Use a Fishbone Diagram to Find Root Causes and Effective Solutions

WHAT IT IS

A fishbone diagram is a way to visually diagram a problem's root causes. This allows teams to address the root cause rather than focusing on symptoms.

WHY DO IT

"Solutions" that only address symptoms are not likely to succeed. Identifying the sources of a problem – the root causes – helps teams develop lasting solutions. The more often you do fishbone diagrams, the easier and faster it becomes!

WHO SHOULD DO IT

A small, focused team. For example:
- HEWs, Nurses, EPI focal persons, and others experiencing or affected by the problem
- QIT members, including community leaders/members
- Managers who might have insight into the problem, a role in solving the problem, or facilitation skills to help move the process along

HOW TO DO IT

1 Draft a clear **problem statement**, on which all team members agree

Write the problem statement in the head of the "fish." Draw a line with an arrow toward the head—this is the fish's "backbone." In the example shown here, the problem is **low coverage**.
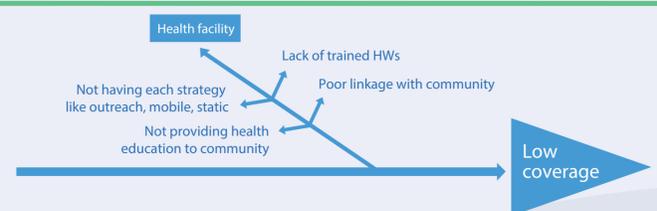
Low coverage

2 Brainstorm **major categories** that might be part of the problem

Connect them to the backbone, in "ribs." Other common categories include health system, geography, materials, policy, environment, culture/tradition, methods, and information.
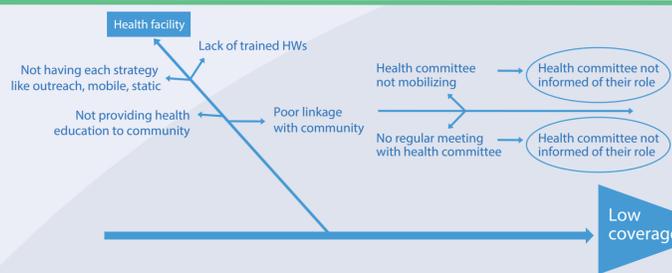
Community | Health facility
Process/procedure | Government
Low coverage

3 Brainstorm **contributing factors**

Develop possible causes of the problem in each category (or choose a category where you can act). Attach each to the appropriate rib. Some contributing factor may fit into multiple categories.

Health facility
Lack of trained HWs
Not having each strategy like outreach, mobile, static
Poor linkage with community
Not providing health education to community
Low coverage

4 Push toward **deeper causes**

You might end up with several branches off of each successively smaller rib. Continue to go deeper for a clear understanding. Ask "why" 2–5 five times, as in the example.

Health facility
Lack of trained HWs
Not having each strategy like outreach, mobile, static
Not providing health education to community
Poor linkage with community
Health committee not mobilizing → Health committee not informed of their role
No regular meeting with health committee → Health committee not informed of their role
Low coverage

5 Identify the **main reasons/root causes** by looking for causes that appear more than once

Addressing the root cause can affect many contributing factors and have far-reaching effects.
- In the example shown, "Not informed about their role" seems to be a good root cause to address.
- Other options for deciding which main reason/root cause to address include:
  - The likely impact of addressing that root cause
    - The greater the likely impact, the more important it is to address
  - How difficult it will be to address the root cause
  - The resources available to address the root cause
  - Whether there is a logical order in which to address the root causes
- The process of finding the right root cause to address might involve trial and error.
  - If the team decides to address an identified root cause and the problem continues to occur, it probably is not the actual root cause.
  - Take another look at the root causes and keep asking "Why?"

6 Identify and implement one or more solutions that address the root cause(s)

A few notes:
a. Removing a contributing factor might improve the situation, but it will not necessarily keep the problem from occurring. This is one way to distinguish a contributing factor from a main reason/root cause.
b. Try solutions within your control to make the situation better.
c. Share your fishbone with higher-ups. Ask them for help addressing root causes your team cannot address.

Here's what the "why's" would look like in a different format:

Problem
Low immunization coverage

Why?

Poor linkage to community

Why?

Health committee not mobilizing

Why?

Health committee not informed of role

UI-FHS
Universal Immunization through Improving Family Health Services

JSI
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