MONITORING AND EVALUATION STRATEGIC PLAN for the NATIONAL HEALTH PLAN (2021–2030)

National Department of Health

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The Monitoring and Evaluation Strategic Plan was approved by the National Health Board in December 2022.

The development of this Plan was coordinated by the Performance, Monitoring and Research Branch of the National Department of Health. Original artwork for front and back covers was done by Mr Antonio Perez (World Health Organization). Copyright for the photo is with World Health Organization/Yoshi Shimizu.

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FOREWORD BY THE HONOURABLE MINISTER FOR HEALTH AND HIV & AIDS

The Government of Papua New Guinea aims to achieve a smart, wise, fair and happy society as espoused in *Papua New Guinea Vision 2050*. Among other priorities, Vision 2050 seeks to improve the quality of life of Papua New Guineans as the country achieves greater heights of socioeconomic development. A critical enabler of this vision is physically and mentally healthy citizens.

As such, the National Department of Health (NDoH) has adopted the new *Papua New Guinea National Health Plan 2021–2030* (NHP 2021–2030), setting the directions for planning and implementation in the health sector for the decade. NHP 2021–2030 builds on lessons learned from previous health plans, with an overarching goal of leaving no one behind. It aims to reverse poor health indicators, with a focus on community engagement and empowering people to take ownership of their own health, the health of their family and the health of their community.

To facilitate implementation of NHP 2021–2030, a monitoring and evaluation (M&E) strategy is needed to determine whether inputs delivered are providing the expected results and to ensure use of quality data for programme planning and improvement. NDoH therefore developed this *Monitoring and Evaluation Strategic Plan* as a companion document to NHP 2021–2030. The Strategic Plan aims to catalyse and coordinate efforts for building effective M&E systems for enhanced accountability and learning aimed at improving peoples' health through better and improved health services delivery in Papua New Guinea.

The *Monitoring and Evaluation Strategic Plan* identifies indicators across all programmes in the health sector to track progress in implementation of NHP 2021–2030, providing one integrated measurement framework for the health sector that is aligned with the Sustainable Development Goals and universal health coverage. The Strategic Plan is expected to help reduce fragmentation in health information systems and promote a culture of data analysis and use for decision-making at all levels of the health system.

I commend NDoH for its pioneering wisdom in developing NHP 2021–2030 and its accompanying *Monitoring and Evaluation Strategic Plan*, and ask all stakeholders in the health sector to work together in realizing the goal and objectives of the Strategic Plan.

Honourable Jelta Wong, MP
Minister for Health and HIV & AIDS

ACKNOWLEDGEMENTS BY THE SECRETARY FOR HEALTH

I would like to thank and congratulate all those involved in the development of the *Monitoring and Evaluation Strategic Plan for the National Health Plan 2021–2030*. This document provides guidance to the National Department of Health (NDoH), Provincial Health Authorities (PHAs), other Government line agencies and departments, partners, and stakeholders in the health sector to measure progress in implementation of the *Papua New Guinea National Health Plan 2021–2030* (NHP 2021–2030). It also provides an opportunity to strengthen capacity for monitoring and evaluation (M&E) and for reducing fragmentation of health information systems in the health sector.

This *Monitoring and Evaluation Strategic Plan* was developed building on experiences from implementation of the M&E Strategic Plan for the previous the National Health Plan (NHP 2011–2020). A key change in this new Strategic Plan is the identification of 200 indicators across all programmes in the health sector, aligned with the five Key Result Areas of NHP 2021–2030, the Sustainable Development Goals and universal health coverage. This is a significant increase from the 29 indicators identified to measure progress in selected programme areas under the previous plan. In addition, for all indicators, baselines, targets and reporting levels have been identified to facilitate performance tracking. For the first time, consideration was given to disaggregating indicators by social stratifiers, such as sex and age, to allow for the monitoring of inequities.

While Papua New Guinea has reporting rates averaging above 90% in the National Health Information System over the last five years, challenges with data quality and use persist at all levels of the health system. For example, critical data on personnel, training, funding and medical supplies have been fragmented and are difficult to collate. In addition, little feedback is provided to health facilities, districts and provinces on reported data, undermining the importance of the routine data collected. In this new Strategic Plan, M&E capacity will be strengthened at all levels – but more importantly at the district and facility levels. A culture of regular monthly, quarterly and annual reviews at the provincial, district and programme levels will also be nurtured to promote data use for decision-making and improvements in service delivery. Lastly, the current Strategic Plan also draws on lessons learned during the coronavirus 2019 (COVID-19) pandemic for strengthening surveillance and M&E, including but not limited to the need for effective and sustainable digital health solutions.

The development of the *Monitoring and Evaluation Strategic Plan for the National Health Plan 2021–2030* was undertaken by the M&E Technical Working Group, comprising senior staff from the NDoH Performance Monitoring and Research Branch with support from development partners (the World Health Organization and the Health Services Sector Development Project). Extensive consultations were also held with all branches of NDoH, PHAs, development partner organizations, donors, nongovernmental organizations, churches, the private sector, civil society organizations and other Government line agencies.

I once again thank all involved for their contributions in developing this M&E Strategic Plan. I encourage everyone to use this Strategic Plan as the single measurement framework for the health sector. Let us be accountable for our actions and continue to be innovative in our endeavours to strengthen health service delivery for improved outcomes.

Dr Osborne Liko
Secretary for Health

ABBREVIATIONS

AFP	acute flaccid paralysis
AIP	Annual Implementation Plan
ANC	antenatal care
BMI	body mass index
CIR	civil identity and registry
COVID-19	coronavirus disease 2019
CPHL	Central Public Health Laboratory
CPR	contraceptive prevalence rate
CRVS	Civil Registration and Vital Statistics
CYP	couple-years of protection
DHS	Demographic and Health Survey
DHIS	Discharge Hospital Information System
DICT	Department of Information, Communication and Technology
DQA	data quality assessment
EMR	electronic medical Record
eNHIS	electronic National Health Information System
FAOSTAT	Food and Agriculture Organization of the United Nations statistical database
FPC	Finance and Planning Committee
GIS	geographical information systems
GoPNG	Government of Papua New Guinea
HIS	Health Information System
HMIS	Hospital Management Information System
HRH	human resources for health
HRIS	Human Resource Information System
HSIP	Health Services Improvement Programme
HSPC	Health Sector Partnership Committee
HSSDP	Health Services Sector Development Programme
HPV	human papillomavirus
HWF	health workforce
IBBS	Integrated Bio-Behavioural Surveillance
ICD-10	International Statistical Classification of Diseases and Related Health Problems, Tenth Revision (ICD-10)
ICT	information and communications technology
IFMS	Integrated Financial Management System

IHP+	International Health Partnership+
IHR (2005)	International Health Regulations (2005)
IPTp	intermittent preventive treatment in pregnancy
ITN	insecticide-treated nets
IUD	intrauterine device
KRA	Key Result Area
LLG	Local-level Government
LLIN	long-lasting insecticidal net
LTBI	latent tuberculosis infection
MCV1	measles-containing-vaccine, first-dose
MDR-TB	multidrug-resistant tuberculosis
M&E	monitoring and evaluation
MRAC	Medical Research Advisory Council
MSD	Medical Standards Division
MSM	men who have sex with men
m-Supply	Medical Supply System
NCD	noncommunicable disease
NDoH	National Department of Health
NEFC	National Economic and Fiscal Commission
NGO	nongovernmental organization
NHHRA	National Health and HIV Research Agenda
NIHF	National Inventory of Health Facilities
NHIS	National Health Information System
NHP	National Health Plan
NHSS	National Health Service Standards
NSO	National Statistics Office
NTD	neglected tropical diseases
ODA	Official Development Assistance
ORS	oral rehydration solution
PATH	PNG-Australia Transition to Health
PC	preventive chemotherapy
PHA	Provincial Health Authority
PHIO	Provincial Health Information Officer
PIC	Project Implementation Committee
PLLSMA	Provincial and Local-level Services Monitoring Authority
PMC	Performance Monitoring Committee

PMGH	Port Moresby General Hospital
PMRB	Performance, Monitoring and Research Branch
PNG	Papua New Guinea
PNGCIR	Papua New Guinea Civil Identity and Registry Office
RMNCAH	reproductive, maternal, newborn, child and adolescent health
RR-TB	rifampicin-resistant tuberculosis
SDG	Sustainable Development Goal
SEM	Senior Executive Management
SOP	standard operating procedure
SPAR	Sector Performance Assessment Report
SPD	Strategy and Policy Division
TB	tuberculosis
TFR	total Fertility Rate
UHC	universal health coverage
VIA	visual inspection with acetic acid
WASH	water, sanitation and hygiene
WHO	World Health Organization

GLOSSARY

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.[1]

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.[1]

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.[1]

Civil registration and vital statistics (CRVS)

A well-functioning civil registration and vital statistics system that registers all births and deaths, issues birth and death certificates, and compiles and disseminates vital statistics including cause of death information.[2]

Data

Quantitative and qualitative information or facts that are collected and analysed.[1]

Data warehouse

A data warehouse is a type of data management system that is designed to enable and support intelligence activities, especially analytics. Data warehouses are solely intended to perform queries and analyses and often contain large amounts of historical data.

Digital health

Digital health encompasses e-Health, which is defined as "cost-effective and secure use of ICT [information and communications technology] and information systems to support health and health-related fields, including health services, health surveillance and health-related literature, education, knowledge and research (Resolution WHA58.28 on e-health (2005)". Digital health expands the concept of e-Health to include health information systems and digital consumers, with a wider range of smart devices and connected equipment. It also encompasses other uses of digital technologies for health such as the Internet of Things, artificial intelligence, big data and robotics.[3]

e-Health

The cost-effective and secure use of information and communications technologies (ICT) in support of health and health-related fields, including health-care services, health surveillance, health literature, and health education, knowledge and research.[3]

Enterprise architecture

A blueprint of business processes, data, systems and technologies used to help implementers design increasingly complex systems to support the workflow and roles of people in a large enterprise, such as a health system.[3]

Evaluation

The rigorous, scientifically based collection of information about programme/intervention activities, characteristics and outcomes that determine the merit or worth of the programme/intervention. Evaluation studies provide credible information for use in improving programmes/interventions, identifying lessons learned and informing decisions about future resource allocation.[1]

Health data

The systematic application of information and communications technology (ICT), computer science and data to support informed decision-making by individuals, the health workforce and health systems to strengthen resilience to disease and improve health and wellness. It includes all data pertaining to the health status of a data subject that reveal information relating to the past, current or future physical or mental health status of the data subject. This includes information about the natural person collected in the course of the registration for, or the provision of, health-care services to that natural person; a number, symbol or particular assigned to a natural person to uniquely identify the natural person for health purposes.[3]

Health information system

A system that integrates data collection, processing, reporting and use of the information necessary for improving health service effectiveness and efficiency through better management at all levels of health services.[3]

Hospital management information system

Hospital management information system is a computer system that helps manage information related to health care and aids in the job completion of health-care providers effectively. The system manages data (clinical, financial, laboratory) related to all departments and units of health care in a larger health facility, such as a hospital

Impact

A result or effect that is caused by or attributable to a project or programme. Impact is often used to refer to higher-level effects of a programme that occur in the medium or long term, and can be intended or unintended and positive or negative.[4] Impact includes changes in morbidity and mortality.

Indicator

A quantitative or qualitative variable that provides a valid and reliable way to measure achievement, assess performance or reflect changes connected to an activity, project or programme.[1]

Information and communication technology (ICT)

Information and communication Technology is a broader term for information technology (IT), which refers to all communication technologies including Internet, wireless networks, mobile phones, computers, software, middleware, videoconferencing, social networking, and other media applications and services

Inputs

Resources provided for project or programme implementation, such as financial and human resources, infrastructure, equipment, time and other materials.[4]

Interoperability

The ability of different information systems, devices and applications to access, exchange, integrate and cooperatively use data in a coordinated manner through the use of shared application interfaces and standards, within and across organizational, regional and national boundaries, to provide timely and seamless portability of information and optimize health outcomes.[3]

International Statistical Classification of Diseases and Related Health Problems, Tenth Revision (ICD-10)

The purpose of ICD-10 is to permit systematic recording, analysis, interpretation and comparison of mortality and morbidity data collected in different countries or areas and at different times. ICD-10 is used to translate diagnosis of diseases and other health problems from words into an alphanumeric code, which permits easy storage, retrieval and analysis of the data.

Midterm evaluation

Evaluation performed at the midpoint of project or programme implementation.[4]

Monitoring & evaluation (M&E)

Monitoring and evaluation (M&E) is a combination of data collection, analysis and dissemination (monitoring) and assessing to what extent a programme or intervention has or has not met its objectives and the reasons for successes and gaps (evaluation).

M&E framework

A matrix that correlates key objectives, programmes and results areas with specific indicators and the methods for collecting data for those indicators.

Outcome

A results or effect that is caused by or attributable to a project, programme or policy. Outcome is often used to refer to more short- and medium-term effects such as changes in knowledge, attitudes, skills and behaviours, service access and coverage, policies and environmental conditions.

Output

The direct products, goods and services generated from an intervention or activity.

Population-based survey

A type of survey which is statistically representative of the target population, such as the Demographic and Health Survey (DHS).

Performance

The degree to which an intervention or organization operates according to specific criteria, standards and guidelines or achieves results in accordance with stated goals or plans.[1]

Process (indicator)

Services that programmes provide to accomplish their objectives, such as outreach activities, curriculum development, materials developed, counselling sessions, workshops and training events.[5]

Research

In the health setting, systematic investigation into and study of a health situation, topic, or disease and sources in order to establish facts and reach new conclusions.

Strategy

Strategy is a general plan to achieve one or more long-term or overall goals.

Stratifier

A stratifier refers to a characteristic such as demographic, social, economic, racial or geographic descriptor that can identify population subgroups for the purpose of measuring differences in health and health care that may be considered unfair or unjust.

Surveillance

The ongoing, systematic collection, analysis, interpretation and dissemination of health-related data essential to planning, implementation and evaluation of public health practice so as to reduce morbidity and mortality and to improve health.[6]

Target

The objective a programme or intervention is working towards, expressed as a measurable value; the desired value for an indicator at a particular point in time.[1]

Trend

The general direction in which tracking data tend to move: upwards, downwards or stable (not changing).

References for glossary definitions:

[1] UNAIDS Basic Terminology and Frameworks for Monitoring and Evaluation
[2] Civil registration and vital statistics (CRVS), World Health Organization
[3] World Health Organization Global strategy on digital health 2020-2025, 2021
[4] USAID Glossary of Monitoring and Evaluation Terms 2009
[5] M&E Terminology, Measure Evaluation
[6] Centers for Disease Control and Prevention

EXECUTIVE SUMMARY

The *Monitoring and Evaluation Strategic Plan for the National Health Plan (2021–2030)* serves as a guide for measuring health sector performance and strengthening health information systems (HIS) over the course of the implementation period of the *Papua New Guinea National Health Plan (2021–2030)* (NHP 2021–2030). NHP 2021–2030 is the single governing health policy document for Papua New Guinea, and it outlines the strategic direction, vision and core priorities for the health sector for the current decade. The goal of the Strategic Plan is to increase the availability and use of timely, complete and accurate health-related data to monitor implementation, assess health sector performance, and ensure that data are used for evidence-based health service delivery and decision-making.

The Performance Monitoring and Research Branch (PMRB) of the National Department of Health (NDoH) coordinated the development of the Strategic Plan, with technical input from all branches within NDoH, central agencies, Provincial Health Authorities (PHAs), development partners and other relevant stakeholders, including academia. The Strategic Plan is aligned with other existing health-information-related strategies, policies and frameworks in Papua New Guinea, and it is based on a thorough assessment of the previous *Monitoring and Evaluation Strategic Plan for the National Health Plan (2011–2020)*, the current state of routine HIS and anticipated needs in the near future. The following principles guided the development and design of this new Strategic Plan:

- promoting country leadership and ownership;
- leveraging existing systems, processes and resources to the greatest extent possible;
- fostering collaboration and coordination;
- promoting interventions and actions that are practical, feasible and relevant at all levels of the health system;
- adaptability to changing health information and monitoring and evaluation (M&E) needs; and
- driving the utmost efficiency.

The Strategic Plan is guided by six strategic objectives:

- strengthen governance, coordination and regulations for HIS;
- strengthen and institutionalize systems for building human resource capacity and improving infrastructure for HIS;
- enhance the quality and capacity of routine HIS, including improving reporting from private health facilities and those run by nongovernmental organizations (NGOs) and other partners;
- ensure linkages and interoperability of HIS in Papua New Guinea;
- expand conventional data sources to ensure data are readily available for decision-making and promote a culture of monitoring, evaluation and learning within NDoH and PHAs; and
- enhance use of health information at all levels of health service delivery and by all stakeholders in the health sector to promote evidence-based decision-making and drive impact.

The Strategic Plan includes a Monitoring and Evaluation Framework that outlines 200 indicators to measure key health sector inputs, outputs, outcomes and overall impact over the lifetime of NHP 2021–2030. The Framework is structured around the five Key Result Areas (KRAs) of NHP 2021–2030, with an overall focus on monitoring progress towards universal health coverage and equity, given the National Health Plan's central theme of "leaving no one behind". The Key Result Areas are:

KRA 1. Healthier communities through effective engagement

KRA 2. Working together in partnership

KRA 3. Increased access to quality and affordable health services

KRA 4. Addressing disease burden and targeted health priorities

KRA 5. Strengthening health system.

Of the 200 indicators, 37 indicators have been selected as national "core" indicators to signpost health sector performance, drawing on the 29 indicators identified under the previous *Monitoring and Evaluation Strategic Plan*. Thirty-five indicators have also been selected for provincial monitoring, while the remaining indicators are for tracking by specific programmes and are to be reported annually or at regular intervals – every two to five years – over the implementation period of NHP 2021–2030. Where relevant and feasible, selected indicators will be disaggregated by key demographic, geographic and socioeconomic stratifiers to monitor equity. Sources, reporting levels and frequencies, as well as procedures for data management, analysis and use of data collected for the indicators, are also outlined (see accompanying Indicator Compendium).

The *Monitoring and Evaluation Strategic Plan* also outlines how M&E activities will be aligned with Government annual planning and budgeting cycles, defines the M&E roles and responsibilities at various levels of the health system, and establishes timelines for health reviews and evaluations throughout the implementation period of NHP 2021–2030. The Strategic Plan also seeks to address persistent gaps and challenges in M&E and health information, including insufficient human resources with the required skills, limited information and communication technology (ICT) infrastructure and capacity, fragmented health information systems, the lack of interoperability, data quality issues and limited data use, as well as coordination with stakeholders within and outside the health sector.

To address the gaps and challenges mentioned above and establish a robust M&E system, the Strategic Plan proposes the following interventions to strengthen M&E and the health information systems:

- capacity-building for a skilled workforce in health information systems
- establishing Provincial Health Information and Intelligence Units
- enhancing and upgrading ICT infrastructure,
- ensuring interoperability of health information systems
- developing an integrated data warehouse
- strengthening the National Health Information System
- improving hospital networks and reporting
- enhancing linkages between research and decision-making
- enhancing leadership and governance.

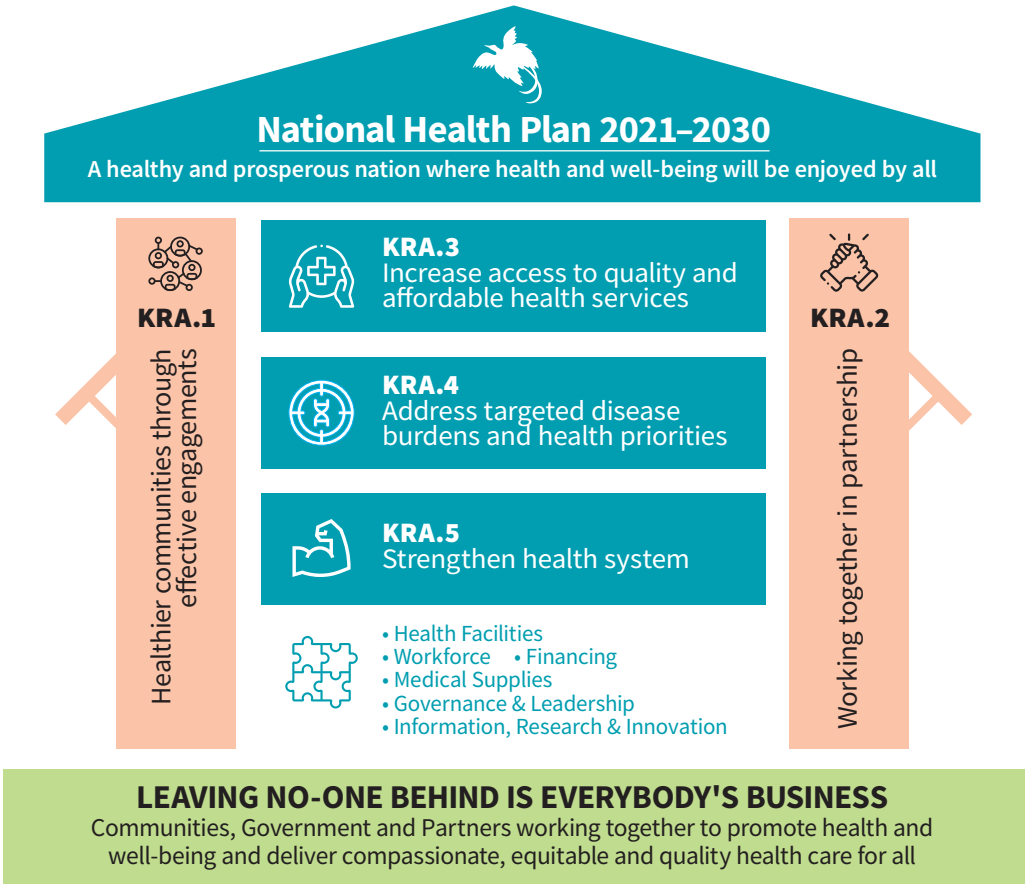
1. INTRODUCTION

1.1 Background

The *Papua New Guinea National Health Plan 2021–2030* (NHP 2021–2030) is the single governing health policy document in Papua New Guinea, and outlines the strategic direction, vision and core priorities for the health sector between 2021 and 2030. NHP 2021–2030 envisions "a healthy and prosperous nation where health and well-being are enjoyed by all", with a goal of "preventing ill health, identifying and addressing health risks and emerging diseases, and providing accessible and affordable quality health care to all". To achieve this vision and goal – and based on successes and lessons identified in the implementation of NHP 2010–2020, five Key Result Areas (KRAs) are outlined in the current National Health Plan, along with specific objectives and strategies. The five KRAs are:

KRA 1. Healthier communities through effective engagement
KRA 2. Working together in partnership
KRA 3. Increased access to quality and affordable health services
KRA 4. Addressing disease burden and targeted health priorities
KRA 5. Strengthening health system (Fig. 1).

Fig. 1. Key result areas of the Papua New Guinea National Health Plan 2021–2030



Measuring health sector performance over the period of the National *Health Plan 2021–2030* (NHP 2021–2030) is critical in determining progress in implementation of the Plan, whether inputs delivered are providing the expected results (accountability), and how services and policies need to be improved or adapted for better outcomes (learning). Effective measurement requires clearly defined indicators and targets, in addition to well-functioning health information systems that collect, report and disseminate quality data. Furthermore, strengthened capacities in monitoring and evaluation, as well as enhanced use of data, are needed at all levels to inform decision-making for improved health services and programmes – and to ultimately drive impact. Therefore, a *Monitoring and Evaluation Strategic Plan* has been developed to ensure coordination and harmonization of monitoring and evaluation and health- information-strengthening activities, and their alignment with NHP 2021–2030.

1.2 Purpose

The purpose of this *Monitoring and Evaluation Strategic Plan* is to guide measurement of health sector performance and strengthening of health information systems (HIS) during the life of NHP 2021–2030. It provides details on:

- progress achieved under the *Monitoring and Evaluation Strategic Plan* of NHP 2010–2020 and persistent gaps and challenges that need to be addressed (Chapter 2);
- the national Monitoring and Evaluation Framework, which is part of the *Monitoring and Evaluation Strategic Plan*, and the indicators proposed to monitor progress in the implementation of NHP 2021–2030 and to assess outcomes and impacts (Chapter 3);
- approaches to be implemented in monitoring and evaluation, including the roles and responsibilities of main actors (Chapter 4); and
- approaches and actions to improve monitoring and evaluation and strengthen HIS (Chapter 5).

1.3 Development of the Monitoring and Evaluation Strategic Plan

The Plan was developed by the Performance, Monitoring and Research Branch (PMRB) through consultations and with technical inputs from programmes and other branches within the National Department of Health (NDoH), central agencies, Provincial Health Authorities (PHAs), development partners and other relevant stakeholders, including academia. It is aligned with other strategies, policies and frameworks related to health information in Papua New Guinea.

Development of the Strategic Plan was guided by the following principles:

- promoting country and local community leadership and ownership;
- building on existing systems, processes and resources to the extent possible;
- fostering partnership and coordination;
- promoting interventions and actions that are practical, feasible and relevant to all levels of the health system;
- flexibility to meet changing health information and monitoring and evaluation needs; and
- driving the use of information at all levels of service delivery for performance and impact assessment.

1.4 Vision, goal and objectives

Vision

This Strategic Plan envisions an effective and coordinated monitoring and evaluation system based on interoperable health information systems (HIS) that generate quality health-related data for programme monitoring, health service improvement and driving programme impact at all levels of the health system.

Goal

To improve the availability and use of timely, complete and accurate health-related information to monitor implementation of NHP 2021–2030, assess health sector performance, and ensure evidence-based health service delivery and decision-making.

Objectives

- to strengthen governance, coordination and regulations for HIS;
- to strengthen and institutionalize systems for building human resource capacity and improving infrastructure for HIS;
- to enhance the quality and capacity of routine HIS, including improving reporting from private health facilities and those run by nongovernmental organizations (NGOs) and other partners;
- to ensure linkages and interoperability of HIS in Papua New Guinea;
- to expand on conventional data sources to ensure data are readily available for decision-making and promote a culture of monitoring, evaluation and learning within NDoH and PHAs; and
- to enhance use of health information at all levels of health service delivery and by all stakeholders in the health sector to promote evidence-based decision-making and drive impact.

2. SITUATIONAL ANALYSIS

2.1 Overview of national health information systems

Several health information systems have been established in Papua New Guinea to collect data on health service delivery, vital statistics (births and deaths), health outcomes, medical supplies, human resources, health financing and infrastructure (health facilities).

Of all systems, **the national health information system (NHIS)** is the primary system for data on health service delivery and health outcomes. First established in 1987 and managed by the PMRB, the NHIS is a well-established system in which data are reported from health facilities to provinces and then to the national level. Data are reported from health centres, urban health centres and hospitals on outpatient and limited inpatient services based on a set of registers, tally sheets, daily summary forms, record books and monthly reporting forms. Indicators cover services such as family planning, antenatal care, childbirth, immunizations and well-child care, sick-child care, school health services, outreach clinics, malaria and drug shortages. Certain indicators are disaggregated by age group and sex. Reporting coverage has improved and consistently ranged around 90% (80–100%) since 2000. Private health facilities are not yet reporting into the NHIS.

The NHIS has mainly been a paper-based system, with data entry on computers done at the provincial and national levels. In 2018, it was decided to roll out the **electronic national health information system (eNHIS)**, involving direct entry and reporting of health data through tablets – following a pilot initially conducted in 184 health facilities in five provinces. At the end of 2021, the eNHIS had been rolled out to over 600 health facilities in 18 of 22 provinces, with only four provinces using paper and computer-based NHIS reporting.

Programmes, such as HIV and tuberculosis (TB) which have their own surveillance systems, are starting to include modules within the eNHIS to collect and report data – including case-based (patient-level) data. In addition, a module for notifying births and deaths has been included to improve data for civil registration and vital statistics. However, the module is not used by all health facilities.

Also included in the eNHIS are the **Discharge Hospital Information System** (DHIS) and the **National Inventory of Health Facilities** (NIHF) database. The DHIS is used to report a line list of all hospital discharge cases and the corresponding morbidity or mortality according to the *International Statistical Classification of Diseases and Related Health Problems, 10th revision* (ICD-10) codes. The NIHF is an inventory of registered health facilities and health posts (previously aid posts) that meet the National Health Service Standards (private health facilities are not included). Data are collected through an annual inventory form and cover status (open or closed), human resourcing, number of beds, and availability of communication equipment and other infrastructure. Eventually, it is envisaged that all HIS would link or be interoperable with eNHIS to enable the development of an integrated data repository or warehouse.

Aside from the DHIS, hospital data is also managed in the electronic Hospital Management Information Systems (HMIS) in selected hospitals. Port Moresby General Hospital is using a system called "Insta" and Western Highlands Province is using the Patient Medical Records Management System. Data from the HMIS are used to manage patient records, report on hospital morbidity and mortality; however, utility for informing subnational and national decision-making remains limited due to the low coverage. HMIS has not yet been rolled

out more widely due to high costs for installation and limited human resource capacity to maintain the system.

The other main HIS comprise:

- **HIV/AIDS and TB surveillance systems** to monitor burden, service delivery and health outcomes specific to the two diseases. Though these systems were originally established as paper-based systems, there have now been efforts to link the systems to the eNHIS through incorporation of HIV and TB modules that allow for entry and consolidation of patient-based data.
- **Medical Supply System** (m-Supply), managed by the Medical Supplies Procurement and Distribution Branch of NDoH, to monitor medical supplies in all five Area Medical Stores and selected health facilities. As of 2021, it was operating as an electronic and paper-based system. In 110 health facilities,[1] m-Supply is used on mobile phones; in 38 health facilities,[2] it is being used on desktop computers; and in the remaining health facilities, medical supplies are reported into the system using paper-based reporting forms.
- **Pharmaceutical Registration System** is managed by the Pharmaceutical Services Standards Branch of the NDoH for registration of drugs and other medical products. It is currently being expanded to integrate the registration of pharmaceutical establishments (such as importers, wholesalers, distributors and retailers) and pharmacy personnel.
- **Integrated Financial Management System** (IFMS) is an official Government accounting system managed by the Department of Finance used to pay for goods, services and staff payroll as guided and protected by the Public Administration Act.
- **Alesco Payroll System** is an official Government online payroll system managed by the Department of Personnel Management and used by the Human Resources Branch for the payment of salaries and allowances of public servants and to track these payments over time.
- **GoData Surveillance System** was established following the onset of the coronavirus diseases 2019 (COVID-19) pandemic for reporting of COVID-19 cases by all PHAs.
- **Civil Registration and Vital Statistics** information is collected by the Papua New Guinea Civil Identity and Registry Office (PNGCIR) along with the National Identity Department. Data on births and deaths are collected through paper forms and then transferred into the electronic civil identity and registry (CIR) system at the provincial or national levels. The Civil Registration and Vital Statistics (CRVS) electronic database is maintained at the Department of Communication Data Centre in Port Moresby. Discussions are ongoing to link the CIR system with the eNHIS, which collects data on birth and death notifications.

Three additional information systems were established but were not functional as of the end of 2021, largely due to software maintenance and cybersecurity issues. These are the:

1 Sixty health centres in Morobe, 10 high-burden TB Basic Management Units, 19 high-burden antiretroviral therapy facilities and 21 PDCO offices.

2 Five Area Medical Stores, 16 provincial hospitals, six district hospitals, seven provincial medical stores and two general stores, Daru TB store and the Central Public Health Laboratory.

- **Human Resource Information System** (HRIS) was developed in 2016–2017 by the Human Resources branch of NDoH to register and maintain data on all health-care workers employed in the health sector, including administration and support staff. It was intended to help: (1) track health worker training, certification and licensure; (2) maintain data on health worker deployment, performance and attrition; and (3) model long-term health workforce needs and develop necessary budgets.
- **Nursing registration system** for registering nurses and midwives with the Nursing and Midwifery Council; and
- **Research Portal,** used and managed by PMRB, for registration of research proposals and tracking of ethical approval. The research portal is expected to be functional again in 2023.

2.2 Achievements under the Monitoring and Evaluation Strategic Plan for the National Health Plan 2011–2020

NHP 2011–2020 focused on "back to basics" – strengthening primary care, with a focus on improving maternal and child health outcomes and reducing the burden of communicable diseases. A three-pronged approach was outlined focused on: (1) targeted investment in service delivery in rural areas and disadvantaged urban settings, including implementation of PHA reforms; (2) reinforcing health services through strong efficient systems, including HIS; and (3) giving specific attention to improving a prioritized set of health outcomes based on disease burden and likely future health threats.

The *Monitoring and Evaluation Strategic Plan* for previous national health plan, *National Health Plan 2011–2020* (NHP 2011–2020), aimed to facilitate coordinated collection, analysis and use of health information to monitor implementation of the Plan and results achieved; ensure accountability for results and transparency; and support use of data for programme planning and policy-making. The Plan outlined a set of 29 national indicators aimed at signposting health sector performance, along with interventions aimed at strengthening: (1) governance and leadership for health information; (2) data management, dissemination and use; (3) expanding data sources and improving the quality of the data generated; and (4) public health and disease surveillance. Achievements against these areas are outlined in Table 1.

Table 1. Key achievements under the areas of focus of the *Monitoring and Evaluation Strategic Plan for the National Health Plan 2011–2020*, Papua New Guinea

Focus area under the Monitoring and Evaluation Strategic Plan (2011–2020)	Key achievements
Health information system (HIS) governance and leadership	• Establishment of an e-Health Steering Committee and Technical Working Group • Development of a draft e-Health Strategy 2017–2027 • Development of CRVS Action Plan

Focus area under the Monitoring and Evaluation Strategic Plan (2011–2020)	Key achievements
Data management, dissemination and use	• Annual publication of the Health Sector Annual Performance Review report • Improved reporting coverage in the NHIS/eNHIS • Use of geographical information systems (GIS) for analysis and inclusion within the eNHIS • Inclusion of HIV and TB modules in eNHIS with roll out in selected provinces
Data sources	• Roll-out of the eNHIS • Roll-out of IFMS and Alesco Payroll systems in selected provinces • Development of HRIS, nurse registration system, and research portal • Conducted Demographic and Health Survey 2016–2018 • Implementation of ICD-10 classification of diseases • Implementation of verbal autopsy approaches in selected provinces
Public health and disease surveillance	• Strengthened surveillance of measles and acute flaccid paralysis • Two rounds of malaria surveys conducted • Integrated Bio-behavioural Survey for HIV/AIDS among Key Populations conducted in 2018

The eNHIS, IFMS and Alesco Payroll systems were all now rolled out and are now being used nationally and in most provinces. The eNHIS has increased timeliness of reporting, reduced time spent on data entry, and facilitated consolidation and analysis of data on health services and health outcomes. geographical information systems (GIS), incorporated within the eNHIS, have also enabled spatial analysis of data. The IFMS and Alesco Payroll systems have helped to decentralize financial management to PHAs.

2.3 Ongoing gaps and challenges

While important strides have been made towards strengthening health information and monitoring and evaluation systems, there are persisting gaps and challenges related to human resources, information and communications technology (ICT) infrastructure, fragmented information systems and data quality and use, as outlined below. The *Monitoring and Evaluation Strategic Plan* aims to address these gaps and challenges through approaches and actions outlined in subsequent chapters.

2.3.1 Insufficient human resources with the required skills

One of the most important factors that has impeded effective monitoring and evaluation and use of data for decision-making in the health sector is the lack of skilled staff at the national and subnational levels. This is particularly the case in the domains of data management, analysis and use; epidemiology; and ICT.

The PMRB, which provides leadership and oversight for monitoring and evaluation and HIS,

has 14 established positions, of which six were vacant as of early 2022. In addition, there are only two ICD-10 coders at the national level to do coding of reported morbidities and mortalities, but they are also responsible for other programme areas. With an estimated 60 000 to 70 000 deaths occurring in Papua New Guinea annually, having only two coders is a significant impediment to strengthening mortality surveillance. Similarly, only three PMRB staff are responsible for managing the NHIS/eNHIS, NIHF, DHIS and mortality databases, and preparing the necessary quarterly and annual national reports – in addition to addressing requests for data and specific analyses. Data analyses and report preparation are generally time consuming as data are often manually consolidated due to the fragmented information systems and limitations in ICT infrastructure.

The critical shortage of human resources is also felt at the provincial, district and health-facility levels. For instance, there is currently only one provincial health information officer (PHIO) in each province to oversee data reporting from health facilities and manage provincial data. PHIOs also need further skills building to perform their roles and responsibilities, particularly in the areas of data management and data analysis, visualization and interpretation – as identified by PHIOs themselves during a workshop in September 2021. Systematic training needs assessments have not yet been done for national-level health information/surveillance staff, as well as for PHIOs. At the hospital and health centre levels, there are likewise limited staff for data collection and reporting. Turnover of staff in PHAs and at the health-facility level means that new staff may not have the necessary training before assuming responsibilities for data recording and reporting. Gaps such as low reporting coverage for inpatient data (around 40%) are partly attributed to the lack of skilled personnel to manage and report hospital data.

2.3.2 Limited ICT infrastructure and capacity

Inadequate information communications technology (ICT) infrastructure and capacity is another challenge in Papua New Guinea. There is no reliable server to host HIS and other digital solutions, and hospital networking is non-existent. A draft ICT policy for the health sector has been developed but it is not yet endorsed. Minimum ICT infrastructure standards (such as the necessary hardware and network for connectivity) have not been identified for each level of the health system.

In addition, there is a lack of capacity and resources for the maintenance of ICT infrastructure, support and troubleshooting. Currently three systems – the HRIS, the registration system for nurses and midwives, and the Research Portal – are non-functional due to ICT issues, including the lack of capacity or resources to set up the necessary servers, upgrade firewalls and ensure cybersecurity.

Lastly, despite the potential benefits of ICT in the health sector, such as with m-health, telemedicine, medical imaging and diagnosis, the application of these technologies remains limited in health facilities across Papua New Guinea. The country is in the initial stages of e-health development. Hospitals have narrow electronic medical record (EMR) functionality while the sharing of information among medical departments, health-care institutions, and health providers is challenging due to a range of factors including lack of capacity, ICT infrastructure and financial resources.

2.3.3 Fragmented information systems

Monitoring and evaluation of health sector performance under NHP 2021–2030 will require collecting, linking and analysing data across multiple information systems and data sources.

However, health-related data are currently collected in multiple information systems, such as the NHIS/eNHIS, m-Supply, DHIS and IFMS, which are not interoperable. Data are stored in different formats and common data standards have not yet been established, requiring considerable time to consolidate, link and triangulate data from different systems. While efforts are underway to develop programme-specific modules within the eNHIS for surveillance systems that have traditionally been separate, development of common data standards, data exchange protocols and the establishment of an interoperability layer is critical for linking information systems across the health sector. This will enable the development of a data warehouse that will significantly facilitate access to and analysis of different types of data.

Hospital management information systems are also fragmented, with different software/applications being used that are not interoperable. This poses a significant challenge to the oversight of hospital reporting, ensuring the quality and completeness of data, and ultimately the use of data to improve quality of hospital service delivery.

2.3.4 Variable data quality

Currently, there is no data quality assurance system in place for routinely reported health information, such as for data in the eNHIS/NHIS. While features have been included in the eNHIS software to limit data entry and reporting errors, facility data quality assessments (DQA) or random verifications/spot checks of eNHIS/NHIS data are not conducted regularly. These same issues apply to other HIS.

Findings from limited assessments to date suggest that data quality in both disease surveillance systems and the NHIS/eNHIS is an important issue. A DQA of data reported for TB, HIV and malaria conducted by the Global Fund to Fight AIDS, Malaria and Tuberculosis in 2016 identified discrepancies between source documents in health facilities and reported figures, as well as incomplete data and reporting lags. Discrepancies were due to a range of factors including errors in data recording or transfer of data to reports and application of incorrect indicator definitions. Similarly, findings from NHIS supervisory visits conducted by PMRB in late 2021 and early 2022, which included data quality reviews, show significant variation in data quality in the 10 provinces visited. Of five indicators reported in the NHIS/eNHIS that were reviewed for data quality, only one indicator was reported accurately (based on source documents as the reference) in over half of provinces. Discrepancies between source documents and reported figures were attributed to the same factors identified in the Global Fund assessment, in addition to data not being completely recorded in source documents, data from aid posts not being included in monthly reports, data for a particular month being reported in the next month, and limited time for recording and reporting data (competing clinical duties).

While reporting coverage in the NHIS/eNHIS has ranged around 90% since 2000 and has steadily increased over the years, reporting from larger hospitals, including the national hospital, remains a key challenge. Reporting coverage for inpatient data from the DHIS, for example, is below 50%.

2.3.5 Limited data analysis and use

Another critical challenge is limited analysis and use of data for decision-making at all levels, particularly at the provincial and health-facility levels. Despite the considerable data generated from the various HIS in addition to other sources such as research studies, these data are not analysed and disseminated in a timely and systematic manner. Both at the national and provincial levels, for example, quarterly performance reviews do not routinely involve comprehensive reviews and discussion of data. While Health Sector Performance

Annual Reports (SPAR) have been produced on an annual basis analysing 29 core indicators at the national and provincial levels, it remains unclear how findings are used or discussed at the provincial and lower levels. Standard dashboards monitoring trends in these indicators are not yet widely available or accessible for decision-makers to regularly review and use for planning and implementation. Factors impeding data analysis and use include limited capacities in data analysis, synthesis and interpretation; lack of feedback on data reported; limited availability and/or application of data visualization tools; and recognition of how data are used at higher levels.

At the health-centre level, a record book is to be maintained to plot data and detect trends and patterns. However, data are not routinely plotted in the record book and reviewed. The 2021 NHIS supervisory visits, for example, found that 75% (30/40) of health facilities visited in 10 provinces did not use the health-facility record book or plot data in the Expanded Programme on Immunization (EPI) monitoring charts to review vaccination coverage. The supervisory visits also found that health-facility staff do not routinely review the monthly public health bulletin published in the eNHIS that provides an overview of trends of key indicators (discharges and deaths, maternal and child health, immunizations, outpatients) based on data entered in the eNHIS. The lack of analyses of data and the non-use of the tools was largely attributed to not knowing how to use the data and the value of doing the analyses, as well as competing work priorities limiting time available.

Lastly, while a Medical Research Advisory Council is in place to review and approve research in the country, to date there have been limited arrangements in place to ensure that research findings are communicated to programme implementers and policy-makers so that they can inform decision-making. In addition, research undertaken is not always aligned with priorities of the National Health Plan or needs of public health programming and operations.

2.3.6 Coordination with stakeholders within and beyond the health sector

Related to the issue of fragmentation of HIS and the generation of quality data is coordination with stakeholders within and beyond the health sector. Systems such as those for CRVS require close coordination with stakeholders outside the health sector, namely the PNGCIR and the National Statistics Office (NSO), to ensure that data on births and deaths are accurately captured and analysed to generate national vital statistics. This coordination however, continues to be suboptimal. A National CRVS Committee has been established bringing together all necessary stakeholders and is mandated to meet quarterly. Yet, these meetings have not always been regular and when held, there may be challenges with achieving quorum. Similarly, an e-Health Steering Committee has been established by NDoH to bring together key actors working in e-health, including the Department for Information, Communication and Technology (DICT), but the same challenges persist in ensuring regularity of meetings and following up on or implementing recommendations. Underpinning the issues of effective coordination are the lack of necessary legislative instruments (for example bills or acts) to mandate collaboration between various stakeholders. The Civil and Identity Registration Bill 2020, which would formalize relationships between NDoH, PNGCIR and NSO and require information sharing, has not yet been endorsed by Parliament.

3. MONITORING AND EVALUATION FRAMEWORK

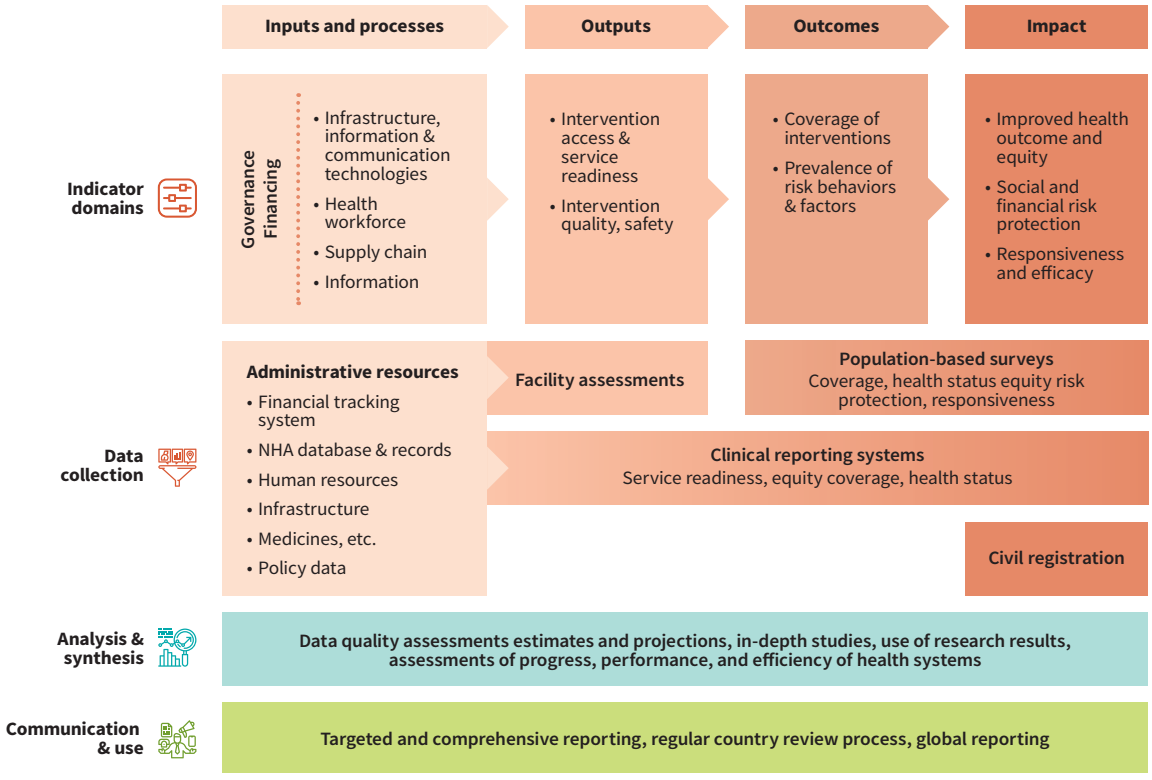
3.1 Overview

This Monitoring and Evaluation Framework, which is part of the *Monitoring and Evaluation Strategic Plan* for NHP 2021–2030, outlines a set of indicators to measure key health sector inputs, outputs, outcomes and overall impact. Measurement of the indicators will support strategic planning, operational tracking and evidence-based decision-making, as well as accountability and transparency in the achievement of the targets, objectives and goals of NHP 2021–2030.

The Framework was guided by the *International Health Partnership Common Monitoring & Evaluation Logical Framework* (Fig. 2), with input, process, output, outcome and impact indicators identified. It is structured around the five KRAs of NHP 2021–2030, with an overall focus on monitoring progress towards universal health coverage (UHC) and equity given the central theme of NHP 2021–2030, which is "leaving no one behind". Monitoring of equity will be undertaken by collecting data disaggregated by key demographic (age and sex), geographic (urban, rural and regional) and socioeconomic (wealth and education) stratifiers, in addition to administrative disaggregations (for example, national, provincial, district), where relevant and feasible.

The subsequent sections provide further details on indicators selected, data sources, analysis and synthesis, and dissemination of data collected.

Fig. 2. International Health Partnership Plus (IHP+) Common Monitoring & Evaluation Logical Framework



Source: Adapted from Strategizing national health in the 21st century: a handbook. Geneva: World Health Organization; 2016.

3.2 Indicators

The Framework comprises a total of 200 indicators (Annex 1), identified following extensive consultations and several rounds of review with programme managers, monitoring and evaluation experts, and other key stakeholders, led by PMRB at NDoH.

Key principles guiding selection of indicators were:

- The establishment of a single-sector framework that meets the needs of all stakeholders including central agencies and development partners.
- Identifying indicators that are specific, measurable, achievable, results oriented and time bound, as well as relevant to NHP 2021–2030 and programme needs.
- Identifying indicators that can adequately reflect achievements of the health sector, recognizing that longer-term impact indicators will also reflect wider socioeconomic development.
- Ensuring a mix of indicators to measure inputs and processes, outputs, outcomes and impact with an emphasis on outcomes to measure performance at the service-delivery level in line with priorities of NHP 2021–2030 .
- Ensuring alignment and consistency with globally and regionally recommended indicators, namely those for the Sustainable Development Goals (SDGs) and UHC to facilitate international comparisons and reporting commitments.
- Identifying indicators that use, wherever possible, well-established sources of information to minimize the reporting burden and enhance data quality.

The indicators are grouped by KRA and objective and are classified by type (input, process, output, outcome and impact) (Table 2). A sector-level, rather than programme-level, perspective was adopted to determine the type of indicator.[3]

In addition, disaggregations, data sources, frequency of reporting, responsible entity for data collection and level of reporting, as well as national baselines and targets, are detailed for each indicator. Where relevant and feasible, indicators will be disaggregated by the social stratifiers of age, sex, geographical residence (urban or rural), education level and income quintile to better monitor achievement of NHP 2021–2030 priorities, as well as UHC and the SDG targets.

Annual targets for indicators were agreed upon after ensuring alignment with the goals, objectives and targets of existing national strategic plans for different health programmes. Individual provinces will be expected to set their own targets in consultation with their counterparts of national programmes. National and provincial targets will be reviewed regularly over the period of NHP 2021–2030 to ensure they are still relevant and realistic.

Indicators included in the Framework will be reviewed regularly, such as every three years, over the implementation period of NHP 2021–2030 to ensure they continue to be relevant, feasible to collect and meet the needs of different stakeholders in the health sector for measuring performance. During these reviews, indicators may be modified or removed based on monitoring and evaluation needs.

3 Viewing from the sector level provides a slightly different hierarchy to that of the programme level. For example, for the immunization manager, the outcome of the programme may be immunization coverage, and the impact may be the incidence of vaccine preventable illness; whereas from the sector perspective, the impact would be focused on child mortality, whereas immunization coverage is more an output from this level.

Table 2. Overview of indicators included in the Monitoring and Evaluation Framework for *the National Health Plan 2021–2030*

Indicator type	KRA 1 Healthier communities through effective engagement	KRA 2 Working together in partnership	KRA 3 Increased access to quality and affordable health services	KRA 4 Address disease burden and targeted health priorities	KRA 5 Strengthen health system	Total
Input/ process	3	4	2	3	39	51
Output	5	2	0	26	9	42
Outcome	0	1	6	59	1	67
Impact	0	0	0	39	1	40
Total	**8**	**7**	**8**	**127**	**50**	**200**

3.3 Data sources

Data for indicators outlined in the Monitoring and Evaluation Framework, including baselines, will be collected based on quantitative and qualitative methodologies. Key sources are:

- NHIS/eNHIS in which the Government, the church, NGOs and civil society organizations run health facilities (excludes privately owned health facilities) report on health services delivered and patient outcomes.
- DHIS for hospital reporting on morbidity and mortality.
- Programme-specific surveillance systems and programme reports, such as for disease surveillance (outbreaks, TB or HIV).
- National and provincial quarterly and annual administrative and monitoring reports.
- Government of Papua New Guinea (GoPNG) budget documents, provincial expenditure reports, National Economic and Fiscal Commission (NEFC) expenditure reports, health expenditure reviews, and national health accounts for data on health financing and expenditures.
- Payroll data for data on human resources in health.
- NIHF that collects data on physical assets and infrastructure annually.
- Health-facility assessments and clinical reports that provide information on availability, readiness and quality of services.
- Programme evaluation or independent review reports that provide information on implementation of activities and outputs and outcomes achieved.
- Operational research and special studies undertaken by programmes and research institutes such as the malaria indicator surveys or EPI cluster surveys.
- Population-based surveys such as the national population census, national household surveys, and the Demographic and Health Survey (DHS) that report data on health outcomes and impact.

- CRVS that provide information about birth and deaths.

Noting that each health information source has its own limitations, the most suitable source will be determined after considering factors such as coverage, data quality and year of data, in addition to the type of reporting and frequency. For example, the NHIS may be used to track the proportion of pregnant women having at least one antenatal care visit for quarterly and annual reports, while data from the DHS may be used for midterm and end-term reporting for the same indicator given the frequency at which these surveys are conducted. Where feasible and appropriate, data will also be collected from different sectors, including education, infrastructure, and water and sanitation, and the data will be incorporated into monitoring and evaluation procedures to support data from the health sector.

Data reporting forms and tools are available to collect data from the above HIS and data sources. However, these will need to be reviewed and, where needed, revised to ensure that the data required under the new Monitoring and Evaluation Framework can be collected. Data collection procedures will also be reviewed with the aim of minimizing the reporting burden, and the necessary guidelines and the standard operating procedures (SOPs) developed to guide collection and reporting.

3.4 Reporting levels and frequencies

Data for the indicators in the Monitoring and Evaluation Framework will be collected routinely or periodically depending on the type of indicator and data source. Input, process, output and selected outcome indicators that are reported through the NHIS or annual NDoH, provincial or programme reports, for example, will be collected and reported on a quarterly or annual basis. Data for other outcome and impact indicators, which are mostly measured through population-based surveys or special studies, will be reported periodically, every two to five years. Data for these indicators will be reviewed during the midterm and end-term evaluations and maintained in a central database by PMRB.

Of the 200 indicators in the Monitoring and Evaluation Framework, 135 indicators are to be collected and reported on an annual basis based on data from sources such as NHIS, NDoH, provincial and programme reports. Of the annual indicators:

- Thirty-seven are "core" national indicators that will be reported in the annual Sector Performance Assessment Reports (SPAR). The 29 SPAR indicators reported during the period of the previous NHP were retained and an additional eight indicators selected to reflect the new priorities of NHP 2021–2030 and taking into account the feasibility of data collection and the importance to monitoring of performance.
- Seventeen indicators, from the 37 core national indicators, are for monitoring monthly by NDoH Senior Executive Management (SEM) monthly. A subset of the national indicators has been selected to facilitate monitoring by senior management and decision-making, considering importance to priorities of NHP 2021–2030 and the frequency of data collection. Selected indicators outside of the Monitoring and Evaluation Framework (such as leading causes of morbidity and mortality) may be included for SEM monitoring based on the needs for decision-making.
- Thirty-five indicators are for monitoring by provinces on at least an annual basis, identified to reflect priorities of NHP 2021–2030 and their importance to and feasibility for subnational monitoring. These indicators will serve to signpost sector performance at the provincial level and help inform programme planning and implementation and service improvement discussions. The indicators will

be included in annual PHA reports and also in planned provincial dashboards to facilitate monitoring and analysis. Thirty of the 35 indicators are also part of the 37 core national indicators and will serve as a basis for the national values.

- For the remaining 93 annual indicators that are not part of the 37 national core indicators or 35 provincial indicators (see Annex 1), programmes will take the lead to report on these in at least annual reports. Data for these indicators will be managed in a central database by PMRB in collaboration with programmes.

As outlined in Section 3.2, indicators in the Monitoring and Evaluation Framework will be reviewed periodically and may be modified depending on health sector needs. As such, the indicators classified for annual and periodic collection – and those considered as national "core", provincial and programme indicators – may change over the period of NHP 2021–2030.

Table 3. List of national "core" indicators and provincial indicators in the Monitoring and Evaluation Framework of the National Health Plan 2021–2030 for annual reporting

Indicator domain[1]	Indicator	Key result area	National indicator	Provincial indicator	SEM indicator	Data source
Input & process indicators						
Governance, Financing, Infrastructure, Information & Communication Technologies, Health workforce, Information, Supply Chain	Number of village health assistants per 1000 population	1	X	X		PHA reports
	Proportion of outbreaks/ urgent events identified and reported that are assessed by NDoH/PHA within 48 hours of receiving the report	4	X		X	Surveillance reports
	Total budget allocation – Health Services Improvement Programme (HSIP) and GoPNG per capita	5	X	X		NDoH, Treasury Department reports
	Proportion of health facilities that have running water and sanitation	5	X	X		NIHF
	Proportion of health centres and hospitals with a functioning radio or telephone or mobile phone	5	X	X		NIHF
	Percentage of months that health facilities do not have stock of all selected medical supplies for more than a week in the month	5	X	X	X	NHIS/eNHIS
	Proportion of general hospitals and provincial hospitals that have at least 14 of 14 specialities	5	X	X		National Health Service Standards reports
	Density of health workers per 10 000 population (stratified by cadre)	5	X	X		NDoH human resources records
	Number of health facilities with m-Supply system	5		X		m-Supply reports
	Proportion of Government (functional grants) and development partner contributions that are expended	5	X	X		NDoH, Treasury Department reports
	Provincial health expenditure (Government and development partner contributions) as a proportion of estimated minimum health expenditure required	5	X	X	X	NDoH, Treasury Department reports
	Proportion of health facilities that received at least one supervisory visit during the year	5	X	X		NHIS/eNHIS
	Outpatient service utilization per capita	5	X	X	X	NHIS/eNHIS
	Proportion of health posts open	5	X	X		NHIS/eNHIS

Indicator domain[1]	Indicator	Key result area	National indicator	Provincial indicator	SEM indicator	Data source
Output Indicators						
Intervention access & service readiness Intervention quality & safety	Outreach clinics per 1000 population <5 years	1	X		X	NHIS/eNHIS
	Proportion of partner coordination annual meetings held at the provincial and national levels	2	X	X	X	PHA reports
	Proportion (%) of total provincial hospital births that are referred from rural centres per 1000 births	4	X	X		NHIS/eNHIS
	Family planning use (couple-years of protection)	4	X	X	X	NHIS/eNHIS
	Proportion of children <5 years diagnosed with fever who are treated with appropriate antimalaria drugs	4	X			Malaria Indicator Survey
	TB treatment success rate for all forms of TB bacteriologically confirmed and clinically diagnosed, new and relapse cases	4	X	X	X	TB programme reports
	Proportion of provincial and district hospitals, and health-centre quality assured labs as per the national standards	4	X			Programme reports
	Proportion of pregnant women screened for syphilis	4		X		eNHIS/ Serosurveys
	Coverage of treatment for latent tuberculosis infection (LTBI): a. HIV-positive people (newly enrolled in care) on TB preventive treatment	4		X		TB programme reports
	b. Percentage of children <5 years who are household contacts of bacteriologically confirmed TB (%)	4		X		TB programme reports
	Proportion of health facilities reporting complete and timely weekly disease surveillance report	4		X		Surveillance reports
	Inpatient admissions per capita	5	X	X	X	NHIS/eNHIS
	Percentage of product batches tested that met quality control standards	5	X			Medical supplies reports

Indicator domain[1]	Indicator	Key result area	National indicator	Provincial indicator	SEM indicator	Data source
Outcome Indicators						
Health service coverage, prevalence of risk behaviours/ factors	Universal health coverage (UHC) index of service coverage	3	X			UHC reports
	Measles – measles-containing-vaccine, first-dose (MCV1) –immunization coverage	4	X	X	X	NHIS/eNHIS
	Pentavalent 3 immunization coverage	4	X	X	X	NHIS/eNHIS
	Percentage of deliveries attended by skilled health professionals (supervised birth at health facilities)	4	X	X	X	NHIS/eNHIS
	Proportion (%) of pregnant women having at least 4 antenatal care (ANC) visits	4	X	X		NHIS/eNHIS
	Percentage of pneumonia deaths in children <5 years at health facilities	4	X	X	X	NHIS/eNHIS
	Number of children 0–59 months who are underweight with the Z score of <-2 weight for age	4	X	X	X	NHIS/eNHIS
	Underweight (<2500 gm birth as a proportion of total births (Proportion of low birth weight among newborns)	4	X	X		NHIS/eNHIS
	Incidence of malaria cases per 1000 populations	4	X	X	X	NHIS/eNHIS
	Proportion of children sleeping under an insecticide-treated bed net	4	X			Malaria Indicator Survey
	HIV confirmed prevalence in pregnancy (age 15–24) (%)	4	X	X		HIV programme reports
	Proportion of HIV-infected pregnant women who receive antiretroviral medicines to reduce the risk of mother-to-child transmission	4	X	X	X	HIV program reports
	TB case detection/notification rate for all forms of TB per 100 000 population	4	X	X	X	TB programme reports
	Incidence of diarrhoeal disease in children <5 years per 1000 children <5 years	4	X	X		NHIS/eNHIS
	Injury presentations by type (road traffic accident and others) per 1000 population	4	X	X		NHIS/eNHIS

[1] As outlined in the International Health Partnership Plus (IHP+) Common Monitoring & Evaluation Logical Framework

3.5 Data management

NDoH is responsible for all legislation, policies, regulations and standard operating procedures (SOPs) governing data management, ranging from data access and storage to data cleaning. SOPs have been developed for reporting data in the various health information systems (HIS). However, there are gaps in compliance with procedures for data collection, storage, cleaning and quality control at all levels of the health system, and the SOPs are also outdated. To help address these gaps, NDoH will develop updated SOPs for routine data collection and management that will cover how data are to be compiled, stored, transmitted and submitted in routine HIS, data quality assurance, and specific roles and responsibilities in data management. Capacities in data management will be further strengthened through training on data management procedures for health information staff at all levels, supportive supervision and feedback mechanisms.

Additionally, over the period of NHP 2021–2030, NDoH will set up a data warehouse at the national level to facilitate data access, triangulation and analysis by stakeholders at the national, provincial, district and health-facility levels. The data warehouse will comprise data from all sources including the NHIS/eNHIS, facility assessments, programme disease surveillance systems, population-based surveys, civil registration and the census. To achieve this, common data standards will be established and interoperability of the different systems ensured (see Chapter 5 for further details).

Significant efforts will be made over the lifetime of the *Monitoring and Evaluation Strategic Plan* to improve data quality. This will be done through routine – at least annual – data-quality reviews as part of supervisory visits, particularly for data reported in the NHIS/eNHIS. Larger data-quality assessments – larger in geographical scope, or involving verification of more indicators – will be conducted periodically for the NHIS/eNHIS as well as specific programme surveillance systems. Reviews will be supplemented by mechanisms at the national level to institutionalize data quality, such as through defining national data-quality standards, routine monitoring of data-quality indicators, and inclusion of data quality within performance monitoring for relevant institutions and individual positions.

3.6 Data analysis, dissemination and use

Analysis, dissemination and use of data generated from M&E is essential for informing programme planning and implementation, as well as policy-making. Analysis of data from various sources, namely routine information systems, will be promoted and strengthened at the health-facility, district, provincial and national levels through mechanisms such as facility audits or assessments, and development of quarterly and annual performance reports at NDoH, and by PHAs (see Chapter 4 for details). Visualization tools and data products will be developed to summarize analyses and disseminate data including: national, provincial and programme-specific dashboards, annual SPAR reports and district health profiles, data bulletins, annual NDoH and PHA health performance reports, and annual programme reports. Discussions or orientations will be held on these data products/reports to support analysis and interpretation and to promote use of data. In addition, capacity-building activities will be undertaken to improve analytical skills for national and subnational staff based on needs assessments (see Chapter 5 for details).

Data use will be promoted through aligning M&E with planning and performance cycles. Efforts will be made to ensure that Monitoring and Evaluation Framework indicators are cascaded down into NDoH and PHA Corporate Plans and Annual Implementation Plans, or that operational indicators in these plans are aligned with the Monitoring and Evaluation

Framework. In addition, NDoH quarterly review templates will be revised and PHA annual reporting templates developed to include relevant Monitoring and Evaluation Framework indicators and thereby ensure that discussions of data occur during national and provincial reviews. PMRB will also conduct necessary data analyses and develop data products to inform the review discussions. Public health and curative health programmes will be supported to analyse and review programme data, where needed, such as programme reviews and meetings of advisory committees. Lastly, mechanisms will be established for the provision of regular feedback from the national level to PHAs, and then to district health offices and health facilities on data reported to ensure that all stakeholders understand the value and importance and how data are being used.

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4. IMPLEMENTATION STRATEGY

Successful implementation of NHP 2021–2030 requires effective monitoring and evaluation (M&E) by everyone at all levels.

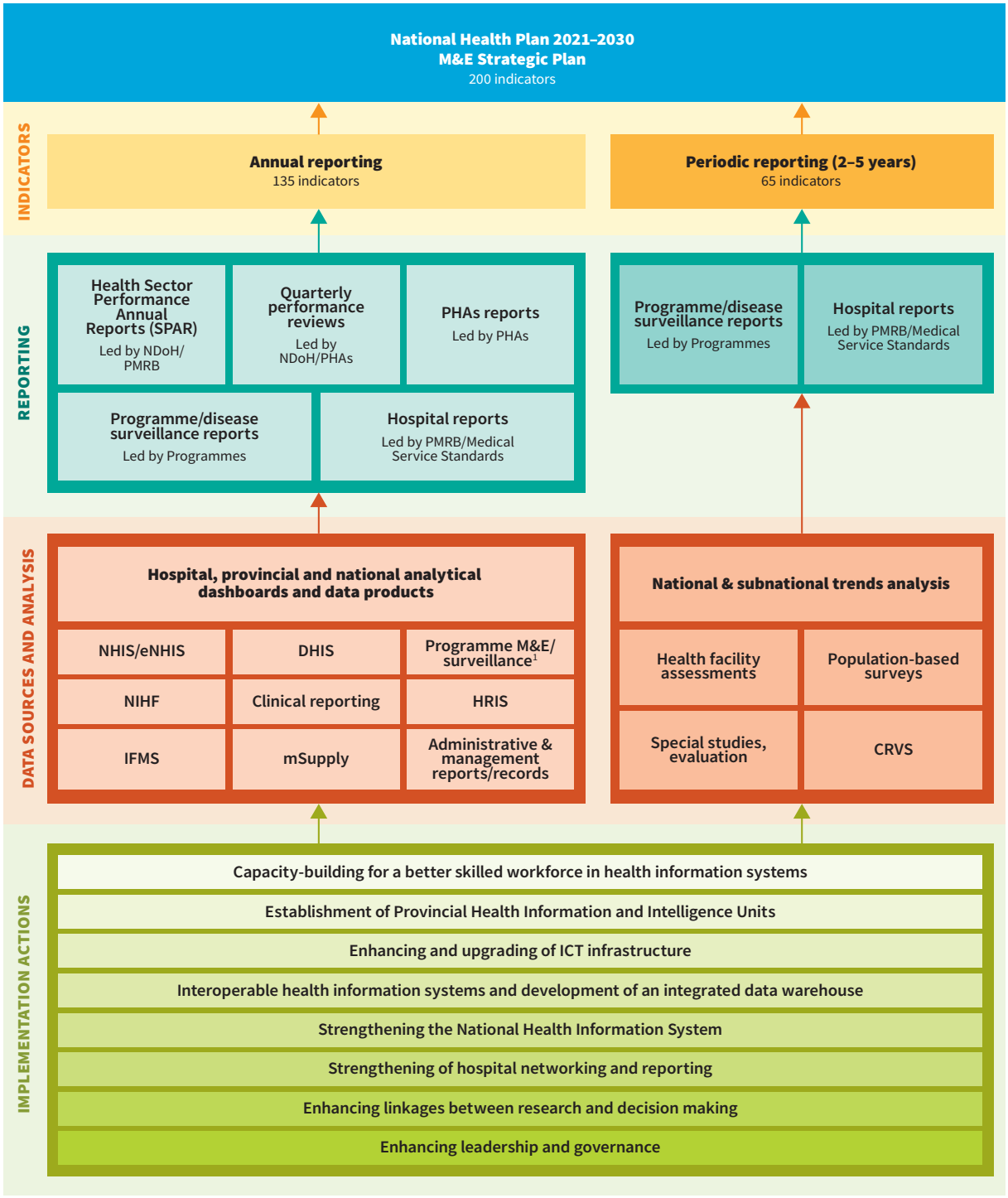
Monitoring is a routine internal function of the health sector that involves identifying appropriate indicators, and setting up and strengthening systems to collect, report, analyse, disseminate and ensure the use of data from the indicators. In the context of NHP 2021–2030, monitoring involves monthly, quarterly and annual reviews or reporting.

Evaluation is a periodic and retrospective exercise that involves reviewing what NHP 2021–2030 and health sector intended to achieve and what has been achieved, and identifying reasons for successes and any gaps in implementation. Midterm (2025) and end-term evaluations (2029) will be conducted for the Plan.

According to The National Administration Act 1997, monitoring should be conducted by the National and Provincial Health Boards and District Health Committees. The National Health Board is mandated to report to the Minister for Health and HIV/AIDS who makes an annual statement to the Parliament. The central agencies also require the sector to describe their progress and commitment towards implementing the globally agreed SDGs and the *Papua New Guinea Development Strategic Plan 2010–2030*. Additionally, the steps taken should be regularly documented in collaboration with development partners as required by the Health Sector Development Programme (HSSDP).

The overall approach to M&E for NHP 2021–2030 and the health sector is summarized in Fig. 3, with specific details provided in the sections below and Chapter 5.

Fig. 3. Overview of the monitoring and evaluation approach for the National Health Plan 2021–2030, Papua New Guinea



[1]Programme specific surveillance systems, examples include those for HIV/AIDS and TB, GoData for disease outbreaks.

4.1 Roles and responsibilities for monitoring and evaluation

4.1.1 National level

At the national level, PMRB will have overall responsibility for coordinating monitoring and evaluation and HIS strengthening activities for NHP 2021–2030, collaborating closely with other departments at NDoH, PHAs, development partners and other key stakeholders. Specifically, PMRB will:

- develop the necessary guidelines, protocols, manuals and tools to facilitate data management and analysis and dissemination for the NHIS/eNHIS, DHIS and HMIS;
- liaise with programmes and PHAs for the collection and consolidation of data as required under the Monitoring and Evaluation Framework;
- coordinate the development of annual national and provincial SPAR reports;
- develop reporting templates and dashboards for NDoH and PHAs for quarterly performance reviews;
- maintain a central database for the consolidation of data from different sources for the Monitoring and Evaluation Framework;
- develop research agendas and coordinate review and approval of research proposals to support implementation of NHP 2021–2030;
- promote use of data for strategic programme and policy decisions;
- provide necessary training, capacity-building and supervision to programme and sectional Managers and their M&E officers within NDoH, PHAs and districts, including key NDoH implementing partners; and
- coordinate activities of partners working in health information.

Programmes at NDoH will be responsible for oversight of M&E, surveillance, data analysis, dissemination and use within their respective areas. PMRB will liaise with programmes to strengthen programme reporting to the eNHIS, DHIS and HMIS, where relevant, and for review and consolidation of data for SPAR as well as other national and global reports.

The national e-Health Steering Committee, e-Health Technical Working Group, M&E Technical Working Group and Medical Research Advisory Committee, which are either chaired/co-chaired or have participation of the PMRB, will support achievement of the vision, goal and objectives of this *Monitoring and Evaluation Strategic Plan*. Across these committees and working groups, functions include reviewing, approving and overseeing e-health initiatives in Papua New Guinea; guiding M&E and health systems strengthening activities; and advising on research agendas. These committees meet at least on a quarterly basis and have a wide membership of different stakeholders.

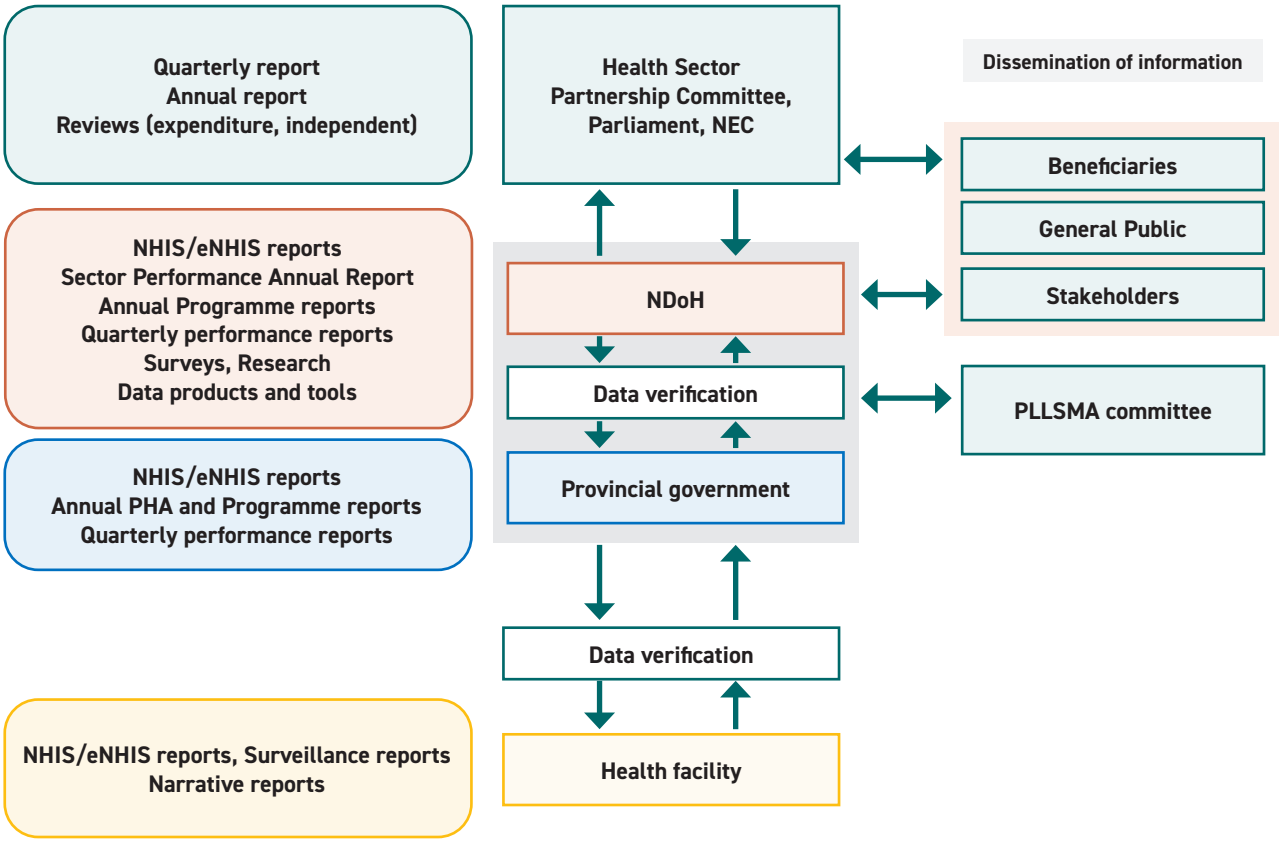
4.1.2 Provincial and district (subnational) levels

PHAs will have overall responsibility for coordinating M&E activities and health systems strengthening activities for NHP 2021–2030 within their provinces, collaborating closely with NDoH, other provincial departments and key stakeholders working in health at the provincial level. This includes development of M&E plans, printing and distribution of data and reporting forms or tools, ensuring timely reporting of data from health facilities in the province, conducting supervisory visits and reviewing data quality, and development of annual reports. District Health Authorities are encouraged to support PHIOs to conduct follow-ups, and verify and audit data of health facilities within their districts.

4.1.3 Health facilities

Health facilities (health centres and above) are responsible for recording, reviewing and entering data into the various HIS that collect health-facility data. They will also routinely analyse and use data to inform their service delivery plans and targets (Fig. 4).

Fig. 4. Overview of roles and responsibilities for monitoring and evaluation in the health sector



NDoH = National Department of Health

PHA = Provincial Health Authority

PLLSMA= Provincial and Local-level Services Monitoring Authority

4.2 Monitoring mechanisms

4.2.1 Routine quality improvement audits or assessments – hospitals and health centres

Monthly death audits are routinely performed in most hospitals. It is proposed that, where possible, routine audits of human resources, finances, medical supplies, and service quality or quality improvement assessments should also be regularly conducted under the leadership of clinical consultants and with guidance from NDoH. Health centres and community health posts will undertake reviews of service coverage and resources available, under the guidance of Officers-in-Charge. Where possible, these assessments should be integrated

across programmes to minimize burden for health- facility staff. These routine audits or assessments at the health-facility level will ensure regular monitoring of resources, services delivered and outcomes achieved, and enable timely identification of any issues or bottlenecks for corrective measures to be implemented. Verification of the audits or assessments will be conducted during supervisory visits from PHAs or NDoH to ensure that these are conducted regularly and to review the data collected.

4.2.2 Quarterly performance reviews

Based on NHP 2021–2030 and programme-specific strategic plans, NDoH and PHAs will develop Annual Implementation Plans (AIPs) outlining specific targets and activities to achieve the targets. Quarterly performance reviews will continue to be undertaken at the national and provincial levels, involving a range of stakeholders, to assess progress against the AIPs and NHP 2021–2030 (Table 4). The reviews will include discussions on the national "core" indicators and provincial indicators identified in the Monitoring and Evaluation Framework, and findings will help guide decision-making on programme planning and implementation, as well as resource allocation and disbursement of budgets.

National level

At NDoH, quarterly reviews of performance will be conducted, as they have in the past. Quarterly review templates will be reviewed and revised to include the national core indicators and other required information for monitoring implementation of the specific programmes, NHP 2021–2030 and health sector activities. Dashboards and any data products developed by PMRB will be used to facilitate discussions during these reviews.

Provincial level

Quarterly performance reviews at the provincial level will focus on progress against the provincial indicators identified in the Monitoring and Evaluation Framework, as well as any other specific priorities and targets identified by provinces. Guidance on using and discussing data during provincial quarterly reviews will be developed, in addition to provincial dashboards to monitor the 35 provincial indicators. The reviews will involve participation of the PHA Chief Executive Officer, PHA directors, the provincial hospital manager, provincial health programme managers, district health managers, Church health service providers and other relevant non-state providers in the province.

In addition, a standard template will be developed for annual PHA reports to ensure that the necessary indicators are reported and additional M&E information captured. Relevant data from these annual reports will be consolidated in a central database managed by PMRB.

Table 4. Overview of the quarterly performance review approach as part of monitoring of the National Health Plan 2021–2030 at the national and provincial levels, Papua New Guinea

	Provincial level	National level
Purpose	To identify progress against provincial Annual Implementation Plans, or AIPs, (activities and targets), analysis of strengths and poor performance or delays, resource gaps	To identify progress against program annual activity plans (activities and targets), analysis of strengths and poor performance or delays, resource gaps
Participants	Provincial Health Authority Chief Executive Officers and Directors, and Provincial Hospital Manager District Health Managers, Church agencies, relevant provincial programme managers	Secretary of Health, Deputy Secretaries of Health and Executive Managers Programme managers and relevant programme staff, Port Moresby General Hospital, Provincial Health Authority Chief Executive Officers and Directors (if invited)
Information sources	NHIS quarterly report, provincial dashboard, hospital morbidity and mortality reports, programme surveillance, reports and surveys, programme-specific assessments or studies, administrative/expenditure reports, information/data from sentinel sites for monitoring of certain programmes and events	NHIS quarterly report, senior executive management dashboard hospital morbidity and mortality reports, programme surveillance, reports and surveys, programme-specific assessments or studies, administrative/expenditure reports

4.2.3 Health Sector Performance Annual Reports (SPAR)

Annual performance of the health sector will be assessed against the 37 national core indicators outlined in the Monitoring and Evaluation Framework and documented in the Health Sector Performance Annual Reports. This continues the practice from NHP 2011–2020 when SPARs were published annually with national trends and provincial comparisons. The SPAR consists of consolidated inputs from various programmes and departments at NDoH, with development coordinated by the Strategic Policy and Planning Division/PMRB. Provincial analyses are presented showing provincial performance, as well as provincial trends over time. The methodology used to assess provincial performance in the SPAR will be reviewed by PMRB and the criteria/standards used revised, if needed, to ensure that outputs are meaningful towards tracking progress and aligned with the objectives of NHP 2021–2030.

Over the life of NHP 2021–2030, SPAR analyses will be further enhanced through drawing on a range of visualizations and presenting data disaggregated by social stratifiers (for example, sex, age, income and residence) where relevant and feasible. Increased emphasis will be

given to identifying reasons for progress and gaps/challenges and recommendations for planning and implementation, in collaboration with NDoH programmes and departments. Once published, efforts will be made by PMRB to orient and discuss findings with different target audiences, namely PHAs.

4.2.4 Annual PHA reports

Provincial Health Authorities will develop and submit annual reports to summarize progress in health programmes and outcomes based on the Monitoring and Evaluation Framework provincial indicators and any other indicators identified by the province. PMRB will develop standard templates for the annual reports, and provincial dashboards can be used as inputs for annual reports.

4.2.5 Hospital reports

Annual hospital reports will be published based on DHIS and clinical data to track trends in hospital morbidity, mortality and other clinical indicators. PMRB will work with the Medical Standards Division to identify a core set of clinical indicators, aligned with the National Health Service Standards (NHSS), for reporting by hospitals. These indicators will complement the Monitoring and Evaluation Framework indicators and support the Medical Standards Division in monitoring implementation of the National Health Service Standards (NHSS), as well as clinical decisions and service improvement at the hospital level.

4.2.6 Programme and disease surveillance reports

All health sector programmes are expected to have M&E indicators in their national programme strategies, which are aligned with the NHP 2021–2030 Monitoring and Evaluation Framework. All programmes were consulted in the development of the Framework, and further consultations and briefings will be held on monitoring and reporting requirements as detailed in this Strategic Plan. Programmes will publish their own annual reports or disease surveillance reports to track progress against indicators in the Monitoring and Evaluation Framework and any other indicators identified by the programme.

PMRB will be responsible for consolidating data from quarterly programme performance reviews and annual reports into a central database, as well as soliciting the necessary data and inputs for the annual SPAR. PMRB will provide guidance to programmes on any changes required to collect programmatic data for the Monitoring and Evaluation Framework and the required training, and to ensure further alignment and linkages with the NHIS/eNHIS.

4.2.7 Alignment of monitoring with planning and budgeting cycles

The quarterly and annual performance review cycle is consistent with the GoPNG planning and budgeting cycle to ensure that performance information is available to planners in a timely manner. This creates an entry point for reporting into the planning/budget cycle and allows responsiveness to performance.

Table 5. GoPNG Planning and Budgeting Cycle

Month	Planning & budgeting	Review cycle
January	Pre-planning and budgeting for the coming year	Follow-up of outstanding data, finalization of expenditure data (October-September), Annual Sector review, Finance and Planning Committee (FPC) meeting Project Implementation Committee (PIC) meeting
February	Pre-planning and budgeting for the coming year	Annual Sector Review report finalized, 4th quarter Review (of previous year), Performance Monitoring Committee (PMC) meeting, FPC meeting, PIC meeting
March	Annual Sector Review Report available, pre-planning and budgeting for the coming year	Health Sector Partnership Committee (HSPC) meeting, PIC meeting, FPC meeting
April	Pre-planning and budgeting for the coming year	Quarterly review, HSPC, Development Partner Summit, PIC meeting, FPC meeting, 1st quarter review (current year)
May	Pre-planning and budgeting for the coming year	PIC meeting FPC meeting
June	Vetting of plans (in view of performance) and budget for the coming year	National Health Conference (every other year) FPC meeting, PIC meeting
July	Vetting of plans and budget for the coming year	2nd quarter review (current year), PMC meeting FPC meeting, PIC meeting
August	Plans submitted to Department of Treasury for the coming year	FPC meeting, PIC meeting
September	Review and work on feedback from Department of Treasury on plans and budget for the coming year	FPC meeting, PIC meeting
October	Review and work on feedback from Department of Treasury on plans and budget for the coming year	3rd quarter review (current year) FPC meeting, PIC meeting
November	Review and finalize plans for the coming year (after NDoH/provincial comments & budget allocation)	Development Partner Summit, FPC meeting, PIC meeting
December		Closure of NHIS data (October–September) FPC meeting, PIC meeting

4.3 Assessments of Performance

The monitoring mechanisms outlined above will help to assess PHA performance over time in achieving provincial targets and the objectives of NHP 2021–2030. Provincial dashboards, quarterly performance reviews and PHA annual reports all will serve as tools for monitoring and reviewing progress, and to inform programme and health service planning. Provincial performance analyses conducted for the SPAR will enable PHAs to better place themselves vis-à-vis other provinces and to identify areas requiring further support. In addition, discussions of relevant M&E indicators will be included during meetings of various governance bodies (for example national steering committees or technical working groups for programmes) to ensure regular monitoring of trends and help identify actions for service and programme improvement.

Lastly, it is proposed to conduct National Health Conferences on a biennial basis to present and discuss progress in implementation of NHP 2021–2030, review national and provincial health priorities and inform future directions.

4.4 Research

Medical and public health research is guided by the National Health and HIV Research Agenda (NHHRA) and the Health Research Policy, which are critical in advancing knowledge in improving public health programmes and service delivery. At the national level, research coordination will be done through the Papua New Guinea Medical Research Advisory Council (MRAC) and its subcommittees at the PHA level and other major research institutions. MRAC acts as the National Ethical Clearance Committee for all health and medical related research, including clinical research, biomedical studies, and operational and health systems research. MRAC will review and approve all types of research proposals involving human participants with a view to safeguard the dignity, rights, safety and well-being of all actual or potential research participants.

Research findings constitute an important information source for tracking progress in implementation of NHP 2021–2030 and measuring impact. The National Health and HIV Research Agenda will therefore be reviewed and revised to ensure alignment with priorities of NHP 2021–2030. Coordination with relevant stakeholders/partners working in research will be maintained to identify research that could help address M&E operational and implementation bottlenecks. A functional research portal will be set up to ensure interested stakeholders have access to information on past and ongoing research projects. Knowledge translation will also be emphasized under this Strategic Plan to ensure that research results are used as an evidence base to inform decisions on reviews, amendments and recommendations for health policies and other regulations for NDoH. This will be facilitated through close of monitoring of research projects, dissemination of information products and publications summarizing research, and organization of research seminars or fora to bring together researchers, decision-makers and other relevant stakeholders.

4.5 Evaluations

Midterm and final evaluations of NHP 2021–2030, coordinated by NDoH, will be conducted in 2024 and 2029, respectively, to assess progress in implementation, and outcomes and impact achieved. All indicators and targets in the Monitoring and Evaluation Framework will be reviewed, including the outcome and impact indicators that are measured on a periodic (and not annual) basis. These evaluations will also include an implementation review of the

Monitoring and Evaluation Strategic Plan.

The midterm evaluation in 2024 will focus on progress in implementation with short- to medium-term changes serving as a useful tool to inform subsequent directions. Findings from the review will be used to adjust priorities and objectives and identify recommendations for enhanced implementation during the final half of the life of NHP 2021–2030.

The final evaluation in 2029 will be a comprehensive analysis of progress and performance for 2021–2030, building on the annual performance reviews and midterm evaluation and incorporating findings from special research studies, surveys and programme-specific evaluations. This evaluation will address the extent to which targets, outcomes and objectives have been achieved; positive and negative unplanned results of the programme; effectiveness of programme activities, success stories; and the most significant changes that can be attributed to the implementation of NHP 2021–2030.

The evaluation designs will rely on the use of multiple data sources in time and type to determine the impact. Descriptive statistics will be used to summarize evaluation outcomes and impact by year, survey round, geographic region (national and subnational levels), and demographic characteristics of individuals and households. Policies developed over the period of NHP 2021–2030 will also be reviewed to assess progress in implementation. An independent team will be established to conduct the evaluations, including members with expertise in areas such as M&E, health policy, finance and health economics, human resources for health, and capacity development. This team will have a defined scope of work and will further refine evaluation objectives, guiding questions, evaluation methodology, budget, and the expected outcomes and impact.

5. STRENGTHENING MONITORING AND EVALUATION AND HEALTH INFORMATION SYSTEMS

The *National Health Plan* (NHP 2021–2030) recommends transforming the M&E system to ensure its practical functionality over the next 10 years. Specifically, the following key actions are proposed to strengthen M&E and health information systems (HIS) based on identified gaps and challenges detailed in Chapter 2:

- Capacity-building for a better skilled workforce in health information systems
- Establishment of Provincial Health Information and Intelligence units
- Enhancing and upgrading ICT infrastructure
- Interoperable HIS and development of an integrated data warehouse
- Strengthening the National Health Information System
- Strengthening hospital networking and reporting
- Enhancing linkages between research and decision-making
- Enhancing leadership and governance and improved coordination.

These actions will additionally contribute to improved data quality and use for decision-making.

5.1 Capacity-building for a skilled workforce in health information systems

An effective M&E system requires an institutional structure with appropriately skilled personnel at all levels. To build a skilled workforce for HIS and M&E, health workforce assessments will be conducted and M&E staffing standards identified for the national, provincial and health-facility levels. This will include defining the competencies required for M&E and health information roles at all levels of the health system, so that standard job descriptions can be developed. Once competencies are defined, a systematic training needs assessment will be conducted to identify current knowledge and skills gaps followed by development of a capacity-building plan for national and subnational staff. The capacity-building plan will identify in-service short-term training sessions required, as well as long-term education opportunities, for example, pursuing master's degree programmes, to be delivered and funded through collaborations between NDoH, partners and universities. In addition, pre-service curricula will be reviewed for inclusion of M&E- and health-information-related content, and revised as needed. Training and education opportunities will be supplemented by mentoring and supportive supervision from the national to provincial level and from provincial to health-facility levels, as well as development of manuals, guidelines and other tools.

5.2 Establishment of Provincial Health Information and Intelligence units

With support of NDoH and development partners, PHAs will set up Health Information and Intelligence units to boost provincial capacity for M&E, data analysis, reporting and use. These units will be responsible for oversight of M&E processes and data collection and reporting within their provinces, including support for data analysis to hospitals and other health facilities. The structure of the PHA Information and Intelligence units will be proposed by NDoH in consultation with PHAs, development partners and other key stakeholders.

5.3 Enhancing and upgrading ICT infrastructure

Improving ICT infrastructure is critical to strengthening all HIS and ensuring an effective M&E system. An ICT policy will be developed by NDoH in alignment with the broader Government ICT plan, as well as NHP 2021–2030 and this Strategic Plan. In addition, minimum ICT infrastructure standards for NDoH, PHAs, hospitals and health facilities will be identified through stakeholder consultations.

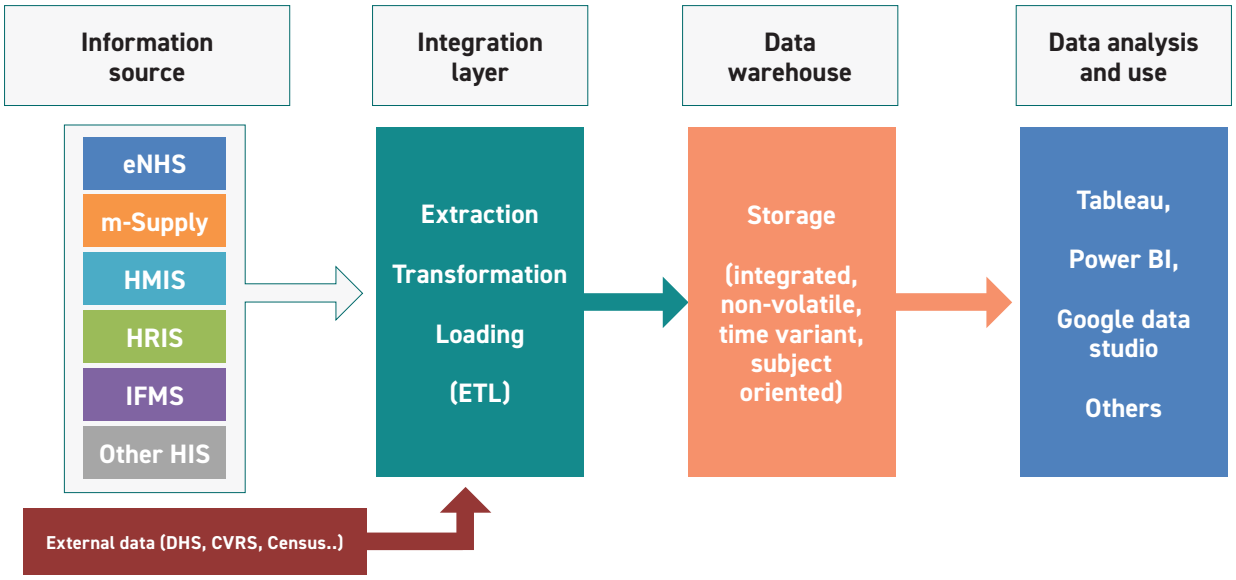
During the first three years of implementation of this Strategic Plan, an ICT infrastructure needs assessment and inventory (for example, equipment available, internet connectivity) will be conducted at PHAs as well as NDoH. Based on findings and the minimum standards identified, gaps in standards will be addressed through collaboration between NDoH, PHAs, telecommunication companies and development partners. Priority will be given to hospital ICT infrastructure given that hospital networks have not yet been established and the low coverage in hospital reporting. As part of addressing gaps in ICT infrastructure, relevant provincial and health-facility staff will be trained on ICT maintenance and troubleshooting.

5.4 Interoperable health information systems and development of an integrated data warehouse

Currently, there is no national data warehouse that brings together health-related data from different sources. Therefore, NDoH will establish a national data warehouse to improve data extraction and transformation (Fig. 5). This will allow stakeholders at the national, provincial and district levels to access integrated health information. Data from routine HIS, both from public and private facilities, will be stored in the data warehouse along with data from household surveys, censuses, health-facility assessments , disease surveillance programmes and other health- related data. The data warehouse will be managed based on the establishment of data-sharing standards applied across the various systems to ensure and improve interoperability of systems.

To facilitate development of the data warehouse, a comprehensive inventory of HIS will be undertaken in the second and third years of the *Monitoring and Evaluation Strategic Plan* to assess functionality and identify the platforms, data structures, variables and data-sharing policies used. This will be followed by discussion among the developers and database managers of the various systems to establish common data standards, as well as an integration that would allow for database extraction, transformation and loading into the database warehouse, in addition to information exchange. The warehouse will draw on the Government e-cloud infrastructure managed by the Department of Information Communication and Technology (DICT). Communication has already been initiated between NDoH and DICT to migrate some HIS to the Government e-cloud infrastructure.

Fig. 5. Proposed health data warehouse to be established under the National Health Plan 2021–2030, Papua New Guinea



5.5 Strengthening the National Health Information System

Strengthening of the routine HIS is critical during the period of NHP 2021–2030. As such, expansion of the eNHIS will be a key priority during the implementation period of the *Monitoring and Evaluation Strategic Plan* to digitize reporting systems in the remaining health facilities that still use the paper-based system. Along with expansion, recording and reporting tools used in the NHIS/eNHIS will be reviewed and updated where needed to align with the NHP 2021–2030 reporting requirements. In addition, current efforts to link or integrate parallel reporting systems with the eNHIS will be continued to include syndromic surveillance, hospital reporting and other systems to address the issue of fragmentation and having several vertical systems that are not interoperable. Efforts will also be made to capture data from private and NGO health facilities within the NHIS/eNHIS, as they are currently not reporting.

To improve the quality of data reported, PMRB will conduct annual data verification reviews on the data reported in the eNHIS, in collaboration with Provincial Health Information Officers (PHIOs) and health-facility staff, to identify areas requiring support to improve accuracy and reliability. Programme focal points in provinces will also be encouraged to review data reported on a monthly basis, along with PHIOs, to improve quality of data reported and further promote ownership of data. In addition to these routine reviews, larger data-quality assessments (larger in geographical scope or involving verification of more indicators) will be conducted periodically for the NHIS/eNHIS.

While the NHIS/eNHIS remains the central information system in the health sector, it cannot generate all the information required to monitor the implementation of NHP 2021–2030 or health sector performance. M&E of health sector performance also requires information from sources in addition to those routine HIS such as CRVS, population-based surveys, the census and other special studies. Where relevant, discussions will be held with the agencies responsible for these other sources, such as the National Statistics Office or the Papua New Guinea Institute for Medical Research to agree on identifying common indicators and their

definitions. Linkages and interoperability of different data systems will also be pursued to facilitate development an integrated data warehouse.

5.6 Strengthening hospital networks and reporting

Hospital reporting is currently fragmented, with variation in reporting pathways and systems into which data are reported. Assessments of the different hospital systems will be undertaken to ascertain functionality and identify strengths and limitations, and then to determine how one common reporting system and a hospital network can be established. This will include establishing common data standards for the various systems to eventually be interoperable. During the process, existing systems like eNHIS and HMIS will be leveraged rather than new ones being introduced. Strengthening hospital reporting systems will enable hospitals to network better and fill critical data gaps.

5.7 Enhancing linkages between research and decision-making

Translation of research findings to decision-making is critical for informing policy-making, health programming and service delivery improvements. Under this *Monitoring and Evaluation Strategic Plan*, concerted efforts will be made to ensure that research undertaken in the country is aligned with priorities of NHP 2021–2030 and seeks to address clinical, programme implementation and operational issues. The *National Health Research Policy* and *Health and HIV Research Agenda* will be updated in line with these objectives, and institutional arrangements/governance for research strengthened through reviewing operational procedures of the Medical Research Advisory Council (MRAC) and its subcommittees at the PHA level. In addition, a functional research portal will be set up to ensure interested stakeholders have access to information on past and ongoing research projects.

Collaboration between policy-makers, researchers and programme implementers will be promoted through organization of seminars and health conferences to discuss research and its implications for policies and programmes, as well as participation of researchers on key governance bodies at the national and PHA levels. Training will be conducted for programme staff on developing research proposals and conducted research, and for research staff on communicating research findings to policy-makers. Lastly, concerted efforts will be made to disseminate information products and publications summarizing research findings.

5.8 Enhancing leadership and governance

The NDoH Strategic Policy Division (SPD) and PMRB are responsible for overseeing the overall administration and implementation of the strategy at the national level and are accountable for the performance.

PMRB capacity will be strengthened to effectively oversee, coordinate and fulfil all aspects of monitoring and evaluation in the health sector by:

- modifying the *Monitoring and Evaluation Strategic Plan* as necessary;
- coordinating with implementing agencies regarding the collection of data – timely reports (sector, programme and province), feedback and support;
- coordinating the preparation of M&E reports for the SEM, HSPC, and Provincial and Local-level Services Monitoring Authority committees and subcommittees;
- maintaining a sound M&E database;

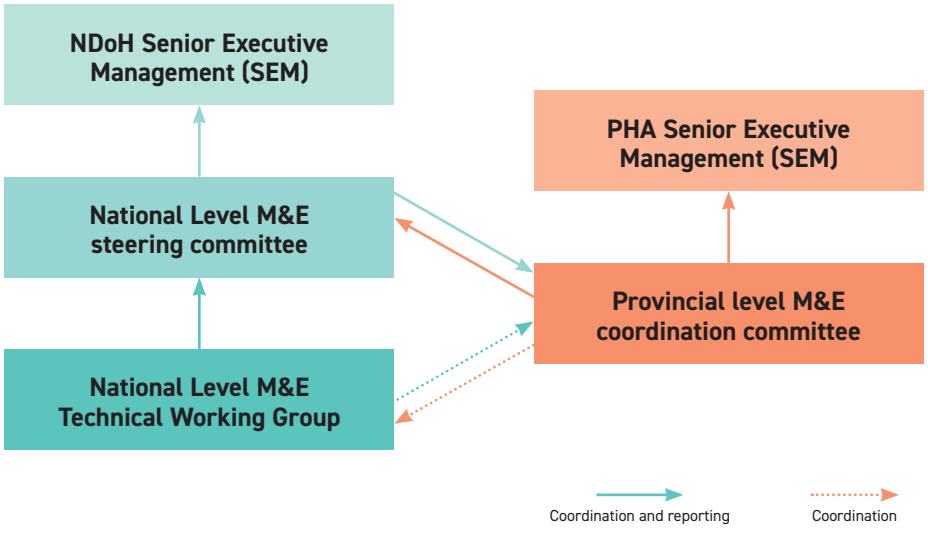
- coordinating and commissioning special studies and evaluations, as necessary;
- overseeing programme and project activities, as well as data quality reviews;
- disseminating data and promoting their use by decision-makers at all levels of the health system; and
- disseminating information on lessons learned and best practices.

Transforming the M&E will be placed high on the agenda of all responsible ministries and the overall strategy coordinated through the Monitoring and Evaluation Committee, which will meet quarterly. The role of this committee will include:

- directing implementation of the *Monitoring and Evaluation Strategic Plan*;
- periodic reviews of progress in implementation of the *Monitoring and Evaluation Strategic Plan*;
- ensuring the plan for information use is aligned with national decentralization efforts;
- coordinating and developing detailed guidelines and set national benchmarks for service delivery, programme performance and resource allocation;
- ensuring NHIS and M&E reports are prepared for consideration by SEM during their regular meetings; and
- enforcing NHIS policies and legislation.

To support the implementation of the M&E strategic plan 2021-2030, the existing M&E technical working group will be strengthened with a revised TOR. M&E Committees will also be established in PHAs, which will share workplans and seek technical guidance from the national Technical Working Group. PHA M&E Committees and the national M&E Technical Working Group will report to the national M&E Steering Committee, which in turn, will report to NDoH Senior Executive Management (Figure 6).

Fig. 6. M&E governance bodies and coordination at the national and provincial levels



6. ACTIVITY IMPLEMENTATION SCHEDULE FOR THE MONITORING AND EVALUATION STRATEGIC PLAN, 2022–2025

This implementation schedule has been developed for 2022–2025. Another schedule will be developed for 2026–2030 following the midterm evaluation to ensure that findings from the evaluation are considered in implementation.

Activity	Implementation action in M&E Strategic Plan[1]	Entities involved (NDoH & partners)	Time period	Cost (Papua New Guinea kina)
Objective 1: To strengthen governance, coordination and regulations for health information systems (HIS)				
Finalize and seek endorsement of the *Monitoring and Evaluation Strategic Plan*	Enhancing leadership and governance	PMRB	January to August 2022	No cost
Establish a PHIO network to convene for quarterly meetings for updates and information sharing	Enhancing leadership and governance	PMRB	May 2022	No cost
Establish a national M&E Technical Working Group to oversee and advise on implementation of the *Monitoring and Evaluation Strategic Plan*	Enhancing leadership and governance	PMRB Partners	June 2022	No cost
Update ICT policy for the health sector	Enhancing leadership and governance	PMRB ICT Department of Information Communication and Technology (DICT)	June to December 2022	25 000
Establish Provincial M&E Technical Working Groups to oversee implementation of the *Monitoring and Evaluation Strategic Plan* at the PHA level, aligned with functions of the national committee/Technical Working Group	Enhancing leadership and governance	PMRB PHAs Partners	June to December 2022	210 000 (10 000 for a meeting per PHA for 21 PHAs)
Finalize the Health Information System (HIS) policy	Enhancing leadership and governance	PMRB	June to December 2022	5000 (consultation)
Print and disseminate the *Monitoring and Evaluation Strategic Plan*	Enhancing leadership and governance	PMRB World Health Organization (WHO)	October to December 2022	50 000
Mobilize funding to implement the *Monitoring and Evaluation Strategic Plan*	Enhancing leadership and governance	PMRB Development partners	Ongoing	No cost

Activity	Implementation action in M&E Strategic Plan[1]	Entities involved (NDoH & partners)	Time period	Cost (Papua New Guinea kina)
Convene the E-Health Steering Committee, CRVS National Committee and E-Health Technical Working Groups regularly to fulfil their mandates	Enhancing leadership and governance	ICT (E-health) PMRB (CRVS)	Ongoing	25 000 (5000 per year for quarterly meetings)
Develop and sign memoranda of understanding with relevant stakeholders within and outside the health sector for data sharing	Enhancing and upgrading ICT infrastructure, development of an integrated data warehouse	PMRB ICT Partnership Unit NDoH	Ongoing	5000
Objective 2: To strengthen and institutionalize systems for building capacities for human resources and improving infrastructure for health information systems (HIS)				
Develop a draft national competency framework for NDoH and PHA M&E/surveillance/ health information roles	Capacity-building	PMRB WHO	March to September 2022	30 000
Recruit technical advisor for IT, information and research	Capacity-building	PMRB	June 2022	160 000 (per year 40 000)
Conduct a training needs assessment for NDoH M&E/surveillance/ health information staff and PHIOs	Capacity-building	PMRB WHO	June to October 2022	30 000
Design and conduct an assessment of ICT infrastructure, software applications and ICT systems	Enhancing and upgrading ICT infrastructure	ICT PMRB DICT	June to October 2022	630 000 (30 000 x21 PHAs)
Review and enhance NDoH website, including a section for data & knowledge management	Enhancing and upgrading ICT infrastructure	ICT	June 2022 to June 2023	150 000
Develop a costed human resources capacity-building plan for NDoH M&E/surveillance/ health information staff and PHIOs	Capacity-building	PMRB WHO	January to April 2023	50 000 (consultancy, travel, meeting)
Identify and advocate for long-term education opportunities for NDoH M&E/health information staff and PHIOs	Capacity-building	PMRB	June to December 2023	No cost
Develop and pilot guidelines for on-the-job training and coaching for M&E/health information roles at district and health-facility levels	Capacity-building	PMRB Partners	June to December 2023	40 000 (piloting in the National Capitol District & Central Province)
Define standards for ICT infrastructure in the health sector at the national and provincial levels	Enhancing and upgrading ICT infrastructure	ICT PMRB	June to December 2023	40 000 (consultant & meeting)

Activity	Implementation action in M&E Strategic Plan[1]	Entities involved (NDoH & partners)	Time period	Cost (Papua New Guinea kina)
Procurement of necessary hardware and software for PMRB and ICT at the national level	Enhancing and upgrading ICT infrastructure	ICT PMRB	2023–2025	200 000 (67 000 per year)
Conduct trainings on identified areas of need and capacity- building plans	Capacity-building	PMRB Partners	2023–2025	150 000 (50 000 per year)
Review pre-service training programmes for M&E-related competencies included	Capacity-building	PMRB Educational institutes	January to December 2024	150 000
Revise pre-service training programmes based on findings from the review	Capacity-building	Educational institutes PMRB	2025 onwards	150 000
Objective 3: To ensure linkages and interoperability of health information systems (HIS) in Papua New Guinea				
Update the *National e-Health Strategy 2017–2027*	Enhancing and upgrading ICT infrastructure, Development of an integrated data warehouse	ICT PMRB E-Health Steering Committee/ Technical Working Group WHO	January to June 2023	100 000
Develop the design of the national digital health platform (enterprise planning approach)	Development of an integrated data warehouse	ICT PMRB DICT	2023–2025	
Develop an outline of the enterprise architecture	Development of an integrated data warehouse	ICT PMRB DICT	2023	100 000
Identify components of the digital health platform	Development of an integrated data warehouse	ICT PMRB DICT	2023	100 000
Develop and approve health information standards and interface expectations for interoperability	Development of an integrated data warehouse	ICT PMRB DICT	2023–2024	100 000
Develop and approve secure messaging standards	Development of an integrated data warehouse	ICT PMRB DICT	2024	100 000
Develop and approve a national regulatory framework for health information protection	Development of an integrated data warehouse	ICT PMRB DICT	2024–2025	100 000

Activity	Implementation action in M&E Strategic Plan[1]	Entities involved (NDoH & partners)	Time period	Cost (Papua New Guinea kina)
Objective 4: To enhance the quality and capacity of routine health information systems (HIS), including improving reporting from private health facilities and those run by nongovernmental organizations (NGOs) and other partners				
4.1 NHIS/eNHIS				
Expand eNHIS to remaining four provinces	Strengthening the National Health Information System	Remote sensing PMRB	January to December 2022	Funded by the Asian Development Bank
Develop data management manual	Strengthening the National Health Information System	PMRB PNG-Australia Transition to Health (PATH)/WHO	April to June 2022	15 000
Develop SOPs for NHIS/eNHIS	Strengthening the National Health Information System	PMRB PATH	April to June 2022	15 000
Review and revise paper NHIS, inventory and discharge reporting forms to align with new *Monitoring and Evaluation Strategic Plan* and the Monitoring and Evaluation Framework	Strengthening the National Health Information System	PMRB All NDoH programmes WHO	June 2022 to June 2023	15 000
Handover of transition plan for eNHIS to NDoH, including transfer of administrative rights and training	Strengthening the National Health Information System	Remote sensing	January to December 2023	Covered by HSSDP
Update and finalize metadata/indicator definitions in the NHIS	Strengthening the National Health Information System	PMRB All NDoH programmes WHO	January to June 2023	No cost
Coordinate with Medical Standards Division on an inventory audit of health facilities	Strengthening the National Health Information System	PMRB	June to December 2023	200 000
Seek approval of revised NHIS, inventory and discharge reporting forms	Strengthening the National Health Information System	PMRB	June to December 2023	No cost
Pilot revised NHIS forms in selected provinces	Strengthening the National Health Information System	PMRB PHAs	January to June 2024	200 000
Print and distribute NHIS revised data collection and reporting forms	Strengthening the National Health Information System	PHAs	June to December 2024	250 000

Activity	Implementation action in M&E Strategic Plan[1]	Entities involved (NDoH & partners)	Time period	Cost (Papua New Guinea kina)
Revise eNHIS forms based on updated paper data collection and reporting forms	Strengthening the National Health Information System	PMRB	June to December 2024	Covered by HSSDP
Conduct annual PHIO workshop and NHIS supervisory visits	Strengthening the National Health Information System	PMRB WHO Partners	2022–2025	920 000 (230 000 per year)
Digitalization of data collection and reporting forms not in the eNHIS	Strengthening the National Health Information System	PMRB Programmes	Ongoing	To be decided with programmes requesting
4.2 Hospital reporting				
Conduct an assessment of hospital reporting to identify strengths and gaps	Strengthening of hospital networking and reporting	PMRB Medical Standards Division (MSD) WHO	March to October 2022	20 000 (Travel to selected hospitals, consultation meeting)
Analyse available hospital data on morbidity and mortality and finalize a hospital report	Strengthening of hospital networking and reporting	PMRB WHO	Jan 2023	10 000 (development of report)
Identify a core set of hospital indicators for reporting	Strengthening of hospital networking and reporting	PMRB MSD WHO	February to June 2023	15 000 (consultation meeting)
Develop a hospital reporting template	Strengthening of hospital networking and reporting	PMRB MSD	June to December 2023	No cost
Conduct training on ICD-10 classification of diseases and determine feasibility of use of the platform in hospital reporting	Strengthening of hospital networking and reporting	PMRB MSD Bloomberg Philanthropies/ CDC Foundation WHO	2023–2024	500 000 (250 000 per year)
Pilot and finalize hospital reporting template	Strengthening of hospital networking and reporting	PMRB MSD	January to June 2024	100 000
Print and roll out hospital reporting template	Strengthening of hospital networking and reporting	PMRB MSD	June 2024 to December 2025	100 000

Activity	Implementation action in M&E Strategic Plan[1]	Entities involved (NDoH & partners)	Time period	Cost (Papua New Guinea kina)
Include hospital reporting template within relevant electronic system (eNHIS or other identified)	Strengthening of hospital networking and reporting	PMRB MSD	June 2024 to December 2025	50 000
4.3 CRVS and mortality surveillance				
Convene CRVS Committee regularly, in coordination with the Civil and Identity Registry (CIR)	Strengthening the National Health Information System	PMRB CIR, NSO DICT	Ongoing 2022–2025	Costs borne by CIR
Recruit three ICD-10 coders at PMRB to support mortality coding	Strengthening the National Health Information System	PMRB Bloomberg Philanthropies /CDC Foundation	March to June 2022	100 000
Conduct training on medical certification of cause of death for doctors in seven provinces	Strengthening the National Health Information System	PMRB Bloomberg Philanthropies /CDC Foundation WHO	April 2022 to Jan 2023	620 000
Establish mechanisms for coronavirus diseases 2019 (COVID-19) death reporting to PMRB	Strengthening the National Health Information System	PMRB COVID-19 surveillance team	June to December 2022	20 000 (consultations)
Strengthen birth registration reporting systems to the health sector	Strengthening the National Health Information System	PMRB CIR Remote Sensing	March to September 2023	50 000 (consultations, any updates to eNHIS, training)
4.4 Disease surveillance				
Consultations to review the systems used for disease surveillance	Strengthening the National Health Information System	PMRB Public health	June to December 2023	20 000 (consultations)
Identify and implement mechanisms to strengthen linkages between disease surveillance and eNHIS	Strengthening the National Health Information System	PMRB Public health	January to June 2024	50 000 (updates to eNHIS, linking systems)
4.5 Establishment of PHA Information and Intelligence Centre				
Develop concept note for the PHA Information and Intelligence Centres	Capacity-building	PMRB PHA Partners	January to April 2023	No cost
Consultations to develop Information and Intelligence Centre terms of reference and functions	Capacity-building	PMRB PHA Partners	June to December 2023	20 000

Activity	Implementation action in M&E Strategic Plan[1]	Entities involved (NDoH & partners)	Time period	Cost (Papua New Guinea kina)
Review PHA M&E structure to identify human resources needs for the Information and Intelligence Centres	Capacity-building	PMRB PHA Partners	June to August 2023	5000
Develop protocols/guidelines for establishment of Information and Intelligence Centres, including standardized job descriptions for staff	Capacity-building	PMRB PHA Partners	January to June 2024	5000
4.6 Reporting from private health facilities				
Conduct an inventory of private providers of health services	Strengthening the National Health Information System	PMRB MSD PHAs	January to June 2024	No cost
Conduct an assessment of hospital information systems of selected private providers	Strengthening the National Health Information System	MSD PMRB	July to December 2024	30 000
Conduct a consultation with private health facilities to review assessment findings and identify recommendations	Strengthening the National Health Information System	PMRB MSD	September 2024	50 000
Engage private providers of health services by sensitizing and informing them about legislation and providing them with the necessary standard reporting forms	Strengthening the National Health Information System	PMRB MSD	September 2024	
Objective 5: To expand on conventional data sources to promote a culture of monitoring and information dissemination within NDoH and PHAs				
Formalize MRAC as an independent advisory committee reporting to the Secretary's Office	Enhancing linkages between research and decision-making	PMRB	March 2022	No cost
Determine MRAC structure and review and update terms of reference	Enhancing linkages between research and decision-making	PMRB	March 2022	10 000 (meeting)
Set up electronic research portal	Enhancing linkages between research and decision-making	PMRB WHO	March to September 2022	No cost

Activity	Implementation action in M&E Strategic Plan[1]	Entities involved (NDoH & partners)	Time period	Cost (Papua New Guinea kina)
Development of draft National Research Agenda	Enhancing linkages between research and decision-making	PMRB Burnet PNG Institute of Medical Research MRAC WHO	June to December 2022	140 000 (Include printing costs)
Update and finalize Health Research Policy	Enhancing linkages between research and decision-making	PMRB	June to December 2022	90 000 (includes printing costs)
Endorsement of National Research Agenda	Enhancing linkages between research and decision-making	PMRB	June 2023	No cost
Endorsement of Health Research Policy	Enhancing linkages between research and decision-making	PMRB	June 2023	No cost
Identify research grant opportunities and develop proposals to support national research agenda	Enhancing linkages between research and decision-making	PMRB IMR MRAC	Ongoing 2022–2025	50 000 (12 500 per year)
Conduct training on research proposals, conducting operational research/research methodologies	Enhancing linkages between research and decision-making	PMRB	March to September 2023	300 000
Development of an e-Library for the NDoH and training	Enhancing linkages between research and decision making	PMRB	January to June 2024	20 000 (ICT costs and e-Library training)
Objective 6: To enhance use of health information at all levels of the health system and by all stakeholders in the health sector to ensure evidence-based decision-making and programme planning				
Develop PHA dashboard	Strengthening the National Health Information System	PMRB World Bank	January to December 2022	Funded by World Bank

Activity	Implementation action in M&E Strategic Plan[1]	Entities involved (NDoH & partners)	Time period	Cost (Papua New Guinea kina)
Revise quarterly performance review and annual reporting templates	Strengthening the National Health Information System	PMRB	September 2022	5000 (meetings)
Conduct National Quarterly Performance Reviews	Enhancing leadership and governance	PMRB NDoH programmes	Quarterly 2022–2025	20 000 (5000 per year)
Conduct monitoring of timely reporting and dissemination of hospital, provincial and national quarterly and annual reports	Strengthening the National Health Information System	PMRB	Ongoing 2022–2025	No cost
Publication of annual Health Sector Performance Assessment Report (SPAR) and district profiles	Strengthening the National Health Information System	PMRB HSSDP WHO	2022–2025	200 000 (50 000 per year)
Communication and dissemination activities to share and discuss findings from the SPAR and district profiles	Strengthening the National Health Information System	PMRB	2022–2025	40 000 (10 000 per year)
Hold Research Forum to support translation of research into decision-making	Enhancing linkages between research and decision-making	PMRB	June 2024	200 000 (two days)
Produce data products for Biennial Health Conferences	Strengthening the National Health Information System	PMRB	To be decided	30 000 (printing)
Conduct midterm review of NHP 2021–2030	Enhancing leadership and governance	PMRB	2025	500 000 (Technical assistance, field visits, dissemination meeting)
TOTAL BUDGET 2022–2025				**7 685 000**

ANNEXES

ANNEX 1: MONITORING AND EVALUATION FRAMEWORK FOR THE NATIONAL HEALTH PLAN 2021–2030

	Indicator	Type of indicator	Targets											KRA objective	Means of verification	Frequency	Level of data collection
			Baseline	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030				
	KRA1: More Engaged communities																
1	PHAs that have developed annual implementation plans (AIPs) with community engagement	Output	NA	30%	50%	80%	90%	100%	100%	100%	100%	100%	100%	1.1	PHA/ NDoH report	Annual	NDoH/ PHA
2	Outreach clinics per 1000 population <5 years	Output	31[1]	40	50	60	70	75	80	80	80	80	80	1.1	NHIS	Annual	Health facility
3	Integrated outreach clinics conducted	Output	60[1]	65	68	72	75	80	85	90	95	95	100	1.1	NHIS	Annual	Health facility
4	Village health assistants per 1000 population	Input	NA	0.2	0.4	0.6	0.8	1.0	1.2	1.4	1.6	1.8	2.0	1.2	NDoH/ PHA report	Annual	NDoH/PHA
5	Availability of village health assistant guidelines and packages of service	Input	No					Yes					Yes	1.2	NDoH report	Annual	NDoH
6	Availability of national strategy or policy for including local communities in stakeholder discussions on policies and planning	Input	No					Yes					Yes	1.3	NDoH report	Annual	NDoH
7	Provinces with Health Rehabilitation and Assistive Technology Community-based Rehabilitation Outreach Programmes through clinical services	Output	32%	32%	41%	50%	59%	68%	77%	86%	95%	100%	100%		National Orthotics and Prosthetics Service (NOPS) programme data	Annual	NOPs programme
8	Districts with a health promotion officer	Output	0%					35%					70%	1.3	NDoH /PHA report	Annual	PHA/NDoH

	Indicator	Type of indicator	Targets											KRA objective	Means of verification	Frequency	Level of data collection
			Baseline	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030				
	KRA2. Working together in partnership																
9	Policies, strategies and plans developed outside the health sector with priorities aligned to NHP 2021–2030.	Outcome	NA					80%					100%	2.1	NDoH reports	3 years	Government sectors
10	Partners that are supporting health services and development with a signed memorandum of understanding (MoU) with NDoH	Output	NA	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	2.1	NDoH reports	Annual	NDoH
11	Partners' contribution in the total annual health budget	Input	NA										30%	2.1	NDoH HSIP report	Annual	NDoH
12	Partners' forum established at Provincial and National Level	Input	NA	74%	83%	91%	100%	100%	100%	100%	100%	100 %	100%	2.1	NDoH/PHA report	Annual	NDoH
13	Partner coordination annual meetings held at the provincial and national levels	Output	NA	35%	50%	61%	83%	100%	100%	100%	100%	100%	100%	2.2	NDoH/PHA report	Annual	NDoH/PHA
14	National level priorities for partner support identified every 3 years	Input	NA			Yes		Yes			Yes		Yes	1.2	NDoH report	3 years	NDoH
15	Public–private partnership service level agreements signed at the provincial level	Input	NA					30% ↑					50% ↑	2.2	NDoH/PHA report	Annual	NDoH/PHA
	KRA3. Increase access to quality and affordable health services																
16	UHC Service Coverage Index (SCI)	Outcome	33					45					60	3.1	UHC global estimates	2 years	
17	UHC Service coverage index: reproductive, maternal, newborn and child health – family planning, antenatal care (ANC) and delivery , Penta 3 immunization, care-seeking behaviour for child pneumonia	Outcome	48					61					88	3.1	UHC global estimates	2 years	Health facility/ population
18	UHC Service Coverage Index: Infectious diseases (tuberculosis [TB] treatment, HIV antiretroviral treatment, use of insecticide-treated bed nets for malaria prevention, adequate sanitation	Outcome	46					63					80	3.1	UHC global estimates	2 years	Health facility/ population
19	UHC Service Coverage Index: Noncommunicable diseases (NCDs) – prevention and treatment of raised blood pressure, prevention and treatment of raised blood glucose, tobacco (non-smoking)	Outcome	50					64					80	3.1	UHC global estimates	2 years	Health facility/ population

	Indicator	Type of indicator	Targets										KRA objective	Means of verification	Frequency	Level of data collection
			Baseline	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030				
20	UHC Service Coverage Index: Service capacity and access (basic hospital access, health worker density, health security)	Outcome	11					25					40	3.1	UHC global estimates	2 years	Health facility/ population
21	Population with household expenditures on health greater than 25% of total household expenditure or income (SDG 3.8.2)	Outcome	NA										30% ↓	3.2	HIES/global database	5 years	Population
22	Provinces implementing user-friendly incentive schemes to increase Reproductive, Maternal, Newborn, Child and Adolescent Health (RMNCAH) services demand	Input	NA	10	20	30	40	50	60	70	80	90	100	3.2	PHA reports/ programme data	Annual	PHA
23	Availability of national health insurance policy or strategy	Input	No					Yes					Yes	3.2	NDoH reports	Annual	NDoH
	KRA4: Targeted Health Priorities																
	Improved health status																
24	Life expectancy at birth (in years)	Impact	65.3[2]										70	4.0	Census / United Nations estimates	10 years	Population
	Malaria																
25	Use of insecticide-treated nets (ITNs)	Outcome	46[3]					69					92	4.1	MIS/DHS	3¬–5 years	Population
26	Children who slept under an insecticide treated bed net	Outcome	59.5[3]					76					90	4.1	MIS/DHS/ PNGIMR reports	3–5 years	Population
27	Pregnant women who slept under a long-lasting insecticidal net (LLIN) the previous night	Outcome	49[3]					73					90	4.1	MIS/DHS/ PNGIMR reports	3–5 years	Population
28	Intermittent preventive therapy for malaria during pregnancy (IPTp)	Outcome	23.5[3]					35					50	4.1	MIS/DHS	3–5 years	Population

	Indicator	Type of indicator	Targets											KRA objective	Means of verification	Frequency	Level of data collection
			Baseline	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030				
29	Children <5 years diagnosed with fever who are treated with appropriate antimalarial drugs	Output	45.3[4]					75					90	4.1	MIS/DHS	3–5 years	Population
30	Malaria parasite prevalence among children aged 6–59 months	Impact	8.8[4]					5.0					2.0	4.1	MIS/DHS	3–5 years	Population
31	Incidence of malaria per 1000 population	Impact	112[1]					90					61	4.1	NHIS	Annual	Health facility
32	Mortality due to malaria per 100 000 population	Impact	1.69[1]					0.2					0.0	4.1	NHIS	Annual	Health facility
	Dengue fever																
33	Mortality attributed to dengue fever	Impact	NA										30% ↓	4.1	Programme reports	3–5 years	Health facility
	HIV/AIDS, STIs, Hepatitis B																
34	HIV incidence rate (per 1000 uninfected population)	Impact	0.38[5]					0.2					0.1	4.1	HIV Programme	2–3 years	Population
35	HIV prevalence	Impact	0.9[5]					0.5					0.4	4.1	HIV Programme	2–3 years	Population
36	Protection against HIV at last high-risk contact - Female sex workers - Men who have sex with men - Men and women who had more than one partner in the past 12 months - People who inject drugs	Outcome	37%[6] female sex workers 31%[6] MSM Port Moresby rate taken as a baseline					>50% for both categories					>80% for both categories	4.1	Integrated Bio-Behavioural Survey (IBBS Survey) survey	5 years	Population

	Indicator	Type of indicator	Targets											KRA objective	Means of verification	Frequency	Level of data collection
			Baseline	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030				
37	People living with HIV who know their HIV status	Outcome	71[5]					90					90	4.1	National HIV programme	Annual	Health facility
38	Antiretroviral therapy (ART) coverage among people living with HIV	Outcome	88[5]					90					90	4.1	National HIV Programme	Annual	Health facility
39	People living with HIV who have suppressed viral loads at the end of the reporting period	Outcome	NA					70					90	4.1	National HIV programme	Annual	Health facility
40	ART retention rate at 12, 24, 48 and 60 months	Outcome	NA										>90 for all	4.1	National HIV Programme	Annual	Health facility
41	HIV-confirmed prevalence in pregnancy (age 15–24)	Outcome	0.79[1]					0.4					0.2	4.1	HIV programme data	Annual	Health facility
42	HIV-infected pregnant women who received antiretroviral drugs to reduce the risk of mother-to-child transmission	Output	82[1]	83	85	87	90	92	95	96	97	98	100	4.1	HIV programme report	Annual	Health facility
43	AIDS-related mortality rate per 100 000 population	Impact	6.6[5]										3.3	4.1	UNAIDS estimates	Annual	Health facility
44	Sexually transmitted infections (STIs) incidence rate	Impact	NA										50% ↓	4.1	NHIS/survey	Annual	Health facility
45	Prevalence of hepatitis B surface antigen (HBsAg) children 4–6 years old	Impact	2.3[7]					1.5					<1	4.1	Sero-survey	5 years	Population
46	New hepatitis B infections per 100 000 population in a given year	Impact	NA										20%↓	4.1	Sero-survey	5 years	Population
47	Pregnant women attending antenatal care services tested for syphilis	Output	NA					70					80	4.1	NHIS	Annual	Health facility/ population

	Indicator	Type of indicator	Targets											KRA objective	Means of verification	Frequency	Level of data collection
			Baseline	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030				
	TB & leprosy																
48	TB-affected families experiencing catastrophic costs due to TB	Impact	34%					15%					0%	4.1	TB patient cost survey	5 years	Population
49	TB incidence rate per 100 000 population	Impact	432[8]					350					250	4.1	TB programme report	Annual	Population
50	TB case fatality ratio	Impact	13%[8]	10%	9%	8%	7%	6%					⩽5%	4.1	WHO Global TB estimates	Annual	Population
51	TB patients with known HIV status	Output	52[8]	73	79	86	90	95	100	100	100	100	100	4.1	TB programme report	Annual	Health facility
52	TB case notification rate for all forms of TB per 100 000 population	Output	324[8]	332	334	337	339	342	345	350	360	375	400	4.1	TB programme report	Annual	Health facility
53	TB treatment success rate for all forms of TB bacteriologically confirmed and clinically diagnosed, new and relapse cases	Outcome	73[8]	79	80	82	83	85	90	92	93	94	95	4.1	TB programme report	Annual	Health facility
54	TB treatment coverage	Outcome	79[8]	82	85	88	91	95	95	95	95	95	95	4.1	TB programme report	Annual	Health facility
55	TB treatment coverage for drug-resistant TB	Outcome	75[8]	78	81	84	87	90	92	93	94	95	95	4.1	TB programme report	Annual	Health facility
56	HIV-positive TB patients on ART	Outcome	80[8]	82	85	88	91	94	95	98	100	100	100	4.1	TB programme report	Annual	Health facility

	Indicator	Type of indicator	Targets											KRA objective	Means of verification	Frequency	Level of data collection
			Baseline	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030				
57	Coverage of treatment for latent TB infection (LTBI): a) HIV-positive people (newly enrolled in care) on TB preventive treatment; b) children <5 years who are household contacts of bacteriologically confirmed TB (%)	Outcome	25/ 35[8]	30/ 38	36/ 42	41/ 45	47/ 49	52/ 52	58/ 57	63/ 61	69/ 64	74/ 68	80/ 70	4.1	Programme report	Annual	Health facility
58	Drug-susceptibility testing for TB patients	Outcome	70[9]	79	83	88	95	95	95	95	95	95	95	4.1	TB programme report	Annual	Health facility
	Leprosy																
59	Leprosy provincial rate per 10 000 population	Impact	6[9]					3					0	4.1	Leprosy programme report	Annual	Health facility
60	New leprosy case detection rate per 100 000 population	Output	6.2[9]					0.6					0.3	4.1	Leprosy programme report	Annual	Health facility
61	New leprosy cases with grade 2 disabilities	Outcome	8.5[9]					2.0					1.0	4.1	Leprosy programme report	Annual	Health facility
	Neglected tropical diseases (NTDs)																
62	Provinces implementing post-mass drug administration (MDA) or post-validation surveillance for lymphatic filariasis	Outcome	2[10]					12					22	4.1	Joint reporting form	Annual	Population
63	Provinces having incorporated skin neglected tropical disease (NTD) management in its UHC package	Output	0[9]					5					15	4.1	Joint reporting form	Annual	Population
64	Confirmed yaws cases	Impact	86.163					25% ↓					50% ↓	4.1	NHIS	Annual	Population

	Indicator	Type of indicator	Targets											KRA objective	Means of verification	Frequency	Level of data collection
			Baseline	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030				
65	Coverage of preventive chemotherapy for selected NTDs	Output	8[9]					40					80	4.1	NTD Programme report	Annual	Population/ health facilities
66	People requiring interventions against NTDs (SDG 3.3.5)	Impact	5,210,263[9]										80% ↓	4.1	NTD Programme report	Annual	Population
	Noncommunicable diseases (NCDs)																
	Prevalence of NCD risk factors disaggregated by type:																
67	Age standardized prevalence of raised blood glucose/diabetes among persons aged 18+ years	Outcome	12[11]					10					8	4.2	WHO STEPwise approach to surveillance (STEPS)	5 years	Population
68	Age-standardized prevalence of raised blood pressure among persons aged 18+ years	Outcome	20[11]					15					12	4.2	STEPS	5 years	Population
69	Age-standardized prevalence of tobacco use among persons age 15+ years	Outcome	37[11]					25					20	4.2	STEPS	5 years	Population
70	Total alcohol per capita (age 15+ years) consumption (litres of pure alcohol)	Outcome	1.0[11]					0.5					0.3	4.2	WHO estimates	5 years	Population
71	Age-standardized prevalence of insufficient physical activity among persons aged 18+ years	Outcome	14[11]					12					10	4.2	STEPS	5 years	Population
72	Prevalence of current betel nut consumption persons 15+	Outcome	66.9[3]					54					44	4.2	STEPS	5 years	Population
73	Age-standardized mean population salt intake per gram per day in persons 18+ years	Outcome	6.0[11]					4.2					3.0	4.2	STEPS	5 years	Population
74	Age-standardized prevalence overweight and obesity in persons above 18+ years	Outcome	19[11]					19					17	4.2	STEPS	5 years	Population
75	Mortality between 30 and 70 years (premature mortality) from NCDS	Impact	30[11]					24					20	4.2	WHO estimates	5–10 years	Population

	Indicator	Type of indicator	Targets										KRA objective	Means of verification	Frequency	Level of data collection
			Baseline	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030				
	Ophthalmology																
76	Rate of cataract surgery per 1 million population per year	Outcome	<500[12]										3500	4.2	NHIS/ Hospital report	Annual	Health facility
	Mental health																
77	Services for mental health disorders disaggregated by type (psychosis, depression, bipolar disorder, epilepsy)	Output	1045 (Cumulative)					20% ↑					40% ↑	4.2	Hospital report, Global estimates	Annual	Health facility
78	Treatment interventions (pharmacological, psychosocial and rehabilitation, and aftercare services) for substance use disorders	Output	353 (Cumulative)										706	4.2	Hospital reports/ WHO estimates	Annual	Health facility
	Violence																
79	Prevalence of intimate partner violence	Outcome	63%[3]					53%					43%	4.2	DHS	5 years	Population
80	Prevalence of non-partner sexual violence	Outcome	NA										20% ↓	4.2	DHS	5 years	Population
81	Proportion of young women and men aged 18–29 who experienced sexual violence by age 18	Outcome	NA										20% ↓	4.2	DHS	5 years	Population
82	Mortality rate attributed to unintentional poisoning per 100 000 population	Impact	1.7[13]										0.1	4.2	Global estimates	5 years	Population
83	Suicide rate per 100 000 population	Impact	6.0[11]					5.0					4.0	4.2	Global estimates	5 years	Population
	Oral health																
84	Proportion of patients who received oral health services at health facilities	Output	NA					50					80	4.2	Hospital/ programme reports	Annual	Health-facility level

	Indicator	Type of indicator	Targets											KRA objective	Means of verification	Frequency	Level of data collection
			Baseline	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030				
85	Aggregated Incidence of oral health diseases and defects (oral cancers, jaw tumours, trauma, infections, odontogenic infections, congenital defects, etc.)	Output	NA										30% ↓	4.2	Hospital reports	Annual	Health-facility level
	Cancer																
86	Cancer incidence rate by type of cancer (breast, cervical and oral) per 100 000 population	Impact	46, 29 & 21[14]										35, 23 & 16	4.3	Hospital report/ Cancer Registry	Annual	Health facility
	Trauma																
87	Injury presentations by type (road traffic accident and others) per 1000 population	Outcome	32[1]					24					16	4.4	NHIS	Annual	Health facility
88	Road traffic accident death rate per 100 000 population	Impact	NA										30% ↓	4.4	NHIS	Annual	Health facility
	Reproductive, adolescent, maternal, newborn and child health																
89	Maternal mortality ratio (MMR)	Impact	171[3]					135					<100	4.5	DHS/UNMMEIG	5 years	Population
90	Under-5 mortality rate	Impact	49[3]					31					25	4.5	DHS/UN IGME	5 years	Population
91	Infant mortality rate	Impact	22[3]					16					11	4.5	DHS/UN IGME	5 years	Population
92	Neonatal mortality rate	Impact	20[3]					15					10	4.5	DHS/UN IGME	5 years	Population
93	Total fertility rate (TFR)	Impact	4.2[3]					3.8					3.5	4.5	Census/DHS	5 years	Population
94	Family planning use (couple-years of protection)	Output	135[1]					200					270	4.5	NHIS	Annual	Health facility
95	Contraceptive prevalence rate (CPR)	Outcome	37[3]	40	44	47	51	55	58	62	66	70	74	4.5	DHS	5 years	Population
96	Unmet need for family planning	Outcome	25.9[3]	24	22	20	18	16	14	12	11	10	10	4.5	DHS	5 years	Population
97	Women whose demand is satisfied for a modern method of contraception (SDG 3.7.1)	Outcome	48.7[3]	53	57	61	65	69	73	76	79	80	80	4.5	DHS/ RH surveys	5 years	Population

	Indicator	Type of indicator	Targets											KRA objective	Means of verification	Frequency	Level of data collection
			Baseline	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030				
98	Pregnant women having at least one ANC visit	Outcome	51%[3]	56%	61%	66%	71%	76%	78%	80%	82%	84%	85%	4.5	NHIS/DHS	Annual	Health facility
99	Pregnant women having at least four ANC visits	Outcome	49%[3]	55%	60%	65%	70%	75%	77%	78%	79%	81%	83%	4.5	NHIS/DHS	Annual	Population/ health facility
100	Cervical cancer screening	Outcome	NA										80%	4.5	Hospital reports/ survey	5 years	Population/ health facility
101	Supervised births at health facilities	Outcome	36%[1]	59%	62%	65%	68%	71%	74%	77%	80%	80%	80%	4.5	NHIS/DHS	Annual	Population/ health facility
102	Postpartum care coverage for mothers	Outcome	46%[3]	50%	53%	57%	60%	64%	67%	71%	74%	77%	80%	4.5	DHS	5 years	Population
103	Postnatal care coverage for newborns	Outcome	50%	50%	53%	57%	60%	64%	67%	71%	74%	77%	80%	4.5	DHS	5 years	Population
104	Institutional maternal mortality ratio	Outcome	110[1]	100	90	80	70	60	50	40	30	20	10	4.5	NHIS	Annual	Health facility
105	Maternal death review coverage	Output	NA	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	4.5	Programme report	Annual	Health facility
106	Stillbirth rate per 1000 live births	Impact	16.1[15]					12					8	4.5	NHIS	Annual	Health facility
107	Pentavalent 3 immunization coverage rate	Outcome	44%[1]	51%	60%	65%	70%	80%	81%	82%	83%	84%	85%	4.5	NHIS	Annual	Population/ health facility
108	Measles-containing vaccine, first dose (MCV1) immunization coverage rate	Outcome	42%[1]	50%	58%	65%	70%	80%	81%	82%	83%	85%	85%	4.5	NHIS	Annual	Population/ health facility
109	Districts with ›80% of pentavalent 3 immunization coverage	Outcome	8%[1]					50%					90%	4.5	NHIS	Annual	Health facility

	Indicator	Type of indicator	Targets											KRA objective	Means of verification	Frequency	Level of data collection
			Baseline	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030				
110	Total provincial hospital births that are referred from rural centres per 1000 births	Output	NA											4.5	NHIS/ hospital reports	Annual	Health-facility level
111	Care-seeking behaviour for symptoms of pneumonia	Outcome	63%					75%					80%	4.5	DHS	5 years	Population
112	Incidence of diarrhoeal disease in children <5 years	Impact	182					137					91	4.5	NHIS/DHS	5 years	Population
113	Coverage of diarrhoea treatment	Outcome	38%[3]	43%	49%	54%	60%	65%	71%	76%	81%	86%	90%	4.5	DHS	5 years	Population
114	Deaths among children <5 years with pneumonia admitted to a health facility	Impact	2.1%					1.0%					0.5%	4.5	NHIS	Annual	Health facility
115	Reported congenital syphilis cases	Impact	NA										20% ↓	4.5	HIV Programme	Annual	Health facility
116	Women aged 20–24 who were married or in union before the age 15 and before age 18	Outcome	Before Age 15: 8.0%, before age 18: 27.3%										20% ↓	4.5	DHS	5 years	Population
117	Adolescent birth rate per 1000 girls 10–14 or women 15–19 years of age (SDG 3.7.2)	Impact	1/68[3]					0.5/51					0/ 34	4.5	DHS	5 years	Population
118	Adult mortality rate per 1000 population aged 15–60 years old (male and female)	Impact	2.96 & 2.56[3]					2.3 & 2.0					1.8 & 1.4	4.5	Vital registration/ DHIS/DHS	5 years	Population
119	Adolescent (10–19 years old) mortality rate per 100 000 population	Impact	NA										50% ↓	4.5	DHIS/DHS/ civil registration	5 years	Population
	Nutrition																
120	Stunting prevalence in children <5 years	Impact	48.2%[16]					36.0%					24.0%	4.5	DHS/HIES	5 years	Population
121	Wasting prevalence in children <5 years	Impact	16.0%[16]					12.0%					8.0%	4.5	DHS/HIES	5 years	Population

	Indicator	Type of indicator	Targets										KRA objective	Means of verification	Frequency	Level of data collection
			Baseline	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030				
122	Underweight prevalence in children <5 years	Impact	27.2%[16] (HIES) 21.0%[1] (NHIS)					19.0% 15.0% (facilty-based)					13.0% 10.0% (facilty-based)	4.5	DHS/ NHIS	5 years/ Annual	Population
123	Children aged 6–59 months who received vitamin A supplementation	Output	36[1]	40	45	49	54	59	64	69	74	78	80	4.5	NHIS	Annual	Health facility
124	Children aged 1–5 years dewormed	Output	7[1]	15	23	31	39	47	55	63	71	78	80	4.5	NHIS	Annual	Health facility
125	Households using iodized salt	Outcome	88[3]					95					100	4.5	DHS	5 years	Health facility
126	Prevalence of anaemia in women aged 15–49 years and by pregnancy status	Outcome	36.6/ 44.8[17]										20/25	4.5	Global Nutrition Report	5 years	Population
127	Early initiation of breastfeeding	Outcome	91[3]					95					100	4.5	DHS	5 Years	Population
128	Exclusive breastfeeding in the first six months	Outcome	62[3]					70					80	4.5	DHS	5 years	Population
129	Incidence of low birthweight among newborns	Outcome	7[1]					5					2	4.5	NHIS	Annual	Health facility
130	Prevalence of anaemia in children 6–59 months	Outcome	NA										20% ↓	4.5	DHS/survey	5 years	Population
131	Children aged 0–59 months who are overweight (%)	Outcome	13.7[17]					11					7	4.5	Global Nutrition Report	5 years	Population
	Hygiene and environmental health																
132	Population using safely managed drinking-water services (%)	Outcome	47[3]					55					75	4.6	DHS	5 years	Population

	Indicator	Type of indicator	Targets											KRA objective	Means of verification	Frequency	Level of data collection
			Baseline	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030				
133	Population using safely managed sanitation services (%)	Outcome	30[3]					45					75	4.6	DHS	5 years	Population
134	Mortality rate attributed to unsafe water, unsafe sanitation and lack of hygiene per 100 000 population	Impact	16.3[13]					12					10	4.6	WHO Global Health Observatory	Annual	Health-facility level
135	Mortality attributed to joint effects of household and ambient air pollution (age-standardized)	Impact	152[13]										130	4.6	WHO Global Health Observatory	Annual	Health facility
136	Population with primary reliance on clean fuels and technologies at the household level	Outcome	13[11]										30	4.6	DHS/STEPS/ HIES	5 years	Population
137	Concentrations of fine particulate matter (PM2.5) (SDG indicator 11.6.2)	Outcome	1[11]										0.7	4.6	Admin. report	5 years	Population
	Surveillance and health emergencies																
138	Non-polio acute flaccid paralysis (AFP) rate per 100 000 population under 15 years	Output	6[9]					≥2					≥2	4.7	National surveillance report	Annual	Health facility
139	AFP stool adequacy rate	Output	72[9]					80					80	4.7	National surveillance report	Annual	Health facility
140	Discarded non-measles/non-rubella cases per 100 000 population	Output	1[9]					2					2	4.7	National surveillance report	Annual	Health facility
141	Outbreaks/urgent events identified and reported are assessed by NDoH/PHA within 48 hours of receiving the report	Process	54[1]	60	65	70	75	80	85	90	90	90	90	4.7	National surveillance report	Annual	PHA/health facility
142	Health facilities reporting complete and timely weekly disease surveillance reports	Output	54[9]	70	73	76	78	80	80	80	85	90	90	4.7	National surveillance report	Annual	PHA/ health facility
143	International Health Regulations (2005) – IHR (2005) – core capacity index	Output	NA										80	4.7	State Party Self Reported reports	Annual	NDoH/PHA

	Indicator	Type of indicator	Targets											KRA objective	Means of verification	Frequency	Level of data collection
			Baseline	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030				
144	Submission of IHR (2005) State Party Self-assessment Annual Report	Output	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		National surveillance programme	Annual	NDoH
145	Public health emergency (outbreak or disaster) after-action review conducted	Output	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		National surveillance programme	Annual	NDoH
146	New COVID-19 cases	Outcome	802												National surveillance programme	Annual	NDoH
	Laboratory																
147	Provincial hospital, district hospital and health centre labs that are quality assured as per national standards	Output	60	70	80	90	100	100	100	100	100	100	100	4.7	Programme report	Annual	Central Public Health Laboratory (CPHL)/ NDoH
148	Hospital and central laboratories assessed with Stepwise Laboratory Improvement Process Towards Accreditation (SLIPTA) framework	Input	NA					20					40	4.7	Programme report	Annual	CPHL/ NDoH
149	Laboratories of general and provincial hospitals accredited with ISO 15189 and/or 17025	Input	NA					10					20	4.7	Programme report	Annual	CPHL/ NDoH
150	Provincial hospital labs supervised by CPHL at least once per year	Output	68	100	100	100	100	100	100	100	100	100	100	4.7	CPHL report	Annual	CPHL/ NDoH
	KRA5: Building strong resilient health system																
151	Legislation reviewed and developed to implement the National Health Plan and support health system strengthening	Input												5	Programme report	5 years	NDoH

	Indicator	Type of indicator	Targets										KRA objective	Means of verification	Frequency	Level of data collection
			Baseline	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030				
152	Policies, strategies and plans reviewed and developed to implement the National Health Plan 2021–2030	Input	0/3					15/9						5.1	Programme report	5 years	NDoH
153	Provinces that have policies, strategies and plans to implement the National Health Plan 2021–2030	Input	0	100	100	100	100	100	100	100	100	100	100	5.1	Programme report, PHA report	Annual	NDoH
154	Provinces that have conducted annual reviews of their strategies and plans to implement the National Health Plan 2021-2030	Output	0	100	100	100	100	100	100	100	100	100	100		PHA report	Annual	PHA
155	Specialized cancer centres established in Port Moresby General Hospital (PMGH) and Angau Hospital	Input	0					100					100	5.2.	Programme report/PHA report	Annual	NDoH
156	Provinces with cancer satellite clinics	Input	NA					50					100	5.2.	Programme report/PHA report	Annual	NDoH
157	Health facilities per 10 000 population	Input	2.8					3.5					5.0	5.2.	National Inventory of health facilities (NIHF)	Annual	NDoH/ health facility
158	Health facilities that have running water and sanitation	Input	49[1]					75					100	5.2	NIHF	Annual	Health facility
159	Health facilities with functioning radio, telephone or mobile phone	Input	44[1]					75					100	5.2	NIHF	Annual	Health facility
160	Outpatient service utilization per capita	Output	1.14[1]					1.5					2.0	5.2	NHIS	Annual	Health facility
161	Hospital bed density per 10 000 population	Input	NA										50% ↑	5.2	NIHF	Annual	Health facility

	Indicator	Type of indicator	Targets										KRA objective	Means of verification	Frequency	Level of data collection
			Baseline	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030				
162	Inpatient admissions per 1000 population	Output	25										50	5.2	NHIS	Annual	Health facility
163	General hospitals and provincial hospitals that have all 14 specialties	Input	4.3[1]					25					50	5.2	Programme report	Annual	Health facilities
164	Population with access to Bellwether Procedures in less than 2 hours	Outcome	20%[18]										80%	5.2	Special studies	5 years	NDoH
165	Surgical volume per 100 000 population	Output	1264[18]										2500	5.2	Special studies, World Bank database, hospital reports	Annual	Health facilities
166	Perioperative mortality rate	Output	0.5[18]										50% ↓	5.2	Hospital reports, special studies	5 years	Health facilities
167	Blood units collected from voluntary blood donation	Input	NA	50% ↑	60% ↑	70% ↑	80% ↑	100% ↑	120% ↑	140% ↑	160% ↑	180% ↑	200% ↑	5.2	Blood bank report	Annual	Health-facility level
168	Voluntary blood donations	Input	65					75					80	5.2	Blood bank report	Annual	Health-facility level
169	Obstetric and gynaecological admissions due to abortion	Output	NA										50% ↓	5.2	DHIS	Annual	Health facilities
170	Districts with supervised delivery hubs	Output	NA	9	18	27	36	45	54	63	72	81	89	5.6	Programme report	Annual	PHA
171	Total budget allocation (Health Services Improvement Programme or HSIP, and GoPNG) per capita	Input	193										210	5.3	NDoH Treasury Dept. report	Annual	NDoH
172	Public domestic sources of current spending on health	Input	70										100	5.3	NDoH Treasury Dept. report	Annual	NDoH

Indicator		Type of indicator	Targets											KRA objective	Means of verification	Frequency	Level of data collection
			Baseline	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030				
173	Government (functional grants) and development partner contributions that are expended	Process	80[1]	90	100	100	100	100	100	100	100	100	100	5.3	NDoH Treasury Dept. report	Annual	NDoH
174	Provincial health expenditure (Government and development partner contributions) as a percentage of estimated minimum health expenditure required	Process	66[1]	70	75	80	85	90	95	100	100	100	100	5.3	NDoH Treasury Dept. report	Annual	NDoH
175	PHAs that have introduced facility-based budgeting	Input	7	8	10	12	18	21	21	21	21	21	22	5.3	NDoH Treasury Dept. report	Annual	NDoH
176	External sources of current spending on health as a percentage of current expenditure on health	Input	20.5[13]										20.5	5.3	NDoH Treasury Dept. report	Annual	NDoH
177	Total net official development assistance to medical research and basic health sectors (SDG 3.b.2)	Input	NA											5.3	NDoH Treasury Dept. report	Annual	NDoH
178	Density of health workers per 10 000 population (stratified by cadre)	Input	1.0[19]					1.8					2.0	5.4	Human resources for health (HRH) records	Annual	NDoH
179	Graduates from health-training institutions per cadre per 1000 population	Input	NA										TBD	5.4	HRH records	Annual	NDoH
180	Access to core set of relevant essential medicines (SDG3.b.3)	Input	NA										80	5.5	mSupply/ NHIS	Annual	NDoH
181	Months that health facilities do not have stock out of all selected medical supplies for more than a week in the month	Input	53[1]	56	65	70	73	75	78	81	84	85	90	5.5	NHIS	Annual	Health facility
182	Health facilities with medical equipment as per National Health Service Standards (NHSS)	Input	NA										100	5.5	NHSS audit	5 years	Health facility
183	Health information systems linked to a NDoH- managed data warehouse and cloud platform	Input	0					7					10	5.6	NDoH ICT report	Annual	NDoH/PHA

	Indicator	Type of indicator	Targets											KRA objective	Means of verification	Frequency	Level of data collection
			Baseline	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030				
184	Per cent of report completeness by facilities	Input	93[1]					95					95	5.6	NHIS	Annual	Health facility
185	Birth registration coverage (SDG 16.9.1)	Input	NA										50	5.6	Civil registration	Annual	NDoH/ health facility
186	Death registration coverage (SDG 17.19.2)	Input	NA										50	5.6	Civil registration	Annual	NDoH/ Health facility
187	Health facilities that meet the data verification factor within 10% range	Output	24%–40% for indicators assessed					75% for all indicators					95% for all indicators	5.6	NHIS supervisory report	Annual	Health facility
188	Health facilities that received at least one supervisory visit during the year	Process	60[1]					70					80	5.6	NHIS	Annual	Health facility
189	Health sector-wide area network established	Input	NA					Partial					Yes	5.6	NDoH ICT report	Annual	NDoH/PHA
190	Provinces implementing Human Resource Information System (HRIS)	Input	NA					50					100	5.6	NDoH ICT report	Annual	NDoH/PHA
191	Health posts open	Input	49[1]					80					100	5.6	NHIF	Annual	Health facility
192	Established National Reference Laboratory	Input	NA										Yes	5.6	NDoH report	Annual	NDoH
193	Number of final research reports approved by the Medical Research Advisory Committee	Output	NA	4	5	5	5	5	7	7	7	7	7	5.7	MRAC Secretariat report	Annual	NDoH
194	Provincial hospitals and Port Moresby General Hospital have a functional Hospital Management Information System (HMIS)	Input	4.3%										100%	5.6	NDoH ICT report	Annual	NDoH/PHA

	Indicator	Type of indicator	Targets										KRA objective	Means of verification	Frequency	Level of data collection
			Baseline	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030				
195	e-Health, clinical and administrative applications hosted at NDOH data centre	Input	2										10	5.6	NDoH ICT report	Annual	NDoH/PHA
196	Health facilities with m-Supply system	Input	7.5%										100%	5.6	NDoH ICT report	Annual	NDoH/PHA
197	Provinces with at least 3 digital health specialists	Input	95										100	5.6	NDoH ICT report	Annual	NDoH/PHA
198	Provinces with functional teleconferencing digital services	Input	0										100	5.6	NDoH ICT report	Annual	NDoH/PHA
199	Provinces with digital security system established	Input	0										100	5.6	NDoH ICT report	Annual	NDoH/PHA
200	Product batches tested that met quality control standards	Process	89	100	100	100	100	100	100	100	100	100	100	5.5	PSSB/ MQCL report	Annual	NDoH

Source for baseline, ↓ Reduction ↑ increase

NA= baseline not available or could not be found during the planning of NHP 2021–2030 , for these indicators 2021 or 2022 performance NHP will be taken as a baseline if the indicator is a routinely monitored indicator or through survey or by consulting the PHAs.

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ANNEX 2: TERMS OF REFERENCE FOR THE NATIONAL MONITORING & EVALUATION STEERING COMMITTEE, NATIONAL DEPARTMENT OF HEALTH PAPUA NEW GUINEA

1. Background

The *National Health Plan 2021-2030* (NHP) outlines the need for a robust monitoring and evaluation framework to measure progress in implementation of the Plan in all the five key result areas, against the agreed objectives and targets. As such, a Monitoring and Evaluation (M&E) Strategic Plan was developed for the NHP to provide guidance on measuring health sector performance and strengthening health information systems over the implementation period of the NHP. The goal of the Strategic Plan is to increase the availability and use of timely, complete and accurate health-related data to monitor implementation, assess health sector performance, and ensure that data are used for evidence-based health service delivery and decision-making.

The Strategic Plan includes a M&E Framework which outlines over 200 indicators across all programmes to measure key health sector inputs, outputs, outcomes and overall impact over the lifetime of NHP 2021–2030. The Framework is structured around the five Key Result Areas (KRAs) of NHP 2021–2030, with an overall focus on monitoring progress towards universal health coverage and equity, given the National Health Plan's central theme of "leaving no one behind".

Well-functioning health information systems are critical towards ensuring effective M&E. Whilst significant efforts have been made to strengthen health information systems in Papua New Guinea, several challenges persist. These include insufficient human resources with the required skills, limited information and communication technology (ICT) infrastructure and capacity, fragmented health information systems, the lack of interoperability, data quality issues and limited data use, as well as coordination with stakeholders within and outside the health sector.

The National Department of Health (NDoH), Provincial Health Authorities (PHAs), and several development partners currently support implementation of activities to strengthen monitoring and evaluation and health information systems. There is a need to both track progress in implementation of the M&E Strategic Plan and ensure coordination of efforts in implementation.

2. Purpose of the National Monitoring and Evaluation (M&E) Steering Committee

The purpose of the National M&E Steering Committee is to oversee implementation of the M&E Strategic Plan and approve all associated plans, tools and activities proposed. The Steering Committee will be responsible for:

- Reviewing and approving workplans and budgets, monitoring risks, quality and timeliness of implementation of the M&E Strategic Plan and the national health and HIV/AIDS research agenda.
- Ensuring coordination and alignment of information/M&E related activities implemented by different stakeholders (PHA, development partners, academia, other relevant government departments etc) with the NHP and the M&E Strategic Plan; and national health and HIV/AIDS research agenda.
- Advocacy and awareness raising with appropriate government departments and development dpartners for enhanced prioritization and resource mobilization for M&E and health information and research activities.

3. Specific responsibilities of the National M&E Steering Committee

The National M&E Steering Committee will have the following specific responsibilities:

- Monitor implementation of the M&E Strategic Plan for the NHP and achievement of its outcomes;
- Monitor implementation of the national health and HIV/AIDS research agenga and achievement of its outcomes;
- Advise on and endorse proposed national strategies, frameworks, policies, protocols and workplans related to M&E and health information systems and reseach;
- Review and advise on any recommendations proposed by the M&E Technical Working Group for strengthening M&E and health information systems and research;
- Share proposed M&E and health information system and research related activities to ensure coordination and harmonization between the NDoH, PHAs and partners;
- Address any issues that have major implications for the M&E Strategic Plan and associated policies and workplans;
- Advise on and identify opportunities to enhance incorporation of monitoring data into policy- and decision-making;
- Advocate with policy makers and donors for political and financial support for monitoring and evaluation and health information priorities; and
- Report on project progress in implementation of M&E and health information related activities in the health sector to those responsible at a high level, such as the NDoH Senior Executive Management, Program & Performance Committee, the Minister for Health and HIV, or the National Executive Council.
- Coordinate the mid-term and final review of the National Health Plan (NHP) 2021-2030

4. Membership

Chair: Deputy Secretary, National Health Policy and Corporate Services

Deputy Chair: Deputy Secretary, National Public Health

Secretariat: PMRB

Members:

Performance, Monitoring and Research Branch (PMRB) and ICT branch NDoH.
Disease control manager (NDoH)
Family health program manager (NDoH)
Medical Standards Division manager (NDoH)
Provincial Health Authority Chief Executive Officers from four regions
World Health Organization (WHO)
United Nations Funds For Children (UNICEF)
Vital Strategies
World Bank
Health Sector Support Development Program (HSSDP)
PNG Australia Partnership Transition to Health (PATH)
World Vision
Burnet Institute
PNG Civil Identity Registry (CIR)
National Statistics Office (NSO)
Department of National Planning & Management (DNPM)
Department of Provincial Local Government Affairs (DPLGA)

Observers:

Representatives from additional organizations may be invited as observers or to present specific issues on an ad-hoc basis as and when need arises.

5. Coordination with other Technical Working Groups and Steering Committees

The National M&E Steering Committee will liaise closely with other Technical Working Groups and Steering Committees that oversee areas related to monitoring and evaluation and health information systems, namely:

- M&E Technical Working Group
- The e-Health Steering Committee and Technical Working Group
- Medical Research Advisory Committee (MRAC)
- Burden of Disease Steering Committee
- Civil Registration and Vital Statistics Steering Committee
- PHA M&E Committees/Technical Working Groups
- Any other relevant Committees that may be established

The M&E Steering Committee Chair will share with the Chairs of the above Committees and Technical Working Groups any issues and points of discussion for their attention. This will help to ensure improved coordination and harmonization of governance around health information matters. Where needed, joint meetings of Technical Working Groups/Steering Committees may be requested.

The M&E Steering Committee Chair may also delegate Members of the M&E Steering Committee to participate in other relevant meetings or groups (such as Technical Working Groups, Steering Committees), and when appropriate, present on updates or discussion points from the M&E Steering Committee meetings.

5.1. Coordination with the M&E Technical Working Group

The National M&E Steering Committee will oversee the M&E Technical Working Group (TWG), whose function is to advise the Steering Committee of important issues that impact on planning, implementation or funding of M&E/health information system strengthening activities. The Steering Committee may also request the TWG to review, deliberate and advise on any key issues that are presented to the Steering Committee.

The Chair of the M&E TWG will need to provide the Chair and Secretariat of the M&E Steering Committee with relevant reports and/or recommendations at each Steering Committee meeting. Any recommendations made to the Steering Committee by the TWG should be in the form of a "Steering Committee Paper", which is then endorsed by the Committee as either "Approved", "Approved with conditions, or "Not approved".

6. Operating procedures

6.1 Meeting frequency

- Meetings of the M&E Steering Committee will be convened by the Chair on a quarterly basis at the NDoH. Ad-hoc meetings may also be called to discuss specific issues as and when needs arise
- If the designated Chair is not available, then the Deputy Chair will be responsible for convening and conducting the meeting. The Deputy Chair is then responsible for informing the Chair on the salient points/decisions raised or agreed upon at the meeting.

6.2 Meeting agenda & quorum requirements

- The meeting agenda will be circulated by the Secretariat to all M&E Steering Committee members at least seven days prior to the meeting (i.e. one week in advance), and requests for agenda items considered up to three working days before the meeting – subject to approval of the Chair.

- The final agenda of the National M&E Steering Committee meeting, with any relevant meeting papers, will be distributed to all Members at least two working days before the scheduled meeting.
- A minimum of 50% + 1 of National M&E Steering Committee members is required for the meeting to be recognised as an authorised meeting for the recommendations or resolutions to be valid. The quorum must contain at least three member(s) from the National Department of Health, including a representative from PMRB.
- Members of the National M&E Steering Committee may nominate a proxy to attend a meeting if the member is unable to attend. The Chair will be informed of the substitution at least one (1) working day prior to the scheduled nominated meeting. The nominated proxy shall have voting rights at the attended meeting. The nominated proxy shall provide relevant comments/feedback, of the National eHealth Steering Committee member they are representing, to the attended meeting.

6.3 Reporting of meeting discussions

- Minutes of all meetings will be recorded in a standard template by the Secretariat and shared with the Chair and Deputy Chair seven working days after the meeting for review. The minutes are to then be disseminated to all members ten working days after the meeting, at the latest.
- Minutes of the previous M&E TWG meeting will be tabled at each meeting for review, particularly for any matters arising from the previous meeting that require further discussion or follow-up.
- By agreement of the Committee, out-of-session decisions will be deemed acceptable, if circulated via flying minutes. Where agreed, all out-of-session decisions shall be recorded in the minutes of the next scheduled National M&E Steering Committee meeting.
- Annual reports summarizing discussions and activities of the M&E Steering Committee will be submitted to the Secretary of Health, NDoH

ANNEX 3: TERMS OF REFERENCE FOR THE MONITORING & EVALUATION TECHNICAL WORKING GROUP NATIONAL DEPARTMENT OF HEALTH PAPUA NEW GUINEA

1. Background

Within the National Department of Health (NDoH), the Performance, Monitoring and Research Branch (PMRB) is responsible for overseeing monitoring and evaluation (M&E) of health sector activities and reporting on progress to the Senior Executive Management of the NDoH. This reporting is in turn used to inform reporting to the Minister of Health and HIV/AIDS and the national Parliament. Monitoring and Evaluation is focused around priorities outlined in the *National Health Plan 2021-2030* (NHP) and guided by the *M&E Strategic Plan and M&E Framework for the NHP*. Well-functioning health information systems are critical towards ensuring effective M&E. However, key on-going challenges in Papua New Guinea include fragmented information systems, quality of data reported, and analytical capacities - particularly at the subnational levels.

A National M&E Steering Committee for the Health Sector will be established under the Minister of Health and HIV and the Secretary for Health to oversee implementation of the M&E Strategic Plan and approve all associated plans, tools and activities proposed. An existing M&E Technical Working Group, established in early 2021 and originally with the purpose of developing the M&E Strategic Plan and M&E Framework, will continue to operate under the oversight of the M&E Steering Committee.

2. Purpose

The purpose of the Monitoring & Evaluation Technical Working Group (M&E TWG) is to provide technical guidance on monitoring and evaluation activities within the health sector and strengthening of routine health information systems for improved policy and decision-making. This includes strategic advice on implementation of the M&E Strategic Plan for the NHP and improving reporting and data quality within routine information systems. It will also support the core functions and roles of the M&E Steering Committee.

3. Specific responsibilities

The M&E TWG will have the following specific responsibilities:

- Review, advise on and endorse proposed national strategies, frameworks, policies and protocols related to M&E and health information systems;
- Provide technical guidance to PMRB, PHAs and partners on strengthening M&E and health information systems including data management, reporting coverage and data quality, data analysis and dissemination tools, capacity building, and enhancing linkages between the different health information systems;
- Review and advise on dedicated tools developed for monitoring of implementation of the *National Health Plan 2021-2030* such as national and sub-national dashboards, performance reports and other M&E tools;
- Provide guidance on analyses and approaches needed to fill information gaps on performance of the health sector and review any findings arising from these analyses; and
- Advise on any other matters as delegated by the M&E Steering Committee.
- Provide technical inputs and draft the National Reports eg SPAR, National Hospital Reports, NDOH Annual Management Report
- Review all research reports endorsed quarterly by MRAC and translate for policy briefs, program

intervention and publication and also submit for peer reviews.

- Coordinate and review all national programs plans evaluation and provide technical advice on the process for midterm and end of term evaluation

4. Membership

Chair: Manager, Performance Monitoring & Research Branch

Secretary: Rotational among core members

Secretariat: PMRB

Core Members:

- Technical Advisor - Research
- Technical Advisor - NHIS
- M&E representatives from development partners: HSSDP, PATH, WHO, Burnet Institute
- Representatives from key NDoH programmes (HIV, TB, Malaria, Family Health)

Observers/invited to join on an ad-hoc basis when needed:

- Technical Advisor – Planning
- Technical Advisor - Economics
- M&E Officers from Programmes: HIV, Tuberculosis, Malaria, EPI
- Representatives from Procurement & Medical Supply, IFMS, HR
- Medical records representative from POMGEN
- Representative from UPNG, SMHS
- Other partners

5. Coordination with other Technical Working Groups and Steering Committees

The M&E TWG will liaise closely with other Technical Working Groups and Steering Committees that oversee areas related to monitoring and evaluation and health information systems, namely:

- The e-Health Steering Committee and Technical Working Group
- Medical Research Advisory Committee (MRAC)
- Burden of Disease Steering Committee
- Civil Registration and Vital Statistics Steering Committee
- PHA M&E Committees/Technical Working Groups
- Any other relevant Committees that may be established

The M&E TWG Chair will share with the Chairs of the above Committees and Technical Working Groups any issues and points of discussion for their attention. This will help to ensure improved coordination and harmonization of governance around health information matters. Where needed, joint meetings of Technical Working Groups/Steering Committees may be requested.

6. Operating procedures

- Meetings of the M&E TWG will be convened by the Chair on a monthly basis, on the last Friday of each month, at the NDoH. Ad-hoc meetings may also be called to discuss specific issues as and when needs arise
- The meeting agenda will be circulated by the Secretary to all M&E TWG members on the Friday prior to the meeting (i.e. one week in advance), and requests for agenda items considered up to two days before the meeting – subject to approval of the Chair.
- Documents requiring review will be shared as soon as possible prior to the meeting.
- Minutes of all meetings will be recorded in a standard template on a rotational basis by members of the M&E TWG and shared with the Secretary one week after the meeting, at the latest, for dissemination to all members.
- Minutes of the previous M&E TWG meeting will be tabled at each meeting for review, particularly for any matters arising from the previous meeting that require further discussion or follow-up.
- The Chair may delegate Members of the M&E TWG to participate in other relevant meetings or groups (such as Technical Working Groups, Steering Committees), and when appropriate, present on updates or discussion points from the M&E Technical Working Group
- Members are to attend meetings on a regular basis to ensure continuity of representation in the TWG. Bi-annual progress reports summarizing discussions and activities of the M&E TWG will be submitted to the M&E Steering Committee. Any other reports and/or recommendations are to presented at M&E Steering Committee meetings as needed.

ANNEX 4: TERMS OF REFERENCE, PROVINCIAL MONITORING & EVALUATION COORDINATION COMMITTEE

1. Background

Measuring health sector performance over the period of the *National Health Plan 2021-2030* (NHP) is critical in determining progress in implementation of planned activities and achievement of the objectives and targets under the Key Result Areas (KRAs) of the NHP. As such, the National Department of Health (NDoH) developed a M&E Strategic Plan for the NHP which outlines indicators and actions for measuring performance.

Within the NDoH, the Performance, Monitoring and Research Branch (PMRB) is responsible for overseeing monitoring and evaluation (M&E) of health sector activities, and reporting on progress to the Senior Executive Management of the NDoH. Further, the national M&E Steering Committee and M&E Technical Working Group provides oversight and technical guidance on M&E activities.

At the provincial level, Provincial M&E Coordination Committees will be established under the supervision of the Provincial Health Authority (PHA) Chief Executive Officer (CEO) to oversee implementation of the M&E Strategic Plan and its accompanying M&E tools and Standard Operating Protocols (SOPs). The committee will also be responsible for providing oversight and guidance on monitoring and evaluation of program activities as per PHA Annual Implementation Schedules (AIS) and the Annual Implementation Plans (AIP) and research activities

2. Purpose

The purpose of the Provincial Monitoring & Evaluation Coordination Committee is to oversee and provide technical guidance on monitoring and evaluation activities within the province including for AIS /AIP activities and strengthening of routine health information systems for improved policy and decision-making and research activities conducted in the province. This includes strategic advice on implementation of the M&E Strategic Plan for the NHP, National Health & HIV Research Agenda and improving reporting and data quality within routine information systems at the provincial level. In addition, the Provincial Monitoring & Evaluation Coordination Committee will ensure coordination between national and provincial M&E/health information and research activities through close collaboration and technical guidance from the National M&E Steering Committee and M&E Technical Working Group.

3. Specific responsibilities

The M&E Coordination Committee has the following specific responsibilities:

- Provide guidance on Implementation of the National Health Plan: 2021–2030, M&E Strategic Plan, and National Health & HIV Research Agenda (2023-2030) through the Provincial M&E Framework
- Ensure the utilization of tools developed for monitoring of implementation of the National Health Plan: 2021–2030, National Health & HIV Research Agenda (2023-2030) and M&E Strategic Plan such as national and sub-national dashboards, performance reports and other M&E tools
- Provide technical guidance to provincial SEM, provincial and district program coordinators, district health managers and partners on activities and tools to strengthen M&E and health information systems, research, including improving reporting coverage and data quality, capacity building, and enhancing linkages between the different health information systems
- Provide guidance on data use and dissemination including regular analysis of program data, and provincial indicators in the M&E Strategic Plan

- Provide technical guidance on monitoring and evaluation of planned AIS/AIP activities against set targets and performance indicators and research activities
- Coordinate and liaise with PHA Institutional Review Boards on research proposals submission and outcomes on low risk and operational researches conducted in the PHAs
- Advocacy and raising of awareness within appropriate governments and development partners for enhanced prioritization and resource mobilization for M&E, AIS/AIP and health information activities
- Advise on coordination and harmonization of plans and tools for M&E, AIS/AIP and health information systems with those of other relevant government departments, development partners and key stakeholders
- Advise on any other matters as delegated by PHA CEO, National M&E Steering Committee and TWG

4. Chair and Co-Chair

The CEO shall be the Chairperson of the M&E committee, and the Director, Policy & Planning shall be the Co-Chair. In the absence of the appointed Chair the Co-Chair will chair the Committee meetings.

5. Membership

Core Membership:

- Director, Policy Planning
- Provincial M&E Officer
- Medical Record Officers
- Hospital Quality Assurance Officer
- Provincial Health Information Officer (PHIO)
- Director/Deputy Director Public Health
- Director/Deputy Director Corporate Services
- Director/Deputy Director Curative Health, Medical Services
- Nurse Clinical Manager
- Provincial Disease Control Officer
- M&E representatives from development partners: PATH, WHO, Church health services
- M&E representative from Provincial Administration

Observers/invited to join on an ad-hoc basis when needed:

- All Program Coordinators
- All Unit Managers/Sectional Heads
- Other partners

6. Secretariat

The Provincial M&E Officer, PHIO or anyone assigned by the M&E Committee

7. Coordination with other Technical Working Groups/Committees

The M&E Committee will liaise with other Committees that oversee areas related to monitoring and evaluation and health information systems, including the National M&E Steering Committee and M&E Technical Working Group.

8. Meetings

The Committee will meet at the beginning of the first quarter of every year to review the previous year performance. Meetings will then continue with one held at the end of every quarter, totaling up to five (5) meetings annually, or at the request of the Chairperson or the Co-chair. Notice of the next meeting and minutes of the previous must be shared five (5) days prior.

9. Quorum

Quorum is reached through a minimum of Chairperson or Co-Chairperson along with four (4) members of the Committee in attendance. Members are to attend meetings on a regular basis to ensure continuity of representation in the Committee.

10. Reporting

The Provincial M&E Coordination Committee will report to the PHA Senior Executive Management Team and the National M&E Steering Committee through the Chair/Co-Chair.