

Continuous Quality Improvement Toolkit

A Resource for Maternal, Infant, and Early Childhood Home Visiting Program Awardees

Module 5 Facilitation Guide: Understanding the PDSA Process and Measurement

Purpose/Goals: The purpose of this training module is for the participants to learn about how to implement the Plan-Do-Study-Act (PDSA) cycle to guide the CQI process.

Time: About 100 minutes (30 minutes of content and 70 minutes of activities).

Format: This presentation is given in person but can also be delivered via webinar if necessary. The recommendation is for participants to sit with their agency in small groups of four to six per table. Coaches should float between tables and connect with each agency team.

Equipment: An in-person training requires a laptop and projector to deliver this presentation. This training can also be conducted via Webinar, which would require a Webinar service, laptop, and telephone. To complete the Coin Spinning Activity, four coins of different sizes and a timepiece are needed for each group.

Materials:

- PowerPoint slides — The notes section of the PowerPoint slides contains talking points to use during the presentation. A copy of the slides may also be provided to participants.
- *The PDSA Cycle: Step by Step* handout — Within each stage of the PDSA cycle, there are several action steps to guide participants through the process. This handout, referenced on Slide 15, is a reference document for independently developing PDSA cycles.
- *Coin Spinning Game Worksheet* — This handout is used for the Coin Spinning Game and is referenced on Slides 17 and 18.
- *PDSA Ramps* Handout — This handout provides tips and examples for linked tests of a change strategy, also referred to as PDSA ramps. The handout provides tips, an example, and a worksheet that can be helpful for planning future PDSA cycles. It is referenced on Slide 36.
- The *PDSA Cycle Worksheet: Example* and the blank *PDSA Cycle Worksheet* walk participants through each stage of the PDSA cycle. The *PDSA Cycle Worksheet: Example* illustrates how to complete the worksheet. The blank worksheet provides a template for participants to plan their own PDSA cycle. Slide 37 includes notes on how to facilitate the completion of the handout.

General Topics Covered:

- The PDSA cycle and explain why it is useful
- Three types of measures for PDSA cycles
- How to conduct rapid improvement cycles

Introduction to PowerPoint Activities and Participation. When the icon below appears, participants will be engaged.



Activity: Example of Change Strategies: Family Retention (Slide 9)

- **Introduction:** This activity guides participants in how to increase family retention through three examples of change strategies.
- **Time:** About 10 minutes.
- **Instructions:** Present the potential family retention innovations to the participants and ask them to think about how each innovation may lead to improvement.
 - Ask participants to select one change strategy and volunteer to provide a rationale as to why the change strategy will help retain families.
 - If the example and explanation given are sound, reinforce the key points and thank the person for sharing.
 - If the example and explanation do not fully explain why the change strategy would lead to family retention, ask the participants followup questions to help him/her think through the underlying logic. For example, if the participant selects “Texting to support the family’s goals” and he/she states, “The family will feel more supported,” you can ask the following questions:
 - Why would feeling supported matter for retention?
 - Why would you text rather than email or call the family member? What is unique about texting?
 - If texting is a good option because it follows how the family members communicate, how does this lead to their retention in home visiting?
 - Is it possible that at first the family does not value home visiting? If so, is it possible that texting with the family member to support their goals increases their perceived value of home visiting, thus reducing the likelihood the family will leave?

Activity: Coin Spinning Game (Slides 17 and 18)

- **Introduction:** This activity demonstrates how PDSA cycles work and how data can be easily collected and charted. By making predictions about spinning coins, participants learn more about the experimentation process, why predictions are made, and why data are recorded. Please watch the [youtube video](#) prior to facilitating this session for more guidance. If the link here or on the slide does not work, copy the link (<https://www.youtube.com/watch?v=3U9lLiPOhtM>) and paste it into your browser.

- **Time:** About 20 minutes (5 minutes to introduce the game, 10 minutes to play the game, 5 minutes to debrief).
- **Instructions:** Ask participants to break into agency teams of four to six for this activity. Briefly introduce the activity and its objectives.
 - Provide each team with four coins of different sizes and the *Coin Spinning Game Worksheet*.
 - Have the teams designate one person to be the time keeper. This person needs a watch with a second hand or a smartphone with a stopwatch function.
 - Review the *Coin Spinning Game Worksheet* with the teams.
 - Plan — Develop a plan to test the change strategies and predict what you expect to happen.
 - Do — Execute the change strategy as planned. Record the observations.
 - Study — Document similarities and differences between what was predicted and observed.
 - Act — Decide whether to adapt, adopt, or abandon the change strategy.
 - Remind teams to document the results on the run chart at the bottom of the page.
 - Ask for questions, then provide 10 minutes to play the Coin Spinning Game. Walk around to ensure that teams understand and are completing the *Coin Spinning Game Worksheet* as intended.
 - Debrief — Reconvene the teams to debrief the game using the following questions:
 - What brought you to the longest spin?
 - Creativity — Tried spinning on different surfaces (e.g., table, notepad, floor).
 - Theory — Who was the best spinner? Which coin spins the best?
 - Ability to formulate and ask questions — Explored assumptions without judgment.
 - How many tests did your team run?
 - How much data did you collect? How many data points are on your run chart?
 - For teams that completed the run chart, ask “Were you surprised at how quickly you could collect the data and fill out a run chart?”
 - For teams that did not complete the run chart, ask “In the real world, if multiple change strategies are tested and a change is documented, how would you be able to tell what steps you took to get there?”

Activity: What Type of Measure Quiz (Slide 27)

- **Introduction:** This activity helps participants identify process, outcome, and balancing measures. All PDSA cycles should include at least one measure of each type. When the slide appears, the red checks will not be visible. After the participants indicate their first answer, click “Enter” for the first check to appear. Only click once, or multiple checks will appear. Use the facilitator notes with each slide to walk through the content and facilitate discussion.
- **Time:** About 10 minutes.
- **Instructions:** Present the following SMART aim for smoking cessation to the audience: “By October 1, 2018, 10 of the 20 primary caregivers who reported smoking at enrollment will quit smoking within 6 months of enrollment.” Next, present each measure that is associated with the smoking cessation project and ask audience members to identify whether the measures are process, outcome, or balancing measures.
 - Alcohol use — This is a balancing measure, as decreasing tobacco use may cause an increase in other substance use. Monitoring other substance use to make sure that alcohol or drugs are not being substituted for tobacco is important.

- Number of quitline referrals — This is a process measure; referral to a quitline is a change strategy that can be tested to determine whether it increases the likelihood that primary caregivers will quit smoking.
- Number of primary caregivers who quit smoking within 6 months of enrollment — This is an outcome measure, and is the primary measure of change to determine whether change strategies are successful.
- Number of home visitors trained in motivational interviewing — This is a process measure; motivational interviewing is a change strategy that can be tested to see if it increases the likelihood of smoking cessation.
- Number of home visits attended — This is a balancing measure, as the primary caregiver may reduce or stop attendance at home visits if he/she feels too much pressure from his/her home visitor to quit smoking.

Activity: PDSA Group Work (Slide 37)

- **Introduction:** This activity guides participants through planning their own PDSA cycle using the *PDSA Cycle Worksheet* and SMART aims created in the previous module.
- **Time:** About 30 minutes.
- **Instructions:** Ask participants to break up into their respective agency teams of four to six participants. Ask participants to fill out the blank *PDSA Cycle Worksheet*, using the *PDSA Cycle Worksheet: Example* as necessary. You may choose to walk through the example as a group if you think that would be helpful for the participants.
 - Use the SMART aim statements created in the last module to develop this PDSA cycle.
 - Provide participants with 15 minutes to complete the blank PDSA worksheet.
 - Have participants complete the PDSA worksheet, focusing on the plan section. Encourage participants to
 - Develop a timeline for the initial PDSA.
 - Think through tasks necessary to carry out the change strategy and who will be responsible for those tasks.
 - Predict what will happen and how the team will measure whether the predictions are accurate.
 - Discuss a potential next PDSA cycle.
 - Reconvene the groups. Invite a representative from each team to share its planned PDSA cycle (timeline, scale, next cycle). Ask the following:
 - How has the team incorporated the “Power of One” into its PDSA cycle and ramp?
 - For teams that are proposing to start on a larger scale, ask the representative to elaborate on why the team thought it was necessary to start larger: “What would it look like to start with testing with just one family?”