Mr. Potato Head PDSA Collaboration

Why Use This Exercise

- To teach rapid cycle PDSA testing.
- To emphasize the importance of prediction and measurement.
- To show the ease of rapid cycle testing and measurement for learning.
- To demonstrate the value of collaborative learning.

Target Audience

Frontline caregivers, managers, and leaders of organizations. The exercise can be adapted to all levels of people involved in improvement efforts. It is very useful to those engaged in testing or facilitating testing.

Type of Exercise

Experiential exercise involving participation of all team members. Can be facilitated with small to large groups.

Key Concepts:

- Rapid, small scale PDSA testing builds profound knowledge quickly.
- Planning a test, including prediction and measurement increases learning.
- Planning and measurement are easy to do efficiently and routinely.
- Collaboration aids knowledge building and speeds learning for improvement.
- Testing creates knowledge faster than discussion and planning.
The exercise was developed by David M. Williams, Ph.D. an improvement advisor at www.truesimple.com, and tested on several Institute for Healthcare Improvement (IHI) collaboratives. Williams adapted the game based on an exercise facilitated by Eric W. Dickson, MD, MHCM, FACEP, President of UMASS Memorial Medical Group and faculty of the Impacting Cast & Quality collaborative. Dickson used Mr. Potato Head to show the value of standardized work and lean thinking.

The exercise is designed to simulate the Model for Improvement and the IHI Breakthrough Series Collaborative Model.

These instructions are adapted from the format in the National Quality Center (2006, August). The game guide: Interactive exercises for trainers to teach quality improvement in HIV care.

Materials

For this game, you will need:

- A room with round tables of 6-8 participants.
- A Mr. Potato Head for each table. Each Potato Head should be stored in the same way (see Figure 1). Important note: Mr. Potato Head comes in many versions. It’s important to have a full size version and the same version should be used across participants.
- Flip chart paper visible to all participants displaying the accuracy score operational definition:
  - 3 – All pieces on Sam & positioned correctly
  - 2 – All pieces on Sam, but one or more is out of place
  - 1 – One or more pieces are not on Sam.
- Flip chart paper (adhesive or with masking tape) with a pre-drawn table for PDSA documentation and two run charts (see Figure 2) at each table.
- Markers for each table for documenting on flip chart paper.
- A time piece able to capture minutes and seconds at each table.
Figure 1. Mr. Potato Head Version Example and Storage

Figure 2. Flip Chart Template

<table>
<thead>
<tr>
<th>PDSA</th>
<th>Theory</th>
<th>Prediction</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Go from toe to head</td>
<td>Time: 60 Sec.  Accuracy: 3</td>
</tr>
<tr>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Preparation

To prepare for the session:

- Familiarize yourself with the sessions structure and content.
  - Read through the game instructions and key teaching points in their entirety.
  - Practice the game itself.
  - Practice presenting the key teaching points.
  - Sketch out the timing and key points for reference.
- Prepare the room.
  - Preferably rounds distributed in the space so there is room for the facilitator and participants to move but also be close to other tables.
  - Place one pre-drawn flip chart sheet at each table, on the wall or an easel. It should be close enough for the team to be able to document freely and see easily and also should be visible to the facilitator and other participants.
  - Place a marker or two at each table.
  - Mr. Potato Heads should be held out of sight by the facilitator or support staff.
- Identify and recruit a senior leader to simulate baseline performance at the start of the exercise. It should be someone who has not seen the exercise (important), the participants perceive as a senior leader (e.g., CMO, CEO), and who has a good sense of humor. Senior leader time commitment is 10 minutes.

Performing the Mr. Potato Head Exercise

Welcome and Introduction

To begin the exercise, welcome participants and thank them for their participation. Ask each table to select four (4) team members to fill the roles of: master clinician, documenter, time measurer, and accuracy score inspector.

Learning Objectives

Tell participants that by the end of the session they will:

- Understand rapid cycle PDSA testing,
- Understand how theory and prediction aid learning.
- See how to collect real-time measurement.
- Appreciate the opportunity of collaborative learning.
Instructions: Mr. Potato Head PDSA Collaboration Exercise

**Agenda**

Provide a brief description of the session’s primary components:

1. Background of the exercise
2. The exercise itself
3. Debrief and discussion on the participant’s learning and how this applies to our work
4. Feedback & close

**Background of the Game**

_Facilitator’s note_

Williams developed the exercise after years of trying to identify an experience that taught PDSA testing, measurement, and collaborative learning. He had tested various methods including lecture and various exercises (e.g., 2-4-6, paper airplane), but most worked for one objective, but not all effectively. None were accessible for all audiences. After seeing a demonstration of using Mr. Potato Head to teach standardized work, Williams adapted it to PDSA testing and tested and evolved the exercise over several collaboratives, of varying focus, and on two continents. This draft represents the current version. Improvements are welcome.

Deming points out that without theory and prediction it is difficult to create profound learning. In addition, measurement supports our learning and helps us understand variation and the impact of our changes. The IHI Breakthrough Series Collaborative Model is aimed at bringing improvement teams together to share discoveries, learn what works, and enable transformational improvements.

Key points to explain to your audience:

- Knowledge is gained through testing (versus planning or brainstorming).
- Tests should be small, rapid, and sequential.
- Theory and prediction preceding and following every test and is essential and more important that the actual results.
- Learning from other teams can accelerate learning and understanding.
- Measurement does not have to be hard and aids learning.
The Exercise Itself

Instructions for the exercise:

Opening Simulation

- Introduce the exercise as a simulation to learn PDSA testing, measurement, and collaboration.
- Ensure each table has the equipment needed and has designated the four (4) roles.
- Recruit a timekeeper and an accuracy score measurer from a front table to judge the simulation.
- Invite the senior leader volunteer to the front of the room to establish our baseline. You can ask questions of the leader highlighting their experience with patient safety and exemplar clinical practice.
- Describe that our aim is to efficiently and effectively provide reliable care to our patient “Sam”.
- From out of sight, place a Mr. Potato Head on the table in view of the participants and in front of the senior leader.
- Remind the senior leader that the aim is to put “Sam” back together quickly and to have him match the picture (provided).
- Instruct your timekeeper to start the clock when the senior leader picks up the Mr. Potato Head and to stop the clock when he or she indicates he or she is finished and removes his or her hands from the toy.
- Let the senior leader begin. As they struggle, the facilitator may make observations or ask questions.
- Once assembled, ask the timekeeper to share time in minutes and seconds and ask the accuracy inspector to select a score based on the operational definition displayed.
- Instruct each team to document the baseline time and accuracy on their run charts as a benchmark of what’s possible.
- Thank your volunteer for simulating the exercise.

Main Exercise

- Hand out a Mr. Potato Head to each table in front of the designated “master clinician”. Request no one touch the toy until instructed.
- Instruct the teams to consider what they witnessed in the simulation and identify one theory they would like to test to improve upon the time and/or accuracy. Ask them to write it on their flip chart paper.
- Instruct the teams to make a prediction of what their time and accuracy score will be.
- Once the two steps above are complete, allow the teams to conduct their test. Advise them they should stop after their test and not do another.
- After the completion of the test, the documenter shall document the time and accuracy on the run charts.
o Steps 2-5 will be repeated. Teams will stop after each test to study results, debrief with the facilitator and peers, and to design the next test.

**Debrief and Discussion**

Debrief will occur after each round. Time should be allowed at the end of the session.

The following debrief should occur after each PDSA and be led by the facilitator. The order can vary on what the facilitator is noting from the teams with exception of the first and last rounds.

o PDSA 1 – (always first) – limited debrief. Instruct the teams to discuss their results and what they learned through doing the exercise. Ask them to identify the next theory to test and their new predictions and to write it on their flip chart. When all teams are ready, instruct them to do their test as described in the main exercise instructions.

o PDSAs 2-5 – order may vary and more than one observation may be shared per round.
  o Find the best time and score in the room. Ask the table what their theory was and ask the other teams to test. This is an example of best practice. Also note that sometimes best practice teams show signs of competition and are resistant to sharing.
  o Note teams continue to return the parts to the same state as they were distributed (i.e., inside the body). There may be an assumption that is a rule and they are anchoring that as a false requirement. For example, the parts could be laid out on the table.
  o Note the energy level and engagement as team members are all involved in planning, testing, and results review.
  o Note that each test may provide various ideas for testing and each one can be tested to learn. Including when two team members have competing ideas.
  o Note how a change may improve one measure but not another. Importance of having a family of measures including process and balancing.
  o Note the ease of measurement and display in real-time.

o PDSA 5 – Inquire why participants are not visiting other teams to learn from them and bring the learning back to their team. Highlight this is the key value of a collaborative and a common missed opportunity in a collaborative. Have them try it.
Feedback and Close

- Ask your audience for feedback on whether this session met its objectives. Take notes of their response on a flip chart, and keep it for your use in the future.
- Schedule an informal follow-up session with any audience member who wants clarification or more information on the game or the concepts you discussed.
- Thank your audience and congratulate them on their hard work.