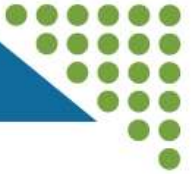


# An Introduction to Quality Improvement

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## Learning Objectives

At the end of the presentation, participants will be...

- Able to define Risk Management, Quality Assurance and Quality Improvement
  - Identify at least two components and strategies of each
  - Explain the difference between quality improvement and quality assurance
- Able to explain the main features of the Model for Improvement
  - Identify at least two of the FOCUS strategies
  - State how the Paper Airplane Game illustrates the Model for Improvement





# Introductions

Who's in the room?



# qual·i·ty

*/'kwälədē/*

*noun*



1. the standard of something as measured against other things of a similar kind; the degree of excellence of something.  
"an improvement in product quality"

Similar:

standard

grade

class

classification

caliber

status

condition



2. a distinctive attribute or characteristic possessed by someone or something.  
"he shows strong leadership qualities"

Similar:

feature

trait

attribute

characteristic

point

aspect

facet



# Quality: A Brief History



Medieval  
Europe



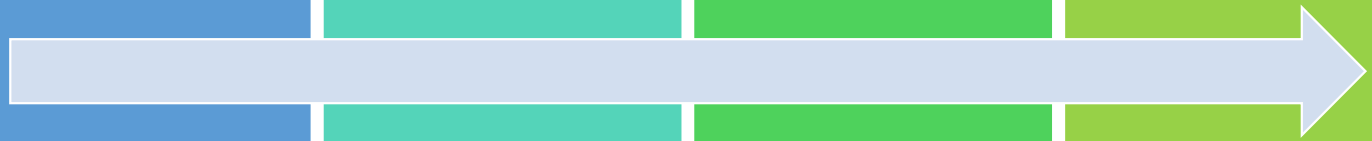
Industrial  
Revolution



20th  
Century



Today



**• What will put us at risk?**

- What could threaten our organization and/or services?
- What could threaten staff and/or individuals' health and safety?
- What are other sources of potential liability?

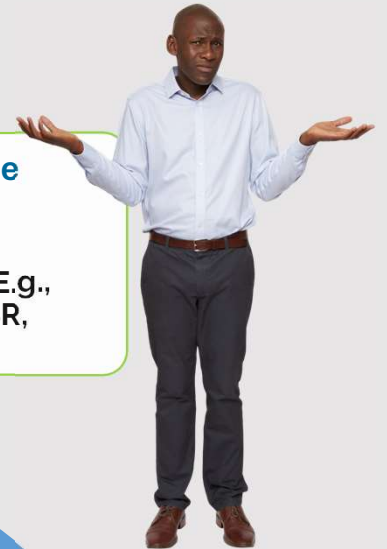
**Risk Management:**  
The process of identifying, analyzing and reducing potential threats.

- How can we do better?
- How can we improve health and safety outcomes?
- How can we reduce staff turnover?

**Quality Assurance:**  
Ensuring that a product or service meets specified standards and requirements.

- Do we meet the standards?
- Are we meeting requirements? E.g., HCBS, SCQR, QSR, Licensing

**Quality Improvement:**  
Using strategies to continuously improve services, processes and outcomes.





## Quality Assurance (QA)

### Knowing the standards

- Having and understanding the standards
- Training on the standards

### Project Management:

- Checklists of the standards
- Make plans to meet and/or maintain compliance
- Enlist the help of a team

### Self-assessment

- Evaluate your organization against the standards
- Make improvements as needed

### Participate in external reviews

- QSR, SCQR, HCBS, etc.
- Make any suggested improvements

Date

## Risk Management (RM)

### Risk Management plan

#### Understanding risk

- Collect and review risk data, including trends over time (e.g., serious incidents, medication errors, adverse events)
- Risk Triggers and Thresholds
- Safety Inspection
- Risks to the organization (e.g., financial, staffing)

#### Analyzing risk

- Root Cause Analysis
- Risk Matrix
- Systemic Risk Assessment
- Failure Mode Effect Analysis (FMEA)

#### Minimizing / reducing risk

- Setting Goals and Objectives and tracking progress over time
- Improvement Plan →

## Quality Improvement (QI)

### Quality Improvement Policy / Procedure

### Quality Improvement Plan –annual

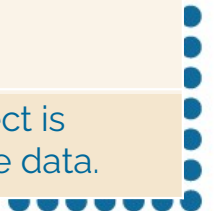
#### Prepare for a QI Project:

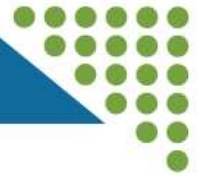
- Find an opportunity to improve
- Organize a team familiar with the problem
- Clarify understanding of the problem
- Understand root causes
- Select a change to address the problem



#### Use a QI model, e.g., Model for Improvement, to:

- Develop an Aim (SMART Goal)
- Determine a Measure
- Identify a Change
- Do Plan-Do-Study-Act Cycles

Track progress. Once the QI project is complete, continue to monitor the data.

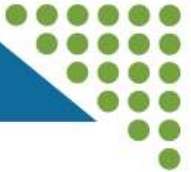




| <b>Quality Assurance vs. Quality Improvement</b>   |  |
|--|--|
| <b>Quality Assurance</b>   | <b>Quality Improvement</b>   |
| Guarantees quality   | Raises quality   |
| Relies on inspection   | Emphasizes prevention  |
| Uses a reactive approach   | Uses a proactive approach  |
| Looks at compliance with standards   | Improves the processes to meet standards   |
| Requires a specific fix  | Requires continuous efforts  |
| Relies on individuals  | Relies on teamwork   |
| Examines criteria or requirements  | Examines processes or outcomes   |
|  Asks "Do we provide good services" |  Asks, "How can we provide better services?" |







## Examples

### Quality Assurance

- Are we achieving performance measures at 86%?
- Are we completing individuals' risk awareness tools per guidelines?
- Are we meeting employee training requirements?

### Quality Improvement

- What can help us achieve performance at a higher percent?
- How can we reduce adverse outcomes for individuals?
- How can we improve the percent of employees completing training requirements?



Let's play... Is It QI or QA?

1. The staff member in charge of risk management completes all the required training and attestation.

Is this Quality Improvement or Quality Assurance?



Let's play... Is It QI or QA?

1. The staff member in charge of risk management completes all the required training and attestation.

Is this Quality Improvement or Quality Assurance?

It is Quality Assurance.

Why?



## Let's play... Is It QI or QA?

2. In your program, 10 individuals had a Serious Incident because of a fall this past year. You set a goal to reduce the number of falls to 5 or fewer by the end of next year.

Is this Quality Improvement or Quality Assurance?



Let's play... Is It QI or QA?

2. In your program, 10 individuals had a Serious Incident because of a fall this past year. You set a goal to reduce the number of falls to 5 or fewer by the end of next year.

Is this Quality Improvement or Quality Assurance?

It is Quality Improvement.

Why?

Let's play... Is It QI or QA?

3. You develop a tracking spreadsheet to help make sure that staff complete their required training.
- Is this Quality Improvement or Quality Assurance?



## Let's play... Is It QI or QA?

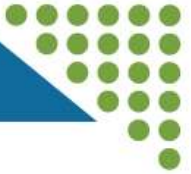
3. You develop a tracking spreadsheet to help make sure that staff complete their required training.
- Is this Quality Improvement or Quality Assurance?

It is Quality Assurance.

*But it could be quality improvement if it was part of an improvement effort.*

Why?

What could a Quality Improvement effort look like?



# Quality Improvement in Focus

FOCUS Steps to help prepare  
Including Root Cause Analysis  
Three Questions and PDSA  
Setting up for success

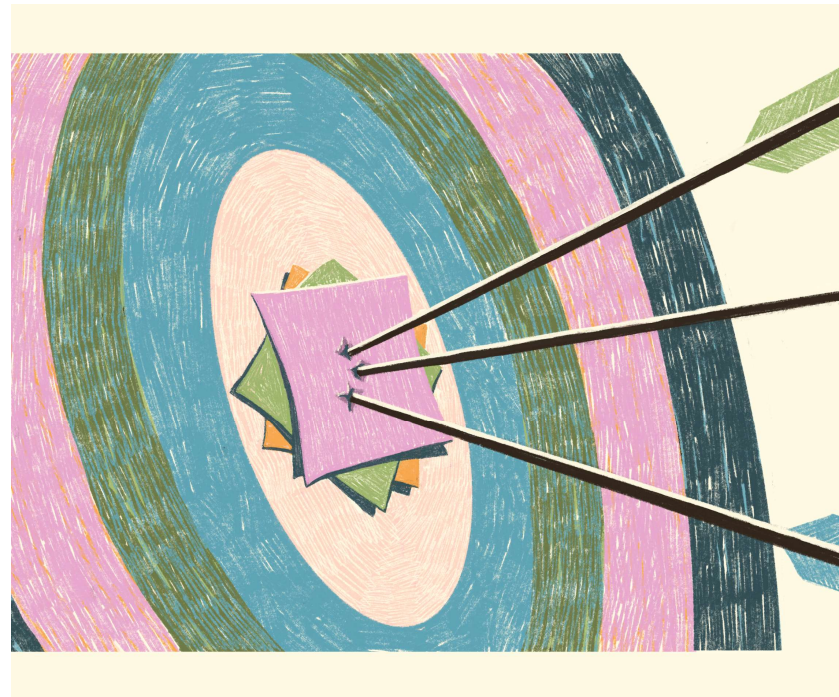


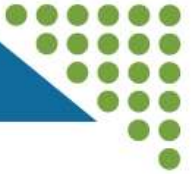


## Definition: Quality Improvement

Quality Improvement is:

- An ongoing effort to achieve measurable improvements in quality.
- A way to improve efficiency, effectiveness, performance, accountability, and outcomes.
- Use of a model supported by strategies, methods and tools.
- A repeatable set of steps that work best if they become a routine part of your business operations.

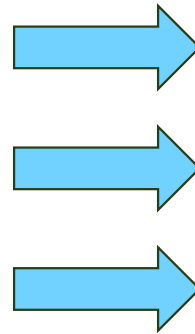




## FOCUS and the Model for Improvement

### **FOCUS: Setting up for success**

- Find an opportunity to improve.
- Organize a team who understands the issue.
- Clarify current understanding of the problem.
- Understand the cause(s) of the problem.
- Select a change to improve the problem.



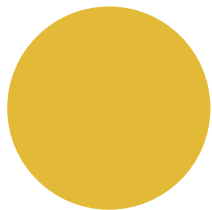
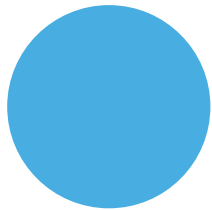
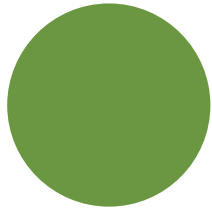
### **Model for Improvement**

- Aim
- Measure
- Change
- Plan-Do-Study-Act





**F**ind an opportunity to improve:  
How would you do this in your work?

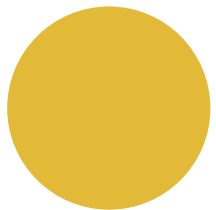
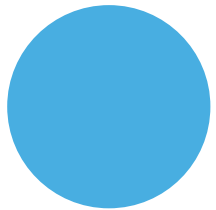
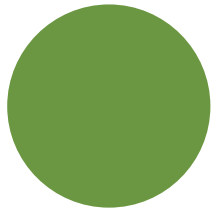
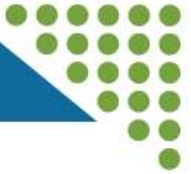


- Ideas:
- Ask your team – What should we improve? Why?
- Ask – What seems to be a problem in our program?
  - Do we have data to describe the problem?
  - If not, how can we get the data?
- Look at your performance metrics.
  - Compare and contrast.
  - Use a tool to help decide which to focus on first, e.g., a risk matrix (next slide).



# FOCUS Steps

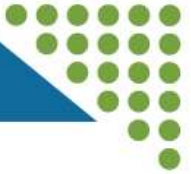
| Risk Matrix |                | Consequence   |        |           |           |           |
|-------------|----------------|---------------|--------|-----------|-----------|-----------|
|             |                | Insignificant | Minor  | Moderate  | Major     | Severe    |
| Likelihood  | Almost Certain | Medium        | High   | Very High | Very High | Very High |
|             | Likely         | Medium        | High   | High      | Very High | Very High |
|             | Possible       | Low           | Medium | High      | High      | Very High |
|             | Unlikely       | Low           | Low    | Medium    | Medium    | High      |
|             | Rare           | Low           | Low    | Low       | Low       | Medium    |



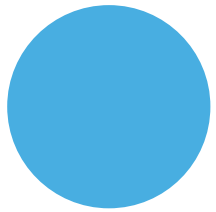
Organize a team who understands the issue.

- Why?
  - Bring diverse perspectives and creativity
  - Share the workload
- Who should be on your team?
  - Risk/quality staff
  - Team members doing the work
  - People affected by the problem

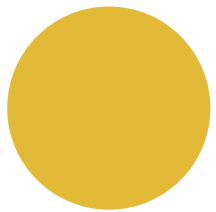


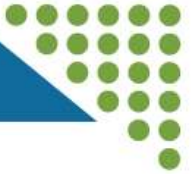


**C**larify understanding of the problem.



- What does this mean? Why is it important?
  - Ensure the problem is clearly understood by all team members
  - Understand how the current process works and analyze it
  - Begin establishing baseline and other measurement processes

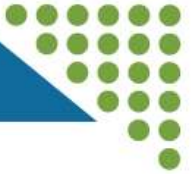




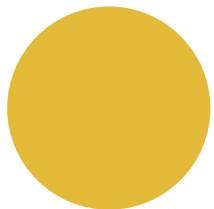
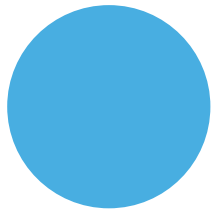
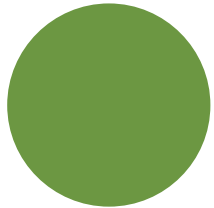
## Understand reasons for the problem.

- It is important to use analytical tools to understand **why the problem is happening**.
  - Understand causes of variation in the system.
  - Conduct Root Cause Analysis (RCA).
- There are many RCA tools.
    - 5 Whys and Why Tree
    - Brainstorming
    - Fishbone diagram (Cause and Effect Diagram)
    - Check sheet
    - Survey
    - Focus Group
    - Key Informant Interview
    - Process Map





## Select the improvement strategy ("Change").

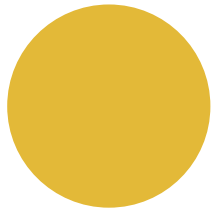
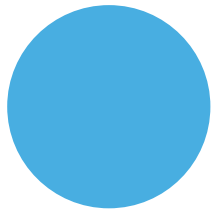
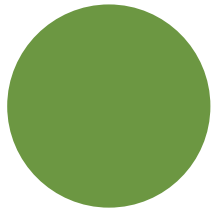


- Identify possible solutions: What improvements can be made?
- Involve your team in identifying, evaluating and selecting potential solutions.

Pro Tip: Pick ONE thing to work on at a time.







|  |   |
|--|---|
| <b>Your root cause analysis</b>                              | The process of identifying root causes can help identify solutions.                                       |
| <b>Create or use a Driver Diagram</b>                        | A visual display of a team's theory of what "drives," or contributes to, the achievement of a project aim |
| <b>Creative thinking techniques</b>                          | E.g., brainstorming   |
| <b>Surveys, focus groups, key informant interviews</b>       | Be sure to include perspectives of the people doing the work.   |
| <b>Review the best available evidence for what works:</b>    |   |
| <b>a) Literature, other evidence of effectiveness</b>        | Journal articles, evidence-based practices  |
| <b>b) Ideas of peers, experts in the field</b>               | Providers who have success, "bright spots"  |
| <b>c) Guidelines</b>   | Manuals, guides, instructions, process maps   |
| <b>d) What has worked at other organizations (copy)</b>      | Other states, similar agencies/institutions   |
| <b>Use team-based decision strategies to select a change</b> | Examples: a PICK chart, voting, a pro/con list, voting and ranking.                                       |





## Standardize internal (agency) policies and practices

- Develop and adopt topic-related policies and procedures
- Include information (in the P&P) on documentation, communication, and referral processes
- Provide training for staff on related policies and procedures
- Have a process to help assure that topic-related policies and procedures are followed
- Streamline related processes, to increase effectiveness or efficiency
- Have approved /available /accessible topic-related print and electronic materials

## Build capacity of, and support for, staff to address the issue

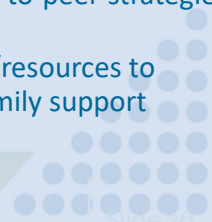
- Establish professional development competencies
- Establish training requirements and content
- Establish performance measures
- Establish data to use for quality improvement
- Share topic-related data on measures with staff
- Utilize a quality improvement process and framework
- Promote topic-related timely and effective supervision practices
- Ticklers/reminders for using screenings/assessments/tools on a schedule
- Promote team-based practices/care
- Establish referral and linkage process to topic-related internal and/or external resources/professionals

## Create community linkages and support systems related to the topic

- Establish cooperative relationships with key community partners
- Establish relationships with support groups
- Establish relationships with medical and educational field
- Close loops of communication for referrals, and processes for accessing/engaging in supports and services
- Create MOUs with community partners
- Have up to date topic-related resource lists
- Create teams that include external partners to focus on the topic

## Engage individuals and families

- Inform families of the benefits of topic-related information
- Individual is empowered to meet their goal
- Staff engage in individual-led / person-centered conversations related to topic
- Use of best practice/evidence-informed strategies to enhance practices on the topic or issue
- Use evidence-based curriculum (and other materials) with families
- Utilize effective counseling strategies
- Consider peer-to-peer strategies on the topic
- Use practices/resources to strengthen family support systems



This worksheet is available on the DBHDS website.

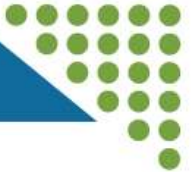
FOCUS<sup>1</sup> Worksheet

Using the FOCUS Steps can help a quality improvement team prepare for using the Model for Improvement and PDSA Cycles.

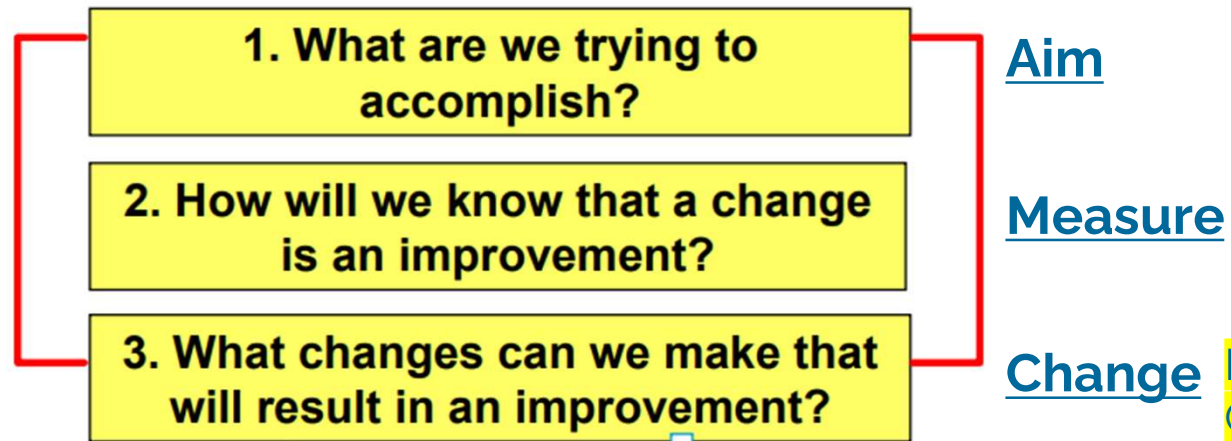
|  |  |  |
|--|--|--|
| <p><b>F: Find a problem or process to improve</b></p>              | <p>How do you know it's a problem? How did you identify the problem, or the need to do something?</p> <p>What is your data telling you? How long has this been a problem? What are the trends? What is the story?</p> <p>What if you don't have data but you think there's a problem? How can you get baseline data?</p> |  |
| <p><b>O: Organize a team that is familiar with the problem</b></p> | <p>What is the role of the team? Understand the team's purpose.</p> <p>Who should be on your team? How can you bring in the voice of all stakeholders?</p> <p>How can you have effective team meetings? Think about agendas, notes and communication.</p>  |  |
| <p><b>C: Clarify current knowledge of the problem</b></p>          | <p>What is your data really telling you? Do you need additional information?</p> <p>What else do you know about the issue? How does the process or situation work now?</p> <p>What has been done already to try to address this problem? Did it work? Why or why not? How do you know?</p>                               |  |
| <p><b>U: Understand the reasons for the problem</b></p>            | <p>Why is the problem or process variation happening?</p> <p>Have you done a root cause analysis (RCA)? What did it tell you? What RCA technique(s) did you use?</p> <p>If the problem involves a process, have you done a process map? What did it tell you?</p>  |  |
| <p><b>S: Select the improvement</b></p>                            | <p>What change(s) can you try to improve the problem?</p> <p>Is there one strategy you can try first? How did you pick this solution? Why do you think this will work?</p>   |  |

Link: <https://dbhds.virginia.gov/wp-content/uploads/2023/12/FOCUS-Worksheet.pdf>

1. American College of Cardiology. Introduction to Quality Improvement and the FOCUS-PDSA Model. Link: <https://cvquality.acc.org/clinical-tools/qi-tools/>

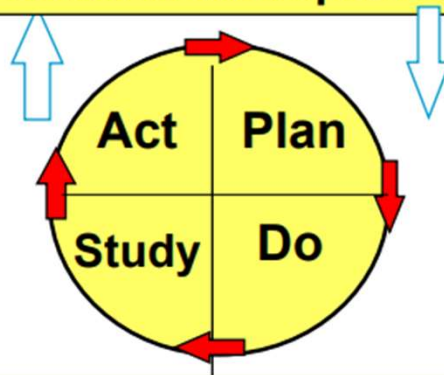


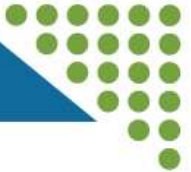
## The Three Questions



Note: The Change has been identified in the FOCUS steps.

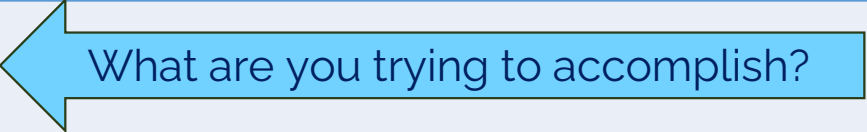
PDSA Cycle





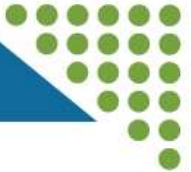
## Aim, Measure, Change

Reference the “Job Aid: Plan-Do-Study-Act (PDSA) Worksheet”

|  |  |
|--|--|
| <p><b>Aim Statement:</b><br/>What is your baseline data, and what is your SMART objective?</p>   |  |
| <p><b>Measure:</b><br/>Describe the measure you will use to know that a change is an improvement.</p>  |  |
| <p><b>Change:</b><br/>What change can you make that will result in an improvement? What do you predict will happen when you make the change?</p> | <p>Change:</p> <p>Prediction:</p>  |

*\*Discuss Questions on the QI Job Aid\**





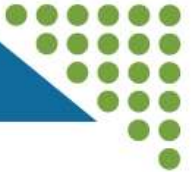
## SMART Goals

**Problem** Example: In 2023, 10 out of 50 individuals (20%) experienced a Fall related serious incident.

|          |            |   |
|----------|------------|---|
| <b>S</b> | Specific   | <p><b>Let's develop a SMART Aim statement.</b><br/> <b>Fill in the blanks:</b></p> <p>By ___date_____ we want to improve<br/>                 _____(problem) from __data__(baseline) to<br/>                 ____data_____(goal).</p> <p>By December 31, 2024, we want to reduce the percent of<br/>                 individuals who experience a Fall related serious incident<br/>                 from 20% to 10% or less.</p> |
| <b>M</b> | Measurable |   |
| <b>A</b> | Achievable |   |
| <b>R</b> | Relevant   |   |
| <b>T</b> | Time-bound |   |

**Resource: QAPI Goal Setting Worksheet:** <https://www.cms.gov/medicare/provider-enrollment-and-certification/qapi/downloads/qapigoalsetting.pdf>





# Aim, Measure, Change

Reference the "Job Aid: Plan-Do-Study-Act (PDSA) Worksheet"

|  |  |
|--|--|
| <p><b>Aim Statement:</b><br/>What is your baseline data, and what is your SMART objective?</p>   | <p>EXAMPLE: By December 31, 2024, we want to reduce the percent of individuals who experience a Fall related serious incident from 20% to 10% or less.</p>   |
| <p><b>Measure:</b><br/>Describe the measure you will use to know that a change is an improvement.</p>  | <p>How will you know a change is an improvement?<br/>It typically includes the calculation you will use and how you will obtain the data.</p> <p>We will measure the percent of individuals with serious falls. Numerator = Individuals with a fall related serious incident. Denominator = all individuals served. Our data is from a risk tracking tool.</p>                                 |
| <p><b>Change:</b><br/>What change can you make that will result in an improvement? What do you predict will happen when you make the change?</p> | <p>Change: What change can you make that will result in an improvement? <b>THIS HAS CARRIED OVER FROM FOCUS</b></p> <p>Prediction: Our FIRST change is to inspect all group homes and remove potential fall/trip hazards.</p> <p>What do you predict will happen when you make this change??</p> <p>We believe we will find and remove at least 5 hazards and have fewer people trip/fall.</p> |



**NEXT Try using the Model for Improvement<sup>2</sup> and the Plan-do-Study-Act (PDSA) Cycle.**

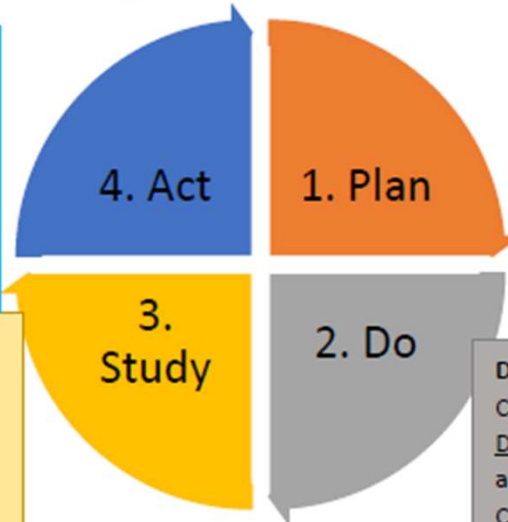
**Aim:** What are you trying to accomplish? What is your SMART Objective? (Specific, Measurable, Achievable, Relevant, Time-bound)

**Measure:** How will you know a change is an improvement? Describe the measurable outcome(s) you want to see.

**Change:** What change can you make that will result in an improvement? **Note: The Change is what carries over from the FOCUS steps.**

Act and decide what to do next. You can:  
**Adapt:** Modify the changes and do another PDSA cycle.  
**Adopt:** Continue or expand the change in your organization.  
**Abandon:** Abandon this change and select a different change to test in the next cycle.  
Document and describe what changes to make for the next cycle based on what you learned.

Study the change you made.  
 Study and analyze the data you collected. Document how the measured results compare to the predictions. What did you learn? Did the change result in the expected outcome? Were there any surprises, successes, failures, unintended consequences? What would you do different in another test?



Plan a test of your change.  
Document the steps that you are going to do.  
 What is your timeline? Who will be involved?  
 When and how will the change happen? What resources will you need? What do you think will happen when you make the change? What data do you need to collect? How will you collect it? When will you have the data?

Do (implement) the plan.  
 Carry out the plan on a small scale to begin with.  
Document your steps and observations, including any problems and unexpected findings or events.  
 Collect the data you need, per your plan.  
 Describe what happened when you ran the test.

**CONTINUE Plan-Do-Study-Act Cycles based on what you learn to achieve improvement and consider expanding to other parts of your organization. When you decide to complete your QI project, continue to monitor the measure.**



Job Aid: Quality Improvement  
A quick guide to conducting quality improvement, from the DBHDS Office of Clinical Quality Management.

FIRST Use the FOCUS Model<sup>1</sup> to determine which improvement approach is right for you.

- F: Find a problem or process to improve**  
How do you know it's a problem? How long has this been a problem? What are the trends? What is the story? What is your data telling you? How long has this been a problem? What are the trends? What is the story? What if you don't have data but you think there's a problem? How can you get baseline data?
- O: Organize a team that is familiar with the problem**  
What is the role of the team? Understand the team's purpose. Who should be on your team? How can you bring in the voice of all stakeholders? How can you have effective team meetings? Think about agendas, notes and communication.
- C: Clarify current knowledge of the problem**  
What is your data really telling you? Do you need additional information? What else do you know about the issue? How does the process or situation work now? What has been done already to try to address this problem? Did it work? Why or why not? How do you know?
- U: Understand the reasons for the problem**  
Why is the problem or process variation happening? Have you done a root cause analysis (RCA)? What did it tell you? What RCA technique(s) did you use? If the problem involves a process, have you done a process map? What did it tell you?
- S: Select the improvement strategy**  
What change(s) can you try to improve the problem? Have you used tools like brainstorming and identifying evidence-based solutions? Is there one strategy you can try first? How did you pick this solution? Why do you think this will work?

**NEXT Try using the Model for Improvement<sup>2</sup> and the Plan-do-Study-Act (PDSA) Cycle.**  
Aim: What are you trying to accomplish? What is your SMART Objective? (Specific, Measurable, Achievable, Relevant, Time-bound)  
Measure: How will you know a change is an improvement? Describe the measurable outcome(s) you want to see.  
Change: What change can you make that will result in an improvement?

- Act and decide what to do next. You can:**  
Adapt: Modify the changes and do another PDSA cycle.  
Adopt: Continue or expand the change in your organization.  
Abandon: Abandon this change and select a different change to test in the next cycle.  
Document and describe what changes to make for the next cycle based on what you learned.
- Study the change you made.**  
Study and analyze the data you collected. Document how the measured results compare to the predictions. What did you learn? Did the change result in the expected outcome? Were there any surprises, successes, failures, unintended consequences? What would you do different in another test?



- Plan a test of your change.**  
Document the steps that you are going to do. What is your timeline? Who will be involved? When and how will the change happen? What resources will you need? What do you think will happen when you make the change? What data do you need to collect? How will you collect it? When will you have the data?
- Do (implement) the plan.**  
Carry out the plan on a small scale to begin with. Document your steps and observations, including any problems and unexpected findings or events. Collect the data you need, per your plan. Describe what happened when you ran the test.

**CONTINUE Plan-Do-Study-Act Cycles based on what you learn to achieve improvement and consider expanding to other parts of your organization. When you decide to complete your QI project, continue to monitor the measure.**  
1. American College of Cardiology. Introduction to Quality Improvement and the FOCUS-PDSA Model. Link: <https://www.quality.ace.org/clinical-toolkit/qi-toolkit>  
2. Institute for Healthcare Improvement. How to Improve. <https://www.ihp.org/resources/Pages/Howtoimprove.aspx>

Consider what improvement approach is right for you.

A mitigating strategy is implemented when a team implements a solution to a problem because team members believe it to be effective. It is used to lessen the negative impact of a problem or to improve the process.

A quality activity is a test that is used to improve a process or a product.

This worksheet is available on the DBHDS website.

Job Aid: Plan-do-Study-Act (PDSA) Worksheet

**Aim Statement:**  
What is your baseline data, and what is your SMART objective?

**Measure:**  
Describe the measure you will use to know that a change is an improvement.

**Change:**  
What change can you make that will result in an improvement? What do you predict will happen when you make the change?

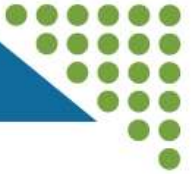
**Plan:**  
Plan a test of your change. Document the steps that are needed. What is your timeline? Who will be involved? Include how you will plan to collect and analyze data to study your change.

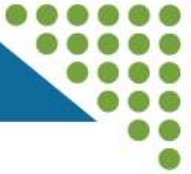
**Do:**  
Implement your plan. Describe what happened.

**Study:**  
Study and analyze the data you collected. What did you learn?

**Act:**  
Decide what to do next. Will you adapt, adopt or abandon?

| Task | Who is responsible? | Begin and end dates | Result |
|------|---------------------|---------------------|--------|
|      |                     |                     |        |
|      |                     |                     |        |
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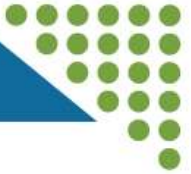


## Learning Objectives

- Experience using the **Model for Improvement & PDSA Cycles**
- Use **teamwork**
- Start with **a small test of change.**
- Use what you learn to **become more effective over time.**
- Begin to see **how to apply these concepts** to your work

*Have fun!*





## The Three Questions

- **Aim:** By the end of this exercise, achieve (or exceed) your goal flight distance, compared to your baseline.
- **Measure(s):** Distance, in feet/inches
- **Change(s): Up to you!** Make changes to improve the performance of your paper airplane to maximize the distance it flies.
  - Ideas on your HANDOUT under 'Change package'.



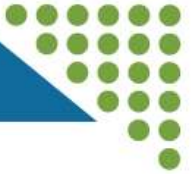


## Team Tasks

- Form into teams of 5-7 people
- Roles:
  - Team leader: Ensure the team follows the PDSA Steps
  - Data leader: Record measurements and data points
  - Airplane designer(s)
  - Test pilots
  - Thought contributors
- Each team needs:
  - 1. HANDOUT:** Change package, PDSA Worksheet + Graph
  - 2. SUPPLIES:** Paper, etc., to make airplane(s)



- Rules
  - One team = One airplane
  - Only one design change per PDSA Cycle
  - All planes must have wings and be able to glide
  - Each design flown by at least 2 different pilots
  - A flight stays in the runway area ("between the two chairs")
- Move through the four steps (PDSA) and don't skip any steps
  - "Plan" their airplane,
  - "Do" the test flight and record results
  - "Study" the result of the flight, and
  - "Act" to determine the changes they will make to airplane design in the next round.
- **Record your work on the HANDOUT!**



## Setup

- Up On Stage:
  - Handouts – PDSA Worksheet + graph
  - Materials to make paper airplanes: stacks of construction paper, paper clips, tape, scissors
- In The Back:
  - **Two ‘Runways’**: Space for people to fly the airplanes
  - Masking tape for starting point
  - A yardstick or long tape measure for distance
  - **See the “Measurer” for each flight**



Team: \_\_\_\_\_

| CHANGE PACKAGE         |  |
|------------------------|--|
| Problem                | Changes to test  |
| Short flight distances | Use heavier paper or two pieces. Change launch techniques. |
| Nose dives             | Add tape weight to rear.                                   |
| Wanders off-target     | Reinforce plane body with weight.                          |

### Rules

1. Create a team of 5-7 people.
2. Only one design change per PDSA Cycle
3. All planes must have wings and be able to glide.
4. Each design flown by at least 2 different pilots.
5. A flight stays in the runway area.
6. Move through the **four steps (PDSA)** and don't skip any steps.

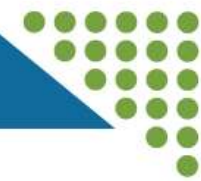
BASELINE DATA 1: \_\_\_\_\_ feet, inches Nosedive? Yes No Wandered off-target? Yes No  
 BASELINE DATA 2: \_\_\_\_\_ feet, inches Nosedive? Yes No Wandered off-target? Yes No

Average / Baseline Distance =

Aim (Goal) Distance=

### + PDSA Worksheet

| PLAN  | DO  | STUDY     | ACT      |           |         |   |  |  |  |   |  |  |  |   |  |  |  |   |  |
|---|---|-----------|----------|-----------|---------|---|--|--|--|---|--|--|--|---|--|--|--|---|--|
| Theory to test:<br><br>What you will do:<br><br>Predicted result: | Results:<br><table border="1"> <thead> <tr> <th>Trial</th> <th>Distance</th> <th>Nosedive?</th> <th>Wander?</th> </tr> </thead> <tbody> <tr> <td>1</td> <td></td> <td></td> <td></td> </tr> <tr> <td>2</td> <td></td> <td></td> <td></td> </tr> <tr> <td>3</td> <td></td> <td></td> <td></td> </tr> </tbody> </table> | Trial     | Distance | Nosedive? | Wander? | 1 |  |  |  | 2 |  |  |  | 3 |  |  |  | What happened?<br>What worked?<br>What didn't?<br>What did you learn? | What will you keep doing?<br>Stop doing?<br>Change?<br>Do more of? |
| Trial   | Distance  | Nosedive? | Wander?  |           |         |   |  |  |  |   |  |  |  |   |  |  |  |   |  |
| 1   |   |           |          |           |         |   |  |  |  |   |  |  |  |   |  |  |  |   |  |
| 2   |   |           |          |           |         |   |  |  |  |   |  |  |  |   |  |  |  |   |  |
| 3   |   |           |          |           |         |   |  |  |  |   |  |  |  |   |  |  |  |   |  |
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| 1   |   |           |          |           |         |   |  |  |  |   |  |  |  |   |  |  |  |   |  |
| 2   |   |           |          |           |         |   |  |  |  |   |  |  |  |   |  |  |  |   |  |
| 3   |   |           |          |           |         |   |  |  |  |   |  |  |  |   |  |  |  |   |  |
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| Trial   | Distance  | Nosedive? | Wander?  |           |         |   |  |  |  |   |  |  |  |   |  |  |  |   |  |
| 1   |   |           |          |           |         |   |  |  |  |   |  |  |  |   |  |  |  |   |  |
| 2   |   |           |          |           |         |   |  |  |  |   |  |  |  |   |  |  |  |   |  |
| 3   |   |           |          |           |         |   |  |  |  |   |  |  |  |   |  |  |  |   |  |
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| 1   |   |           |          |           |         |   |  |  |  |   |  |  |  |   |  |  |  |   |  |
| 2   |   |           |          |           |         |   |  |  |  |   |  |  |  |   |  |  |  |   |  |
| 3   |   |           |          |           |         |   |  |  |  |   |  |  |  |   |  |  |  |   |  |

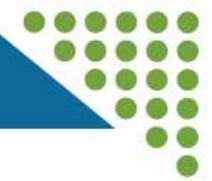
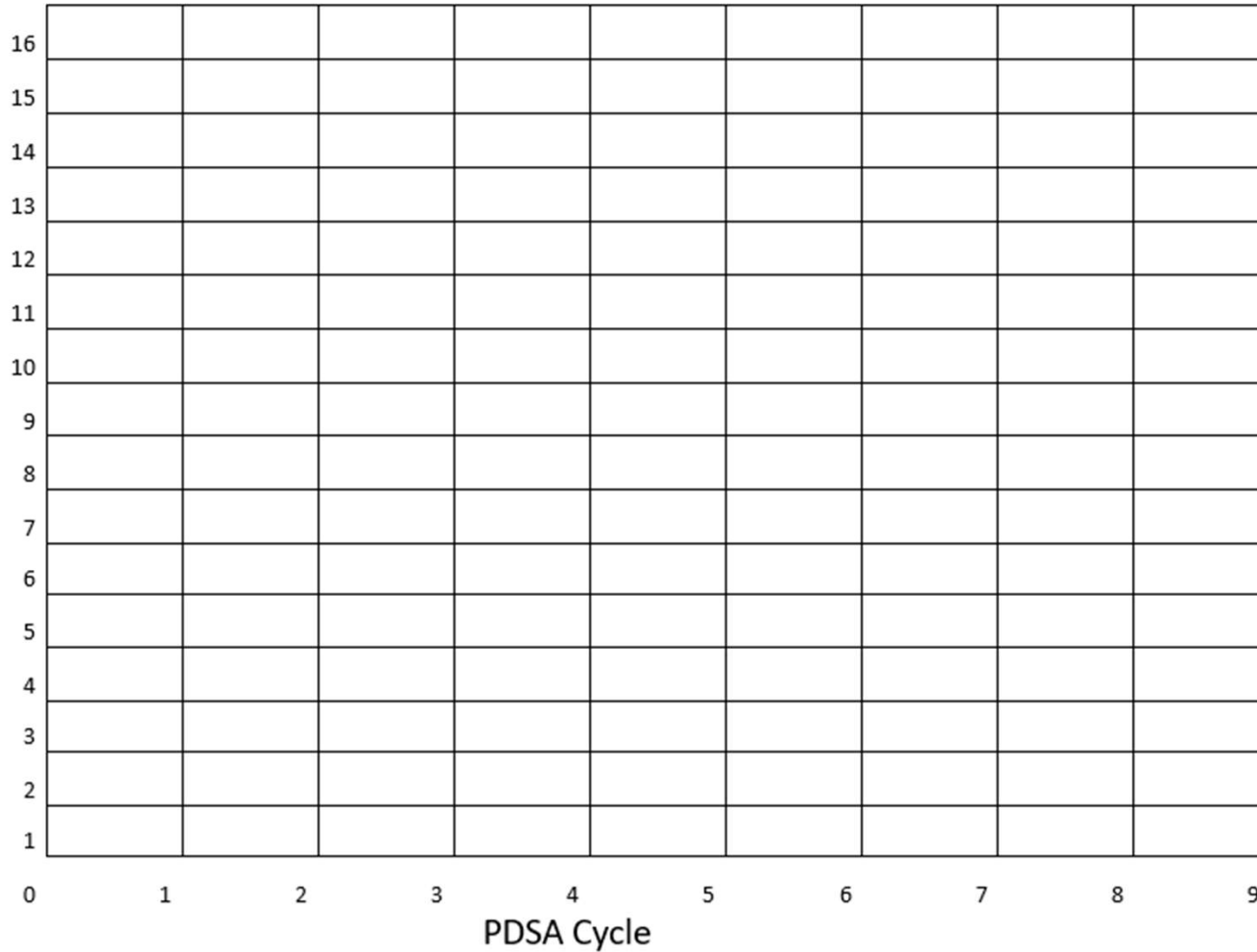




Team: \_\_\_\_\_

Paper Plan Distance

Distance in Feet



Let's Start!

5-7 Minutes

- Assemble your team
- Get your supplies



**Have Fun  
&  
Fly Safe!!!**

## Do your PDSAs!

10-15 Minutes

- Make your first airplane (prototype)
- Get **Baseline Data** – Two flights!



**Have Fun  
&  
Fly Safe!!!**

## Do your 1<sup>st</sup> PDSA!

10-15 Minutes

- **Plan** your design change
- **Do** – Fly! Measure!
- **Study** – Review results
- **Act** – Decide next change



**Have Fun  
&  
Fly Safe!!!**

## Do your 2nd PDSA!

10-15 Minutes

- **Plan** your design change
- **Do** – Fly! Measure!
- **Study** – Review results
- **Act** – Decide next change



**Have Fun  
&  
Fly Safe!!!**

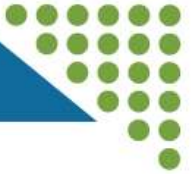
## Do your 3rd PDSA!

10-15 Minutes

- **Plan** your design change
- **Do** – Fly! Measure!
- **Study** – Review results
- **Act** – Decide next change



**Have Fun  
&  
Fly Safe!!!**



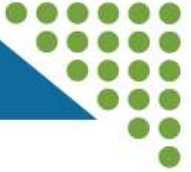
## Let's Debrief

Come back together.  
Take your seats.



**Have Fun  
&  
Fly Safe!!!**





## What happened? Share!

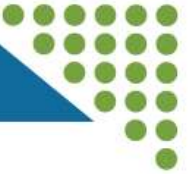
- Who achieved their goal?
- Who exceeded their goal?

### **WINNING TEAM(s)**

- What worked well for you and your team?
- What did you try that didn't work?
- What did you learn from doing PDSA cycles?

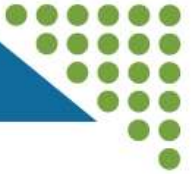






How does this relate to your work?

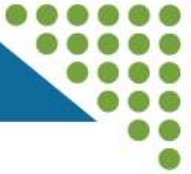




## How does this relate to your work?

- Some takeaways:
  - **Have a team** and include all voices
  - Use a **PDSA Worksheet**
  - Start with **one change** and plan carefully
  - Have a **hypothesis** for what you think will happen
  - Study your change **using data and observation**
  - Reflect on **what you have learned**
  - Use learning to inform your next steps
  - Use multiple tests
  - **Have fun in your work!**





## Let's check on our.....Learning Objectives

At the end of the presentation, **are you** able to...?

- **Better able to** define Risk Management, Quality Assurance and Quality Improvement
  - Identify at least two components and strategies of each
  - Explain the difference between quality improvement and quality assurance
- **Better able to** explain the main features of the Model for Improvement
  - Identify at least two of the FOCUS strategies
  - State how the Paper Airplane Game illustrates the Model for Improvement



- Airplane PDSA Exercise:
  - <https://chess.wisc.edu/niatx/PDF/LearningSession/LS1/PDSAAirplaneGame.pdf>
  - NQC Game Guide. 2006: <https://www.in.gov/health/hiv-std-viral-hepatitis/files/Game-Guide-Quality.pdf>
- Alder, Steve. What is Risk Management in Healthcare? HIPAA Journal. Blog post. February 19, 2024. Link: <https://www.hipaajournal.com/risk-management-in-healthcare/>
- American College of Cardiology. Introduction to Quality Improvement and the FOCUS-PDSA Model. [https://cvquality.acc.org/docs/default-source/qi-toolkit/01\\_introtoqiandthefocus\\_pdsamodel\\_12-10-13new.pdf](https://cvquality.acc.org/docs/default-source/qi-toolkit/01_introtoqiandthefocus_pdsamodel_12-10-13new.pdf)
- Centers for Medicaid and Medicare Services (CMS). Quality Assurance & Performance Improvement (QAPI). <https://www.cms.gov/Medicare/Provider-Enrollment-and-Certification/QAPI/Downloads/ProcessToolFramework.pdf>
- Institute for Healthcare Improvement (IHI). Quality Improvement Essentials Toolkit. <https://www.ihl.org/resources/tools/quality-improvement-essentials-toolkit>
- Klein TA, Seelbach CL, Brannan GD. Quality Assurance. [Updated 2023 Mar 6]. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2024 Jan-. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK557503/>
- McGowan J, Wojahn A, Nicolini JR. Risk Management Event Evaluation and Responsibilities. [Updated 2023 Aug 23]. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2024 Jan-. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK559326/>
- Michigan Office of Public Health Improvement. Embracing Quality in Public Health. <https://www.miophi.org/embracing-quality-in-public-health/qi-guidebook/>
- NEJM Catalyst. What Is Risk Management in Healthcare? NEJM Catalyst. April 25, 2018. Link: <https://catalyst.nejm.org/doi/full/10.1056/CAT.18.0197>
- Virginia Licensed Provider regulations: <https://law.lis.virginia.gov/admincode/title12/agency35/chapter105/>



Thank

You

