

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

Deck of Cards Game

Why Use This Game

- To show the problems that can result from making the wrong kind of changes in a process.
- To demonstrate a “stable” process.
- To show how to how to make a stable process better.

Target Audience

Managers and leaders of organizations. This game is geared towards people who will be leaders of improvement efforts and to those who frequently review performance data, such as QI committee members.

Type of Game

A demonstration with everyone participating.

Key Concepts

- The first thing to do to improve a process is to make it more stable and predictable.
- It is easy to overcompensate and over adjust as you try to improve a process, and by doing this you make the process less stable and predictable.
- Some management approaches can result in extremely unstable processes!

Source, History and Resources for More Information

This game was developed by Kristin J. Arnold, president of Quality Process Consultants, Inc. in Fairfax, VA. Arnold based this game on W. Edwards Deming’s funnel experiment, and published her description of the game in the October, 2001 issue of Quality Progress (page 112).

Materials

For this game, you will need:

- A room with enough empty floor space that four groups (of 2-8 people) can work without running into each other
- Four sets of 12 playing cards each
- Three tape measures
- Four “targets” that will stick to the floor (sticky colored dots work well)
- Twelve colored dots of a different color for Team B
- One “rule card” for each team
- A flip chart and markers to record the key points 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.
 - If necessary, move out chairs and other furniture so there is ample playing space for 4 teams in the room.
 - Place one colored dot on the floor for each of the 4 teams; this will be the target for each team. Make sure the targets are away from the walls and each other; it’s important to keep each group’s work separate!
 - Prepare the “rule cards” (samples are given in Attachment 1):
 - Team A: drop every card over the target.
 - Team B: After each drop, measure the distance (z) from the target to the spot where the card landed. Set the next drop position over the point $-z$ from the last targeted position, which is the last spot you aimed at (same distance, but opposite direction). Use a colored dot to mark the last targeted position.
 - Team C: After each drop, measure the distance (z) from the target to the spot where the card landed. Set the next drop position over the point $-z$ from the original target.
 - Team D: Set the next drop position right over the spot where the last card landed.

Playing the Deck of Cards 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:

- Understand how making the wrong changes in a process can hinder the process.
- Understand how making these types of changes can be demoralizing to the staff who work in the process.
- 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 Deck of Cards 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

Deming developed his funnel experiment, on which Arnold based this game, to illustrate the concept he called “tampering.” Formally, tampering is taking action on a process assuming that the cause of a problem is a one-time, unusual, special cause, rather than understanding that the cause is something inherent in the structure of the process (see our description of The Red Bead Game for more information on these two types of causes). A more general description of tampering is “making changes or adjustments in a process when such changes are not warranted” (Paul Plsek).

Deming points out that the unwarranted changes involved in tampering make processes work less well because they introduce new components every time the process is run. When you measure the results, they end up all over the place. Any process that produces unpredictable results is much harder to manage well.

Tampering and its results can be difficult concepts to convey. The Deck of Cards Game provides a clear picture of what tampering looks like and will help the participants see why it is so harmful. The game can then start a discussion of examples of tampering the participants have experienced, especially in their HIV programs.

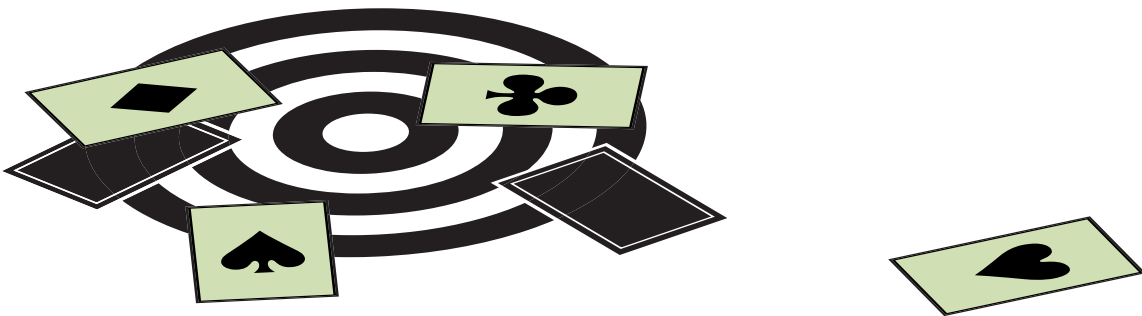
Key points to explain to your audience:

- In deciding how to improve a process, we need to be aware that some changes can make the process worse rather than better.
- Most of the time, when something goes wrong in a process our instinct is to react to what we think is the immediate cause. We “tweak” the process and hope it works out.
- A better approach is to study the process to see if the results it produces are basically stable and predictable. If so, it will be better to work on the process as a whole.

The Game Itself

(These instructions are taken from Kristin Arnold’s Quality Progress article cited above.)

- Divide the participants into four teams. Tell each team to gather around one of the target dots on the floor.
- Tell each team the objective is to produce as many products as close to the target as possible, while following a particular rule. Hold up the four rule cards for all to see.
- Explain that each team produces a product by standing up and dropping one playing card from shoulder height. The playing card should be held perpendicular to the target on the floor, NOT parallel to the floor.
- Review the rules for each team and distribute the rule cards. Give each team its stack of playing cards. Teams B, C and D also each get a tape measure, and team B gets a page of colored dots.
- Make sure each team understands its rule, and allow each team to work collaboratively to produce 12 products. Teams A and D will finish quickly, teams B and C take longer.



Debrief and Discussion

Review the distribution of cards with the entire group.

- Ask the team to share the rule it followed and the results and to speculate about what happened to the process:
 - Team A: The cards will probably cluster around the target. The distribution is stable and shows minimal variation from the target. Even if you have a bad process, your result will be predictable and manageable. This is a stable process and the best choice.
 - Team B: The distribution of cards fans out and is unstable but symmetrical around the target. The team knows where the standard is, but adjusts it based on the last piece produced.
 - Team C: The distribution explodes in opposite directions because the team overcompensates for its errors. This is how most processes become over-adjusted from where the operation was during the last process run.
 - Team D: The cards will tend to drift because the distribution is unstable and moves away from the target in one direction. This is the kind of process drift that can occur when a process uses the last piece produced as the standard for the next piece, instead of using a universal product standard.
- Have each team come up with an example of rules B, C and D in their HIV program. Examples of C and D are most common.

- One clinic, for example, saw a few weeks of low visits and started scheduling lots more patients. The clinic quickly became overcrowded and so the staff scaled back the number of scheduled visits, leading to complaints about lack of access. This would be an example of actions like those taken by team C.
- Team D's experience shows what happens when, for example, you don't have a consistent training program for new employees. If one employee trains another, and so on, the message will change over time as will your performance results. Ask the participants, what has been the result to their program of these types of changes?
- If time permits, start a second round where the teams can make process improvements. Have each team identify one improvement to make, test it and then compare. For example, one process improvement might be to drop the card parallel to the floor. If rule A is used, almost every card will settle on top of the target.
- Discuss how organizations can take a stable process and try to make it better.

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.

Attachment 1

Sample Rule Cards

Objective: to produce as many products as close to the target as possible while following a particular rule.

TEAM A's RULE

Drop every card over the target.

TEAM B's RULE

- After your first drop, measure the distance from the target to the spot where the card landed. For example, your card may have landed 3" to the right of the target.
- Set the next drop point over the point the same distance from the target, but in the opposite direction (e.g., 3" to the left of the target).
- Mark this point with a blue dot.
- Drop again. This time, measure your distance from your current target (i.e., the blue dot).
- Set your new target that distance, but in the opposite direction, from the blue dot.
- Mark this new target with another blue dot.
- Continue.

TEAM C's RULE

- After your first drop, measure the distance from the target to the spot where the card landed.
- Your new drop point is this distance from the original target, but in the opposite direction (e.g., if the card landed 3" to the right of the target, your new drop point is 3" to the left of the target).
- Drop again. Measure the distance from the target to the second spot where the card landed (e.g., now the card is 6" below the target).
- Your new drop point is this distance from the original target, but in the opposite direction (e.g., 6" above the target).

TEAM D's RULE

Set the next drop position right over the spot where the last card landed.