications, Congress. etc.

Holding the Gains

LS – Learning Session

AP – Action Period

Supports

Email (listserv)   Phone Conferences

Visits   Assessments

Monthly Team Reports

*AP3 –continue reporting data as needed to document success

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South Carolina Department of Health
and Environmental Control

For a Question or Comment, please Click on the raised hand icon on the right of your screen OR type into the chat box.

For more information about OPQC

- OPQC web site: https://opqc.net
- OPQC email: opqc@cchmc.org
- Twitter account: @OhioPQC
- OPQC Online Newsletter

- **Raj Narang, MBA**
- Senior Project Specialist
  - opqc@cchmc.org

OPQC and Your Hospital:
Working together to improve outcomes for women and newborns in Ohio