Basic Monitoring and Evaluation Concepts for Healthcare Workers in Eswatini

October 2023

Participant Manual

A Monitoring and Evaluation Training Manual for Health Care Workers

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List of Acronyms

AIDS	Acquired Immune Deficiency Syndrome
NCD	Non-Communicable Disease
DQA	Data Quality Assessment
HIV	Human Immunodeficiency Virus
HTS	HIV Testing Services
HMIS	Health Management Information System
KPIs	Key Performance Indicators
SDG	Sustainable Development Goals
SID	Strategic Information Department
M&E	Monitoring and Evaluation
MERL	Monitoring and Evaluation, Reporting and Learning
MOH	Ministry of Health
NHSSP 2019-2023	National Health Sector Strategic Plan 2019-2023 (NHSSP)
PMTCT	Prevention of Mother to Child Transmission
SMART	Specific, Measurable, Achievable, Realistic, Time bound
TB	Tuberculosis
TOC	Theory of Change
WHO	World Health Organization

For a full glossary of terms used, please see the end of this Manual.

Introduction

Monitoring and Evaluation (M&E) happens naturally, all the time. It is likely that we are all doing some form of data collection or analysis every day, or else using information we or others collect to make decisions. It is often a shock to those who do not see themselves as contributing to M&E functions to find out that they are using many of the skills of an M&E professional in their daily lives, at work and elsewhere.

For instance, imagine that you are considering a long car journey. As part of your consideration, you need to estimate how long the journey may take, its costs and the benefits of driving over other forms of transport. To do this, we use our baseline knowledge, drawn from our own experience or that of people we know. We may make further enquiries from social media or from traffic updates (data collection), estimate costs (inputs), the weather, time of year and use all this information to draw trends to come to a prediction on how long it may take us (analysis). Finally, we decide on whether to go by car, use another form of transport, or perhaps to shelve the travel plans altogether (data utilization). After we have taken the trip, we could reflect on whether the journey was worth it and if we would do it again (evaluation). We may even inform others of our experience (reporting) so that they can make their own travel decisions (learning). These are the basics of monitoring and evaluation. And yet, commonly, those who interact with M&E functions on a regular basis often see it as overly technical and therefore reserved for those whose role is dedicated to this field. In truth, M&E is everyone's responsibility, and everyone can benefit from it.

Monitoring and Evaluation helps ensure that resources (time, personnel, funds, services, equipment and so on) are used efficiently. This does not only apply to resource-constrained organizations, but it applies across all types of organizations and institutions, including those within the health sector. The data collected through monitoring reveals gaps or issues, which require resources to address, whilst evaluation informs us how we can be shrewder with our resources in future. Without M&E, it is not clear what areas need to be a priority in the future. Resources could easily be wasted in one area, while underutilized in another. M&E is meant to facilitate a process where organizations learn from the available data and make decisions informed by their data products. This is why, in recent years, the acronym MERL has been used in place of M&E, highlighting the importance of reporting and learning (MERL) as well as monitoring and evaluation, within the M&E cycle. For instance, when the health sector in a country invests in MERL, it indicates the country intends to use it to learn from their data so that they can make evidence-based decisions on funding allocations, staffing needs, service provision, and patient behaviour, among many other things.

How to Use this Manual

This manual is designed as a tool to be used by a wide variety of healthcare workers, auxiliaries, administrative staff and other cadres working within the health sector. It is an introduction to the basic principles and concepts of M&E and their practice by healthcare workers. It is intended to be used to introduce new processes or improve existing functions in alignment with the National Health Sector Strategic Plan 2019 - 2023 (NHSSP) -2019-2023 and other national policies and strategies. It is intended to complement, and be used in

conjunction with, existing MOH strategies and practices. As such, it makes some recommendations for systems strengthening and efficiencies which may be pursued by Ministry of Health colleagues and so every attempt has been made to ensure that this manual is a future-proof reference tool which is relevant in a wide variety of different contexts and settings. It is accompanied by a Facilitator's Guide, which offers structured sessions for those who are tasked with training healthcare workers on these topics.

1. Basics Concepts of Monitoring and Evaluation

1.1. Learning Objectives

- To introduce healthcare workers to the fundamentals of M&E and make a distinction between Monitoring and Evaluation.
- To demystify M&E and cultivate the culture of participation in M&E tasks among health facility service providers. Fostering the culture of involvement will improve health care delivery.

1.2. Introduction

Monitoring and evaluation (M&E) are critical processes for assessing the performance and effectiveness of programs, projects and policies. The process involves collecting and analysing data on program activities, outputs, outcomes and impact to determine whether the desired results have been achieved. M&E is essential for ensuring that programs are effective, efficient and accountable. By monitoring and evaluating program performance, organizations can identify successes and challenges and make informed decisions to improve program outcomes and impact. For practitioners to understand monitoring and evaluation (M&E), it is important to be familiar with some of the common terminology (key concepts and definitions) used in this field.

1.3. Defining Monitoring and Evaluation, Reporting and Learning [1]

Monitoring[2] An activity that involves continuous, systematic surveillance of a program or intervention that involves collection of routine data that measure progress towards achieving program objectives. It is used to track changes in program performance and the efficient use of resources over time. Monitoring asks key ongoing questions such as: "how well is the program being implemented?", "how much does implementation and results vary from site to site?" and "what other factors are we encountering which may positively or negatively affect our expected results?"

Monitoring:

- Is an ongoing, continuous process
- Requires the collection of data at multiple points throughout the program cycle, including at the beginning, to provide a baseline
- Can be used to determine if activities need adjustment during the intervention to improve desired outcomes

Examples of program elements that can be monitored are the number of vaccine doses administered monthly, the quality of service, service coverage and patient outcomes

Evaluation is a scientific process that gauges the success of the project or program in meeting the objectives. It is a systematic process to determine merit, worth, value or significance. Evaluation is the process of assessing the value or quality of something. It is a systematic way to measure and analyse the performance, effectiveness, and success of a program, policy,

[1] Source: What is the difference between monitoring and evaluation? – www.EvalCommunity.com

[2] M&E Fundamentals –Nina Frankel 2016 _ Measure Evaluation ,USAIDS, PEPFAR

individual, or other entity. Evaluation is used to determine the impact of an intervention and to make decisions about how to improve it.

Reporting refers to the process of providing periodic formal updates to the different levels of the reporting cascade and partners. Reporting is a tool for accountability; it helps the health facility, Ministry of Health, development partners and implementing partners understand the progress they are making towards established goals. In the context of Eswatini's Ministry of Health there are established rules and schedules for reporting; some funders require reports on a quarterly basis, whereas others might require reports semi-annually.

Learning refers to the process through which information generated from M&E is reflected upon and intentionally used to continuously improve a project's ability to achieve results. In this manual, learning is explained further in Chapter 10 (Data Dissemination and Utilization).

1.4. Basic Concepts in M&E

The following are some of the key concepts (definitions) in M&E:

Indicator: An indicator is a variable that can be measured to determine progress towards achieving a goal or objective. Indicators can be qualitative or quantitative.

Outputs: Outputs are the direct products or services delivered by a program or intervention.

Outcome: Outcomes refer to the changes that occur because of the program or intervention. These changes are often related to the program's objectives or goals.

Impact: Impact refers to the long-term effects or broader changes that occur as a result of a program or intervention. Impact can be challenging to measure and may take years to manifest.

Baseline: Baseline data is the information collected at the start of a program or intervention against which progress can be measured.

Monitoring: Monitoring is the systematic and continuous process of collecting data on program activities, outputs, and outcomes to track progress towards achieving program goals.

Evaluation: Evaluation is the process of assessing the effectiveness, efficiency, relevance, sustainability, and impact of a program or intervention. It involves collecting and analysing data to determine the program's success or failure.

Logic Model: A logic model is a visual representation of a program's theory of change. It describes the program's inputs, activities, outputs, outcomes, and impact.

Performance Indicator: A performance indicator is a specific and measurable variable used to assess program performance.

Data Quality: Data quality refers to the accuracy, completeness, and reliability of data. High-quality data is critical for making informed decisions based on evidence.

1.5. Key Differences between Monitoring and Evaluation

Monitoring	Evaluation
• Monitoring is the continuous, systematic collection of data/information through the implementation of an intervention as part of routine oversight. It focuses on the implementation of an intervention, comparing what is delivered to what was planned.	• Evaluation is a scheduled, periodic and in-depth assessment at specific points in time (before, during, at the end of or after an intervention). It is a process that assesses the success of an intervention against an established set of evaluation criteria.
• It is usually conducted by people directly involved in the implementation of the intervention.	• It is usually conducted by people who do not directly participate in the intervention.
• It routinely collects data against indicators and compares achieved results against targets.	• It assesses causal contributions of interventions to results and explores unintended results.
• It focuses on tracking the progress of regular or day-to-day activities during implementation.	• It assesses whether, why and how well change has occurred and whether the change can be attributed to the intervention.
• It looks at production of results at the output and outcome level.	• It looks at performance and achievement of results at the output, outcome and objective level
• It concentrates on planned intervention elements.	• It assesses planned elements and looks at unplanned change, searches for causes, challenges risks, assumptions and sustainability of the intervention.

Table 1: The Differences between Monitoring and Evaluation

1.6. Routine Data Management Procedures to ensure data processes are ethical:

Data ethics are the rules or standards governing the conduct of a person collecting, collating, reporting, or utilizing data and represent our standard of "right" conduct. The data management process involves a series of decisions that are made by the organization to ensure ethical data collection.

To help ensure ethical data collection we undertake the following:

Ensure Informed Consent: Provide the clients or data providers with adequate information on the data collection effort, this could be within the health facility or in a community outreach. This will help the client make informed decisions about their participation by getting a written or spoken consent statement as applicable.

Consider the rights of children and their capacity to provide informed consent, this will mean you need to engage the parent or guardian for permission.

Protect Privacy: Clients are always made aware of how much privacy they can expect about their responses in the case of an interview.

- Follow standards for confidentiality and anonymity of data collected from clients, as appropriate. Confidentiality guarantees that data could link information to respondents, such as name, location of household, or identification number information and does not allow for follow ups with respondents. Be sure to clarify with the respondent whether the data will be anonymous or confidential.
- Do not discuss an individual's responses and be sure the staff /community volunteers do not as well. Do not put names on the data (files, reports) - use ID numbers or patient codes if possible.
- Participation in data collection should be voluntary without being coerced. If a client does not consent to provide information, the client must not be deprived of service for this reason.
- Locking physical data sets and encrypting electronic records as part of protecting client data. These measures ensure that unauthorized individuals cannot access sensitive information, whether it is stored in physical or digital form. Implementing strict access controls and regularly monitoring for any suspicious activities further strengthens the security of client data.

Empower and Include Communities: Discuss with communities/ clients how you plan to carry out the collection effort and why you are doing the research and how you will use the data. Know and respect cultural norms and practices as appropriate. If possible, try to provide the results and feedback of the findings to the participants and the communities and apply the use of pictures, success stories etc. to ease understanding.

- M&E activities should maximize benefits and minimize harm.
- Present M&E findings in a way that is highly accessible to all stakeholders yet still maintains participant confidentiality. Determine the appropriate means for disseminating results to each stakeholder.

Integrity and Honesty:[3] Demonstrate integrity and honesty in all stages of the M&E activities within the facility, this could be day to day client health information handling or data collection for a study or community activities.

- Disclose any potential conflicts of interest to stakeholders and donors prior to finalizing the plans for an M&E activity.
- Honour agreements made with stakeholders (including communities and participants) regarding the timing of surveys, plans for sharing results, community participation in data collection, and any other relevant aspects of the M&E activity.
- Do not undertake M&E activities for which there are insufficient resources to provide quality data and results. If there is not enough staff or money to conduct the fieldwork

[3] Adapted from: USAID M&E Ethics Framework, 2008

as planned or finalize and report on the data collected, develop an alternative methodology for which there are sufficient human and financial resources.

- Ensure that, to the best of your knowledge and ability, the M&E data are accurate. Address any questionable M&E practices observed during data collection or analysis, whether due to negligence or mistakes by M&E team members. Correct any questionable practices even if additional data must be collected.

Competence: The facility staff, especially the M&E staff, should have the skills and cultural competence to conduct an M&E activity.

- Decline participation in any M&E activity that falls outside of your skill set or competencies (or that of the M&E team collectively), if adequate technical support is not provided, this may mean engaging the regional M&E team for support.
- Do not undertake an M&E activity if stakeholders doubt your credibility due to your past work or publicly stated views.
- Continually seek to improve your skills and competencies through technical training and by reflecting on the lessons learned from each M&E activity. Keep up to date on the new developments in the health field by reading current literature.

2. Monitoring and Evaluation Design System

2.1. Learning objectives

- To familiarize health care workers with Eswatini's Ministry of Health Monitoring and evaluation framework.
- To introduce healthcare workers to commonly used M&E frameworks and methodologies such as logic.
- To promote collaboration and teamwork in monitoring and evaluation to ensure accurate and reliable data collection

2.2. Introduction

The Health Statistics Unit was responsible for Health data processing over the years in Eswatini and monitoring and evaluations in 2003 started focusing on HIV mainly inclined towards donor reporting. The Strategic Information Department (SID) was established in 2008, M&E Unit, HMIS unit, Research unit, Epidemiology and Disease Control unit. The mandate of the SID is to generate evidence and strategic information for effective planning delivery for the health sector.

The health sector is empowered to monitor and evaluate health performance at all levels and use technically sound information to improve health and well-being of the Eswatini population. The Monitoring and Evaluation unit will employ methods for and approaches for improving monitoring and evaluation, health information systems, and data use. The unit will collate, analyse, report and disseminate information, knowledge, and best practices to facilitate, influence and support effective planning, support evidence-informed decision making

Mandate of the M&E Unit

- Overall monitoring gathers data from routine systems, surveillance and epidemiological systems, survey and research data, data from estimates and projections.
- Data is then collated and employed analytical skills to measure performance for key indicators.
- Data collation and employment of analytical skills to measure performance for key indicators.
- Review and evaluate National Health Plans, programs and projects to determine if they are achieving their intended objectives and program performance using the evidence of data.
- Planning and target setting.
- Reporting to the MOH, other sectors and to the global community.

Figure 1 The M&E Cycle

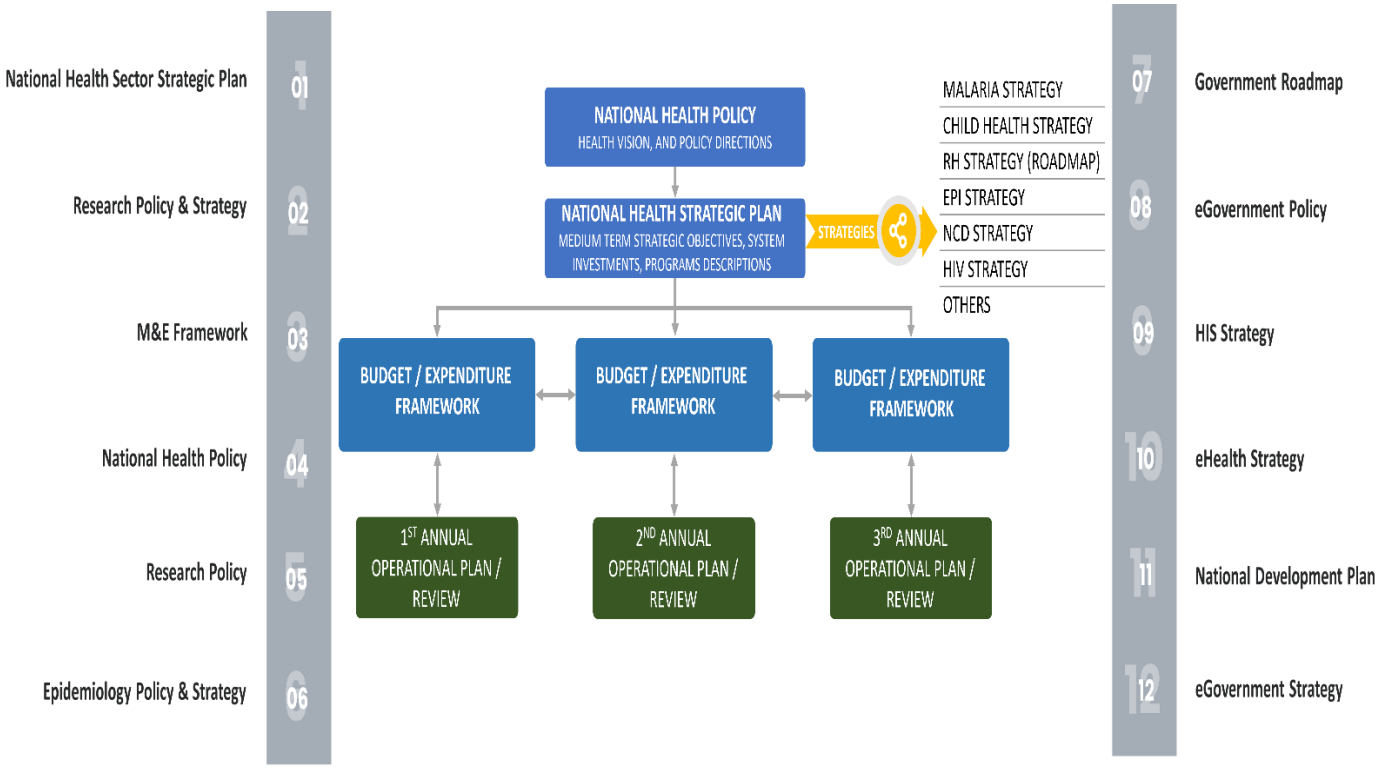


Figure 2: Guiding documents and strategic direction for Eswatini. Source: Ministry of Health

2.3. M&E Implementation cascade

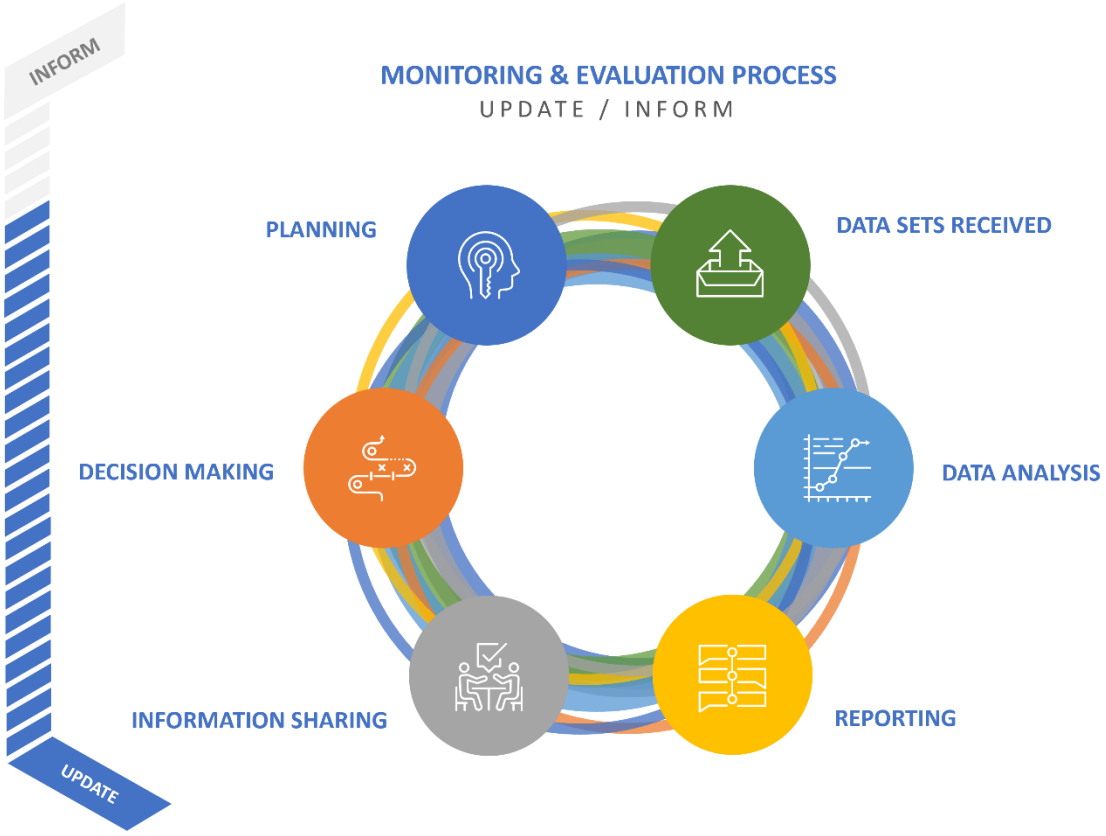


Figure 3: M&E Implementation cascade. Source: Eswatini Ministry of Health

2.4. Logic Model

Logic models are visual representations or diagrams that illustrate how a program or intervention is intended to work. They map out the relationships between program inputs, activities, outputs, and outcomes, and can be used to communicate program goals and objectives, as well as guide program design, implementation, and evaluation.

Logic models are important in evaluation because they provide a clear and systematic way to identify and measure program inputs, activities, outputs, and outcomes. By mapping out the underlying assumptions and theories of change that drive a program, logic models help evaluators identify potential gaps, inconsistencies, and areas of improvement in program design and implementation. They also help evaluators develop evaluation plans and strategies, identify appropriate indicators and measures, and track progress toward program goals and objectives.

Logic models provide a structured and systematic approach to program evaluation that helps ensure that programs are designed, implemented, and evaluated in a rigorous and effective manner.

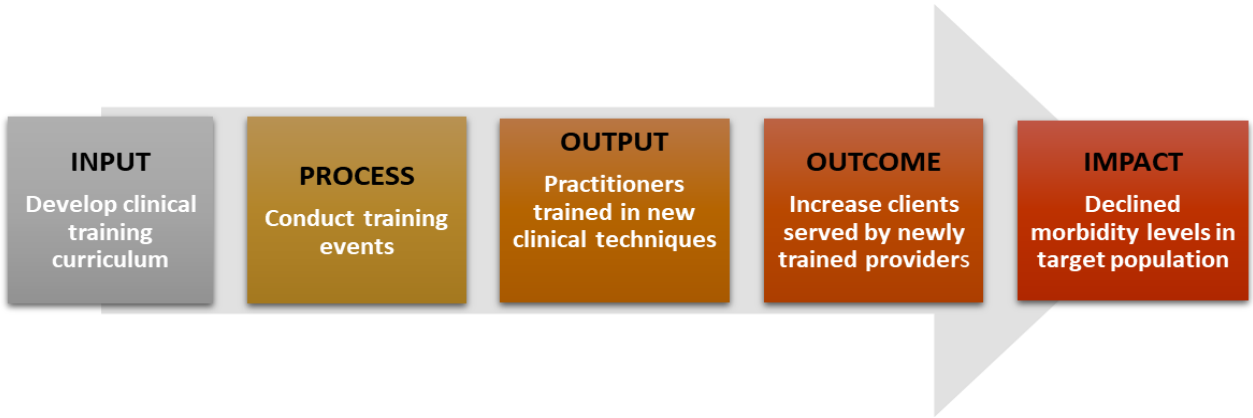


Figure 4: Logic Model

Logic Models have five essential components:

Inputs: The resources invested in a program - for example, technical assistance, computers, condoms, or training

Processes: The activities carried out to achieve the program's objectives

Outputs: The immediate results achieved at the program level through the execution of activities

Outcomes: The set of short-term or intermediate results at the population level achieved by the program through the execution of activities

Impact: Refers to the long-term effects or broader changes that occur as a result of a program or intervention. Impact can be challenging to measure and may take years to manifest.

3. Indicator Formulation

3.1. Learning Objectives

- To introduce healthcare workers to indicators and to create an understanding of how they contribute to these indicators.
- To capacitate healthcare workers to understand performance monitoring to identify areas of improvement.
- To provide training on how to formulate S-M-A-R-T indicators.

3.2. Introduction

An indicator is a quantitative metric that provides information to monitor performance, measure achievement and determine accountability (UNAIDS, 2010). Therefore, an indicator:

a. Is a unit of information (evidence), measured over time, that describes the level of performance achieved in relation to a set of aims or objectives.
b. Is realistic and measurable criteria of project progress.
c. Can be quantitative (number-related) measures but may also be qualitative (narrative-related) observations.
d. Enable a large amount of data to be reduced to its simplest form.

For this manual, an indicator is defined as measures that captures relevant information of different attributed and dimensions of health status and performance of a health system. Health related indicators describe and monitor a health status of a population.

For example: The number of malaria cases which occur within a region over a specific period of time

3.3. Benefits of Indicators

In summary indicators:

- Act as early warning signals to predict future conditions in a project
- Signal the need for corrective management action in a project
- Evaluate the effectiveness of various management actions
- Help us to understand and quantify progress made in implementation
- Serve as tools to examine trends and highlight problems in a project

3.4 Developing SMART Indicators

The process of developing Specific, Measurable, Attainable, Relevant, and Timely (S-M-A-R-T) indicators is a collaborative one that includes participation from key stakeholders such as programme staff, beneficiaries, funders, and other relevant partners. It is important to identify programme goals and objectives, identify outcomes and outputs, develop indicator statements, ensure the indicators are SMART, test and refine the indicators, monitor and evaluate progress, and review and update the indicators on a regular basis. Only then can SMART indicators be developed. If you follow these steps, you will be able to develop indicators for your programme or project that are specific, measurable, achievable, relevant, and time-bound, and that can effectively track progress towards achieving your goals.

Specific (S): The indicator clearly and directly relates to the outcome. It is described without ambiguities. All stakeholders must have a common understanding of the indicator to avoid ambiguity.

Measurable (M): The indicator has the capacity to be counted, observed, analysed, tested, or challenged. If one cannot measure an indicator, then progress cannot be determined. How will one know if the outcome has been achieved? Once an indicator is clear and specific, they can be measured in numerous ways; almost any indicator is in one way or another, measurable.

Achievable and Attributable (A): The system [monitoring and evaluation system and related indicators] identifies what changes are anticipated because of the intervention and whether the results are realistic. Attribution requires that changes in the targeted developmental issue can be linked to the intervention. **Achievable / Attainable:** The indicator is achievable if the performance target accurately specifies the amount or level of what is to be measured to meet the result/outcome. The indicator should be achievable both because of the program and as a measure of realism. The target attached to the indicator should be achievable.

Relevant (R): An indicator should be a valid measure of the result/outcome and be linked through research and professional expertise. The best way to think about relevance is to ensure that there is a relationship between what the indicator measures and the theories that help create the outcomes for the client, program, or system. The best method to find relevant indicators is to consult expert input and proper research.

Timely / Time-bound (T): Indicators must be timely in several aspects. First, they must be timely in terms of the time spent in data collection. This relates to the resources that are available - staff and partner time being critical. Second, indicators must reflect the timing of collection.

Figure 5: SMART Indicators

3.5. How to check if an indicator is SMART

An efficient process for developing or reviewing indicators follows these steps:

A. Clarify the objectives or results and identify what needs to be measured.
B. Brainstorm on a list of possible indicators for your goals, objectives or results and where this information will come from (i.e., the data source or sources).
C. Consider indicators in terms of the type of data and methods of data collection from the data sources. Then, assess each potential indicator from a technical perspective and select the most relevant indicators based on the assessment.
D. Determine whether baseline values for the indicators exist. Record these baseline values for the indicators (even if baseline values do not exist) and circulate these widely for information and review by all stakeholders.
E. Compile protocols for the project indicators and refine the indicators and protocols. Finalize the indicator selection and documentation.

DOs and DON'Ts for Selecting Indicators

Table 2: Advice on developing indicators.

DO	DON'T
Choose indicators that require data that can be realistically collected with available resources	Choose performance indicators that the program activities cannot affect.
Choose indicators that use data that can be verified.	Choose indicators that do not accurately depict the outcome or output.
Choose indicators that produce reliable results when measured repeatedly so it truly reflects observed changes.	Choose or define indicators with a vague definition that is open to interpretation.

Other Categories of Indicators

Indicators can also be categorised according to whether they are quantitative, qualitative or 'proxy'. Proxy means 'substitute' – it is best explained by referring to examples.

Quantitative

These record hard facts, e.g.

- Number of condoms
- Number of children orphaned
- Percentage of adults infected with HIV

Qualitative

These record people's impressions or feelings, e.g.

- Clients' level of satisfaction with a service?
- Do families feel that they are coping?
- How appropriate was a certain way of doing things?

Proxy/ Substitute

These are used as a simple way of measuring something that is complex or too difficult to measure directly, e.g.

- Using child height as a proxy measure of child welfare
- Using the type of roof on a house as a proxy measure of household income
- Using number of condoms distributed as a proxy measure of safer sex behaviour

Other important considerations

- Too many indicators can be confusing and make your initiative difficult to monitor
- Consider the cost of collecting the data - do you have sufficient resources to ensure that you can collect and analyse it all?
- Build ownership of the data and its collection
- Decide how often to collect the data and who is involved
- Review your indicators regularly
- Think of ways to encourage active use of the information

3.6. Different levels of Indicators

Table 3: Levels of indicators

Level	Desegregation
Global and Regional	Indicators on regional or national goals
National	Indicators on national goals
Regional	Indicators for notification and planning at regional & national level
Health Facility	Indicators for managing health services being provided
Community	Indicators for health situation at community level

Indicators play a critical role in turning data into relevant information for decision makers in public health. Health related indicators are relevant in defining goals to be pursued by national health authorities.

3.7. Put it into Practice!

Typically, indicator formulation does not take place at the facility level. Health care workers must understand how indicators are formulated to know what kind of contribution they may provide to these indicators. Below is a case study of a hypothetical clinic that aims to improve patient satisfaction and the quality-of-service provision. The clinic can then develop measurable indicators, such as the percentage of positive feedback from patients regarding staff behaviour, quality of service ratings provided by patients, etc.

Case Study*:* Ka-Shali Health Centre

As part of the quality improvement plan, the team spends time developing an M&E Plan that will guide all of their monitoring and evaluation activities. One of the most important phases is to formulate indicators that will be included in the Ka-Shali strategy. Sister Dumi instructs her team that these indicators should be S.M.A.R.T. in order to help improve data management quality. During this process, the team notices that some critical indicators have not been tracked for a long time. The HTS, TB, NCDs, and general clinical services are the core departments of the facility. Therefore, it is essential for the team to prioritise these areas and ensure that regular indicator monitoring and evaluation are conducted.

Box 1

In your group outline some of the key indicators that you would have developed for the facility.

4. Target Setting

4.1. Learning Objectives

- To create an understanding on the importance of target setting in healthcare. This will help healthcare workers recognise the significance of setting specific targets to improve patient care, health outcomes and overall performance.
- To enhance communication skills, target setting often requires collaboration among healthcare workers.
- To equip healthcare workers with the knowledge and skills to effectively monitor and evaluate their progress towards set target

4.2. Introduction

A target is an indicator's "specific, planned level of result to be achieved within a specific timeframe with a given level of resources" (USAID, 2020). Although some targets may be assigned to a particular facility or region by national or regional-level colleagues at the Ministry of Health, facility staff may have some freedom to set their own targets to measure and improve their own performance. This data may be then used at facility-level or reported in the regional and national data systems as additional monitoring data.

4.3. Basic Concepts

When setting targets, it is important to focus on what can realistically be achieved given the resources and the facility's context, current baseline, past trends, emerging needs and gaps in services and capacity and logistics. Other considerations such as staffing and contextual factors (social, economic, political etc) should also be considered when developing targets. Useful information for setting targets include past trends, expert opinions, research findings, current and forecast supply chain information, what has been accomplished elsewhere, and patient feedback and expectations.

The following are considerations in setting targets:

Rationale and Purpose: Focus on what your facility wants to achieve

- Does it align with your overall vision or goals for the facility?
- Do you have the necessary resources to achieve the target realistic?
- Do you have the human and institutional capacity to achieve the target?
- Which target do you need to prioritize?
- Which targets will best demonstrate your success?

Awareness: Have you oriented staff, partners and other stakeholders on the objective(s) to be accomplished and other factors which will influence the achievement of the target? Strong communication on targets and progress towards them will:

- Motivate individuals to work together
- Allow you to use other people's ideas develop clearer, more realistic targets
- Allow team members to verify targets for achievability
- Engage everyone in monitoring whether anticipated progress is being made.

Determining Baseline Data

For many indicators, establishing a viable target will be based directly on baseline data, including past performance, availability of products, patient behaviour and seasonal changes in health service uptake. Other indicators, especially ones which measure new products, services, approaches or behaviours, may have little or no comparable baseline data. Usually, one of the following four scenarios applies. All use family planning as an example.

- Primary baseline data already exists and can be used to set targets before the activity begins. For example, primary data collected from the same facility in the previous year shows an increase in the uptake of family planning services like those being offered this year. As such, this baseline will most likely be valid and provide excellent grounds for establishing this year's targets.
- Secondary baseline data exists which can inform the estimation of targets. For example, a regional-level study conducted in the past 5 years at similar facilities within the same region found that family planning services were sought more often between October and February and therefore quarterly and annual targets in the coming year can reflect this.

Note**:** Existing primary or secondary data presents a few challenges, including how applicable it is to the strategy, product or service or activity, target population, and context you want to measure. In addition, existing data might have data quality issues in terms of integrity, precision, and timeliness, or may not be disaggregated by age, sex, location or other criteria.

- Baseline data needs to be collected to set targets. The facility needs to conduct primary data collection prior to or close to the beginning of the project or activity. For instance, a new family planning product is being rolled out nationwide and will be available at health clinics for the first time. To measure the impact of health promotions activities on patient demand, the facility may use the first few months of roll out to determine existing demand for the product.

Note: Primary data collection is more expensive and time consuming than using already existing data. However, primary data collection might make sense for highest value outcome indicators.

- Baseline value of targets is zero. It is common to have a baseline of zero for output indicators like number of healthcare workers trained or number of teaching and learning materials distributed on a particular topic, especially if it is a new topic. These are usually output indicators.

Note: without baseline data for outcomes, there is no minimum value from which to determine a change over time.

Remember: The Difference between Outcomes and Outputs

Output indicators are tangible, immediate and intended products or consequences, usually within your control.

Outcome indicators are higher level or end results of an action. An outcome is expected to have a positive impact on your staff, the service you provide, your patients or their health outcomes.

4.4. Put it into Practice

Target setting is not typically assigned to health facilities, but it is necessary to put the theory that has been learned into practice in order to grasp the idea of setting targets. You may learn more about the concept by reading the case study from real-life scenario that is provided below. By applying target setting in a real-life scenario, health facilities can better understand the challenges and benefits associated with this practice. The case study will provide valuable insights into the practical application of setting targets and help solidify the understanding of this concept. You will be given instructions on how to conduct the exercise through the practice questions that follow.

Case Study*:* Ka-Shali Health Centre

Although donors and the Ministry of Health do not have expectations that a facility develop its own targets, the Ka-Shali team makes the decision to set itself specific targets that will be accomplished by the facility. The goal is to monitor all community health activities, such as outreach programs for HIV testing, condom distribution, health education on NCDs, and successful linkages to care and treatment. By setting targets, the team aims to ensure that all community health activities are effectively monitored and evaluated. This would not only enhance the quality of facility interventions but also enable better data collection for improved care delivery and yield better health outcomes.

Box 2

As a member of the Ka-Shali Health Centre staff, your group has been tasked to set realistic targets which will form part of the Facility M&E Plan. In your small groups, apply the necessary skills to set targets for the planned community outreach health programs. Consider what you will use as baseline data and state what strategies you will explore to ensure the targets are met.

5. Data Collection

5.1. Learning Objectives

- To create an understanding of the importance of accurate data collection in healthcare.
- To develop skills in data collection methods and techniques such as interviews, surveys observations.
- To instil the culture of ensuring data integrity and confidentiality.
- To equip healthcare workers with the knowledge and skills to identify and address common data collection errors, implement validation processes and maintain completeness and accuracy of data.

5.2. Introduction

Data collection is a daily function of all healthcare workers. It is also the most recognisable step of the M&E process. In health care this is the process of collecting, evaluating, and utilising data for patient documentation. This process makes patient data instantly available in the system, and collaborative efforts within any medical system can increase medical data collection accuracy. Accurate data collection is crucial for healthcare providers to make informed decisions and improve patient outcomes. By ensuring that patient data is collected and evaluated efficiently, healthcare professionals can identify trends, track progress, and identify areas for improvement in their practice. Collaborative efforts among medical professionals can lead to standardized data collection methods, enhancing the accuracy and reliability of the information gathered.

5.3. Basic Concepts

What is data?

The term "data" refers to raw, unprocessed information while “information,” or “strategic information,” usually refers to processed data or data presented in some sort of context.

Data collection is only useful if it is used to make evidence-based decisions. The information must be based on high quality data and efficiently disseminated to stakeholders.

For example: We can use data to analyse the uptake of COVID-19 vaccine in Eswatini in 2020. With such data the Ministry of Health will be able to make decisions to procure more vaccines for the population because there is demand.

How do you know if it is routine, research or surveillance data within a facility?

Routine data: is collected on a continuous basis, such as information that clinics collect on the patients utilizing their services. Although these data are collected continuously, processing and reporting usually occur only periodically—for instance, aggregated monthly and reported quarterly.

Data collection from routine sources is useful, because it can provide information on a timely basis. For instance, it can be used effectively to detect and correct problems in service delivery. However, it can be difficult to obtain accurate estimates of catchment areas or target

populations through this method, and the quality of the data may be poor, because of inaccurate record keeping or incomplete reporting.

Surveillance data: Surveillance data is dedicated to monitoring and tracking the occurrence of specific health conditions and disease within a population. During surveillance day, health facility staff collect and analyse data related to the targeted health condition or disease. This data helps in identifying trends, patterns and potential outbreaks, enabling timely intervention and public health measures

Research data: The data is collected for the purpose of conducting scientific studies and investigations. These studies aim to generate new knowledge, evaluate the effectiveness of interventions or treatment or explore new approaches in healthcare. Research involves data collection, analysis, literature review and collaboration with other researchers or institutions.

Who should collect data?

Anyone can contribute towards data collection, including medical personnel, support staff, administrative and facilities staff, such as receptionists and security guards. This process need not lead to additional workload or responsibilities for an individual and will allow facilities to become more efficient, which may in fact reduce the burden on staff members.

Required characteristics and skills of those who collect data:

- Understand the national, regional and facility-based goals and targets.
- Have been trained in basic qualitative and quantitative data collection techniques
- Understand what kind of data will be used by decision-makers.
- Be honest, observant, perceptive, inquisitive, persistent, and professional
- Be sensitive listeners
- Be able to determine and focus on what is important.
- Be literate and have basic computer skills
- Be a team player

How should data be collected?

There are many ways in which data can be collected, stretching from the more informal observations, anecdotes and testimonial data, including verbal and written client satisfaction data. More formal methods include using registers, referral forms, and prescriptions, paper-based and digital forms and so on. Finally, data can be collected through HMIS, patient feedback and suggestion boxes, mystery shopper exercises and others.

When should data be collected?

Data collection happens naturally all the time. It is likely that we are all doing some form of data collection every day. Data collection in healthcare is simply the process of routinely gathering, analysing, and using information harvested from various data sources. Data collection may serve a multitude of purposes but ideally it is meant to achieve the project goals in this context that are set by the health facility and the Ministry of Health at national level. In a typical health facility scenario, data is collected daily, monthly and quarterly, so that a facility will have data informed reports. For example, patient demographic data is valuable in a health facility for marketing purposes, building more effective care plans, or even

enhancing patient perceptions of care. So, in essence data is supposed to be collected by everyone in the health facility but reported through the authorized personnel.

Monitoring Data Collection Methods

Microsoft Excel may offer the best solution for most healthcare workers. Excel provides the facility with the opportunity to standardise data collection, accurately capture data from physical registers and forms and to quickly build a database which can provide healthcare workers and MOH with the necessary data. In larger facilities, or when skills are available, data may be collected directly into electronic applications, such as Microsoft Access or directly into HMIS through a computer or handheld device, such as a tablet or phone.

Possible data collection methods for evaluation of Health Facilities in Eswatini

1. Document review	**Patient File reviews:** Essential starting point for all evaluations. Involves examination of available patient lists, patient files, facility reports and national reporting mechanisms such as HMIS (for non-medical interventions such as teen clubs).
	Inventory Data review: Stock takes, and physical existence checks on stock.
2. Consultation	**Patient feedback:** this is a flexible, in-depth approach, which is easy to implement and can lead to rich data. There is a risk of biased presentation/interpretation **from** informants/interviewers.
	Focus group interviews: For analysis of specific, complex problems, to identify attitudes and priorities in smaller groups. Reasonable in terms of cost, and efficient. Stimulates the generation of new ideas. Risk of domination by individuals and bias of moderator(s). Susceptible to manipulation and less suitable for sensitive issues.
	Other participatory techniques Visual techniques such as facilities/services mapping, ranking and scoring, and techniques such as staff feedback and satisfaction surveys provide a means of generating a local analysis, and involving beneficiaries and stakeholders directly in the evaluation process.
3. Facilitation	**Self-evaluation on performance and results obtained:** The evaluator becomes a facilitator, facilitating a critical self-assessment of implementers and beneficiaries. Less extractive with stakeholders potentially becoming owners of the evaluation process.
4. Survey-based techniques	**Formal survey:** Oral interviews or written questionnaires in a representative sample of respondents. Data collection is demanding but often produces reliable information.
	Informal survey: Involves quantitative surveys of small samples. Reasonable and rapid. Risk of sampling errors/biases. Less suited for generalisation.

	Case studies: In-depth review one or more selected cases. Well-suited for understanding processes and for formulating hypotheses to be tested later.
5. Observation	**Direct observation:** Involves inspection, field visits, observation to understand processes, infrastructure/services and their utilisation. However, it is dependent on the observer's independence, understanding and interpretation.
	General Observation: In-depth observations over an extended period of time, participatory or non-participatory. Well-suited for understanding processes but with limited potential for generalisation.

Table 2: Data Collection Methods

5.4. Using electronic data capture tools

There are many advantages to electronic data capture tools, over traditional paper-based ones. Although resources and capacity do not always allow us to capture data using electronic means, such as through tablets or phones, it removes the need for another person to enter that data into an electronic system, with the potential for human-error which is associated with this process.

Other advantages to electronic data capture include:

- Data efficiency
- Real-time results
- Automated data analysis
- Data accuracy (through reduced human error and greater checks and controls)
- Safe and secure from fire, water damage, loss or theft
- Stronger confidentiality (passwords and authorizations)
- Better for the environment

Some types of errors or biases common in data collection are:

- **Sampling bias:** Occurs when the sample taken to represent the population of interest is a representative sample.
- **Non sampling error:** All other kinds of mismeasurements, such as courtesy bias, incomplete records, incorrect questionnaires interview errors or nonresponse rate.
- **Subjective measurement:** Occurs when the data are influenced by the measurer

The Client Management Information System (CMIS)

The national Client Management Information System (CMIS) in the health sector. With financial support from development partners including the US Government through PEPFAR and the Global Fund to Fight AIDS, Tuberculosis and Malaria, the system is now being rolled out in all health facilities across the country. The country chose to develop this tailor-made solution using standardized coding tools in order to improve patient care and data management by improving data quality and access, reducing duplicated cases and improving patient flow and wait times within the clinic. Initially built to serve HIV/AIDS program data collection, it is now a fully-fledged information system covering all disease

and public health programs and including cross-cutting data from sources such as the national census, civil registrations records and population surveys.

Background on the National Client Management Information System

The health information system in Eswatini has gone through significant transformation in the past decade due to increasing demand for health data for decision making. These changes include the roll-out of the Client Management Information System (CMIS) in public health care facilities to collect patient level data.

As a result of substantial investments, these transformations have resulted in progressive improvements in performance of the national health information system in the country. For instance, the availability, quality and use of data have greatly improved. The country is able to produce regular and good quality statistics to support the assessments and improvements in service delivery and health situation of the population. These align with the goals for the National Health Sector Strategic Plan, Vision 2022, Government priorities and the commitments outlined within the Sustainable Development Goals. The importance of having a robust national health information system has been articulated and prioritized by several documents in the country. For instance, the National Health Sector Strategic Plan (NHSSP) III 2019-23, just like its previous versions, prioritizes health information system for supporting evidence-informed decision-making. It places emphasis on scaling up client management information system (CMIS) to all health facilities, strengthening the strategic information department and review of indicators. It also places emphasis on enhancing coordination of monitoring and evaluation activities, and regular reviews of performance of the national health information system. Similarly, the National Health Sector Policy (2016-2026) directed the Ministry of Health to strengthen, coordinate and manage health information from all sources. As a result, The Eswatini National Health Information System Strategic Plan and associated costed Implementation Plan was drafted and ratified in 2021. The Strategy has the following objectives:

1. Strengthen the leadership and governance functions for the national HIS.
2. Strengthen systems for the collection, storage, and transmission of health data.
3. Build country capacity in the analysis and synthesis of health data.
4. Enhance the use of health data for decision making.

Adapted from The Eswatini National Health Information System Strategic Plan, MOH 2021

Figure 4 (below) shows how CMIS data is used and shared.

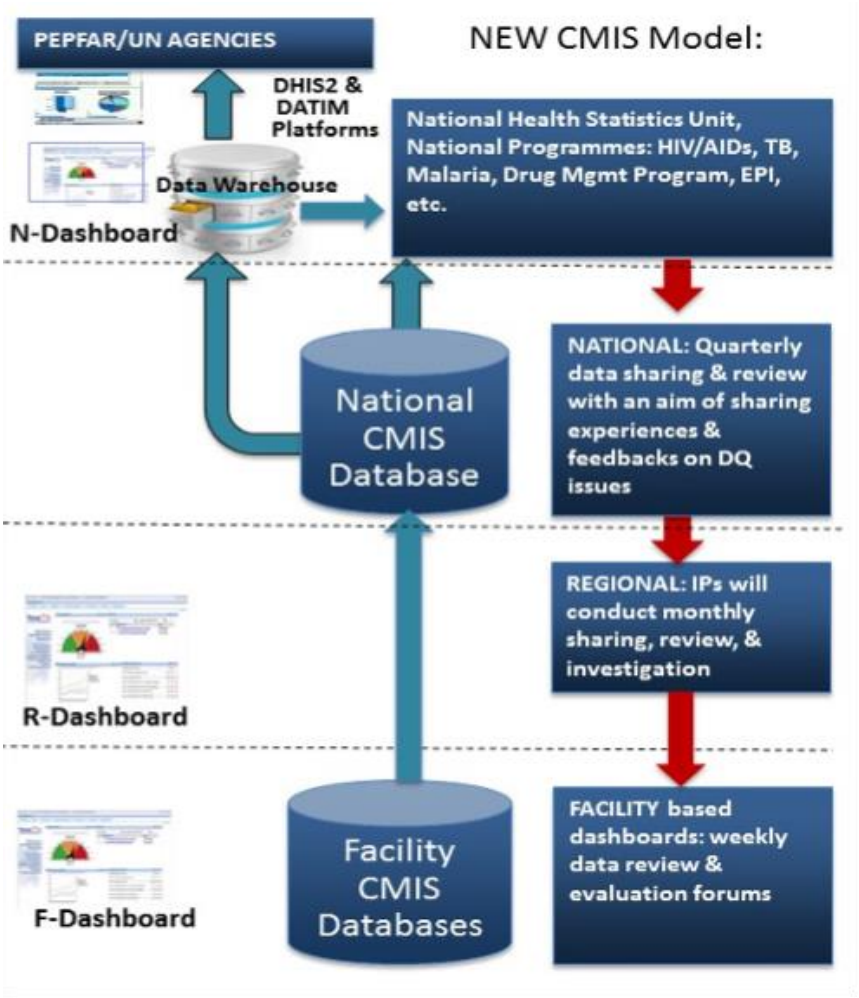


Figure 4: CMIS Data flow model. Source: The Eswatini National Health Information System Strategic Plan, 2021

5.5. Put it into Practice

Every health facility performs data collection routinely. In order to increase knowledge on this important M&E aspect within a health facility, read the case study below and use the questions to put the theory learnt into practice. By analysing this case study and answering the provided questions, healthcare professionals can gain practical insights into implementing effective data collection practices in their own facilities.

Case Study*:* Ka-Shali Health Centre

In the early years of the facility, monitoring and evaluation was challenging due to inadequate data collection systems and lack of capacity among staff. This led to difficulties in tracking service effectiveness and identifying areas for improvement. The institution lacked a health information system, paper-based data collection tools were inconsistently used, and client records could not be traced. This lack of accurate data makes it difficult to identify trends and patterns within the community and improve service delivery.

Box 3

1. What best practices for data collecting would you introduce to Ka-Shali Health Centre?
2. Outline a step-by-step intervention plan for improving data collection quality, including data collection procedures that are standard and expected by the Ministry of Health.
3. You have been tasked with briefing the facility's team on data collecting; select one representative from your team to conduct a brief on data collection (Role Play).

6. M&E Data Analysis

6.1. Learning Objectives

- To enhance data analysis and interpretation skills among healthcare workers.
- To develop skills for data analysis techniques and be able to select appropriate analysis methods based on the nature of the data and research questions.

6.2. Introduction

The aim of data analysis is to help turn the collected raw data into knowledge, which can then be used for decision making and other purposes. Data analysis can take place at any stage of a project or cycle. There are many different types of data analysis. These include quantitative, qualitative and participatory analysis. Many projects and programmes use a combination of different types of analysis. Raw monitoring and evaluation data is not normally useful on its own. If it is to be useful it first needs to be analysed.

The healthcare system and facilities in Eswatini produce data daily. Patient visits and services provided by different departments help achieve this. Health facilities rely on data to improve operations, which ultimately leads to better patient care. Healthcare data analytics can improve how healthcare facilities function by utilizing medical data from various sources. Electronic health records for patients, clinical treatment notes, real-time notifications to medical staff, and other important patient documentation are all included in the data offered in healthcare institutions. Healthcare data analytics can use this data to examine patterns and trends in patient outcomes, enabling medical facilities to execute focused interventions and make profitable decisions. Analytics from healthcare data can also help in identifying areas of improvement within the health system, such as reducing wait times or optimizing resource allocation, leading to more efficient and effective patient care. For example, should a specific facility desire to introduce a male-friendly corner, decision-makers must be informed of the need and demand for such services by an analysis on the number of men and times of the day they visit that facility?

The key priority interventions of the Ministry of Health i.e., promoting health, disease control, managing medical health conditions, informed decisions making, and emergency readiness cannot be achieved if the data provided by facilities is not analysed. Data analysis plays a crucial role in ensuring that the key priority interventions of the Ministry of Health are effectively implemented.

6.3. Basic Concepts

The aim of data analysis is to help turn raw data facts and opinions developed through **formal or informal planning, monitoring, evaluation or research processes** - into knowledge. In turn that knowledge can then be used for decision-making, or to ensure accountability to different stakeholders.[4]

Data analysis can take place at any stage of a project. It can happen before a project or programme begins as part of the design phase (baseline level). It can also happen during a

[4] Britton, B (1998). The Learning NGO. Occasional Papers Series no. 17. INTRAC, July 1998.

project or programme, at the end, or a while after it has finished. Data analysis can be carried out at many different levels within or across projects, programmes, sectors of work and organisations. In social development, data analysis is often encouraged within communities as part of a participatory development process.

6.4. Different Types of Analysis

There are many ways of categorising data analysis – far more than can be described in this paper. One way is to categorise it according to the type of data collected. (Note that many organisations, projects and programmes use a combination of different types of data analysis).

a. **Quantitative data analysis** is used to analyse numbers rather than words. It can range from simple exercises to arrange and process data through to very complicated processes designed to accurately measure quantifiable changes with calculated degrees of precision.

b. **Qualitative data analysis**, on the other hand, is used to analyse words – quotes, cases, transcripts, reports - and, sometimes, images. Qualitative methods rely on rules and processes which are very different from those of quantitative methods.

c. **Rating or scaling exercises**. Some M&E methodologies are designed to translate qualitative data into quantitative information through rating or scaling exercises. This involves developing ratings or scales based on qualitative analysis, and then processing them through quantitative methods.

d. **Participatory data analysis** can involve quantitative or qualitative data analysis and is often treated as a separate case. This is because participatory data analysis follows different rules and is usually based on stakeholders' sense making and consensus rather than rigorously applied methods. The purpose of participatory analysis may also be quite different - encouraging stakeholders to analyse their own situations rather than concluding based on an external viewpoint.

Another way of categorising data analysis is as follows:

- **Descriptive data analysis** is only concerned with processing and summarising data. This is often true of financial or administrative data analysis.
- **Theory driven data analysis** is used to test theories of change, assumptions or hypotheses. The aim is to analyse data to see if it confirms (or not) the theory or hypothesis.
- **Data or narrative driven analysis** involves letting patterns emerge from data, and then developing theories afterwards.

Qualitative data analysis can normally be applied to any of the three types described above. However, quantitative data analysis is rarely used with data or narrative driven analysis. This is because most quantitative data analysis techniques involve collecting predicted information for specified purposes.

Analysis Questions

There are many different approaches which may be used to analyse quantitative and qualitative. Each approach will focus on different aspects of the data, and many arrive at different conclusions and so it is important to select the most suitable analysis for your desired outcome or area of interest. However, many of the core questions which we hope to answer through data analysis are similar and fall into several categories. Some of these are listed in the following table.[5,6]

Types of Questions	Examples of Analysis Questions
Process Questions	• What work (activities undertaken or outputs delivered) has been carried out? • What work was planned but not done? Why was this work not done? • What problems have been encountered? How were these problems addressed (if at all)? If they were not addressed, why not? • Which activities appear to have been notably successful or unsuccessful? Why? • Are there constraints to progress which could be addressed? If so, how? • Are there constraints which cannot be helped? If so, what can be done to minimise their effects?
Change Questions	• What changes have been observed? Were these expected or not? • How do they compare with what was hoped for or anticipated? • How important or significant are they? Are they likely to be sustainable? • How have changes affected different groups? • What made the changes happen? Which other factors (other than your own project, programme or organisation) influenced the changes? • Are there expected changes that have not happened? If so, why have they not happened?
Action Questions	• Is the project, programme or organisation still on track to deliver its objectives? If not, what needs to change? • Are they still the right objectives? If not, how do they need to change? • Are the activities and outputs still appropriate? Should some be stopped, or others added? • How has the external political or socio-economic situation changed? How should the project, programme or organisation adapt as a result? • What are others doing (or not doing) that might influence the project, programme or organisation? How should it adapt as a result?
Learning	• What lessons have been learned from implementing the work? How can

[5] Adapted from: Gosling, L and Edwards, M (2003). Toolkits: A practical guide to assessment, monitoring, review and evaluation. Second edition. Save the Children, UK.

[6] Adapted from: Data Analysis | INTRAC

Questions	these lessons be applied to future work? ● What needs to be done differently in the future, based on what has happened in the past? ● What lessons are there for other projects, programmes or organisations? ● What lessons might there be for policymakers or other decision-makers?
M&E Questions	● Are there questions which cannot be answered through current M&E processes? ● What further evidence or information needs to be produced to make future decisions? ● Are current indicators, methodologies and approaches appropriate? If not, how do they need to change? ● Is there a need for new or further research, review or evaluation?

Table 3: Examples of Analysis Questions

6.5. Quantitative and Qualitative Data Analysis

Quantitative data analysis involves the use of numerical data to measure various aspects of health facilities performance, such as patient satisfaction, service utilization. This analysis helps identify trends, patterns and areas of improvement.

Qualitative analysis uses no-numerical data such as interviews, focus groups and observations to gain deeper understanding of the experience, perception and behaviour of patients or clients, health care provider and staff. This analysis helps uncover insights and perspectives that quantitative data may not capture.

E.g., Community Led Monitoring - which provides feedback to healthcare workers in terms of quality of service

6.6. Data Analysis tools

There are several data analysis tools that are commonly uses. It is important to choose the right tool based on the complexity of the analysis and the desired outcome. Some of these tools include the following:

Data Analysis tool	Description	When is the tool commonly used
Excel	Excel is a widely used tool for data analysis. It allows users to input and manipulate data, perform calculations, create charts and graphs, and analyse data using various functions and formulas. It provides users with the ability to organize and sort large amounts of data efficiently	Excel is often used for tasks such as forecasting and creating reports.
SPSS (Statistical Package for the Social Sciences) or STATA	This is a software program used for statistical analysis. It provided a range of tools and techniques for data manipulation and advanced statistical analysis.	SPSS is used commonly in research and surveys.
Tableau or Power BI	This is a powerful data visualization tool that allows users to create interactive dashboards, charts and graphs. It enables users to explore and analyse data in a visually appealing and interactive way.	This software is commonly used for data exploration, exploration and presentation
Python or "R"	This is popular programming language that offers various libraries and packages. These libraries provide tools for data manipulation, data cleaning, statistical analysis and data visualization	This is widely used in data science and analytics

Table 4: Data Analysis Tools

6.7. Put it into Practice

No matter how involved or not they are in these exercises, healthcare professionals need to understand the component of data analysis. The case study that follows will provide you some fundamental data analysis practice. This practice will help develop the healthcare worker's skills in interpreting and drawing insights from data, which is crucial for making informed decisions in patient care. By analysing real-life scenario, they can gain practical experience in applying data analysis techniques to solve healthcare-related problems.

Case Study*:* Ka-Shali Health Centre

The team is asked to analyse last quarter's data in order to obtain critical results that will guide a new maternal and child health (MCH) service delivery approach and establish a baseline for future results. Unfortunately, the team lacks the capacity to undertake such an analysis. As a result, Mr. Gama, a regional MOH M&E Officer, is called in to help with the exercise. Mr Gama brings his expertise in data analysis and has access to the necessary resources and tools and agrees to mentor the team. With his assistance, the team is able to effectively analyse the data and derive valuable insights for the present intervention and future planning. Next time, the facility team will be able to do this process without Mr. Gama.

Box 4

Pretend you are Mr. Gama:

1. In groups, analyse the data provided with the intent to draw conclusions and come up with key learning points to help improve the MCH program at Ka-Shali Clinic.
2. Which data analysis method did you use and why?

6.8. Data Visualization

6.8.1. Introduction

Finding the right way to visualise your data can be a daunting task, even after you have navigated all the processes that lead up to this point. However, human beings appreciate and understand visual representations in a more intimate and complex way than figures or tables alone and so charts, diagrams and other visually appealing ways of presenting data are an important skill. Data Visualization is the process of putting your data into charts and pictures which provide information about what the data is showing. Doing this well is the difference between telling a high-impact story that your audience will remember and losing them in a lot of confusing numbers and unclear connections. Dashboards, pictures, stories, graphical representation and conceptualisation – these all provide a snapshot of the story that data can tell. Providing graphical representation of information in charts, maps, diagrams, and doing this well can be critical – whether it is gaining buy-in of a critical superior or telling your story to a partner or donor. Given that a lot of data visualisation will take place at regional or national levels, a facility needs to be able to master the basics, usually in Microsoft Excel, and be able to read the data presented by others in presentations, reports and elsewhere.

6.8.2. Basic Concepts

Before you choose a method of visualising your data, spend time considering the following:

- **Identify your audience** - before you start designing your data visualization, you need to understand who your audience is, what they care about, and what they need to know.
- **Choose goals for your visualization** - The main goal of data visualization is to make it easier to identify patterns, trends and outliers in your data sets. The question the health facility could ask include:
    - What is your goal in communicating these results?
    - What messages or conclusions would you like your audience to draw from these results?
    - What patterns or trends in your data sets do you want to highlight or emphasise?
- **Select the right format to achieve your goals** - There are hundreds of different ways of representing a dataset. Choose wisely and remember that more simple approaches are often easier for your audience to understand. Software like Microsoft Excel will often suggest one or more different ways of presenting a data set, based on the type and range of data you have.
- **Ensure that visualizations faithfully and effectively communicate your data** -Data visualisations such as charts and graphics can be used to highlight or emphasise results or elements, so be sure to ask yourself if you are remaining fair and representative of the results

6.8.3. Types of Data Visualizations

Figures and tables are central elements of successfully communicating results, whether it is in a report or through another type of medium (such as a poster or pamphlet). Figures and tables help to steer the reader's focus to relevant aspects of the findings. Figures can raise interest and can help to summarize the content in a concise way. If detailed information is necessary, well-structured tables can help to provide these details in a clear manner.

Tables

Tables are an effective way to demonstrate your results. They are best to use tables when you have data that cannot easily be presented visually (i.e., the data set is too long, or has too many variables), when the data requires more specific attention, or to support other types of data visualisation.

TB programme Results by region (Eswatini) (Example)

	JAN 2022 - DEC 2022			
Result / Region	**Hhohho**	**Manzini**	**Shiselweni**	**Lubombo**
N# of TB screenings conducted	700	120	900	1400
N# of TB Presumptive cases identified	22	7	17	32
Positive Case Finding Success Ratio	3%	6%	2%	2%
Note: The above data is fictional and intended for demonstration purposes only				

Table 5 Example of a simplified table of TB data

Advantages:

- Studying the columns and rows of a table, it is easier to quickly grasp the meaning of data
- A table can also show the increasing or decreasing nature of data and abrupt values are easily identifiable.
- Tables allow a reader to easily represent different various quantities related to a quantity.

Bar Graphs

Bar graphs are an even more visually appealing way of showing your data. They should be used when comparing different categories or discrete variables, such as age groups, class etc. to compare large changes in data values. They are also a good way to show the trends of how data might change over time.

Advantages:

- Bar charts show each data category in a frequency distribution
- They display relative numbers or proportions of multiple categories
- They can summarize a large data set in visual form
- They clarify trends better than do tables
- Bar charts estimate key values at a glance
- They permit a visual check of the accuracy and reasonableness of calculations
- They be easily understood due to widespread use in business and the media

However, bar charts do present challenges when trying to visualise disparate data.

For instance, consider the bar chart below, which visualises the data in the table above:

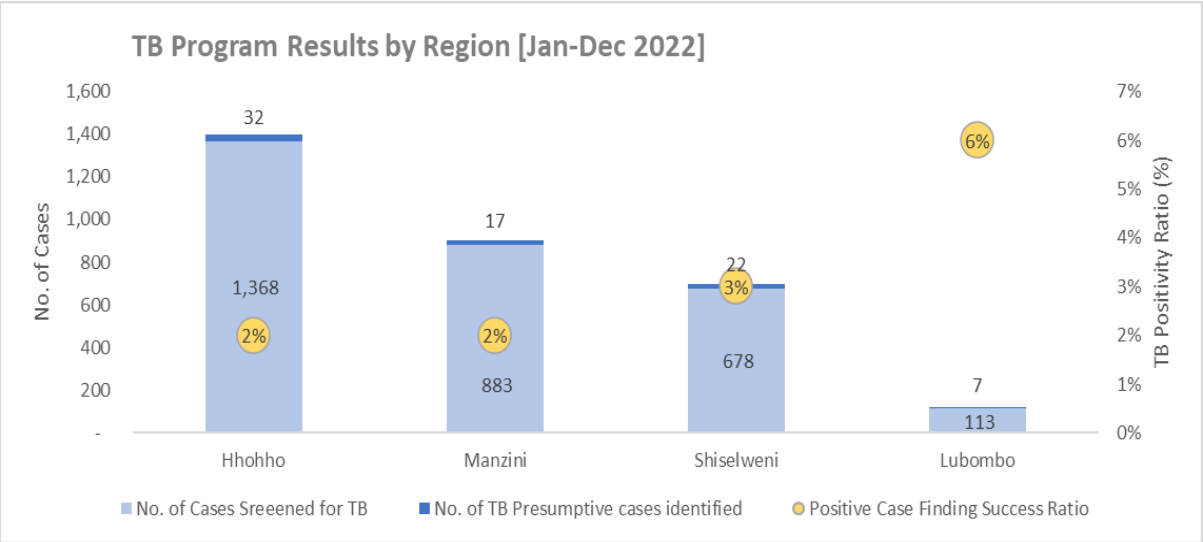
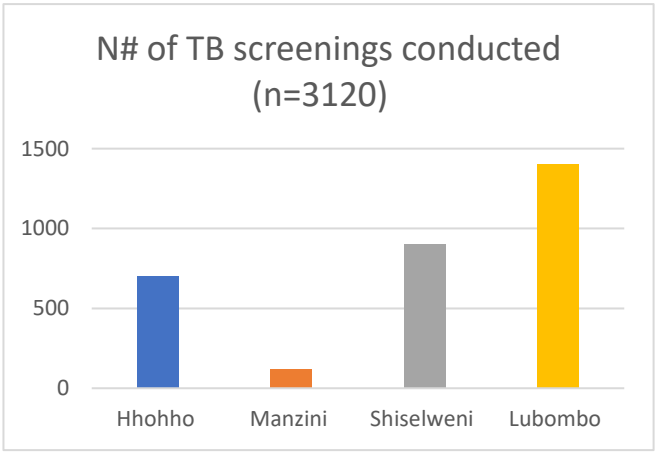


Figure 5: Example of Bar Chart

From the graph above, we can now see that although Manzini has a lower number of TB cases identified, the ratio of cases identified to screenings conducted is much higher, at 6%, compared to 3% in Hhohho and 2% in Shiselweni and Lubombo.



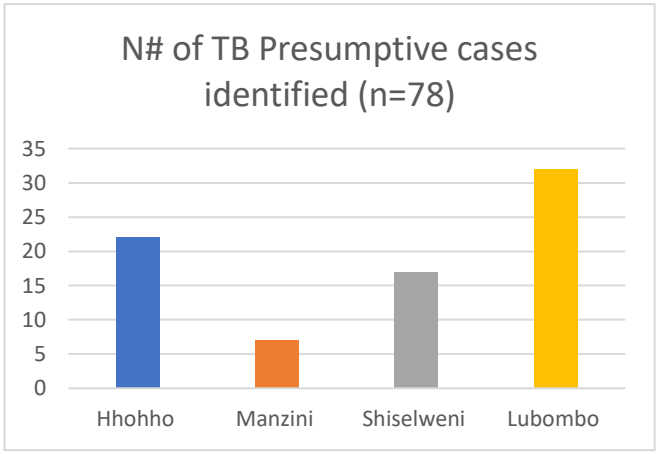


Figure 6: Another example of a Bar Chart,

In the two graphs above, we can see the general trend of TB results across the four regions. Like all data visualisations, this would require further explanation on why Manzini was not able to conduct as many screenings as other regions. However, presenting the data in this way does not reveal the full implications of the data presented in the table above. We need to add more information to assist the reader to analyse the performance of each region. The table below replaces the number of screenings conducted with the Positive Case Finding Success Ratio for each region:

Let's put it into practice!

Case Study*:* Ka-Shali Health Centre

Upon receiving the report from the team, Sister Dumi is overwhelmed by the amount of text in the document. Pages and pages of long descriptive sentences. She is worried that many people won't read it and suggests that they use some visual elements to present their findings. To make the report appealing to the recipients of the documents, she engaged the M&E team to use some graphic illustrations of the data which will have a short summary under each. Sister Dumi believed that incorporating visual elements would not only enhance the overall presentation of the report but also make it easier for the recipients to grasp the key information at a glance. By including the evaluation summaries under each graphic, she aimed to provide a concise and informative overview of the team's findings, ensuring that the recipients could quickly locate, understand and interpret the data.

Box 5

1. Sister Dumi has tasked you, as an M&E focal person, with creating visuals of the data within the report. Using the data provided, choose the best presentation approach for your data, and write a summary of your findings.

2. From the same data, write a summary of outcomes and draw conclusions on the trends with a summary on how the health system can be improved.

7. Data Quality

7.1. Learning Objectives

- To equip healthcare workers with knowledge and skills to manage and clean data effectively.
- To create and understanding on the outcomes of poor-quality data.
- To equip healthcare workers with the knowledge and understanding of data management and validation.
- To provide training on data cleaning techniques, error dictation and correction and continuous quality improvement.

7.2. Introduction to Data Quality

The goal of a monitoring and evaluation (M&E) system is to ensure that data produced are used to document progress towards goals and objectives and to improve health programs. However, the data produced by these systems is often incomplete, inaccurate, and is not reported on time, due to insufficient capacity in the health system, or inadequate system design. Therefore, data must be of high quality if they are to be relied upon for making good decisions on health policy, health programs, and allocation of scarce resources. Data give the picture of what is happening; bad data makes the entire system questionable.

7.3. Data Quality Assessment

A Data Quality Assessment (DQA) is a process to help facility staff and partners understand the strengths and weaknesses of their data and the extent to which the data can be trusted to influence management decisions. A DQA is a standard, regular process and should not be seen as an assessment of an individual or team's performance. Rather, a DQA is an opportunity to document any limitations in data quality and establish actions for addressing those limitations. A DQA should be conducted to understand and document the extent that a facility's data meets or does not meet the established data quality standards below.[7]

The DQA process should not be a stand-alone event. Instead, it should form part of a process of learning and improving our existing M&E processes.

[7] DQAs can also be conducted at every stage of the reporting process, at facility, regional and national level data.

Figure 7: The Change Management Cycle with various M&E processes included.

7.4. Basic Concepts

The following table outlines some basic standards which we can use to conduct a Data Quality Assessment activity on facility-level data.[8]

DQA Standard	Example Questions to Ask
Validity	1. Does the data clearly and adequately measure the intended results? 2. How well do the data capture tools measure the intended results? 3. Are there any discrepancies or weaknesses in the tools which could be improved? 4. Does the data reflect bias, such as interviewer bias, unrepresentative sampling, or transcription bias?
Integrity	1. When data is collected, analysed, and reported, are there mechanisms in place to reduce the possibility that it is intentionally manipulated? 2. Remember: data integrity is at greatest risk of being compromised during data collection and analysis.
Precision	1. Is the data precise enough to present a fair picture of performance and results? Is the data detailed enough to influence real decisions? 2. What is the margin of error (the amount of variation normally expected from a given data collection process)?
Reliability	1. Does the data reflect stable and consistent data collection processes and analysis methods over time?

[8] Adapted from: How to Conduct a Data Quality Assessment. USAID, 2012

	2. Would someone else come to the same conclusions if the data collection and analysis process were repeated? 3. Are you confident that progress toward your targets reflects real changes rather than variations in data collection methods?
Timeliness	1. Is your data available frequently enough to reflect real-life scenarios? 2. Is your data collection consistent and regular enough to present an accurate picture of performance? 3. Is data collection conducted frequently enough to influence management decision making at the appropriate levels?

Table 6: Examples of DQA Questions

7.5. When Should a DQA be conducted?

For a new indicator, service, data collection tool or method, a DQA will normally be conducted within the first 3-6 months of implementation. It is good practice to assess potential data quality issues prior to the start of data collection, by testing data capture tools or ensuring that staff are familiar with approaches. However, a full DQA can only be conducted after data collection has begun and thereafter, throughout the data analysis and presentation stages. For all regular M&E processes, such as on existing services or standardized tools, DQAs should be conducted regularly to ensure that the tools are still relevant and fit for purpose and that the data collected is used as intended.

For more information on Data Quality Assessments, please consult the NHSSP III (2019-2023; section 7.1) and associated MOH operational plans.

7.6. Types of Errors to Be Considered in Data Cleaning Missing data:

1. Missing data is the result of a respondent declining to answer a question, a data collector failing to ask or record a respondent's answer or a data entry staff member skipping the entry of a response.
2. Inconsistent data: Within one person's survey, responses are sometimes not consistent. For example, a respondent might say that he had never had sex and then report that he had two sexual partners. The problem should be reconciled by referring to the original questionnaire, if possible. If the respondent's answers are indeed inconsistent, develop a rule about which response to accept.
3. Out-of-range values: Some data items may be impossible or implausible. For example, "35" is recorded for a 15-year-old female to the question, "How many times have you been pregnant?" Refer to the original survey. If the respondent did give an impossible or implausible answer, you can code the response "no number.

7.7. Who is responsible for conducting a DQA?

Although the Ministry may establish its own standard procedures for checking the quality of data submitted into HMIS, it is advised that the facility perform its own basic DQA processes during data input, to identify errors before they are posted into the system. The simplest way to do this is to establish a simple maker-checker approach (also known as 4-eyes) commonly

used in banks and financial transactions. This approach simply requires that every entry has a "maker" who originally enters the record (in this case, a patient record or a data collection tool) into the system and a "checker" who verifies the accuracy of that entry or data before it is submitted. This can be done in bulk at the end of the day and using a sample of entries, rather than one-by-one.

7.8. Data Quality Assessment tools

The World Health organization produced the Data Quality Assurance (DQA) toolkit which supports countries in assessing and improving the quality of routine data. This toolkit includes an application for use in the DHS2 for routine data quality checks and for annual data quality desk review.

7.9. Data Quality Review[9]

The Data Quality Review (DQR) assesses the quality of data generated by information systems in health facilities. The objectives of a DQR are:

- To institutionalize a system for reviewing the quality of data, including routine monitoring of data, Individual data quality reviews (conducted annually) and periodic in-depth assessments of priority health programs
- To identify weaknesses in the data collection and management system and interventions for system strengthening; and;
- To monitor the performance of data quality over time and the capacity to produce good quality data.

7.10. The DQR methodology comprises two separate processes namely[10]:

A desk review – a review of the quality of existing aggregated reported data, using standardized data-quality metrics. This can be done as part of routine and regular data quality checks or as a discrete/cross-sectional assessment.

A site assessment – an assessment of data quality that requires visits to health facilities and district offices and includes verification of source data and an assessment of system capabilities to produce quality data. The site assessment can be part of a routine data quality assurance cycle that includes supervision, or it may be conducted as a discrete/ cross-sectional assessment.

7.11. The difference between DQA and Audit

Health facility data quality assessment is a systematic evaluation of accuracy, completeness and reliability of data collected and reported by a health facility. It involved checking the data against established standards and indicators to ensure quality. This assessment helps identify any gaps or errors in the data and provide recommendations for improving data quality.

Data audit is a more comprehensive process that not only assesses data quality but also examines the data management systems and processes within a health facility. It involves reviewing the entire data management cycle, including data collection, storage, and analysis

[9] DATA QUALITY ASSURANCE –Module 1 Framework and Metrics WHO 2020 (Page 3)
[10] DATA QUALITY ASSURANCE –Module 1 Framework and Metrics WHO 2020 (Page 5)

and reporting. The goal of a data audit is to identify any weaknesses or inefficiencies in the data management system and recommend improvements to enhance data quality and integrity.

Both DQA and Audit are important to ensure accurate and reliable data in health facilities. While DQA focuses primarily on the quality if the data itself, the data audit takes a broader perspective and evaluates the overall data management system.

7.12. Put it Into Practice

An essential component of monitoring and evaluation is ensuring data quality. Before we can utilize more digitalized tools, let's practice manually identifying errors and inconsistencies in the data. This hands-on approach will help us develop a keen eye for spotting potential issues and improve our overall data management skills. Practicing manual identification will allow us to establish a solid foundation of understanding before transitioning to automated error detection methods. The example is given in the case study that follows.

Case Study*:* Ka-Shali Health Centre

The Ministry of Health detected data anomalies, a new team leader was introduced as part of a quality improvement effort. Sister Dumi, who is particular about client information management, leads the team of clinical and administrative staff. "There is no tolerance for poorly collected data," she says.

Sister Dumi sets the team their first task: to examine the feedback report provided by the Regional Matron's Office, which details some of the facility's data quality shortcomings. As part of the exercise, Sister Dumi provides sample data from the PMTCT program and asks the team to carry out a data cleaning process to ensure that similar mistakes do not happen in future.

Box 6

You are a member of the team responsible for cleaning the dataset of patients at Ka-Shali. Using the dataset provided in Annex 3, identify as many irregularities as possible and forward a few observations to Sister Dumi to help with future DQAs

Exercise: Can you think of any specific challenges that health facilities face when conducting data quality assessment or data audit.

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8. Evaluation

8.1. Learning Objectives

- To equip healthcare workers with the necessary skills to conduct to evaluate interventions within their health facilities.
- To provide training is knowledge and skills required to develop and evaluation plan to measure the success of interventions.

8.2. Introduction

Evaluation measures how well the healthcare program activities have met expected objectives and/or the extent to which changes in outcomes can be attributed to the program or intervention. The difference in the outcome of interest between having or not having the program or intervention is known as its "impact" and is commonly referred to as "impact evaluation." So, evaluation is the judging, appraising or determining the worth, value and quality of a program, project or plan. It involves comparing the present situation with the past to find out to what extent original purposes have been achieved**.** Aspects of healthcare which can be assessed include:

Effectiveness[11] – the benefits of healthcare measured by improvements in health

Efficiency – relates the cost of healthcare to the outputs or benefits obtained

Acceptability – the social, psychological and ethical acceptability regarding the way people are treated in relation to healthcare

Equity - the fair distribution of healthcare amongst individuals or groups

Healthcare evaluation can be carried out at pre-determined times throughout the implementation of a healthcare intervention, so that findings of the evaluation inform the ongoing programme or can be carried out at the end of a programme.

8.3. Characteristics of Evaluation

- Evaluation must be useful and used
- Evaluation must be fair, impartial and independent
- Evaluation must be accurate
- Evaluations must include beneficiary perspective

NB: evaluation criteria are constant although the focus of evaluation can change

[11]CDC, Developing and Effective Evaluation Plan ,2021

8.4. Four Major Reasons for Evaluation

1. To clearly record what you want to achieve in your organisation. This involves clarifying aims and objectives.	2. To clearly record what the institution is doing. This involves making a detailed record of the ways the organisation tries to achieve its objectives.
3. To assess to what extent the organisation is succeeding at achieving its objectives. This involves finding out what this level of success (or failure) costs.	4. To discover the factors that influence your success or failure. This involves identifying obstacles and ways around them.

8.5. Types of Evaluation

a. **Output:** This type of evaluation looks at your activity. What product, service or approach or activity are you offering? It assesses whether your activity is appropriate for your objectives. For example, do you provide/produce what you aim to? Is your output appropriate – in terms of quality, quantity, and type – given your stated objectives? Would other activities be more successful as a way of achieving objectives.

   Example: Is our youth outreach programme holding regular youth group meetings as planned?

b. **Process:** This type of evaluation looks very closely at how your project works – at the processes involved. It assesses how and why decisions are made and implemented. For example, does your project follow professional 'good practice'? Could management and administration be improved? Who is involved in decision-making? Should others be given a voice?

   Example: Does the youth in our programme have a way to contribute their feedback to how the program is managed?

c. **Performance:** This type of evaluation focuses on your stated objectives and assesses the quantity and quality of what you actually achieved. E.g., to what extent are you meeting your targets? Is the quality of the service good enough? How cost-effective is your project? Do you achieve 'value for money'?

   Example: Have we reached our goal of training 500 youth in peer counselling skills?

d. **Impact:** This type of evaluation focuses on the end results or outcomes of your work. Outcomes are usually very hard to measure accurately. For example, is there evidence of behaviour change as a result of an individual's increased HIV awareness and/or attendance at prevention activities? Are your organisation's activities more effective because of training workshops?

   Example: Have we reached our goal of delaying the age of sexual intercourse among youth in our programme?

e. **Strategy:** This type of evaluation takes a 'helicopter' view of the project. It is very challenging because it asks you to think about the very foundations of your work. For example, what is the overall purpose of your project/organisation? Is it appropriate? Are

your goals still relevant or do they need to be revised? Are your activities meeting your goals?

Example: Are we targeting the populations among youth who are most in need of outreach, or are there other categories of youth who we should try to reach?

8.6. Evaluation Plan

An evaluation plan is a written document that describes how you will monitor and evaluate your program, as well as how you intend to use evaluation results for program improvement and decision making. The evaluation plan clarifies how you will describe the "What," the "How," and the "Why It Matters" for your program.[12]

- The "What" reflects the description of your program and how its activities are linked with the intended effects. It serves to clarify the program's purpose and anticipated outcomes.
- The "How" addresses the process for implementing a program and provides information about whether the program is operating with fidelity to the program's design. It also helps clarify if changes should be made during implementation to improve the effectiveness of the intervention.
- The "Why It Matters" provides the rationale for your program and the impact it has on public health. This is also sometimes referred to as the "so what" question. Being able to demonstrate that your program has made a difference is critical to program sustainability.

An evaluation plan is like a roadmap. It clarifies the steps needed to assess the processes and outcomes of a program. An effective evaluation plan is more than a column of indicators added to your program's work plan. It is a dynamic tool (i.e., a "living document") that should be updated on an ongoing basis to reflect program changes and priorities over time

Steps to Evaluation[13]

1. **Engage stakeholders:** Identify the end users who have interest in the evaluation findings. Evaluations are enriched when different voices are included in development and implementation processes. There is a therefore a need to engage them meaningfully. Meaningfully engaging your stakeholders and offering them opportunities to participate ensures that the voices of those that have an interest in your programs or services are heard.
2. **Describe the program:** A program description clarifies the program's purpose, activities, capacity to improve health and implementation context. Before you can evaluate your program or intervention, you must be able to clearly describe its purpose, activities, and components, as well as the outcomes it is intended to achieve in the short-, medium-, and long-term.
3. **Focus the evaluation design:** The amount of information you can gather concerning your program. Focusing on your evaluation design will help you identify the goal of

[12] CDC Developing and Effective Evaluation Plan, 2021

[13] CDC. Developing and Effective Evaluation Plan, 2011

your evaluation and the steps needed to achieve it. Your plan should anticipate the intended uses of your findings and create a strategy that ensures that your evaluation will be useful, feasible, ethical, and accurate.

4. **Gather credible evidence:** collect accurate and adequate evidence to support your evaluation results and the recommendations that follow. Conclusions and recommendations that are based on credible evidence will be viewed as trustworthy by the evaluation's primary users and as believable and relevant by stakeholders.
5. **Justify conclusions:** analysing the information you collected into meaningful and useable information. Stakeholders must believe that your conclusions are trustworthy before they will use your evaluation results with confidence. To reach conclusions that are well-substantiated and justified, review your evaluation results from the perspectives of many different stakeholders.
6. **Ensure use and share lessons learnt:** Share lessons learnt, communicate and disseminate results. The key findings from your evaluation mut be shared with the identified stakeholders to ensure that the evaluation achieves its purpose to enhance your intervention. In this manual it is discussed in Chapter 10 (Data Utilization and Dissemination).

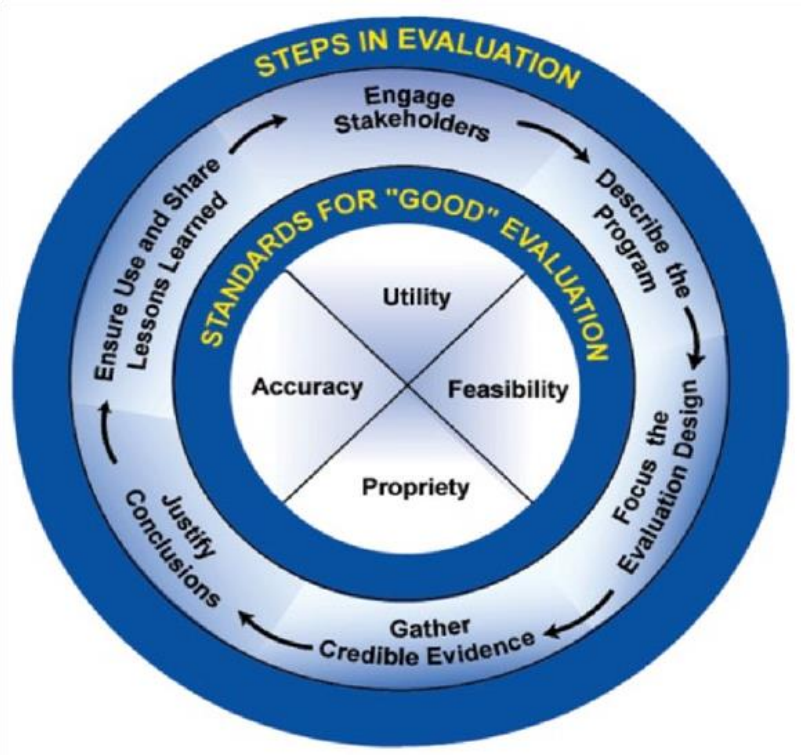

Figure 8 Steps in Evaluation

Source: CDC Developing and Effective Evaluation Plan (2021) & CDC Program Evaluation in Six Steps (2020)[14]

For more information on how to conduct evaluation reporting, see **Annex 1**

[14] https://www.cdc.gov/visionhealth/programs/vision-health-toolkit/section-four/six-step-evaluation.html

8.7. Put it into Practice

Spend some time reading and comprehending the case study below, then use the practice questions at the bottom of the case study to apply the theory of evaluation in practice. The case study provides a real-life scenario that allows you to analyse and apply the concepts of evaluation. By engaging with the practice questions, you can deepen your understanding and gain practical experience in evaluating situations. This hands-on approach will help solidify your knowledge and enhance your ability to apply evaluation theory in your health facility.

Case Study*:* Ka-Shali Health Centre

Within six months of the data quality improvement journey, the Ministry of Health notices the improvement from Ka-Shali Health Centre and engages an external team of M&E experts to provide further technical assistance to the team to accelerate the improvements in data management further. One of the primary tasks is to conduct an evaluation of performance in the six months of systems strengthening. This evaluation process is going to be beneficial as a potential donor has requested an evaluation on the status of the PMTCT program with potential support.

Box 7

1. With data provided in Annex 3, work as individuals to conduct an evaluation that will provide adequate information on the status of the program.
2. In a small group, work together to develop an evaluation plan for programs within the facility, decide on specific tasks that will need to take place at each of the steps in your evaluation.

9. Reporting

9.1. Learning Objectives

- To equip health care workers with proper and accurate reporting techniques such as using clear, concise language and organizing information effectively.
- To engage healthcare workers on the components of a report, considering reporting timelines and planning for reporting.

9.2. Introduction

Reporting refers to the responsibility of the health facility team to provide periodic formal updates to the different levels of the reporting cascade and partners. Reporting is a tool for accountability; it informs the health facility, Ministry of Health, development partners and implementing partners of the progress the project or initiative is making towards its goals.

For M&E purposes reporting is different from recording patient data or updating medical records, although the two tasks do use some of the same skills. While patient records focus on an individual, most M&E reporting will take a wider view (such as progress, change or impact) of a facility, department or service provided over a period. Without reports, the efforts put into service delivery and monitoring activities such as data collection and analysis will not be appreciated by those who make decisions.

As the below diagram demonstrates, reporting is at the third level (knowledge) of the health information pyramid. Report writing is a fundamental step in ensuring that vital patient and operational data gets from the facility to the national level. To be effective, this data needs to be presented in a way which clearly communicates not only the facility's qualitative and qualitative results but also analysis, conclusions, recommendations and next steps proposed by facility-level implementers. As such, reporting is vital for the growth and sustainability of the facility.

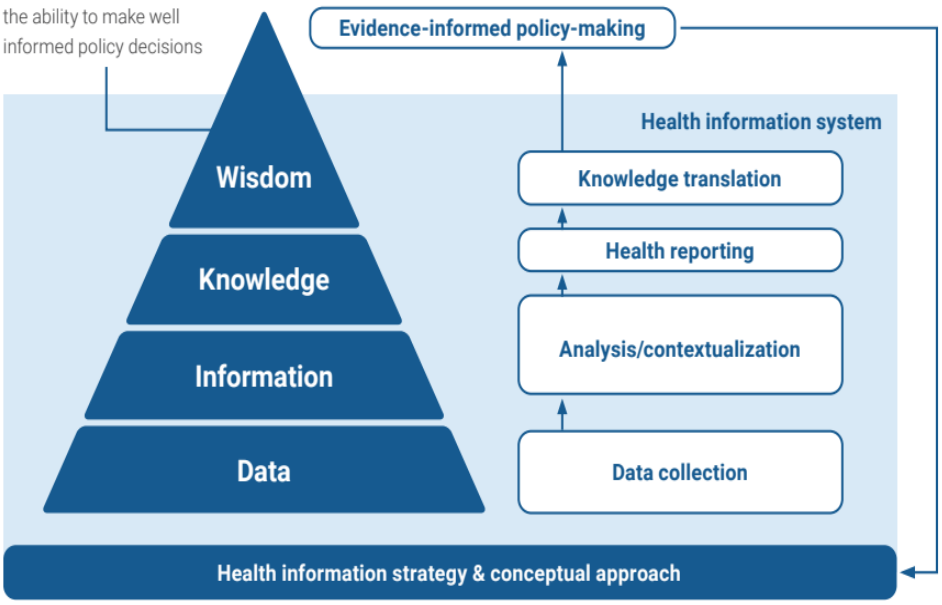

Figure 9: The Health Information Pyramid.[15]

9.3. Basic Concepts[16]

Reporting practices and schedules are often a condition of funding for many development partners and donors. However, regardless of who is supporting the service delivery, reporting should be a regular part of a facility's responsibilities. There is currently no generic template for MOH reports at the facility-level. The best way to assemble information and present it in a report depends on the context, the purpose of the report, the target audience and the author's freedom to express opinions and writing style. Thus, this guidance focuses on well-defined quality criteria for health reports, rather than presenting a standard health report.

Types of Report

The basic types of reports which will written by facilities are as follows:

A baseline report provides the necessary information to 'benchmark' indicators for the facility, department or service's purpose and goal, providing a snapshot of the situation before the operation commences or at least in its early stages.

Regular Reports (usually monthly) – Best practice recommends that facilities produce a short regular monitoring reports (usually monthly and quarterly). The format and contents of these reports varies according to the scale of activity, the availability of data, and the capacity of the facility to collect, analyse and report on the data.

The Quarterly Report – A quarterly report may be prepared every three months by the facility and submitted to the country delegation, for which it is an essential management tool. These reports should include information on outputs as agreed in the M&E Plan. If monthly reports

[15] Guidance for creating impactful health reports, WHO (2021), originally in Verschuuren & van Oers (2019).

[16] Some of this section has been adapted to a Swazi context from: Guidance for creating impactful health reports, WHO (2021)

have been written on-time, it is possible to use data and findings included in those reports to inform a quarterly report.

The Annual Report – The annual report is prepared every year for each facility, activity/department or service by the responsible person, usually the team leader or department head. An annual report should include a summary of the activities over the year, as well as annual results and plans for next year. An annual report can draw on data and findings already reported on within the monthly or quarterly reports submitted throughout the period.

The End of Project / Evaluation Report - Reports which outline the findings from more in-depth evaluations will usually be written by external parties. However, the evaluation should aim to support institutional learning and so guide policy formulation, budget allocations and service delivery at all levels.

9.4. Guidance for Monitoring and Evaluation Report Writing[17]

1. Be clear on who your audience is and ensure that the information is meaningful and useful to the intended reader.
2. Be as short as possible, consistent with the amount of information to be presented.
3. Focus on results achieved as defined in your M&E Plan or defined in the NHSSP. Link the use of resources allocated to these indicators to clearly demonstrate how resources have created an outcome or impact.
4. Write in plain language that can be understood by the target audience, especially if they do not have medical training.
5. Plan ahead to ensure the timely submission of progress reports. Even if your report is incomplete in certain aspects, such as by including draft results or partial coverage, it is better to circulate key results in other areas rather than wait for the complete picture.
6. Be consistent in your use of terminology, definitions and descriptions of partners, activities and places.
7. Present complex data with the help of figures, summary tables, maps, photographs, and graphs (see Chapter 11 on Data Visualisation).
8. Use sub-headings to divide your content into smaller, easily understood sections.
9. Only highlight the most significant results, key points or words (using bold, italics or other stresses such as text boxes).
10. Double-check the accuracy of your data. Once submitted, it is difficult to correct or amend a report without bringing the accuracy of our monitoring and evaluation processes into question.

9.5. Characteristics of a Report

Successful reports usually consider the below factors:

[17] Adapted from IRC 2022

Timeliness – whether reports are submitted at specified and agreed times. This can be monitored simply by recording on a facility's planner or calendar when reports are due.

Completeness – whether all the information required by the report format is provided.

Consistency – whether the units of measurements used to demonstrate progress towards an indicator in consecutive reports facilitate comparisons in performance over time. This can be monitored by checking the report against the results in HMIS or against agreed milestones and indicators specified in the M&E Plan.

Content – the extent to which the report provides an analysis of what has taken place, or simply presents 'bare' data or figures.

Reliability/accuracy – the extent to which the report is a fair representation of the performance and results.

Prior to writing a report, it is often advisable to conduct an **internal review** of the performance and data. with other facility staff. This will prepare them for its content and allow team members to contribute with ideas, opinions or conclusions and recommendations of their own. Once you have submitted a report, it is fair to request an **acknowledgement of receipt from the recipient** and if you have not received comments or feedback on the report within a reasonable time, respectfully request it. Feedback could include observations or questions on the report's data, conclusions, and recommendations or suggested next steps.

9.6. The Structure of a Report

Reports follow the structure below:

a. **Title, date and facility/author's name, usually on a title page or page 1;** your report should have the tittle page. This page could include information on; the title of the report, the name of the author, date of compilation and relevant graphics of the institution which may include relevant images and official logos.
b. **Include a table of contents for reports over 5 pages in length;** this is the list of all headings and subheadings I the report, together with page numbers. Most word processing software can build a table content automatically.
c. **Introduction:** the introduction usually provides background information on the subject matter. This could be a form for literature review.
d. **Provide a summary (1 page or less) at the beginning;** this section summarised the program and provides information that may be relevant to a first-time interaction with the program.
e. **The Results or Findings section;** this section gives the data that has been collected for example a survey. The data is often presented in tables and charts. This section is primarily concerned with description, it does not analyse or draw conclusions.
f. **Analysis, Conclusions or Recommendations section(s)his** section should discuss not only what your findings show but why they show this using evidence from previous reports to back up your explanation. The report should conclude with recommendations. This should derive from the main body of the report. No new information should be included.
g. **Closing Remarks or Next Steps;** outline the next steps or future activities that will be implemented as part of the program.
h. **References or Bibliography;** any source cited in the text should be included in full in the reference section.
i. **Annexure:** this section is used to provide any detailed information which the reader may need for reference but contains key information witch you do not want to include in the body of the report. For example, questionnaires used in a survey. The appendices should be numbered.

9.7. Put it into Practice

Reports are compiled quarterly and annually by healthcare facilities. It is important that we understand the essential components of a report in order to develop reports of the highest quality. In this exercise, we are unable to work on a report; instead, we will create a schedule for reporting. A tool we can use to stay organized. We can explore other reporting techniques that inform our development partners by using the case study below.

Case Study*:* Ka-Shali Health Centre

The new Principal Secretary of the MOH has announced that she would like all facilities to compile a short monthly report with results. Every month on the 5th, the report is to be ready and sent to the regional-level colleagues, who will then collate data and send it to the national-level. Ka-Shali received feedback from MOH that they worked exceptionally and met their targets, and the Ministry will be contributing resources to help improve programs earlier this year, along with a small grant from another partner to support the ART adolescent club. Although this has been very positive for the clinic, it has also increased the team's M&E workload as each of these external supporters also have report deadlines.

Box 8

1. As members of the facility's M&E team, work with your group to develop a typical reporting schedule that would have made you successful.
2. Use an image from the field and tell a story of a successful intervention.

10. Dissemination and Data Utilization

10.1. Learning Objectives

- To describe the role of data utilization in providing evidence-based decisions to improve health programs in community and health facilities.
- To cultivate the culture of data utilization and accountability to help monitor the effectiveness of interventions ensuring that resources are utilized optimally for the benefit of beneficiaries.

10.2. Introduction

Monitoring and Evaluation data needs to be manageable and timely, reliable, specific to the activities in question, and the results need to be well understood. The process of collecting data is only meaningful and worthwhile if it is subsequently used for evidence-based decision-making. To be useful, information must be based on quality data, and it also must be communicated effectively to policy makers and other interested stakeholders.

The key to effective data use involves linking the data to the decisions that need to be made and to those making these decisions. The decision-maker needs to be aware of relevant information in order to make informed decisions. In this context this will be the Ministry of Health: For example, if health facility STI data shows **an improvement in safer sexual practices, including delaying sexual debut, consistent condom use and having one or fewer partners** the decision-maker may decide to maintain the program as is. Alternatively, the data may lead to additional research on scaling up due to the effectiveness of the current STI strategy. When decision-makers understand the kinds of information that can be used to inform decisions and improve results, they are more likely to seek out and use this information.

10.3. Basic Concepts

Stages of Data Use

Data use involves three main stages (see figure9 below):

(a) Improving the Health Management Information System (HMIS)

(b) Improving the performance of health programs,

(c)Improving the way health systems function and improve health outcomes.

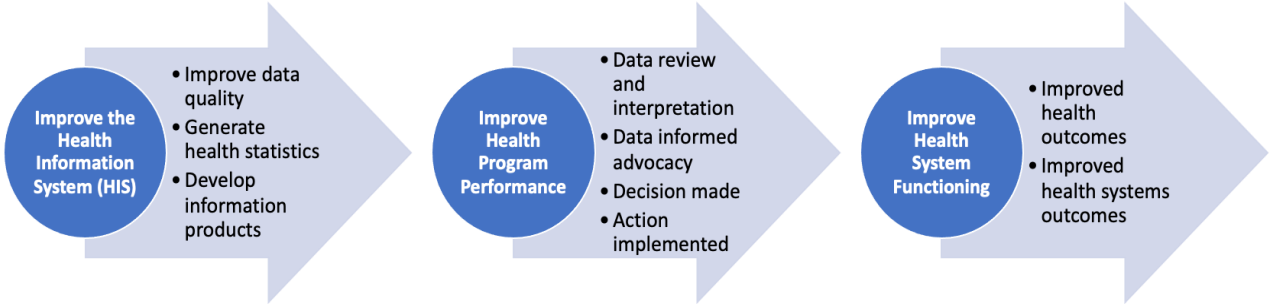

Figure 10: MEASURE Evaluation continuum of data use

Improving the Health Information System

The first stage consists of steps to enhance the HIS: the analysis and synthesis of data to identify data quality issues for improvement; the generation of health statistics to answer key health questions; and the development of tailored information products to synthesize and disseminate findings.

Improving the Performance of Health Programs

The second stage of data use includes steps to drive data-informed decision making for health program improvement. This conceptualization of data use requires that data are reviewed as part of a specific decision-making process, for example, to create or revise a health program strategy or work plan; to develop or revise a policy; to advocate for a policy or program; to allocate resources; or to monitor program performance. Following the data review and interpretation process, a data-informed recommendation is submitted to a higher level of management or a decision maker with a request for action, the decision to act is made, and follow-up actions are implemented that lead to improved health outcomes.

Data Use: Information Products

Information products are regular and periodic reports, newsletters, website updates or other written means of communication that are from project data. These products can be converted into information education and communication (IEC), these can be print materials such as posters, brochures, flyers, billboards, etc. that are intended to draw attention to information about a health project.

What does an information product do?

An information product documents the indicator values at a specific point in time. Typically, it also interprets the indicator values and, based on these interpretations, offers conclusions and recommendations.

An information product is a standard report/document that the health facility produces on a regular interval after receiving data and analysing it.

Dissemination

How the information gathered will be stored, disseminated, and used should be defined at the planning stage of the project and described in the M&E plan. This will help ensure that findings from M&E efforts are not wasted because they are not shared. The various users of this information should be clearly defined, and the reports should be written with specific audiences in mind. Dissemination channels can include written reports, press releases and stories in the mass media, and speaking events.

The purpose of disseminating the information products to stakeholders is for them to have the latest information at hand when making decisions about planning, implementing and funding of health services. So, reporting will usually take place through an information product.

To ensure use and sharing; read more on ***Annex 2***

10.4. Put it into Practice

Data utilization can help systematically improve health systems. In order to deliver comprehensive health services, partnerships and data must be used to establish a community intervention plan. This plan should involve collaboration between healthcare providers and community organizations to identify the health needs of the community and develop targeted interventions. Data utilization can also aid in monitoring the effectiveness of these interventions and making necessary adjustments to improve health outcomes. Through this exercise, we will be able to engage in the utilization of data.

Case Study*:* Ka-Shali Health Centre

The initial aim of improving the M&E systems was to improve the data management and to ensure that Ka-Shali's interventions are well-monitored. The key findings in their analysis indicated that there is a need to increase the number of outreach programs to sensitize communities on SRH. In order to successfully engage other partners on the ground, Sister Dumi instructs her team to develop a brief concept note to offer further information and justify this request to senior colleagues at the MOH.

Box 9

In Plenary: Share some of the patterns within the community and work out an intervention plan, listing some partners that can be engaged in the community health activation activities.

11. Monitoring and Evaluation Plan

11.1. Learning Objectives

- To equip health care workers with the necessary information to build and M&E system that effectively tracks and evaluate the performance of a health program.
- To incorporate a practical exercise to help reinforce the concept learnt to prepare health care workers implement M&E systems in their respective facilities.

11.2. Introduction

The M&E plan describes the strategic information your program will gather and use for decision making that will lead to improved health programs and ultimately to improved health status. It is also the fundamental document that will hold the program accountable and tell you whether you succeeded or not. Measure Evaluation defines an M&E Plan as a document that describes a system which **links strategic information** obtained from various data collection systems **to decisions** that will improve health programs. Therefore, an M&E plan is an important document that ensures a health facility is accountable and can measure success.

11.3. Basic Concepts

Functions of an M&E Plan by level of the health system

Figure 11: Functions of an M&E Plan by level of health system

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11.4. Establishing a Monitoring and Evaluation Plan[18]

Develop a plan for how the indicators will be tracked, measured, and reported over time. This plan should include the frequency of data collection, data analysis procedures, and reporting requirements. To develop a plan for how the indicators will be tracked, measured, and reported over time, you can follow these steps:

Define the data collection methods: Determine the data collection methods that will be used to track and measure the indicators over time. This may include surveys, interviews, observations, focus groups, or administrative data.

Determine the data sources: Determine the data sources that will be used to collect the data for each indicator. This may include program records, participant surveys, partner data, or publicly available data.

Establish data collection procedures: Establish procedures for collecting and managing the data, including the frequency of data collection, the roles and responsibilities of staff involved in data collection, and the protocols for data management, storage, and security.

Identify data analysis methods: Determine the data analysis methods that will be used to analyse the data and to calculate the indicators over time. This may include statistical analysis, trend analysis, or comparative analysis.

Develop a reporting plan: Develop a plan for reporting the indicators over time, including the frequency of reporting, the format of the reports, and the intended audience. This may include regular progress reports for internal stakeholders or annual reports for external stakeholders.

Assign roles and responsibilities: Assign roles and responsibilities for tracking, measuring, and reporting the indicators over time, including staff members responsible for data collection, analysis, and reporting.

Establish a timeline: Establish a timeline for tracking, measuring, and reporting the indicators over time, including milestones for data collection, analysis, and reporting.

Monitor and evaluate the plan: Monitor and evaluate the plan for tracking, measuring, and reporting the indicators over time, and adjust as needed based on the results of the monitoring and evaluation.

You will be able to develop a plan for how the indicators will be tracked, measured, and reported over time if you follow these steps in order. This plan will ensure that the data is collected and analysed in a consistent and reliable manner, and that the reports provide useful information for programme monitoring and evaluation.

Steps and Strategies for Designing a Monitoring and Evaluation Plan

Designing a monitoring and evaluation (M&E) plan involves several steps and strategies to ensure that the plan is effective in measuring program performance, identifying areas for

[18] This section is adapted from: Measure your Success with Indicators in Monitoring and Evaluation – EvalCommunity.com

improvement, and making evidence-based decisions. Here are some of the key steps and strategies:

Define Program Goals and Objectives: The first step is to clearly define program goals and objectives. This will provide a clear direction for the selection of appropriate indicators, data collection methods, and analysis techniques.

Identify Key Performance Indicators (KPIs): KPIs are the specific variables that will be used to measure program performance. It is essential to identify KPIs that are measurable, relevant, and aligned with program goals and objectives.

Determine Data Collection Methods: There are several methods for collecting data, including surveys, interviews, focus groups, observations, and document reviews. The choice of data collection method will depend on the type of data needed, available resources, and the target population.

Develop Data Collection Tools: Once data collection methods have been identified, it is necessary to develop data collection tools, such as survey questionnaires, interview protocols, or observation checklists. These tools should be pre-tested to ensure they are valid and reliable.

Determine Data Analysis Methods: There are different methods for analysing data, such as descriptive statistics, inferential statistics, and qualitative analysis. The choice of analysis method will depend on the type of data collected and research questions.

Develop a Data Management Plan: Data management plan involves planning for the storage, organization, and analysis of data. The plan should include procedures for data entry, cleaning, storage, and backup.

Develop a Reporting Plan: Reporting is an essential component of M&E. The reporting plan should specify the type of report, the audience, and the frequency of reporting. The structure of Evaluation reports should be clear, concise, and actionable.

Ensure Ethical Considerations: Ethical considerations are critical when designing and conducting M&E. It is essential to obtain informed consent from participants, maintain confidentiality, and ensure data security.

Establish a Monitoring and Evaluation Schedule: A monitoring and evaluation schedule outlines the timeline for data collection, analysis, and reporting. This schedule should be realistic and consider the availability of resources.

Budget for Monitoring and Evaluation:[19] M&E requires resources, including personnel, equipment, and software. It is essential to budget for these resources to ensure that the M&E plan can be effectively implemented.

By following these steps and strategies, organizations can develop a comprehensive M&E plan that will help them measure program performance, identify areas of improvement, and make informed decisions.

[19]Adapted from: Measure your Success with Indicators in Monitoring and Evaluation - EvalCommunity.com

Finally, the M&E Plan should include more formal feedback opportunities such as:

- Regional data review meeting
- Reflecting on performance and planning for future activities with colleagues at both facility/regional levels.
- Opportunities to contribute to national strategies, operational plans and so on.

11.5. Put it into Practice

Spend some time reading and comprehending the case study below, then use the practice questions at the bottom of the case study to apply the theory of monitoring and evaluation. The case study provides a real-life scenario that allows you to analyse and apply the concepts of M&E. This hands-on approach will help solidify your knowledge and enhance your ability to conduct monitoring and evaluation in your health facility.

Case Study*:* Ka-Shali Health Centre

Ka-Shali Health Centre is a facility located in the semi-urban area of Manzini. The clinic was built in 1998 in response to an upsurge in HIV incidence in the surrounding area. This state-of-the-art community centre provides service to over 13 surrounding communities beyond the Ngwane Park area. The facility serves over 50 patients daily with 5 nurses, 1 doctor who visits once a week, 4 cadres and 3 administrative staff members. maternal and child health, HTS, NCDs, TB and other general health care services are among the services provided.

Box 10

1. In your small groups, you have been tasked to develop and M&E plan that will be a tool to improve data quality within the facility. On the template provided, outline some of the key objectives on the plan that will bring immediate outcomes. Add more rows as needed.

Monitoring and Evaluation Plan Template

PROGRAMME GOAL: (E.g. To increase the number of men accessing health services by 2030)

OBJECTIVE 1: (E.g. To increase male health service uptake in Lubombo by the year 2024)

Result / Outcome (optional)	Objectively Verifiable Indicators	Means of Verification	Responsible (source)	Data Collection Methods	Purpose of Data	Frequency of Reporting	Assumptions
e.g. Improved Male health service uptake	e.g. Number of health facilities with male friendly services	Facility survey report	Male-friendly services focal person	Special surveys Field reports	Planning	Annually	Personnel trained will remain at the facility and carry out their responsibilities.

Figure 12: Example of a line of a Monitoring and Evaluation Plan using the template provided

How to use the M&E Plan Template

Please refer to the definitions for each component of the Monitoring and Evaluation Plan for help on what to focus on when you develop the plan.

Programme Goal: The goal is a broad statement about a desired long-term outcome of the program. For example, improvement in the reproductive health of adolescents or a reduction in unwanted pregnancies in X population would be goals.

Objective: are statements of desired specific and measurable program results. Examples of objectives would be to reduce the total fertility rate to 4.0 births by year X or to increase contraceptive prevalence over the life cycle of the program.

Results / Outcomes: Outcomes refer to the changes that occur because of the program or intervention. These changes are often related to the program's objectives or goals.

Indicators: are clues, signs, or markers that measure one aspect of a program and show how close a program is to its desired path and outcomes. They are used to provide benchmarks for demonstrating the achievements of a program.

Means of Verification: The specific method used to validate or confirm the accuracy, completeness and reliability of data. This may include: Primary data source, secondary data source, data validation techniques, data triangulation, documentation and record keeping.

Responsible: Who will oversee the process, is it a data clerk and M&E officer?

Data collection methods: There are several methods for collecting data, including surveys, interviews, focus groups, observations, and document reviews. The choice of data collection method will depend on the type of data needed, available resources, and the target population.

Purpose of data: What will the data be used for? Dissemination and utilization of the information gained.

Frequency of reporting: How often will you be reporting? Is it monthly, quarterly or yearly?

Assumption: hypotheses about factors or risks which could affect the progress or success of an intervention. Intervention results depend on whether the assumptions made, prove to be correct**.**

Box 11

12. Knowledge Management

Performance Monitoring & Evaluation

12.1. Learning Objectives

- To create an understanding of the importance of performance monitoring and evaluation in healthcare and its impact on patient outcomes.
- To develop skills in designing and implementing performance M&E plan tailored to the needs of healthcare facilities.
- To foster the culture of continuous quality improvement and accountability in healthcare.

12.2. What Is a Performance Monitoring Plan?

The Performance Monitoring Plan (PMP) serves as a reference document that contains the targets, definition of each indicator, and the method of data collection and frequency of data collection for each indicator, who will be responsible for collecting the data and how it will be collected and used.

In a health facility set up, the PMP will be a tool that guides the staff on managing the process of monitoring, analysis, evaluation and reporting progress onwards achieving your objectives. It enables operation units to collect comparable data over time.

Key components of a performance monitoring plan:[20]

1. **Performance indicators**: for monitoring operation within the facility, performance indicators are already agreed. Each performance indicator requires a detailed definition in the context & scope. Example: % increase in same day initiation on ART.
2. **Unit of Measurement**: The indicator must be measurable with a specific common unit. The common unit which is used to measure the change is referred to as the "unit of measurement of an indicator". As per the above example, the indicator is % hence the unit of measure is "%".
3. **Data Disaggregation:** When the indicator measure is further classified based on geography, gender, age, education etc. this is called data disaggregation. This is done to determine how the intervention affects the clients of different demographics.
4. **Rationale**: This is a brief description why the indicator was selected and how it will be useful for the facility. The process of selecting indicators if often based on considering trade-offs. That is, optimal indicators may not be most cost effective. By clearly stating rationale for the indicator, an outsider can better understand the decision underlying the selection process. This helps when you have new staff members or during an audit.
5. **Responsible Person:** For each performance indicator, it is important to identify the specific person and/or office responsible for collecting, analysing, and reporting the data. For example, a data clerk from the HTS department may be responsible for an indicator for linkages to care and treatment.

[20] Adapted from: M&E Studies (USAID)

6. **List of data sources:** This is the list of entities which the facilities will use to obtain data. Data sources may include, the community, the government, implementing organizations, private sector institutions, some data can be sourced from other documents e.g., reports from implementing partners. Switching data sources for the same indicator can lead to inconsistencies and misinterpretations.
7. **Frequency and Timing:** In a health facility, data is collected at any time**.** The frequency and timing for data collection should be based on how often data is needed for monitoring purposes, cost of data collection, and the pace of change anticipated. Data in the performance monitoring plan (PMP) is most commonly reported on a quarterly, semi-annual, or annual basis. In some cases, data can be collected more frequently like on a weekly or monthly basis and in some cases, data might be collected less frequently, e.g., after every 5 years. Data can be collected daily, monthly, annually or every few years.
8. **Data collection methods:** this describes how exactly the data will be collected, including tools and methods. This is to provide sufficient details on the data collected or calculation methods to enable it to be replicated consistently over time. the full details of collection methods could include details on techniques, tools or sampling
9. **Data Quality Assessment Procedures:** In this section there should be a complete step by step description of how the quality of data was determined/assessed.
10. **Data Limitations and actions to address those limitations:** The situation and scenario in the facility might change from time to time. This might result in an increase of some problems in the collection of data. Even if the data was not being collected from the field, whatever the source of the data previously was, it might not work sometimes. This is the section where you explain the challenges faced, what are the limitations and scope of the collected data and what steps have been taken to address those limitations. Clearly explain the strengths and weaknesses of the data so that neither you are giving too much of the hopes from the data to the donor nor you are under performing with the collected data.
11. **Data Analysis Issues:** This is how the content of the data will be analysed.
12. **Data use:** The data collected and analysed is to be reported to the donors. Moreover, any other organizations, partners or individuals can also receive the analysed data and can use it. This section defines the scope of distribution of the data.
13. **Baselines and Targets**: Baselines is the status of the indicator when it was measured at the start of the intervention and the target is the level to which indicator has to be taken by the interventions.

12.3. Put it into Practice

The healthcare facility will benefit from a performance monitoring plan for tracking progress and identifying areas for improvement. By implementing a performance monitoring plan, the facility can ensure that it is meeting its goals and objectives while also being able to make data-driven decisions to enhance patient care and optimize operational efficiency. The case study that follows will help in practicing how to construct the PMP.

Case Study*:* Ka-Shali Health Centre

As the team carries out the evaluation exercise, they discover that it could be more efficient to carry out all data processes if they have a performance monitoring *plan. Such a plan would ensure that all departments are aligned with the objectives of the facility and that everyone works towards these goals. Having a performance* monitoring *plan would also enable the team to track progress, identify areas for improvement, and make data-driven decisions to optimize efficiency.*

Box 12

As members of the Ka-Shali Health Centre, Sister Dumi has tasked you to develop the performance monitoring plan for your facility. In the template provided, work with a small group of colleagues to outline key components of your plan to be presented in plenary.

Conclusion

In conclusion, basic Monitoring and Evaluation training for healthcare workers plays a vital role in improving the overall quality provided in health facilities within Eswatini. By equipping nurses, support staff, auxiliaries and others with the necessary knowledge and skills, this training enables them to effectively collect data, assess and evaluate their performance, leading to improvement in patient outcomes and facility effectiveness.

Through this manual and accompanying training, healthcare workers gain a deeper understanding of the importance of performance monitoring and evaluation, learn the appropriate data collection techniques, how to set indicators, analyse the results to identify areas of improvement disseminate the information and make evidence-based decisions.

By implementing robust monitoring and evaluation systems tailored to their specific healthcare settings, they can track progress, measure outcomes and ensure accountability.

Moreover, this manual fosters a culture of continuous quality improvement and collaboration within facility teams. It promotes communication and sharing of performance data and evaluation results, allowing for collective learning and identification of best practices, identify gaps in service delivery, address challenges and implement targeted interventions to enhance the overall quality of care.

Ultimately, strengthening the capacities within monitoring and evaluation will empower healthcare workers to deliver high quality services by providing them with the necessary tools and skills to measure their successes and troubleshoot their challenges.

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Glossary of Key Terms[21]

Accountability: responsibility for the use of resources and the decisions made, as well as the obligation to demonstrate that work has been done in compliance with agreed-upon rules and standards and to report fairly and accurately on performance results vis-a-vis mandated roles and/or plans.

Activity: actions taken, or work performed through which inputs such as funds, technical assistance, and other types of resources are mobilized to produce specific outputs.

Assumptions: hypotheses about factors or risks which could affect the progress or success of an intervention. Intervention results depend on whether the assumptions made, prove to be correct.

Baseline: the status of services and outcome-related measures such as knowledge, attitudes, norms, behaviours, and conditions before an intervention, against which progress can be assessed or comparisons made.

Benchmark: a reference point or standard against which performance or achievements can be assessed. Note: A benchmark refers to the performance that has been achieved in the recent past by other comparable organizations, or what can be reasonably inferred to have been achieved in similar circumstances.

Beneficiaries: the individuals, groups, or organizations, whether targeted or not, that benefit directly or indirectly, from the intervention.

Coverage: the extent to which a program/intervention is being implemented in the right places (geographic coverage) and is reaching its intended target population (individual coverage).

Data: specific quantitative and qualitative information or facts that are collected and analysed.

Efficacy: the extent to which an intervention produces the expected results under ideal conditions in a controlled environment.

Efficiency: a measure of how economically inputs (resources such as funds, expertise, time) are converted into results.

Evaluation: the rigorous, scientifically based collection of information about program/intervention activities, characteristics, and outcomes that determine the merit or worth of the program/intervention.

Facility survey: a survey of a representative sample of facilities that generally aims to assess the readiness of all elements required to provide services and other aspects of quality of care (e.g., basic infrastructure, drugs, equipment, test kits, client registers, trained staff).

Health Information System (HIS): a data system, usually computerized, that routinely collects and reports information about the delivery and cost of health services, and patient demographics and health status.

Impact evaluation: a type of evaluation that assesses the rise and fall of impacts, such as disease prevalence and incidence, as a function of HIV programs/interventions.

Impact monitoring: tracking of health-related events, such as the prevalence or incidence of a particular disease; in the field of public health, impact monitoring is usually referred to as "surveillance".

Incidence: the number of new cases of a disease that occur in a specified population during a specified time period.

[21] Source: Glossary of Monitoring and Evaluation Terms (UNAIDS, 2010)

Indicator: a quantitative or qualitative variable that provides a valid and reliable way to measure achievement, assess performance, or reflect changes connected to an intervention

Inputs: the financial, human, and material resources used in a program/intervention.

Logical framework: management tool used to improve the design of interventions. It involves identifying strategic elements (inputs, outputs, activities, outcomes, impact) and their causal relationships, indicators, and the assumptions of risks that may influence success and failure.

Monitoring: routine tracking and reporting of priority information about a program / project, its inputs and intended outputs, outcomes and impacts.

M&E plan: a multi-year implementation strategy for the collection, analysis and use of data needed for program / project management and accountability purposes.

Objective: a statement of a desired program/intervention result that meets the criteria of being Specific, Measurable, Achievable, Realistic, and Time-phased (SMART)

Outcome: short-term and medium-term effect of an intervention's outputs, such as change in knowledge, attitudes, beliefs, behaviours.

Outputs: the results of program/intervention activities; the direct products or deliverables of program/intervention activities, such as the number of HIV counselling sessions completed, the number of people served, the number of condoms distributed.

Performance Management Plan (PMP): serves as a reference document that contains the targets, definition of each indicator, the method of data collection and frequency of data collection for each indicator, who will be responsible for collecting the data and how it will be collected and used.

Project: an intervention designed to achieve specific objectives within specified resources and implementation schedules, often within the framework of a broader program.

Qualitative data: data collected using qualitative methods, such as interviews, focus groups, observation, and key informant interviews. Qualitative data can provide an understanding of social situations and interaction, as well as people's values, perceptions, motivations, and reactions.

Quality assurance: planned and systematic processes concerned with assessing and improving the merit or worth of an intervention or its compliance with given standards.

Quantitative data: data collected using quantitative methods, such as surveys. Quantitative data are measured on a numerical scale, can be analysed using statistical methods, and can be displayed using tables, charts, histograms and graph

Stakeholder: a person, group, or entity who has a direct or indirect role and interest in the goals or objectives and implementation of a program/intervention and/or its evaluation.

Target: the objective a program/intervention is working towards, expressed as a measurable value; the desired value for an indicator at a particular point in time.

Validity: the extent to which a measurement or test accurately measures what is intended to be measured

Annexure

Annex 1

Checklist for ensuring effective evaluation reports

- Provide interim and final reports to intended users in time for use.
- Tailor the report content, format, and style for the audience(s) by involving audience members.
- Include an executive summary.
- Summarize the description of the stakeholders and how they were engaged.
- Describe essential features of the program (e.g., in appendices).
- Explain the focus of the evaluation and its limitations.
- Include an adequate summary of the evaluation plan and procedures.
- Provide all necessary technical information (e.g., in appendices).
- Specify the standards and criteria for evaluative judgments.
- Explain the evaluative judgments and how they are supported by the evidence.
- List both strengths and weaknesses of the evaluation.
- Discuss recommendations for action with their advantages, disadvantages, and resource implications.
- Ensure protections for program clients and other stakeholders.
- Anticipate how people or organizations might be affected by the findings.
- Present minority opinions or rejoinders where necessary.
- Verify that the report is accurate and unbiased.
- Organize the report logically and include appropriate details. •
- Remove technical jargon.
- Use examples, illustrations, graphs and stories

Adapted from Worthen BR, Sanders JR, Fitzpatrick JL. Program evaluation: alternative approaches and practical guidelines. 2nd ed. New York, NY: Addison, Wesley Logman, Inc. 1997.

Annex 2

Ensuring use and sharing lessons learned

Definition: Ensuring that a) stakeholders are aware of the evaluation procedures and findings; b) the findings are considered in decisions or actions that affect the program (i.e., findings use); and c) those who participated in the evaluation process have had a beneficial experience (i.e., process use).

Role: Ensures that evaluation achieves its primary purpose — being useful; however, several factors might influence the degree of use, including evaluator credibility, report clarity, report timeliness and dissemination, disclosure of findings, impartial reporting, and changes in the program or organizational context.

Activities:

- Designing the evaluation to achieve intended use by intended users.
- Preparing stakeholders for eventual use by rehearsing throughout the project how different kinds of conclusions would affect program operations.
- Providing continuous feedback to stakeholders regarding interim findings, provisional interpretations, and decisions to be made that might affect likelihood of use.
- Scheduling follow-up meetings with intended users to facilitate the transfer of evaluation conclusions into appropriate actions or decisions.
- Disseminating both the procedures used and the lessons learned from the evaluation to stakeholders, using tailored communications strategies that meet their needs.

Adapted from a) Joint Committee on Standards for Educational Evaluation. Program evaluation standards: how to assess evaluations of educational programs. 2nd ed. Thousand Oaks, CA: Sage Publications, 1994; and b) Patton MQ. Utilization-focused evaluation. 3rd ed. Thousand Oaks, CA: Sage Publications, 1997.

Annex 3

Ka-Shali Health Center

Prevention of Mother to Child Transmission HIV (PMTCT) Clients Database

JAN - MAR 2022

File No.	Name of Client	Date of Birth	Age	Date of Visit	Residence	Occupation	Marital Status	Previous Knowledge of HIV Status (Y/N)	PMTCT HIV Test Offered (Y/N)	PMTCT HIV Test Results (R/NT)	Knowlwdge of Partners Status	If HIV positive, ART Initiated ? (Y/N)
KH001	Dudu Dlamini	1/23/1991	32	03/02/22	Ngane Park	Factory worker	Complicated	Yes	Yes	NR	No	N/A
KH002	Maseko Londiwe	2/26/1996	27	03/02/22	Ngwane Park	Unemployed	Single	No	Yes	R	No	Yes
KH003	Hlophe Nomsa	8/20/1980	43	03/02/22	Nhlambeni	House Keeping	Married	No	Yes	NR	Yes	N/A
KH004	Zwane Phelele	7/2/2022	21	04/02/22	Ngawe Park	Stu dent	Married	No		NR	No	N/A
KH005	Mziya Takhona	9/7/1985	38	05/02/22	Mahlabatsini	Teacher	Single	Yes	Yes	NR	Yes	Yes
KH06	Ndlangamandla Nomvelo	12/6/1992	31	15/03/22	Manzini	Unemployed	Single	Yes	Yes	R	No	Yes
KH001	Nonduzo Dlamini	6/16/1987	36	17/03/22	Eteni	Office Admin	Single	No	Yes	NR	No	N/A
KH008	Nonduzo Dalmini	92/22/2000	23	06/06/22	Ngwane Park	Social Worker	Single	No	Yes	NR	No	N/A
KH0099	Mamba Tiyandza	7/11/1987			Nhlambeni	Clerk	Single	Yes	Yes	NR	Yes	N/A
KH010	Ngcampalala Neli	7/23/2001	23	24/08/22	Ngwane Park	Unemployed	Single	No	Yes	R	No	
KH011	Patience, Ginidza	10/31/1996	27	24/08/22	Ngwane Park	Factory worker	Single	No	Yes	R	No	Yes
KHO12	Gule Primrose	6/6/1991	30	2408202	Ngwane Park	Single	Single	No	Yes	NR	NO!!!	N/A

Note: All names included in this example dataset are fictitious and included for learning purposes only. The names included bear no relation to real people whatsoever.


SIYINQABA