EFFECTIVE VACCINE MANAGEMENT

Training for frontline healthcare workers

10 MODULES

CPD Accredited

health
Department:
Health
REPUBLIC OF SOUTH AFRICA

SAVIC
South African Vaccination & Immunisation Centre

SEFAKO MAKGATHO HEALTH SCIENCES UNIVERSITY

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Modules 1 & 10

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Modules 5, 6 & 7

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Module 8

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Modules 2 & 9

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Moderator

Aims of EVM training

10 Modules

01 To equip frontline healthcare workers with knowledge and guidance on good EVM practices, in compliance with legislation for vaccine logistics and supply

02 To provide trained frontline healthcare workers with the ability to assess and monitor vaccine supply chains and help improve the supply chain performance

03 To establish high standards of performance to ensure reliability, quality and availability of vaccines and ancillary supplies when and where needed

04 To strengthen quality management practices through the use of SOPs, assessments & development of quality improvement projects

05 To provide frontline healthcare workers with job aids for point of care decision-making

06 To build capacity in terms of EVM training for master trainers

Target Audience

Frontline healthcare workers
(vaccinators, pharmacy staff and depot personnel)
responsible for the management of vaccines
in public and private sectors

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Mode of Delivery

Requirements for Online Participants

1. Computer system (desktop, laptop, or tablet) running on a recognised operating system (Windows or Mac OS)
2. Internet access
3. Email address
4. Soundcard with microphone and speakers
5. Minimum computer literacy skills

Data Free

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Training modalities

Individual

Individual online self-learning→ flexible study hours (distance learning)

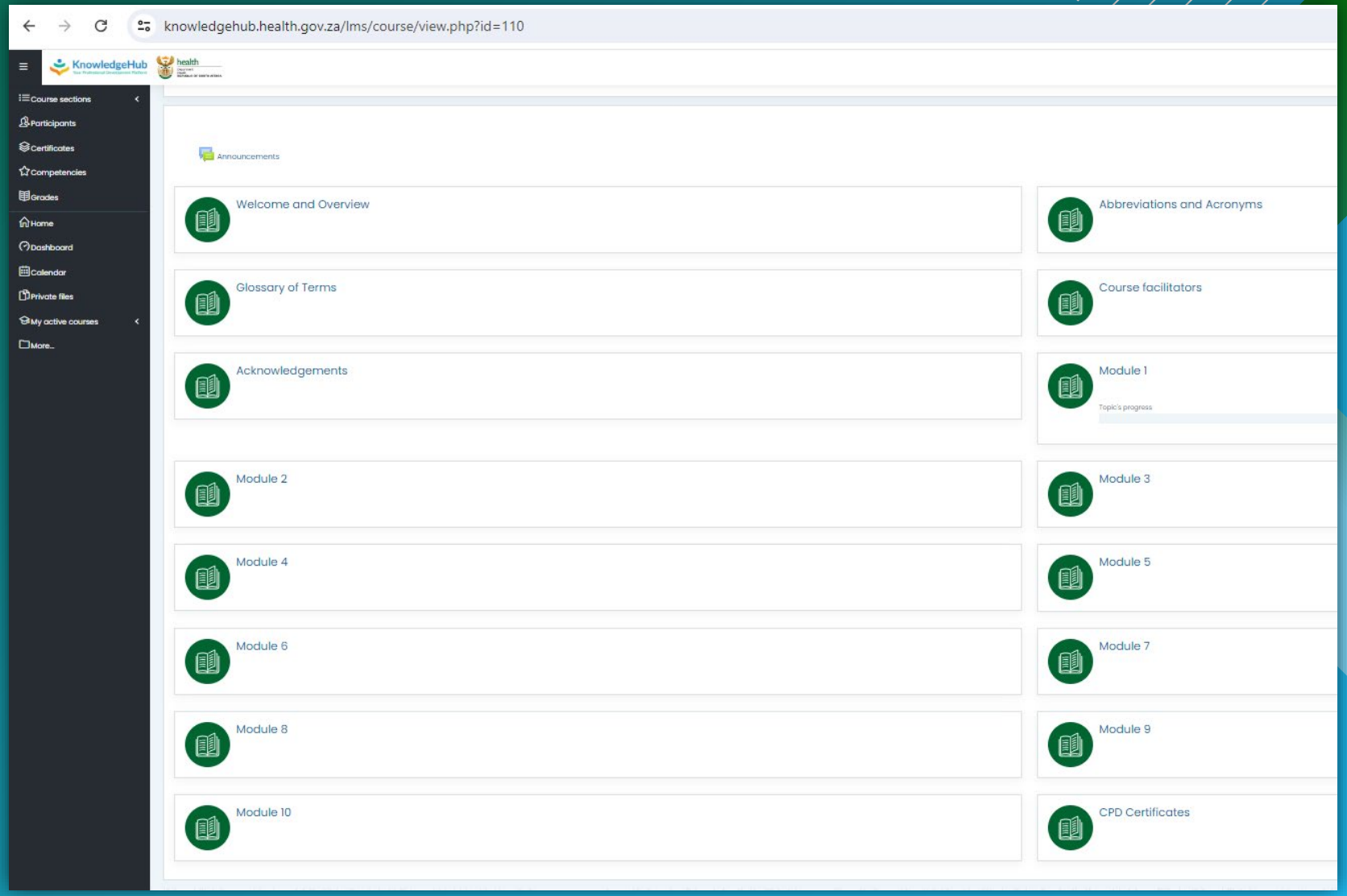
Master trainer

On-site training for pre-service and in-service settings

Classroom training

Access the Course

Landing Page



Abbreviations and Acronyms

For Download from the Landing Page

ABBREVIATIONS AND ACRONYMS

This section contains the abbreviations and acronyms applicable to all modules of the EVM training.

30DTR	30 day temperature recorder
AEFI	Adverse events following immunisation
AFP	Acute flaccid paralysis
BCG	Bacillus Calmette–Guérin
bOPV	Bivalent oral polio vaccine
CCE	Cold chain equipment
CCEI	Cold chain equipment inventory
CCM	Cold chain monitor
CHCs	Community Health Centres
COVID-19	Coronavirus disease 2019
CPD	Continuing professional development
DDV	Direct delivery
DHIS	District Health Information System
EML	Essential Medicines List
EPI	Expanded Programme on Immunisation
EPI-SA	Expanded Programme on Immunisation in South Africa
EVDS	Electronic Vaccination Data System
EVM	Effective Vaccine Management
FEFO	First-expiry-first-out
FIFO	First-in-first-out
GPP	Good Pharmacy Practice
HCRW	Healthcare risk waste
HepB	Hepatitis B
HCWs	Healthcare workers
Hib	*Haemophilus influenzae* type b
HPCSA	Health Professions Council of South Africa
HPV	Human papillomavirus
IPC	Infection prevention and control
IPM	Inspection and preventive maintenance
IPV	Inactivated polio vaccine
KPIs	Key performance indicators
MCQs	Multiple choice questions

MDVP	Multi-Dose Vial Policy
MMR	Measles, mumps and rubella
NAGI	National Advisory Group on Immunisation
NCL	National Control Laboratory
NDoH	National Department of Health
NEMLC	National Essential Medicines List Committee
NHI	National Health Insurance
NNT	Neonatal tetanus
NSC	National Surveillance Centre
OPV	Oral polio vaccine
PCM	Phase change material
PCV	Pneumococcal conjugated vaccine
PFMA	Public Finance Management Act
PHPM	Public Health Pharmacy and Management
PQS	Performance, quality, and safety
RTMS	Remote Temperature Monitoring Devices
RTMS	Remote Temperature Monitoring Systems
RV	Rotavirus vaccine
SA	South Africa
SAHPRA	South African Health Products Regulatory Authority
SANCLBP	South African National Control Laboratory for Biological Products
SANC	South African Nursing Council
SAPC	South African Pharmacy Council
SAVIC	South African Vaccination and Immunisation Centre
SIAs	Supplementary immunisation activities
SLA	Service level agreement
SMU	Sefako Makgatho Health Sciences University
SOPs	Standard Operating procedures
SVS	Stock Visibility System
Td	Tetanus and reduced strength of diphtheria vaccine
TT	Tetanus toxoid
UNICEF	United Nations Children's Fund
VPD	Vaccine preventable diseases
VVM	Vaccine Vial Monitor
WHO	World Health Organization
WIC	Walk in cold rooms
WIF	Walk in freezers

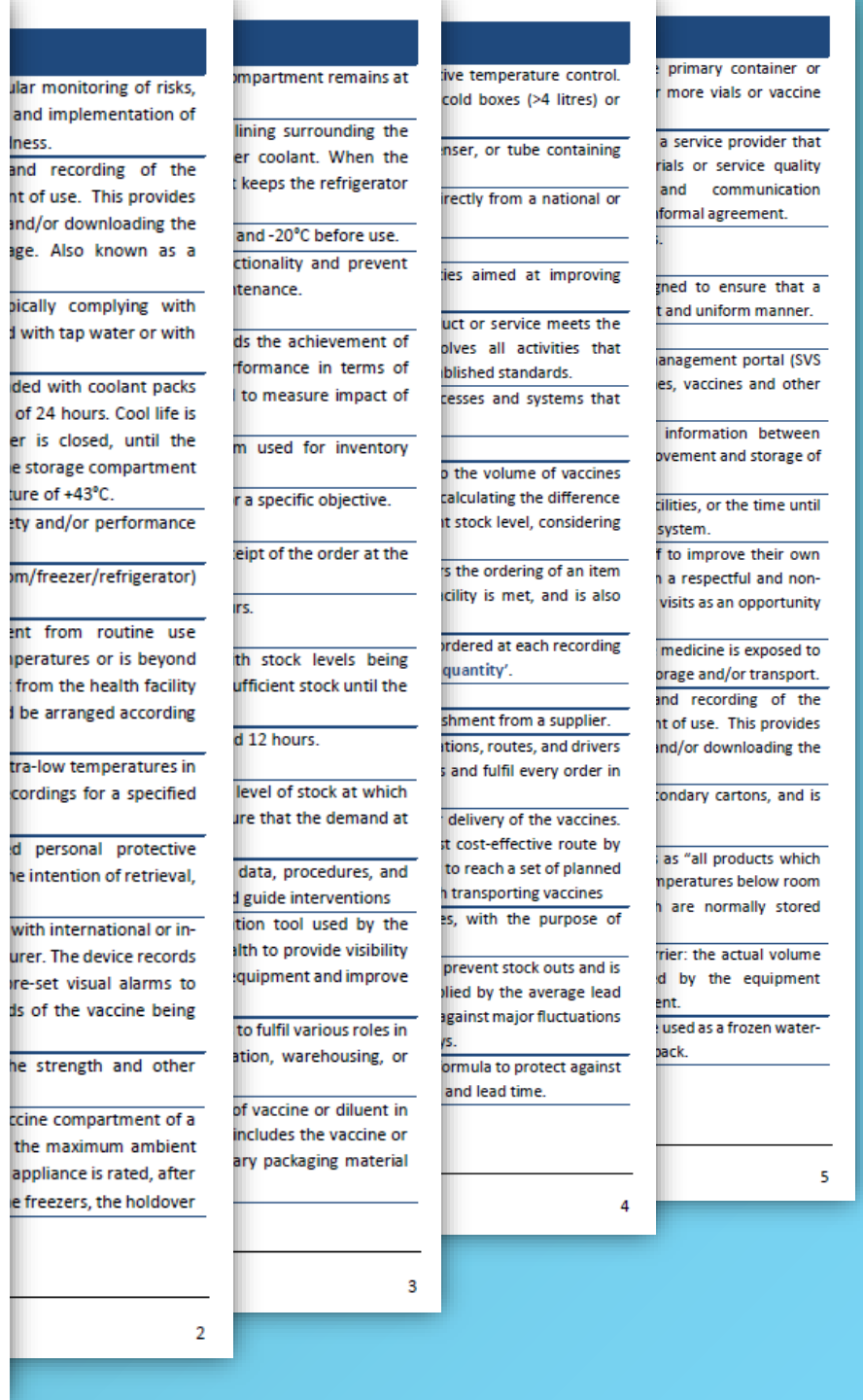
Glossary of Terms

For Download from the Landing Page

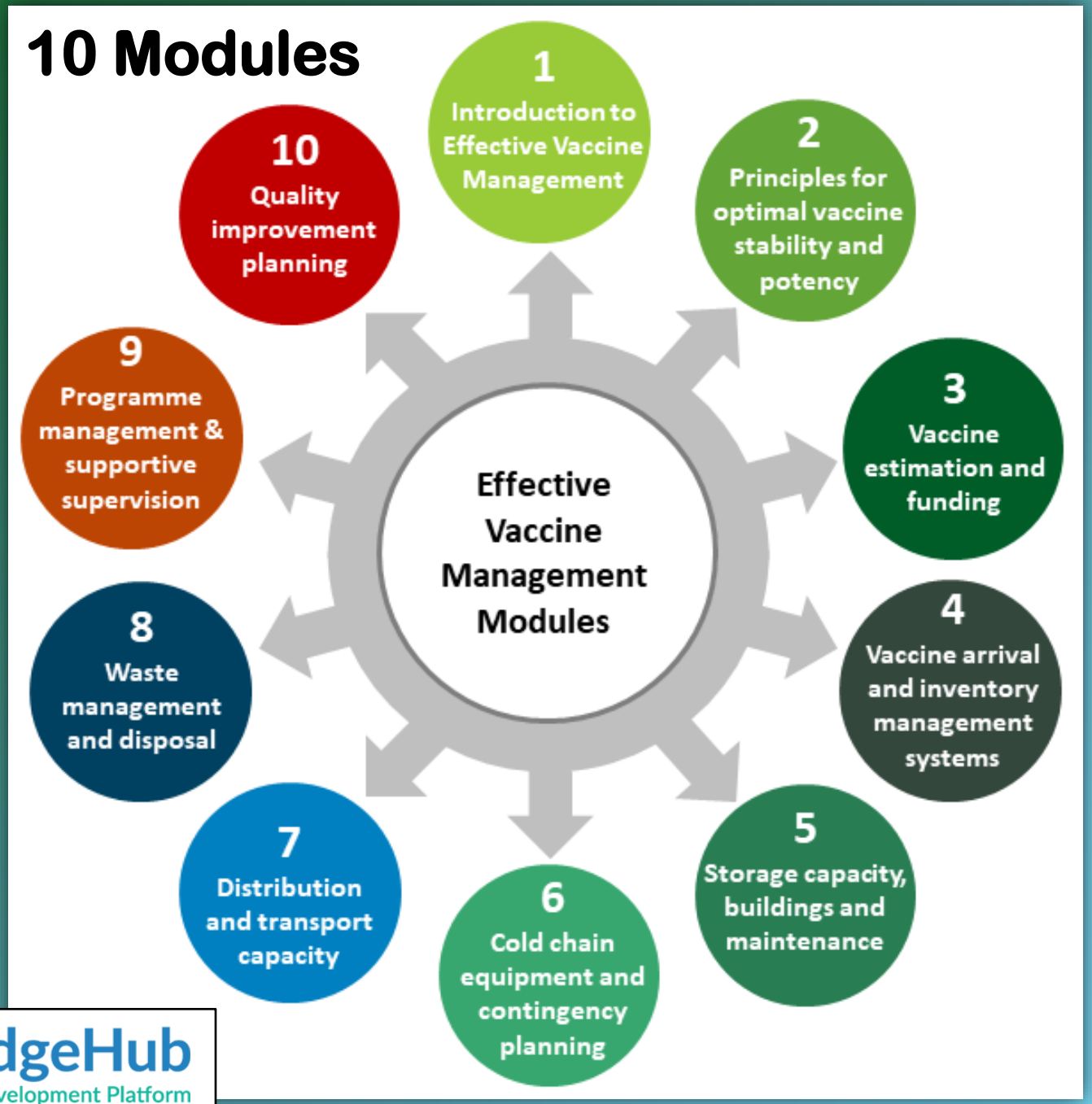
GLOSSARY OF TERMS

This section contains the glossary of terms applicable to all modules of the EVM training.

Term	Definition
Active cold chain systems	Externally or on-board powered, to maintain a temperature-controlled environment inside an insulated enclosure under thermostatic regulation.
Adverse event following immunisation	Any untoward medical occurrence that may present after immunisation but which does not necessarily have a causal relationship with the usage of the vaccine.
Audit	Is the on-site verification activity, such as inspection or examination, of a process or quality system, to ensure compliance to requirements.
Average consumption	This is the average number of units used over a given period, (usually one month) and determines how much stock should be ordered (3 to 6 months' usage is usually used to calculate average; this is different for seasonal stock like flu vaccine)
Average daily consumption	Average number of vaccines that are issued on a daily basis.
Average monthly consumption	Average number of vaccines used per month, adjusting for stock-outs.
Cold chain	The system of transporting and storing vaccines while maintaining the recommended temperature
Cold chain breach	A cold chain breach occurs when storage temperatures are outside the recommended range (usually +2 °C to + 8 °C) for a specified period.
Cold chain capacity	The temperature-controlled space needed at a vaccine store or service-delivery point, to store or distribute the required volumes of vaccines and diluents.
Cold chain equipment	Equipment used to store and transport temperature-sensitive products at the proper temperature during each stage of the supply chain.
Cold chain equipment inventory	A record of the quantities, types and characteristics of the cold chain equipment deployed in a country or other administrative unit.
Cold chain management	The management of medicines that must be maintained within a specified temperature range from the time of manufacture, through transportation and delivery to health establishments until their administration to clients
Cold life	The empty container is stabilized at +43°C and loaded with icepacks. Cold life is measured from the moment when the container lid is closed until the temperature of the warmest point in the vaccine storage compartment first reaches +10°C, at a constant ambient temperature of +43°C.
Conditioned ice packs	Ice packs that are removed from the freezer and allowed to remain at room temperature until the ice can be heard to "rattle" in the ice pack.



Training Materials



Printed EVM Job Aids Distributed by UNICEF

- Posters of key EVM concepts
- Desk Top Flip Charts

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Structure of modules

2 hours of learning per module

PART 1

Pre-module quiz: Multiple-choice questions, based on the module content

±10 minutes

15 min time limit
One attempt
Score displayed

PART 2

- Lecture video i.e. PowerPoint® slide deck with voice recording
- Transcript, corresponding to voice recording of the lecture video
- Folder with resources and supporting documents in PDF format, videos
- Scenario or case study with questions

±25 minutes
Lecture video and transcript

± 35 minutes
Self-learning based on resources provided

± 30 minutes
Case study with questions

PART 3

Post-module assessment: Multiple-choice questions, based on the module content

±10 minutes

No time limit
Multiple attempts
Minimum 80%

PART 4

Module evaluation

±10 minutes

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To qualify for a CPD certificate

1. Successfully complete ALL modules (all learning activities)
2. Obtain a minimum score of 80% for ALL post-module assessments
3. Complete the module evaluation for ALL modules

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CERTIFICATE
OF COMPLETION

Has earned 20 CPD points for completing the online
Effective Vaccine Management Tranining
This activity is accredited by the South African Medical Association,
and offered through the Knowledge Hub.

20 CLINICAL

MDB015/MPDP/105/26

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Health Manager: System Strengthening
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INTRODUCTION TO EFFECTIVE VACCINE MANAGEMENT

Welcome to Module 1

On successful completion of this module, you will be able to:

1. Understand the importance of EVM
2. Describe the minimum standards for management of the entire vaccine supply chain
3. Describe an EVM assessment using a questionnaire based on the EVM assessment criteria
4. Identify challenges within the immunisation supply chain
5. Facilitate equitable distribution of resources to mitigate identified challenges within the immunisation supply chain

Prof Hannelie Meyer

Need to strengthen immunisation supply chains

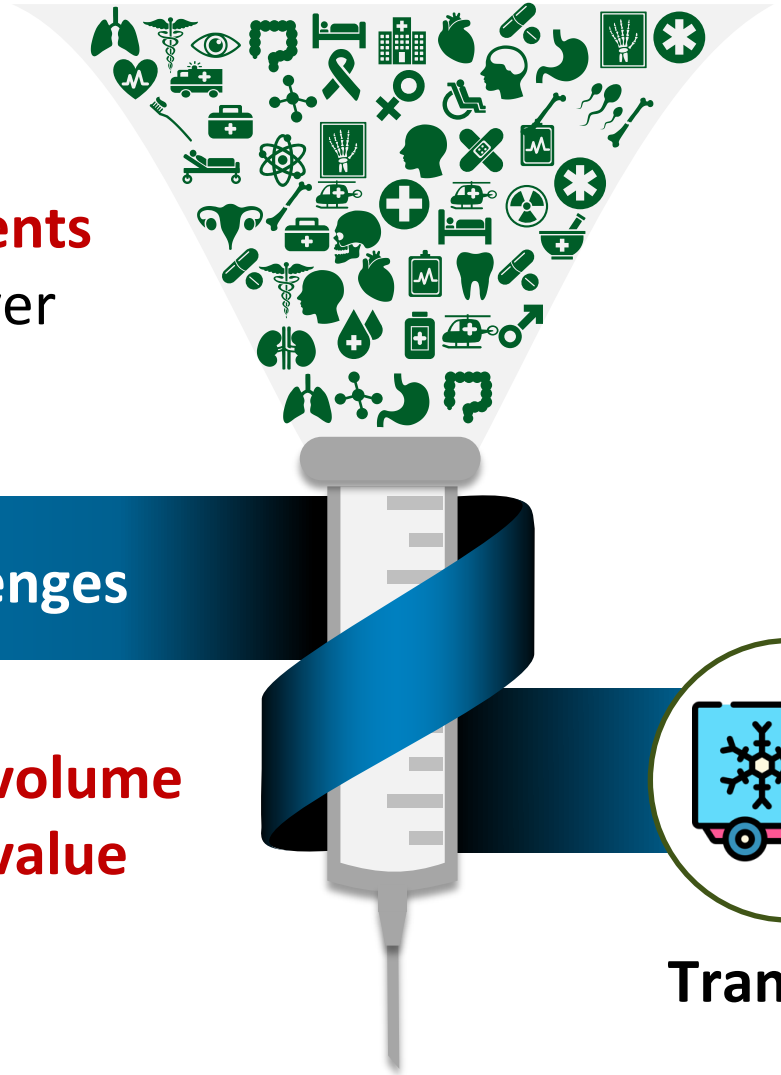
Significant **investments** in new vaccines over the last decade

Vaccine supply chains must prepare for increasing:

- ☑ Complexity
- ☑ Storage capacity
- ☑ Investment

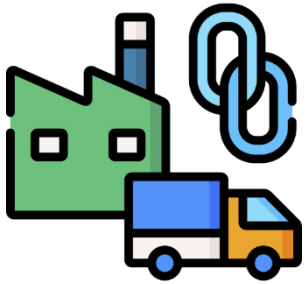
Inevitable challenges

- Increase in **volume**
- Increase in **value**

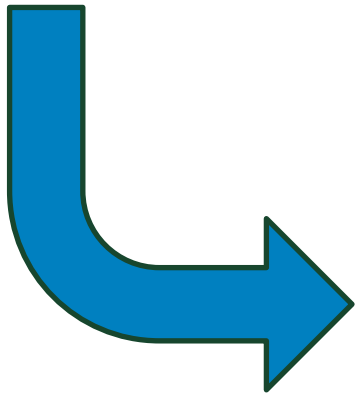


Transport **Storage** **Distribution**

Benefit of strong immunisation supply chains



Strong **immunisation supply chains** enable delivery of life-saving vaccines to every person when needed, no matter where they are



Meet the vision

A world where everyone, everywhere, at every age
... fully benefits from vaccines
... for good health and well-being

https://www.immunizationagenda2030.org/

EVM assessment framework

Organised according to applicability at the supply chain level of health facility being assessed

CRITERIA

Operational or management functions that health facilities must perform

CATEGORIES

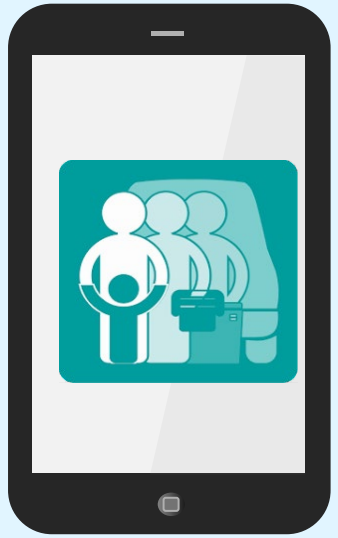
Necessary inputs, outputs and performance of health facilities

REQUIREMENTS

Attributes that a well-functioning immunisation supply chain must have

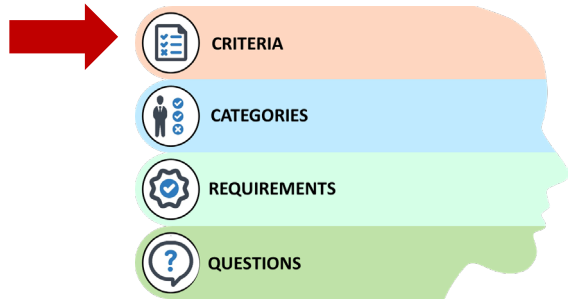
QUESTIONS

Means of ascertaining whether requirements have been met

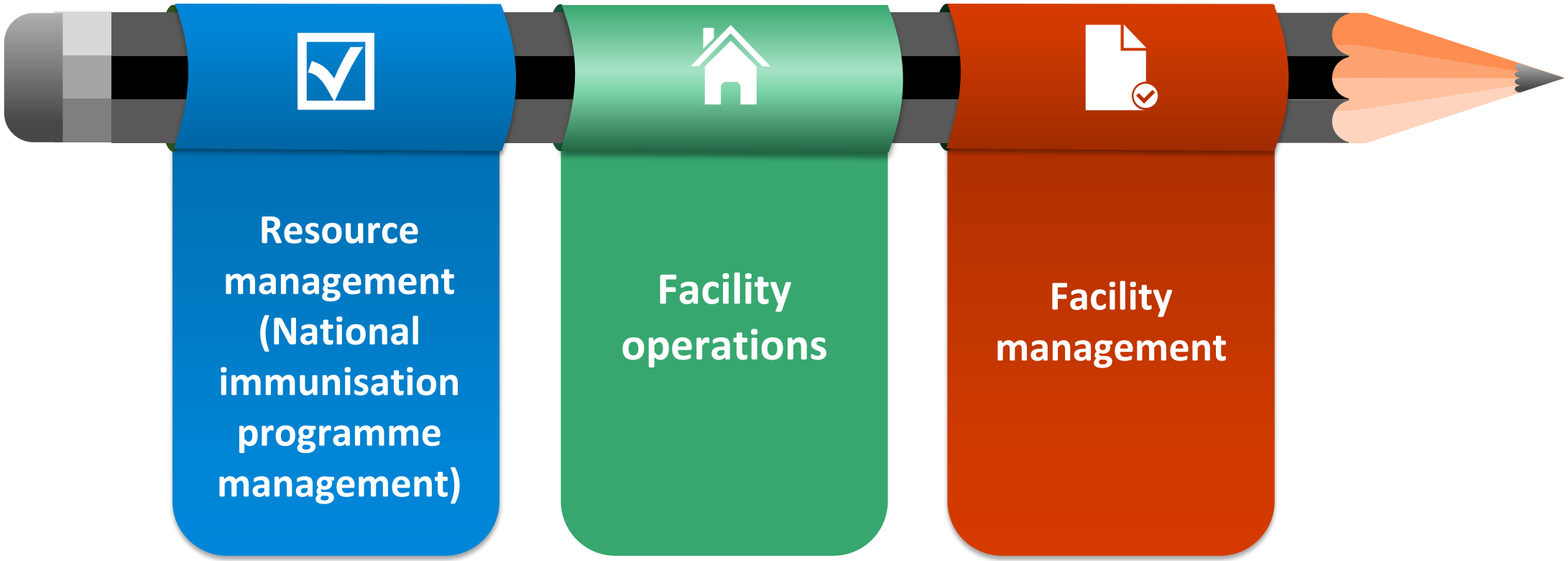


EVM assessment framework defines the way in which vaccine supply chain systems are assessed

Criteria for EVM assessment



Main components: 19 EVM criteria



Each of the modules will focus on specific EVM facility operations criteria and/or EVM facility management criteria

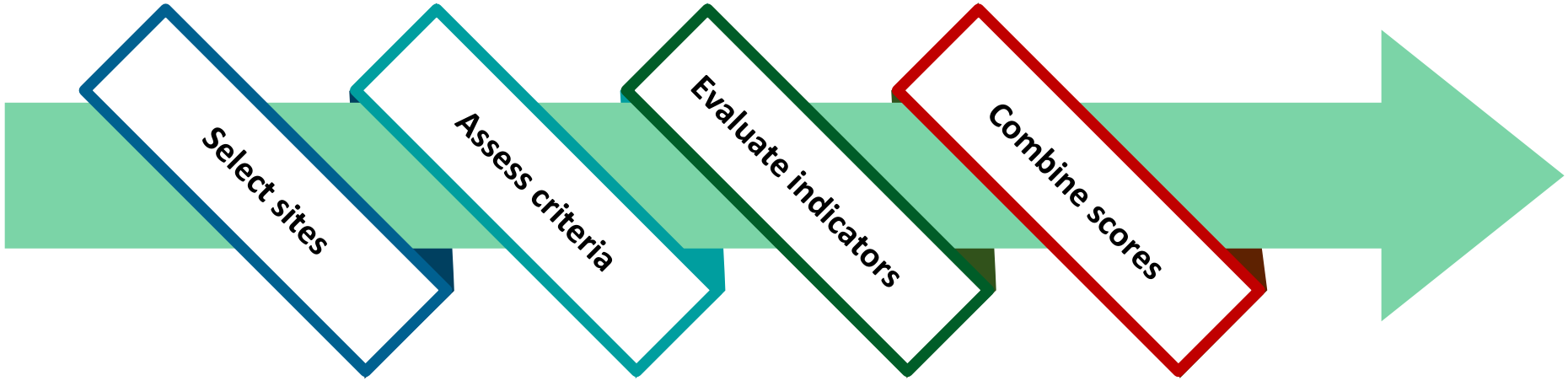
EVM criteria		Modules									
Facility operations		1	2	3	4	5	6	7	8	9	10
E1	Vaccine arrivals	■		■	■						
E2	Temperature management	■	■	■	■	■	■	■			
E3	Storage and transport capacity	■			■	■	■	■			
E4	Facility infrastructure and equipment	■				■	■		■		
E5	Maintenance	■				■	■				
E6	Stock management	■		■	■						
E7	Distribution of vaccines and dry goods	■		■	■	■		■			
E8	Vaccine management	■	■	■	■			■			
E9	Waste management	■							■		
Facility management		1	2	3	4	5	6	7	8	9	10
M1	Annual needs forecasting	■		■						■	■
M2	Annual work planning	■			■	■	■	■	■	■	■
M3	Supportive supervision	■	■	■	■	■	■	■	■	■	■
M4	iSC performance monitoring	■	■		■	■	■	■	■	■	■

Conducting an EVM assessment by criteria

EVM criteria assessed at each supply chain level

- Observation
- Infrastructure
- Records inspection
- Staff interviews

Indicator scores are combined to give criterion scores for each area at each level



Select representative sample of sites at each level of the supply chain

Inputs, process and performance indicators are evaluated in each area at each level

An area of vaccine management is considered 'Effective' if its criterion score is greater than or equal to 80%

Importance of EVM

EVM
Setting a standard for the vaccine supply chain

Important to ensure that **EVM principles are implemented at all levels** of the immunisation supply chain

EVM training will allow vaccine distribution sites and health facilities to **identify shortcomings** in the immunisation supply chain

Improvement plans must be developed to address identified gaps before the next EVM assessment is conducted

PRINCIPLES OF OPTIMAL VACCINE STABILITY AND POTENCY

Welcome to Module 2

On successful completion of this module, you will be able to:

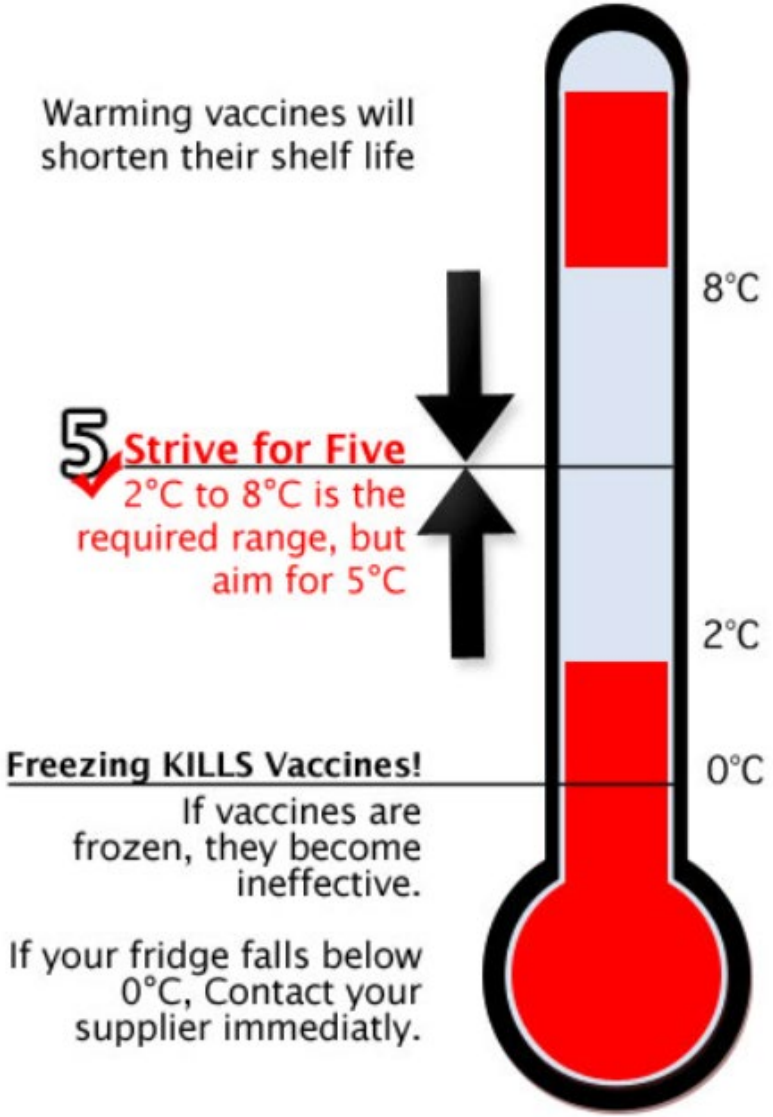
1. List the characteristics of vaccines as biological substances
2. Describe thermostability of vaccines and loss of potency
3. Describe the tools to monitor thermostability of vaccines
4. Understand vaccine reconstitution and the use of diluents
5. Understand the multi-dose vial policy

Mr Kesentseng Mahlaba

Thermostability of vaccines

Thermostability of vaccines refers to their ability to **remain potent** when stored within a given temperature range

Loss of potency due to exposure to heat, freezing conditions or light **is cumulative, permanent, and irreversible**



AKCP. Vaccine Cold Storage Rooms – How They Work and are Maintained. Blog.2020. https://www.akcp.com/blog/vaccine-cold-storage-rooms-how-they-work-and-are-maintained/

Cold chain

Series of coordinated tools and activities directed towards **maintaining vaccine temperatures** within stipulated ranges

Vaccines must generally **not be exposed to freezing conditions**

During **transportation** and **storage**, starting from production to the point of vaccination

Exceptions e.g. OPV which can be stored and distributed between -15 and -25°C

Optimal **storage conditions** and the **expiry date** determined during vaccine development

Cold chain management

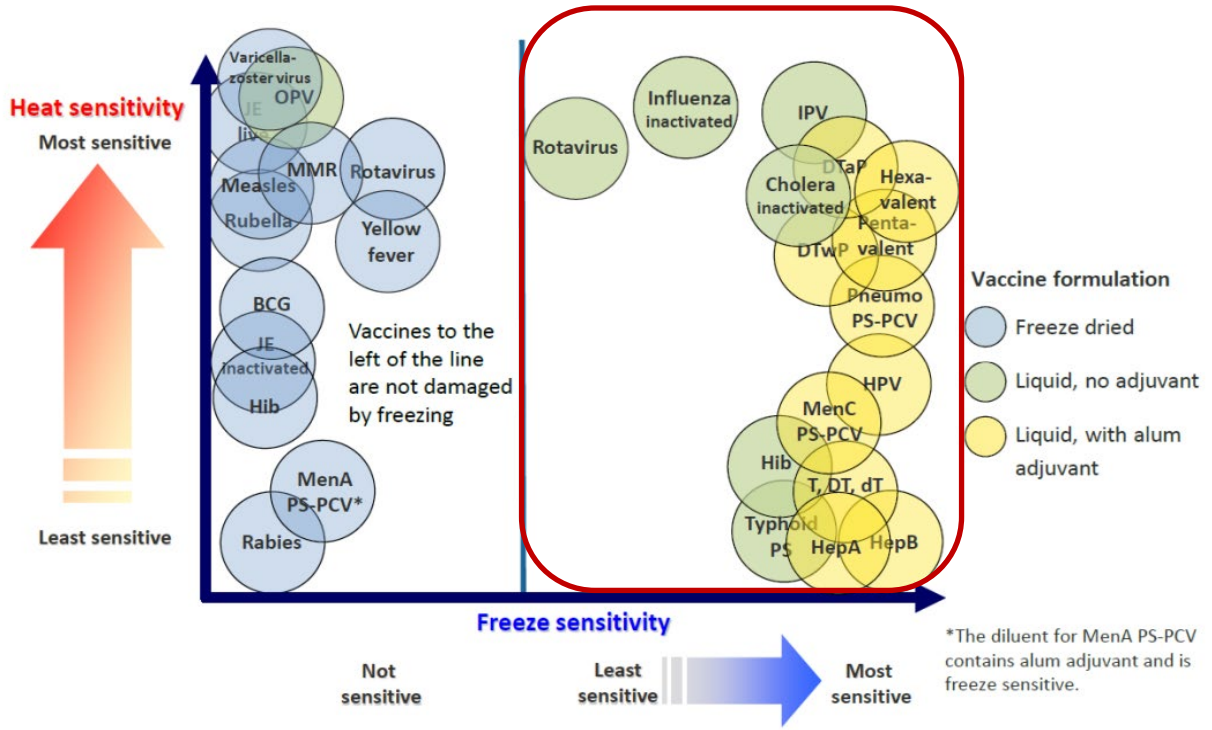
Suspected freezing of vaccines

> **Report** evidence of freezing to supervisors

- If a freeze-sensitive vaccine is **frozen solid**, **discard** it immediately
- If there is **concern** that a freeze-sensitive vaccine
  - may have been **exposed to freezing** conditions; or
  - might have been **frozen**; or
  - there is an **alarm** on the freeze indicator

➡ Conduct a **shake test**

The shake test is **ONLY** applicable to **freeze-sensitive vaccines**



VACCINE ESTIMATION AND FUNDING

Welcome to Module 3

On successful completion of this module, you will be able to:

1. Understand all essential information to be captured on the stock management system
2. Ensure availability of adequate quantities of vaccines, diluents and relevant ancillary supplies
3. Avoid stock-outs to ensure uninterrupted immunisation services
4. Avoid overstocking and/or unnecessary expiration of vaccines and ancillary items before utilisation

Mr Kesentseng Mahlaba

Stock counts

Facilities must **perform stock counts** at least monthly

Before placing vaccine orders, ensure that quantities on hand match balances reflecting on record

Check condition of vaccines: expiry date; vaccine vial monitors; damages

Check type and quantities to order; avoids over- and under-stocking → vaccine wastage and missed vaccination opportunities

An inventory management system is used to **estimate the vaccine needs** of healthcare facilities

Vaccine estimation and forecasting

Vaccine estimates

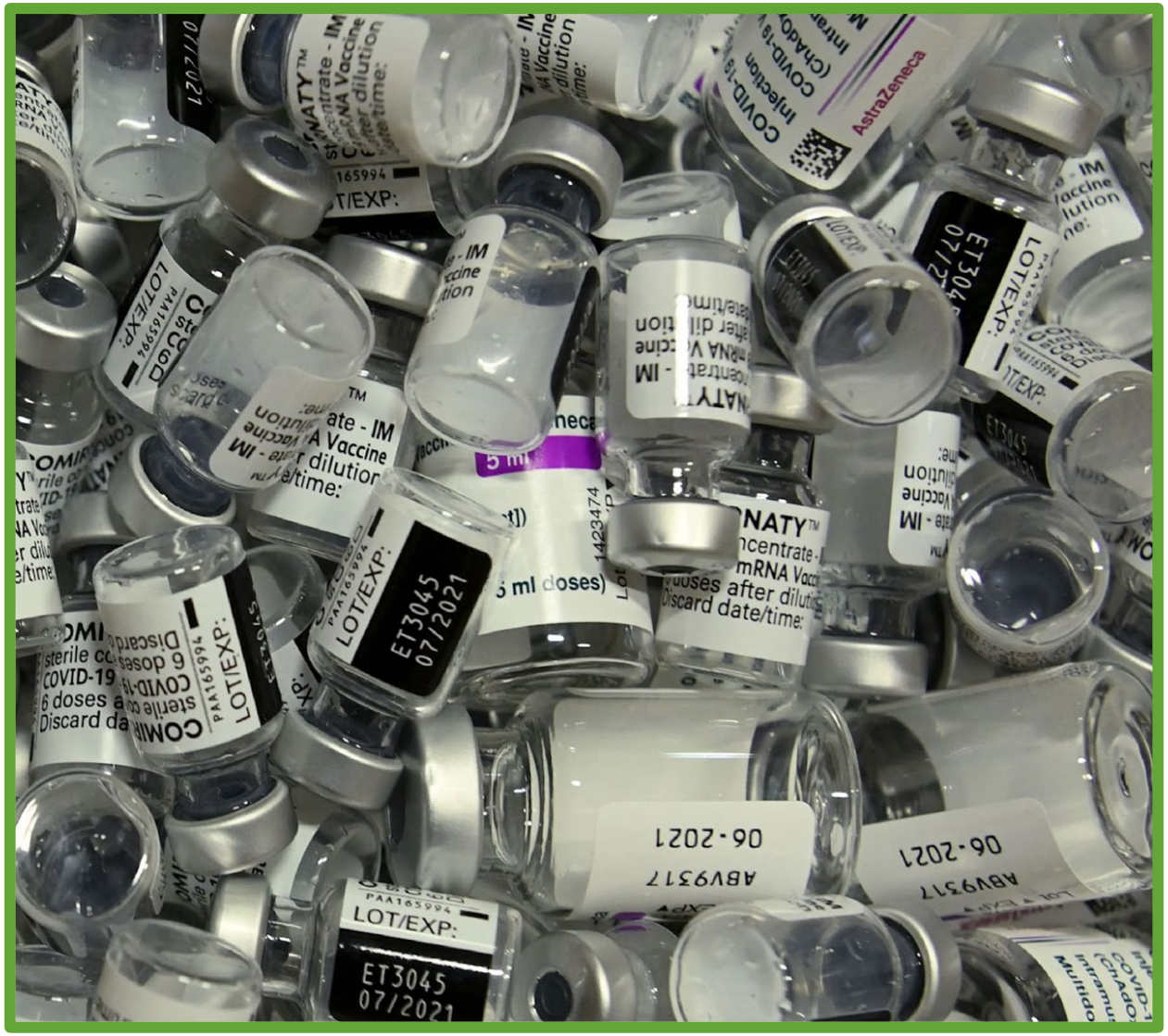
Accurate vaccine estimates are essential to **ensure vaccine availability at healthcare facilities** and prevent missed vaccination opportunities

Vaccine forecasting

Vaccine estimates can be calculated using different methods including **the size of the target population**; or historic usage, also known as the **consumption method**;
or on the **immunisation session size**

Vaccine wastage monitoring

- Indicates the **cost-effectiveness** of an immunisation programme
- Influenced by various factors that could be specific to the **vaccine** or the **vaccinator**
- Divided into
  - **Unavoidable** wastage in **open** vials
  - **Avoidable** wastage in **unopened** vials



VACCINE ARRIVAL AND INVENTORY MANAGEMENT SYSTEMS

Welcome to Module 4

On successful completion of this module, you will be able to:

1. Outline shipping of vaccines by a manufacturer and receipt by the national vaccine store or distributor
2. Describe the process of vaccine transportation to lower levels of distribution
3. Describe the vaccine receipt process at lower levels of distribution
4. Implement the guidelines for vaccine stock inspection and storage upon receipt at a facility
5. Describe vaccine inventory management at lower levels of distribution

Ms Audrey Chigome

Shipping and receiving of vaccines from a manufacturer

- Every shipment from vaccine manufacturers must reach the receiving store in a **satisfactory condition** and with the **correct paperwork**

- **Process of receiving vaccines** from a manufacturer

- **Critical stages** in the shipping process
  - Arrival of a vaccine shipment in South Africa
  - Customs clearance
  - Transportation to the national store

- Effective **communication** and **strict guidelines** are essential at every step of the process

Recording of received vaccines at lower levels of distribution

Stock recording of incoming and outgoing stock, with details of the quantity and specific characteristics

Accurate records are crucial

Accountability

Ensure correct quantities of vaccines are ordered

Good record keeping for vaccines helps to:

- Monitor vaccine movement & consumption
- Monitor stock availability & stock adequacy
- Accurately identify stock on hand
- Avoid stock-outs & overstocking

!! REMEMBER

Manual stock cards are recommended as a **control** even where an electronic recording system is in place

STORAGE CAPACITY, BUILDINGS AND MAINTENANCE

Welcome to Module 5

On successful completion of this module, you will be able to:

1. Determine if storage capacity is sufficient to accommodate maximum stock requirements for routine immunisation and ancillary items, including supplementary immunisation activities when required
2. Describe good warehousing practices required to ensure compliance of vaccines store building
3. Identify reasons why regular maintenance of buildings, equipment and transport is important within the immunisation supply chain
4. Understand the roles and responsibilities of various departments to ensure maintenance of buildings, equipment and vehicles

Dr Mncengeli Sibanda

Vaccine storage capacity for the cold chain

Is there sufficient cold chain capacity throughout the immunisation supply chain?

Cold chain storage capacity is important for the immunisation program to operate efficiently

Vaccine storage capacity should be sufficient to accommodate maximum stock requirements

- Routine immunisation
- Supplementary immunisation activities

Enough **dry storage capacity** for the required ancillary items

Storage and distribution capacity so that required vaccines are kept at **recommended temperatures** at all levels of vaccine supply chain

Calculation of vaccine storage volume for a combination or front opening fridge

Step 1

Calculate **gross fridge** volume

$= l \times w \times h$

Step 2

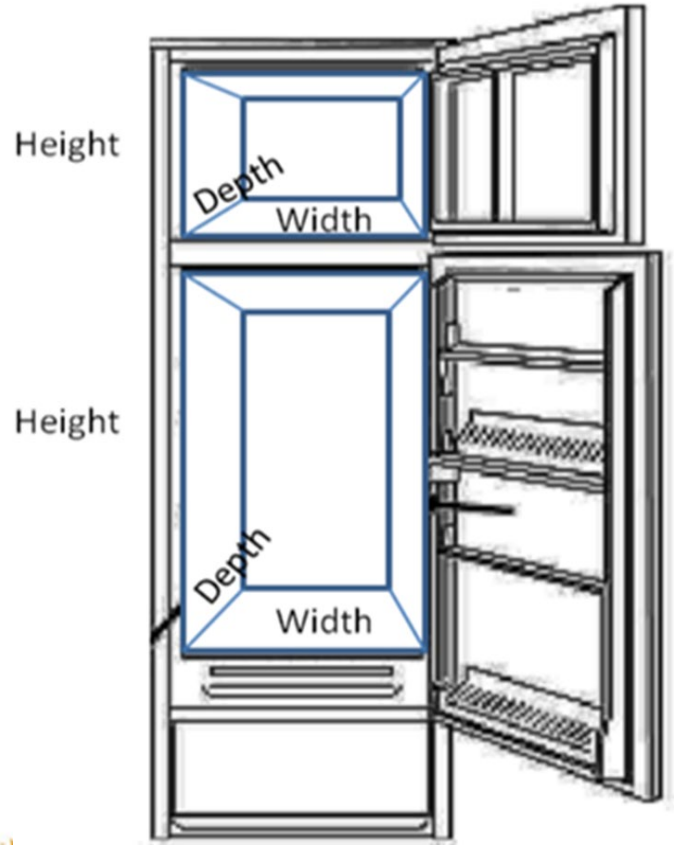
Calculate **gross freezer** volume

$= l \times w \times h$

Step 3

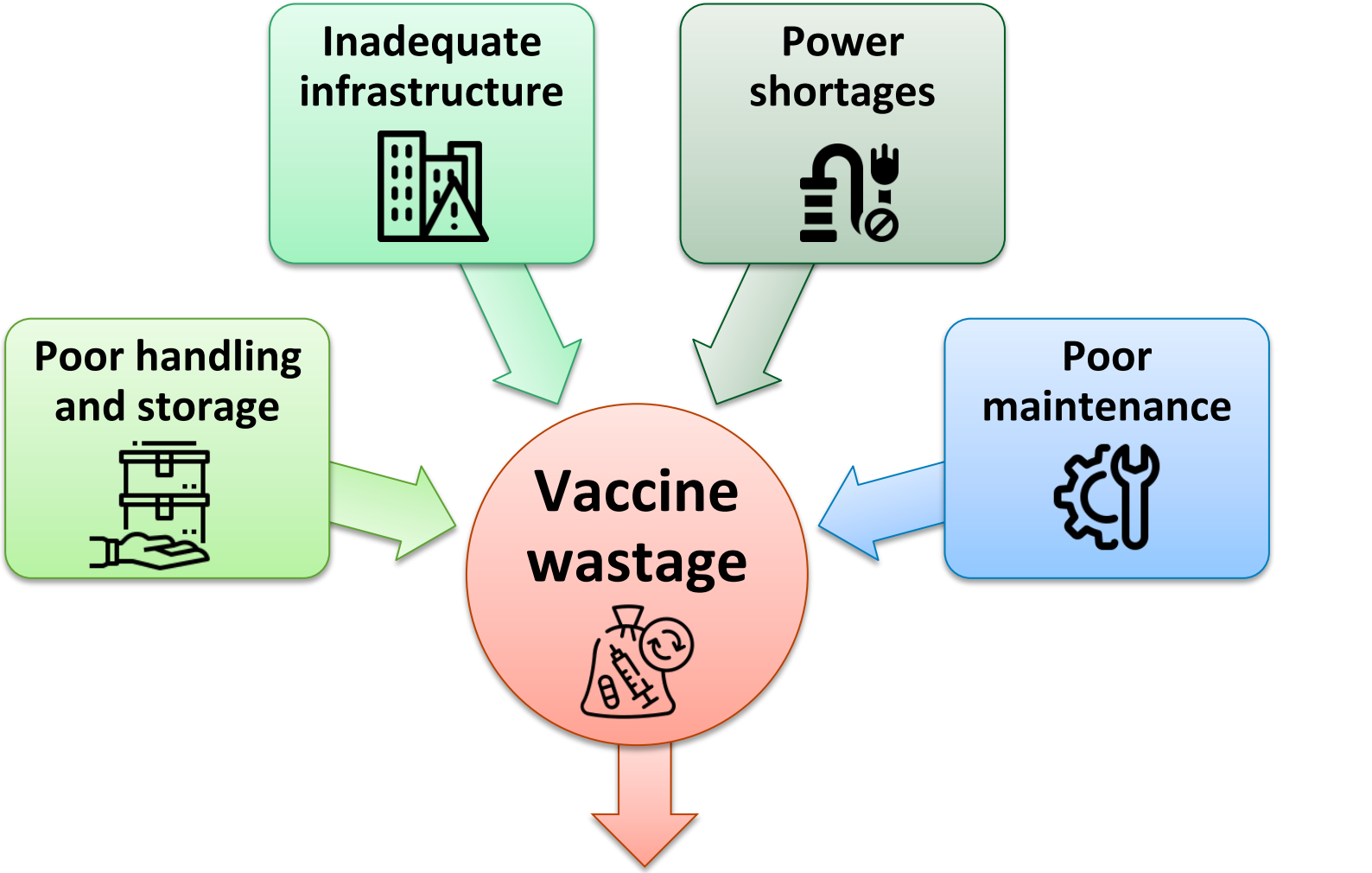
Calculate **net volume**

$= Gross\ volume \times 0.67$
$(utilisation\ factor)$



- To determine **nett vaccine storage capacity**, convert to the nett volume into liter (fridge)
- To determine **nett vaccine or ice pack storage capacity**, convert to the nett volume into liter (freezer)

Maintenance of buildings, equipment and transport



Maintenance of buildings, equipment and distribution vehicles is **IMPORTANT**

COLD CHAIN EQUIPMENT AND CONTINGENCY PLANNING

Welcome to Module 6

On successful completion of this module, you will be able to:

1. List and describe the key issues of vaccine cold chain management including selecting and maintaining the appropriate cold chain equipment
2. Ensure temperature monitoring during vaccine storage and transportation to maintain vaccine effectiveness before use
3. Formulate contingency plans to protect the integrity of the vaccines in case of any cold chain failure

Dr Mncengeli Sibanda

Cold chain equipment

All equipment that **maintain the required temperature** during storage and distribution of thermolabile products including vaccines

To **preserve** their quality from the site of manufacture until their administration

An **essential component** of an effective immunisation supply chain and logistics system

Cold chain equipment must be **reliable**, well **maintained** and **cost-effective**

To **ensure adequate** and **sustainable storage capacity** for current and planned vaccines and supplies

To **reduce maintenance requirements** and **running costs**

Active and passive systems

Active cold chain systems
are externally or on-board powered, to maintain a temperature-controlled environment inside an insulated enclosure

under thermostatic regulation

E.g., fridges, freezers, cold rooms and temperature-controlled trucks

Passive cold chain systems
maintain a temperature-controlled environment inside an insulated enclosure

without thermostatic regulation

Using the required number of correctly prepared coolant packs

- Conditioned or frozen ice packs
- Phase change materials
- Dry ice or others

Vaccine distribution levels

Different levels within the national cold chain system require different types of equipment for transporting and storing vaccines and diluents within the required temperature range

Cold-chain equipment required at each level is dependent on the capacity required

Primary level

Sub-national level

Lowest distribution level

Walk-in cold or freezer rooms and/or freezers, fridges, passive containers, and in some cases, insulated unrefrigerated or refrigerated trucks are used

Throughout all levels, temperature monitoring devices and tools must be used

Service point level

Fridges with or without freezing compartments, freezers and passive containers are needed

DISTRIBUTION AND TRANSPORT CAPACITY

Welcome to Module 7

On successful completion of this module, you will be able to:

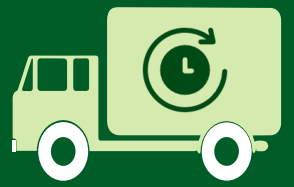
1. Optimise transport capacity to meet maximum demand
2. Describe the process of route validation
3. Outline the process of coolant pack preparation and packing of cold boxes and vaccine carriers based on vaccines distributed
4. Explain transport contingency planning in case of emergencies during distribution

Dr Mncengeli Sibanda

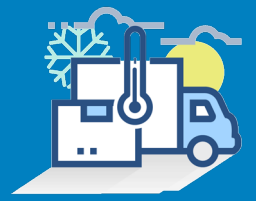
Efficient vaccine distribution

It is **important to understand the heat and freeze sensitivity** of every vaccine

A **Standard operating procedure** (SOP) for vaccine packing, distribution and training staff must be developed



Plan for and record the duration of the journeys and transport temperature profiles of all routes



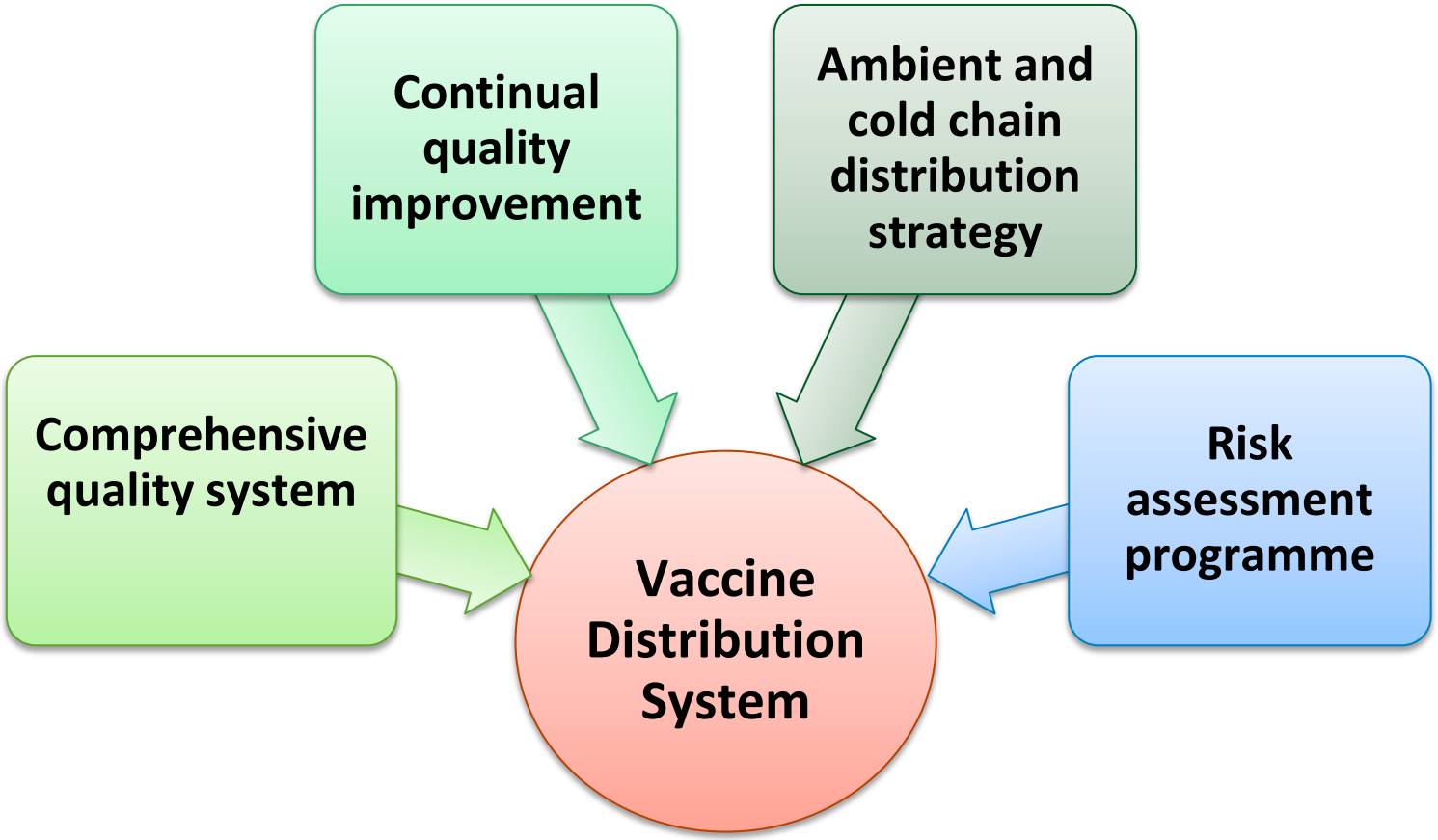
In-country distribution of vaccines is a key supply chain link but often the weakest one

Distribution between each level in the supply chain is not always efficient

To avoid loss of potency, vaccines must be protected from exposure to excessively high or low temperatures during transport

Efficient vaccine distribution (2)

According to the South African Pharmacy Council's (SAPC) Good Pharmacy Practice: Minimum requirements for procurement, storage and distribution of thermolabile products



Vaccines **MUST** be distributed in such a way that they are:

- Secure
- Not subjected to unacceptable degrees of heat / cold
- Maintained to product specifications

Efficient vaccine distribution (3)

The transportation mode must have **sufficient capacity** to allow for orderly storage of vaccines during transportation

The temperature of the loaded area should be monitored with a continuous temperature monitoring device that meets **WHO specifications**

The passive container **MUST** contain a continuous temperature monitoring device to monitor temperature inside the passive container during distribution

Planned vaccine distribution system

A planned vaccine distribution system is essential for achieving three of the six "rights" of a supply chain:

- ☑ **Right place**
- ☑ **Right time**
- ☑ **Right condition**

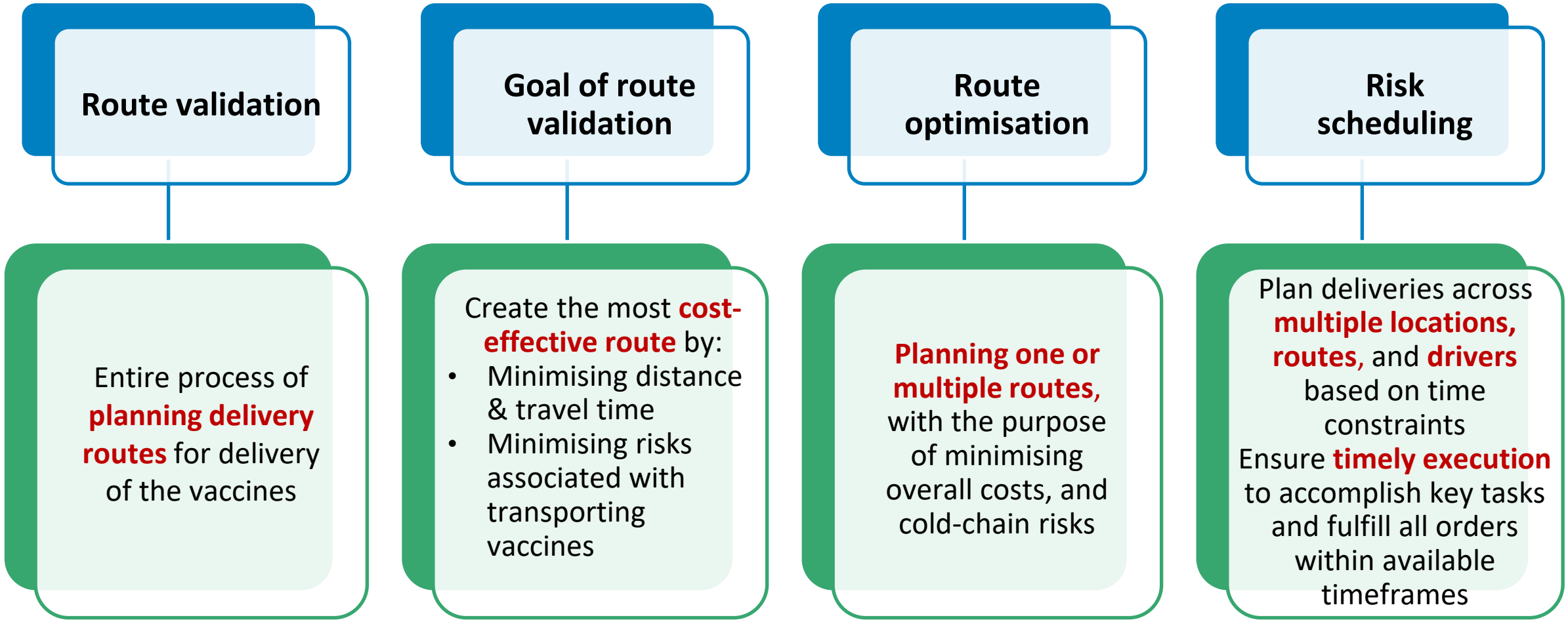
All vaccines stored in the vaccine supply chain need:

- ✓ A distribution plan based on efficient route or delivery circuit planning
- ✓ A distribution schedule that is respected and monitored
- ✓ To ensure the distribution plan is followed as closely as possible

Distribution plan and delivery schedule is based on the knowledge of:

- ✓ When vaccines will arrive in the store and when they will leave
- ✓ How many vaccines will arrive in the store and how much will leave

Route validation



All distribution points including **depots** should have **a planned distribution schedule**, and adherence to the plan **MUST** be monitored by comparing **actual deliveries to planned deliveries**

WASTE MANAGEMENT AND DISPOSAL

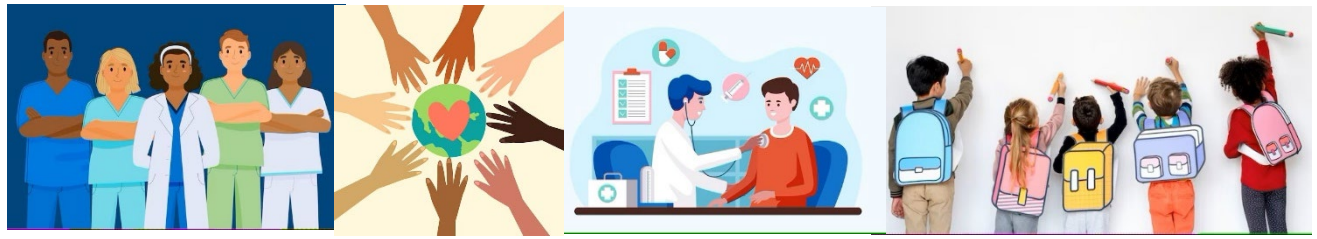
Welcome to Module 8

On successful completion of this module, you will be able to:

1. Identify the types of waste generated during vaccination services and their hazards
2. Demonstrate the safe collection of vaccination waste
3. Describe prescribed storage conditions for collected vaccine waste
4. Understand the requirements for the safe transportation of collected waste
5. Understand the requirements for the safe disposal of collected waste

Dr Sophy Moloko

Vaccine waste hazards



CALL TO ACTION!

"Community needle stick injury guidelines"

Queensland Government

Children's Health Queensland Hospital and Health Service

https://www.med-technews.com/news/latest-medtech-news/technology-developed-to-reduce-needlestick-injuries/
https://www.huffpost.com/archive/au/entry/the -rare-but-terrifying-times-students-were-pricked-by-syringes_au_5cd35bc9e4b0ce845d7fc1c9

Vaccine waste segregation

Minimises the **quantity** of infectious waste that needs **special handling** and **treatment**

Reduces the chance of **spreading infection** and/or causing **injuries**

Prevents the **mixture** of medical waste with general municipal waste

Reduces the risks of **exposure** to **hazardous healthcare waste** for workers

Vaccination waste must be **segregated by category** into appropriate colour bags/boxes or pharmaceutical bins at point of generation

Estimating volumes of used sharps

Importance of adequate safety boxes → Monthly quantity determination → Immunisation needs of population → Volume of syringes and needles

Important! Each vaccination station should have a safety box

Catchment Population	Number of 5-litre safety boxes per month for 100% immunisation coverage					
	Crude Birth Rate					
	10	15	20	25	30	35
1,000 – 5,000	1	1	1	1	1	1
6,000 – 10,000	1	1	2	2	3	3
11,000 – 15,000	1	2	3	3	4	5
16,000 – 20,000	2	3	4	5	6	6
21,000 – 25,000	2	3	5	6	7	8
26,000 – 30,000	3	4	6	7	8	10

Therefore, for a catchment of 10,000 & and a crude birth rate of 20

We will need = 2 x 5-litre boxes

PROGRAMME MANAGEMENT AND SUPPORTIVE SUPERVISION

Welcome to Module 9

On successful completion of this module, you will be able to:

1. Identify and describe tools used to provide supportive supervision for immunisation programmes
2. Describe good practices for programme management of vaccines at different service levels
3. Describe the monitoring and evaluation processes for immunisation programmes
4. Develop and review standard operating procedures (SOPs) used in immunisation programmes
5. Understand the role of SOPs in quality management and employee training
6. Understand the importance of good record keeping and recording in immunisation programmes

Ms Audrey Chigome

Enhancing performance through supportive supervision

When gaps are identified

Constructive feedback

Collaborative solutions

Key performance indicators (KPIs) in workplans

Effective performance management

Continuous support

Quality monitoring and service delivery

Reasons for unimmunised / under-immunised

Interventions → improved service delivery

SUPPORTIVE SUPERVISION

Improved performance

Enhanced service quality

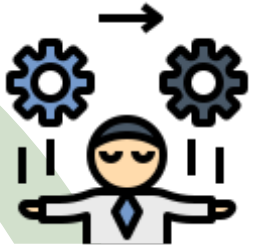
Collaborative problem-solving

Real-time support

Inclusive workplan with KPIs

Standard Operating Procedures (SOPs)

The **goal** of the EVM initiative is **to help countries to strengthen quality management practices**



A **high standard of quality management** is an essential element of effective immunisation service delivery

A major component is the **systematic introduction and effective use of SOPs**

SOPs are **written documents** with detailed instructions for a specific activity

An **SOP** should be a well-focused document

QUALITY IMPROVEMENT PLANNING

Welcome to Module 10

On successful completion of this module, you will be able to:

1. List the pillars of a quality management system
2. Use a Challenge Model to identify challenges and achieve a desired measurable result
3. Conduct a root cause analysis
4. Develop a quality improvement plan (QIP)
5. Monitor progress towards achieving a desired measurable result for quality improvement

Prof Hannelie Meyer

What is a quality improvement plan (QIP)?

Purpose of immunisation supply chain QIP

- Build an evidence-based case for national immunisation supply chain investments
- Develop an improvement plan that engages stakeholders
- Setting immunisation programme on a path to success

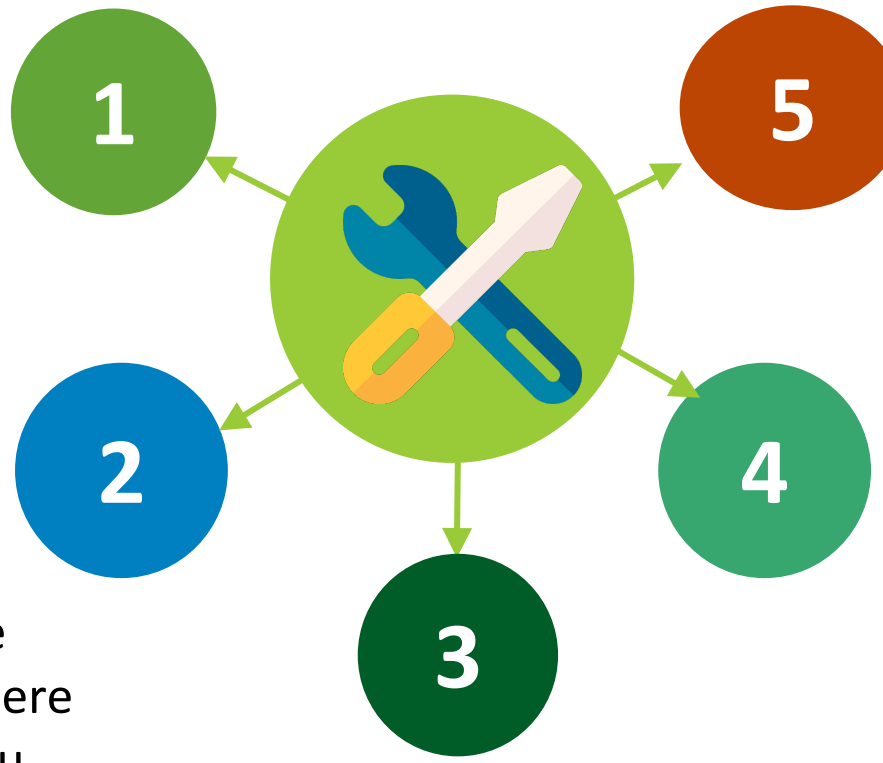
EVM
Setting a standard for the vaccine supply chain

- Strategic and including wide set of stakeholders
- Designed to reveal root causes of supply chain problems
- Mobilise human and financial resources to address them
- QIP is based on evidence and programming logic

EVM QIP approach

Quality improvement tools used in cIP

Process mapping
Also known as flow diagram
Useful for analysing the system and identifying gaps



Plan-Do-Study-Act (PDSA) or Plan-Do-Check-Act (PDCA)
Improvement cycle to try out, test, and implement improvements

Assess, Plan, Implement & Monitor
EVM model's cIP

Challenge Model
Helps to carefully diagnose where you want to go and where you currently are before you decide on a plan of action

Cause-and-effect or Fishbone analysis
May assist in analysing possible causes

5 Whys
Approach to analyse and identify possible causes of the problem

The Challenge Model

MISSION (of the organisation)

VISION (of the organisation)

MEASURABLE RESULT
(the required result)

Obstacles & Root Causes

Identify and list obstacles and root causes

Priority Actions

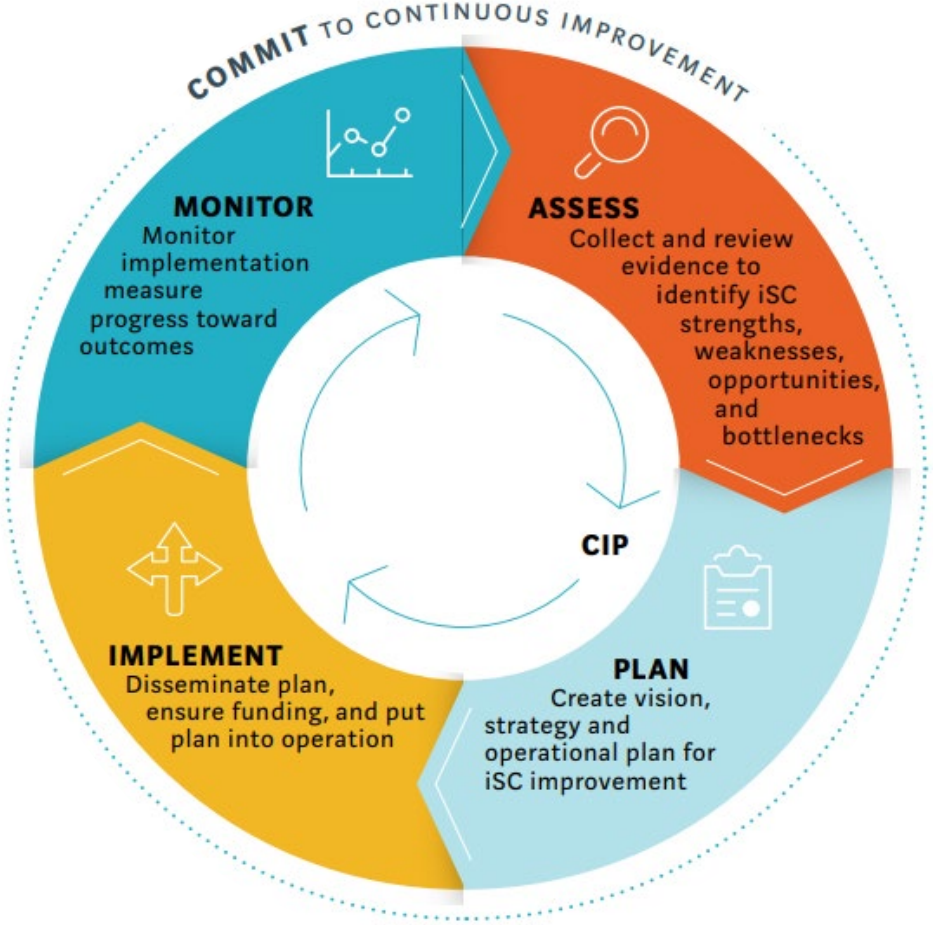
Identify and list priority actions

CURRENT SITUATION

CHALLENGE

EVM
Setting a standard for the vaccine supply chain

Continuous improvement plan: UNICEF tool



- WHO-UNICEF EVM assessment process = similar approach to PDSA cycle of quality improvement
- During the **EVM assessment**, critical areas that need to be improved are identified, if the required **score of 80% is not obtained**
- Facility can identify the **areas** within the immunisation supply chain that need to be **improved** to ensure safe and effective vaccines are available
- Facility can then develop a **QIP** to address the identified shortcomings
- **Commitment** to **continuous improvement** within the immunisation supply chain is required

Available on EVM page of TechNet-21: https://www.technet-21.org/en/library/main/7546

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Health
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United Nations Children's Fund South Africa

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unicef
for every child

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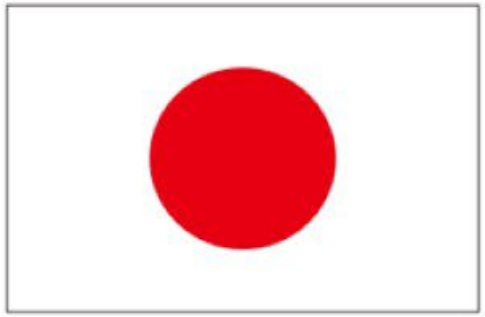

From the People of Japan