REACHING 90-90-90 AND BEYOND

The Ending the Epidemic Quality Improvement Activity Series

Dan Belanger, Leah Hollander, Olajumoke Odedele

New York State Quality of Care Program

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Driving to the End of the Epidemic

Type of Exercise:

Group exercise, 2 hours

Target Audience:

Quality Improvement project teams and other staff involved in HIV care

QI Tools and Concepts:

- Driver Diagrams
- Force Field Analysis
- System of Profound Knowledge

Learning Objectives:

- Learn how to use driver diagrams to strategically plan improvements
- Understand the system of profound knowledge as a way to gain a more comprehensive understanding of areas for improvement
- Refine improvement after investigating driving and restraining forces of process changes for improvement

Concept and Overview:

It is important to think strategically about what changes you can make to your current processes to achieve your improvement goals. A driver diagram is a visual tool to help understand and prioritize factors within a system that drives desired outcomes called the primary outcome. In this activity, you will use a driver diagram to think about all the factors influencing viral load suppression and then brainstorm activities to make improvements in those areas. A Force-Field Analysis will then help identify the strengths and weaknesses of your improvement ideas.

Session At-A-Glance	Who?	How Long?
Welcome, Agenda, Learning Objectives	Facilitator	5 Minutes
Driver Diagrams Overview	Facilitator	5 Minutes
Viral Load Suppression Driver Diagram	Participants	10 Minutes
W. Edward Deming's System of Profound Knowledge	Facilitator	5 Minutes
Driving Lessons	Participants	60 Minutes
Brain Hurricane and Force-Field Analysis	Participants	20 Minutes
Report Back	Participants	10 Minutes
Wrap Up	Facilitator	5 minutes

Materials

For this quality improvement exercise, you will need the following materials:

- Participant handouts
  - Blank driver diagram
  - Driving instructor talking points
  - Brain Hurricane handout
  - Force-Field Analysis handout
- Flash drive with slides

Preparation

To prepare for this quality improvement exercise, complete the following tasks:

- Familiarize yourself with the session's structure and content
- Make copies of all handouts (and slides if desired), one for each per participant
- Save slides onto a flash drive which you will bring to the session

Facilitator Instructions for the Day of the Activity

Setting up the Room

Get to the session early so that you have time to set up the room before it starts. *If participants arrive early, you can ask for their assistance to set up the room if necessary.* Set up for this activity involves the following:

- Arrange tables and chairs into 4 clusters
- Set up slides and ensure that they can be advanced
- Have the handouts already on the tables or at the entrance for participants to pick up as they enter

Welcome and Introductions

To begin the session, welcome the participants and, if not already done, ask individuals to introduce themselves. If you have time, feel free to add a fun question related to the driving theme for participants to answer as they introduce themselves.

Agenda

Provide a brief description of the sessions primary components:

- Driver Diagrams Overview
- VLS Driver Diagram
- The System of Profound Knowledge
- Driving Lessons
- Brain Hurricane and Force-Field Analysis
- Report Back

Learning Objectives

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

- Learn how to use driver diagrams to strategically plan improvements
- Understand the system of profound knowledge as a way to gain a more comprehensive understanding of areas for improvement
- Refine improvement after investigating driving and restraining forces of process changes for improvement

Driver Diagrams

Introduce driver diagrams by showing the participants the blank driver diagram. Explain that driver diagrams are a visual tool to help understand the factors within a system that drive a desired outcome and that they can be used to think strategically about what changes you can make to your current system to achieve your improvement goals. Explain the difference between primary drivers and secondary drivers.

- Primary Drivers: main factors that drive the primary outcome
- Secondary Drivers: subset of the primary drivers which push those factors

Show the two examples of driver diagrams (attaining a Masters degree and ending world hunger.) Read through each example, explaining that to achieve *primary outcome* you must fulfill *primary drivers*. *Secondary drivers* are what influence these primary drivers. Explain that we want to focus our improvement work at the level of the secondary driver as these are generally more manageable concepts for work on.

Viral Load Suppression Diagram

Now that participants understand the basic concept of a driver diagram, tell them it is time to develop, as a group, a driver diagram for achieving viral load suppression. Tell them they will have 10 minutes to come up with a primary outcome, primary drivers and secondary drivers.

Go to the next slide and temporarily exit out of the presentation mode so you can fill in the driver diagram as the group discusses it*. Tell the participants that they have a blank driver diagram in their packets, which they can fill in during the discussion.

**Alternatively, you can draw out the driver diagram on a big piece of paper or on a whiteboard/chalkboard.*

Ask the group to come up with **one primary outcome**, which should be related to improving viral load suppression. Once the primary outcome has been established, ask the group to come to decide on **4 primary drivers**. Recognize that there may be more than 4, but that they should decide on the 4 that are most important. Once the primary outcome has been established, ask about secondary drivers. (*Try to align these with the correct primary driver, though this may be hard if the conversation is moving quickly. Also, some secondary drivers may be related to more than one primary driver. If you run out of space, you can add more lines for secondary drivers.)*

Before returning to presentation mode, quickly type in the primary drivers that have been decided on in slides 14 if you can. If not, you can do this when you get to that part of the presentation.

Show the group the complete diagram they have created. If you think it useful or if the group struggled to create their own, you can also show them the example driver diagram for viral load suppression.

System of Profound Knowledge

Discuss Edwards Deming's System of Profound Knowledge as a framework for

thinking about improvement. Explain that as they discuss ideas to improve the primary drivers, they should keep in mind Deming's System of Profound Knowledge, thinking about:

- **Psychology** of patients, staff and other stakeholders
- **Systems** within which they work and live
- **Variation** in lives and data outcomes, both expected and unexpected
- What is **known** about working with this community of patients and how that can impact your work

Driving Lessons

Explain to participants that, to help them focus their efforts, four "driving instructors" will be driving around the room, conducting 15 minute discussions at each table. Explain that

- "Driving Instructors" facilitate discussions on the primary drivers and Deming's System of Profound Knowledge
- The "Driving Instructor" Talking Points will guide the discussion to elicit further details about how to improve processes in support of primary and secondary drivers.
- Each instructor focuses on one driver
- After **15 minutes**, the driving instructors move to the next table
- Instructors continue to rotate until all tables have considered each primary driver from all aspects of the system of profound knowledge

Review the 4 primary drivers developed earlier *(if they were not written into the slide earlier, exit out of the presentation and do so now.)* Ask for 4 volunteers to serve as Driving Instructors. Send one driving instructor to each table*. Tell participants that the talking points for the discussion are in their handouts and remind them that they should take notes during the discussion.

**If participants are not already grouped around 4 tables, make sure they do so before starting.*

Tell everyone to "start their engines" and make sure to inform the drivers every 15 minutes to change tables.

Brain Hurricane

After each driving instructor has visited each table, tell the participants it is time for the brain hurricane, where they will list as many improvement ideas at they can think of in 10 minutes, to improve areas identified as secondary drivers of viral load suppression. *(If there are specific ways in which you want the group to focus the brainstorm, mention them here*.) Tell participants that there is a Brain Hurricane handout that they can use to write their ideas.

Force-Field Analysis

After 10 minute of brainstorming are up, tell each table that they need to vote on their top improvement ideas. Explain that after they have reached a consensus on the most effective intervention, they will have 10 minutes to analyze the driving forces and restraining forces of that improvement idea using the Force-Field Analysis tool in their packet. Clarify that driving forces are those which currently exist and support the desired change, while restraining forces are those that may inhibit the desired change.

Report Back

Ask each driving instructor to report back on the most innovative ideas that they heard for improving processes associated to their primary driver. Each driving instructor has 1 to 2 minutes.

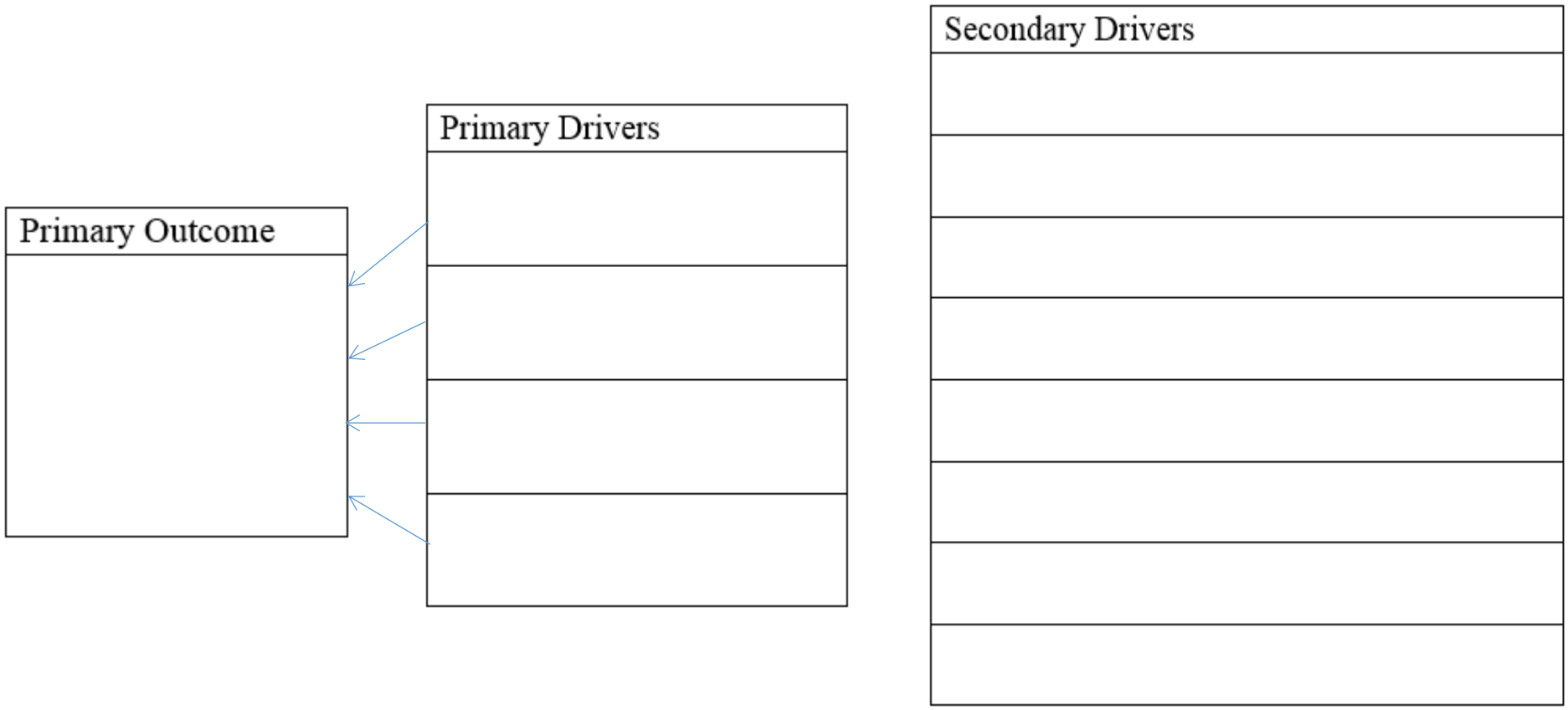
Ask each table to report back on their top improvement idea, specifically noting the opportunities and challenges that they identified using the Force-Field analysis. Each table has 1 to 2 minutes.

Next Steps:

If there are upcoming deadlines or meetings, mention them here. If this is not the last session of the day and you plan on covering this at the end of the meeting, you can skip this part.

Handouts and other supplemental material follow

Driver Diagram Template



Deming's System of Profound Knowledge Talking Points

Primary Driver One: _____

Secondary Driver(s): _____

- What is the impact of systems including healthcare and supportive systems on the identified primary driver? What systems level changes can your improvement team realistically make to improve outcomes for the primary driver by focusing on the secondary driver(s)?

- What psychological factors impact the primary driver? What mental health issues might play a factor? Keeping in mind the thought processes of the patients, healthcare and supportive service staff and other stakeholders, what process changes can be made to positively impact psychological factors that influence the primary and secondary drivers?

- What is an expected level of variation in outcomes for this primary driver? How can changes in these outcomes be measured? It might take a while to see if the process change results in a positive change in viral load suppression. How can you more quickly measure the process change?

- What is currently known about the primary and secondary drivers?

Deming's System of Profound Knowledge Talking Points

Primary Driver Two: _____

Secondary Driver(s): _____

- What is the impact of systems including healthcare and supportive systems on the identified primary driver? What systems level changes can your improvement team realistically make to improve outcomes for the primary driver by focusing on the secondary driver(s)?

- What psychological factors impact the primary driver? What mental health issues might play a factor? Keeping in mind the thought processes of the patients, healthcare and supportive service staff and other stakeholders, what process changes can be made to positively impact psychological factors that influence the primary and secondary drivers?

- What is an expected level of variation in outcomes for this primary driver? How can changes in these outcomes be measured? It might take a while to see if the process change results in a positive change in viral load suppression. How can you more quickly measure the process change?

- What is currently known about the primary and secondary drivers?

Deming's System of Profound Knowledge Talking Points

Primary Driver Three: _____

Secondary Driver(s): _____

- What is the impact of systems including healthcare and supportive systems on the identified primary driver? What systems level changes can your improvement team realistically make to improve outcomes for the primary driver by focusing on the secondary driver(s)?

- What psychological factors impact the primary driver? What mental health issues might play a factor? Keeping in mind the thought processes of the patients, healthcare and supportive service staff and other stakeholders, what process changes can be made to positively impact psychological factors that influence the primary and secondary drivers?

- What is an expected level of variation in outcomes for this primary driver? How can changes in these outcomes be measured? It might take a while to see if the process change results in a positive change in viral load suppression. How can you more quickly measure the process change?

- What is currently known about the primary and secondary drivers?

Deming's System of Profound Knowledge Talking Points

Primary Driver Four: _____

Secondary Driver(s): _____

- What is the impact of systems including healthcare and supportive systems on the identified primary driver? What systems level changes can your improvement team realistically make to improve outcomes for the primary driver by focusing on the secondary driver(s)?

- What psychological factors impact the primary driver? What mental health issues might play a factor? Keeping in mind the thought processes of the patients, healthcare and supportive service staff and other stakeholders, what process changes can be made to positively impact psychological factors that influence the primary and secondary drivers?

- What is an expected level of variation in outcomes for this primary driver? How can changes in these outcomes be measured? It might take a while to see if the process change results in a positive change in viral load suppression. How can you more quickly measure the process change?

- What is currently known about the primary and secondary drivers?

Brain Hurricane

Brain Hurricane: What changes can your team make to improve each secondary driver for each associated primary driver as identified in the driver diagram exercise? List as many improvement ideas as you can to improve processes in areas identified as secondary drivers of viral load suppression. Anything goes!

Force-Field Analysis

1.) Define the desired change or action (agree on a simple statement.)
2.) Brainstorm the driving forces & restraining forces
3.) Prioritize the driving forces & restraining forces (identify the critical few and rank order the top 3)
4.) List actions to be taken (focusing on the critical few driving & restraining forces)

Desired Change:

Driving Forces (Those which currently exist & support or drive the desired change)	**Restraining Forces** (Forces that may inhibit the implementation of the desired change.)

Actions to be taken:

The Living Tree

Type of Exercise:

Group exercise, 1 hour 30 minutes

Target Audience:

Quality improvement project teams interested in involving consumers in their QI work

QI Tools and Concepts:

- Tree Diagrams
- System of Profound Knowledge

Learning Objectives:

- Understand the purpose and usefulness of a tree diagram
- Learn how to develop a tree diagram
- Practice using a tree diagram to analyze a problem
- Use the System of Profound Knowledge to inform strategic tactics to attain objectives identified in the tree diagram

Concept and Overview:

A tree diagram is a quality tool that can be used to visualize a structural element of an area of interest. In this activity, we use the tree diagram to think of ways to better involve consumers in QI work.

Session At-A-Glance	Who?	How Long?
Welcome, Agenda, Learning Objectives	Facilitator	5 Minutes
Tree Diagram Overview	Facilitator	10 Minutes
“Branching” out to Involve Consumers in QI	Participants	70 Minutes
Wrap Up	Facilitator	5 minutes

Materials

For this quality improvement exercise, you will need the following materials:

- Flip chart paper
- Markers
- Sticky notes
- Participant handouts
  - Discussion Questions
  - Blank Tree Diagram
- Flash drive with slides

Preparation

To prepare for this quality improvement exercise, complete the following tasks:

- Familiarize yourself with the session's structure and content
- Make copies of the handout (and slides if desired), one per participant
- Draw large tree diagram skeletons (with desired outcome) on Flip chart paper
- Save slides onto a flash drive which you will bring to the session

Facilitator Instructions for the Day of the Activity

Setting up the Room

Get to the session early so that you have time to set up the room before it starts. *If participants arrive early, you can ask for their assistance to set up the room if necessary.* Set up for this activity involves the following:

- Arrange tables and chairs into 4 clusters
- Set up slides and ensure that they can be advanced
- Have the handouts already on the tables or at the entrance for participants to pick up as they enter

Welcome and Introductions

To begin the session, welcome the participants and, if not already done, ask individuals to introduce themselves. If you have time, you can ask participants to share their favorite tree (or flower, plant, etc.) as they introduce themselves!

Agenda

Provide a brief description of the sessions primary components:

- Tree diagram overview
- "Branching" out to involve consumers in improving VLS
  - Large Group Discussion: Objectives
  - Small Group Discussion: Tactics
  - Growing the Living Tree

Learning Objectives

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

- Understand the purpose and usefulness of a tree diagram
- Learn how to develop a tree diagram
- Practice using a tree diagram to analyze a problem

- Use the System of Profound Knowledge to inform strategic tactics to attain objectives identified in the tree diagram

Tree Diagram Overview

Explain to participants that a tree diagram is a quality instrument used to assist in the visualization of the structural elements of a plan, a problem or another area for investigation.

Note that a tree diagram is useful because it can be used to envision a desired outcome and the structures or processes necessary to achieve it. Working up from the opportunity/desired outcome, lay out strategic objectives and tactics to achieve the goal.

Show participants the tree diagram skeleton and point out the base of the tree, which is the desired outcome/opportunity; the branches of the tree, which are the objectives that need to be met to reach the desired outcome; and the leaves of the tree, which are the tactics that will be used to meet your objectives.

Tell participants that they will now look at some examples of tree diagrams. Show them the simple example first, where the desired outcome is "satisfied customers"; the objectives are "good food", "good service" and "pleasant surroundings;" and the tactics are, for "good food", "quality ingredients" and "good recipes; for "good service", "prompt attention" and "professional waiter"; and for "pleasant surroundings", "happy atmosphere", "good table presentation" and "pleasing décor".

Then show the more complex tree diagram, with the desired outcome of "improving customer satisfaction in the grocery store". You do not need to read through this whole example.

"Branching" out to Involve Consumers in QI

Tell participants that they will now be working on a tree diagram, where the primary goal is consumer involvement in viral load suppression focused quality improvement work. Show them the blank tree diagram and explain that they will be completing it as a group.

Instruct participants that they have 10 minutes to discuss as a group what they think the four main objectives should be. Ask them to keep in mind the System of Profound Knowledge framework, thinking about factors relating to:

- **Psychology** of patients, staff, other stakeholders
- **Systems** within which patients and staff work and live
- **Variation,** both expected and unexpected, in lives and outcomes
- **Knowledge** about the community and about the desired outcome

After four objectives have been agreed upon, explain to participants that they will be split into four groups, each of which will be assigned one of the four objectives to discuss in more detail. Explain that they will use the discussion handout to develop tactics, informed by the System of Profound Knowledge, to reach the objectives necessary to achieve successful consumer

involved viral load suppression quality improvement projects.

Ask participants to divide into four groups at this point, if they are not already. Assign one objective to each group and tell participants they have 20 minutes for discussion. Ask them to write each tactic they come up with on a sticky note *(if not already on tables, pass out sticky notes as participants begin talking.)*

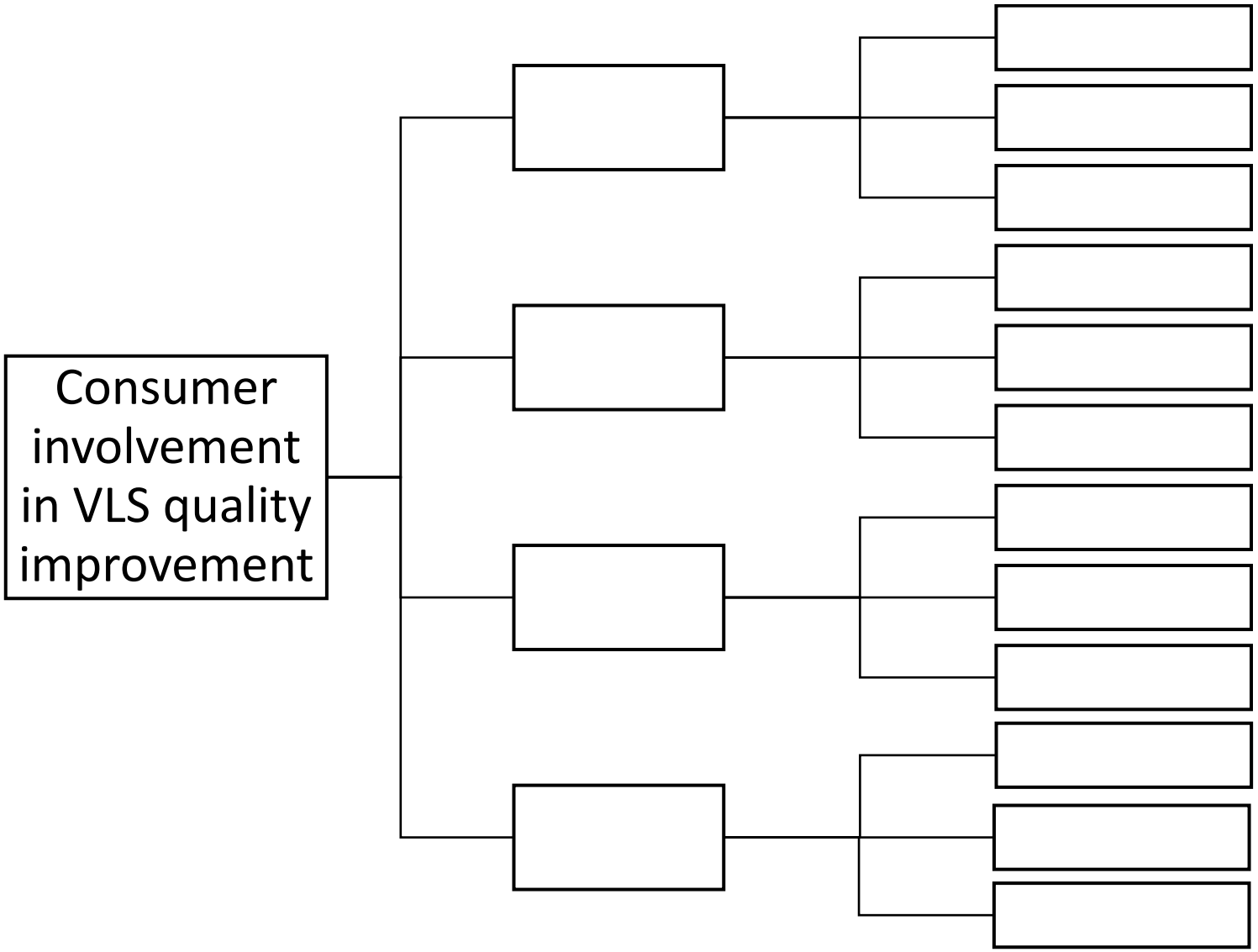
While participants are talking, place the large tree diagram skeleton, which you prepared before the meeting, at the front of the room. After the 20 minutes of small group discussion ends, tell participants that it is time to share what they have discussed with the larger group. Explain that one person from each group will report on the tactics they came up with to achieve their objective. Meanwhile, another person from each group will write the objective on the tree diagram and place the sticky notes. Tell them that each group will have 10 minutes to present.

Call the first group up and have groups switch every 10 minutes. Remind participants that they have a blank tree diagram in their handouts if they want to fill it in as the groups present. After every group has presented, ask participants to look at the whole tree. *(If a camera is available, take a picture of the tree which you can send to all the participants. Alternatively, you can save the paper and transcribe it into a word document.)* If you think it useful, you can show the group the example tree diagram at the end of the PowerPoint.

Next Steps

Thank everyone for their participation. If there are upcoming deadlines or meetings, mention them here. If this is not the last session of the day and you plan on covering this at the end of the meeting, you can skip this part.

Handouts and other supplemental materials follow


Consumer involvement in VLS quality improvement

DISCUSSION QUESTIONS

Psychology: What psychological factors of patients, family, friends, clinic staff or others might influence involving consumers in quality improvement activities aimed at improving viral load suppression?

Discussion Notes:

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Systems: How could systems and processes including clinic systems influence consumer involvement in quality improvement activities aimed at improving viral load suppression?

Discussion Notes:

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Variation: How might variation (e.g. environmental changes, changes in clinic scheduling and staff, changes related to the patient) influence, challenge or drive consumer involvement in quality improvement activities aimed at increasing the rate of viral load suppression?

Discussion Notes:

Knowledge: What is known about involving consumers in projects aimed at improving viral load suppression rates? Are there tested activities that can help to structure consumer involvement in quality improvement activities to improve viral load suppression outcomes?

Discussion Notes:

Data Disparities Drill Down

Type of Exercise:

Group exercise, 1 hour 25 minutes

Target Audience:

Quality Improvement teams interested in focusing their improvement work on subgroups with disparities in viral load suppression (VLS) rates

QI Tools and Concepts:

- System of Profound Knowledge

Learning Objectives:

- Understand how to calculate VLS rates for subgroups of patients to identify disparities in health outcomes
- Share ideas with peers about how to improve VLS rates among specific populations

Concept and Overview:

Health outcomes are often not distributed across the population equally with certain subgroups carrying a higher burden of negative outcomes than others. In this activity, participants will use mock data to look at viral load suppression rates in different subgroups and use their findings to target interventions towards specific subgroups.

Session At-A-Glance	Who?	How Long?
Welcome, Agenda, Learning Objectives	Facilitator	5 Minutes
W. Edwards Deming's System of Profound Knowledge	Facilitator	5 Minutes
Drilling Down Data to Discover Disparities	Participants	50 Minutes
Discussion: Real Life Drill Down	Participants	20 Minutes
Wrap Up	Facilitator	5 Minutes

Materials

For this quality improvement exercise, you will need the following materials:

- Participant Handouts
  - Mock clinic data handout
  - Subgroups data table handout
  - Data discussion questions handout
- Flash drive with slides on it

Preparation

To prepare for this quality improvement exercise, complete the following tasks:

- Familiarize yourself with the session's structure and content
- Make copies of the handout (and slides if desired), one per participant
- Print copies of the subgroup date table answer sheets for the facilitators
- Save slides onto a flash drive which you will bring to the session

Facilitator Instructions for the Day of the Activity

Setting up the Room

Get to the session early so that you have time to set up the room before it starts. *If participants arrive early, you can ask for their assistance to set up the room if necessary.* Set up for this activity involves the following:

- Arrange tables and chairs into 4 clusters
- Set up slides and ensure that they can be advanced
- Handouts should already be on the tables or at the entrance for participants to pick up as they enter

Welcome and Introductions

To begin the session, welcome the participants and, if not already done, ask individuals to introduce themselves. If you have time, you can ask participants to share a fun fact about themselves as they introduce themselves!

Agenda

Provide a brief description of the sessions primary components:

- The System of Profound Knowledge
- Drilling Down Data to Discover Disparities
- Discussion: Real Life Drill Downs

Learning Objectives

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

- Understand how to calculate viral load suppression rates for subgroups of patients to identify disparities in health outcomes
- Share ideas with peers about how to improve VLS rates among specific populations

W. Edwards Deming's System of Profound Knowledge

Discuss W. Edwards Deming's system of profound knowledge as a framework for

thinking about disparities among patient group and quality improvement to address those disparities. Explain the four components of the system of profound knowledge that should be considered: appreciate the system, understand variation, psychology and theory of knowledge.

Explain to participants that as they think about disparities amongst patient groups they should keep in mind:

- **Psychology** of patients and clinic staff
- **Systems** within which the work and live
- **Variation** in lives and data outcomes, both expected and unexpected
- What is **known** about working with this community of patients and how that can impact your work.

Drilling Down Data to Discover Disparities

Explain to participants that they will be split into four groups to represent four different clinic teams.* Each team will get a brief description of the specific resources available (or not available) at their clinic. Each team will also receive mock patient data for their clinic, including viral load test results and some patient characteristics, and a blank table with 4 subgroups listed at the top. Clinic teams will be asked to identify which patients belong to each subgroup and then to calculate the viral load suppression rate of each cohort of patients. Lastly, each clinic team will discuss, based on their calculations and clinic background information, how they would prioritize process improvements to support viral load suppression

**If participants are not already divided into 4 groups, make sure to do so before starting the activity*

Explain that to calculate the viral load suppression rate of a given group, you will need to know the total number of eligible patients and, from that, the total number of patients suppressed at their last viral load test. The number of eligible patients will be as defined by your program. In this activity, it will be the number of patients in a given subgroup. Suppressed will also be as defined by your program.

Review the background on each clinic:

- **Clinic A:** has a special grant to provide care for adolescent girls and young women, does not provide substance use treatment services onsite.
- **Clinic B:** has strong linkage with an organization providing supportive services in the LGBT community and a special funding for providing services to sex workers.
- **Clinic C:** has a support group for adolescent girls/young women and substance use treatment services onsite.
- **Clinic D:** has support groups for MSM and sex workers but no substance use treatment services onsite.

Do you know the Drill?

Explain to participants that they will now use their mock patient data to identify the patients that belong in each cohort listed in the blank clinic cohorts table. These groups are: adolescent girls/young women (<25), sex workers, people with active injection drug use and men who have sex with men (MSM)*. Instruct participants that they

should record the patient ID number and VL result in the table. Once they have filled in all the patients in the clinic cohort table, participants will calculate the VLS rate for each cohort.

**These categories can be changed to others that are more relevant for your context; however, you will need to make sure that the categories you choose allow for the same breakdown of data and you may also need to change the clinic descriptions accordingly.*

Give participants 20 minutes to complete this part of the activity. After 20 minutes have passed, explain to them that they will now have a 20-minute group discussion focusing on the following questions:

1. Given these data results and additional clinic information, how would you prioritize process improvements to support viral load suppression?
2. What other factors would you consider in prioritizing process improvements?
3. Using Deming's System of Profound Knowledge, what is your plan to improve the viral load suppression rate of your clinic?

Discussion: Real Life Drill Down

When 20 minutes have passed, explain to participants that now that they have looked at disparities among patients in their fictional clinics, they are going to think about addressing disparities in their own clinics. Instruct participants to discuss for 20 minutes, the following questions:

- In your actual clinic, what are you currently doing to address disparities?
- What processes are currently in place to help patients who are not viral load suppressed become and sustain VLS?*
- How can team members in this group work collaboratively to improve the rate of viral load suppression?
- What are the opportunities of a team approach to improving the rate of viral load suppression?
- What are the challenges?
- How can challenges be overcome and opportunities be capitalized upon to move from ideas to action?

**You can encourage participants to consider mapping out the current step-by-step processes by developing a process flow diagram.*

Next Steps

When the discussion time has passed, thank everyone for their participation and encourage them to bring this discussion back to others at their clinic. If there are upcoming deadlines or meetings, mention them here. If this is not the last session of the day and you plan on covering this at the end of the meeting, you can skip this part.

Handouts and other supplemental materials follow

Mock Patient Level Clinic Data

Clinic A

Patient	VL at last test	Age	Gender	Exposure Risk	Engagement in Sex Work
Patient 1	suppressed	20	Female	Heterosexual	Yes
Patient 2	suppressed	45	Male	IDU, MSM	Yes
Patient 3	Not suppressed	18	Female	IDU	No
Patient 4	Not suppressed	30	Male	MSM	No
Patient 5	suppressed	22	Female	IDU	No
Patient 6	Not suppressed	17	Male	MSM	No
Patient 7	Not suppressed	24	Female	Heterosexual	Yes
Patient 8	suppressed	41	Female	Heterosexual	Yes
Patient 9	suppressed	27	Male	IDU	No
Patient 10	Not suppressed	66	Male	IDU, MSM	No
Patient 11	suppressed	19	Male	MSM	Yes
Patient 12	Not suppressed	17	Female	Heterosexual	No
Patient 13	Not suppressed	23	Female	IDU	Yes
Patient 14	suppressed	50	Male	MSM	No
Patient 15	Not suppressed	16	Female	Perinatal	No
Patient 16	Not suppressed	21	Female	IDU	No
Patient 17	suppressed	40	Transgender-M to F	Heterosexual	Yes
Patient 18	Not suppressed	35	Male	IDU	No
Patient 19	suppressed	26	Male	MSM	Yes
Patient 20	Not suppressed	50	Male	MSM	No

Mock Patient Level Clinic Data

Clinic B

Patient	VL at last test	Age	Gender	Exposure Risk	Engagement in Sex Work
Patient 1	suppressed	20	Female	Heterosexual	Yes
Patient 2	Not suppressed	45	Male	IDU, MSM	Yes
Patient 3	suppressed	18	Female	IDU	No
Patient 4	Not suppressed	30	Male	MSM	No
Patient 5	suppressed	22	Female	IDU	No
Patient 6	suppressed	17	Male	MSM	No
Patient 7	Not suppressed	24	Female	Heterosexual	Yes
Patient 8	Not suppressed	41	Female	Heterosexual	Yes
Patient 9	Not suppressed	27	Male	IDU	No
Patient 10	Not suppressed	66	Male	IDU, MSM	No
Patient 11	Not suppressed	19	Male	MSM	Yes
Patient 12	Not suppressed	17	Female	Heterosexual	No
Patient 13	suppressed	23	Female	IDU	Yes
Patient 14	suppressed	50	Male	MSM	No
Patient 15	suppressed	16	Female	Perinatal	No
Patient 16	suppressed	21	Female	IDU	No
Patient 17	Not suppressed	40	Transgender-M to F	Heterosexual	Yes
Patient 18	Not suppressed	35	Male	IDU	No
Patient 19	Not suppressed	26	Male	MSM	Yes
Patient 20	Not suppressed	50	Male	MSM	No

Mock Patient Level Clinic Data

Clinic C

Patient	VL at last test	Age	Gender	Exposure Risk	Engagement in Sex Work
Patient 1	suppressed	20	Female	Heterosexual	Yes
Patient 2	Not suppressed	45	Male	IDU, MSM	Yes
Patient 3	Not suppressed	18	Female	IDU	No
Patient 4	suppressed	30	Male	MSM	No
Patient 5	suppressed	22	Female	IDU	No
Patient 6	suppressed	17	Male	MSM	No
Patient 7	Not suppressed	24	Female	Heterosexual	Yes
Patient 8	Not suppressed	41	Female	Heterosexual	Yes
Patient 9	Not suppressed	27	Male	IDU	No
Patient 10	Not suppressed	66	Male	IDU, MSM	No
Patient 11	suppressed	19	Male	MSM	Yes
Patient 12	Not suppressed	17	Female	Heterosexual	No
Patient 13	Not suppressed	23	Female	IDU	Yes
Patient 14	suppressed	50	Male	MSM	No
Patient 15	Not suppressed	16	Female	Perinatal	No
Patient 16	suppressed	21	Female	IDU	No
Patient 17	suppressed	40	Transgender-M to F	Heterosexual	Yes
Patient 18	Not suppressed	35	Male	IDU	No
Patient 19	suppressed	26	Male	MSM	Yes
Patient 20	suppressed	50	Male	MSM	No

Mock Patient Level Clinic Data

Clinic D

Patient	VL at last test	Age	Gender	Exposure Risk	Engagement in Sex Work
Patient 1	suppressed	20	Female	Heterosexual	Yes
Patient 2	Not suppressed	45	Male	IDU, MSM	Yes
Patient 3	Not suppressed	18	Female	IDU	No
Patient 4	Not suppressed	30	Male	MSM	No
Patient 5	suppressed	22	Female	IDU	No
Patient 6	Not suppressed	17	Male	MSM	No
Patient 7	suppressed	24	Female	Heterosexual	Yes
Patient 8	suppressed	41	Female	Heterosexual	Yes
Patient 9	suppressed	27	Male	IDU	No
Patient 10	Not suppressed	66	Male	IDU, MSM	No
Patient 11	suppressed	19	Male	MSM	Yes
Patient 12	Not suppressed	17	Female	Heterosexual	No
Patient 13	Not suppressed	23	Female	IDU	Yes
Patient 14	Not suppressed	50	Male	MSM	No
Patient 15	suppressed	16	Female	Perinatal	No
Patient 16	suppressed	21	Female	IDU	No
Patient 17	suppressed	40	Transgender-M to F	Heterosexual	Yes
Patient 18	Not suppressed	35	Male	IDU	No
Patient 19	suppressed	26	Male	MSM	Yes
Patient 20	Not suppressed	50	Male	MSM	No

Clinic Cohorts

Viral Load Test Results on Last Viral Load of the Year (Suppressed/Unsuppressed)							
Patient	**Adolescent Girls/Young Women (<25)**	**Patient**	**Sex Workers**	**Patient**	**People with Active Injection Drug Use**		**Men who have Sex with Men (MSM)**
Cohort Numerator: Suppressed							
Cohort Denominator: Total							
VLS Rate for Cohort							

Total Clinic VLS Rate: / = %

Clinic A Answer

Viral Load Test Results on Last Viral Load of the Year (Suppressed/Unsuppressed)							
Patient	**Adolescent Girls/Young Women (<25)**	**Patient**	**Sex Workers**	**Patient**	**People with Active Injection Drug Use**	**Patient**	**Men who have Sex with Men (MSM)**
Patient 1	Suppressed	Patient 1	Suppressed	Patient 2	Suppressed	Patient 2	Suppressed
Patient 3	Not Suppressed	Patient 2	Suppressed	Patient 3	Not Suppressed	Patient 4	Not Suppressed
Patient 5	Suppressed	Patient 7	Not Suppressed	Patient 5	Suppressed	Patient 6	Not Suppressed
Patient 7	Not Suppressed	Patient 8	Suppressed	Patient 9	Suppressed	Patient 10	Not Suppressed
Patient 12	Not Suppressed	Patient 11	Suppressed	Patient 10	Not Suppressed	Patient 11	Suppressed
Patient 13	Not Suppressed	Patient 13	Not Suppressed	Patient 13	Not Suppressed	Patient 14	Suppressed
Patient 15	Not Suppressed	Patient 17	Suppressed	Patient 16	Not Suppressed	Patient 19	Suppressed
Patient 16	Not Suppressed	Patient 19	Suppressed	Patient 18	Not Suppressed	Patient 20	Not Suppressed
Cohort Numerator: Suppressed	2		6		3		4
Cohort Denominator: Total	8		8		8		8
VLS Rate for Cohort	25%		75%		38%		50%

Total Clinic VLS Rate: *9 /20 = 45 %*

Clinic B Answer

Viral Load Test Results on Last Viral Load of the Year (Suppressed/Unsuppressed)							
Patient	**Adolescent Girls/Young Women (<25)**	**Patient**	**Sex Workers**	**Patient**	**People with Active Injection Drug Use**	**Patient**	**Men who have Sex with Men (MSM)**
Patient 1	Suppressed	Patient 1	Suppressed	Patient 2	Not Suppressed	Patient 2	Not Suppressed
Patient 3	Suppressed	Patient 2	Not Suppressed	Patient 3	Suppressed	Patient 4	Suppressed
Patient 5	Suppressed	Patient 7	Not Suppressed	Patient 5	Suppressed	Patient 6	Suppressed
Patient 7	Not Suppressed	Patient 8	Not Suppressed	Patient 9	Not Suppressed	Patient 10	Not Suppressed
Patient 12	Not Suppressed	Patient 11	Not Suppressed	Patient 10	Not Suppressed	Patient 11	Not Suppressed
Patient 13	Suppressed	Patient 13	Suppressed	Patient 13	Suppressed	Patient 14	Suppressed
Patient 15	Suppressed	Patient 17	Not Suppressed	Patient 16	Suppressed	Patient 19	Not Suppressed
Patient 16	Suppressed	Patient 19	Not Suppressed	Patient 18	Not Suppressed	Patient 20	Not Suppressed
Cohort Numerator: Suppressed	6		2		4		3
Cohort Denominator: Total	8		8		8		8
VLS Rate for Cohort	75%		25%		50%		38%

Total Clinic VLS Rate: *8 /20 = 40 %*

Clinic C Answers

Viral Load Test Results on Last Viral Load of the Year (Suppressed/Unsuppressed)							
Patient	**Adolescent Girls/Young Women (<25)**	**Patient**	**Sex Workers**	**Patient**	**People with Active Injection Drug Use**	**Patient**	**Men who have Sex with Men (MSM)**
Patient 1	Suppressed	Patient 1	Suppressed	Patient 2	Not Suppressed	Patient 2	Not Suppressed
Patient 3	Not Suppressed	Patient 2	Not Suppressed	Patient 3	Not Suppressed	Patient 4	Suppressed
Patient 5	Suppressed	Patient 7	Not Suppressed	Patient 5	Suppressed	Patient 6	Suppressed
Patient 7	Not Suppressed	Patient 8	Not Suppressed	Patient 9	Not Suppressed	Patient 10	Not Suppressed
Patient 12	Not Suppressed	Patient 11	Suppressed	Patient 10	Not Suppressed	Patient 11	Suppressed
Patient 13	Not Suppressed	Patient 13	Not Suppressed	Patient 13	Not Suppressed	Patient 14	Suppressed
Patient 15	Not Suppressed	Patient 17	Suppressed	Patient 16	Suppressed	Patient 19	Suppressed
Patient 16	Suppressed	Patient 19	Suppressed	Patient 18	Not Suppressed	Patient 20	Suppressed
Cohort Numerator: Suppressed	3		4		2		6
Cohort Denominator: Total	8		8		8		8
VLS Rate for Cohort	38%		50%		25%		75%

Total Clinic VLS Rate: *10 / 20 = 50 %*

Clinic D Answers

Viral Load Test Results on Last Viral Load of the Year (Suppressed/Unsuppressed)							
Patient	**Adolescent Girls/Young Women (<25)**	**Patient**	**Sex Workers**	**Patient**	**People with Active Injection Drug Use**	**Patient**	**Men who have Sex with Men (MSM)**
Patient 1	Suppressed	Patient 1	Suppressed	Patient 2	Not Suppressed	Patient 2	Not Suppressed
Patient 3	Not Suppressed	Patient 2	Not Suppressed	Patient 3	Not Suppressed	Patient 4	Not Suppressed
Patient 5	Suppressed	Patient 7	Suppressed	Patient 5	Suppressed	Patient 6	Not Suppressed
Patient 7	Not Suppressed	Patient 8	Suppressed	Patient 9	Suppressed	Patient 10	Not Suppressed
Patient 12	Not Suppressed	Patient 11	Suppressed	Patient 10	Not Suppressed	Patient 11	Suppressed
Patient 13	Not Suppressed	Patient 13	Not Suppressed	Patient 13	Not Suppressed	Patient 14	Not Suppressed
Patient 15	Suppressed	Patient 17	Suppressed	Patient 16	Suppressed	Patient 19	Suppressed
Patient 16	Suppressed	Patient 19	Suppressed	Patient 18	Not Suppressed	Patient 20	Not Suppressed
Cohort Numerator: Suppressed	4		6		3		2
Cohort Denominator: Total	8		8		8		8
VLS Rate for Cohort	50%		75%		38%		25%

Total Clinic VLS Rate: *10 / 20 = 50 %*

Do you know the Drill? Discussion Questions

1. Given these data results and additional clinic information, how would you prioritize process improvements to support viral load suppression?

2. What other factors would you consider in prioritizing process improvements?

3. Using Deming's System of Profound Knowledge, what is your plan to improve the viral load suppression rate of your clinic?

Real Life Drill Down Discussion Questions

1. In your actual clinic, what are you currently doing to address disparities?

1. What processes are currently in place to help patients who are not viral load suppressed become and sustain VLS? (Consider mapping out the current step-by-step processes by developing a process flow diagram.)

2. What strategies (process changes) could you test to help patients who are not suppressed become and sustain viral load suppression? How can you tailor your improvement activities to meet the needs of the identified subgroups? How will you know if a change is an improvement?

2. How can team members in your group work collaboratively to improve the rate of viral load suppression?

3. What are the opportunities of a team approach to improving the rate of viral load suppression?

4. What are the challenges?

5. How can challenges be overcome and opportunities be capitalized upon to move from ideas to action?

Fishing for Solutions:

"The Living Cause and Effect Diagram"

Type of Exercise:

Group exercise, 2 hours

Target Audience:

Quality Improvement project teams and other staff involved in HIV care

QI Tools and Concepts:

- Cause and effect diagrams

Learning Objectives:

- Understand the purpose and uses of a Cause and Effect Diagram
- Appreciate the relationship of the Cause and Effect Diagram to quality improvement in HIV Care
- Understand the dynamic connection between causes and an effect, such as increased viral load suppression
- Understand and participate in the living cause and effect diagram interactive exercise

Concept and Overview:

Taking time to think of all the causes that may influence a given outcome can help one think beyond the obvious causes, like time and money, which everyone wishes they had more of, to others that one may actually be able to improve. Organizing these causes can help one prioritize which causes to work on improving and determine who should be involved. In this activity, participants will think about the causes that influence viral load suppression, and, from this, what improvement activities they may be able to work on.

Session At-A-Glance	Who?	How Long?
Welcome, Agenda, Learning Objectives	Facilitator	5 Minutes
Cause and Effect Diagrams	Facilitator	5 Minutes
The Living Cause and Effect Diagram	Participants	85 Minutes
Report back to the Port	Participants	20 Minutes
Wrap Up	Facilitator	5 Minutes

Materials

For this quality improvement exercise, you will need the following materials:

- Flip chart paper
- Markers
- Sticky notes
- Cause Captain talking points
- Flash drive with slides

Preparation

To prepare for this quality improvement exercise, complete the following tasks:

- Familiarize yourself with the session's structure and content
- Make copies of the talking points (and slides if desired), one per participant
- Draw large affinity fishbone skeletons (with effect and 4 main causes) on 4 pieces of Flip chart paper
- Save slides onto a flash drive which you will bring to the session

Facilitator Instructions for the Day of the Activity

Setting Up the Room

Get to the session early so that you have time to set up the room before it starts. *If participants arrive early, you can ask for their assistance to set up the room if necessary.* Set up for this activity involves the following:

- Arrange tables and chairs into 4 clusters
- Set up slides and ensure that they can be advanced
- Handouts should already be on the table or at the entrance for participants to pick up as they enter

Welcome and Introductions

To begin the session, welcome the participants and, if not already done, ask individuals to introduce themselves. If you have time, feel free to ask if anyone has any fun (short!) fishing stories!

Agenda

Provide a brief description of the sessions primary components:

- Purpose and uses of a cause and effect diagram for improvement
- The Living Cause and Effect Diagram
- Report Back to the Port

Learning Objectives

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

- Understand the purpose and uses of a Cause and Effect Diagram
- Appreciate the relationship of the Cause and Effect Diagram to quality improvement in HIV care
- Understand the dynamic connection between causes and an effect, such as increased viral load suppression

- Understand and participate in the living cause and effect diagram interactive exercise

Cause and Effect Diagram aka the Affinity Fishbone

Explain that the Cause and Effect Diagram, also called the affinity fishbone, due to its appearance, is a quality improvement tool that:

- Organizes and displays all causes and sub-causes that may influence a problem, outcome, or effect
- Helps push people to think beyond the obvious causes (money and time) to find some causes that they can fix/improve
- Helps organize potential solutions and make clear who should be involved in solutions
- Encourages a balanced view
- Demonstrates the complexity of a problem

Show the slide with the blank cause and effect diagram and explain that the effect/problem/outcome go in the box on the far right, while the cause categories go in the boxes at the ends of the "fish bones." Cause categories are broad categories of thing that influence a given effect. Some examples of very general cause categories are listed on the slide, such as people or environment, but one can choose cause categories that are more specific to a given effect.

Show the example "Causes of Viral Load Suppression" diagram. Explain that 4 broad causes (psychosocial support, retention, ARV adherence and clinic systems) of the desired outcome (improved VLS rates) were chosen as the causes categories. For each cause categories, sub-causes were added. It is the sub-causes that you want to focus on for a quality improvement project.

Tell participants that they will be making their own viral load suppression cause and effect diagram shortly.

The Living Cause and Effect Diagram

Explain to participants that they will soon be boarding their "submarines", with their sub(marine)- cause teams, on a trip to improve viral load suppression, stopping on the way at 4 different "fishing boats" where the Cause Captain of the boat will lead them in a discussion about the sub-causes for their given cause category.

The 4 causes they will be looking at are*:

- Psychosocial support
- ARV Adherence
- Retention
- Clinic Systems/Process

**You can ask the participants if there is a different cause they want to look at. (You may need to revise your giant fishbone accordingly)*

Ask for 4 volunteers to be Cause Captains. Make sure there is one Cause Captain at each table. *(If there are two volunteers from the same table, one can move to another table.)*

Introduce the four sub(marine)-cause teams. Assign the groups at each of the 4 tables one of the 4 submarines. *(If participants are not already grouped around 4 tables, ask them to do so at this time.)*

Explain the instructions for moving about the "Causeway:"

- Each sub(marine)-cause team will be given a large fishbone with the main causes and outcome
- The teams will spend 20 minutes at each "fishing boat" (table) to discuss sub-causes and improvement activities related to each cause category
- The sub-causes and improvement activities will be written on sticky notes and added to the teams' large fishbone under the appropriate cause

Go over the Cause Captains' talking points, which the Cause Captains should use to guide their discussions and tell participants that these talking points are included in their handouts.

Hand out the fishbones and start the clock, having the sub(marine)-cause teams rotate tables every 20 minutes

Report Back to the Port

Ask each Cause Captain to share the best sub-cause/improvement idea that they heard on their fishing boat. Each Cause Captain has 1-2 minutes to answer.

After each Cause Captain has shared, ask each sub(marine)-cause team to share a couple of improvement ideas they are going to bring back to their own clinics to improve viral load suppression. Each team has 2-3 minutes to answer.

Next Steps

When the report back is done, thank everyone for their participation. If there are upcoming deadlines or meetings, mention them here. If this is not the last session of the day and you plan on covering this at the end of the meeting, you can skip this part.

Handouts and other supplemental materials follow

Cause Captain Talking Points

1) Do team members' improvement activities (sub causes) address the challenge area (cause) being discussed at this table?

2) Do participants engage in other improvement activities in this category aimed at achieving the goal?

3) What else could be done in this cause category to elicit the desired effect?

Notes from the End of the Epidemic

Type of Exercise:

Group exercise, 1 hour 35 minutes

Target Audience:

QI project teams and other staff involved with HIV care who are working to end the HIV epidemic in their community

QI Tools and Concepts:

- Cause and effect diagrams
- SWOT Analysis
- Force Field Analysis

Learning Objectives:

- Learn about Provocative Operation
- Reverse our order of things to generate new ideas
- *Version 1:* Understand the challenges to viral load suppression for certain patient groups
- *Version 2:* Understand the QI projects that your peers are working on and the challenges they are facing
- Use QI tools to identify improvements and overcome challenges

Concept and Overview:

Often things seem logical in hindsight. In this activity, participants travel through time to the end of the AIDS epidemic. With the goal of ending the epidemic achieved, participants work backwards through the steps taken to figure out how we got to that point. Using this method of reversal, we open our minds to new ideas that may be restricted when thinking in traditional chronological fashion. In version one, the participants focus on how the epidemic was ended for specific sub groups, while in version two, participants focus on how the QI projects currently being conducted by some of their peers helped end the epidemic.

Session At-A-Glance		Who?	How Long?
Welcome, Agenda, Learning Objectives, Rules of the Day		Facilitator	5 Minutes
Edward DeBono's Provocations		Facilitator	10 Minutes
Back to the Future: Notes from the End of the Epidemic		Participants	70 Minutes
	• *Notes Part 1: Back to the Future Discussion and Time Tables*		*30 Minutes*
	• *Notes Part 2: Affinity Fishbone*		*20 Minutes*
	• *Notes Part 3: SWOT and Force-Field Analysis*		*20 Minutes*
Report Back		Participants	10 Minutes
Wrap Up		Facilitator	5 Minutes

Materials

For this quality improvement exercise you will need the following materials:

- Flip chart paper
- Markers
- Sticky Notes
- Participant Handouts
  -Notes from the End of the Epidemic talking points
  -Affinity Fishbone handout
  -SWOT Analysis handout
  -Force-Field Analysis handout
- Flash drive with slides

Preparation

To prepare for this quality improvement exercise, complete the following tasks:

- Familiarize yourself with the session's structure and content
- Revise the slides to reflect the relevant location and the date of the meeting.
- If doing *version 1*, update the "Time Table" subgroups on slides 14-17 to those that are the most relevant to the meeting participants.
- If doing *version 2*, identify 3 or 4 participating clinics to share the QI projects they are working on. The number of clinics who are sharing will be the number of groups for this activity. Fill in the time table slides (slides 14-17) with the aim, activities and quality challenge for the clinics that are sharing their QI projects.
- Make copies of the talking points and other handouts (and slides if desired), one for each per participant
- Draw large affinity fishbones on 4 pieces of Flip chart paper
- Save slides onto a flash drive which you will bring to the session

Facilitator Instructions for the Day of the Activity

Setting up the Room

Get to the session early so that you have time to set up the room before it starts. *If participants arrive early, you can ask for their assistance to set up the room if necessary.* Set up for this activity involves the following:

- Set up slides and ensure that they can be advanced
- Handouts should already be on the table or at the entrance for participants to pick up as they enter

Welcome and Introductions

To begin the session, welcome the participants and, if not already done, ask individuals to introduce themselves. If you have time, you can ask participants to make one prediction for 10 years in the future as they introduce themselves

Agenda

Provide a brief description of the sessions primary components

- Edward DeBono's Provocations
- Back to The Future: Notes from the End of the Epidemic

- Part 1 A: Back to the Future Discussions
- Part 1B: Time Tables
- Part 2: Affinity Fishbone
- Part 3: SWOT/Force-Field Analysis

- Report Back

Learning Objectives

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

- Learn about Provocative Operation
- Reverse our order of things to generate new ideas
- *Version 1:* Understand the challenges to viral load suppression for certain patient groups
- *Version 2:* Understand the QI projects that your peers are working on and the challenges they are facing
- Use QI tools to identify improvements and overcome challenges

Learning Objectives

Set the stage for the activity by telling participants the rules of the day:

1. Change the order of things
2. Reversal of the usual order
3. Have fun, learn and make a difference

Edward DeBono's Provocations

Begin this section on Edward DeBono's Provocations by reading two quotes from DeBono himself:

1. "There is a mathematical need for provocation in thinking because self-organizing systems reach stable states of local equilibrium."
2. "Provocation has everything to do with experiments in the mind."

Explain that provocation (also called Provocative Operation or PO) is one of the tools of lateral thinking, a term coined by DeBono to describe a way of thinking that is indirect and creative, involving ideas that may not be accessible using traditional step-by-step logic. Explain that there are 4 components of provocations, escape, reversal, distortion, exaggeration and wishful thinking, and that we will be focusing on reversal today.

Explain the concept of reversal, starting with the idea that often things are logical in hindsight. Explain that when using reversal, we think about things in the opposite direction from the normal direction of action to create instability, such as:

- A plane lands upside down
- You answer the phone, and then it rings
- A patient is discharged before being admitted
- A patient is rehabilitated before surgery.

Back to the Future: Notes from the End of the Epidemic

Explain that the tables everyone is sitting at have been specially crafted to carry participants on the wings of peer learning forward in time to the End of the Epidemic

As the time travel is complete, you see the exciting newspaper headline telling you that the AIDS epidemic has ended in your location (*city/town, state, country, etc. depending on the scope of your meeting.)*

Part 1 A: Back to the Future (Discussion)

Reiterate to participants that the AIDS Epidemic has successfully been ended. Ask rhetorically, how did we do it? Explain that participants will now briefly discuss with the people at their tables some general questions about how we got to the end of the epidemic*.

- What role did quality improvement play?
- What role did this group play?
- What role did your clinic or organization play?
- What role did you play?
- What new and innovative communication techniques did we use to share and spread improvements?
- What processes have we set in place to sustain the improvements?

**If participants are not already grouped around 4 (or the number of QI projects being shared if doing version 2) tables, make sure they do so before starting*

Note that there is no "correct" answer to these questions and that participants do not need to answer all of them. Tell participants that they have 10 minutes for this discussion.

Alert participants when the 10 minutes of conversation are over, so you can move on to part 1B.

Part 1 B: Time Tables (Version 1)

Explain to participants that each time table team was responsible for ending the epidemic for a specific patient subgroup. Using the talking points in their packets, they will work backwards to illuminate how they accomplished their goal of ending the epidemic for their patient group.

Introduce each table's patient group, which you should have specified on the slides in advance of the meeting, following this script:

"Your team successfully implemented process changes to help your unsuppressed (*insert patient group here)* to viral suppression. Some things you considered in developing your breakthrough improvement were gender, age, culture, language, housing, socio-economic status, and interpersonal relationships. Your changes were shared, spread, and tailored to meet the needs of other communities until all (*insert patient group here*) across (*insert geography here)* were virally suppressed. How did you do it?"

After assigning each table a sub-group, read through the time table talking points as a group. Explain that these questions lead them step by step, backwards, from the end of the epidemic to when they started their quality improvement work. Remind them that again there are no "correct" answers. Tell them that they have 20 minutes for this part of the activity.

If the sticky notes are not already on the tables, pass them out as the participants begin to answer the questions.

Alert participants when the 20 minutes of discussion have ended so you can move on to part 2.

Part 1 B: Time Tables (Version 2)

Explain to participants that, having been part of the successful effort to end the epidemic, they will now look back on their work and how they did it, focusing on the QI projects of a few of their peers. Explain that each QI

project team will discuss their QI project, sharing, as available: baseline data, the improvement team members, the aim of the project, the improvement activity, and data with a graph showing results of tests of change. They will then focus on one challenge that had to be overcome (i.e. a challenge they are currently facing) to end the epidemic.

Ask each of the QI project team facilitators to introduce themselves and say what clinic they are from. If there is time, you can briefly review each QI project with the whole group, going through each of the time table slides. If you are running low on time, skip this as participants will hear about the QI project relevant for their table. Send one facilitator to each table.

Tell participants that, using the talking points in their packets they will work step by step, backwards, from the end of the epidemic to when they started their quality improvement work, to determine how this quality improvement project contributed to ending the epidemic. Tell them that they have 20 minutes for this part of the activity.

If the sticky notes are not already on the tables, pass them out as the participants begin to answer the questions.

Alert participants when the 20 minutes of discussion have ended so you can move on to part 2.

Part 2: Affinity Fishbone

Explain to participants that they will now be gathering all the improvement ideas that they brainstormed and wrote on sticky notes during the Time Table discussion and grouping them into the appropriate cause areas using a cause and effect diagrams. Explain that you will be passing out the large cause and effect diagram to each table after you are done explaining the activity, but a small version is included in participants' handouts. Tell participants that after they have grouped their improvement ideas into the appropriate cause areas, they will discuss the ideas and decide on the top idea for each cause area. They will have 20 minutes for this activity.

Before participants start working on their fishbone, briefly go over the uses of a cause and effect diagram:

- Organizes and displays all causes and sub-causes that may influence a problem, outcome, or effect
- Helps push people to think beyond the obvious causes (money and time) to find some causes that they can fix/improve
- Helps organize potential solutions and make clear who should be involved in solutions
- Encourages a balanced view
- Demonstrates complexity of the problem

Pass out the fishbone which you prepared on flip chart paper before the meeting and tell participants to get started.

Alert participants when 20 minutes have ended so you can move on to part 3

Part 3: SWOT/Force-Field Analysis

Tell participants now that they have decided on their best ideas for improving viral load suppression in each cause area, they will perform either a S.W.O.T analysis or a Force-Field Analysis to look at their ideas more in-

depth. They will have 20 minutes for this part of the activity.

Instruct Time Tables one and four that they will be doing a S.W.O.T analysis, using the template in their handouts, on at least one of their top improvement ideas and more if they have time. Explain that in a S.W.O.T analysis, they will look at the strengths, weaknesses, opportunities and threats to implementing their ideas for (version 1) improving viral load suppression for their patient group/(version 2) addressing your viral load suppression QI challenge.

Instruct Time Tables two and three that they will be doing a Force-Field analysis, using the template in their handouts, on at least one of their top improvement ideas, and more if they have time. Explain that they will be analyzing the opportunities and challenges for implementing their improvement ideas and thinking about how they can use the opportunities to overcome the challenges and improve VLS (for their patient group if doing version 2).

Remind all participants to take notes during their discussion.

Time Tables Spin Us Back: Welcome Back and Report Back

Our time in the future has ended and it is time to go back to our teams in the present day and share what we have learned. Tell participants that the time tables are taking us back….and back…and back to (*date of meeting.)*

Welcome the participants back and ask how their trip was. Ask for one participant from each table (the facilitators if doing *version 2*) to share what they have learned: What can they implement by today or next Tuesday? What changes can they make to the way they provide care today that will get the ball rolling to end the epidemic on schedule?

Next Steps:

Thank all the contributors to the presentation and thank the participants.

If there are upcoming deadlines or meetings, mention them here. If this is not the last session of the day and you plan on covering this at the end of the meeting, you can skip this part

Handouts and other supplemental materials follow

Notes on the End of the epidemic

Please complete this form by writing your group's answers in the boxes provided.

How did you measure changes to understand if they resulted the desired outcomes?

How many times did you tweak or refine your changes before implementing them?

How many tests did you run? How did your team meet to discuss the tests in a timely manner so that you could refine and move on to the next test? How did you test your changes?

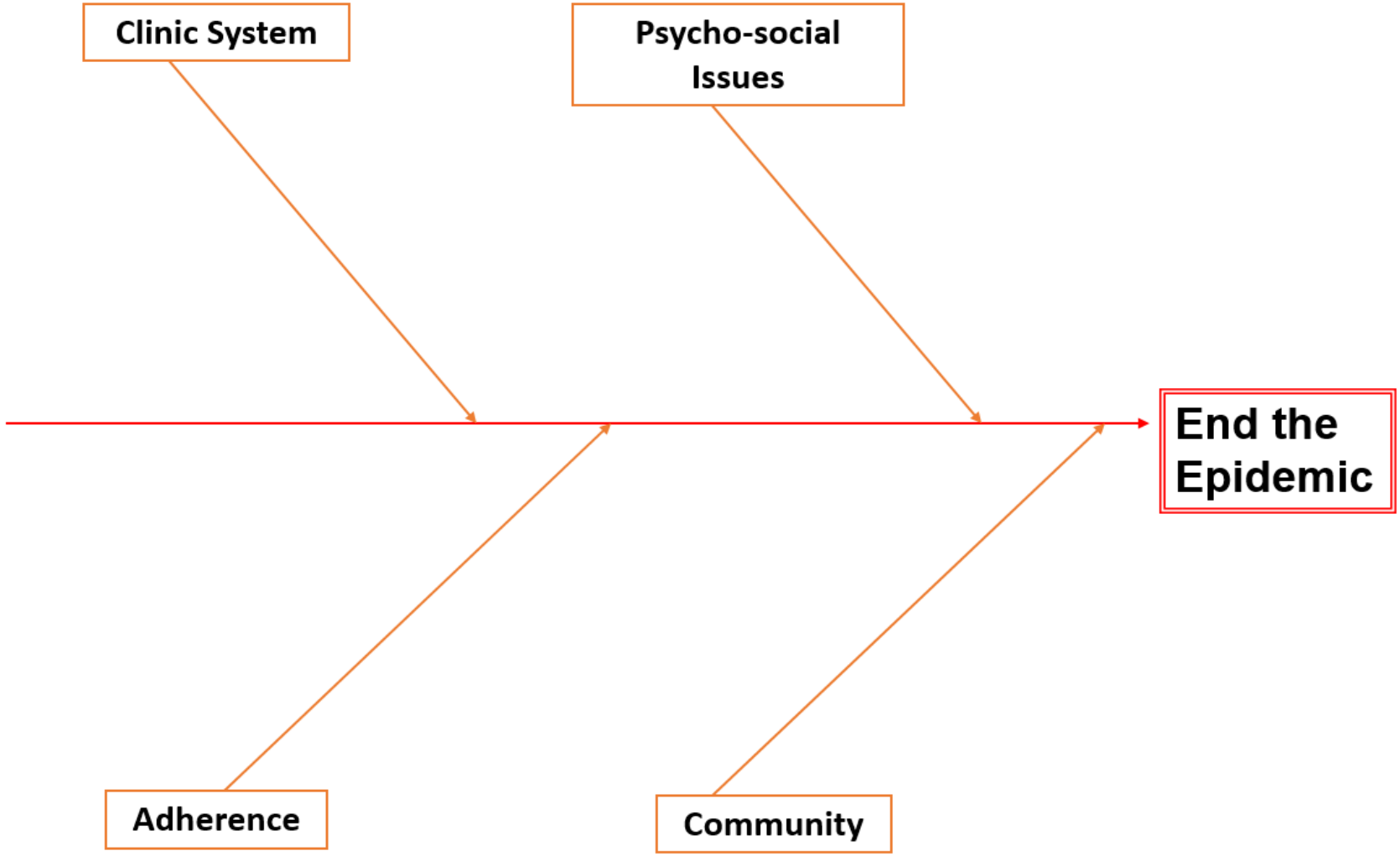
Who implemented your process changes?

What process changes did you make? **Please answer this after each participant brainstorms as many possibilities and writes them down on sticky notes, one idea per sticky.** How did you choose which change ideas to test?

What QI tools did you use to investigate your current processes for areas of improvement and to think creatively about developing your improvement activity? How did you drill down your data to understand impacted groups of patients?

Ending the AIDS Epidemic Affinity Fishbone

- Gather together the ideas that each participant brainstormed and wrote down on sticky notes to improve viral load suppression amongst your patient group
- Using the cause and effect diagram template provided, group the improvement ideas in the appropriate cause area
- As a group, discuss the improvement ideas and come to a consensus as to the top idea for each cause area.



SWOT Analysis Template

*State what you are assessing here*_____

(This particular example is for a new business opportunity. Many criteria can apply to more than one quadrant. Identify criteria appropriate too your own SWOT situation.)

Criteria examples	Strengths	Weaknesses	Criteria examples
Advantages of proposition Capabilities Competitive advantages USP's (unique selling points) Resources, Assets, People Experience, knowledge, data Financial reserves, likely returns Marketing - reach, distribution, awareness Innovative aspects Location and geographical Price, value, quality Accreditations, qualifications, certifications Processes, systems, IT, communications			Disadvantages of proposition Gaps in capabilities Lack of competitive strength Reputation, presence and reach Financials Own known vulnerabilities Timescales, deadlines and pressures Cash flow, start-up cash-drain Continuity, supply chain robustness Effects on core activities, distruction Reliability of data, plan predictability Morale, commitment, leadership Accreditations etc
Criteria examples	**Opportunities**	**Threats**	**Criteria examples**
Market developments Competitors' vulnerabilities Industry or lifestyle trends Technology development and innovation Global influences New markets, vertical, horizontal Niche target markets Geographical, export, import New USP's Tactics: eg, surprise, major contacts Business and product development Information and research Partnerships, agencies			Political effects Legislative effects Environmental effects IT developments Competitor intentions - various Market demand New technologies, services, ideas Vital contracts and partners Sustaining internal capabilities Obstacles faced Insurmountable weaknesses Loss of key staff Sustainable financial backing Economy - home, abroad Seasonality, weather effects

Force-Field Analysis

1.) Define the desired change or action (agree on a simple statement.)
2.) Brainstorm the driving forces & restraining forces
3.) Prioritize the driving forces & restraining forces (identify the critical few- rank order the top 3)
4.) List actions to be taken (focusing on the critical few driving & restraining forces)

Desired Change:

Driving Forces (Those which currently exist & support or drive the desired change)	**Restraining Forces** (Forces that may inhibit the implementation of the desired change.)

Actions to Be taken:

The Ending the Epidemic Quality Improvement Challenge

Type of Exercise:

Group exercise, 2 hour 15 minutes

Target Audience:

QI project teams and other staff involved with HIV care

QI Tools and Concepts:

- Change Concepts
- Concept Fan
- Mind Map
- Random Word Association
- Fractionalization

Learning Objectives:

- Testing Quality tools to see if they can be used in conjunction with one another to investigate improvement ideas
- Understand how challenges can be overcome with team work
- Strengthen peer learning

Concept and Overview:

All improvement requires change and, while there are many kinds of changes that may lead to improvement, they develop from a limited number of change concepts. Quality improvement creative thinking tools get you thinking in different ways and help stimulate new ideas. In this activity, participants use a specific set of change concepts paired with a creative thinking tool to develop new ideas for addressing an improvement challenge.

Session At-A-Glance	Who?	How Long?
Welcome, Agenda, Learning Objectives	Facilitator	5 Minutes
Change Concepts	Facilitator	5 Minutes
Sharing Challenges to Quality Improvement	Participants	15 Minutes
The Quality Improvement Challenge	Participants	95 Minutes
Report Back	Participants	10 Minutes
Wrap Up	Facilitator	5 Minutes

Materials

For this quality improvement exercise you will need the following materials:

- Flip chart paper
- Markers
- Table 1-4 change concept and QI tool handouts
- Flash drive with slides

Preparation

To prepare for this quality improvement exercise, complete the following tasks:

- Familiarize yourself with the session's structure and content
- Make copies of the handouts (and slides if desired), one for each per participant
- Make extra copies of the table 3 handout (¾ x # of participants)
- Save slides onto a flash drive which you will bring to the session

Facilitator Instructions for the Day of the Activity

Setting up the Room

Get to the session early so that you have time to set up the room before it starts. *If participants arrive early, you can ask for their assistance to set up the room if necessary.* Set up for this activity involves the following:

- Arrange tables and chairs into 4 clusters
- Set up slides and ensure that they can be advanced
- Handouts should already be on the table or at the entrance for participants to pick up as they enter

Welcome and Introductions

To begin the session, welcome the participants and, if not already done, ask individuals to introduce themselves. If you have time, as they introduce themselves, ask participants to share one challenge they have overcome in the past week.

Read the session title, "The Improvement Challenge," and then read the quote by Jerry Dunn aka "America's Marathon Man:" "Don't limit your challenge…challenge your limits." Ask participants if they accept today's challenge to improve quality of HIV care.

Agenda

Provide a brief description of the sessions primary components:

- Change Concepts
- Sharing QI Challenges
- The Quality Improvement Challenge
- Report Back

Learning Objectives

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

- Test quality tools to see if they can be used in conjunction with one another to investigate improvement ideas
- Understand how challenges can be overcome with team work
- Strengthen peer learning

Change Concepts

Explain to participants that, while all changes do not lead to improvement, all improvement requires change. The ability to develop, test and implement changes is essential for any individual, group, or organization that wants to continuously improve. There are many kinds of changes that will lead to improvement, but these specific changes are developed from a limited number of change concepts.

Further explain that a change concept is a general notion or approach to change that has been found to be useful in developing specific ideas for changes that lead to improvement. Tell participants that creatively combining these change concepts with knowledge about specific subjects can help generate ideas for tests of change.

Sharing Challenges to Quality Improvement

Version 1:

Instruct participants that they have 10 minutes to discuss their quality improvement projects and challenges with the other people at their table*. After a representative from each program has had an opportunity to share, the table will choose one project on which to focus their discussion and one project lead to facilitate the discussion.

*If participants are not already grouped around 4 tables, make sure they do so before starting.

After the 10 minutes of discussion have ended, ask the 4 project leads to very briefly describe the VLS project and challenge to the rest of the group.

Version 2:

Ask the pre-selected QI project leads to come to the front of the room and, one by one, explain the QI project they have been working on and their quality challenge. Each project lead can present for 3 – 4 minutes.

The Quality Improvement Challenge

Now that everyone knows the quality challenges they will be discussing, explain that they will now partake in the Quality Improvement Challenge, using change concepts and creative thinking tools in conjunction to overcome challenges to quality improvement.

Explain to participants the instructions for the Quality Improvement Challenge:

- There will be four 20 minute sessions.
- During each session, the QI project lead will visit a different table where they will investigate possible ideas to improve their VLS project, particularly thinking about the challenges they are currently facing.
- Each table will use a specific set of change concepts in conjunction with a specified creative thinking tool.
- Each QI project lead will take notes on possible improvement ideas.

- Every 20 minutes the QI lead will rotate to the next table

Review the change concepts and creative thinking tools for each table*, letting participants know that these same instructions are included in their handouts.

**If there are other change concepts that you would like to use in place of the ones included in this activity, please do so and change the slide and handouts accordingly before the presentation.*

Table 1:

The change concepts for table 1 are those focused on increasing demand, i.e. serving more patients. They are as follows:

- Focus on core process and purpose
- Alliances and relationships
- Mass customize
- Offer product/service anytime
- Emphasize intangibles
- Differentiate product/service using quality dimensions

The creative thinking tool for table 1 is the concept fan. This is a tool created by Edward de Bono to assist in identifying alternative solutions to a problem. It helps the user to take a step back and gain a broader viewpoint. Participants will use this tool, in conjunction with the chance concepts for increasing demand, in order to stimulate fresh ideas to overcome the quality challenges

The steps for using the concept fan technique are as follows:

- Draw a circle in to the right of the middle of a large piece of paper
- Write the quality challenge that you are working to resolve in the circle.
- Draw lines from the right side of the circle, representing possible solutions to the problem. Start with 3 change concepts as possible solutions.
- Step back for a broader view of the problem. Draw a circle to the left of the first circle and write a broader description of the quality challenge in the new circle.
- Draw an arrow from the first circle to the new one to show that this is where it is coming from.
- Continue from this new starting point to fan out new concept/challenges and possible solutions
- If the second circle does not generate strong solutions, repeat the process. Stepping back once again, draw another circle to the left of the second one and define the problem in even broader terms.

Table 2:

The change concepts for table 2 are useful for program redesign and focused on consumer challenges. They fall into two broad categories, addressing costumer problems and meeting customer expectations. The change concepts in these two categories are as follows:

Address customer problems:

- Listen to customers
- Coach customers
- Reduce wait time

Meet customer expectations:

- Focus on outcomes for customers

- Use a coordinator
- Reach agreement on expectations

The creative thinking tool for table 2 is the mind map. Conventional writing imposes a structure that may inhibit free expression of creative ideas. In conventional writing, ideas must be expressed sequentially and the right words should be chosen to clearly define and communicate your idea. A mind map breaks free of this rigidity and can help express ideas in a way that is more along the lines of how the human mind works.

The brain is made up of a system of connected neurons. Some crucial characteristics of the workings of the human brain include the following: parallel processing, senses, recall, learning and function.

Parallel Processing: You can think of more than a single thing at a time. Ideas stream into the conscious mind and then are swiftly gone. Something else flows in to take its place. In creating a mind map, when something flows into your mind, write it down in a quick word or slight picture, so that it can be recalled again. Go with the flow of thoughts streaming into your mind. Don't worry about making a structured logic!

Senses: You constantly process information from your five senses. Allow your sense to flow free to capture the things that stream through your head in all of the senses – picture, colors, emotions, smells, sounds, etc.

Recall: We can remember things. Recollection stimulates the connection in the brain, bringing associated memories. For example, if one thinks of a place once visited, it can be pictured; one can remember the smell, the sounds, the sights. This is all triggered by remembering the place.

Learning: The neuron connections in the brain change with stimulation and use. Examining your mind map can help you draw new connections between disparate points in the map.

Function: Different parts of the brain are responsible for varied functions. Only a portion of the human brain is conscious. There are several functions in the brain that we are not conscious of but that support our consciousness. Mind maps can help to engage your subconscious to stream ideas. The subconscious does not appear to have a direct link to time. Ideas from your subconscious bubble up. This may occur instantly, or in a few minutes, an hour, a day, or a month. The mind map helps to capture the new idea when it bubbles up. (*Show picture of brain with functions)*

Mind maps facilitate the effective use of these brain functioning characteristics rather than getting in the way.

The steps for using the mind map technique are as follows:

- Write the quality challenge in the middle of the paper
- Write your change concepts in circles stemming from the main idea
- As your team allows ideas to stream, draw pictures and words as you choose to represent your thoughts and ideas, and lines connecting them.

Table 3:

The change concepts for table 3 are useful for program redesign focused on eliminating waste associated with errors. They are as follows:

- Reminders
- Differentiations
- Constraints
- Affordances (the qualities or properties of an object that define its possible uses or make clear how it can or should be used)

The creative tool for table 3 is random word stimulations. The use of randomly selected words can stimulate new patterns of thought, ideas and solutions. Edward de Bono suggested the following word list:

1. Weed
2. Rust
3. Poor
4. Magnify
5. Foam
6. Hole
7. Diagonal
8. Vacuum
9. Tribe
10. Gold
11. Puppet
12. Nose
13. Link
14. Drift
15. Duty
16. Portrait
17. Cheese
18. Chocolate
19. Coal
20. Tribe

The steps for using the random word stimulation technique are as follows:

- Participants select a number between 1 and 20
- Participants think about the random word associated with the selected number in conjunction with one of the change concepts to overcome the quality challenge that is being focused on
- Write down any ideas that come to mind from the combination of the quality problem, the change concept and the random word
- Repeat this for 3 other random words and the 3 other assigned change concepts
- The results are collected and discussed

Table 4:

The change concepts for table 4 are useful for program redesign to better cope with and learn from variation. They are as follows:

- Match the amount to the need
- Standardization
- Improve Predictions
- Contingency Plan
- Sort product into grades
- Exploit variation

The creative tool for table 4 is fractionalization. Preconceived notions and static patterns of thought can make it hard to think of new ideas. Fractionalization is a technique developed by Edward de Bono to break existing ideas or patterns into separate parts so that they can be rearranged to spark fresh ideas and concepts.

One example is if the challenge is to design an apple picking robot. The fractions of the process that the robot would need to go through are: reaching, finding, picking and safely placing apples undamaged into baskets. The fractions can then be reassembled in different orders:

- Ex. Reaching-finding-picking → Perhaps you think to try to shake the tree for all three

- Ex. Reaching- undamaged apples-placed in baskets → maybe you think up an elevated canvas platform which could be raised towards the apples

The steps for using the fractionalization technique are as follows:

- Write down the current step-by-step process related to the quality challenge. For example, if the challenge is educating virally unsuppressed patients about the importance of taking ARV medication, the current process might be:
  1. The patient received a clinic appointment
  2. The patient receives a reminder call
  3. The patient attends the clinic
  4. The patient sees the nurse
  5. The nurse takes vitals
  6. The patient sees the peer educator who provides tips on taking medication regularly
  7. The doctor gives the patients VLs results and discusses the importance of taking ARV medications
  8. The patient sees the case manager who provides support and referrals
  9. The patient receives the next appointment
  10. The patient goes home
- Randomly reorder the steps of the process, selecting a change concept to help focus your thinking and stimulate discussion about redesigning the process
- Repeat this with two other randomly selected change concepts, each time using the change concept to stimulate discussion about what the new step-by-step process might help you to overcome the quality challenge and result in an improved outcome.
- At the end, answer the following: What new ideas did you come up with to solve the quality challenge? What are the best ideas?

After you have explained what each table will be doing, assign numbers 1, 2, 3 and 4 to each of the tables*. Pass out flip chart paper and markers to tables 1 and 2 and pass out the extra table 3 handouts to table 3. Send one QI project lead to each table, and tell them to begin. Be sure to walk around to each of the tables to make sure they understand what they are doing and are staying on track.

**If doing version 2 and the participants have not already been divided into 4 groups, do so before assigning numbers to the tables.*

Every 20 minutes tell the QI project leads to rotate tables. Make sure that the table teams know they are continuing to use the same change concepts and creative thinking tools. During the 20 minute sessions you can also give other time warnings, like “5 minutes left”.

Report Back

Now that all of the QI leads have visited each of the tables, explain that they will report back on what they have learned and what process changes they plan to make based on the lessons learned.

Tell the participants that they are to applaud quickly or loudly based on how much they like the QI process changes

proposed by each QI lead. The QI lead who gets the loudest applause wins.

After the winning QI lead has been identified, ask the winner to tell us which table was most useful in identifying the process change. The team chosen by the winning QI project lead is the winning team!

Tell participants that the winners win…The mystery prize*

**Note: you can make up something on the spot (like the adulation of your peers) or have a paper certificate, ribbon or the like in hand to pass out.*

Thank all the QI leads and everyone else for their participations. Give a special thank you to

- Edward de Bono
- The fans
- The human mind
- The thought police (for letting us off the hook)
- The English language

Next Steps:

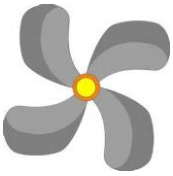
If there are upcoming deadlines or meetings, mention them here. If this is not the last session of the day and you plan on covering this at the end of the meeting, you can skip this part.

Handouts and other supplemental materials follow

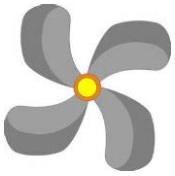
Table 1: Spreading changes to more unsuppressed patients

Change Concepts for Increasing Demand

- Focus on core process and purpose
- Alliances and relationships
- Mass customize
- Offer product/service anytime
- Emphasize intangibles
- Differentiate product/service using quality dimensions



Tool: Concept Fan



The Concept Fan is a tool to assist in identifying alternative solutions to a problem. It helps the user to take a step back to gain a broader viewpoint.

Instructions:

1. Draw a circle to the right of the middle of a large piece of paper and write the quality challenge you are trying to resolve in the circle
2. Draw lines from the right side of the circle representing possible solutions to the problem. Use three of the change concepts as possible solutions.
3. Next, to get a broader view of the problem, draw a circle to the left of the first circle and write a broader description of the quality challenge in it
4. Draw an arrow from the first circle to the second circle to show that this is where it is coming from
5. Continue from the starting point to fan out new concepts
6. If the second circle does not generate strong solutions repeat the process and take an additional step back by drawing another circle to the left of the second one and defining the problem in even broader terms

Notes:

Example:

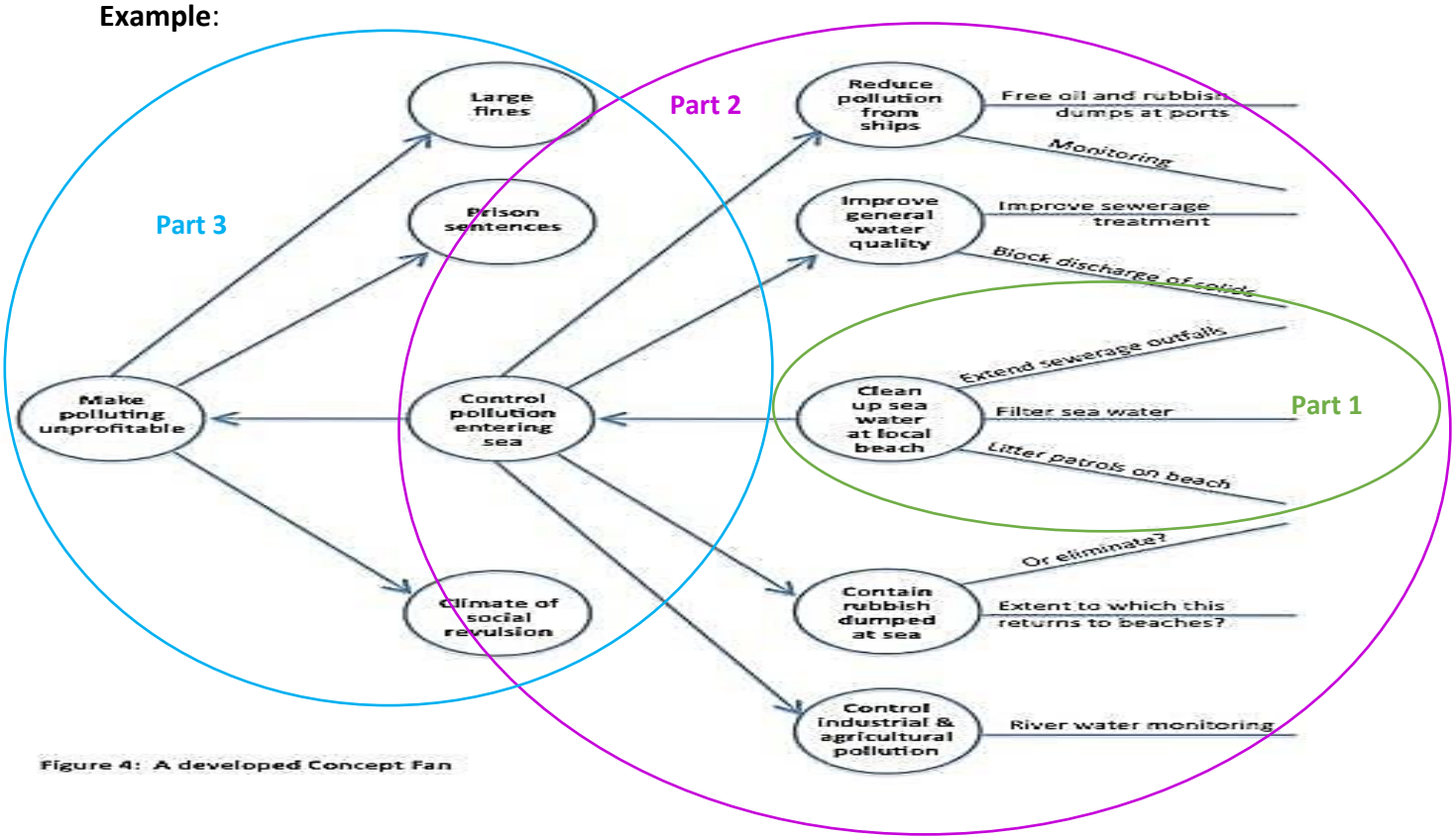


Figure 4: A developed Concept Fan

Table 2: Redesigning program by focusing on consumer challenges

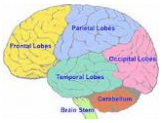
Change Concepts for Addressing Customer Problems

- Listen to customers
- Coach customers
- Reduce wait time

Change Concepts for Meeting customer expectations

- Focus on outcomes for customers
- Use a coordinator
- Reach agreement on expectations

Mind Map



A mind map can help to express ideas in a fashion that is more along the lines of how the human mind works.

Instructions:

1. Write the quality challenge in the middle of the paper
2. Write your change concepts in circles stemming from the main idea
3. From what is written on the paper, let ideas come into your head and write/draw them on the paper with lines connecting ideas that flow from one another

Notes:

Example:

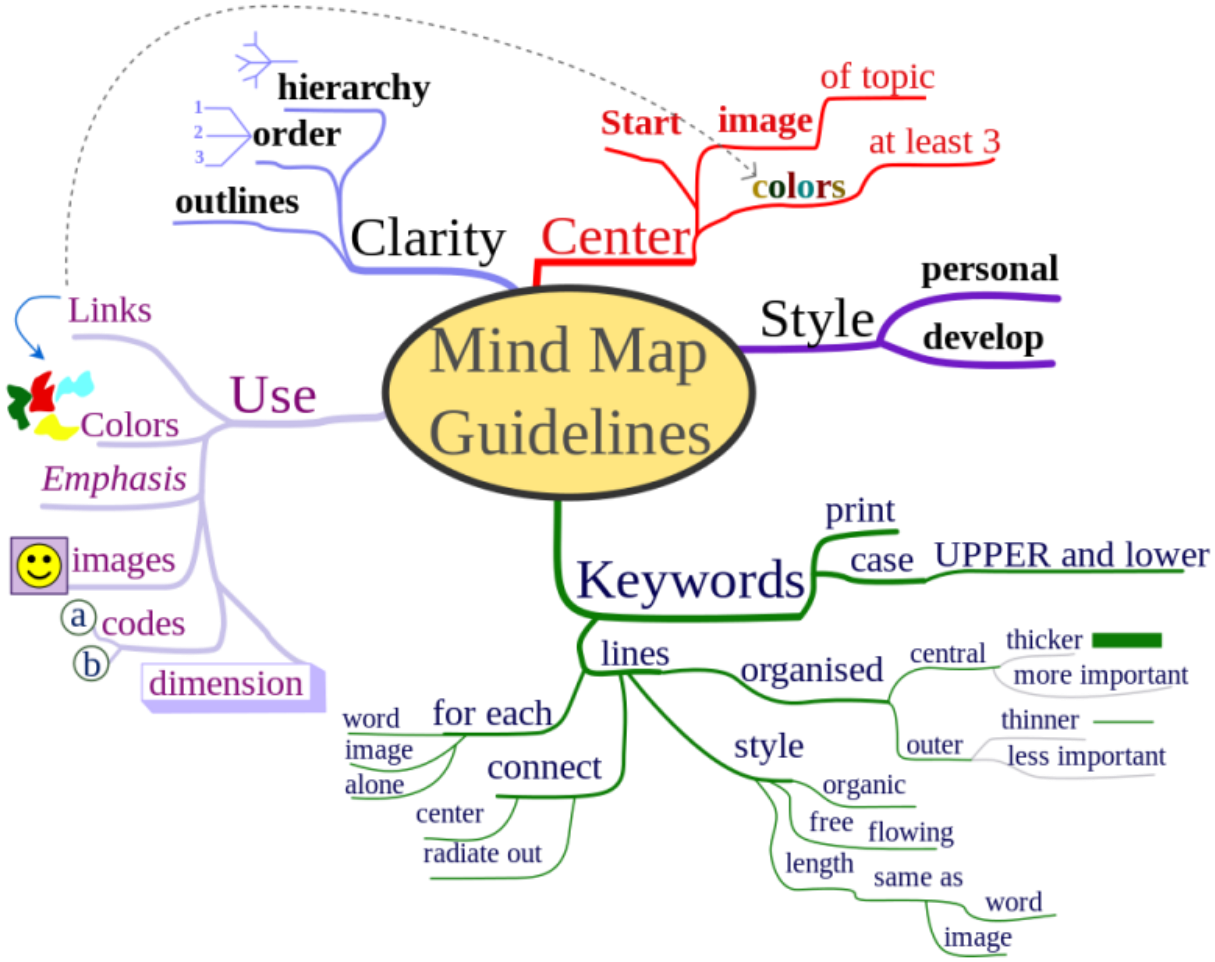

Mind Map Guidelines
Clarity
hierarchy
order
outlines
Center
Start
image
of topic
at least 3
colors
Style
personal
develop
Use
Links
Colors
Emphasis
images
codes
dimension
Keywords
print
case
UPPER and lower
lines
for each
word
image
alone
connect
center
radiate out
organised
central
thicker
more important
outer
thinner
less important
style
organic
free
flowing
length
same as
word
image

Table 3: Redesigning program by focusing on eliminating waste associated with errors

Change Concepts for Eliminating Mistakes

- Reminders
- Differentiations
- Constraints
- Affordances

Random Word Stimulation

The use of randomly selected words can stimulate new patterns of thought, ideas and solutions.

Edward de Bono suggested the following word list:

1. Weed	6. Hole	11. Puppet	16. Portrait
2. Rust	7. Diagonal	12. Nose	17. Cheese
3. Poor	8. Vacuum	13. Link	18. Chocolate
4. Magnify	9. Tribe	14. Drift	19. Coal
5. Foam	10. Gold	15. Duty	20. Tribe

Instructions:

1. Select a number between 1 and 20
2. Find the word associated with the selected number and think about it in conjunction with one of the change concepts and the quality challenge that is being focused on
3. Write down any ideas that come from the combinations of the quality problem, change concept and random word
4. Repeat steps 1 through 4 three more times so that all 4 change concepts are though about in conjunction with a random word

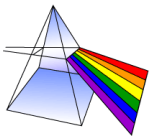
Notes:

Round 1	
Change Concept:	Random Word:
Ideas:	
Round 2	
Change Concept:	Random Word:
Ideas:	
Round 3	
Change Concept:	Random Word:
Ideas:	
Round 4	
Change Concept:	Random Word:
Ideas:	

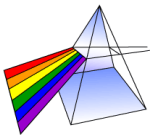
Table 4: Redesigning program to better cope and learn from variation

Change Concepts for Managing Variation

- Matching the amount to the need
- Standardization
- Improve predictions
- Contingency Plans
- Sort product into grades
- Exploit variation



Fractionalization



Fractionalization breaks existing ideas or pattern into separate parts so they can be rearranged to spark fresh ideas and concepts.

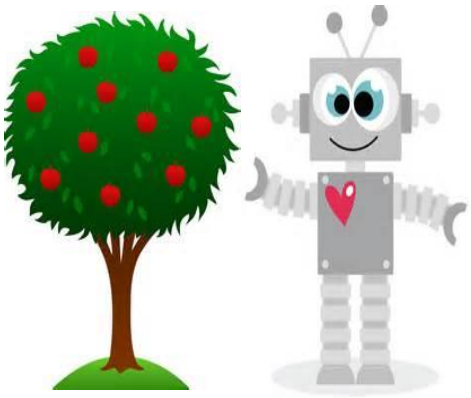
Instructions:

1. Write down the current step-by-step process related to the quality challenge.
    a. For example, if the challenge is educating virally unsuppressed patients about the importance of taking ARV medications, the current process might be: 1. The patient receives an clinic appointment, 2. The patient receives a reminder call, 3. The patient attends clinic, 4. The patient sees the nurse, 5. The nurse takes vitals, 6. The patient sees the peer educator who provides tips on taking medications regularly, 7. The doctor gives the patient VLS results and discusses the importance of taking ARV medications, 8. The patient sees the case manager who provides support and referrals, 9, the patient receives the next appointment, 10. The patient goes home.
2. Randomly reorder the steps of the process. (For example: 8. The patient sees the case manager, 4. The patient sees the nurse, 1. The patient receives a clinic appointment, etc.)
3. Select a change concept to help focus your thinking and stimulate discussion about redesigning the process.
4. Try this with three randomly selected change concepts, each time using the change concept to stimulate discussion about what new step-by-step process might help you to overcome the quality challenge, and result in an improved quality outcome.
5. At the end, answer the following:
    a. What new ideas did you come up with to solve the quality challenge?
    b. What are the best ideas?

Notes:

Example:

- Challenge: How to design an apple picking robot?
- Fractions: reaching, finding, picking and safely placing apples undamaged into baskets.
- Reassembly:
  - Reaching-finding-picking (perhaps you think to try shaking the tree for all three)
  - Reaching-undamaged apples-place in baskets (maybe you think up an elevated canvas platform which could be raised towards the apples)



Voyage of Improvement: Sailing on Towards the End of the Epidemic

Type of Exercise:

Group exercise, 2 hours 20 minutes

Target Audience:

QI project teams and other staff involved with HIV care

QI Tools and Concepts:

- PDSA Cycles
- System of Profound Knowledge
- Flow Diagrams

Learning Objectives:

- Understand quality improvement as a continuous process that focuses on improving the system
- Examine current processes for achieving viral load suppression
- Develop changes for current processes based on the different areas of the system of profound knowledge

Concept and Overview:

Quality Improvement is a continuous process, requiring ongoing review and tweaks, to improve healthcare outcome. In this activity, participants will examine the flow of current processes to discover redundancies and gaps in their process. Participants will then take this knowledge with them, as they board the ship of profound knowledge, on a journey to revise and refine their quality improvement plans.

Session At-A-Glance	Who?	How Long?
Welcome, Agenda, Learning Objectives	Facilitator	5 Minutes
The Circling Stream	Facilitator	15 Minutes
Nautical Maps	Participants	40 Minutes
The Ship of Profound Knowledge	Participants	40 Minutes
Reports from the Ship	Participants	30 Minutes
Wrap Up	Facilitator	5 Minutes

Materials

For this quality improvement exercise you will need the following materials:

- Flip chart paper
- Markers
- Participant Handouts
  -Describing Your Flow handout
  -Ship of Profound Knowledge talking points
  -PDSA form
  -Quality Improvement Project Action Plan Template
- Flash drive with slides

Preparation

To prepare for this quality improvement exercise, complete the following tasks:

- Familiarize yourself with the session's structure and content
- Make copies of the handouts (and slides if desired), one for each per participant
- If internet will not be available, download the YouTube video from slide 5 before the meeting
- Save slides onto a flash drive which you will bring to the session

Facilitator Instructions for the Day of the Activity

Setting up the Room

Get to the session early so that you have time to set up the room before it starts. *If participants arrive early, you can ask for their assistance to set up the room if necessary.* Set up for this activity involves the following:

- Set up slides and ensure that they can be advanced
- Handouts should already be on the table or at the entrance for participants to pick up as they enter

Welcome and Introductions

To begin the session, welcome the participants and, if not already done, ask individuals to introduce themselves. If you have time, feel free to add a fun question related to the nautical theme for participants to answer as they introduce themselves.

Agenda

Provide a brief description of the sessions' primary components:

- The Circling Stream
- Nautical Maps
- The Ship of Profound Knowledge
- Report Back from the Ship

Learning Objectives

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

- Understand quality improvement as a continuous process that focuses on improving the system

- Examine current processes for achieving viral load suppression
- Develop changes for current processes based on the different areas of the system of profound knowledge

The Circling Stream: Continuously Flowing Improvement

Play the "Upstreamist" YouTube video from the Institute for Healthcare Improvement. When the video is complete, explain that in quality improvement, we want to take the upstreamist approach, systematically addressing the needs of patients struggling with viral load suppression by improving clinic process.

Explain that quality improvement is an ongoing process, as continuous as a stream that constantly flows. It is PDSA cycles of improvement, focusing on system level changes to better address the needs of patients, which keep the process flowing, carrying us upstream towards our goal of improved viral load suppression

Explain that the PDSA cycles build on each other, moving us from a very small-scale test of change to implementation of a change clinic wide.

Nautical Maps

Tell participants that, with the idea of continuous process improvement through PDSA cycles in mind, they are going to look in depth at the flow of their own improvement projects.

Read the quote from W. Edwards Deming which states, "If you can't describe what you're doing as a process…you don't know what you're doing".

Explain to participants that they will be getting into groups with the other people present from their clinics*. They will then review the current process steps for patients reaching viral load suppression at their clinic, including the steps of their current QI project and developing a step-by-step flow chart to show this process. Once the process has been mapped, they will identify ways that their process can be improved, streamlined or strengthened by eliminating unnecessary steps, adding steps or improving steps and note these changes on their flow chart.

**If someone is the only representative from their clinic, they can do the activity by themselves or join another clinic, keeping their own processes in mind throughout the activity. If everyone participating is from the same clinic, tell them to break up into groups based on what area of the clinic they work in.*

Show the example flow chart. Then instruct participants to get together with the other people from their clinics and send one person to the front to get a piece of flip chart paper and a marker. *(If you have other people co-facilitating with you, you can have them pass out the paper and markers instead.)* Inform participants that the instructions for creating the flow diagram are in their handouts.

When 30 minutes have passed, tell participants to stop working on their flow diagrams.

The Ship of Profound Knowledge

Tell participants that it is now time to sail through changes on the Ship of Profound Knowledge, which will carry us towards are improvement goal: Viral Load Suppression.

Attribute the System of Profound Knowledge to W. Edwards Deming and explain that it is a framework with which to think about quality improvement. Explain the 4 components

- **Psychology** of patients, staff, other stakeholders
- **Systems** within which patients and staff work and live
- **Variation,** both expected and unexpected, in lives and outcomes
- **Knowledge** about the community and about the desired outcome

Explain to participants that the flow diagram activity can be thought of as a test of change, to see if this QI tool can serve to inform and improve their improvement plans. Tell participants that they will now work on revising their improvement plans, considering aspects of psychology, systems, various and knowledge related to viral load suppression.

Ask each clinic team to join with 2 or 3 other clinic teams for their discussion around the four aspects of the system of profound knowledge. Once the groups have been formed, ask them to select one facilitator from their table to navigate the voyage (discussions). Tell participants that they will have 10 minutes to discuss each aspect and that there are talking points included in their handouts to guide the discussion. Remind participants to take notes on what is discussed.

Tell the participants to get started and every 10 minutes instruct them to switch to the next topic.

Reports from the Ship

Tell the participants that now that their journey on the Ship of Profound Knowledge is complete, it is time for them to report back. Tell them that, with their clinic teams, they will have 5 minutes to identify tweaks, refinement, changes and overhauls that they will make to their plans. Ask them to think about whether their plan is sturdy but streamlined and adaptable to changes as suggested by your PDSA cycles.

Each group will then have 3 to 5* minutes to report on how they will revise their plans.

**This time may need to be shortened, depending on the number of groups reporting back.*

Next Steps:

Advise participants that they should share the ideas discussed today with others from their QI project team and work with them to revise, enhance and improve their process changes. Inform them that they should test these changes, using a PDSA form to document the knowledge gained and further revisions to their process. Let them know that there is a PDSA form included in their handouts.

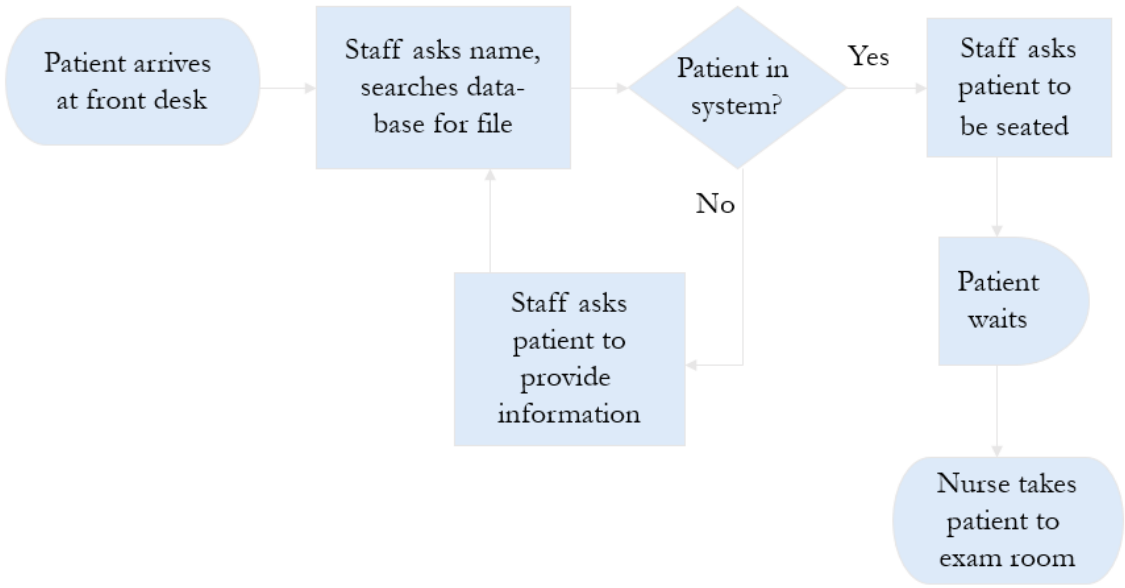
If there are upcoming deadlines or meetings, mention them here. If this is not the last session of the day and you plan on covering this at the end of the meeting, you can skip this part.

Handouts and other supplemental materials follow

Describing Your Flow

- With your clinic team, discuss the current process steps for patients reaching viral load suppression at your clinic, including steps involved in your current QI project
- Develop a step-by-step flow chart using as much detail as possible to show this process
- Identify ways that these processes can be improved, streamlined or strengthened by eliminating unnecessary steps, adding steps or improving steps
- Make these changes into your flow chart

Example Flow Chart:



System of Profound Knowledge Talking Points

Psychology:

- How do psychological factors of patients, family, friends, clinic staff or others impact viral load suppression (VLS)?
- How do psychological factors influence the capability of your clinic's processes to help patients to successfully sustain viral load suppression?
- In what ways has the process of developing your value stream map increased your understanding of psychological factors impacting viral load suppression?
- After creating your value stream map, how will you revise aspects of your QI plan in consideration these psychological factors?

Discussion Notes:

_____
_____
_____
_____
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Systems:

- How does your clinic system impact viral load suppression?
- What other systems impact viral load suppression?
- In what ways has the value stream mapping exercise increased your understanding of how systems level factors impact viral load suppression?

- After creating your value stream map, how will you revise aspects of your QI plan in consideration of systems level factors?

Discussion Notes:

_____
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Variation:

- How does variation In VLS outcomes, in the care environment, in clinic scheduling and staffing and in the life of the patient impact viral load suppression?
- How will you know if improvements in viral load suppression outcomes are caused by your process changes, not by other factors in the environment?
- Has the process of developing the value stream map increased your understanding of variation in viral load suppression?
- After creating your value stream map, how will you revise aspects of your QI plan in consideration of variation?

Discussion Notes:

_____
_____
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Knowledge:

- What is known about why patients are not virally suppressed?
- Are there tested activities that can help patients sustain viral load suppression?
- What new knowledge have you attained from the process of developing your value stream map?
- How will you use this new knowledge to improve clinic processes to support viral load suppression?

Discussion Notes:

_____
_____
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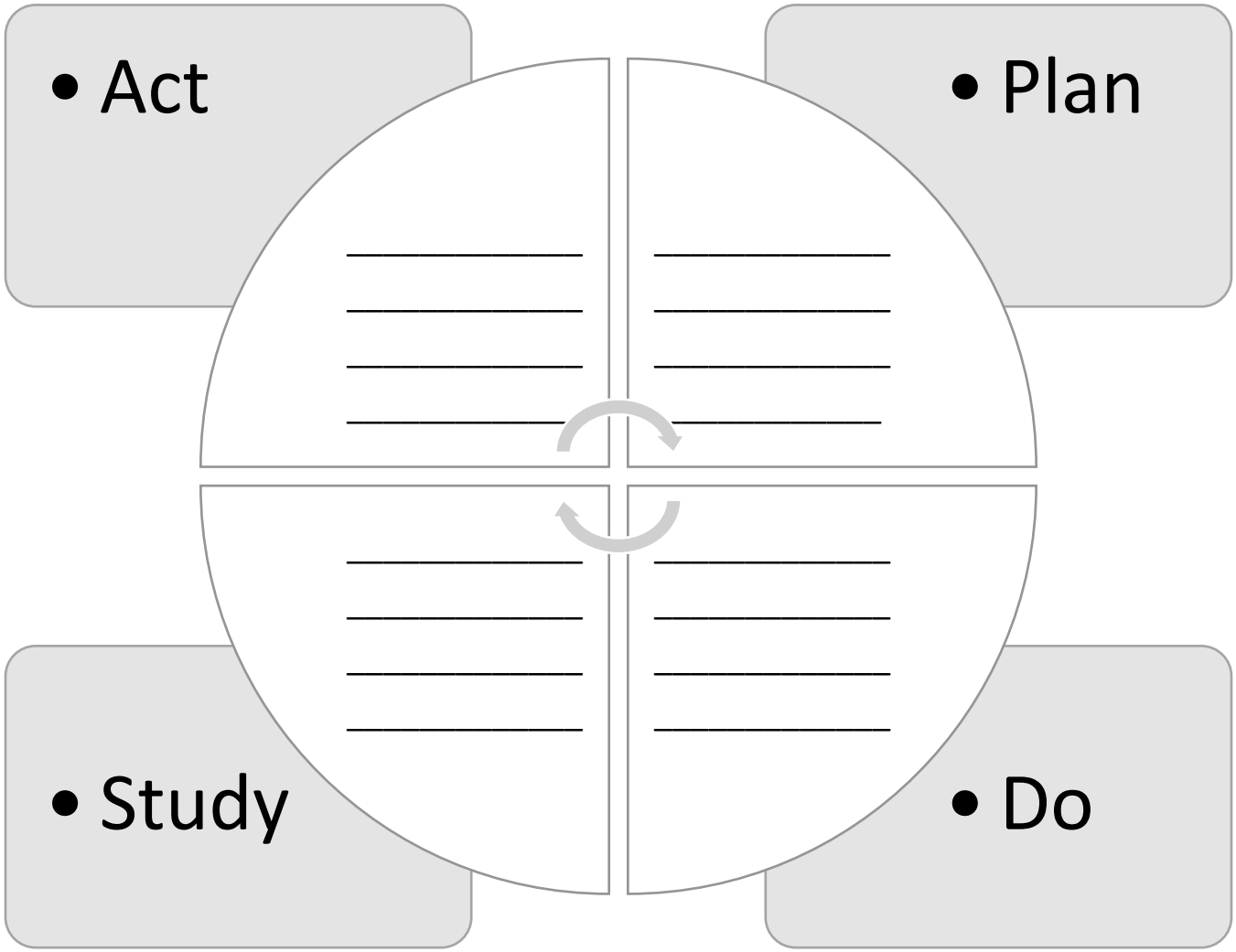
_____

PDSA Form



PDSA Worksheet for Testing Change

Date:
Goal(outcome):
Indicator (Measure to track achievement of goal):

PDSA Cycle #_____(Every Aim will require multiple small tests of change) **Describe your test of change**	**Person(s) Responsible**	**When to be done**	**Where to be done**

Plan

List the tasks needed to set up this test of change	**Person Responsible**	**When to be done**	**Where to be done**
1. **2.** **3.** **4.** **5.**			

Predict what will happen when the test is carried out	**Describe methods of measuring test results**

Do

Describe what actually happened when you ran the test

Study **Describe the measured results and how they compared to the predictions**

Act **Describe what modifications to the plan will be made for the next cycle from what you learned**

Quality Improvement Project Action Plan Template

Clinic Name: _____ Date: _____

Contact Person Name: _____

a) Goal:
Please identify a quantifiable goal for your QI project. Elements of an effective goal statement include: What will you improve? When will it improve? How much will it improve? For whom will it improve?

_____

_____

b) Please describe your improvement activity. What changes will you make to reach your goal?

_____

_____

_____

_____

_____

_____

_____

_____

c) Action Plan:
What are the improvement steps that you will need to take to accomplish the goal? Who will be responsible? When and where will each step occur?

Action Steps	Where	When	Who

e) QI Team:
Please indicate the team members of your QI project.

Name: _____ Title: _____

Name: _____ Title: _____

Name: _____ Title: _____

Name: _____ Title: _____

Name: _____ Title: _____

Knights of the Data Table

Type of Exercise:

Group exercise, 1 hour 40 minutes

Target Audience:

Quality Improvement project teams who are doing a QI project, focused on subgroups*

*If project is not focused on subgroups can still do this activity to think more critically about subgroups

Learning Objectives:

- Discuss challenges to viral load suppression faced by some groups with peers working with similar populations
- Explore ways in which quality improvement work and current processes are and are not addressing the needs of these subgroups
- Discuss improvement ideas to better address the needs of subgroups

Concept and Overview:

Different subgroups within the populations you provide care for may have different needs and face different challenges when it comes to viral load suppression (VLS). In this activity, participants will have an opportunity to discuss a subpopulation that they are focusing their QI efforts on with other clinics that work with similar populations. Together, they will be able to think through opportunities for, challenges to and solutions for improvement.

Session At-A-Glance	Who?	How Long?
Welcome, Agenda, Learning Objectives	Facilitator	5 Minutes
The Quest for Quality	Participants	75 Minutes
Report Back to the Castle	Participants	15 Minutes
Wrap Up	Facilitator	5 Minutes

Materials

For this quality improvement exercise you will need the following materials:

- Knight of the Data Table talking points
- Flash drive with slides

Preparation

To prepare for this quality improvement exercise, complete the following tasks:

- Familiarize yourself with the session's structure and content
- Make copies of the talking points (and slides if desired), one for each per participant
- Determine 4 subgroups (with challenges to VLS) that are served by participating clinics* or that most clinics are focusing their QI work on. Add this information to slide 5.

**If data is not available, ask participants for input in advance of the meeting*

- Save slides onto a flash drive which you will bring to the session.

Facilitator Instructions for the Day of the Activity

Setting up the Room

Get to the session early so that you have time to set up the room before it starts. *If participants arrive early, you can ask for their assistance to set up the room if necessary.* Set up for this activity involves the following:

- Arrange tables and chairs into 4 clusters
- Set up slides and ensure that they can be advanced
- Handouts should already be on the table or at the entrance for participants to pick up as they enter

Welcome and Introductions

To begin the session, welcome the participants and, if not already done, ask individuals to introduce themselves. If you have time, ask participants to name their favorite fairytale/story as they introduce themselves.

Agenda

Provide a brief description of the sessions primary components

- Quest for Quality
  - Round Table Discussions
  - Four Knights Leading the Way
- Report Back to the Castle

Learning Objectives

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

- Discuss challenges to viral load suppression (VLS) faced by some groups with peers working with similar populations
- Explore ways in which quality improvement work and current processes are and are not addressing the needs of these subgroups
- Discuss improvement ideas to better address the needs of subgroups

Quest for Quality

Tell the participants that they are about to embark on a quest for quality, working with 4 gallant knights of the data table to improve the quality of care at their clinics

Round Table Discussions

Announce that there are 4 round tables, each dedicated to addressing the needs of a given subgroup. State the four subgroups and then assign each table one of the subgroups. Ask participants to move to the subgroup table that best represents the subgroup they are focusing their QI work on*. Make sure the tables are relatively even before moving on.

**If clinics are not doing QI work focused on a specific subgroup or are working with a subgroup not represented by the tables, they can go to a group that represents a population they most frequently work with*.

Ask each table to nominate a chair to lead a short discussion. Instruct each table to then have a 10 minutes discuss, led by the chair, touching one the following, questions:

- What is known about the subgroup?
- What challenges to VLS the subgroup might face?
- What information would be good to know to inform our work with that group?

Remind participants to take notes during the discussion.

Four Knights Lead the Way

Explain that 4 knights will now be leading the way in the question for quality, helping the tables discuss improving VLS for their subgroups from a particular perspective.

Introduce each of the 4 knights:

1. Bright Knight: Opportunities for improvement
2. Stormy Knight 2: Challenges to improving
3. Green Knight 3: Creative solutions
4. Black and White Knight 4: Details on Implementation

Go through the slides for each of the 4 knights and read aloud the questions that each knight will cover. Remind participants that these same questions can be found in the Knights of the Data Table talking points handout.

Ask for 4 volunteers to serve as knights. Send one knight to each table and tell them to begin their quests.

Every 20 minutes tell the knights to gallop to another table!

Report Back to the Castle

Tell each knight that, having completed their quest for quality, they need to report back on the most interesting conversation they had on their journey. Each knight has 1 to 2 minutes to give their report.

Then, ask each table to talk about one important idea that they will bring back to their clinic teams. Each table has 1 to 2 minutes to give their report.

Next Steps:

If there are upcoming deadlines or meetings, mention them here. If this is not the last session of the day and you plan on covering this at the end of the meeting, you can skip this part.

Handouts and other supplemental materials follow

Knights of the Data Table Talking Points

Bright Knight

1. What aspect of your process change seems to be working?

2. What is your assumption as to why it is working?

3. What opportunities for further refining your process changes do you see?

4. Why will this approach work?

Knights of the Data Table Talking Points

Stormy Knight Notes

1. What are the problems?

2. What are the dangers?

3. What barriers exist?

Knights of the Data Table Talking Points

Green Knight Notes

1. What new ideas do you have?

2. What do you propose or suggest?

3. What alternatives to current processes can you come up with?

4. What has not been tried yet?

Knights of the Data Table Talking Points

Black and White Knight

1. Do current changes seem to be working? What other changes might work?

2. What steps need to be taken and what steps so far have been taken?

3. What is the next step?

4. What special considerations need to be made?

5. Who has been involved? Who needs to be involved?

6. How will you know if a change is an improvement?

Run to the End of the Epidemic

Type of Exercise:

Group exercise, 2 hours

Target Audience:

Quality Improvement project teams who have completed a QI project, focused on subgroups

QI Tools and Concepts:

- PDSA Cycles
- System of Profound Knowledge

Learning Objectives:

- Reflect on the planning and execution of a QI project
- Learn from peers what has been successful and not successful for improving viral load suppression
- Think about new ways to improve viral load suppression

Concept and Overview:

Using the PDSA framework, participants will reflect, through conversations with peers, on a QI project that is coming to an end. What was the plan? What did we do? How did we study what we did? How will we act based on what we learned?

Session At-A-Glance	Who?	How Long?
Welcome, Agenda, Learning Objectives	Facilitator	5 Minutes
The Relay Race	Participants	80 Minutes
Relaying the Race	Participants	30 Minutes
Wrap Up	Facilitator	5 Minutes

Materials

For this quality improvement exercise you will need the following materials:

- Relay Race talking points
- Batons (optional)
- Flash drive with slides

Preparation

To prepare for this quality improvement exercise, complete the following tasks:

- Familiarize yourself with the session's structure and content
- Make copies of the talking points (and slides if desired), one for each per participant
- Save slides onto a flash drive which you will bring to the session.

Facilitator Instructions for the Day of the Activity

Setting up the Room

Get to the session early so that you have time to set up the room before it starts. *If participants arrive early, you can ask for their assistance to set up the room if necessary.* Set up for this activity involves the following:

- Arrange tables and chairs into clusters, based on the number of groups you wish to have (preferably accounting for 5 to 8 people per group)
- Set up slides and ensure that they can be advanced
- Handouts should already be on the table or at the entrance for participants to pick up as they enter

Welcome and Introductions

To begin the session, welcome the participants and, if not already done, ask individuals to introduce themselves. If you have time, feel free to add a fun question related to the running theme for participants to answer as they introduce themselves.

Agenda

Provide a brief description of the sessions primary components:

- The Relay Race
  - Lap 1: Mapping the Race Course; The Plan
  - Lap 2: "The Do Run-Run"
  - Lap 3: Let's go to the video tape! Studying the Results
  - Lap 4: Acting Upon What You Learned
- Relaying the Race

Learning Objectives

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

- Reflect on the planning and execution of a QI project
- Learn from peers what has been successful and not successful for improving viral load suppression
- Think about new ways to improve viral load suppression

Run Forest!!! Quotable Runners

Explain that the following quotes from famous runners speak to the importance of all parts of the process, not just the end result. This is an important QI concept. *If you have other quotes you want to add, go for it!*

- "The will to win means nothing without the will to prepare." -**Juma Ikangaa, 1989 NYC Marathon winner**
- "It's important to know that at the end of the day it's not the medals you remember. What you remember is the process -- what you learn about yourself by challenging yourself, the experiences you share with other people, the honesty the training demands -- those are things nobody can take away from you whether you finish twelfth or you're an Olympic

Champion." -**Silken Laumann, Canadian Olympian**

The Relay Race

Explain to the participants that they will be embarking on a relay race today to reflect on their QI projects. Participants will run 4 laps, each focused on a different aspect of the PDSA cycle.

Lap 1: The Plan; Mapping the Race Course: Participants will begin by discussing initial plans for improvement

Lap 2: Do a Lap!: Participants will discuss what they learned about the system, psychology, knowledge and variation after testing their changes

Lap 3: Study and Strategize after each lap run: Participants will discuss how they modified their plan after testing it

Lap 4: Act upon what you have learned with each lap: Participants will discuss their ongoing plans, based on what they have learned from this project

Explain the rules of the "race:"

- One facilitator (runner) is chosen from each table to facilitate the first discussion (run the first lap)
- After each lap, the facilitator (runner) chooses another person from the table to facilitate the next discussion (lap) and "passes the baton" to them *(Having an actual item to pass can help make it clear who the facilitator is.)*
- Runners will have 20 minutes to complete each lap

Explain that though they may be in groups from different clinics who worked on different projects, they are to contribute to the discussion from their own clinic experience.

Tell the participants it is time to start the activity. Ask for one volunteer from each group to be the first runner*. Tell the group that the conversation questions for each lap are included in their handouts. Remind them to take notes while they are discussing.

**If the participants are not grouped with the appropriate number of people, you can ask some people to move to other groups now.*

On your marks, get set, go!

During each lap, display the slide that corresponds. Every 20 minutes, show the "Pass the Baton!" slide and tell participants to choose a new runner.

Relaying the Race

Now that the race has been complete, tell the group that, by clinic, they should summarize their discussion, putting together the story of the "race" run by their clinic team.

After groups have had 15 minutes to put their story together, ask one representative from each group to briefly present their story, focusing on how they will act on what they've learned. Each team has 3 to 4 minutes to present.

Race to End the Epidemic

Remind participants that the race to the end of the epidemic continues, and we cannot stop until we reach the finish line.

Next Steps

If there are upcoming deadlines or meetings, such as a due date for the new QI plan, mention them here. If this is not the last session of the day and you plan on covering this at the end of the meeting, you can skip this part.

Handouts and other supplemental materials follow

Running to the End of the Epidemic

Lap One: Plan
Mapping the Race Course

1. Looking back to the beginning of the current VLS QI Project, please describe the process investigation that you conducted after reviewing your data and identifying the subgroup of patients that you chose to focus upon for improvement. How did it go? Did you successfully identify process changes to meet the needs of the identified subgroups?

2. Did you tailor your improvement activity to meet the needs of the identified subgroups of patients or did you use the same improvement intervention for all subgroups without making any modifications? Why?

3. What was your hypothesis about how your plan would work to improve the rate of viral load suppression for specific patient subgroups?

4. Who was involved in developing the plan? Staff? Consumers?

5. Who was involved in testing the plan?

Running to the End of the Epidemic

Lap Two: Do

"The Do Run-Run"

1. How many tests of change did you engage in before implementing your changes? Did you test any changes that did not work?

2. What did you learn about the system of your clinic after testing your changes? What did you learn about the psychology of patients, staff and other stakeholders involved in the change?

3. Did your knowledge about how to improve viral load suppression increase after implementing the change?

4. Did you notice variation in the results from one reporting period to the next? How did the psychology of those involved contribute to variation in results? How did the clinic system contribute to variation?

Running to the End of the Epidemic

Lap Three: Study
Let's Go to the Video Tape!

1. How often did your team come together to discuss changes tested? Which team members discussed the tested changes?

2. Who was responsible for revising the plan after your team analyzed the results?

3. How did you communicate changes in the plan to all team members?

4. In testing your changes with patient subgroups, what did you learn about the challenges facing each subgroup? How did you revise the plan to meet the needs of specific subgroups of patients?

Running to the End of the Epidemic

Lap Four: Act
Acting Upon What You Learned

1. Are you still testing changes or have you implemented these changes? If you are still tailoring your changes, what changes do you plan for your next test of change? Have you spread changes to include more patients?

2. What have you learned about your clinic processes and making changes within your system that you did not know or fully realize until testing these changes?

3. Do you think in focusing upon specific patient subgroups that you have been able to mitigate against disparities in viral load suppression outcomes? Why or why not?

4. What else could be done within your system to improve viral load suppression outcomes amongst specific patient subgroups? How might consumers be involved to further strengthen your interventions to help meet ending the epidemic goals?

Recipes for Ending the Epidemic

Type of Exercise:

Group exercise, 2 hours 15 minutes

Target Audience:

Quality Improvement project teams who are towards the end of or have completed a QI project.

QI Tools and Concepts:

- System of Profound Knowledge

Learning Objectives:

- Learn from colleagues ways to improve viral load suppression (VLS)
- Understand how other clinic teams have overcome challenges to improving VLS rates
- Reflect on a project that is ending- what worked and what did not
- Develop ideas to improve VLS in your new project

Concept and Overview:

As a QI project is wrapping up and you are getting ready to start new QI work, it is important to take time to reflect on your work and use what you have learned to shape your work going forward. Were the right people involved in your project? Did the project team meet regularly enough? What did you learn about your clinic process that you didn't know before the project? These are the types of questions that participants will look at in this activity.

Session At-A-Glance	Who?	How Long?
Welcome, Agenda, Learning Objectives	Facilitator	5 Minutes
System of Profound Knowledge: A QI Recipe for Improvement	Facilitator	5 Minutes
A Moveable Feast	Participants	90 Minutes
New Recipes to End the Epidemic in Your Community	Participants	30 Minutes
Wrap Up	Facilitator	5 Minutes

Materials

For this quality improvement exercise you will need the following materials

- Participant Handouts
  - Chef talking Points
  - Recipe Page "(i.e. improvement plan template)
- "Awards" Printouts
- Flash drive with slides

Preparation

To prepare for this quality improvement exercise, complete the following tasks:

- Familiarize yourself with the session's structure and content
- Make copies of all handouts (and slides if desired), one for each per participant
- Save slides onto a flash drive which you will bring to the session

Facilitator Instructions for the Day of the Activity

Setting up the Room

Get to the session early so that you have time to set up the room before it starts. *If participants arrive early, you can ask for their assistance to set up the room if necessary.* Set up for this activity involves the following:

- Arrange tables and chairs into 4 clusters
- Set up slides and ensure that they can be advanced
- Handouts should already be on the table or at the entrance for participants to pick up as they enter

Welcome and Introductions

To begin the session, welcome the participants and, if not already done, ask individuals to introduce themselves. If you have time, feel free to add a fun question related to the culinary theme for participants to answer as they introduce themselves.

Agenda

Provide a brief description of the sessions primary components:

- The System of Profound Knowledge
- A Movable Feast
- New Recipes to End the Epidemic in Your Community
- Cook Off! May the Best Recipe Win!

Learning Objectives

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

- Learn ways to improve viral load suppression (VLS) from colleagues
- Understand how other clinic teams have overcome challenges to improving VLS rates
- Reflect on a previous QI project – what worked and what didn't
- Develop ideas to improve VLS in your new project
- Have fun!

QI Quotes from the Kitchen

Explain that the following quotes from famous chefs speak to the work we are doing in QI. *If you have other quotes you want to add, go for it!*

- A great chef is first a great technician. 'If you are a jeweler, or a surgeon or a cook, you have to know the trade in your hand. You have to learn the process. You learn it through endless repetition until it belongs to you. - **Jacques Pepin**
- Fancy ingredients or recipes not required; simple, made-up things are usually even better. **- Erin Morgenstern**

System of Profound Knowledge: A QI Recipe for Improvement

Discuss Edward Deming's System of Profound Knowledge as a QI recipe for improvement.

- **Psychology** of patients, staff, other stakeholders
- **Systems** within which patients and staff work and live
- **Variation,** both expected and unexpected, in lives and outcomes
- **Knowledge** about the community and about the desired outcome

Tell participants to keep this in mind throughout the discussion, thinking about how they used the different areas of the system of profound knowledge for their QI projects.

A Moveable Feast

Explain to participants that four "world renown chefs" will be helping review their QI work and develop plans for a new project.

- Crunchy Data Chef: How did you crunch-crunch data to develop and improve your recipe?
- Chef Foody aka the Food Processor: What kind of process investigation did you use to inform your menu for improvement? What recipe (plan) did you identify?
- Short Order Chef: How did you use PDSA cycles to cook up improvement?
- Chef of the Future: What's on the menu for next year?

Ask for 4 volunteers to act as the chefs who will facilitate the conversations.

Explain the instructions for the Kitchen Table Turnabout:

- Each chef spends twenty minutes at each table*
- Tables are turned every twenty minutes until each table has an opportunity to meet with each chef

**If participants are not already grouped around 4 tables, make sure they do so before starting.*

Go over the talking points for each chef and tell participants that these talking points are included in their handouts. Remind them that they should take notes during the discussion.

Send one chef to each table and start the clock, having the chefs rotate tables every 20 minutes.

New Recipes to End the Epidemic in Your Community

Explain to participants that, using the "recipe page" included in their packet, they will

begin to develop plans for a new QI project, working with the people who are from the same clinic as them. They have 20 minutes to work on it. It does not have to be completed in this time frame, as they can take it back to their teams to continue working on it. *If there is a specific focus for the new project, make sure to remind participants now.*

After 20 minutes have passed, give each QI team 1-2 minutes to share their new QI plan.

Cook Off! May the Best Recipe Win!

You and any co-facilitators can serve as judges for this contest. Consult with each other and choose the best QI plan in the following categories:

- Award One: The most creative recipe
- Award Two: Best collaboration between chefs
- Award Three: Most ambitious realistic goal
- Award Four: Best plan to measure changes

You can give the winners each a paper "1st place" ribbon (available in the following supplemental materials on page 101).

Next Steps:

If there are upcoming deadlines or meetings, such as a due date for the new QI plan, mention them here. If this is not the last session of the day and you plan on covering this at the end of the meeting, you can skip this part.

Handouts and other supplemental materials follow

Current Recipes to End the Epidemic – Crunchy Data Chef

Talking Points

- Looking back to the beginning of the current VLS QI Project, please describe the process investigation that you conducted after reviewing your data and identifying the subgroup of patients that you chose to focus upon for improvement. How did it go? Did you successfully identify process changes to meet the needs of the identified subgroups?

- Did you tailor your improvement recipe to meet the needs of the identified subgroups of patients or did you use the same improvement recipe for all subgroups without making any modifications? Why?

- What was your hypothesis about how your recipe would work to improve the rate of viral load suppression for specific patient subgroups?

- Who was involved in developing the recipe? Staff? Consumers?

- Who was involved in testing the recipe?

Test Kitchen (the System) – Chef Foody aka The Food Processor

Talking Points

- How many times did you test your recipe for improvement before implementing your changes? Did you test any recipes that did not work?

- What did you learn about the system of your kitchen (clinic) after testing your change recipes? What did you learn about the psychology of consumers, staff and other stakeholders involved in the change?

- Did your knowledge about how to improve viral load suppression increase after testing your recipe?

- Did you notice variation in the results from one reporting period to the next?

- How did the psychology of those involved contribute to variation in results? How did the test kitchen (clinic system) contribute to variation?

Adjusting your Recipes After Testing – Short Order Chef
Talking Points

- How often did your team come together to discuss changes tested?

- Which team members discussed the tested changes?

- Who was responsible for revising the plan after your team analyzed the results?

- How did you communicate changes in the plan to all team members?

- Who was responsible for revising the plan after your team analyzed the results?

- How did you communicate changes in the plan to all team members?

- In testing your changes with patient subgroups, what did you learn about the challenges facing each subgroup?

- How did you revise the plan to meet the needs of specific subgroups of patients?

What's on the Menu for Next Year – Chef of the Future

Talking Points

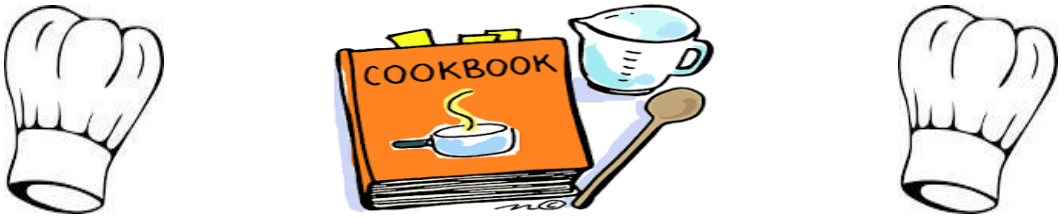
- Are you still testing changes or have you implemented these changes? If you are still tailoring your changes, what changes do you plan for your next test of change? Have you spread changes to include more patients?

- What have you learned about your clinic processes and making changes within your system that you did not know or fully realize until testing these changes?

- Do you think in focusing upon specific patient subgroups that you have been able to mitigate against disparities in viral load suppression outcomes? Why or why not?

- What else could be done within your system to improve viral load suppression outcomes amongst specific patient subgroups?

- How might consumers be involved to further strengthen your interventions to help meet Ending the Epidemic goals?



Recipe for Viral Load Suppression Quality Improvement in Previous Year

Date:	

Lead Facility			
Organization	Primary Contact		
	Name	Email	Phone

Collaborating Organizations				
Organization	Primary Contact			
	Name	Email	Phone	
				Add more rows as necessary

A. Baseline Viral Load Suppression Rate (Using NYS indicator definition for viral load suppression: suppressed at last VL of review period)	
1)	Previous Year VLS Rate: _____%
2)	Most Recent VLS:_____% Time Frame:
3)	Other available VLS Data:

B. Goal for Viral Load Suppression Rate by end of project (Using the NYS indicator for VLS)	
1)	Improvement goal: _____%

C. Aim Statement
Please identify 2-3 quantifiable goals for your viral load suppression QI project. Elements of an effective aim statement include: What will you improve? When will it improve? How much will it improve? For whom will it improve?

D. QI Team		
Please indicate the team members of your QI project		
Name	Organization	Title:

Add more rows as necessary

E. QI Interventions			
Please identify the initial action steps you want to take to reach your Aim by completing the work plan template below.			
Action Steps	Details	When	Who

				Add more rows as necessary
Please identify the method you will use to measure your improvement interventions.				
Please describe how team members will work together to implement the QI project. Will there be consumer involvement?				


1st

The Living Cascade: Focusing on the Care in the Care Continuum

Type of Exercise:

Group exercise, 1 hour 40 minutes

Target Audience:

QI project teams and other staff involved with HIV care working to improve quality of HIV care along the HIV care continuum

Learning Objectives:

- Understand the human interactions along the care continuum
- Develop ideas for improving these human interactions to improve rates of viral load suppression

QI Tools and Concepts:

- Flow diagrams

Concept and Overview:

Each process along the care continuum involves human interaction and represents a journey that the consumer takes. Improving the human interactions at each step of the care continuum will improve the consumer's journey along the cascade and lead to higher rates of viral load suppression.

Session At-A-Glance		Who?	How Long?
Welcome, Agenda, Learning Objectives		Facilitator	5 Minutes
The Living Cascade Hypothesis		Facilitator	5 Minutes
The Living Cascade Exercise		Participants	90 Minutes
	• *Part 1: Cascade Creation*		*60 Minutes*
	• *Part 2: Cascades Spring to Life*		*30 Minutes*
Wrap Up		Facilitator	5 Minutes

Materials

For this quality improvement exercise you will need the following materials:

- Flip chart paper
- Markers
- Living Cascade Talking Points
- "Awards" Printouts*
- Flash drive with slides

*Can print out the 4 awards slides on slides 11-14 or any other picture or an award

Preparation

To prepare for this quality improvement exercise, complete the following tasks:

- Familiarize yourself with the session's structure and content
- Make copies of all handouts (and slides if desired), one for each per participant
- Save slides onto a flash drive which you will bring to the session

Facilitator Instructions for the Day of the Activity

Setting up the Room

Get to the session early so that you have time to set up the room before it starts. *If participants arrive early, you can ask for their assistance to set up the room if necessary.* Set up for this activity involves the following:

- Arrange tables and chairs into clusters, based on the number of groups you wish to have (preferably accounting for 5 to 8 people per group)
- Set up slides and ensure that they can be advanced
- Handouts should already be on the table or at the entrance for participants to pick up as they enter

Welcome and Introductions

To begin the session, welcome the participants and, if not already done, ask individuals to introduce themselves. If you have time, feel free to add a fun question for participants to answer as they introduce themselves.

Agenda

Provide a brief description of the sessions primary components:

- The Living Cascade Hypothesis
- The Living Cascade Exercise
  - Part 1: Cascade Creation
  - Part 2: Cascades Spring to Life

Learning Objectives

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

- Understand the human interactions along the care continuum
- Develop ideas for improving these human interactions to improve rates of viral load suppression

The Living Cascade Hypothesis

Explain to participants the hypothesis behind the living cascade activity. The logic is as such:

- If you improve the steps along the continuum, there will be an increased chance that patients will sustain viral load suppression.
- Each process step along the continuum involves a human interaction. All of the steps together are a journey the consumer takes. Working together, we can improve the consumer journey and help the consumer to arrive at sustained suppression.
- Focusing on improving processes for the smaller group of unsuppressed patients will help patients to become suppressed.
- These activities will increase the clinic's overall viral load suppression rates and regional viral load suppression rates.

The Living Cascade Exercise

Part 1: Cascade Creation

Explain to participants that each cascade team* will select a Cascade Captain, who will assist the group in navigating the discussion of the consumer's journey and will report back to the larger group on the journey and aspects to consider for improvement. Further explain that each team will designate a Cascade Artist, who will draw the process flow map for each step in the cascade.

**If participants are not already sitting in groups of 5 to 8, ask them to do so before starting the cascade discussion.*

Instruct participants that they will use the Living Cascade talking points, which are included in their handouts, to review the current process steps in the community for linkage, retention and viral load suppression. The team artist will draw a process flow map for each of these areas. These may include processes both within and outside the clinic setting*. Each team will then identify ways that these processes can be improved, streamlined or strengthened by eliminating unnecessary steps, adding steps or improving steps. The team artist will draw the new process steps using a different color for the team's suggested improvements. The team will then put the improved processes together into a single process flow** that begins with linkage and culminates with suppression.

**If there are multiple clinics represented in your group, participants should choose one's processes to focus on. Even if this clinic's processes are not fully representative of those at the other clinics, the process of thinking through the steps and how to improve them will be beneficial for everyone.*

***Note: The process flow maps do not need to be redrawn but rather just placed in order, perhaps with arrows drawn to link the connecting steps in each part of the process.*

Show the example flow chart to give participants a sense of what a process flow diagram might look like. Pass out at least 3 pieces of flip chart paper and two different colored markers to each cascade group. Instruct the groups to begin. Suggest every 15 minutes or so that they move onto the next step of the cascade if they have not already.

Part 2: Cascades Spring to Life

Explain to participants that each team will have 5 minutes* to present the step by step process of their care continuum, pointing

out where steps have been eliminated, added, or improved. Let them know that they have the option to act out the process changes in a one act play, if desired.

**This might need to be shortened if there are more than 4 or 5 groups.*

Explain that awards will be given by the "Cascade Committee"* in the following categories

- Best Picture (of Cascade Flow)
- Most original cascade process improvements to support VLS
- Best proposed collaboration between all service providers
- Best acting

**The committee should be made up of you, any other facilitators and any special guests in attendance at the meeting who did not participate in the activity.*

After each group has presented, award the Niagara Awards. Display each award slide and hand the paper version to the winners.

Next Steps:

Tell participants that they should go back to their clinic teams and develop their own clinic level cascade process flow diagrams, which they can use to identify areas for improvement along the care continuum.

If there are upcoming deadlines or meetings, such as a due date for the new QI plan, mention them here. If this is not the last session of the day and you plan on covering this at the end of the meeting, you can skip this part.

Handouts and other supplemental materials follow

Cascade Talking Points

What is your Process: Linkage to Care

- What are the human interactions involved in linking patients to care?
  - Staff and consumers
  - Staff and leadership
  - Staff at testing and supportive service programs
  - The state and local health departments and staff at clinical care programs
- How can the human interactions that make up the process steps of successfully linking patients to care be improved?

As you talk, complete the current process map and the improved process map for this important portion of the care continuum.

What is your Process: Engagement and Retention

- What are the human interactions for engaging and retaining patients in ongoing care?
  - Staff and consumers
  - Staff and leadership
  - Staff at testing and supportive service programs
  - The state and local health departments and staff at clinical care programs
- How can the human interactions that make up the process steps of successfully engaging patients in care be improved?
- How can the human interactions that make up the process steps of successfully retaining patients in care be improved?

As you talk, complete the current process map and the improved process map for this important portion of the care continuum.

What is your Process: Viral Load Suppression

- What are the human interactions for engaging and retaining patients in ongoing care?
  - Staff and consumers
  - Staff and leadership
  - Staff at testing and supportive service programs
  - The state and local health departments and staff at clinical care programs
- Working together, how can we improve the human interactions that make up the process steps of successfully helping patients to viral load suppression?

As you talk, complete the current process map and the improved process map for this important portion of the care continuum.

The Living Cascade: Consumer Cascade Journeys

Type of Exercise:

Presentation, 40 minutes - minimum 1 cascade journey (+15 minutes for each additional consumer cascade journey)

Target Audience:

QI project teams and other staff involved with HIV care working to improve quality of HIV care along the HIV care continuum

Learning Objectives:

- Understand the consumer's perspective of care along the cascade
- Recognize that data represent real people with real experiences

Concept and Overview:

Understanding the consumer perspective and involving consumers in your quality improvement work is important for successful quality improvement. In this activity, consumers share their cascade journey from diagnosis to viral load suppression, giving participants important insight into what was helpful in getting them where they are today.

Session At-A-Glance	Who?	How Long?
Welcome, Agenda, Learning Objectives	Facilitator	5 Minutes
The HIV Organizational Treatment Cascade	Facilitator	5 Minutes
Cascade Journeys	Consumers	15 Minutes/Journey
Conclusion/Tell Your Cascade Journey	Participants	15 Minutes
Wrap Up	Facilitator	5 Minutes

Materials

For this quality improvement exercise you will need the following materials:

- Flash drive with slides

Preparation

To prepare for this quality improvement exercise, complete the following tasks:

- Familiarize yourself with the session's structure and content
- Identify consumers who are willing to share their cascade journeys and help them develop slides to present
- Save slides onto a flash drive which you will bring to the session

Facilitator Instructions for the Day of the Activity

Setting up the Room

Get to the session early so that you have time to set up the room before it starts. *If participants arrive early, you can ask for their assistance to set up the room if necessary.* Set up for this activity involves the following:

- Arrange tables and chairs into clusters, based on the number of groups you wish to have (preferably accounting for 5 to 8 people per group)
- Set up slides and ensure that they can be advanced
- Handouts should already be on the table or at the entrance for participants to pick up as they enter

Welcome and Introductions

To begin the session, welcome the participants and, if not already done, ask individuals to introduce themselves. If you have time, feel free to add a fun question for participants to answer as they introduce themselves.

Agenda

Provide a brief description of the sessions primary components:

- The Organizational Treatment Cascades
- Cascade Journeys
- Conclusions/Tell Your Cascade Story

Learning Objectives

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

- Understand the consumer's perspective of care along the cascade
- Recognize that data represent real people with real experiences

The HIV Organizational Treatment Cascade

Explain to participants that the purpose of organization HIV treatment cascades is to show the number of individuals living with HIV infection, the medical care they are receiving, the medical care they need and the results of that care. Explain that organizational treatment cascades are a visual representation of HIV care and outcomes at a point in time. They monitor the extent and quality of care being delivered to all HIV-positive patients seen at an organization. They assess key parameters of care for persons living with HIV infection and identify gaps in care. Importantly, they prompt discussions on steps to improve HIV care outcomes and help with the creation of data-driven plans to assess and improve care through QI activities.

Explain to participants that when analyzing the care cascade and creating plans for improving care, it is important to remember that each process step along the way involves human interaction and the data are really made up of people. Emphasize that

the question at the center of the organization treatment cascade is “how can we help people living with HIV to become engaged in care and to stay healthy?”

Consumer Cascade Journeys

Explain to participants that consumers will now be sharing their cascade journeys, and the interactions that brought them along the steps of the care cascade. Explain that these stories will give participants important insight into ways to improve the care outcomes for their consumers.

Allow each consumer to present for 15 minutes.

Conclusion/Tell Your Cascade Story

Tell participants that working together we can all make a difference, improving supportive processes, and helping consumers to become virally suppressed, maintain health and play an important part in ending the epidemic by 2020.

Invite participants to tell a compelling story about a consumer’s living cascade to viral load suppression and good health. Also note that they can share at a future meeting. If people do want to share, allow 5 minutes per person.

Next Steps:

If there are upcoming deadlines or meetings, such as a due date for the new QI plan, mention them here. If this is not the last session of the day and you plan on covering this at the end of the meeting, you can skip this part.

References

Bauer, J.E.; Duffy, G.L. and Westcott, R.T. (2006). *The Quality Improvement Handbook*. Milwaukee: ASQ Quality Press.

Langley, G.J.; Moen, R.D.; Nolan, K.M.; Nolan, T.W.; Norman, C.L. and Provost, L.P. (2009). *The Improvement Guide: A Practical Approach to Enhancing Organizational Performance*. San Francisco: Wiley.

Provost, L and Murray, S. (2011). *The Health Care Data Guide: Learning From Data for Improvement*. San Francisco: Jossey-Bass.

Associates in Process Improvement. (2007). *The Improvement Handbook: Model, Methods, and Tools for Improvement, Version for: IHI Improvement Advisor Development Program*. Austin: Associates in Process Improvement.