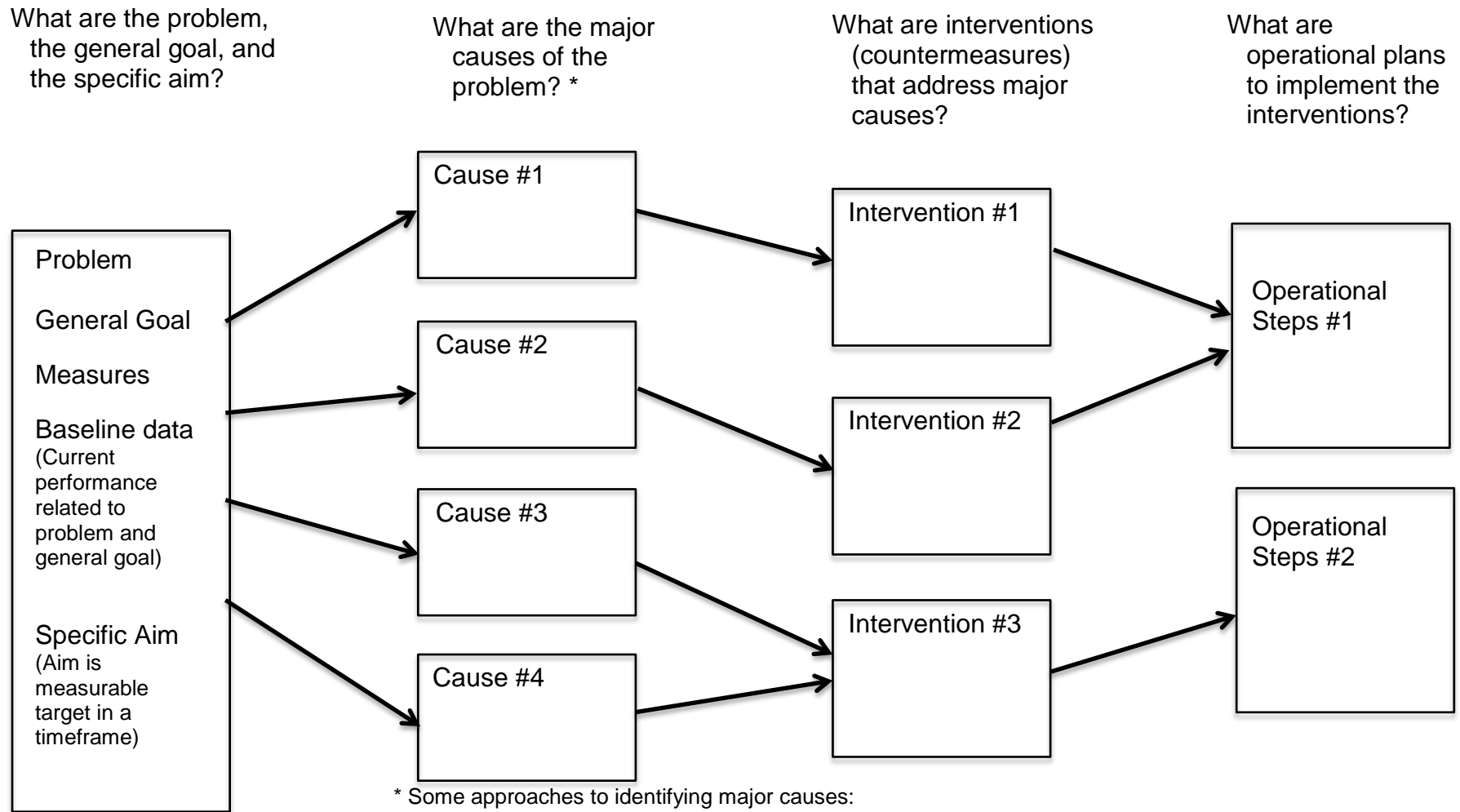


**Figure 1. Structured Problem Solving: Logic Diagram for a Proposed Improvement Cycle**  
 (Planning Tool for QI Project Leaders)



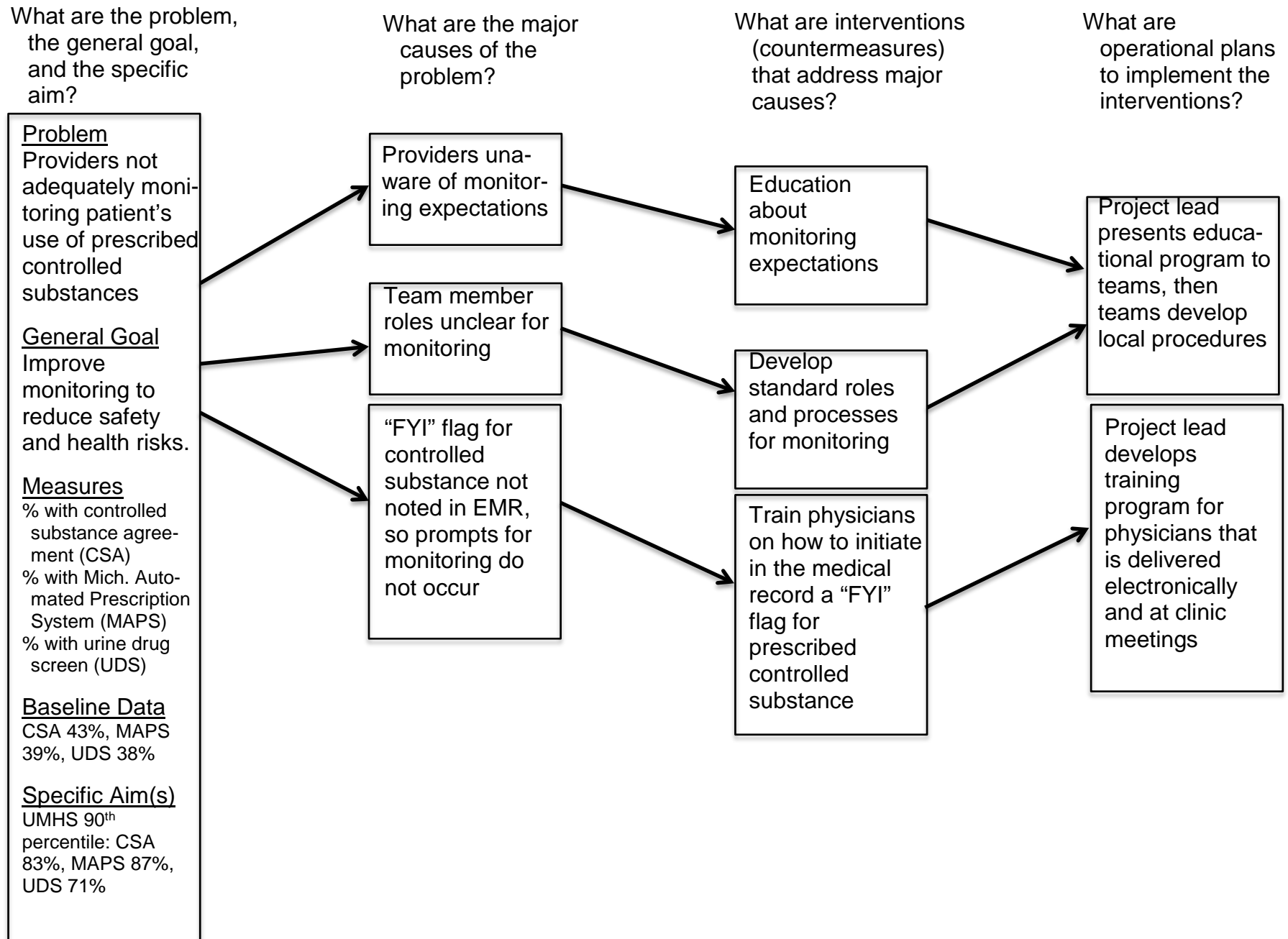
\* Some approaches to identifying major causes:

- Consider categories of causes, e.g., people, materials, equipment, method, environment.
- Consider steps in workflow, e.g., SIPOC: suppliers, inputs, process, outputs, controls.
- Within important categories and steps, to identify underlying/root causes “ask why” (5 times).

Some common causes and interventions that address them:

- |  |   |
|--|---|
| • People are not aware, don't understand | Education about evidence for and importance of the goal                 |
| • People believe performance is OK       | Feedback of data on actual performance and the problem                  |
| • People forget or do not have time      | Standard roles, processes, and reminders for reliability and efficiency |

**Figure 2. Example of Logic Diagram for a Proposed Improvement Cycle**



# Table 1. Facilitating Structured Problem Solving: Steps, Questions, Tools

When someone identifies a likely quality or safety problem in his/her everyday work, use this illustrative guide to consider and ask questions to help the person think through how to understand and address the problem.

Steps	Illustrative Questions	Examples of Tools
Identify <u>Problem</u>	<p>Is this a problem? For whom? Why?            What is the actual current performance?            How do you know this is a problem?            Why is this problem a priority?</p>	<p>Define what “customer(s)” value (consider primary and secondary customers)            Go see            Monitor outcomes, get data</p>
Determine <u>Goal</u>	<p>What do you really want to have happen?            • Can you develop a SMART goal? (Specific, Measurable, Attainable, Relevant, Time-bound)</p>	<p>Outcomes; make sure it’s measurable            Patient outcomes or satisfaction            Performance guidelines            Observed behaviors</p>
Understand <u>Primary Causes</u>	<p>Why is the problem occurring?            Why are those factors occurring?            Why do you think these are the important causes?            • What do you actually know?            • How can you find out more?</p>	<p>Go see            Map current workflow (current value stream)            Look for types of waste (e.g., processes, movement, waiting, products/actions)            Root cause analysis, e.g.:            • Ask “why” this occurs (5 times)            • “Motive, means, and opportunity” analysis</p>
Consider and select <u>Countermeasures</u>	<p>What ideas do you have to address the causes?            Who else would have ideas to address the causes?            Who should be involved in selecting countermeasures?</p>	<p>Standardize work (roles, tools, processes)            Visual management:            • See status of processes            • Organized places for things (5 S)            Error proofing            Map improved workflow (future value stream)</p>
Develop <u>Operational Plans</u>	<p>Operationally what will need to be done?            Who is going to do what?            When is it going to be done?            Who should agree on the operational plans?</p>	<p>Chart showing tasks, individual responsible, and timelines (e.g. Gant chart)</p>

Figure 3. Similar Content Formatted into a More Detailed A3 (two page) Proposal

**An A3 Template**

**Title:** What we are talking

**Date:**

**Owner:**

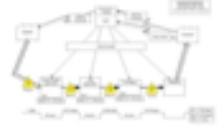
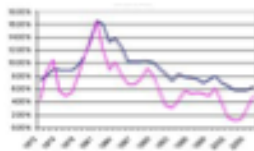
**Background**

Of all our problems, why are we talking about this one? The "ugly story"...  
Historical/organizational/business context...

**Current Situation**

Where do we stand? What is our current performance?

Trend chart, current state value stream map



**Clear Problem Statement**

**Goal**

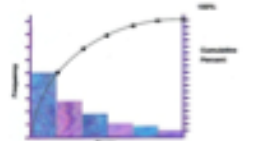
What is the target condition or performance improvement you want now?  
Measurable, by when?

**Analysis**

What are the root causes of the problem? (Fishbone, 5 Whys, Pareto)



What requirements, constraints and alternatives need to be considered?



**Recommendations**

What are your proposed countermeasures, strategies, alternatives? Do they link directly to the root cause?

Include options (some needing no resources)  
Future State Value Stream Map?



**Plan**

What, Who, When? What activities will be required for implementation and who will be responsible for what and when?



**Follow - up**

How we will know if the actions have the impact needed? What remaining issues can be anticipated? When/how will we follow up?

**Reviewed By:**

**Date:**

Modified from Verble, Shook, LaHote, Billi