Session Objectives

- Define quality improvement principles
- Discuss QI tools to help generate and test actionable solutions
Key Features of QI

- Focus on systems, not individuals
- Ideas for change from customers, stakeholders & front line staff
- The “intervention” is design iteratively through testing
- Frequent, ongoing measurement and data driven decision making
- Never ending process (never “done”)

Adapted from: Jean Vukoson’s Bright Futures Presentation and Concepts from Toyota Way

QI Tools

Impact Matrix

- Used to prioritize ideas
- Helps identify changes that will give you the biggest “bang for the buck”
Example: Impact Matrix

Aim:
By September 1, 2014, we aim to increase the overall timeliness and efficiency of processing adoption packets.

Impact Matrix

Instructions

• Number all of the opportunities for improvement
• As a team, discuss each idea and rate it based on:
  o Impact: What impact will the change have on the aim?
  o Difficulty: How difficult will it be to implement the change?
• "Graph" the idea on the impact matrix
• Focus is often on the changes in the top left quadrant

Prioritization Matrix

• Used to prioritize and narrow down focus areas
• Provides more criteria to evaluate focus areas
• Generates a numeric score
Prioritization Matrix

**Instructions**
- Identify and jot down the overall goal(s) for your project.
- Set criteria by which you will rank each change idea.
- List all criteria on the horizontal axis, and all change ideas on the vertical axis.
- Ask each team member to assign each opportunity for improvement a value based on the specified criteria.
- Review the total scores and focus on the opportunity for improvement that ranked the highest.

Fishbone Diagram

**What it is?**
- A visual display that allows teams to organize information and identify *multiple* causes of a problem

**Why use it?**
- Provides structure during brainstorming
- Enables team to think through all potential causes
- Creates a snapshot of the team’s collective knowledge
- Breaks problem into smaller pieces
- Focuses on causes rather than symptoms
- Helps prioritize and focus on specific areas
Instructions

1. Identify your problem and put it at the “head” of the fish
2. Determine major categories for the diagram
   - Consider: Procedures, Policies, Place/Technology, People
   - Consider: Methods, Machine, Materials, Man/People
3. Identify factors that fall under each category
   - Data collected from observations, focus groups, surveys
   - Brainstorm ideas as a group
4. Evaluate your diagram
   - Look at the “balance” of the diagram
   - Focus on the category that has the most factors
   - Prioritize the factors within the category
   - Determine if you need to use the 5 Whys to drill down to find root cause
5. Identify potential solutions for each prioritized factor
6. TEST, TEST, TEST each solution with Plan-Do-Study-Act cycles

Brainwriting

• What it is?
  - Alternative form of brainstorming

• Why use it?
  - Everyone contributes ideas
  - Reduces threat of ideas being blocked by others
  - Quick way to generate many innovative ideas
Brainwriting Example

### 6 3 5 Method
*(6 people, 3 ideas, 5 minutes)*

<table>
<thead>
<tr>
<th>Idea 1</th>
<th>Idea 2</th>
<th>Idea 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>AAA</td>
<td>BBB</td>
<td>CCC</td>
</tr>
<tr>
<td>DDD</td>
<td>EEE</td>
<td>FFF</td>
</tr>
<tr>
<td>GGG</td>
<td>HHH</td>
<td>III</td>
</tr>
</tbody>
</table>

### Alternative Brainwriting Methods

- **Gallery Brainwriting**
  - Write problem statements on flip charts
  - Each person selects a flip chart, reviews problem statement, writes 3 ideas on post-it notes (1 idea/post-it)
  - Rotate to the flip chart on the right, review problem statement, read the ideas, add 3 new ideas and/or enhance the other ideas
  - Continue until everyone has visited each flip chart

- **Index card**
  - Display the problem statement at the front of the room
  - Each person writes 3 ideas on an index card & passes it to person on their right
  - Each person reviews ideas on card, adds 3 new ideas or enhances other ideas
  - Continue process for 20-30 minutes

### Brainwriting

#### 6 3 5 Method Instructions
- Identify and write down a problem statement/issue
- Distribute a worksheet to each person
- Each person has 5 minutes to write 3 ideas on Row 1 of their worksheet
- Pass complete worksheet to person on the right
- Each person has 5 minutes to review the worksheet & add 3 new ideas in Row 2 of worksheet
- Continue process until multiple rows have been filled

### PDSA Cycle

**Act**
- What changes are to be made?
- Adapt? Or Abandon?
- Next cycle?

**Plan**
- Objective of cycle
- Questions/predictions
- Plan to carry out the cycle
- (who, what, where, when)

**Study**
- Complete the analysis of data
- Compare data to predictions
- Summarize what was learned

**Do**
- Carry out the plan
- Document problems/unexpected observations
- Begin analysis of data

Use to tested changes
Tests of Change

- Hunches
- Theories / Ideas
- Very Small Scale Test
- Follow-up Tests
- Wide-Scale Tests of Change
- Implementation of Change
- Changes That Result in Improvement
- Learning

PDSA Tip #1: Scale Down

- Years
- Quarters
- Months
- Weeks
- Days
- Hours
- Minutes
- Number of clients

“Drop 2”

PDSA Tip #2: “Oneness”

Learning & Improvement in Parallel
PDSA Cycle Forms

How might you use QI tools to address problems/challenges within Maternal Child Health?

References