

Quality Improvement (QI)

Elizar Perez, BSN, RN, PHN

Public Health Nurse

County of San Diego HAI Program



www.sdhai.org



phs.hai.hhsa@sdcounty.ca.gov



Healthcare
Associated
Infections
Program

Objectives

The learner will be able to...

- **Explain why Quality Improvement (QI) is important**
- **Identify 3 QI tools**
- **Demonstrate the use of 1 QI tool during the group exercise**



Quality Improvement

The **systematic** approach to **analyzing performance**, in the effort to **improve** performance.



Why is QI Important?

Is the
program,
service, or
process.....

- Achieving the desired outcome(s)?
- Running efficiently?
- Optimizing available resources?
- Minimizing harm and/or near misses?
- Promoting satisfaction among stakeholders?

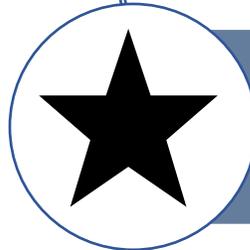


QI: Drives continuous improvement to achieve better outcomes and enhance patient safety!

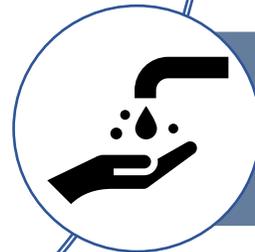
Examples of Quality Improvement



Enhanced Care Program



Falling Star Initiative



Adherence Monitoring Project

Key Points to QI

- Root cause analysis (RCA) – why is the problem happening?
 - Logical fallacies – is there an error in reasoning happening?
- What is the cause & effect?
- What changes human behavior?

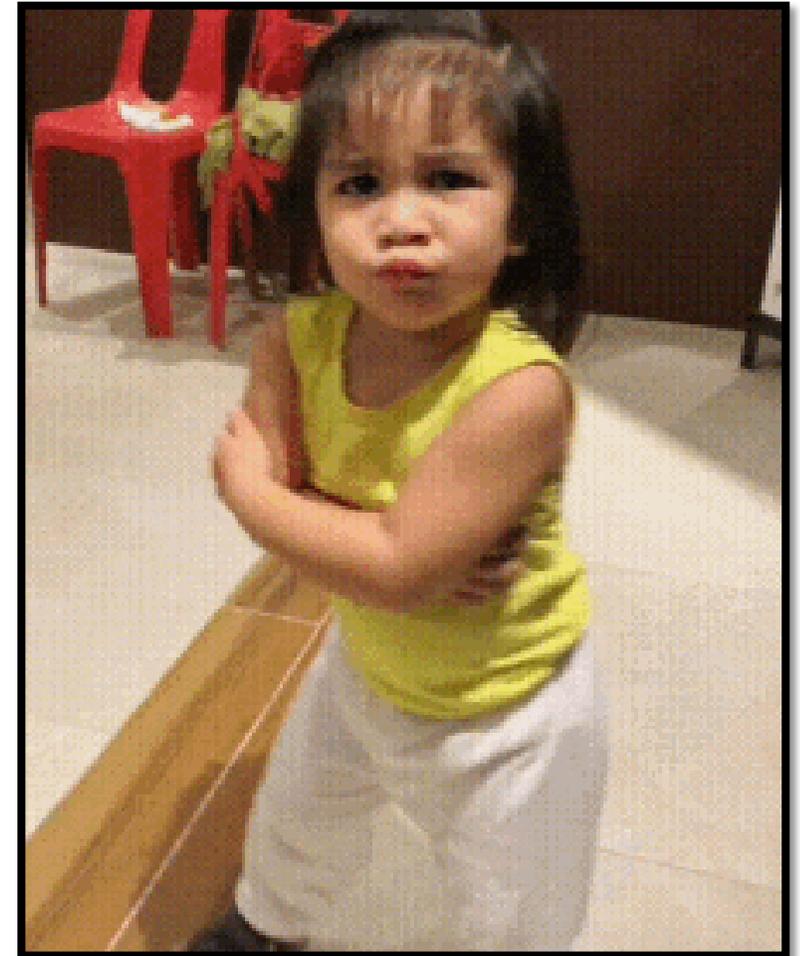
A problem is often a symptom of multiple factors which contribute to a particular outcome.



Key Points to QI Cont.

What Impacts Human Behavior?

- Quality improvement often involves changing human behaviors/practices
- There are many theories on why people do (or don't do) something
- Knowledge?
 - Does knowledge alone impact these behaviors?
 - Drinking and smoking
 - Diet
 - Exercise



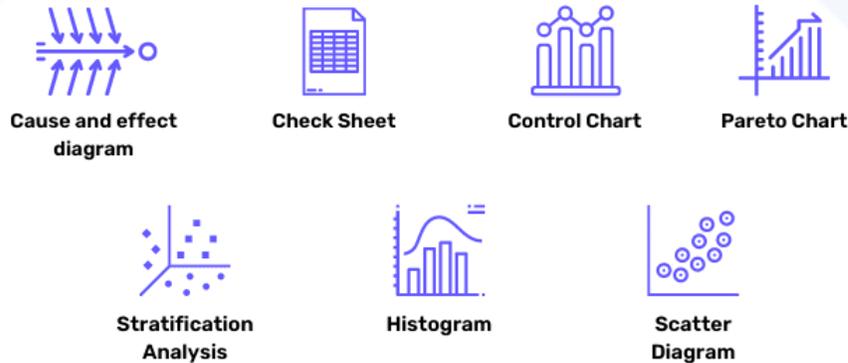
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QI Tools

Tools can be described as
Quality Management tools, Quality Control Tools, Quality Tools...etc...

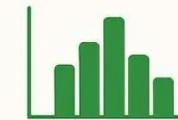
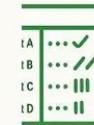
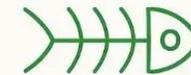
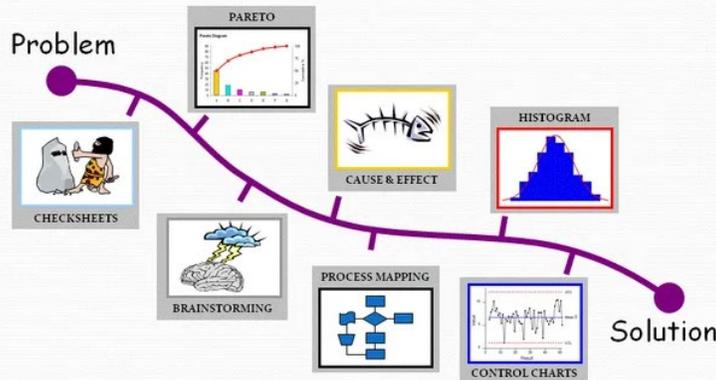
**The best tool is one that helps the team focus
on the issue and make improvements.**

7 Quality Management Tools

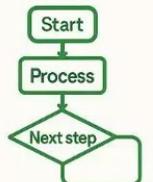
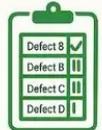


SafetyCulture

Quality Tools for Problem Solving



The 7 Best Quality Control Tools for Process Improvement



Why use QI Tools?

- Prioritize quality improvement projects
- Clarify complex issues
- Standardize processes
- Enhance efficiency and reduce cost of the process
- Empower staff to participate in the process
- Promote a culture of improvement
- Measure and track progress



QI Tools

- Seven Basic Quality Tools
 - Cause and effect diagram, check sheet, control chart, histogram, Pareto chart, scatter plot, stratification
- **Brainstorming**
- **Cause-and-Effect Diagram**
- **Five Whys**



Brainstorming Cont.

- Use **brainstorming** when traditional patterns of thinking do not provide the breadth of possible options required to address a situation
- Focuses on the **quantity**, not quality, of ideas; the goal is to list as many new ideas as possible



Group Exercises

Part One - Brainstorming

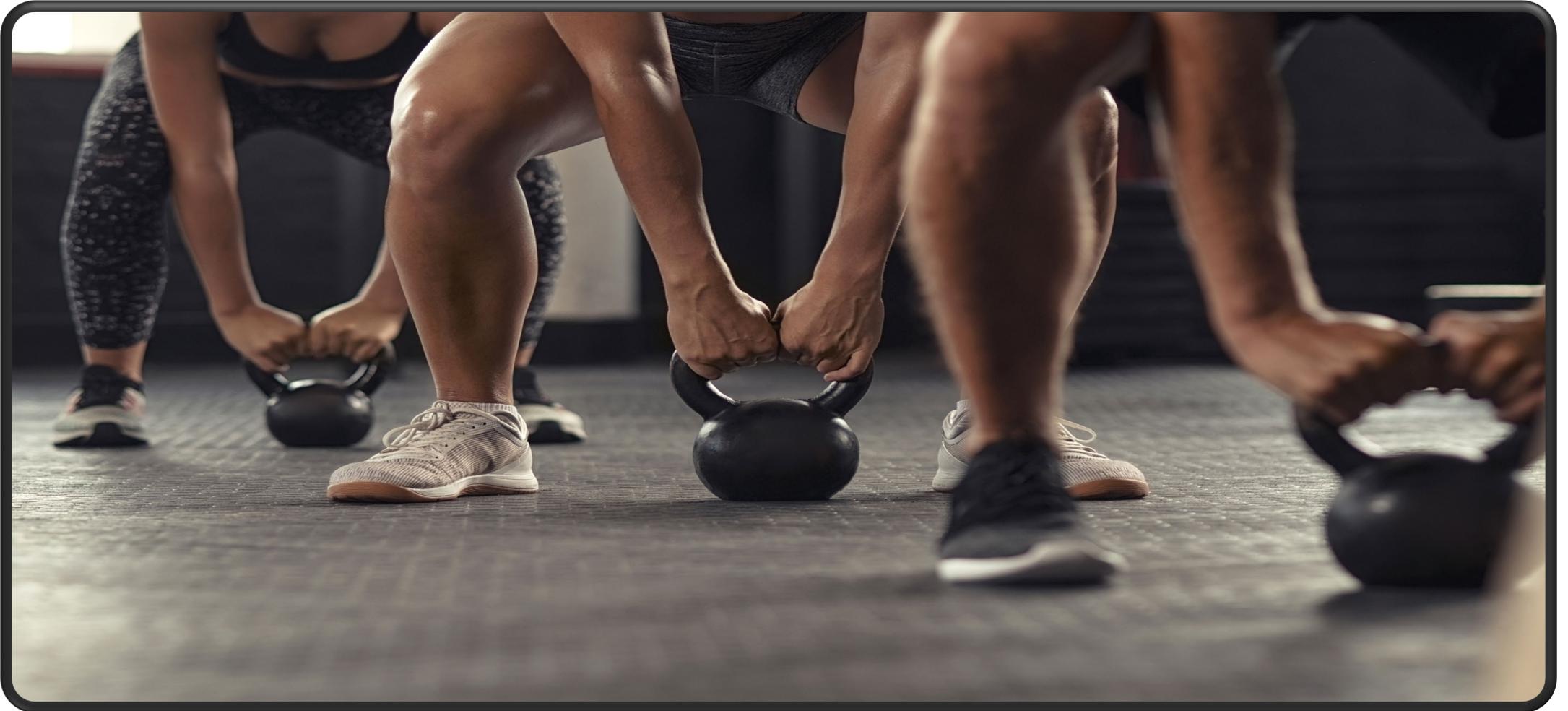
- Timed
- What is the question to be answered
- Just ideas, no problem solving
- No judgment, opinions, criticisms
- Record every idea

Part Two – Organize, Root Cause

- Timed
- Review list
- Categorize
- Organize ideas together
- Fill in handout



Group Exercise



Group Exercise – group breakout

Problem/Issue: Skilled Nursing Facility hand hygiene adherence rate is low at 25%.

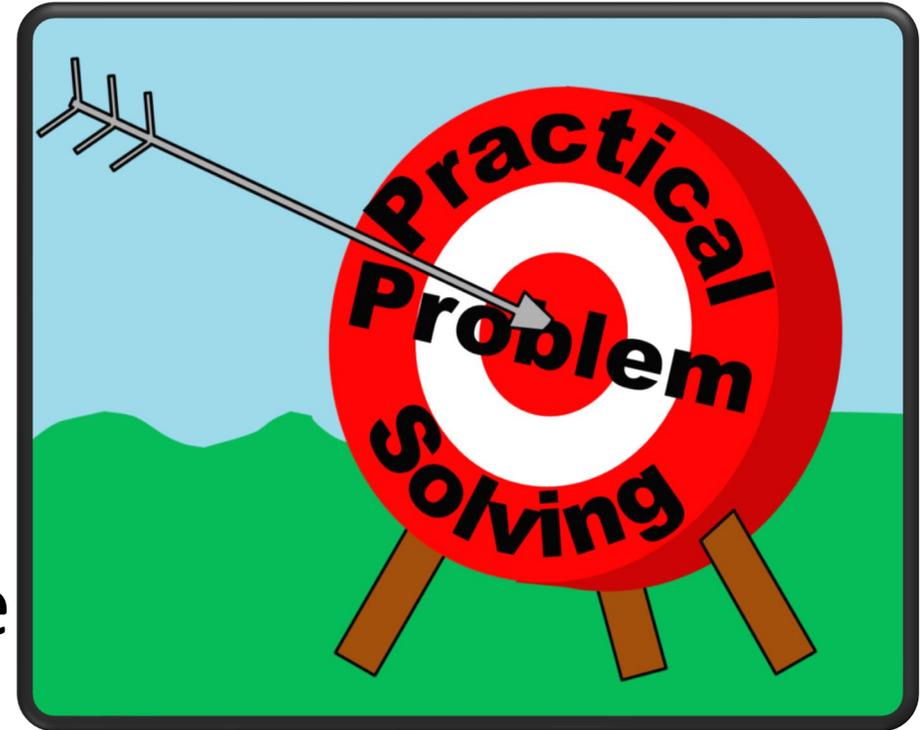
Instructions: 10 minutes

1. Designate someone to record
2. Brainstorm ideas about why this is happening (see handout #1)
3. Shout out ideas
4. Record ideas



What's Next? Root Cause Analysis

- A structured problem-solving way to identify the underlying causes of an issue – not just the symptoms.
- The GOAL is to understand why a problem is happening so that effective lasting solutions can be developed.

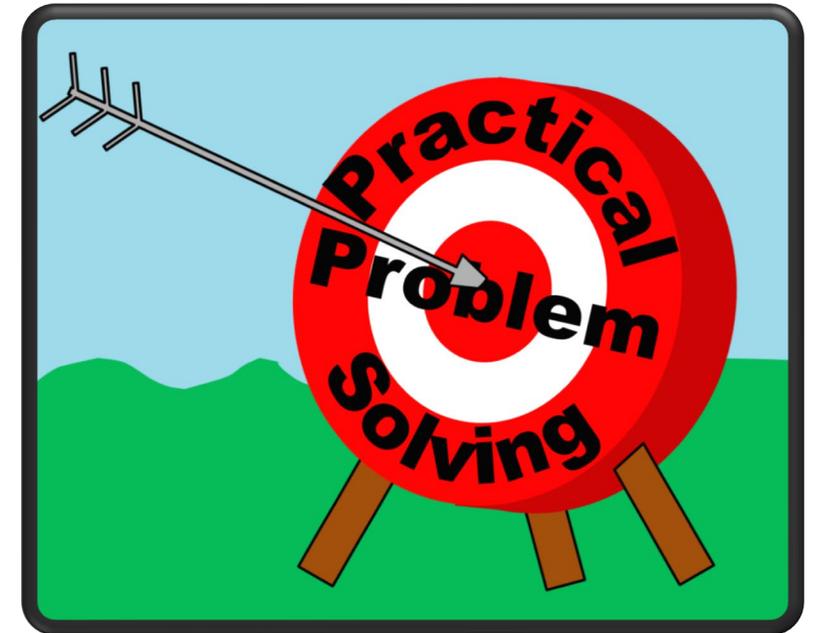


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What's Next? Root Cause Analysis

Root Cause Analysis (RCA) helps to:

- Identify systemic issues rather than surface level fixes
- Prevent problems from reoccurring
- Improved processes in a targeted data informed way
- Align interventions with the true needs of the client and staff

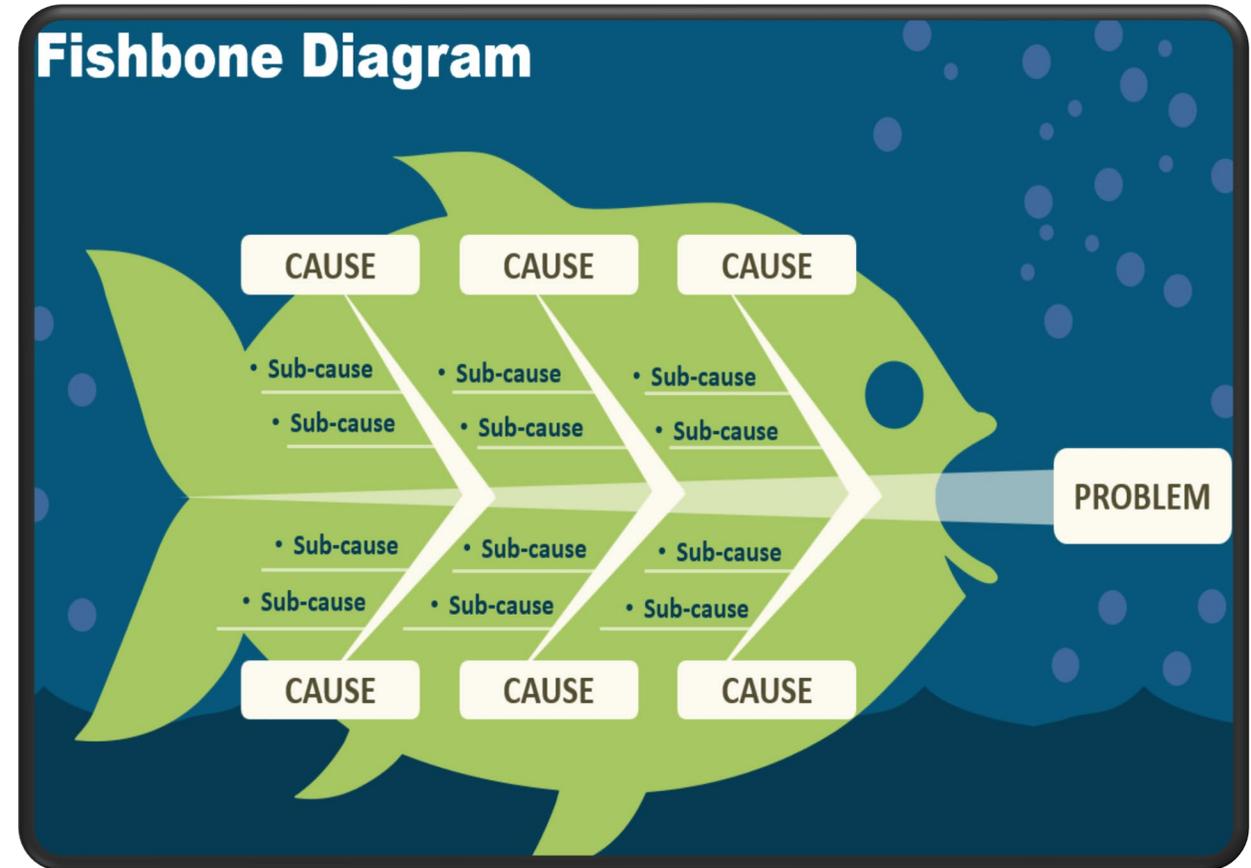


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Fishbone Diagram

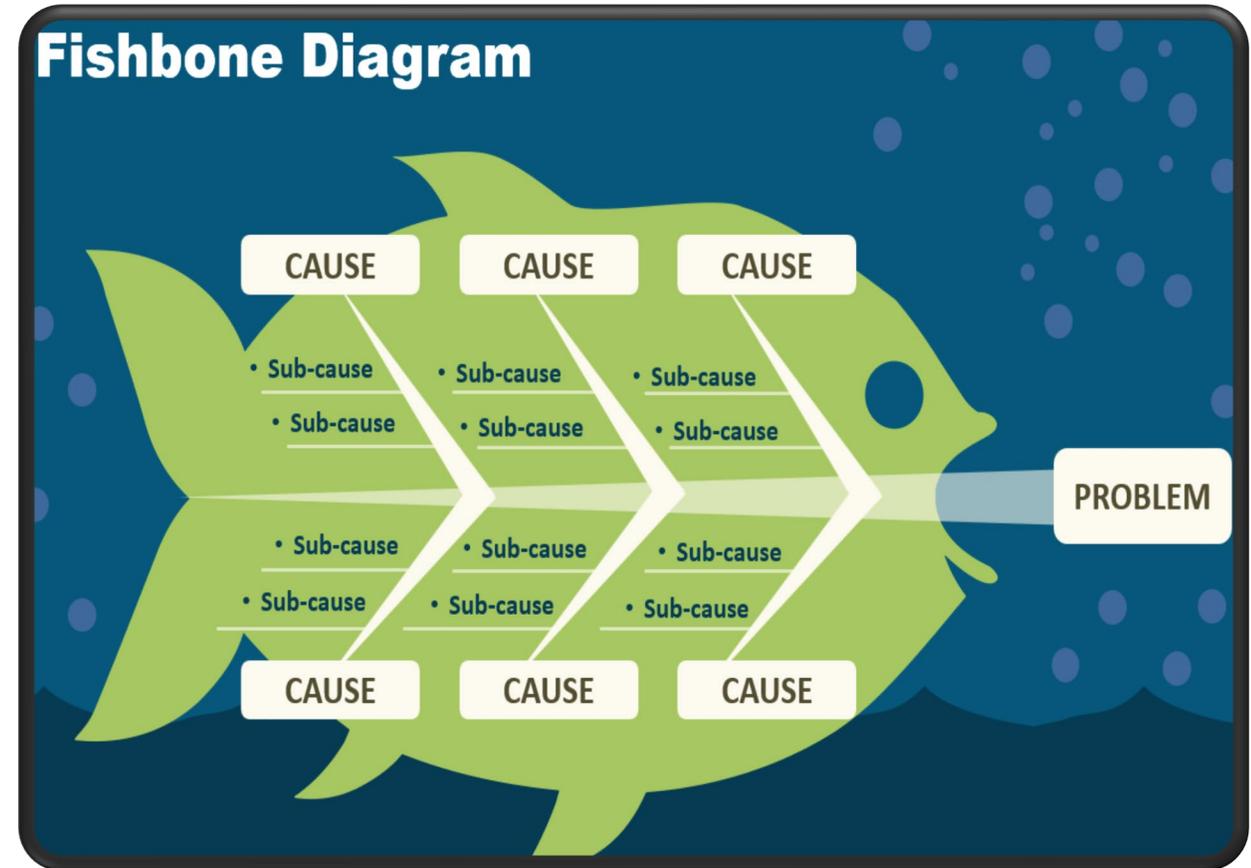
Cause-and-Effect Diagram Ishikawa Diagram

- Tool that helps identify potential causes of a problem by categorizing them
- A root cause analysis tool

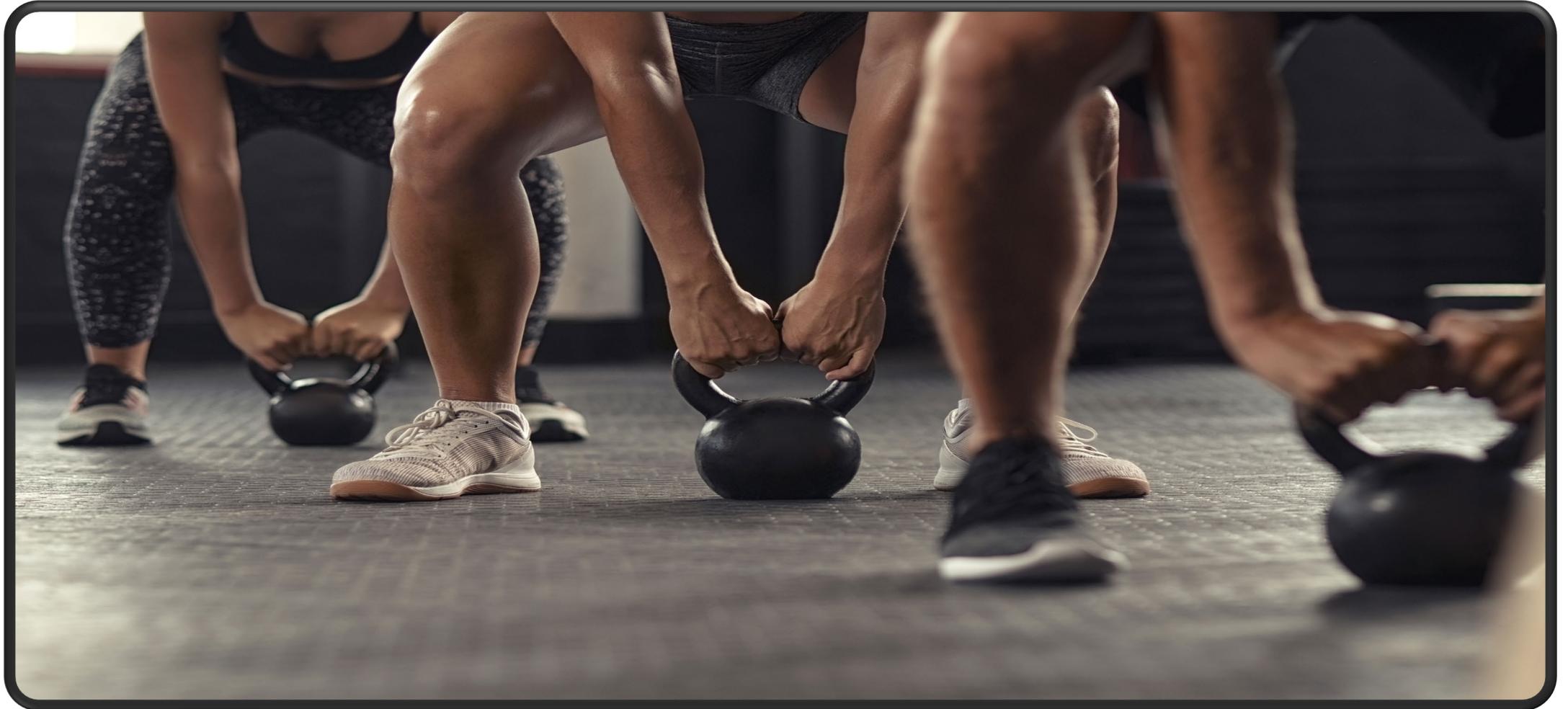


Fishbone Diagram

- Root cause analysis - help identify underlying causes rather than symptoms
- Prevent recurrence - addressing causes to prevent further issue
- Structured problem-solving - organizes brainstorming into logical categories
- Team collaboration - encourages input from multiple stakeholders



Group Exercise



Group Exercise

Instructions: 5 - 10 minutes

- 1. Define the problem:** Why is hand hygiene (HH) rate at 25% (handout)
- 2. Organize your brainstorm ideas:** place each brainstorming idea in “organizing ideas” column (sub-causes)

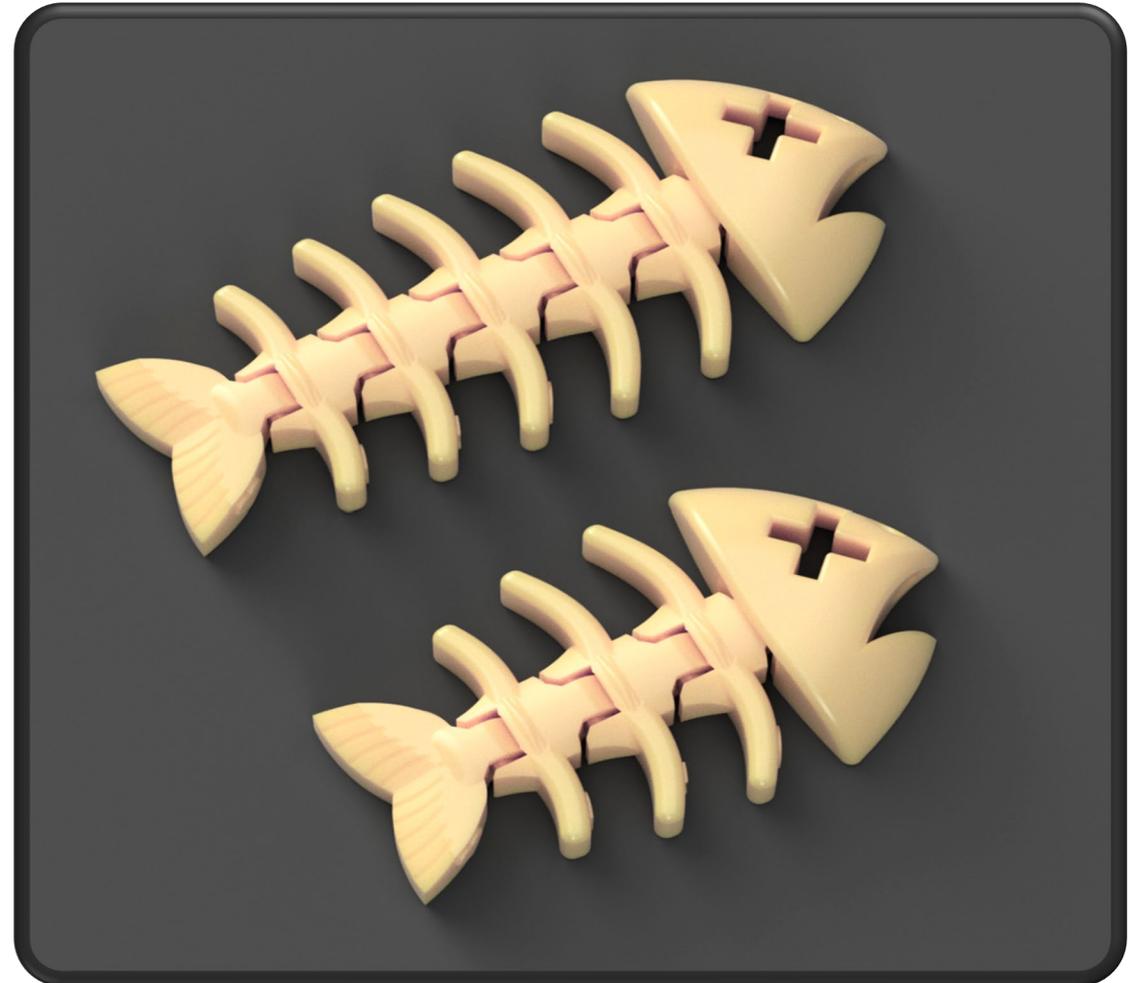
Possible Major Cause Categories

- **Culture – people / human factors**
- Equipment
- Environment
- **Lifestyle – people / human factors**
- Machinery
- Management
- **Manpower – people / human factors**
- Materials
- Measurement
- Methods
- Mother Nature
- **People – people / human factors**
- Policy
- Process
- Services
- Technology

Group Exercise Cont.

Instructions: 5-10 minutes

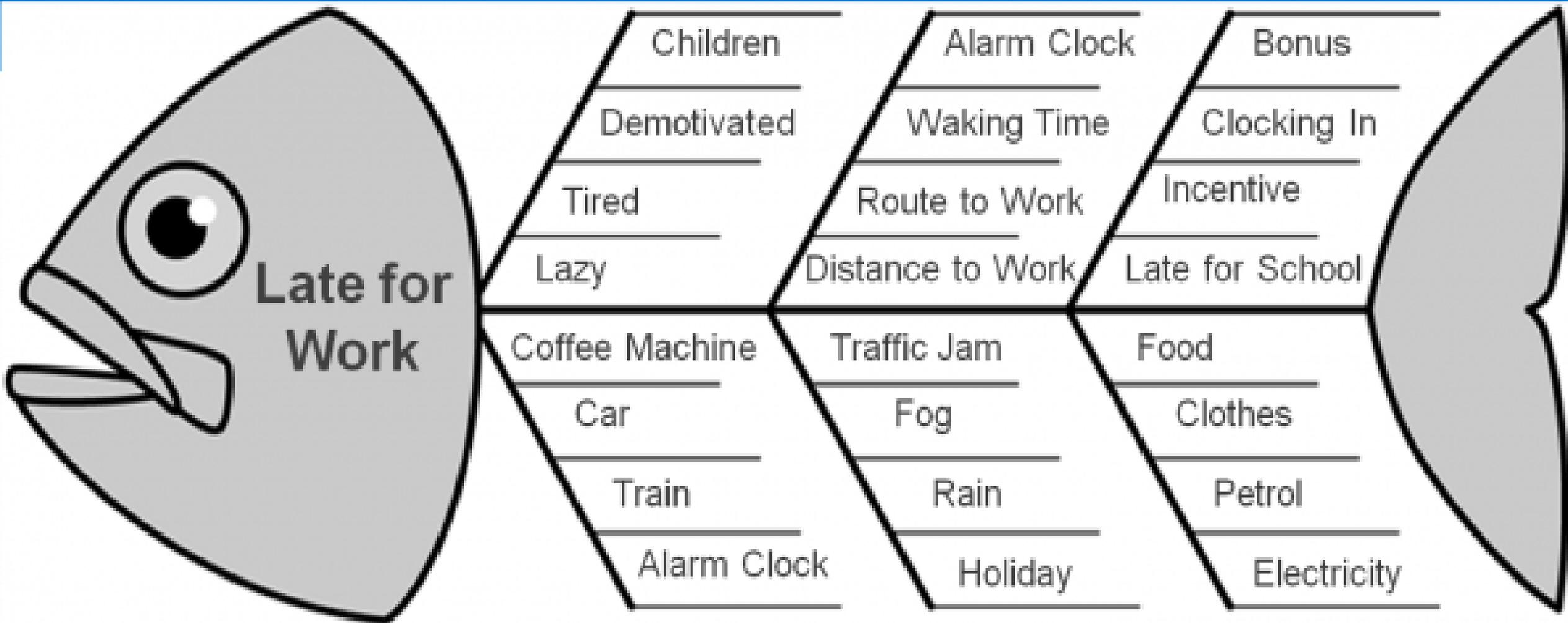
- 3. Input major cause category:** write your major cause categories on your major fishbones
- 4. Input your sub-categories on your fishbone diagram:** place your entries from #2 table “organizing ideas” column into #3 fishbone diagram: smaller bones



People / Human Factors

Method

Measurement



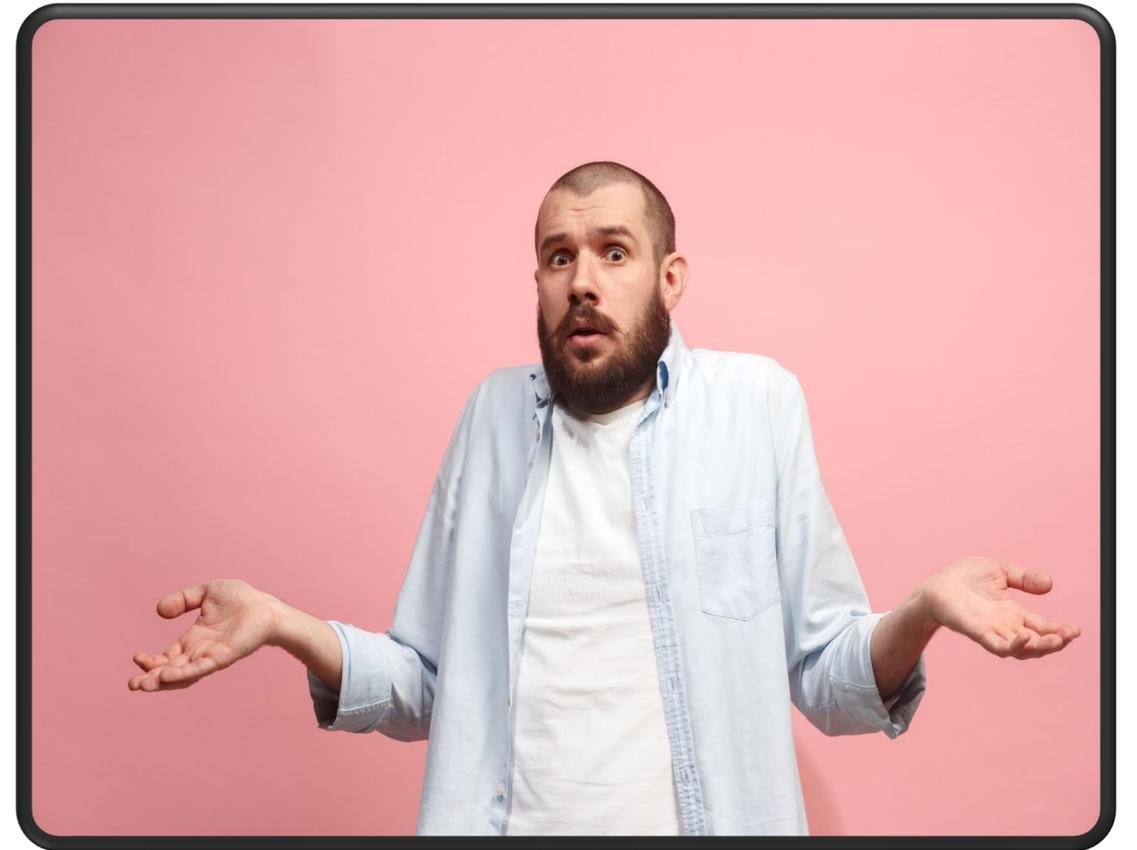
Machine

Environment

Materials

What's Next? 5 Whys Method

- Tool used to identify root cause of a problem by repeatedly asking why.
 - Used for each sub-cause of a fish-bone diagram



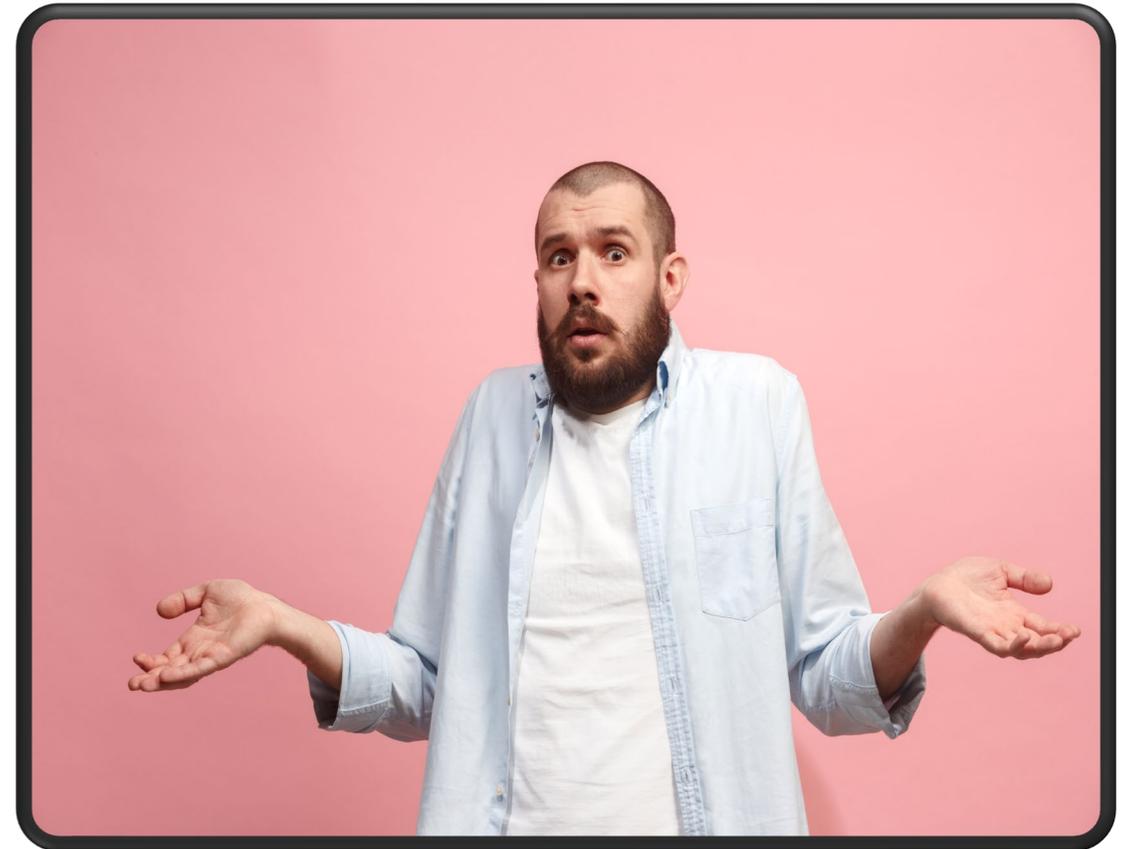
What's Next? 5 Whys Method

How to Implement: (see handout)

- Identify the problem – car broke down

1. **Why**-car was overheating
2. **Why**-water pump broke
3. **Why**-serpentine belt was worn
4. **Why**-same belt when car was purchased
5. **Why**-did not follow recommended maintenance
6. **Why**-purchase and maintenance log was not organized

- Root cause identified = take action



What's Next? Plan-Do-Study-Act Cycle (PDSA)

• Plan

- Identify an area for improvement
- Set measurable goals (SMART)
- Develop a plan for change

• Do

- Implement the change on a small scale
- Minimize risk and collect data

Specific	<ul style="list-style-type: none">• Try and make your goal as precise and defined as possible
Measurable	<ul style="list-style-type: none">• Establish a criteria to measure your progress• How will you know when you are on your way?
Accountable	<ul style="list-style-type: none">• Determine a person who will help you and keep you responsible for your goals
Reachable	<ul style="list-style-type: none">• Set reachable goals that you will be able to attain (high expectations are good)• Set small goals toward bigger goals
Time specific	<ul style="list-style-type: none">• Create a timeline• Having an end time will help you stay accountable to your goals

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What's Next? Plan-Do-Study-Act Cycle (PDSA)

- **Study**

- Analyze results to assess effectiveness
- Identify barriers to success

- **Act**

- Decide whether to Adopt, Adapt, or Abandon the change

Repeat cycle as needed to make improvements



Resources

- <https://edhub.ama-assn.org/steps-forward/module/2702507> – Comprehensive step by step approach using PDSA
- Moran, J. W., & Duffy, G. L. (2012). *Public health quality improvement encyclopedia: Practical guidance for collaborative efforts*. [Public Health Foundation](#).
- [Performance Management & Quality Improvement: Resources | Public Health Gateway | CDC](#) - Performance Management & Quality Improvement: Resources
- [Quality Tools & Templates - List of Quality Tools | ASQ](#) – Quality tools
- [7 Basic Quality Tools: Quality Management Tools | ASQ](#) – Basic tools
- [pdsacycledebedits.pdf](#) – CMS PDS Template

Questions?

For more information, contact the HAI Program at
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Thank you!



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