

| SESSION AT-A-GLANCE | WHO? | HOW LONG? |
|------------------------|-----------------------|------------|
| Introduction | Facilitator | 10 minutes |
| The Game | Facilitator, audience | 20 minutes |
| Debrief and Discussion | Facilitator, audience | 15 minutes |

Tennis Ball Game

Why Use This Game

- To teach how to approach improving a process.
- To teach how to build on knowledge gained from one test in designing a second test.
- To teach how multiple testing cycles lead to improvement.
- To teach the concept of “breakthrough” improvement.

Target Audience

Team members and others who will be developing and running PDSA cycles.

Type of Game

A competition among teams.

Key Concepts

- Processes can be improved by changes in the steps that constitute them.
- The results of one test of a change can help a team identify additional changes to make.
- More tests lead to more knowledge about a process, and to better improvements.
- Setting “stretch goals” can push teams to make substantial improvements.

Source, History and Resources for More Information

This game is used at the Institute for Healthcare Improvement’s Breakthrough Series College and has been used by a number of improvement collaboratives. Additional information about this game comes from Qualis Health, the QIO for Washington State, and its Performance Improvement Support Center.

Materials

For this game, you will need:

- A tennis ball or bean bag for each team
- A way of timing how long it takes each team to complete its process: a stopwatch or a clock with a second hand
- A flip chart and markers to record the results of the discussion

Preparation

To prepare for this session:

- Familiarize yourself with the session’s 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.

- Prepare the room:
 - Participants will work in teams of 6-7 people. Set up the room with enough tables and chairs to accommodate groups of that size. Alternatively, set chairs up auditorium style and plan to have the teams work standing up (they will have to move the chairs out of the way for this, as they will need to work standing in circles).
 - Set up the flip chart in the front of the room.

Playing the Tennis Ball Game

Welcome and Introductions

To begin the game, welcome participants and thank them for their participation. If necessary, ask individuals to introduce themselves to the group.

Learning Objectives

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

- Know how to design changes to a process.
- Know how to test these changes and build on them to design subsequent changes.
- Appreciate how having a clear, ambitious goal can energize a team to make improvements.

Agenda

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

1. Background to the Tennis Ball Game.
2. The game itself.
3. Debrief and discussion on what the game shows, and how its lessons can be applied to HIV care.
4. Feedback and close.

Background to the Game

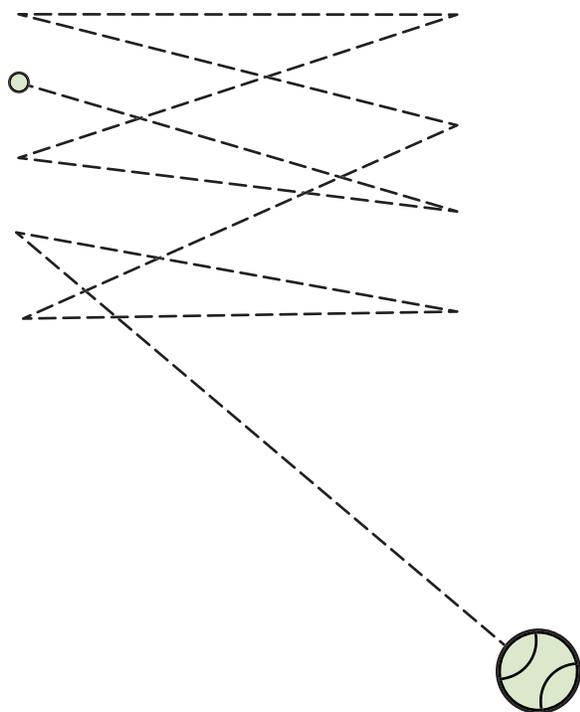
Facilitator's note

This game is a simpler introduction to the concept of PDSA than the Peg Game. It may work better with improvement teams or as a “just in time” teaching technique. As this game is very physical, it is also useful right after lunch or other times when participants' energy is lagging.

This game illustrates the “accelerating improvement” component of PDSA, as shown in the diagram in Attachment I. The idea is that hunches and ideas, when tested, lead to new knowledge that leads to improved processes. Each testing cycle adds more knowledge, and many cycles lead to real improvements.

If your audience is not familiar with the idea of improving quality by improving processes, this game can help introduce that concept. Walk through the steps of a standard patient/client visit. Discuss what can complicate each step and how each complication can affect the quality of care or service you provide.

Step 9 in the game instructions is optional. Using it will allow you to introduce the concepts of benchmarking and breakthrough improvement. Pointing out the excellent results achieved by others is an example of benchmarking – comparing your performance to the “best in class.” If they can achieve these results, why can't we? By presenting the “stretch goal” of the imaginary better performance, you may energize participants to be more aggressive in improving their own performance. In turn, they may achieve startling results!



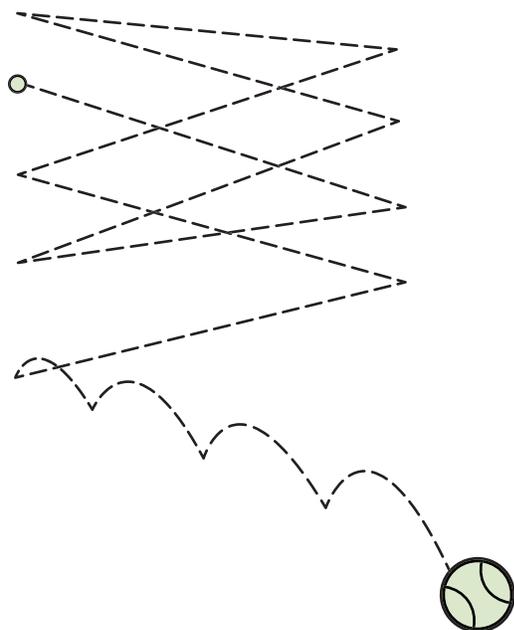
Key points to explain to your audience:

- Describe the components of a PDSA cycle. The attachments to the Peg Game, also in this guide, can be adapted to help in explaining PDSA.
- Stress the idea that many PDSA cycles will accelerate the rate of improvement. Use the diagram in Attachment 1 to illustrate this concept. One key point to stress is that each PDSA cycle creates new knowledge about the process, so focusing on running many cycles – carefully, but expediently – will increase what you are able to learn about your process and the improvements you plan.

The Game Itself

1. If they haven't already, ask participants to form groups of 6-7 people. One person becomes the quality officer, the others will represent steps in the patient visit process.
2. The people representing the steps in the patient visit process stand in a circle or sit around a circular table. The quality officer stands outside the circle but is able to see the process.
3. Begin the design of the patient visit process. One person in the process passes the tennis ball to the person across from him/her in the circle (remembering to whom you threw it). Then the receiver passes it to another person, remembering who each time. The last person passes it to the person that started.
4. Instruct the quality officer to make sure:
 - no one drops the ball.
 - the sequence of steps (i.e., people) is the same on each patient visit.
 - the ball starts and ends with the same person.
5. The quality officer records the time from the start to the end of the process.
6. Practice once to establish the order of the steps.
7. Carry out the process once. The team must start over if execution is done incorrectly or someone "drops the ball". The quality officer times the process and records the time.

8. Complete a PDSA cycle to test some ideas to improve the visit time of the process.
 - Plan: Decide what change to make. Why do you predict this change will result in a shorter visit time? Who will make the change, when and how?
 - Do: Execute the Plan – run the process one time with the changes in place. Check for compliance with quality criteria (see #4, above). Record visit time data.
 - Study: Document what you learned from this test. Be prepared to share your data with other teams.
 - Act: Make a decision about the changes. What ideas do you have for the next PDSA cycle?
9. The facilitator can at this point ask each team for its fastest time. Sigh deeply, and say that you heard that teams in a neighboring clinic, city or state can handle a patient visit much more quickly. Urge your teams to push to match their competitors.
10. Run at least one more PDSA cycle. If you have time, run several.



Debrief and Discussion

Reconvene as a large group. Review results.

- Ask participants what they experienced. Did their times get better? How about from the second to third cycles? Did the second round of improvements build on the first?
- If you used the optional Step 9, explain why you did so. Explain benchmarking and breakthrough improvement. Ask about the impact your comment had on their team's work and its result.
 - The NQC website at NationalQualityCenter.org has information about improvements other programs have made in their HIV care, if you want to try some benchmarking yourself.
- Ask participants about improvements they have tried to make in their HIV programs:
 - Did they use a PDSA approach?
 - If so, did it work? How might they have used PDSA even better?
 - If not, do they think using PDSA cycles would have made this effort more successful? Why or why not?
- Ask participants where might they use PDSA in their current work.

Feedback and Close

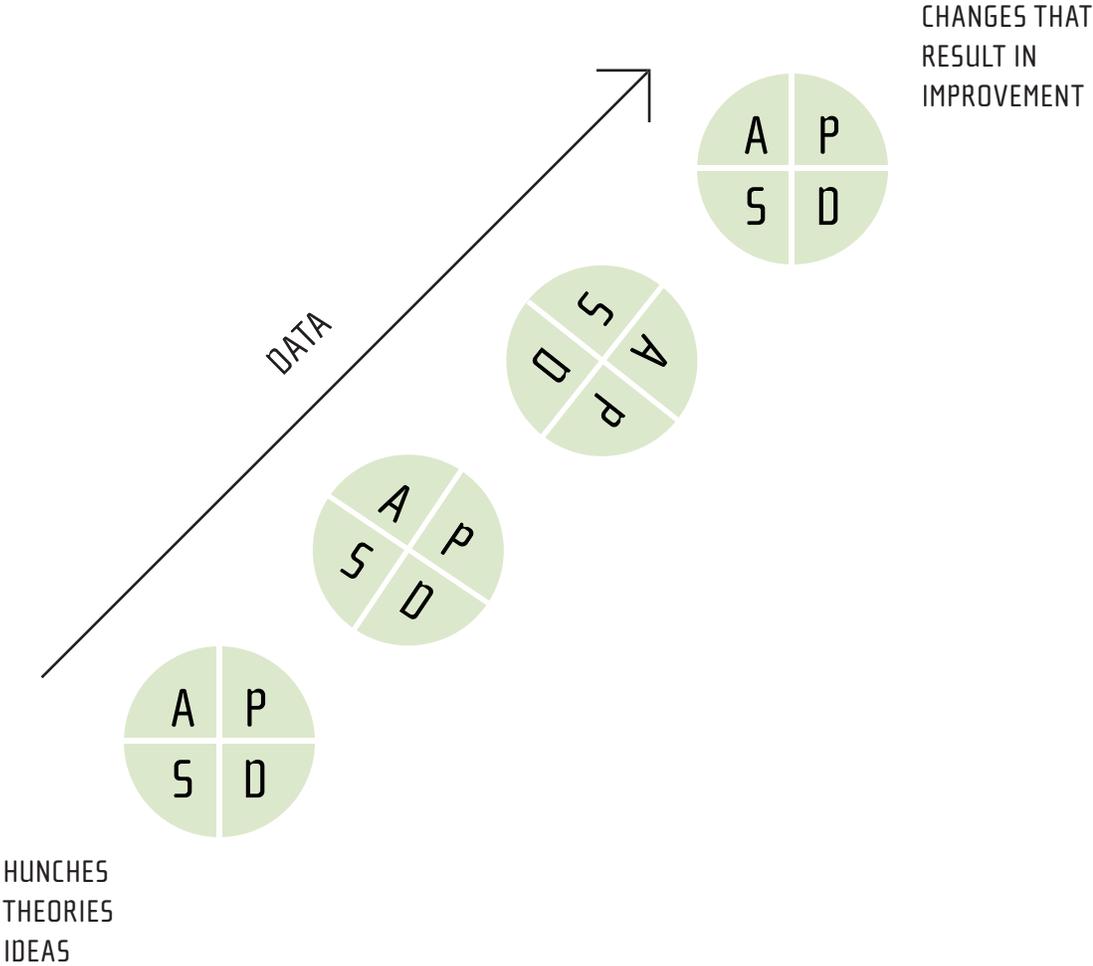
- Ask your audience for feedback on whether this session met its objectives. Take notes of their responses on a flip chart, and keep it for your use in the future.
- Schedule an informal follow-up session with any audience member who wants clarification or more information on the game or the concepts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

Attachment 1

Accelerating Improvement Diagram

Building Knowledge

Source: Langley et. al., The Improvement Guide, San Francisco: Jossey-Bass, 1996, page 9.



Tennis Ball Game