

# Effective Vaccine Management (EVM) – How to develop a Continuous Improvement Plan (CIP)?

Guidance Note Version 1.0 – February 2018

## Supplement 6: Root Cause analysis

The root cause analysis (RCA) is an essential step of the planning logic that supports the CIP: (a) understanding your data, (b) formulating the right problem, (c) analyzing the bottlenecks, (d) developing a comprehensive strategy to address the problem, (e) understanding who is best positioned to resolve the problems, (f) developing a plan to make it happen.

The RCA process provides you with a way to identify breakdowns in processes and systems that contributed to the problem your immunization supply chain faces, and how to prevent the problem to keep occurring. The purpose of an RCA is to find out what happened, why it happened, and determine what changes need to be made:

1. To find out what happened, the RCA looks at the evidence gathered from the situation analysis you have already conducted (see CIP guidance note Supplement 2).
2. To find out why it happened, the RCA unpacks complicated problems leading to poor performance or barriers to achieving higher performance in the immunization supply chain (ISC). Such analysis allows the user to methodically identify and correct the root causes of problems, rather than to simply address the symptomatic result. By doing so, we are aiming at entirely preventing the problem from occurring, by allowing corrective measures to be applied at the right level of depth.
3. By identifying the root causes of your ISC problems, the RCA will allow you to determine what changes need to be made, and to plan accordingly for corrective actions to take place at the right level, at the right time, in the right sequencing, with the best positioned people.

### Using the 5 whys Approach

There are several possible approaches to carry out a root-cause analysis and it is up to the user to determine which approach will work best in their context, but the analysis must specify:

- **The problem**
- **The root-cause of the problem** – noting that there could be several root causes for an identified problem, for example demand side factors, supply side factors, issues related to quality, and the enabling environment
- **Strategies to address the problem**



**Problem: Cold chain equipment is poorly maintained.**

**Why?** There are insufficient cold chain technicians to service all equipment on a regular basis

**Why?** The EPI programme is not training enough cold chain technicians to match demand

**Why?** Insufficient resources allocated to training of cold chain technicians

**Why?** No HR plan for training of cold chain technicians

**Why? (1)** No analysis of HR needs for cold chain maintenance has taken place

**Why? (2)** Cold chain HR competencies have not been on the political radar of MoH HR department (not considered a part of the health programme skills set and career paths)

**Why?** Training provided is of poor quality

**Why?** Training of Trainers (ToT) methodologies used are not evidence based, do not take into account the learners' needs of the specific group of people, training contracts are not results-based, etc

**Why?** There aren't any transport vehicles available to take technicians to health centres

**Why?** Many vehicles are broken down

**Why?** Spare parts not available

**Why? (1)** Insufficient funding allocated to procure vehicle spare parts

**Why? (2)** Spare parts procurement process is not based on programme needs forecast

**Why?** Other programs use the vehicles

**Why? (1)** There is a lack of vehicles for all programs

**Why? (2)** No coordination among different programs on when vehicle can be made available to non-ISC technicians

**Why?** Spare parts for cold chain equipment are not available

**Why?** Insufficient funding allocated to procure parts or fund positions of technicians

**Why?** Spare parts procurement process is not based on programme needs forecast

Etc...

**Why?** Staff at facilities does not provide routine maintenance, such as defrosting freezers or cleaning PV panels.

**Why?** The EPI programme is not training enough facility level staff to meet the needs of routine maintenance

**Why?** Insufficient resources allocated to train facility based staff

**Why?** No HR plan for facility based technicians

**Why?** No analysis of HR needs for routine maintenance has taken place

**Why?** Training provided is of poor quality

**Why?** Training of Trainers (ToT) methodologies used are not evidence based, do not take into account the learners' needs of the specific group of people, training contracts are not results-based, etc

The root cause analysis will help identify strategies to strengthen the iSC. However, it is important to be clear which elements of these resulting strategies are within the sphere of influence of the EPI programme, and to engage other government stakeholders (e.g., MoH Department of Human Resources, Ministry of Finance, etc) in developing comprehensive solutions where success requires a sector-wide approach.

GAVI HSS grants are explicitly designed to engage, through the sharing of donor grant funding, the non-EPI government stakeholders whose collaboration is critical to the success of EPI programme. Understanding and defining systemic root causes, and translating them to coherent strategies, strengthens the national GAVI HSS investment case.