**SESSION AT-A-GLANCE**

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## Paper Airplane Game

### Why Use This Game

- To show how incremental change can, when replicated and expanded over time, lead to improvement.
- To teach the importance of planning cycles of change and building on the knowledge learned in the previous cycles.
- To show how to develop better knowledge as you go through these multiple cycles.

### Key Concepts

- Good changes start small.
- Base your next change on what you learned from its predecessor; in this way, your knowledge — and the impact of your change — will grow over time.
- Improvement comes from repeating these cycles over time.

### Target Audience

Team members and others who will be developing and running PDSA cycles. Also, leaders who will be overseeing these teams, to help them understand the concept of small-cycle tests of change.

### Type of Game

A competition among teams.

### Source, History and Resources for More Information

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:

- Four tables, one labeled “plan,” one “do,” one “study,” and one “act”
- Space for people to try to fly their airplanes
- Materials to make paper airplanes: stacks of construction paper, paper clips, tape, scissors, glue
- A yardstick or long tape measure for each team
- A small prize for the winning team
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 (including different airplane-making strategies).
  - Practice presenting the key teaching points.

• Prepare the room:
  - Move chairs out of the way. People will be standing and gathering around tables. Need to have space to fly the airplanes and see how far they can fly.
  - Prepare a flip chart so you can record results of the discussion, if appropriate.

Playing the Paper Airplane 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 begin an improvement effort with a small test of change.
• Understand how to learn from this first test and use that knowledge to design new tests that become more effective over time.
• Appreciate the role of team work in this effort.
• Begin to see how to apply these concepts to their HIV program.

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

1. Background to the Paper Airplane 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
As teams work to make improvements in their HIV programs, they need to become comfortable with the idea of starting out with a small-scale, pilot test of change that they will build on, and enlarge, over time.

Teams often find it hard to start out with something small; they want to jump in and make a change they think will have more impact, right away. The purpose of this game is to help teams see that the incremental approach of increasingly complex PDSA cycles will, in fact, lead to a better product at the end.

You will need several coaches to help you with this game, to make sure that each team thoughtfully carries out each part of the PDSA cycle. That is why you have four stations around the room — one at which teams “plan” their airplane, one at which they “do” the test flight (make sure you have plenty of airspace at this station), one at which they “study” the result of the flight, and one at which they “act” to determine the changes they will make to airplane design in the next round. The coaches are there to ensure that each team goes through all four steps.

Make sure you have time to run through several improvement cycles: a minimum of three, or more if possible.
Key points to explain to your audience:

- Describe the components of a PDSA cycle. Stress the importance of thoughtful planning before each test and careful assessment of the result.
- Stress that using PDSA cycles means starting small. The Institute for Healthcare Improvement recommends telling teams to pick a change they can begin to test “next Tuesday.” Explain then that the second cycle builds on what was learned in the first, and so on, until finally an effective change can be implemented. The diagram in Attachment 1 is useful in illustrating this concept.

The Game Itself

1. Divide the group into teams of at least 4 people each.
2. Explain the task: create a paper airplane. The goal is to have the paper airplane that will fly the farthest.
3. Teams move from station to station designing & constructing a paper airplane, putting it through a test flight, evaluating the results of the flight (how far did it go?) and acting on the results to prepare for the next cycle.
4. Coaches ensure teams follow the task and don’t skip any steps. They also act as air traffic control officers.
5. At the end of the predetermined number of cycles, teams stop. Each records and reports its longest flight.
6. Facilitator records results from teams and awards the small prize to the team with the airplane that flies the longest distance.

Debrief and Discussion

Reconvene as a large group. Review results.

- Ask the winning team to walk through its airplane designs. What did they learn from each test cycle? How did they change the airplane each time?
- After they have presented, ask other teams to describe their results.
- Discuss in general the idea of multiple small cycles of change. Did their experience in this game help them understand the approach? Do they think it is a valid approach to improvement work? Why or why not?
- Ask participants about improvements they have tried to make in their HIV programs:
  - Did they start with a small test of a change?
  - If so, did it work? How might they have used PDSA cycles even more effectively? 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 small cycle tests of change 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.