

Fishbone/Cause and Effect Diagrams

The **Fishbone/Cause and Effect Diagram** (also known as the Ishikawa Diagram) is a **graphical** tool used to **identify and organize** the possible contributing factors/causes to a (care delivery) problem. When utilizing a team approach to problem solving, there are often many opinions re: the problem's root cause(s). In addition, because people by nature often like to jump to determining what to do about a problem, use of the Fishbone Diagram can help promote a more thorough exploration of the issues behind the problem – which will lead to a more robust solution. The Fishbone Diagram provides an effective tool to capture these different ideas and stimulate a team's brainstorming on root causes.

When to Use a Fishbone Diagram

The Fishbone Diagram has a variety of benefits

- It helps teams understand that there are many causes that contribute to an effect.
- It graphically displays the relationship of the causes to the effect and to each other.
- It helps to identify areas for improvement.

How Fishbone Diagrams Are Constructed

There are multiple options for factor/cause categories depending on the setting of your work. In healthcare, Fishbone Diagrams generally are built using 2 options for categories.

- Option 1: Materials, Methods, Equipment, Environment, and People
- Option 2: Task, Team, Organization and Management, Patient, Individual Staff, and Work Environment Factors

To construct a Fishbone Diagram

1. Start with stating the problem/care delivery issue in the form of a specific question and create a short phrase to describe the problem. The team should agree on this phrase.
2. Place this phrase in the box at the "head" of the fishbone.
3. Identify categories and label these boxes.
4. Draw one line across the page and attach this to the problem statement.
5. Draw several lines, or "bones," extending out vertically or diagonally from the main line and join each line to the individual categories.
6. Categorize the various causes and place on the lines under the appropriate category.

A Fishbone Diagram template is available on the Department of Pediatrics Quality Improvement webpage at <http://www.med.unc.edu/pediatrics/about/quality/qi-tools>.

A whiteboard video on driver diagrams-can be viewed at <https://www.youtube.com/watch?v=387chd8p54c>