

Quality and Safety Series

Cause-and-Effect (Fishbone) Diagram

OBJECTIVES

A close-up photograph of a hand in a dark suit jacket and white shirt cuff, pointing towards the text. The hand is positioned on the right side of the slide, with the index finger pointing towards the word 'OBJECTIVES'.

- Identify a cause-and-effect diagram.
- Explore why an organization should use a cause-and-effect diagram.
- Discuss how to create and implement a cause-and-effect diagram.

Cause-and-Effect (Fishbone) Diagram

- Common names
 - Cause-and-effect diagram
 - Fishbone diagram
 - Ishikawa diagram
- Used as a visualization tool.
- Aids in organizing potential reasons or causes for a real or potential adverse event.
- Encourages broad thinking.
- Best used once you have defined the problem.
- May also be used to prevent future problems.

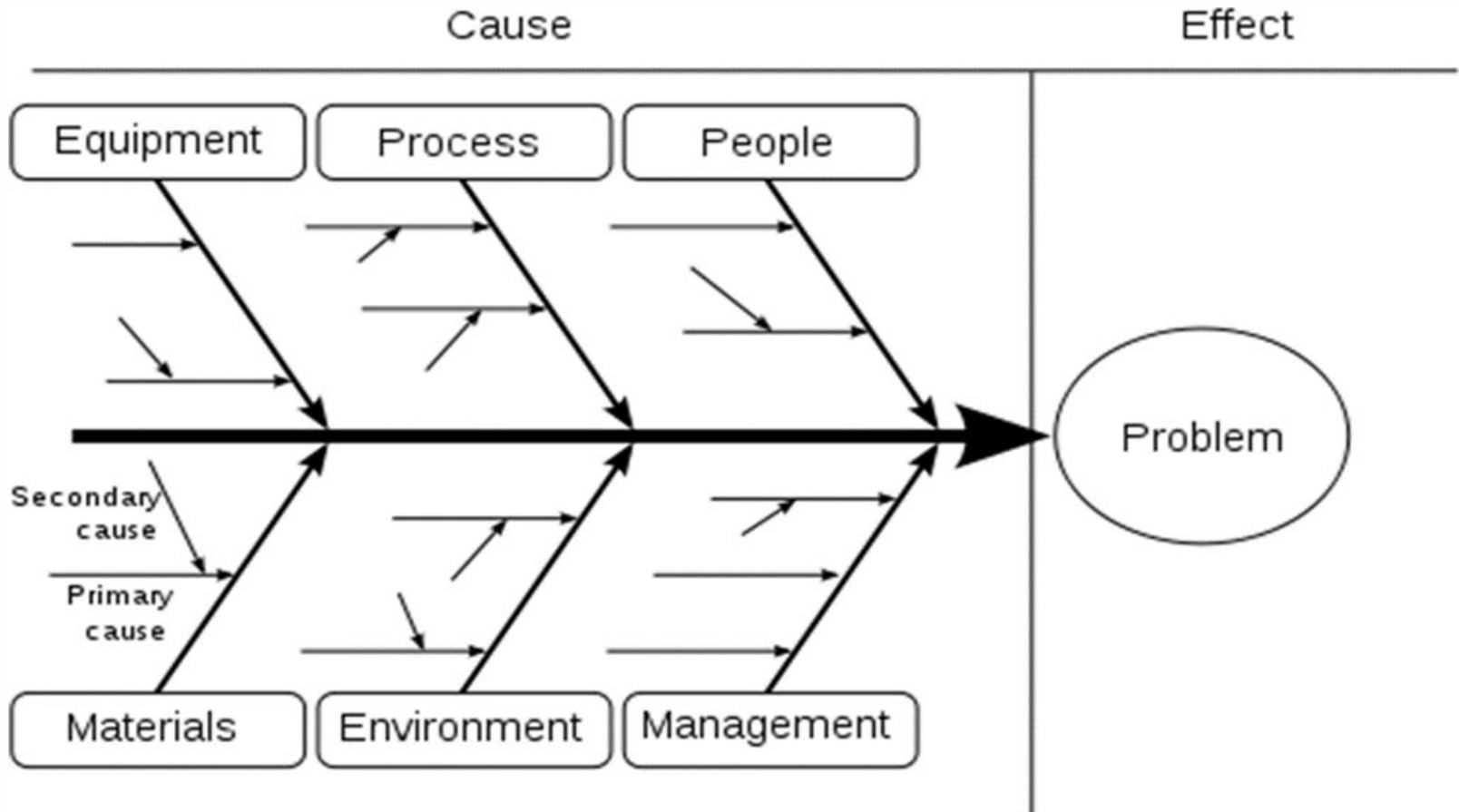


Where to Begin

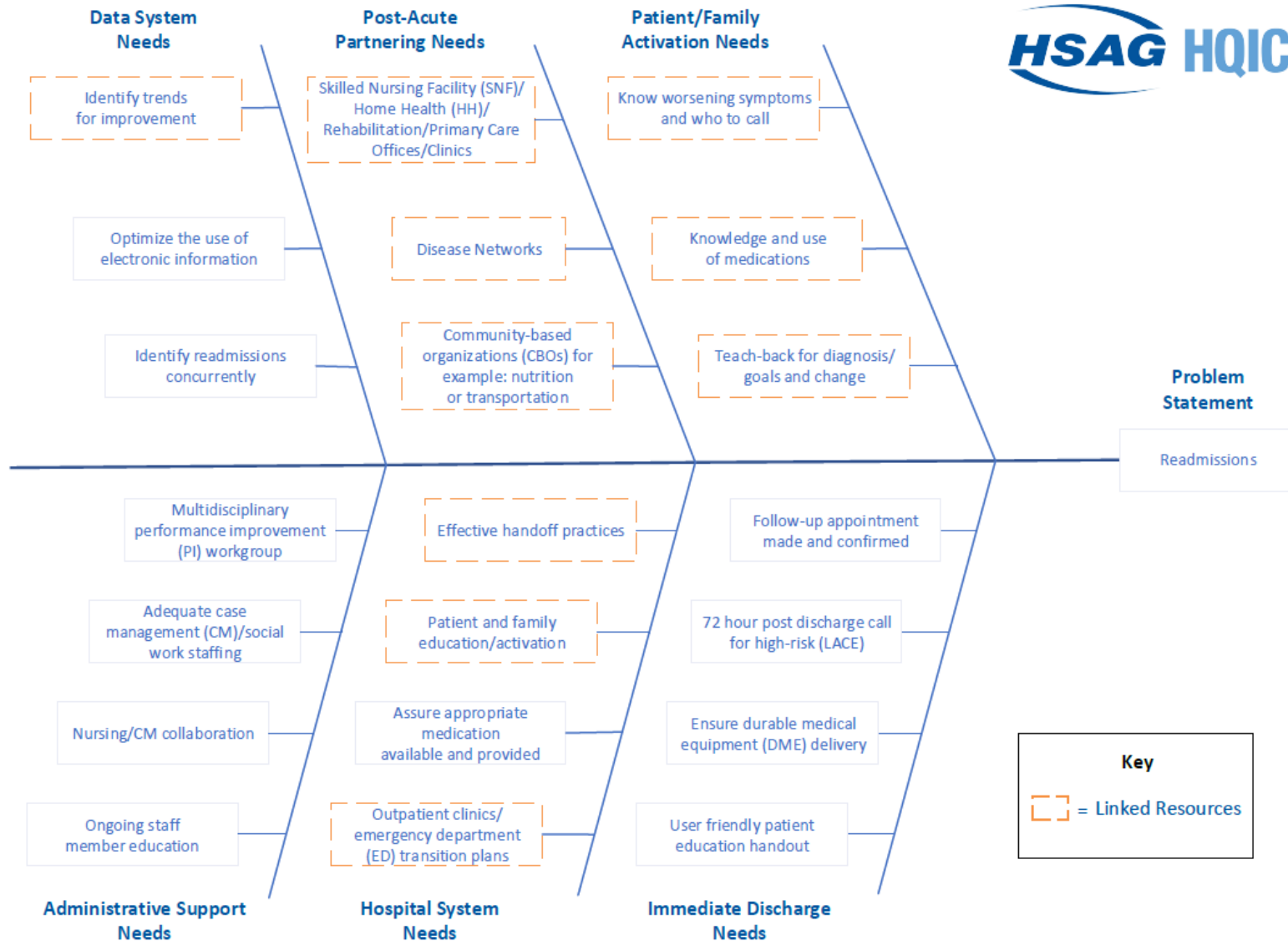
- Start with a **precise** problem statement.
- Use correlative data and information as the foundation of your problem statement.
- Use the “5 whys” to assist the team in drilling down to the root causes.
- Use “brainstorming.”



The Fishbone Diagram Template



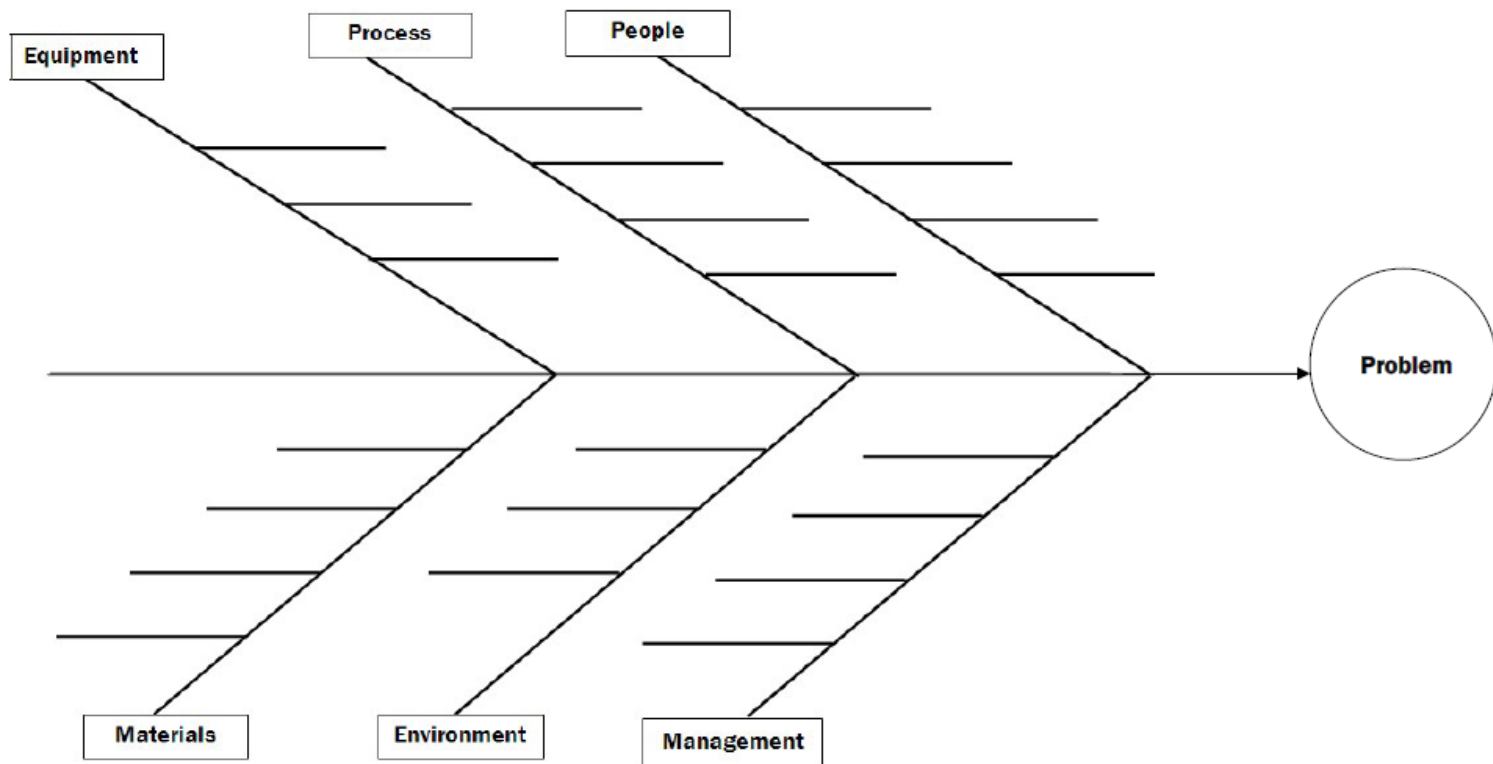
Example of a Completed Fishbone Diagram



Cause-and-Effect Diagram

The Fishbone Diagram

- The cause-and-effect (fishbone) diagram starts with the problem at the head of the fish.
- Under each general category of the fishbone, answer the question, “Why?” for the identified problem.
- Once the fishbone diagram is completed, the various causes are discussed to determine the root of the problem or the real reasons why the problem exists. It is from this discussion that the focus for the improvement plan begins.



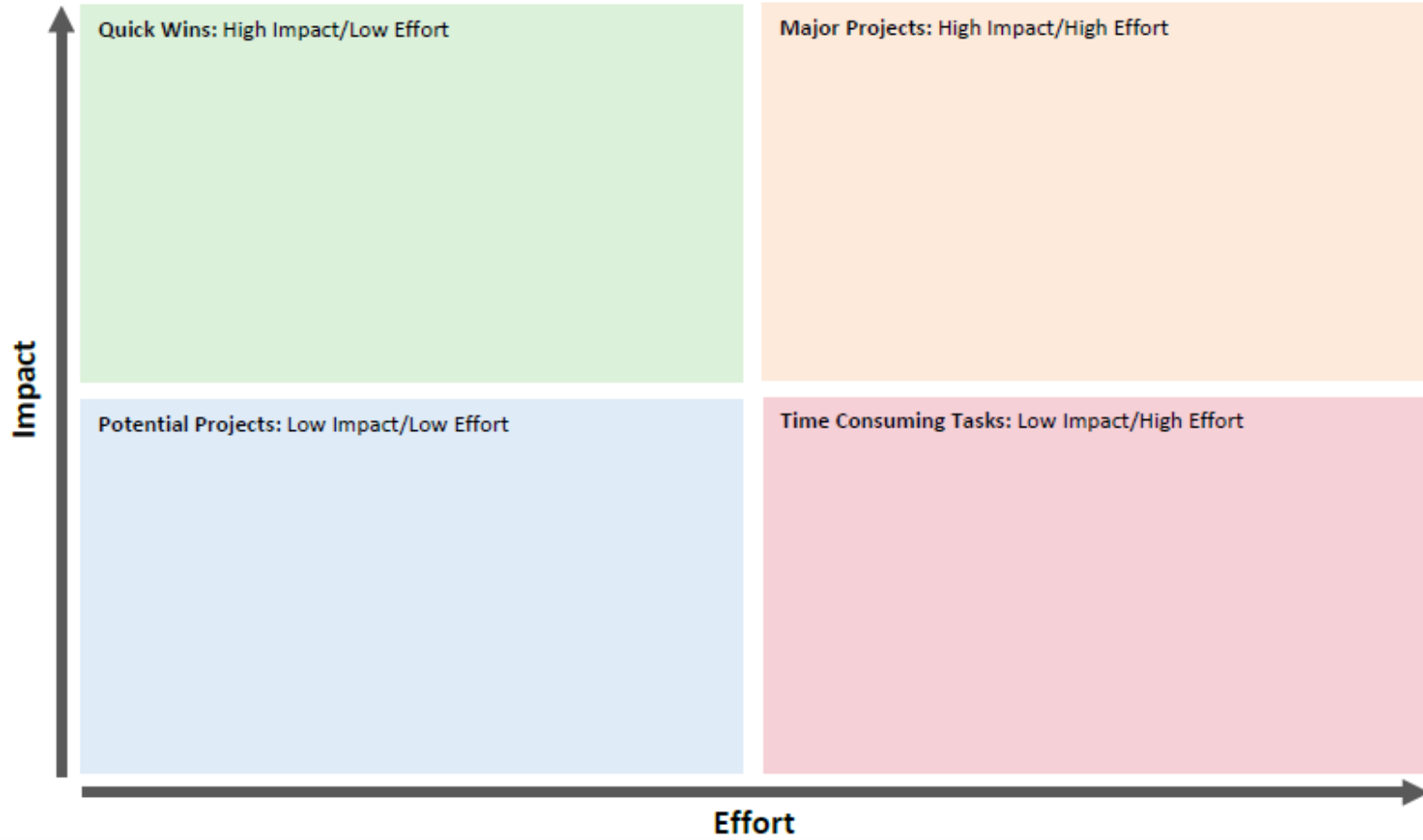
What's Next?

- Examine all causes and validate.
- Eliminate non-causes.
- Re-evaluate causes for likelihood of contribution.
- Gain team consensus on causes.
- Use a prioritization matrix/Eisenhower matrix to determine urgency and impact of a cause.
- Develop an action plan.
- Utilize rapid cycle improvement.



HSAG Prioritization Matrix/Eisenhower Matrix

A prioritization matrix is a process improvement tool that helps teams identify areas of opportunity that are most important to address first. Rank is established by level of impact and difficulty of implementation. Use group-think and brainstorming techniques to rank each item. It is key to focus on the quick wins of high impact/low effort areas first, as well as eliminate or delay the time consuming low impact/high effort items.



HSAG Action Plan



Action Plan—Guidance

Use this form to develop your quality improvement plan. Clarification for each component is provided below and a blank template.

ORGANIZATION NAME							
Action Plan for PROJECT							
Initiated DATE–Updated DATE							
AIM Statement:		<p>Clearly state the aim/goal that you are trying to accomplish. The aim should be S.M.A.R.T:</p> <ul style="list-style-type: none"> • Specific • Measurable • Action-Oriented • Realistic • Time and Resource Constrained 					
ITEM	ROOT CAUSE	PLAN	RESPONSIBILITY	DATE DUE/COMPLETED	MEASUREMENT PLAN	STATUS	RESULTS/LESSONS LEARNED
Identify key areas for improvement.	Identify the root cause of the problem (findings of the Root Cause Analysis [RCA]). The root cause is the factor that when fixed prevents the problem from re-occurring.	Identify plan for accomplishing the improvement in each area identified for change.	Identify project leader and/or team. Make sure to include individuals that directly work in the area that is under improvement. Assign clear responsibilities to each team member.	Set deadlines. Identify when completed. Due (D) Completed (C) D – xx/xx/xx C – xx/xx/xx	Describe the plan to collect information to evaluate the results and to monitor progress.	Describe the status of progress over time	<p>Plan-Do-Study-Act (PDSA)</p> <ul style="list-style-type: none"> • Record what you have learned. • What has worked/not worked? • Identify changes you would make to your project plan and plans you have moving forward. • Identify potentials to spread good practices across your organization.

Key Take-Aways

- Cause-and-effect/fishbone diagrams can be used as part of a root cause analysis.
- A precise problem statement serves as the foundation and is based on data.
- Create with a group—brainstorm.
- Prioritize the results.





Thank you!

Questions: hospitalquality@hsag.com