Figure 1. A Logic Diagram for a Proposed Improvement Cycle

What are the problem, the general goal, and the specific aim?

General Goal
Specific Aim(s)
(Aim is measurable target in a timeframe)

Problem
(Baseline data show current performance related to problem)

What are the major causes of the problem? *

Cause #1

Cause #2

Cause #3

Cause #4

What are interventions (countermeasures) that address major causes?

Intervention #1

Intervention #2

Intervention #3

What are operational plans to implement the interventions?

Operational Steps #1

Operational Steps #2

* 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
What are the problem, the general goal, and the specific aim?

**Problem**
Women with congenital heart disease often do not receive proper counseling about cardiovascular risks of pregnancy. (Baseline: CARPREG score is documented for only 3% of patients)

**General Goal**
Improve communication of pregnancy risk.

**Specific Aim(s)**
Score documented for ≥ 80% over next 4 months

What are the major causes of the problem?

- Pediatric cardiologists less aware of need
- Calculation of risk is difficult to remember
- Physician’s views differ in content of preconception counseling & in expected documentation

What are interventions (countermeasures) that address major causes?

- Education about need and CARPREG scoring
- Worksheet to simplify calculation
- Develop standard process for identifying patients, scoring, and recording scores

What are operational plans to implement the interventions?

- Team lead develops and presents educational program and worksheets
- Physicians, program assistants, and medical assistants jointly develop “standard work”
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.

<table>
<thead>
<tr>
<th>Steps</th>
<th>Illustrative Questions</th>
<th>Examples of Tools</th>
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<tbody>
<tr>
<td>Identify Problem</td>
<td>Is this a problem? For whom? Why?</td>
<td>Define what “customer(s)” value (consider primary and secondary customers)</td>
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<td>What is the actual current performance?</td>
<td>Go see</td>
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<td>How do you know this is a problem?</td>
<td>Monitor outcomes, get data</td>
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<td>Why is this problem a priority?</td>
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<tr>
<td>Determine Goal</td>
<td>What do you really want to have happen?</td>
<td>Outcomes; make sure it’s measurable</td>
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<td>• Can you develop a SMART goal? (Specific, Measurable, Attainable, Relevant, Time-bound)</td>
<td>Patient outcomes or satisfaction</td>
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<td>Performance guidelines</td>
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<td>Observed behaviors</td>
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<td>Understand Primary Causes</td>
<td>Why is the problem occurring?</td>
<td>Go see</td>
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<td>Why are those factors occurring?</td>
<td>Map current workflow (current value stream)</td>
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<td>Why do you think these are the important causes?</td>
<td>Look for types of waste (e.g., processes, movement, waiting, products/actions)</td>
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<td>• What do you actually know?</td>
<td>Root cause analysis, e.g.:</td>
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<td>• How can you find out more?</td>
<td>• Ask “why” this occurs (5 times)</td>
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<td>• “Motive, means, and opportunity” analysis</td>
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<tr>
<td>Consider and select Countermeasures</td>
<td>What ideas do you have to address the causes?</td>
<td>Standardize work (roles, tools, processes)</td>
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<td>Who else would have ideas to address the causes?</td>
<td>Visual management:</td>
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<td>Who should be involved in selecting countermeasures?</td>
<td>• See status of processes</td>
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<td></td>
<td></td>
<td>• Organized places for things (5 S)</td>
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<td></td>
<td>Error proofing</td>
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<td></td>
<td>Map improved workflow (future value stream)</td>
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<td>Develop Operational Plans</td>
<td>Operationally what will need to be done?</td>
<td>Chart showing tasks, individual responsible, and timelines (e.g. Gant chart)</td>
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<td>Who is going to do what?</td>
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<td>When is it going to be done?</td>
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<td>Who should agree on the operational plans?</td>
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Figure 3. Similar Content Formatted into a More Detailed A3 (two page) Proposal

**Title:** What we are talking

**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

**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 will we 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