NATIONAL DEPARTMENT OF HEALTH

STANDARD OPERATING PROCEDURES FOR MANAGEMENT OF DATA FROM ROUTINE HEALTH INFORMATION SYSTEMS

PAPUA NEW GUINEA

National Department of Health

The Data Management Standard Operating Procedure was approved and signed by the Secretary for Health in February 2023.

The development of the Data Management Standard Operation Procedure was coordinated by the Performance, Monitoring and Research Branch of the National Department of Health. Cover art image credit: World Health Organization/Yoshi Shimizu. Formatting and editing by Abt Associates, under the PNG-Australia Transition to Health Program.

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I would like to thank and congratulate all those involved in the development of the Standard Operating Procedures for Management of Data from Routine Health Information Systems. 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 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.

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, enhancing data quality capacity is one activity outlined in the implementation schedule. Focus and aimed to 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.

The development of the the Standard Operating Procedures for Management of Data from Routine Health Information Systems 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, the Health Services Sector Development Project, Papua New Guinea-Australia Transition to Health program). Consultations were also held with respective branches of NDoH, all PHAs, development partner organizations, donors, nongovernmental organizations, and churches.

I once again thank all involved for their contributions in developing this Standard Operating Procedure. I encourage everyone to use this SOP as the reference point for standard of measurement and recording of data reporting for the health sector. Let us maintain and continue to improve our reporting protocols for improved surveillance and monitoring of service delivery and continue to be innovative in our endeavours to strengthen health service delivery for improved outcomes.

Dr Osborne Liko
Secretary for Health

ABBREVIATIONS

AIDS	Acquired immune deficiency syndrome
ANC	Antenatal care
ART	Antiretroviral therapy
BMU	Basic Management Unit [for tuberculosis]
CEO	Chief Executive Officer
CHP	Community health post
DDA	District Development Authority
DHA	District Health Authority
DHIS	Discharge Hospital Information System
DQA	Data quality assessment
DQR	Data quality review
eNHIS	Electronic National Health Information System
EPI	Expanded Program on Immunization
eTB	Electronic Tuberculosis [module]
FP	Family planning
HCT	HIV counselling and testing
HIV	Human immunodeficiency virus
HPDB	HIV Patient Database
HR	Human resources
HRIS	Human Resource Information System
ICT	Information and communications technology
ICT Branch	Information, Communication and Technology Branch [NDoH]
IPT	Isoniazid preventive therapy [tuberculosis]
LAN	Local area network
M&E	Monitoring and evaluation
MERL	Monitoring, evaluation, research and learning
MOU	Memorandum of Understanding
MRO	Medical Records Officer
MSPDB	Medical Supplies Procurement and Distribution Branch
mSupply	Medical Supply System

NDoH	National Department of Health
NHIS	National Health Information System
NHSS	National Health Services Standards
NIHF	National Inventory of Health Facilities
NOPS	National Orthotic and Prosthetic Services
NTP	National TB Program
OIC	Officer-in-Charge
OPD	Outpatient Department
PDCO	Provincial Disease Control Officer
PHIO	Provincial Health Information Officer
PMGH	Port Moresby General Hospital
PMRB	Performance, Monitoring and Research Branch
PNG	Papua New Guinea
PPTCT	Prevention of Parent to Child Transmission
RDT	Rapid diagnostic test [malaria]
RHIS	Routine health information systems
SEM	Senior Executive Management
SOP	Standard operating procedure
SPAR	Sector Performance Annual Review
STI	Sexually transmitted infection
TB	Tuberculosis
TT	Tetanus Toxoid [vaccination]
WHO	World Health Organization

1 INTRODUCTION

The generation and use of quality data from routine health information systems (RHIS) is critical to measure and track performance of the health sector in Papua New Guinea (PNG). Routine health information systems involve regular recording, reporting, analysis, and presentation of health facility data from primary care facilities, hospitals, and other health service points (WHO, 2021). Data is processed and used at health facilities, but also aggregated and reported to higher levels in the health system (such as district, provincial, and national levels) for analysis and use (WHO, 2021). Data generated by RHIS on health services and the health status of patients helps to better understand use and coverage of health services, population health needs, and ultimately progress towards achieving universal health coverage. When data is used to inform service delivery, program planning, and policymaking, RHIS contribute to improved quality of health services and health outcomes while helping to address inequities and enhance efficiency in the health system.

Effective coordination and management of RHIS is necessary to ensure that the data generated is reliable and accurate, and ultimately used for decision-making. Setting clear procedures and protocols for data collection, maintenance and security, quality, analysis and use, facilitates effective coordination and management. While significant efforts have been made in Papua New Guinea towards strengthening routine health information systems, several challenges persist. These include: incomplete recording and reporting of data; inaccurate reporting of data; frequent turn-over in staff recording data; shortage of staff; inadequate information and communications technology (ICT) infrastructure; and lack of guidance on analysis and use of data. These Data Management Standard Operating Procedures (SOPs) were developed to help address some of these challenges.

1.1 Objectives

The objectives of these Data Management SOPs are to clearly document standard procedures and processes for collecting, reporting, storing, maintaining, analysing and disseminating, and ensuring quality of data, from routine health information systems in Papua New Guinea. In addition, the SOPs outline the roles and responsibilities of different stakeholders in health information systems for effective implementation of the procedures and processes. In doing so, the SOPs aim to contribute to improved coordination and oversight of data at all levels in the health sector and the overall goal and objectives of the *Monitoring and Evaluation (M&E) Strategic Plan for the National Health Plan 2021–2030*.

1.2 Scope

These SOPs primarily focus on the National Health Information (NHIS) and the electronic NHIS (eNHIS), as well as the Discharge Hospital Information System (DHIS), and Health Facility Inventory Database (both of which are housed in the eNHIS). Routine reporting systems established for the National Tuberculosis Program, HIV/AIDS programs, Medical Supplies program, and Human Resource programs, also collect health facility data but are not covered in depth by this SOP. Separate SOPs or guidance documents have been drafted for some of these surveillance systems and are referenced where relevant in this document.

1.3 Target audience

These SOPs are for use by the different stakeholders involved in recording, reporting, maintaining, analysing, and disseminating data from routine health information systems in Papua New Guinea, with a focus on the NHIS/eNHIS (as per the scope of these SOPs, outlined

above). The stakeholders include service providers recording data in health facilities, District Health Managers, Program Coordinators, Provincial Health Information Officers (PHIOs) and M&E Officers based at Provincial Health Authorities (PHAs), Medical Records Officers (MROs) in hospitals, and M&E and Surveillance Officers at the National Department of Health (NDoH).

2 OVERVIEW OF ROUTINE HEALTH INFORMATION SYSTEMS IN PAPUA NEW GUINEA

Several routine health information systems have been established in Papua New Guinea to collect data on service delivery, health outcomes, medical supplies, infrastructure, and human resources (HR) from health facilities. These are the: National Health Information System (NHIS), Discharge Hospital Information System (DHIS), HIV Patient Database, Tuberculosis Surveillance System, Medical Supply System (mSupply), and the Human Resource Information System. According to the *National Health Administration Act 1997,* public and private health facilities are required to report data; however, reporting from private health facilities has not started yet. An overview of each of the routine health information systems is provided below.

2.1 National Health Information System (NHIS)

The primary routine health information system for reporting data on the provision of healthcare services and health outcomes is the National Health Information System. The NHIS, first established in 1987 and overseen by the Performance, Monitoring and Research Branch (PMRB) of NDoH, is a well-established system for data reporting from healthcare facilities to provinces and, ultimately, NDoH. The NHIS started as a paper-based system, where data entry was done on computers at the provincial and national levels. Following a pilot run in 184 health facilities across 5 provinces, it was decided to roll out the electronic National Health Information System (eNHIS) in 2018. This system involves direct entry and reporting of health data through tablets. By mid-2022, the eNHIS had been rolled out to over 89% of health facilities in 20 of 22 provinces, with only 2 provinces still using paper- and computer-based NHIS reporting (at the provincial level).

Data is recorded and reported from Level 2 to Level 6 health facilities (encompassing community health posts, health centres, urban clinics, and hospitals) on outpatient and inpatient services, based on a set of registers, tally sheets, daily summary forms, and monthly reporting forms. Although Level 1 health facilities (health posts, previously aid posts) do not report in the eNHIS/NHIS directly, they are required to submit their monthly report to the supervising health facility (community health post, health centre, or urban clinic). The supervising health facility then submits the health post report in the eNHIS/NHIS along with its monthly report.

Indicators reported in the eNHIS/NHIS cover various service areas and health outcomes, including outpatients, inpatient admissions and outcomes, family planning (FP), antenatal care (ANC), childbirth, immunisation, nutrition, sick-child care, school health services, outreach clinics, malaria cases and treatment, and drug shortages. Some indicators are disaggregated by age group and sex. Since 2000, reporting coverage has increased and has generally ranged around 90% (80–100%). Private health facilities are not yet reporting into the eNHIS/NHIS. Programs that have established their own vertical surveillance systems, i.e. HIV and TB, have recently included modules within the eNHIS. These modules have been rolled out in selected provinces to collect and report program data, including case-based (patient-level) data.

2.2 Discharge Hospital Information System (DHIS)

The Discharge Hospital Information System is used to report a line list of all hospital discharge cases and the corresponding morbidity or mortality according to the *International Classification of Diseases Eleventh Revision* (ICD-11) codes. The DHIS is included within the eNHIS reporting system, and health facilities enter data in the discharge register. Given that inpatient services are mainly offered starting in Level 3 health facilities, health facilities from Levels 3–6 are primarily reporting data in the DHIS. Reporting completeness in the DHIS remains low due to a range of factors, including paper-based hospital information systems resulting in significant time need for compiling and entering discharge data.

2.3 National Inventory of Health Facilities (NIHF)

The National Inventory of Health Facilities 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). The health facility inventory form is used by health facilities to report their inventories on an annual basis. Data collected through the annual inventory form covers status (open or closed health post), human resources, number of beds, equipment, and availability of communications equipment and other infrastructure. The inventory form is included in and reported through the eNHIS. The detailed human resource information is captured in the HRIS.

2.4 HIV Patient Database (HPDB)

The HIV Patient Database is the only clinic-level patient management system in Papua New Guinea. It is currently in use by 52 high-load health facilities. HPDB is an electronic (Microsoft Access database), integrated national HIV surveillance and M&E system to collect national, provincial, and facility level HIV/AIDS data. Two reporting forms are used to collect HIV patient data: (1) surveillance form 1 (Surv1), which is used to report summary data on HIV testing and syphilis testing; and (2) surveillance form 2 (Surv2), which is used to report summary data on HIV care and antiretroviral therapy (ART) at the end of each month. The data from Surv1 and Surv2 is compiled monthly from several registers found at the health facility level, including the: ANC register; obstetric register; HIV counselling and testing (HCT) logbook; HIV care and antiretroviral treatment (ART) visit logbook/register; and exposed infants to HIV register. Surveillance form 3 (Surv3) is used to screen for STIs using the syndromic tools, and surveillance form 4 (Surv4) is used to link HIV-positive clients to HIV care and treatment. These 2 forms are mainly maintained in the health facilities, but sometimes may be sent to NDoH. A total of 113 health facilities are sending Surv1 and Surv2 every month to NDoH, where the data is entered into a Microsoft Excel database, and 52 health facilities who have access to HPDB, directly enter patient-level data from the patient booklet.

2.5 Tuberculosis (TB) Surveillance System

Data on the National TB Program (NTP) is collected from Basic Management Units (BMUs) – health clinics where TB cases are diagnosed, registered, and treated. There are approximately 275 BMUs across Papua New Guinea as of 2022. BMUs have a TB Officer-in-Charge (OIC) who oversees activities and maintains a TB master register of all TB patients being treated within the catchment area. The register, along with a set of recording and reporting tools issued by NTP, are used to monitor services and health outcomes, and report data to the provincial and national levels. BMU reports are consolidated into a standardised report, which is submitted quarterly to the Provincial Health Authority and to the NTP at NDoH. NTP maintains a Microsoft Excel database, wherein all data reported from BMUs is entered and maintained. An electronic

TB module (e-TB) has been developed and included within the eNHIS to capture patient-level data and automatically aggregate these for reporting and further analysis. As of 2022, the e-TB module had been rolled out in selected provinces.

2.6 Medical Supply System (mSupply)

The Medical Supply System, mSupply, is managed by the Medical Supplies Procurement and Distribution Branch of NDoH, to monitor medical supplies in all 5 area medical stores and selected health facilities. Currently, it operates as an electronic and paper-based system. In 110 health facilities[1], mSupply 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. Additionally, efforts have also been undertaken to create customisations in mSupply to track distribution of COVID-19 vaccines down to the health facility level.

2.7 Human Resource Information System (HRIS)

The HRIS was developed in 2016–2017 by the Human Resources Branch of NDoH, to register and maintain data on all healthcare workers employed in the health sector, including administration and support staff. It was designed to: (1) track health worker training, certification, and licensing; (2) keep track of health worker deployment, performance, and attrition; and (3) model long-term health workforce needs and develop necessary budgets. As of 2022, the HRIS was not functional, with plans underway to make it functional again.

2.8 National Orthotic and Prosthetic Services (NOPS)

Data on Health Rehabilitation and Assistive Technology Standards is currently collected through 7 PHAs, with plans to expand to the rest of the 15 PHAs on standardised health rehabilitation services for young children and people with disabilities, people with decreasing health conditions due to lifestyle diseases or chronic health conditions, and the aging population. Program data collection focuses on various prosthetics and orthotics engineering, wheelchairs, walking aids, physiotherapy, occupational therapy, and cognition and communication standards and is collected through standardised patient data collection and reporting tools. Data collection forms vary, depending on prosthetics and orthotics presentations, and follow patient assessment, treatment, and follow-up. Patients are assessed and data collected through assessment and selection forms; specific orthotics engineering and treatment is informed by patient measurement and prescription forms; before donning a device, a device check-out form is used; and the client's continuous care is managed through a client follow-up form. The program currently has 3 operational electronic medical records, and a patient master line sheet is managed at provincial NOPS centres and shared with the national team monthly, while the rest of the process is managed at NOPS national office. Program data synthesis, analysis, and reporting is managed through the national program office that informs development of a quarterly update report to NDoH Senior Executive Management (SEM) and Annual Reports submitted to the Minister for Health annually. In collaboration with development partners and with technical guidance from NDoH PMRB, the program is in the process of developing a Disability module built into eNHIS that will replace

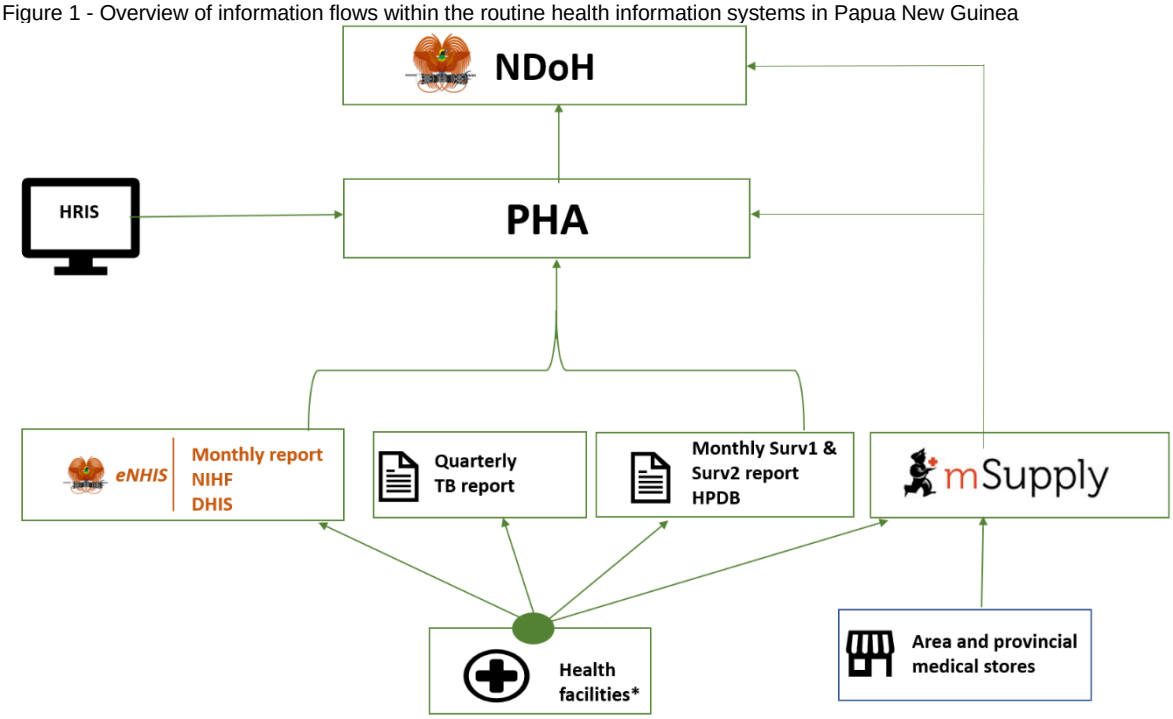
[1] Total includes 60 health centres in Morobe, 10 high-burden TB Basic Management Units, 19 high-burden antiretroviral therapy facilities, and 21 offices of Provincial Disease Control Officers (PDCOs).
[2] Total includes 5 area medical stores, 16 provincial hospitals, 6 district hospitals, 7 provincial medical stores and 2 general stores, Daru TB store, and the Central Public Health Laboratory.

current electronic medical records in efforts to strengthen and centralise data management at all levels (this is yet to be approved).

3 INFORMATION FLOW AND DATA MANAGEMENT RESPONSIBILITIES

Three levels are typically involved in the recording, gathering, and reporting of data in RHIS: health facility; province (Provincial Health Authority); and national (National Department of Health). Data is recorded and summarised in health facilities, and reports sent to the Provincial Health Authority. Then, before it is sent to NDoH, data is reviewed, verified, and validated at PHA level. Data is once more examined at the NDoH level, clarifications and corrections are made, and aggregate national reports are created for dissemination and decision-making. An overview of the information flow in the various routine health information systems is shown in Figure 1.

Figure 1 - Overview of information flows within the routine health information systems in Papua New Guinea



*For the eNHIS, health facility Levels 2–6 are supposed to report data. For TB, the health facilities that manage TB patients, known as Basic Management Units, do the reporting. For mSupply, provincial hospitals are currently reporting data along with selected health centres where roll-out has been done.

Depending on the system, there might be variations within this general flow. For instance, the mSupply system also includes area medical stores. By mid-2022, the roll-out of mSupply to health centres had begun in a few provinces, with information primarily coming from area medical stores, provincial medical stores, and provincial hospitals. The lowest level of a health facility at which data is collected may also vary. For instance, information on TB is collected from BMUs, the health facilities in charge of TB diagnosis, registration, treatment, and follow-up.

Different data management responsibilities are assigned by level to ensure complete and accurate data is transmitted from health facilities to the national level. These responsibilities are detailed below.

3.1 Data management responsibilities at the health facility level

Service providers (doctors, health extension officers, nurses, midwives, and community health workers) are responsible for recording or entering data (if using tablets for the eNHIS) on clients seeking health services, whether at the health facility or during an outreach visit. Data recording tools used include the patients' clinical record books/cards or charts, health facility registers or logbooks, tally sheets, as well as daily and monthly summary forms. All paper forms for the NHIS are also available electronically in the eNHIS. At the end of the month, data is summarised and reported to higher-level health facilities or authorities for further aggregation.

3.1.1 Health posts (previously known as aid posts)

The Officer-in-Charge (OIC) of the health post or community health post (CHP) is responsible for recording and reporting complete and accurate data on clients and health services delivered, and timely monthly reporting to health centres. Specifically, the OIC:

- Completes the health post tally sheet when clients seek services.
- Completes the aid post monthly summary and reviews it for completeness and accuracy prior to submission to the health facility overseeing the health post.
- Ensures that all data recording and reporting forms are stored securely and maintained for at least 10 years.
- Ensures that the tally sheets and monthly reports are delivered to the health facility overseeing the health post in a timely manner.

3.1.2 Community health post, health centres, and urban clinics

The Officer-in-Charge (OIC) of health centres, community health posts, or urban clinics, is responsible for ensuring that complete and accurate data on clients and health services delivered is recorded and reported in a timely manner within the different RHIS. Depending on the staff strength of the health centre or clinic, the OIC may do the recording and reporting or delegate to other staff. Specifically, the OIC:

- Completes or assigns other staff to complete the health centre or urban clinic registers and logbooks, NHIS tally sheets, and daily and monthly summary forms (either on paper or in the tablet for the eNHIS).
- Enters or assigns other staff to enter health post data submitted to the health centre or CHP in the monthly summary form.
- Reviews the NHIS monthly summary form for completeness and accuracy before submitting within the eNHIS or submitting the hard copy to the Provincial Health Authority.
- Ensures that NHIS monthly summary forms are reported in a timely manner.
- Ensures that the health centre record book monthly statistical tables and trend graphs are updated, and the data is used for the health centre decision-making.
- Ensures that annual targets for immunisation and other services are calculated and updated.
- Ensures that the NHIS health bulletin dashboard is regularly discussed with staff and actions are taken based on the data.
- Ensures recording and reporting tools are regularly collected from the PHA to prevent stock-outs.

- Ensures that all data recording and reporting forms are stored securely and maintained for at least 10 years.

3.1.3 Hospitals

The Medical Records Officer in a hospital setting is responsible for collecting, compiling, and reporting clinical data collected within the hospital to the NHIS. For specific programs such as TB or HIV/AIDS, specific staff are likely to be assigned within the relevant wards/clinics to collect and report data through the respective surveillance systems. For example, the HIV/AIDS program may have recruited or assigned a specific staff member to compile, enter and report data into the HIV/AIDS Patient Database.

The Medical Records Officer is responsible for:

- Coordinating recording and compiling of data on hospital admissions and operations, as well as patient outcomes through clerks stationed at different wards/clinics.
- Managing and maintaining patient medical records at the medical record section with full consideration for data confidentiality and security and the medico-legal consequences.
- Collecting weekly and/or monthly summaries of patient data from all wards and clinics within the hospital, which are either paper-based or electronic (e.g. Microsoft Excel files), depending on the system used in the hospital.
- Reviewing data reported from wards and clinics for completeness and accuracy, and seeking clarifications and making corrections where needed.
- Entering compiled data into the reporting forms in the eNHIS or sending hard copies of the monthly summary forms to the PHA.
- Ensuring timely reporting of hospital data in the eNHIS.
- Notifying the PHA of any shortages in data recording and reporting forms or issues with reporting in the NHIS/eNHIS.
- Conducting data quality assessments of hospital data at least on a quarterly basis.
- Assisting in the collation and analysis of data on morbidity, mortality, and hospital operations for hospital management.
- Managing and assisting with ICD-11 coding when required.
- Ensuring that all inpatient discharge cases are line listed and entered in the DHIS.
- Conducting training for hospital ward clerks and data collectors on recording and reporting of data on NHIS, DHIS, and hospital reporting forms.
- Supervising clerks and other hospital data collection points to ensure timely and accurate data is collected and reported.
- Ensuring any electronic data has a regular backup.

3.2 Data management responsibilities at the provincial level

At the provincial level, staff at the PHA are responsible for collecting, reviewing, and validating data from all health facilities within the province prior to reporting the data to the national level. The key PHA staff with data management responsibilities are the Provincial Health Information Officer (PHIO) and the Monitoring, Evaluation, Research and Learning (M&E Officer (for PHAs where this position is established). Aside from these positions, the PHA M&E Steering Committee (where established) also has important oversight and advisory functions for health information and M&E in provinces.

3.2.1 Provincial Health Information Officer (PHIO)

Before the eNHIS was rolled out, the PHIO was responsible for collecting hard copies of the NHIS monthly summary form from all functioning health facilities in the province and entering the data into the NHIS database. After entering the data, the NHIS hard copy forms were sent to NDoH for verification and updating of the master database. However, with roll-out of the eNHIS and direct data entry in health facilities, data entry has become a less significant responsibility for PHIOs. Responsibilities have now shifted more towards monitoring data entry, data review and verification, analysis, and interpretation.

PHIOs are responsible for:

- Ensuring complete and accurate data is reported from health facilities in the province to the national level in a timely manner.
- Reviewing data reported by health facilities in the province in the NHIS prior to approval for submission to the national level.
- Receiving NHIS monthly summary reports submitted by health facilities in hard copy.
- Seeking clarifications on any discrepancies in data reported by health facilities and making corrections prior to submission to the national level.
- Conducting training for health facility OICs on recording and reporting of data in the NHIS.
- Conducting supervisory visits to all health facilities in the province on at least an annual basis to review recording and reporting and provide guidance on any issues encountered.
- Analysing and interpreting NHIS data as needed for program planning, monitoring, and decision-making at the PHA.
- Coordinating with other PHA officers, such as the Provincial Disease Control Officer and the M&E Officer, to ensure necessary health data is available in a timely manner for program planners and decision-makers at the PHA.
- Ensuring electronic data has a regular backup and hard copies of reporting forms are maintained for at least 10 years in a secure space.

3.2.2 Provincial M&E Officer/Coordinator

The Provincial M&E Coordinator role supports the PHA Health Information Team to implement MERL activities in strengthening recording and reporting systems and ensuring quality and timely reporting to NDoH (NHIS) to improve leadership and management of health services for the PHA.

This role involves working closely with the PHIO to establish and coordinate reporting mechanisms within the provincial hospital to ensure timely reporting to the NHIS. This role will also support Provincial Facilitators to plan, budget, deliver, and coordinate provincial health reporting and services, including the coordination of analyses/assessments to identify bottlenecks at the selected PHAs. This role plays an important part in developing data management quality improvement plans, and coordinating and strengthening NHIS activities in the province.

Key responsibilities of this role are:

- Reviewing, advising on, and endorsing proposed provincial strategies, plans and protocols related to M&E and health information systems.

- Providing technical guidance on data management, improving reporting coverage and data quality, data analysis, and dissemination tools, capacity building, and enhancing linkages between the different health information systems.
- Ensuring alignment of provincial M&E and health information activities with the national *M&E Strategic Plan for the National Health Plan 2021–2030* and other national guidance.
- Providing guidance on analyses and approaches needed to fill information gaps on performance of health activities in the province, and reviewing any findings arising from these analyses.
- Advising on and identifying opportunities to enhance incorporation of monitoring data into policymaking and decision-making.
- Ensuring alignment of partner efforts in the province towards strengthening M&E and health information systems.
- Advocating with policymakers and donors for political and financial support for monitoring and evaluation and health information priorities.

3.2.3 Provincial Senior Executive Management

More effective use of data generated from various systems at provincial level is critical to make informed decision-making by provincial SEM. The Senior Executive Management is responsible for making sure the health information data is used to facilitate decision-making. The PHA SEM is required to provide guidance, support, and resources in creating a data-driven decision-making culture at provincial level.

3.2.4 Provincial M&E Steering Committee

The Provincial M&E Steering Committee provides oversight and technical guidance on monitoring and evaluation and health information related activities within the province, for improved data quality and use. It comprises key stakeholders working in M&E and health information in the province, including the PHIO and PHA M&E Officer.

The committee is responsible for:

- Reviewing, advising on, and endorsing proposed provincial strategies, plans, and protocols related to M&E and health information systems.
- Providing technical guidance on data management, improving reporting coverage and data quality, data analysis, and dissemination tools, capacity building, and enhancing linkages between the different health information systems.
- Ensuring alignment of provincial M&E and health information activities with the national *M&E Strategic Plan for the National Health Plan 2021–2030* and other national guidance.
- Providing guidance on analyses and approaches needed to fill information gaps on performance of health activities in the province, and reviewing any findings arising from these analyses.
- Advising on and identifying opportunities to enhance incorporation of monitoring data into policymaking and decision-making.
- Ensuring alignment of partner efforts in the province towards strengthening M&E and health information systems.
- Advocating with policymakers and donors for political and financial support for monitoring and evaluation and health information priorities.

3.3 Data management responsibilities at the national level

Within NDoH, the Performance, Monitoring and Research Branch is responsible for coordinating collection, analysis, and reporting of health information from all levels of the health system to improve health service delivery and health outcomes. PMRB is the custodian of the NHIS, DHIS, and NIHF, and coordinates research within the health sector. For RHIS such as mSupply, HRIS, and program-specific surveillance systems (HIV/AIDS and TB), other departments within NDoH are responsible for oversight. However, coordination with PMRB needs to be ensured for cross-cutting issues on data management, analysis, and use within the health sector.

3.3.1 Performance, Monitoring and Research Branch (PMRB)

PMRB is responsible for:

- Overseeing implementation of the M&E Strategic Plan for the National Health Plan 2021–2030.
- Convening or co-convening national governance bodies related to M&E and health information, such as the e-Health Steering Committee and Technical Working Group, the M&E Technical Working Group, and the Civil Registration and Vital Statistics Committee.
- Developing strategies, plans, protocols, and tools for M&E and strengthening information systems in the health sector.
- Receiving all health facility data routinely reported from health facilities through PHAs in the NHIS, DHIS, and NIHF.
- Reviewing data reported, identifying discrepancies, and seeking clarifications from PHAs and health facilities.
- Following up with PHAs for data from health facilities that have not reported in a timely manner.
- Conducting annual supervisory visits to selected health facilities across the country to review recording and reporting practices and data quality, and address any issues encountered.
- Analysing data reported in the NHIS, DHIS, and NIHF, and synthesis in data products such as the Health Sector Performance Annual Review (SPAR).
- Providing training to PHAs and health facilities on M&E and health information systems, including reporting in the NHIS, DHIS, and NIHF.
- Liaising with all branches and programs across NDoH on matters related to M&E, health information, and overall data management.
- Coordinating the national health research agenda, serving as the Secretariat for the Medical Research Advisory Council, building national and subnational capacities in research, and helping to ensure research findings inform decision-making.

3.3.2 HIV/AIDS Unit

The HIV/AIDS Unit at NDoH is responsible for managing the HPDB. The unit is responsible for coordinating the collection of all HIV/AIDS related reports, as well as the collection, compilation, reporting, and analysis of HIV/AIDS data. It also submits the necessary data for HIV/AIDS related indicators required for national, regional, and global reporting. Please refer to the HIV/AIDS data management SOP for details.

3.3.3 Tuberculosis Unit

The TB Unit at NDoH is responsible for management of the TB surveillance system, which involves coordinating and overseeing collection, compilation, reporting, and analysis of all reports related to the TB program. It is also responsible for submitting data on TB-related indicators required for national, regional, and global reporting. See TB data management/reporting guidelines developed by the unit for further details.

3.3.4 Medical Supplies Procurement and Distribution Branch (MSPDB)

The MSPDB is responsible for managing the mSupply system. The unit supervises and coordinates data collection, compilation, reporting, and analysis for data from mSupply. MSPDB also submits the required data for medical supplies related indicators in the *M&E Strategic Plan for the National Health Plan 2021–2030* to PMRB annually and whenever needed.

3.3.5 Human Resources Unit

The NDoH Human Resources Branch is responsible for managing the Human Resource Information System (HRIS) or equivalent when it is functional again. The unit will coordinate collection and oversee all reports in the HRIS, including data collection, compilation, reporting, and analysis. The unit will submit data on human resource related indicators in the national *M&E Strategic Plan for the National Health Plan 2021–2030* to PMRB annually and whenever needed. The unit will assign data officers with clear roles and responsibilities.

3.3.6 Information, Communication and Technology Branch (ICT Branch)

The NDoH Information, Communication and Technology Branch (ICT Branch) oversees ICT hardware, software, and processes to ensure timely availability of health data and information needed for planning and decision-making across the health system. The ICT Branch will be participating in development of health information systems integration and aggregation of health data into eNHIS. The unit will carry out regular assessment and maintenance tasks aimed at improving all national health database systems and interconnected health ICT hardware and network infrastructure to ensure optimisation of health information system functionalities.

The branch is also responsible for ensuring health data is protected during the processes involved in data collection, data transfer, and data storage across the ICT networks between PHAs and NDoH. The branch provides ICT user training for health information systems (eNHIS, DHIS, NIHF, HIV, mSupply, TB, and HRIS), and provides other targeted software application training for M&E Officers and PHIOs.

The branch will also ensure high-level ICT security, preventing damage to infrastructure networks and data. The branch will support the implementation of the ICT policy and M&E strategic plan as a co-chair of the e-Health Technical Working Group and member of the e-Health Steering Committee. The branch will report ICT-related indicators in the national *M&E Strategic Plan 2021–2030* to PMRB annually and on an ad hoc basis. Please refer to the ICT policy for details.

3.3.7 National Orthotic and Prosthetic Services (NOPS)

The NOPS operating under Medical Service Standards Division, Health Facility Branch, is responsible for managing a fully functional data management process from community and NOPS provincial facilities to the national level. This includes ensuring that data is completely

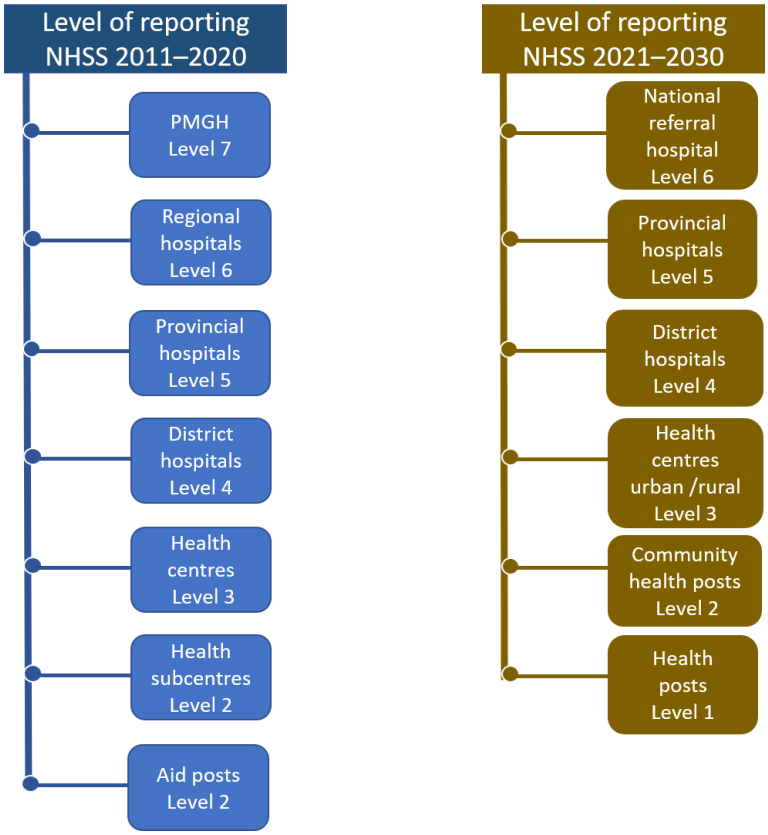
and accurately collected on patient forms, routinely entered into electronic medical records, and submitted in a timely manner to NDoH NOPS. Furthermore, data quality checks, synthesis, analysis, and reporting are managed by the national level team. Program results are documented and shared through quarterly and annual reports to different levels of management, key partners and stakeholders, and used to source external funding and support from external sources where applicable.

4 DATA RECORDING AND REPORTING PROCEDURES

The National Department of Health has data collection procedures in place that have evolved over the last 20 years; beginning with paper-based procedures in the late 1980s and progressing to system software, Foxpro), which over time became out-of-date and evolved into the eNHIS. The National Health Information System is guided by and compliant with the draft NDoH ICT policy, the *M&E Strategic Plan for the National Health Plan 2021–2030*, and the National Health Services Standards (NHSS).

According to the NHSS 2021–2030 there are 6 levels of health facilities in PNG (see Figure 2). The data collection and reporting of health service data starts at the lowest level of health facilities, which is the health/aid post (Level 1). The data that is collected from Level 1 health facilities is reported to and collated by supervising health facilities – i.e. Level 2 (community health post or health subcentre) or Level 3 (health centre or urban clinic) health facilities. Level 4 (district hospitals), Level 5 (provincial hospitals), and Level 6 (national referral hospital) health facilities, all submit their health service data directly to the PHA. Once the data is received by the PHA, the PHIO reviews the data for completeness and accuracy and then approves/submits the health facility reports to NDoH.

Figure 2 - 2021–2030 revised NHSS reporting level



This reporting pathway is applicable for the NHIS reporting system, but is generally the same for the TB and HIV surveillance systems, whereby data is reported from health facilities to PHAs and then to NDoH. This section provides detailed procedures on recording and reporting data in the NHIS. The SOPs or guidance documents for other RHIS, such as HIV or TB surveillance and mSupply, should be referred to for details on recording and reporting in these systems.

4.1 Master list of health facilities

Management of health facilities is split almost in half between government and church health services; however, nearly all major hospitals in the country are managed by the government. A smaller number are managed by the private sector (mainly mining companies), non-government organisations, and other government agencies (such as the Defence Force). The Catholic Church Health Services is a major provider of health services, managing 19% of the total number of health facilities, and contributing nearly half of the services provided by church health services. Other major providers include members of the Christian Health Services, such as the United Church Health Ministry, Lutheran Health Services, and the Evangelical Church of PNG.

A master list of health facilities is kept at the national level, which is used as the reference for health facilities that need to report data. It is regularly updated whenever a health facility is registered, added, or subtracted from the system. A master list of facilities is a complete listing of all public, private, and faith-based health service delivery sites in the country.

The registration of new health facilities is conducted at the national level when a health facility receives a licence to provide service. During the registration, the new health facility is provided with a unique health facility ID. A health facility that is registered and is on the master list of health facilities serves as a reference for reporting to the national level.

Below are the number of health facilities reporting to the NHIS (Table 1). It is reported by NHSS that many health facilities, including district and provincial hospitals, are operating below capacity. It should be noted that the health facility levels reporting to NHIS may be functioning above or below the level that is registered in the NHIS.

Table 1 - Reporting health facilities in the National Inventory by type and status as of 2021*

No	Province/region	Type of health facility							Health/aid post open	Health/aid post closed	Open Levels 2–6	Closed Levels 2–6	Total Levels 2–6	Total Levels 1–6
		Provincial hospital	District hospital	Urban clinic	Health centre	Health subcentre	Community health post	Health/aid post						
1	Western	1	2	5	11	23	0	172	153	19	42	0	42	214
2	Gulf	1	0	1	9	10	0	92	68	24	21	0	21	113
3	Central	1	1	1	8	30	0	94	42	52	42	1	43	135
4	National Capital District	2	0	26	0	0	0	0	0	0	28	0	28	28
5	Milne Bay	1	1	1	10	28	3	147	100	47	44	0	44	191
6	Northern	1	0	1	8	10	0	95	38	43	20	0	20	101
Southern region		**7**	**4**	**35**	**46**	**101**	**3**	**600**	**401**	**185**	**197**	**1**	**198**	**782**
1	Southern Highlands	1	1	2	7	32	5	106	78	28	48	0	48	154
2	Enga	1	2	4	7	24	4	94	57	37	42	0	42	136
3	Western Highlands	1	0	6	5	20	13	67	55	12	45	0	45	112
4	Simbu	1	0	1	8	26	0	73	61	12	36	0	36	109
5	Eastern Highlands	1	1	4	5	25	1	168	71	96	37	0	37	204
6	Hela	1	2	1	2	29	2	98	24	74	37	0	37	135
7	Jiwaka	1	0	2	6	19	0	71	32	39	28	0	28	99
Highlands region		**7**	**6**	**20**	**40**	**175**	**25**	**677**	**378**	**298**	**273**	**0**	**273**	**949**
1	Morobe	1	2	10	17	23	2	352	218	134	55	0	55	55
2	Madang	1	0	3	12	30	0	236	115	66	48	2	50	227
3	East Sepik	1	1	6	10	30	1	154	33	120	49	0	49	202
4	West Sepik	1	1	1	9	25	1	239	113	110	38	0	38	261
Momase region		**4**	**4**	**20**	**48**	**108**	**4**	**981**	**479**	**430**	**190**	**2**	**192**	**745**
1	Manus	1	0	2	10	0	0	80	66	14	13	0	13	93
2	New Ireland	1	1	3	8	19	0	87	62	24	32	0	32	118
3	East New Britain	1	2	1	9	19	0	107	72	35	32	0	32	139
4	West New Britain	1	0	6	9	18	4	139	112	27	38	0	38	177
5	Autonomous Region of Bougainville	1	1	1	11	22	4	175	80	95	40	0	40	215
Islands region		**5**	**4**	**13**	**47**	**78**	**8**	**588**	**392**	**195**	**155**	**0**	**155**	**742**
PNG		**23**	**18**	**88**	**181**	**462**	**40**	**2846**	**1650**	**1108**	**2244**	**3**	**818**	**3218**

* The numbers listed are subject to change on a yearly basis, due to changing status of health facilities.

4.2 Steps involved in recording, collecting, and transmitting data in the NHIS/eNHIS

The following steps are followed, using standard NHIS tools created and produced by the NDoH PMRB, to record and report data in the NHIS.

Step 1: Record data on services provided and health outcomes in standardised medical forms/patient records or clinic books, either at the health facility or during outreach visits in the community.

Step 2: Transfer data to registers and tallying: For programs with register books (either electronic or paper), selected information entered in the medical forms is recorded in the registers and then the NHIS tally sheets are completed or updated accordingly.

The healthcare professionals who are rendering the health services carry out both Steps 1 and 2 above. However, in settings where there is high client flow, such as hospitals, records assistants may be assigned the duty of tallying and registering patients after receiving the appropriate training and under the close supervision of a health worker.

Step 3: Generate daily summary: The various registers and corresponding tally sheets should be obtained, checked for accuracy, and used to create daily summaries by health workers and records assistants. If the records assistant is in charge of this step, the person in this role should consult the health worker before the day is over to confirm the accuracy of the data entered in the registers, tally sheet, and daily summary book. If the eNHIS is being used at the health facility (for Levels 2–6 only), data should be entered into the daily summary form in the eNHIS.

Step 4: Enter daily discharges into the DHIS (Levels 2–6 only): Health facilities that provide inpatient care must enter each day's discharged cases into the DHIS.

Step 5: Receive health post tally sheets (Level 3 health facilities only): Health post tally sheets must be delivered to overseeing health facilities at the end of each month. The health post is in charge of sending the monthly tally sheets to the monitoring health facility. The health post data will be entered into the eNHIS tablet as soon as the supervising health facility receives them.

Note: Before sending the tally sheets to the supervising health facility, health posts must transfer the data from the tally sheet to the monthly summary report for their own records.

Step 6: Submit monthly report: The monthly electronic summary must be double-checked by the health worker and/or records assistant before the OIC approves the report. Before the 7th day of the following month, the OIC should approve the report. For health facilities using paper NHIS forms, the paper monthly summary report must reach the PHA before the 7th of each month.

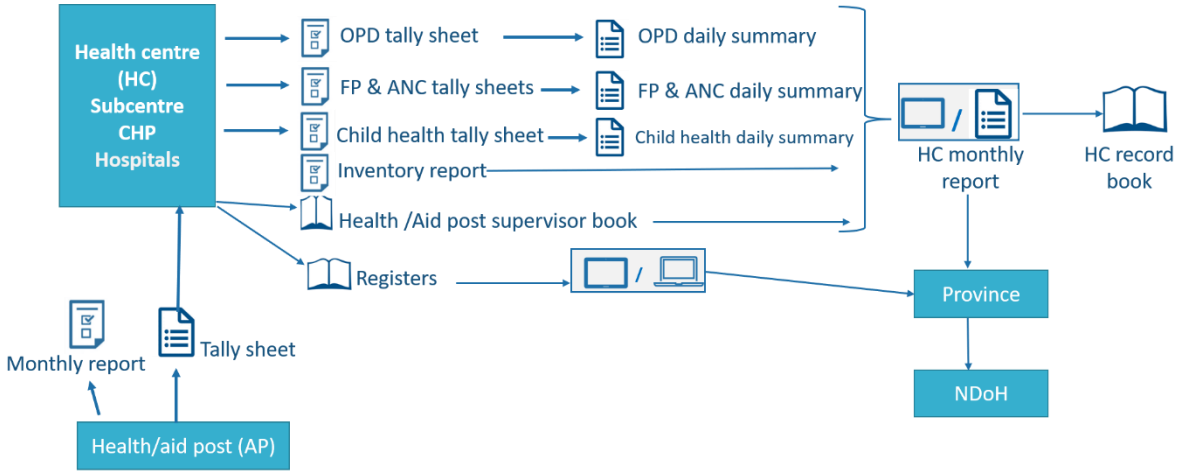
Note: Once the monthly report is compiled and finalised, the health facilities are required to complete the health centre record book for their own records, to monitor the trend.

Step 7: Inventory report (quarterly): The health facility inventory report needs to be submitted every quarter.

Step 8: Approve monthly report: The PHIO should verify, validate, and check for any inconsistencies, incompleteness, or errors made during the reporting process, after the health facility has submitted the monthly report to the PHA. If any problems are found, the PHIO should speak with the health facility OIC right away to make corrections. The PHIO is required to enter any paper monthly reports submitted to the PHA in the eNHIS. The PHIO should approve all health facility monthly reports before the 15th of the following month.

The recording and reporting processes using NHIS tools are depicted in the diagram below.

Figure 3 – NHIS recording and reporting process



4.3 NHIS recording and reporting tools

4.3.1 Recording and reporting tools at Level 1 health facilities or Health/aid post level

Two NHIS forms, the health/aid post tally sheet, and the health/aid post monthly summary report, must be completed at the health/aid post level.

- **Health/aid post tally sheet.** It is used to keep track of daily attendance at the health and aid posts. At the end of the month, the health post will have the total attendances for each condition tallied. The NHIS health/aid post tally sheet has 2 pages – the front page is used to tally outpatient new and reattendance cases; the back page is used to tally referral, birth, death, ANC, family planning, and immunisation. The supervising health centre receives the original tally sheets every month for additional analysis (see Annex 1 Health/aid post tally sheet).
- **Health/aid post monthly summary.** The health/aid post monthly summary is used to summarise the monthly health/aid post report. The total attendance will be transferred from the health/aid post tally sheet to the health/aid post monthly summary report form at the end of each month. The health/aid post retains the monthly summary report as a record and provides monthly attendance comparison trends (see Annex 2Health/aid post monthly summary).

4.3.2 Recording and reporting tools at Level 2–3 health facilities (Level 2 – Community health post/subcentre and Level 3 – Health centres and urban clinics)

Tally sheets, daily summary forms, registers, monthly reporting form, health/aid post supervisory book, and inventory form and change status form are expected to be completed at this level.

A. Tally sheets

- Outpatient tally sheet: This is used to tally and count the number of outpatients attending the outpatient department (OPD) on a daily basis. It is useful to count both new and reattendance cases (see Annex 3 OPD tally sheet).

- Child health tally sheets: This is used to tally and count the number of children who received vaccinations or nutrition services at health facilities each day. It is used to capture daily attendance, nutrition, and immunisation (see Annex 4 Child health tally sheeet).
- Family planning and ANC tally sheet: This is used to tally and count the number of women who receive ANC, FP, and Tetanus Toxoid (TT) services at the health facilities every day (see Annex 5 Family Planning and ANC tally sheet).

B. Daily summary sheet

- Outpatient daily summary sheet: Total outpatient attendances are transferred from the outpatient tally sheet to the daily summary books at the end of each day (see Annex 6 OPD daily summary book).
- Child health daily summary sheet: Total attendances for immunisation and nutrition services are transferred from the child health tally sheet to the daily summary book at the end of each day (see Annex 7 Child health daily summary book).
- Family planning and ANC daily summary book: Total attendances for ANC, TT and family planning are transferred from the Family planning and ANC tally sheet to daily summary books at the end of each day (see Annex 8 Family planning and ANC summary book).

C. Registers

- Malaria register: The malaria register is used to line list cases tested for malaria, as well as laboratory-confirmed malaria and clinically-diagnosed malaria. (see Annex 9 Malaria registers).
- Discharge register: The discharge register is used to line list cases who have been admitted and discharged from health facilities (see Annex 10 Discharge register).
- Leprosy register: The leprosy register is used to line list all cases of leprosy, both new and relapse cases. (Refer to Leprosy program)
- TB register: The TB register is used to line list all TB cases and regularly update on their treatment, lab results, and outcomes. It has 5 sub registers, including the: Presumptive register; First line treatment register; Second line treatment register; Contact register; IPT register; and Due for review and follow-up register. (Refer to TB program)
- Maternal death register: The maternal death register is used to line list health facility maternal deaths. (see Annex 11 Maternal Death Register)
- Birth and death notification register: The birth and death register are used to line health facility births and deaths. (see eNHIS platform)
- HIV register: The HIV register is used to register HIV testing, syphilis testing, and HIV care and ART treatment. It has 3 sub registers, known as Surv1, Surv2, and Surv4. (Refer to HIV program SOP)

D. Inventory form and change of status of form

- Inventory form: This is used to report items and personnel in health facilities. It has sections for general reporting (transport, communication, power, water, number of beds), equipment, number of staff, functional health/aid posts, supervision, and accommodation (see Annex 12 Inventory form).
- Change of status form: This form is used to report facilities that have been upgraded, opened recently, closed, or downgraded (see Annex 13 Change of status form).

E. Monthly reporting form

- Monthly reporting form: The monthly report form is used to report monthly summary data from health facilities to PHAs. The monthly report should be sent to the province every month or submitted electronically through an eNHIS tablet/computer (see Annex 14 Monthly reporting form).

F. Health centre record book

- Health centre record book: At the end of each month, the monthly totals from the daily summary books and monthly report are transferred to the health centre record book. It allows monitoring of key trends in diseases by plotting line graphs. The purpose of the health centre record book is to serve as a resource for supervisors or new employees joining the centre, as well as a record of the health facility to compare performance from one year to the next.
- Health/aid post supervisory book: Once the health/aid post tally sheet arrives at the supervising health facility on monthly basis, the totals need to be transferred to the health/aid post supervisor's data book. The health/aid post supervisory book provides monthly comparison of trends for each health/aid post.

4.3.3 Recording and reporting tools at Levels 4–6 health facilities (Level 4 – District hospitals, Level 5 – Provincial hospitals, and Level 6 – National referral hospital)

At this level, the same recording and reporting tools and forms as those used at Levels 2–3 will be used, as will the method for completing the reporting forms. Due to the fact that many inpatients are reported by Levels 4–6 health facilities, the discharge register will be used more than it is used by the lower-level health facilities. Daily or whenever a patient is discharged, Levels 4–6 health facilities are required to register and report all hospital inpatient discharges in the DHIS.

Note: No other person/project/partner is permitted to update, add, or modify NHIS tools without NDoH approval. Furthermore, no other person, project, or partner may introduce parallel data collection and reporting tools without NDoH approval.

4.3.4 Data entry into NHIS main database and data transmission

Currently, eNHIS is being rolled out to all health facilities in 20 PHAs; as a result, all health facilities in provinces where eNHIS is being rolled out are required to submit daily data using an eNHIS tablet. The eNHIS tablet will automatically generate the monthly summary report for review and signature at the end of each month. Each month, the OIC is required to double-check the data and electronically submit/approve the monthly report to the PHA. The PHIO at the PHA will then validate the data and conduct a quality check prior to approval; once approved, the data will be sent to NDoH. Medical Records Officers or their assistants are expected to enter daily discharge data into the discharge register, maternal death register, birth, and death registers. Once the MRO has entered and approved the data, it will be transferred automatically to the PHA and NDoH. Assigned data entry clerks are required to enter data into the HIV register/report and TB registers/report.

If a health facility is unable to enter data due to natural disasters, tribal issues, long periods of time, or any other verifiable reason, the hard copies of the monthly summary report should be sent to the Provincial Health Information Officer/focal person, who will be responsible for entering the data until the health facility regains the ability to enter the data independently.

4.4 Reporting to the HIV Patient Database

The HIV program reports HIV testing, HIV care, and ART data using Surv1 and Surv2. The HCT logbook, ANC/PPTCT register, Obstetric register, HIV care and treatment register, Exposed Infant register, and ART register, are the recording tools for HIV testing and treatment data. Refer to the HIV SOP for specifics on recording and reporting using the above-mentioned tools.

4.5 Reporting to Tuberculosis Basic Management Unit (BMU) reports

The TB program uses the BMU quarterly report book for quarterly reporting of tuberculosis cases and treatment. The information is extracted from the BMU TB registration book. Refer to the BMU quarterly reporting form and its guideline for information about how to report and the reporting form.

4.6 mSupply

NDoH implemented the mSupply computer and tablet-based recording and reporting system to record, report, and track the movement of drugs and other health commodities. Please refer to the mSupply Standard Operating Procedure for information on how to use and report the mSupply system.

4.7 Human Resource Information System (HRIS)

The HRIS is a system for data entry, data tracking, and data storage for data regarding health human resources in PNG. Currently, the system has not been implemented by all PHAs. Once the system is applied and training is provided, PHAs are required to report using it.

4.8 National Orthotic and Prosthetic Services

The NOPS Disability module to be built on eNHIS will be tablet-based and in facilities. Provincial sites will then be able to enter their data in the Disability module daily. Program data collection focuses on various prosthetics and orthotics engineering, wheelchairs, walking aids, physiotherapy, occupational therapy, and cognition and communication standards, and will be collected through standardised patient data collection and reporting tools.

The details of the recording and reporting procedure will be included in the next SOP once the module is approved and fully rolled out.

4.9 Reporting cycle and timelines

Reporting cycles and timelines vary from program to program. The National Health Information System requires that health facilities submit daily reports where there is full internet connectivity and access. Where there is limitation with internet connectivity, facilities are given consideration to submit monthly before the 7th of the subsequent month. This is also applicable to all other health program reports, including for Maternal and Child Health, Family planning, Malaria, STI/HIV, and Tuberculosis

Table 2 - Reporting timelines from health facility to PHA and NDoH

Report	Program	Report recipient	Frequency	Due date	Due date for gaps analysis & feedback to PHAs	Due date for data verification	Due to Senior Mgt	Disseminated externally
eNHIS report	PMRB	PMRB	Daily/ Monthly	7th day of the subsequent month from health facility to PHA	15th day of subsequent month from PHA to PMRB	30th day of subsequent month feedback NDoH to PHA	Quarterly report	Annual SPAR report
Health facility inventory	PMRB	PMRB	Daily/ Monthly	7th day of the subsequent month from health facility to PHA	15th day of subsequent month from PHA to PMRB	30th day of subsequent month feedback NDoH to PHA	Quarterly report	Annual SPAR report
DHIS	PMRB	PMRB	Daily	7th day of subsequent month from health facility to PHA	15th day of subsequent month from PHA to PMRB	30th day of subsequent month feedback NDoH to PHA	Quarterly report	Annual SPAR report
Medical supply report	Procure-ment and logistics	MSPDB	Daily	7th day of subsequent month from health facility to PHA	15th day of subsequent month from PHA to NDoH	30th day of subsequent month feedback NDoH to PHA	Quarterly report	Annual SPAR report
STI/HIV Surveillance reports	STI/HIV program	STI/HIV program	Monthly	10th day of subsequent month from health facility to PHA	10th day of subsequent month		Quarterly report	Annual SPAR report
TB BMU Reports	Disease Control Branch	Disease Control Unit	Quarterly	15th of 1st month of the next quarter	End of the month of the 1st month of the next quarter	2nd month of the next quarter	Quarterly report	Annual SPAR report
HRIS	Human Resource Branch							

5 DATA ANALYSIS AND DISSEMINATION

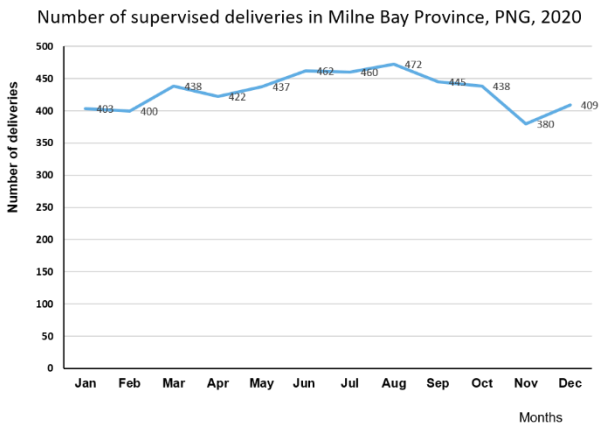
Analysis of data reported by health facilities on health services and health outcomes is critical to identify trends in service coverage and health outcomes, which in turn can inform health service and program planning and improvement, ensure unusual events are quickly detected and responded to, and that resources are available and distributed.

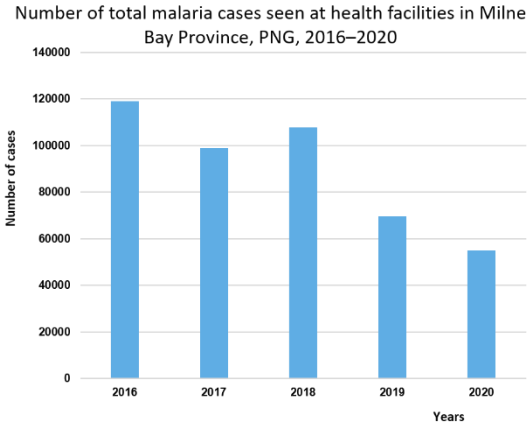
Analyses of routine health information generally involve some form of comparison: comparison over time (e.g. trends in incidence of disease, service coverage, or mortality); comparison by population groups (e.g. disaggregated analysis of cases, deaths, or service coverage by sex and age); or comparison by place (e.g. disaggregated analysis of cases deaths and service coverage by geographic location). The types of analyses and visualisations that can be done for each of these comparison types are detailed further below. Combined analyses are also possible; for example, analysing trends in population groups by geographic location.

5.1 Analysis of time trends (When?)

Time trends analyses are undertaken to identify changes over time, whether short-term (e.g. last 12 months) or long-term (e.g. last 5 years). Such analyses include looking at health outcomes (e.g. number of measles cases, outpatient cases, or inpatient deaths) and service coverage (e.g. immunisation, antenatal care, or antiretroviral therapy treatment), and can be visualised as line graphs, bar graphs, or tables (see Figures 3 and 4).

Figures 4 & 5 - Sample analyses of data looking at time trends



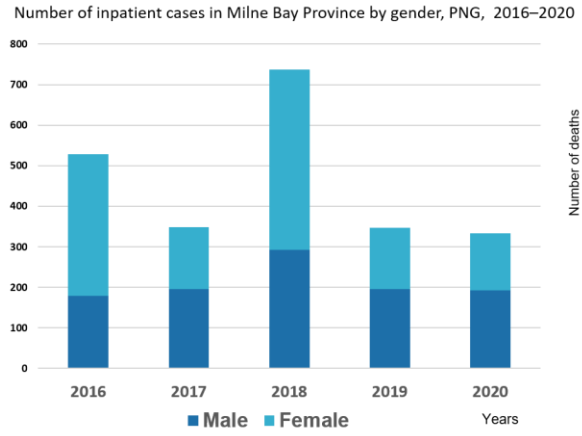


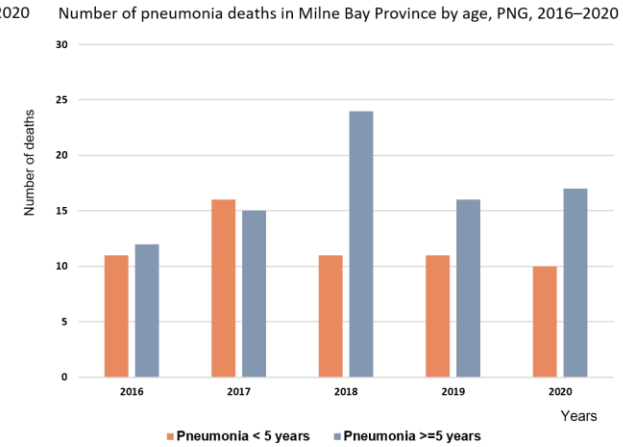
Data source: National Health Information System

5.2 Analysis of population groups (Who?)

Analyses by population groups allows identification of groups at higher risk of disease or with lower access to or use of health services. The most common analyses undertaken look at populations by age and sex, although other characteristics may be examined, such as education level, wealth quintile, pregnancy status, or co-morbidities. These analyses can be presented as line graphs, stacked bar graphs, pie charts, or tables. Sample analyses are shown in Figures 5 and 6.

Figures 6 & 7 - Sample analysis of data by population group



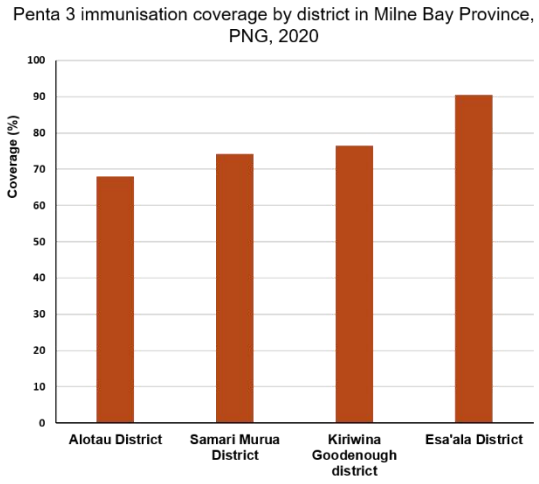


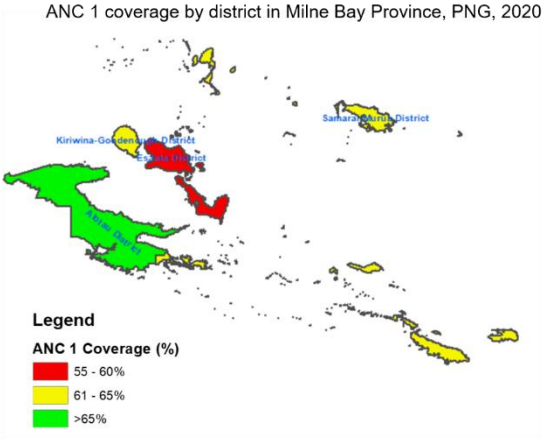
Data source: National Health Information System

5.3 Analysis by location (Where?)

Analysis of data by location allows identification of areas where access to or use of services may be lower, disease incidence higher, or health outcomes poorer. Location may comprise a geographical area (e.g. province, district, and urban or rural area) or could be a health facility level (e.g. health centre, or hospital). Analyses looking at location are often visualised as maps or tables, but may also be presented as bar graphs, stacked bar graphs, and pie charts, as shown in Figures 7 and 8.

Figures 8 & 9 - Sample analysis of data by location





Note: Population estimates were used as a denominator; data source: National Health Information System

5.4 Types of analyses to be undertaken on data from RHIS

The types of analyses to be undertaken on data reported in RHIS covered under these SOPs will depend on the health system level and users, as well as the information system. Recommended analyses to be undertaken, along with their corresponding data source, are outlined below by health system level. The analyses may need to be adapted based on user needs.

5.4.1 Health/aid post (Level 1 health facility)

At the health/aid post level, some basic analysis of data is required, including tracking of trends in health outcomes and service coverage (e.g. immunisation coverage) using pre-defined analysis templates. At this level, at least the following 2 forms should be completed:

- Health/aid post monthly summary form to monitor trends of diseases (outpatient) and services (immunisation, family planning, and ANC) monthly.
- Immunisation monitoring chart with graphs that allow plotting of lines to monitor immunisation coverage and dropouts monthly.

5.4.2 Community health post, health subcentre, urban clinics, and hospitals (Levels 2–6 health facilities)

It is recommended that health centres, urban clinics, and hospitals undertake the analyses outlined in Table 3 to inform target setting, service planning and improvement, medical supply stock monitoring, and resource planning and distribution. Various tools can be used to facilitate these analyses, such as the NHIS health facility record book, which includes graphs for plotting data, as well as pre-developed dashboards and reports in the eNHIS or mSupply. In health centres and urban clinics, the analyses are to be done by the OIC or staff assigned by the OIC, while in hospitals, Medical Records Officers or Medical Officers responsible for different clinical disciplines will likely conduct the analyses.

Table 3 - Recommended analyses of data from RHIS to be done in community health posts, health centres, urban clinics, and hospitals

Area	Recommended analyses	Health facility level	Source	Available tool
Morbidity	Trends in total and new cases of disease (e.g. diarrhoea, measles, malaria, TB, and HIV)	Level 3 and above	NHIS TB surveillance HIV/AIDS patient database	Health facility record book and eNHIS OIC monthly report
	Top 5 causes of morbidity	Level 2 and above	DHIS	eNHIS dashboard
	Top 5 causes of morbidity in children <5 years	Level 2 and above	NHIS DHIS	eNHIS dashboard
Mortality	Trends in total health facility deaths	Level 3 and above	NHIS DHIS NHIS DHIS	eNHIS dashboard/OIC monthly report
	Top 5 causes of mortality	Level 3 and above		eNHIS dashboard/OIC monthly report
	Trends in disease-specific mortality (e.g. malaria, TB, HIV, diarrhoea, and pneumonia)	Level 4 and above		eNHIS dashboard/OIC monthly report
Service coverage	Trends in immunisation coverage	Level 2 and above	NHIS	eNHIS dashboard/OIC monthly report
	Trends in antenatal care coverage	Level 2 and above		eNHIS dashboard/OIC monthly report

	Trends in health facility deliveries	Level 2 and above		eNHIS dashboard/OIC monthly report
	Family planning	Level 2 and above	NHIS	eNHIS dashboard/OIC monthly report
	Child health/nutrition	Level 2 and above	NHIS	eNHIS dashboard/OIC monthly report
	Trends in tuberculosis treatment coverage	Level 3 and above	TB surveillance system	e-TB module
	Trends in antiretroviral therapy coverage	Level 3 and above	HIV/AIDS patient database	HIV/AIDS program dashboard
	Trends in stock-outs of medical supplies and medicines	Level 2 and above	mSupply	eNHIS dashboard/OIC monthly report
Target setting	Size of catchment population	Level 2 and above	Projected population	eNHIS dashboard

5.4.3 Provincial level

PHIOs and M&E Officers are to undertake data analyses necessary for informing provincial monitoring and planning of health programs, and for reporting to the national level as needed. Other staff at the PHA may also be involved in data analyses. Recommended analyses at the provincial level include:

- Analyses recommended for health facilities (outlined above), aggregated at the district and provincial levels.
- Trends in nationally notifiable diseases for any potential outbreaks.
- Calculation of the 35 PHA indicators outlined in the M&E Strategic Plan for the National Health Plan 2021–2030.
- Trends in numbers and density of health workers by cadre (source: HRIS).
- Stock-outs of essential medical supplies/medicines (source: mSupply).
- Health facility density and numbers of operational health facilities.
- Regularly updating and interpreting data on the PHA dashboard.
- Other analysis requested by the PHA.

5.4.4 National level

Within NDoH, PMRB is responsible for analysing data from the NHIS, DHIS, and NIHF, and compiling data from other programs for synthesis and dissemination through data products and at various forums. The HIV/AIDS program and NTP are responsible for analysing and disseminating data from their programs, while MSPDB does so for data from mSupply and the HR Branch for data from the HRIS. These NDoH units provide the necessary data to PMRB when needed for compilation into national reports or presentations and further dissemination. Types of analyses undertaken by the different branches are outlined in Table 4.

Table 4 - Examples of analyses of data from routine health information systems undertaken by branches of NDoH

NDoH branch or program	RHIS	Recommended analyses
PMRB	eNHIS	National and provincial trends in total and new cases of disease (e.g. diarrhoea, measles, malaria, and pneumonia).
	eNHIS, DHIS	Top 10 causes of morbidity.
	eNHIS, DHIS	Top 5 causes of morbidity in children <5 years.
	eNHIS, DHIS, program information systems	Calculation of the 37 national core indicators for Health Sector Performance Annual Reports. Regularly update SEM dashboard. Hospital bed density. Health facility density and distribution. Bed occupancy rate. Surgical volume.
HIV/AIDS	HIV/AIDS Patient Database	Antiretroviral therapy (ART) coverage (current). HIV care cascade analysis (Triple 90).
National Tuberculosis Program	TB surveillance system	New and relapse TB cases with a documented HIV status. Drug susceptibility test for TB cases. TB treatment success rate. TB case notification rate.
MSPDB	mSupply	Availability of essential medicines and commodities health facilities with no stock-out of essential items.
Human Resources	HRIS	Health worker density and distribution.
		Vacancy rate.

5.5 Data dissemination

Dissemination of data analyses and products is necessary to facilitate evidence-based decision-making and ensure that all stakeholders have up-to-date information. It also helps to ensure that those reporting data understand how it is being used and understand the value of the data being reported. The frequency of data dissemination will depend on the health system level and target audience.

Table 5 outlines key data products produced at the provincial and national levels, target audiences, and frequency of dissemination. Data products and dissemination methods may be modified based on need and level of data use and dissemination.

Table 5 - Key national and provincial data products and dissemination frequency

Data product	Overview	Target audience	Frequency	Responsible entity
National level				
Quarterly review reports	Reports on the quarterly performance of each unit within NDoH that have funds allocated for the purpose of tracking implementation of the Aid Investment Plan and Corporate Plan, and the Health Secretary's priorities. SPAR indicators of the respective programs.	NDoH	Quarterly	PMRB
Senior Executive Management Dashboard	Analysis of trends in 17 national indicators.	SEM, NDoH	Quarterly	PMRB
Health Sector Performance Annual Report (SPAR)	Analysis of trends in 37 key national indicators, including provincial differences.	NDoH PHAs Partners General public	Annual	PMRB
District health profiles	Outline health status, health services, and programs coverage and outcomes by districts. Aim to help district authorities produce district plans to enable priorities for actions, and stimulate actions that will improve health at the district level.	NDoH PHAs Partners General public	Annual	PMRB
Annual TB report	Outlines national TB prevalence and incidence, and program coverage and outcomes, including implementation progress and performance of the National TB Program.	NDoH PHAs Government Line Agencies Partners	Annual	National TB Program
Annual HIV/AIDS report	Shows national HIV/AIDS and STIs prevalence and incidence, and program coverage and outcomes, including implementation progress and performance of the HIV/AIDS and STIs program.	NDoH PHAs Government Line Agencies Partners	Annual	National HIV/AIDS and STIs Program
MSPDB report	Outlines medial supply and procurement service coverage and outcomes.	NDoH	Quarterly	MSPDB

		PHAs Government Line Agencies Partners		
HR report	Outlines health human resources service coverage and outcomes.	NDoH PHAs Government Line Agencies Partners	Annual	HR Branch
Provincial level				
Quarterly review report	Provincial review of progress towards achievement of PHAs, including measuring implementation progress of PHAs' Corporate Plans and provincial indicators on a quarterly basis.	PHA NDoH Partners	Quarterly	PHA
PHA dashboard	Analysis of trends in the 37 PHA indicators and other operational indicators.	PHA NDoH District Development Authority(DDA) District Health Authority (DHA)	Quarterly	PHA, PMRB
Annual report	Provincial review of progress towards achievement of PHAs, including measuring implementation progress of PHAs' Corporate Plans and provincial indicators on an annual basis.	PHA NDoH Partners DDA DHA	Annual	PHA

In addition to the above data products, data from RHIS is also to be discussed during NDoH and PHA quarterly review meetings. During these meetings, programs present progress on activities and data to summarise results achieved. PMRB has developed standard templates for NDoH quarterly meetings, as well as templates for PHAs to report on PHA indicators annually.

6 DATA STORAGE, BACKUP, AND CONFIDENTIALITY

Data storage refers to storing data files in a secure location that can be readily and easily accessible when needed. Data backup, in contrast, refers to saving additional copies of the same data in separate physical or virtual locations from data files in storage.

Health records, registers, reports and tally sheets, and other data sources, need to be archived at health facilities for at least 10 years. The archived data should be stored according to established policies on data security and confidentiality, either in paper or electronic formats. Paper-based records, registers, reports, and data forms, are to be stored in a filing cabinet or separate space/room in health facilities, or kept with the client for forms such as the immunisation card, child health record book, mother's health record book, and OPD book. Electronic data is stored in databases (ranging from simple Microsoft Excel databases to more complex ones hosted on servers) maintained on computers or tablets.

Ensuring regular backup of data stored electronically is a critical component of data management because, in the event that data is lost, recovery could be slow, costly, or impossible. Even where data is entered electronically, retaining the source paper-based records, registers, reports, and forms, is important for verification purposes and as a backup in the event that the electronic data is lost or inaccessible.

In PNG, data is to be stored in both paper and electronic formats at the health facility (health post, community health post, health centre, health subcentre, urban clinic, and hospital) and PHA levels, while data is stored electronically at the national level.

Despite the health system level or specific RHIS, all levels must ensure that health records and other health data is retained and stored securely – whether paper-based or electronic. It is critical that records and other data are accessed only by those authorised to do so to protect patient confidentiality. Patient records contain personal and health data, which could potentially result in stigmatisation for patients if made available more widely. Keeping data confidential (both the main and backup data) by ensuring that it cannot be accessed either over a network or locally by unauthorised people is a key storage security principle for preventing data breaches.

At a minimum, the best practices outlined below must be followed at the health facility, provincial, and national levels, for storage and backup of data.

6.1 Health facility level

- The OIC is responsible for securely storing all health records, recording forms and reports, and other related data tools, to ensure that these are available for reference and future use as required. The OIC is also in charge of following guidelines issued at the national or provincial levels on destruction of records not required after specified periods of time.
- Access to all health records, forms, and reports – whether paper-based or electronic – must be restricted to ensure confidentiality of data. The OIC is responsible for monitoring access.
- All health facilities must have shelves, cupboards, storage or filing cabinets, or dedicated spaces with restricted access, for storage of health records, forms, and reports.
- Health facility records like registers, patient cards, tally sheets, reports, and health facility record books, are to be stored in a secure place (outlined above) for 10 years. Records and forms should ideally be stored by year to facilitate retrieval.

- Some records like child health records, mother's health records, and in some cases OPD books, are taken home by the clients and they will be responsible for storing the records.
- eNHIS tablets must be kept securely at the health facilities and accessed only by the OIC or other health facility staff designated by the OIC. Tablets are not to be taken outside of the health facility.
- Do not share or show eNHIS or other login credentials to anyone, and in case you have discovered that someone might know your login, or the login credentials are exposed, report to the administrator or your supervisor for a change of login details.
- Any printed version containing personal information that is generated for or by a service point must be secured and should not be left unattended.
- For databases that are managed on local computers like health facility desktops, or for patient data stored on a local computer, regular backups should be taken at least once in each 24 hours.
- Health facilities like big hospitals that manage servers for hospital management information systems or other electronic systems, should follow the minimum requirements set at provincial and national levels in addition to what is required at health facility level.

6.2 Provincial level

- Provincial Health Information Officers are responsible for ensuring that data reported to (e.g. monthly paper reports submitted by health facility OICs) or collected by PHAs are stored securely and available for reference and future use as required. PHIOs are also responsible for following guidelines issued by the PHA or NDoH on destruction of records not required after specific periods of time.
- Paper-based records and reports must be stored in a secure, dedicated space, such as cupboards, storage or filing cabinets, or archive rooms, with restricted access for at least 10 years. Records and reports should ideally be stored by year to facilitate retrieval.
- Access to computers and other hardware (e.g. tablets) used for accessing the eNHIS and storing other health data (in databases or files) must be restricted to PHIOs and other authorised PHA staff. PHIOs and other provincial staff who have access to the eNHIS system and eNHIS computer are responsible for maintaining the security and confidentiality of any client-level data extracted from the database and stored locally, including all data used in internal reporting.
- Regular backups should be conducted of data stored on computers/tablets – ideally on Cloud servers, or at least hard drives. Storage backup must be done at least on a monthly basis.
- All eNHIS, health information management systems, and other computers and data storage media where data is accessed or stored data will be accessed, must be password-protected.
- All data downloaded to a data storage medium must be maintained and stored in a secure location.
- Data downloaded for statistical analysis must exclude personal information whenever possible, and personal information is not to be electronically transmitted unless it is properly protected.
- At a minimum, commercial antivirus protection software must be used to protect the data from virus attack.

6.3 National level

At national level, all of the minimum best practices at provincial level will apply; however, in addition the following minimum best practices must be followed by NDoH ICT Branch, PMRB, and any vendors contracted by NDoH and program units.

Hosting systems and applications

- Host or arrange for hosting of information systems and applications, ensuring that arrangements conform with security standards, together with relevant stakeholders.
- Preference is given to hosting and managing systems/applications on local servers at the NDoH data centre. Where this cannot be done, the systems are to be hosted at other local data centre or on Cloud server approved by the e-Health Steering Committee and SEM.

Maintenance

- Perform regular computer checks for system performance, updates for software, and to identify any irregularities in the operating system, and fix any issues that may exist.

Data security

- Complete relevant data access or data sharing forms authorised by relevant authority of the data, prior to giving access or sharing data.
- Create passwords for health information or database logins such as the eNHIS when approved requests are received.
- Ensure that different levels of user access to eNHIS data/other databases are controlled, managed, and monitored to avoid abuse.
- Conduct electronic data backup periodically following a set procedure by NDoH ICT Branch, both at a local site and external site.
- Protect and prevent eNHIS and other database applications from cyber and malicious attacks at the national level by implementing necessary security measures.
- Ensure eNHIS and other database computers are connected onto assigned NDoH local area network (LAN) ports to receive maximum protection from cyber-attacks, malware, and virus intrusions, through the functions of network firewalls and active enterprise antivirus protection tools.
- Regularly monitor logins and malicious activities of users.
- Ensure use of end-to-end encryption methods, such as FTPs, SFTPs, or HTTPS for health data transfers.

Guidelines for information systems

- Regularly share updates of eNHIS and other databases' SOPs and protocols.

6.4 Data sharing and access to eNHIS database

- All health facilities reporting data to the NHIS will have a username and password to access and report their data.
- Responsible individuals at the Provincial Health Authority will have a username and password to access and report NHIS data. At the request of the PHA Chief Executive Officer (CEO), access to NHIS will be granted to additional PHA personnel.
- Staff from the NDoH PMRB will have access to the NHIS to regularly monitor the system and conduct data analysis using data submitted through the NHIS. Access will be

granted to other NDoH personnel upon request from the Health Secretary or individuals delegated by the secretary to approve NHIS access.
- Access to eNHIS may be granted to partners and institutions with the approval of the Health Secretary and signing of an MOU.

Steps to request access to data from eNHIS

Step 1: The individual, institution, or organisation seeking access to the eNHIS should submit a written request to the PHA CEO (if specific PHA data is required) or the NDoH PMRB. The request letter may be submitted in hard copy or as a scanned PDF. The letter must specify the individual or organisation that will be granted access, the reasons for access (e.g. monitoring, reporting, or research), and the duration of access required.

Step 2a: If the request is at the PHA level, after review and endorsement of the PHA CEO, it is forwarded to PMRB.

Step 2b: PMRB reviews the request from the PHA or from the national level within 2 weeks of receipt and determines the type of access to be provided: (1) access with privileges to download data; (2) restricted access to view only or privileges to download select data only; (3) access denied. This decision is then forwarded to the Health Secretary for endorsement.

Step 3: The decision made on eNHIS access by PMRB is endorsed by the Health Secretary or returned to PMRB if clarifications are required. If clarifications are required, PMRB provides the necessary information and sends it back to the Health Secretary.

Step 4: Health Secretary approves the decision on eNHIS access.

Step 5: Decision on eNHIS access is communicated back to the PHA or user. If access is granted, PMRB or the eNHIS contractor will register the individual and institution and provide access to eNHIS.

Step 6: When access is granted, the user will be requested to sign a data access agreement form. This must be returned before the user is given login details.

Step 7: After the user is given login details, NDoH will routinely monitor logins and may request password changes at regular intervals. If NDoH officers suspect a user is engaging in malicious activity, access will be denied immediately, and a report will be sent to the PMRB, PHA CEO, and the Health Secretary.

Note: Data retrieved from the eNHIS MUST be acknowledged and adequately referenced in all presentations, documents, and communication where it is used. The reference should include the period to which the data applies, as well as the date(s) on which the data was accessed and downloaded.

7 DATA QUALITY ASSURANCE

Quality health facility data is essential to form an accurate picture of health needs, program and service delivery, and to inform planning and decision-making at every level to improve service coverage and quality. When data is complete, valid, accurate, precise and reliable, it can also facilitate effective and efficient allocation of resources and help to identify areas where support and corrective measures are needed. As such, quality data is essential for monitoring progress towards achievement of the *National Health Plan 2021–2030* goals and targets.

While reporting coverage has improved in RHIS over the years, particularly for the NHIS, increased availability does not guarantee quality of data. Therefore, it is critical to have a system of data quality assurance in place and to routinely review data quality to identify

whether any actions are needed to improve quality. Data quality is defined as having 6 elements, as outlined in Table 6.

Table 6 - Overview of the 6 data quality elements

Data quality element	Description
Validity	Data measures what it is supposed to measure. It is not influenced by errors in calculations or failing to correctly sum data from the registers and tally sheets into monthly summary forms.
Reliability	Data is always defined, measured, and collected the same way. It is influenced by having in place and following standard definitions and guidelines during collection and reporting of data.
Completeness	Data is available for all variables, with no missing data. This refers to both completeness of monthly reports, as well as source documents (registers and tally sheets).
Precision	Data has sufficient detail and units of measurement are clear.
Timeliness	Data is reported on time and is up-to-date. It is influenced by timely compilation and submission of weekly, monthly, and other reports, before or on the pre-defined deadline stated at each level (health facility, province, and national levels).
Integrity	Data is true and with no deliberate modification/bias.

7.1 Actions to ensure quality of data reported from health facilities

- Ensure health facility staff and data clerks are trained in recording, compiling, and reporting routine data.
- Ensure indicator definitions are available, known to, and used by the staff recording, compiling, and reporting data.
- Ensure availability of data recording and reporting forms.
- Complete registers, tally sheets, summary sheets, monthly reports and other forms that are available at health facilities, without missing data fields.
- Enter all required data from the health facility into the eNHIS or a program's reporting system.
- Ensure monthly reports are reviewed for completeness, validity, accuracy, precision, and integrity, by cross-checking against registers and tally sheets prior to submission.
- Double-check data in monthly reports to identify simple calculation errors or failing to correctly sum the data from the registers and lower-level data entry tools into monthly summary forms.
- Engage in data quality review exercises during supervisory visits of PHA or NDoH officers.
- Implement data quality improvement recommendations shared by PHA or NDoH teams.

7.2 Data quality reviews

Data quality should be assessed periodically to enhance confidence in the data and promote the use of the data for decision-making. Ensuring data quality is also a core responsibility of PHAs and NDoH. Since 2021, PMRB has included data quality reviews as part of its annual NHIS supervisory visits, based on standard World Health Organization (WHO) tools and methodologies. These reviews include a data verification exercise for selected indicators, and

an assessment of systems supports for data recording and reporting. PHAs (through PHIO supervisory visits) are recommended to do the same exercise on a quarterly basis, and partners are encouraged to use the same tools when supporting PHAs in improving data quality.

7.2.1 Data verification

Data verification is the process of verifying that data in source documents at health facilities has been transmitted correctly to all reporting levels. This is done by recounting data recorded in source documents (registers, and tally sheets), and comparing total figures against those provided in monthly reports, for selected indicators. In doing this, one can determine whether reported data is overestimated or underestimated, and identify errors/issues that occur in data transmission.

Table 7 outlines the 5 recommended indicators to verify in routine data quality reviews for the NHIS. These indicators were identified based on WHO standard guidelines on data quality reviews, adapted to the PNG context, and verified in the 2021 data verification exercise undertaken by PMRB. Indicators from TB and HIV/AIDS are not included, as data is collected through separate surveillance systems and not the NHIS, and because these programs conduct their own periodic data quality reviews.

Table 7 - Recommended indicators for verification in data quality reviews

Program area	Indicator	Definition
Maternal and child health	Antenatal care first visit (ANC1)	Number of pregnant women attending antenatal care for the first-time during the current pregnancy (new attender).
	Delivery in health facilities	Number of deliveries occurring in the health centre /sub centre/hospital.
Immunisation	Penta 3	Number of children under 1 year who received the 3rd dose of the pentavalent vaccine.
Outpatient	Pneumonia cases in all age groups	Number of persons diagnosed with pneumonia (cough of less than 14 days duration plus fast breathing or chest indrawing or difficulty in breathing or breast feeding).
Malaria	Confirmed malaria cases in all age groups	Number of malaria cases confirmed by microscopy and rapid diagnostic tests (RDTs), excluding clinical malaria cases.

The following key steps should be followed in conducting data verification:

Step 1. Select indicators to review (see selected indicators in Table 7).

Step 2. Select 3 random consecutive months to review data.

Step 3. Recount values for the indicators from the relevant source documents at the health facility, such as patient records or registers.

Step 4. Compare recounted values with the reported values at each level of the reporting system.

Step 5. Calculate the verification ratio (recounted value/reported value).

Step 6. Determine reasons for discrepancies between recounted and recorded values through discussions with staff involved in recording and reporting data.

The data verification ratio is a quantitative measure used to assess accuracy in data transfer from source documents to reports. It is calculated based on the following formula:

$$\text{Verification factor} = \frac{\text{Recounted number of events from source document}}{\text{Reported number of events from the eNHIS or program report}}$$

A verification factor ratio >1 suggest under-reporting of data, and a ratio <1 suggests over-reporting. A ratio of 1 show that data has been accurately transferred from recording to reporting. Generally, ratios within a 10% range of 1, i.e. 0.9 – 1.1, are considered as acceptable. Ratios <0.9 or >1.1 suggest systematic over- or under-reporting and inaccuracies in data transfer.

7.2.2 Assessment of system supports

The assessment of system supports is undertaken to assess system capacity in generating quality data and to identify potential determinants of gaps in data quality. It evaluates the extent to which critical elements of the reporting system adhere to a set of minimum acceptable standards. At each health facility visited, the assessment looks at 5 key support areas, based on WHO data quality review guidelines:

- Presence of at least one trained staff member.
- Presence of guidelines.
- Stock-outs of data collection tools at the time of the visit.
- Received at least one supervisory visit in the last 6 months.
- Evidence of analysis and use of data – for the PNG context, this has been defined as the health facility having used the Expanded Programme on Immunization (EPI) monitoring chart and plotted charts in the health facility record book.

Each area is assessed on a qualitative scale of: 'yes', 'partial', and 'no'. After data is collected, it can be summarised across health facilities by facility level, type (e.g. public or private), location (e.g. urban or rural), and province. The table below, taken from the WHO data quality review guidelines, is an example of how the data collected from the assessment of system supports can be summarised and presented.

Table 8 - Sample analysis of data collected from the assessment of systems support, as part of data quality reviews

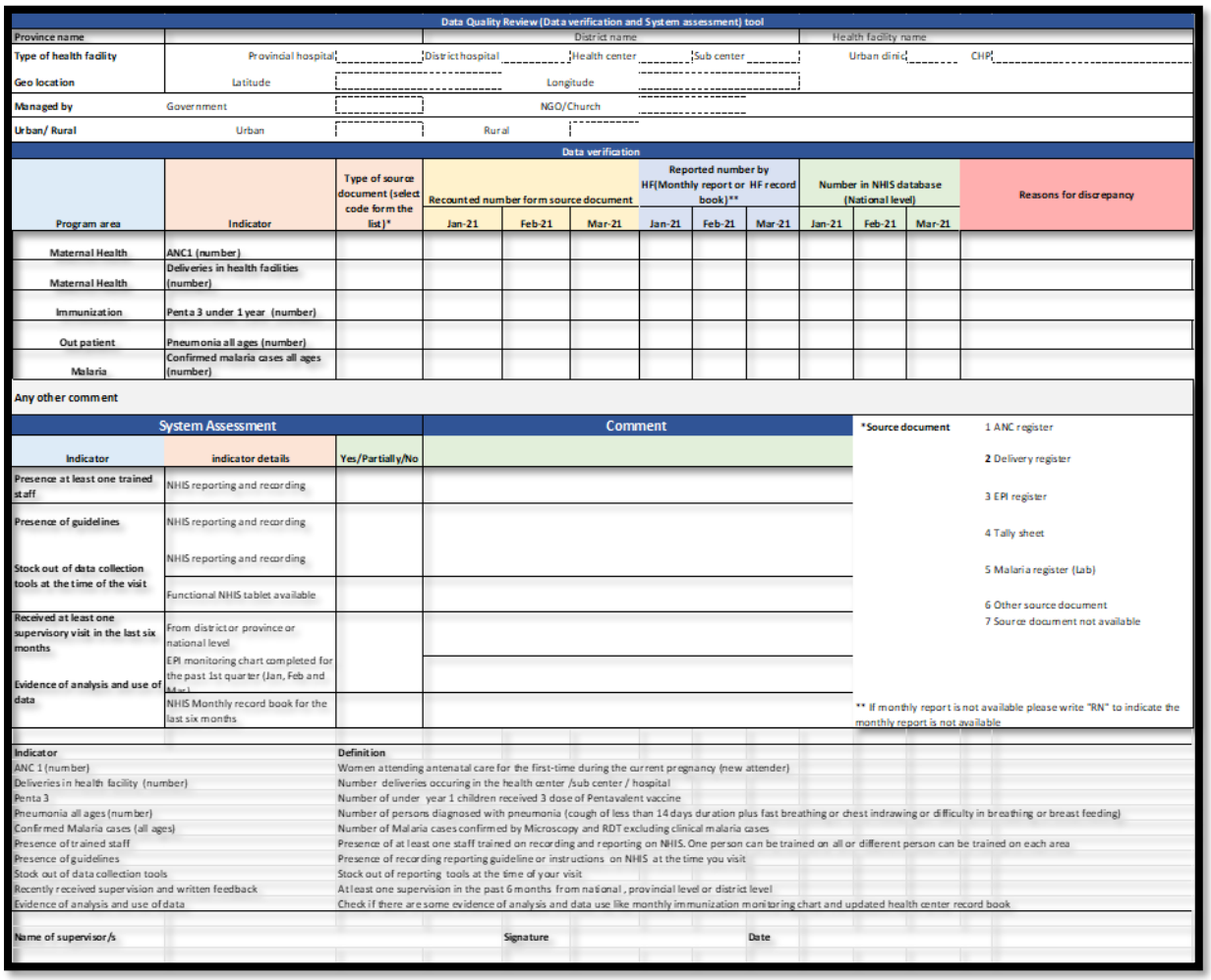
	Facility type			Ownership		Location		
	Health post	Health Centre	Hospital	Public	Private	Urban	Rural	Overall
Number of facilities	n=340	n=635	n=182	n=784	n=342	n=198	n=1,105	n=1,150
% with guidelines	66	63	36	54	61	69	54	57
% with trained staff	49	47	26	41	45	56	39	42
% without stock-out of form	88	77	57	73	73	73	73	73
% receiving supervision and	48	20	2	14	20	22	15	16
% analysing and using data	45	43	20	38	47	56	33	37
% had all criteria	17	3	0	2	4	4	2	2
Mean of items	65	49	33	44	50	54	44	46
Overall Score (%)	30	44	17	37	32	38	34	35

7.3 Actions to improve data quality

Findings from the data quality review (data verification and assessment of system supports) should be reviewed and discussed with all relevant stakeholders (NDoH, PHA, staff from health facilities assessed, and partners involved). Strengths and gaps should be identified, and corresponding short-term and long-term actions identified to address the gaps. Actions should be identified considering relevance, importance/impact on improving data quality, and feasibility of implementation with local resources (human and financial). A limited set of actions is preferable to ensure likelihood of implementation and to facilitate monitoring.

Where several actions have been identified, priority should be given to those with the highest likelihood of success and greatest impact on improving data quality. Actions should be summarised in a data quality improvement plan, with timelines, resources, and responsible person(s)/entities assigned to each action. PHA M&E Committees (or where not in place, PHIOs) or the NDoH M&E Technical Working Group are responsible for monitoring implementation of the data quality improvement plans.

7.4 Data quality review template



Data Quality Review (Data verification and System assessment) tool

Province name			District name						Health facility name				
Type of health facility	Provincial hospital		District hospital		Health center		Sub center		Urban clinic		CHP		
Geo location	Latitude				Longitude								
Managed by	Government				NGO/Church								
Urban/ Rural	Urban		Rural										

Data verification

Program area	Indicator	Type of source document (select code form the list)*	Recounted number form source document			Reported number by HF(Monthly report or HF record book)**			Number in NHIS database (National level)			Reasons for discrepancy
			Jan-21	Feb-21	Mar-21	Jan-21	Feb-21	Mar-21	Jan-21	Feb-21	Mar-21	
Maternal Health	ANC1 (number)											
Maternal Health	Deliveries in health facilities (number)											
Immunization	Penta 3 under 1 year (number)											
Out patient	Pneumonia all ages (number)											
Malaria	Confirmed malaria cases all ages (number)											

Any other comment

System Assessment			Comment
Indicator	indicator details	Yes/Partially/No	
Presence at least one trained staff	NHIS reporting and recording		
Presence of guidelines	NHIS reporting and recording		
Stock out of data collection tools at the time of the visit	NHIS reporting and recording		
	Functional NHIS tablet available		
Received at least one supervisory visit in the last six months	From district or province or national level		
Evidence of analysis and use of data	EPI monitoring chart completed for the past 1st quarter (Jan, Feb and Mar)		
	NHIS Monthly record book for the last six months		

*Source document
1 ANC register
2 Delivery register
3 EPI register
4 Tally sheet
5 Malaria register (Lab)
6 Other source document
7 Source document not available

** If monthly report is not available please write "RN" to indicate the monthly report is not available

Indicator	Definition
ANC 1 (number)	Women attending antenatal care for the first-time during the current pregnancy (new attender)
Deliveries in health facility (number)	Number deliveries occuring in the health center /sub center / hospital
Penta 3	Number of under year 1 children received 3 dose of Pentavalent vaccine
Pneumonia all ages (number)	Number of persons diagnosed with pneumonia (cough of less than 14 days duration plus fast breathing or chest indrawing or difficulty in breathing or breast feeding)
Confirmed Malaria cases (all ages)	Number of Malaria cases confirmed by Microscopy and RDT excluding clinical malaria cases
Presence of trained staff	Presence of at least one staff trained on recording and reporting on NHIS. One person can be trained on all or different person can be trained on each area
Presence of guidelines	Presence of recording reporting guideline or instructions on NHIS at the time you visit
Stock out of data collection tools	Stock out of reporting tools at the time of your visit
Recently received supervision and written feedback	At least one supervision in the past 6 months from national , provincial level or district level
Evidence of analysis and use of data	Check if there are some evidence of analysis and data use like monthly immunization monitoring chart and updated health center record book

Name of supervisor/s | Signature | Date

7.5 Template for data improvement plan

This template will only be used by data quality assessment (DQA) teams in efforts to ensure data quality is maintained by identifying weaknesses within the data management process and identifying quality improvement interventions. This should be populated by the team and kept on file for the next data quality review (DQR) exercise, so improvement can be managed and tracked, and for the purpose of documenting learning and successes.

Program/Project Name:			**Report Period:**		
Site Name:			**Date of Assessment:**		
Team Leader/Members:					

B. Data Improvement

Indicator(s) with variance greater than +/- 10%[1]	Identified data issue (where the error was introduced)[2]	Corrective measures taken[3]	Follow-up steps[4]	Timeline	Person Responsible[6]

Comments:	

Data Element	Definition
Indicator(s) with variance greater than +/- 10%1	From the DQA list of indicators, transfer and list the name of the indicator assessed with a data verification factor 10% above or below the acceptable level identified
Identified data issue (where the error was introduced)2	Reasons provided by the OIC or observed during the supervisory visit contributed to the variation
Corrective measures taken3	Document what corrective actions are taken or will be taken right away; the corrective measures could be correcting the report and resubmitting the report, identifying missing source documents, improvement in the data management process to avoid similar errors in the future.
Follow-up actions	Any follow actions agreed during the data improvement plan
Timeline	The agreed timeline for the corrective action to take place
Responsible person	The person who is responsible to take the corrective measure
	This tool is adopted from FHI360 participatory data verification and improvement tool with some modification

7.6 Data update/change register

Ideally, this template will also be completed by the DQA team to ensure changes made to reported data are actively tracked and updates made on reports are channelled through to PHAs and NDoH PMRB, or M&E for another program. This should also be kept on file at the facility as a reference document when routine DQAs are conducted internally within facilities, a program, or at subnational or national level, depending on who is conducting DQAs and the intent behind DQAs being conducted.

Program Name:		Report Period:	
Site Name:		Date of Assessment:	
Team Leader/Members:			

B. Data Improvement

Review period	Indicator/Data Element	Reason for change	Program Area	Previous Value	Current Value	Documenting Officer	Designation	Approval signature

Comments:

Data Element	Definition
Review period	List period in period based on DQA
Indicator/Data Element	Transfer and list indicator/data element identified based on list of indicators in data improvement plan
Reason for change	Describe reason for change, main reason will be data verified resulting in need to change reported values on reports
Program Area	List program area under which indicator/data element falls under, it could be MCH, Malaria, HIV, depending on DQA list of indicators
Previous Value	Note down previous value reported through eNHIS or other routine health information system reporting
Current Value	Note down current value verified through the DQA exercise
Documenting Officer	Write down name of documenting officer making necessary change on report for re-submission, it could be a data clerk, SIC, NO, medical records, PHIO, program
Designation	Write down designation of documentation officer, making changes on reports for re-submission
Approval signature	Signature of documentation officer or preferably SIC/Program Manager/Facility staff
	This tool is adopted from FHI360 participatory data verification and improvement tool with some modification

8 MONITORING AND EVALUATION COORDINATION AT SUB-NATIONAL LEVEL

8.1 TERMS OF REFERENCE, PROVINCIAL MONITORING & EVALUATION COORDINATION COMMITTEE

8.1.1 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 an 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.

8.1.2 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.

8.1.3 Specific responsibilities

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

- Provide guidance on the 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 research 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

8.1.4 Chair and Co-Chair

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

8.1.5 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

8.1.6 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.

8.1.7 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.

8.1.8 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.

8.1.9 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.

8.2 Quarterly review template

NATIONAL DEPARTMENT OF HEALTH

QUARTERLY PERFORMANCE REVIEW TEMPLATE FOR MANAGERS

DIVISION: **Public Health*	**BRANCH:** **Disease Control*
PROGRAM MANAGER: **Mr Health*	

BRANCH EXPENDITURE:		
RECURRENT	**HSIP**	**OTHERS: (NAME SOURCE OF FUNDS)**
K181,000	*K360,963*	**NA**
TOTAL SPENT THIS QTR: **Recurrent:** K	**HSIP:** K	

1. MAJOR DELIVERABLES FOR THE QUARTER

KRA	KEY DELIVERABLES	PERFORMANCE INDICATOR	STATUS
**5*	*Sector Performance Annual Report (SPAR)*	*SPAR 2021*	*Completed - For SEM to endorse for distribution*

2. IDENTIFY KEY ISSSUES/CHALLENGES AND RECCOMENDASTIONS

CHALLENGES	RECOMENDATIONS
1. ** Disease control is under staffed*	*Urgent call to recruit officers to filled the currently vacant positions*
2.	

3. RISK MANAGEMENT:

RISK	MITIGATION STRATEGY
Recurrent funding for AIP operation is a huge risk that directly affect the program AIP implementation	*Effectively manage and monitor operational funds*

4. ACTIVITIES FOR QUARTER 4 FROM 2022 AIP

KRA	KEY DELIVERABLES	PERFORMANCE INDICATOR	STATUS
5	**2.MRAC Meeting*		*MRAC meeting 2*

GUIDE:

1. **Expenditure must include total spending for the Branch inclusive of all other resource partners that supported the division during that quarter**
2. **Provide progressive updates only on key deliverable for that quarter; the deliverables must be addressing the divisional priorities. State the performance indicator that is expected and the implementation status of each deliverable. Also include the total expenditure for each deliverable.**
3. **Identify only issues and challenges that requires assistance and support from other managers in the division. All other internal issues should be discussed during branch review.**
4. **Identify any risk factors internal or external that may influence the implementation of your priority and suggest strategies on how you will manage these risks.**

8.3 Resolutions template

(PMRB team to insert specifications of this template here)

No	Issue (note issue discussed in detail here)	Resolution (note the resolution agreed on based on issue discussed)	Action Officer(s) (note action officers responsible to execute resolution)	Time Frame (note due date for this task)	Updates/Progress (note progress update on this task)
1	Example: Poor Quarterly Reporting from branches: Branch Managers and Divisional Heads are not providing proper quarterly reports on time. Reports are of poor quality and are not submitted on time to the Secretariat to consolidate a comprehensive quarterly report for the department.	**2nd QPR Participants resolved that;** • All Divisions are to conduct Divisional quarterly reviews to prepare for the NDoH Review and to ensure timely submissions of comprehensive reports.	All EMs	3rd Quarter onward	✓For noting. *Should be incorporated as a routine process for all Divisions*
2					
3					
4					
5					

ANNEX 1 AID POST TALLY SHEETS

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NHIS01-Aidpost Tally Sheet

Aidpost:_____ Month:……..Year:…….

NEW CASES		MALE						TOTAL	FEMALE						TOTAL
Diphtheria		00000	00000	00000	00000	00000	00000		00000	00000	00000	00000	00000	00000	
Neonatal Tetanus		00000	00000	00000	00000	00000	00000		00000	00000	00000	00000	00000	00000	
Acute Flaccid Paralysis		00000	00000	00000	00000	00000	00000		00000	00000	00000	00000	00000	00000	
Measles (suspected)		00000	00000	00000	00000	00000	00000		00000	00000	00000	00000	00000	00000	
Pertussis		00000	00000	00000	00000	00000	00000		00000	00000	00000	00000	00000	00000	
Simple Cough		00000	00000	00000	00000	00000	00000		00000	00000	00000	00000	00000	00000	
Pneumonia	< 1 yr	00000	00000	00000	00000	00000	00000		00000	00000	00000	00000	00000	00000	
	1 - 4 yrs	00000	00000	00000	00000	00000	00000		00000	00000	00000	00000	00000	00000	
	5 yrs +	00000	00000	00000	00000	00000	00000		00000	00000	00000	00000	00000	00000	
Cr. Obst. Pulmon. Dis		00000	00000	00000	00000	00000	00000		00000	00000	00000	00000	00000	00000	
Asthma		00000	00000	00000	00000	00000	00000		00000	00000	00000	00000	00000	00000	
Other Respiratory		00000	00000	00000	00000	00000	00000		00000	00000	00000	00000	00000	00000	
Diarrhoea	< 1 yr	00000	00000	00000	00000	00000	00000		00000	00000	00000	00000	00000	00000	
	1 - 4 yrs	00000	00000	00000	00000	00000	00000		00000	00000	00000	00000	00000	00000	
	5 yrs +	00000	00000	00000	00000	00000	00000		00000	00000	00000	00000	00000	00000	
Malaria	0 - 4 yrs	00000	00000	00000	00000	00000	00000		00000	00000	00000	00000	00000	00000	
Clinical	5 - 14 yrs	00000	00000	00000	00000	00000	00000		00000	00000	00000	00000	00000	00000	
Diagnosis	15 yrs +	00000	00000	00000	00000	00000	00000		00000	00000	00000	00000	00000	00000	
	Pregnant								00000	00000	00000	00000	00000	00000	
Malaria	0 - 4 yrs	00000	00000	00000	00000	00000	00000		00000	00000	00000	00000	00000	00000	
Slide or	5 - 14 yrs	00000	00000	00000	00000	00000	00000		00000	00000	00000	00000	00000	00000	
RDT	15 yrs +	00000	00000	00000	00000	00000	00000		00000	00000	00000	00000	00000	00000	
Diagnosis	Pregnant								00000	00000	00000	00000	00000	00000	
Fever of Unknown Cause		00000	00000	00000	00000	00000	00000		00000	00000	00000	00000	00000	00000	
Anaemia		00000	00000	00000	00000	00000	00000		00000	00000	00000	00000	00000	00000	
Malnutrition	< 6mths	00000	00000	00000	00000	00000	00000		00000	00000	00000	00000	00000	00000	
	6-59mths	00000	00000	00000	00000	00000	00000		00000	00000	00000	00000	00000	00000	
	5-14 yrs	00000	00000	00000	00000	00000	00000		00000	00000	00000	00000	00000	00000	
Sexual Violence	0-4 yrs	00000	00000	00000	00000	00000	00000		00000	00000	00000	00000	00000	00000	
	5 - 16 yrs	00000	00000	00000	00000	00000	00000		00000	00000	00000	00000	00000	00000	
	17 yrs+	00000	00000	00000	00000	00000	00000		00000	00000	00000	00000	00000	00000	
Physical Violence	0-4 yrs	00000	00000	00000	00000	00000	00000		00000	00000	00000	00000	00000	00000	
	5 - 16 yrs	00000	00000	00000	00000	00000	00000		00000	00000	00000	00000	00000	00000	
	17 yrs+	00000	00000	00000	00000	00000	00000		00000	00000	00000	00000	00000	00000	
Motor veh. accident injuries		00000	00000	00000	00000	00000	00000		00000	00000	00000	00000	00000	00000	
Other accident injuries		00000	00000	00000	00000	00000	00000		00000	00000	00000	00000	00000	00000	
Genital ulcers		00000	00000	00000	00000	00000	00000		00000	00000	00000	00000	00000	00000	
Urethral discharge									00000	00000	00000	00000	00000	00000	
Vaginal discharge									00000	00000	00000	00000	00000	00000	
Pelvic Inflam. Disease		00000	00000	00000	00000	00000	00000		00000	00000	00000	00000	00000	00000	
Genital warts		00000	00000	00000	00000	00000	00000		00000	00000	00000	00000	00000	00000	
Latent syphilis (blood tst)		00000	00000	00000	00000	00000	00000		00000	00000	00000	00000	00000	00000	
Other STI		00000	00000	00000	00000	00000	00000		00000	00000	00000	00000	00000	00000	
Pulmonary TB Suspect		00000	00000	00000	00000	00000	00000		00000	00000	00000	00000	00000	00000	
Leprosy		00000	00000	00000	00000	00000	00000		00000	00000	00000	00000	00000	00000	
Yaws		00000	00000	00000	00000	00000	00000		00000	00000	00000	00000	00000	00000	
Other skin disease		00000	00000	00000	00000	00000	00000		00000	00000	00000	00000	00000	00000	
		00000	00000	00000	00000	00000	00000		00000	00000	00000	00000	00000	00000	
Ear infection		00000	00000	00000	00000	00000	00000		00000	00000	00000	00000	00000	00000	
Eye infection		00000	00000	00000	00000	00000	00000		00000	00000	00000	00000	00000	00000	
All other new cases		00000	00000	00000	00000	00000	00000		00000	00000	00000	00000	00000	00000	
		00000	00000	00000	00000	00000	00000		00000	00000	00000	00000	00000	00000	
TOTAL NEW CASES															
Reattendences < 5 yrs		00000	00000	00000	00000	00000	00000		00000	00000	00000	00000	00000	00000	
		00000	00000	00000	00000	00000	00000		00000	00000	00000	00000	00000	00000	
		00000	00000	00000	00000	00000	00000		00000	00000	00000	00000	00000	00000	
Other reattendences		00000	00000	00000	00000	00000	00000		00000	00000	00000	00000	00000	00000	
		00000	00000	00000	00000	00000	00000		00000	00000	00000	00000	00000	00000	
		00000	00000	00000	00000	00000	00000		00000	00000	00000	00000	00000	00000	
TOTAL PATIENTS															

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Ante natal Care & Immunisation Services

ADMISSION/REFER		MALE					TOTAL	FEMALE					TOTAL
Neonatal sepsis		00000	00000	00000	00000	00000		00000	00000	00000	00000	00000	
PPH		00000	00000	00000	00000	00000		00000	00000	00000	00000	00000	
Puerperal sepsis		00000	00000	00000	00000	00000		00000	00000	00000	00000	00000	
Severe malaria		00000	00000	00000	00000	00000		00000	00000	00000	00000	00000	
Other admissions & or referrals		00000	00000	00000	00000	00000		00000	00000	00000	00000	00000	
		00000	00000	00000	00000	00000		00000	00000	00000	00000	00000	
FAMILY PLANNING													
New Acceptors	Brst fd Pill (POP)							00000	00000	00000	00000	00000	
	Comb. Pill (COP)							00000	00000	00000	00000	00000	
	Injection							00000	00000	00000	00000	00000	
	Ovulation							00000	00000	00000	00000	00000	
	Condom							00000	00000	00000	00000	00000	
	Loop/IUD							00000	00000	00000	00000	00000	
	Implant							00000	00000	00000	00000	00000	
Re -Acceptors	Brst fd Pill (POP)							00000	00000	00000	00000	00000	
	Comb. Pill (COP)							00000	00000	00000	00000	00000	
	Injection							00000	00000	00000	00000	00000	
	Ovulation							00000	00000	00000	00000	00000	
	Condom							00000	00000	00000	00000	00000	
	Loop/IUD							00000	00000	00000	00000	00000	
	Implant							00000	00000	00000	00000	00000	
	Tubal ligation							00000	00000	00000	00000	00000	
Permanent	Vasectomy	00000	00000	00000	00000	00000							
	Referred	00000	00000	00000	00000	00000		00000	00000	00000	00000	00000	
BIRTHS/DEATHS													
Attended deliveries								00000	00000	00000	00000	00000	
Village deaths < 1 yr		00000	00000	00000	00000	00000		00000	00000	00000	00000	00000	
Village deaths 1 - 4 yrs		00000	00000	00000	00000	00000		00000	00000	00000	00000	00000	
Village deaths 5 yrs +		00000	00000	00000	00000	00000		00000	00000	00000	00000	00000	
Maternal Deaths								00000	00000	00000	00000	00000	
												No. cases needing follow - up at home	
												No. follow - up cases seen at home	
												No. health education talks given	
IMMUNIZATION													
BCG	W/in 24 hr	00000	00000	00000	00000	00000		00000	00000	00000	00000	00000	
Birth dose	< 1 Week	00000	00000	00000	00000	00000		00000	00000	00000	00000	00000	
	> 1 Week	00000	00000	00000	00000	00000		00000	00000	00000	00000	00000	
Hep B	W/in 24 hr	00000	00000	00000	00000	00000		00000	00000	00000	00000	00000	
Birth dose	> 24 hr	00000	00000	00000	00000	00000		00000	00000	00000	00000	00000	
DTP/Hib/Hep_ B (Penta-Valent)	1st d < 1 yr	00000	00000	00000	00000	00000		00000	00000	00000	00000	00000	
	2nd d < 1yr	00000	00000	00000	00000	00000		00000	00000	00000	00000	00000	
	3rd d < 1 yr	00000	00000	00000	00000	00000		00000	00000	00000	00000	00000	
	> 1 yr	00000	00000	00000	00000	00000		00000	00000	00000	00000	00000	
bOPV (Sabin)	1st d < 1 yr	00000	00000	00000	00000	00000		00000	00000	00000	00000	00000	
	2nd d < 1yr	00000	00000	00000	00000	00000		00000	00000	00000	00000	00000	
	3rd d < 1 yr	00000	00000	00000	00000	00000		00000	00000	00000	00000	00000	
	> 1 yr	00000	00000	00000	00000	00000		00000	00000	00000	00000	00000	
IPV	3 -11 Mths	00000	00000	00000	00000	00000		00000	00000	00000	00000	00000	
PCV 13	1st d < 1 yr	00000	00000	00000	00000	00000		00000	00000	00000	00000	00000	
	2nd d < 1yr	00000	00000	00000	00000	00000		00000	00000	00000	00000	00000	
	3rd d < 1 yr	00000	00000	00000	00000	00000		00000	00000	00000	00000	00000	
	> 1 yr	00000	00000	00000	00000	00000		00000	00000	00000	00000	00000	
Measles Rubella (MR)	6 - 8 Mths	00000	00000	00000	00000	00000		00000	00000	00000	00000	00000	
	9 - 17 Mths	00000	00000	00000	00000	00000		00000	00000	00000	00000	00000	
	18 -23 Mths	00000	00000	00000	00000	00000		00000	00000	00000	00000	00000	
	> 24 Mths	00000	00000	00000	00000	00000		00000	00000	00000	00000	00000	
Vitamin A	6 - 11 mths	00000	00000	00000	00000	00000		00000	00000	00000	00000	00000	
	12 -59 mths	00000	00000	00000	00000	00000		00000	00000	00000	00000	00000	
Albendazole	12 -59 mths	00000	00000	00000	00000	00000		00000	00000	00000	00000	00000	
										Revised Sept 2017			

ANNEX 2 AID POST MONTHLY

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NHIS02-Aidpost Monthly Summary

Aidpost : _____ Year : _____

NEW CASES		Jan M	Jan F	Feb M	Feb F	Mar M	Mar F	Apr M	Apr F	May M	May F	Jun M	Jun F	Jul M	Jul F	Aug M	Aug F	Sep M	Sep F	Oct M	Oct F	Nov M	Nov F	Dec M	Dec F	Total
Diphtheria																										
Neonatal tetanus																										
Acute flaccid Paralysis																										
Measles (suspected)																										
Pertussis																										
Simple Cough																										
Pneumonia	< 1 yr																									
	1 - 4 yrs																									
	5 yrs +																									
Cr. Obst. Pulmon. Dis																										
Asthma																										
Other Respiratory																										
Diarrhoea	< 1 yr																									
	1 - 4 yrs																									
	5 yrs +																									
Malaria	0 - 4 yrs																									
Clinical	5 - 14 yrs																									
Diagnosis	15 yrs +																									
	Pregnant																									
Malaria cases	0 - 4 yrs																									
Confirmed by	5 - 14 yrs																									
RDT or	15 yrs +																									
Microscopy	Pregnant																									
Fever of Unknown Cause																										
Anaemia																										
Malnutrition	< 6mths																									
	6-59mths																									
	5-14 yrs																									
Sexual Violence	0-4 yrs																									
	5 - 16 yrs																									
	17 yrs+																									
Physical Violence (GBV Non Sexual)	0-4 yrs																									
	5 - 16 yrs																									
	17 yrs+																									
Motor vehicle Accident injuries																										
Other accident injuries																										
Genital ulcers																										
Urethral discharge																										
Vaginal discharge																										
Pelvic Inflam. Disease																										
Genital warts																										
Latent syphilis (blood tst)																										
Other STI																										
Pulmonary TB Suspect																										
Leprosy																										
Yaws																										
Other skin disease																										
Ear infection																										
Eye infection																										
All other new cases																										
TOTAL NEW CASES																										
Reattendences < 5 yrs																										
Other reattendences																										
TOTAL OUTPATIENTS																										

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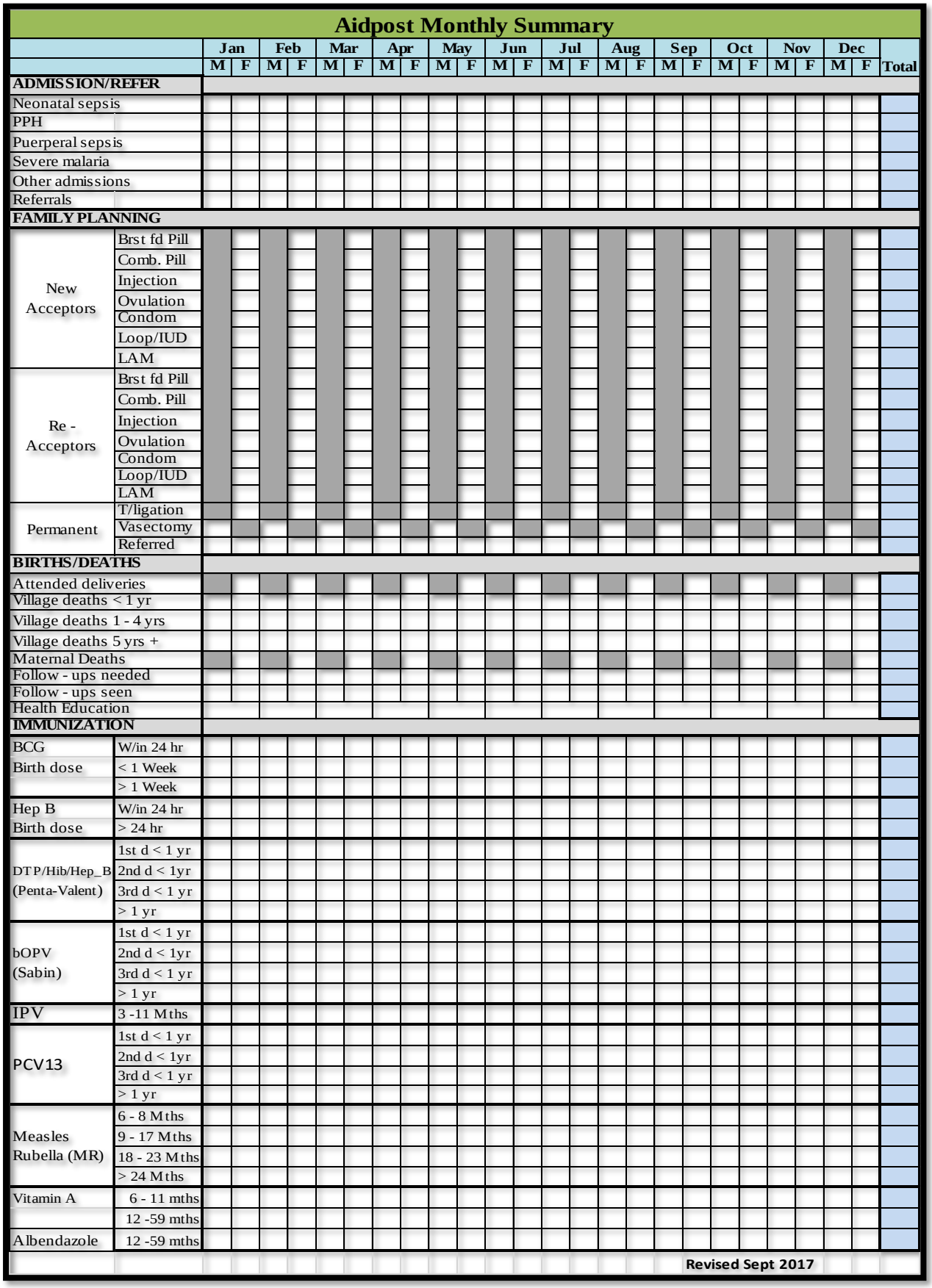


Aidpost Monthly Summary

		Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec		
		M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	Total
ADMISSION/REFER																										
Neonatal sepsis																										
PPH																										
Puerperal sepsis																										
Severe malaria																										
Other admissions																										
Referrals																										
FAMILY PLANNING																										
New Acceptors	Brst fd Pill																									
	Comb. Pill																									
	Injection																									
	Ovulation																									
	Condom																									
	Loop/IUD																									
	LAM																									
Re - Acceptors	Brst fd Pill																									
	Comb. Pill																									
	Injection																									
	Ovulation																									
	Condom																									
	Loop/IUD																									
	LAM																									
Permanent	T/ligation																									
	Vasectomy																									
	Referred																									
BIRTHS/DEATHS																										
Attended deliveries																										
Village deaths < 1 yr																										
Village deaths 1 - 4 yrs																										
Village deaths 5 yrs +																										
Maternal Deaths																										
Follow - ups needed																										
Follow - ups seen																										
Health Education																										
IMMUNIZATION																										
BCG	W/in 24 hr																									
Birth dose	< 1 Week																									
	> 1 Week																									
Hep B Birth dose	W/in 24 hr																									
	> 24 hr																									
DTP/Hib/Hep_B (Penta-Valent)	1st d < 1 yr																									
	2nd d < 1yr																									
	3rd d < 1 yr																									
	> 1 yr																									
bOPV (Sabin)	1st d < 1 yr																									
	2nd d < 1yr																									
	3rd d < 1 yr																									
	> 1 yr																									
IPV	3 -11 Mths																									
PCV13	1st d < 1 yr																									
	2nd d < 1yr																									
	3rd d < 1 yr																									
	> 1 yr																									
Measles Rubella (MR)	6 - 8 Mths																									
	9 - 17 Mths																									
	18 - 23 Mths																									
	> 24 Mths																									
Vitamin A	6 - 11 mths																									
	12 -59 mths																									
Albendazole	12 -59 mths																									

Revised Sept 2017

ANNEX 3 OPD TALLY SHEET

National Health Information System

Outpatient Tally Sheet

Centre: **Date:** / /

NEW CASES		MALE						TOTAL	FEMALE						TOTAL
Diphtheria		00000	00000	00000	00000	00000	00000		00000	00000	00000	00000	00000	00000	
Neonatal tetanus		00000	00000	00000	00000	00000	00000		00000	00000	00000	00000	00000	00000	
Acute flaccid Paralysis		00000	00000	00000	00000	00000	00000		00000	00000	00000	00000	00000	00000	
Measles (suspected)		00000	00000	00000	00000	00000	00000		00000	00000	00000	00000	00000	00000	
Pertussis		00000	00000	00000	00000	00000	00000		00000	00000	00000	00000	00000	00000	
Simple Cough		00000	00000	00000	00000	00000	00000		00000	00000	00000	00000	00000	00000	
Pneumonia	< 1 yr	00000	00000	00000	00000	00000	00000		00000	00000	00000	00000	00000	00000	
	1 - 4 yrs	00000	00000	00000	00000	00000	00000		00000	00000	00000	00000	00000	00000	
	5 yrs +	00000	00000	00000	00000	00000	00000		00000	00000	00000	00000	00000	00000	
Cr. Obst. Pulmon. Dis		00000	00000	00000	00000	00000	00000		00000	00000	00000	00000	00000	00000	
Asthma		00000	00000	00000	00000	00000	00000		00000	00000	00000	00000	00000	00000	
Other Respiratory		00000	00000	00000	00000	00000	00000		00000	00000	00000	00000	00000	00000	
Diarrhoea	< 1 yr	00000	00000	00000	00000	00000	00000		00000	00000	00000	00000	00000	00000	
	1 - 4 yrs	00000	00000	00000	00000	00000	00000		00000	00000	00000	00000	00000	00000	
	5 yrs +	00000	00000	00000	00000	00000	00000		00000	00000	00000	00000	00000	00000	
Malaria Clinical Diagnosis	0 - 4 yrs	00000	00000	00000	00000	00000	00000		00000	00000	00000	00000	00000	00000	
	5 - 14 yrs	00000	00000	00000	00000	00000	00000		00000	00000	00000	00000	00000	00000	
	15 yrs +	00000	00000	00000	00000	00000	00000		00000	00000	00000	00000	00000	00000	
	Pregnant								00000	00000	00000	00000	00000	00000	
Malaria Cases Confirmed By RDT Or Microscopy	0 - 4 yrs	00000	00000	00000	00000	00000	00000		00000	00000	00000	00000	00000	00000	
	5 - 14 yrs	00000	00000	00000	00000	00000	00000		00000	00000	00000	00000	00000	00000	
	15 yrs +	00000	00000	00000	00000	00000	00000		00000	00000	00000	00000	00000	00000	
	Pregnant								00000	00000	00000	00000	00000	00000	
Fever of Unknown Cause		00000	00000	00000	00000	00000	00000		00000	00000	00000	00000	00000	00000	
Anaemia		00000	00000	00000	00000	00000	00000		00000	00000	00000	00000	00000	00000	
Malnutrition	< 6mths	00000	00000	00000	00000	00000	00000		00000	00000	00000	00000	00000	00000	
	6-59mths	00000	00000	00000	00000	00000	00000		00000	00000	00000	00000	00000	00000	
	5-14 yrs	00000	00000	00000	00000	00000	00000		00000	00000	00000	00000	00000	00000	
Sexual Violence	5 - 16 yrs	00000	00000	00000	00000	00000	00000		00000	00000	00000	00000	00000	00000	
	17 yrs+	00000	00000	00000	00000	00000	00000		00000	00000	00000	00000	00000	00000	
	PEP given	00000	00000	00000	00000	00000	00000		00000	00000	00000	00000	00000	00000	
Physical Violence	0-4 years	00000	00000	00000	00000	00000	00000		00000	00000	00000	00000	00000	00000	
	5-16 years	00000	00000	00000	00000	00000	00000		00000	00000	00000	00000	00000	00000	
	17 yrs+	00000	00000	00000	00000	00000	00000		00000	00000	00000	00000	00000	00000	
Motor vehicle accident injuries		00000	00000	00000	00000	00000	00000		00000	00000	00000	00000	00000	00000	
Other accident injuries		00000	00000	00000	00000	00000	00000		00000	00000	00000	00000	00000	00000	
Genital ulcers		00000	00000	00000	00000	00000	00000		00000	00000	00000	00000	00000	00000	
Urethral discharge									00000	00000	00000	00000	00000	00000	
Vaginal discharge									00000	00000	00000	00000	00000	00000	
Pelvic Inflam. Disease		00000	00000	00000	00000	00000	00000		00000	00000	00000	00000	00000	00000	
Genital warts		00000	00000	00000	00000	00000	00000		00000	00000	00000	00000	00000	00000	
Latent syphilis (blood test)		00000	00000	00000	00000	00000	00000		00000	00000	00000	00000	00000	00000	
Other STI		00000	00000	00000	00000	00000	00000		00000	00000	00000	00000	00000	00000	
Pulmonary TB Suspect		00000	00000	00000	00000	00000	00000		00000	00000	00000	00000	00000	00000	
Leprosy		00000	00000	00000	00000	00000	00000		00000	00000	00000	00000	00000	00000	
Yaws		00000	00000	00000	00000	00000	00000		00000	00000	00000	00000	00000	00000	
Other skin disease		00000	00000	00000	00000	00000	00000		00000	00000	00000	00000	00000	00000	
		00000	00000	00000	00000	00000	00000		00000	00000	00000	00000	00000	00000	
Ear infection		00000	00000	00000	00000	00000	00000		00000	00000	00000	00000	00000	00000	
Eye infection		00000	00000	00000	00000	00000	00000		00000	00000	00000	00000	00000	00000	
All other new cases		00000	00000	00000	00000	00000	00000		00000	00000	00000	00000	00000	00000	
		00000	00000	00000	00000	00000	00000		00000	00000	00000	00000	00000	00000	
TOTAL NEW CASES															
Reattendences < 5 yrs		00000	00000	00000	00000	00000	00000		00000	00000	00000	00000	00000	00000	
		00000	00000	00000	00000	00000	00000		00000	00000	00000	00000	00000	00000	
		00000	00000	00000	00000	00000	00000		00000	00000	00000	00000	00000	00000	
Other reattendences		00000	00000	00000	00000	00000	00000		00000	00000	00000	00000	00000	00000	
		00000	00000	00000	00000	00000	00000		00000	00000	00000	00000	00000	00000	
		00000	00000	00000	00000	00000	00000		00000	00000	00000	00000	00000	00000	
TOTAL PATIENTS															

Revised Sept 2017

ANNEX 4 CHILD HEALTH TALLY SHEET

NHIS09-Child Health Tally Sheet *Revised Sept 2017*

Clinic:_____ **Date:**_____

CHILD ATTENDANCE		MALE					TOTAL	FEMALE					TOTAL
Children < 6 mths	New	00000	00000	00000	00000	00000		00000	00000	00000	00000	00000	
	Reatt	00000	00000	00000	00000	00000		00000	00000	00000	00000	00000	
		00000	00000	00000	00000	00000		00000	00000	00000	00000	00000	
Children 6 -59 Mths	New	00000	00000	00000	00000	00000		00000	00000	00000	00000	00000	
	Reatt	00000	00000	00000	00000	00000		00000	00000	00000	00000	00000	
		00000	00000	00000	00000	00000		00000	00000	00000	00000	00000	
NUTRITION													
Children < 6mths	< - 3 z score	00000	00000	00000	00000	00000		00000	00000	00000	00000	00000	
	-3 to -2 z score	00000	00000	00000	00000	00000		00000	00000	00000	00000	00000	
	> - 2 z score	00000	00000	00000	00000	00000		00000	00000	00000	00000	00000	
Children 6 -59 mths	< - 3 z score	00000	00000	00000	00000	00000		00000	00000	00000	00000	00000	
	-3 to -2 z score	00000	00000	00000	00000	00000		00000	00000	00000	00000	00000	
	> - 2 z score	00000	00000	00000	00000	00000		00000	00000	00000	00000	00000	
	MUAC - Red	00000	00000	00000	00000	00000		00000	00000	00000	00000	00000	
	MUAC - Yellow	00000	00000	00000	00000	00000		00000	00000	00000	00000	00000	
	MUAC - Green	00000	00000	00000	00000	00000		00000	00000	00000	00000	00000	
IMMUNIZATION													
BCG	W/in 24 hr	00000	00000	00000	00000	00000	00000	00000	00000	00000	00000	00000	
Birth dose	< 1 Week	00000	00000	00000	00000	00000	00000	00000	00000	00000	00000	00000	
	> 1 Week	00000	00000	00000	00000	00000	00000	00000	00000	00000	00000	00000	
Hep B	W/in 24 hr	00000	00000	00000	00000	00000	00000	00000	00000	00000	00000	00000	
Birth dose	> 24 hr	00000	00000	00000	00000	00000	00000	00000	00000	00000	00000	00000	
DTP/Hib/Hep_B (Penta-Valent)	1st d < 1 yr	00000	00000	00000	00000	00000	00000	00000	00000	00000	00000	00000	
	2nd d < 1yr	00000	00000	00000	00000	00000	00000	00000	00000	00000	00000	00000	
	3rd d < 1 yr	00000	00000	00000	00000	00000	00000	00000	00000	00000	00000	00000	
	> 1 yr	00000	00000	00000	00000	00000	00000	00000	00000	00000	00000	00000	
bOPV (Sabin)	1st d < 1 yr	00000	00000	00000	00000	00000	00000	00000	00000	00000	00000	00000	
	2nd d < 1yr	00000	00000	00000	00000	00000	00000	00000	00000	00000	00000	00000	
	3rd d < 1 yr	00000	00000	00000	00000	00000	00000	00000	00000	00000	00000	00000	
	> 1 yr	00000	00000	00000	00000	00000	00000	00000	00000	00000	00000	00000	
IPV	3 -11 Mths	00000	00000	00000	00000	00000	00000	00000	00000	00000	00000	00000	
PCV 13	1st d < 1 yr	00000	00000	00000	00000	00000	00000	00000	00000	00000	00000	00000	
	2nd d < 1yr	00000	00000	00000	00000	00000	00000	00000	00000	00000	00000	00000	
	3rd d < 1 yr	00000	00000	00000	00000	00000	00000	00000	00000	00000	00000	00000	
	> 1 yr	00000	00000	00000	00000	00000	00000	00000	00000	00000	00000	00000	
Measles Rubella (MR)	6 - 8 Mths	00000	00000	00000	00000	00000	00000	00000	00000	00000	00000	00000	
	9 - 17 Mths	00000	00000	00000	00000	00000	00000	00000	00000	00000	00000	00000	
	18 - 23 Mths	00000	00000	00000	00000	00000	00000	00000	00000	00000	00000	00000	
	> 24 Mths	00000	00000	00000	00000	00000	00000	00000	00000	00000	00000	00000	
Vitamin A	6 -11 mths	00000	00000	00000	00000	00000	00000	00000	00000	00000	00000	00000	
	12 -59 mths	00000	00000	00000	00000	00000	00000	00000	00000	00000	00000	00000	
Albendazole	12 -59 mths	00000	00000	00000	00000	00000	00000	00000	00000	00000	00000	00000	

ANNEX 5 FAMILY PLANNING TALLY SHEET

National Health Information System

Family Planning Tally Sheet

Clinic: Date: / /

N. ACCEPTORS		Males					Total	Females					Total
Pills	Brst fd pill (POP)							00000	00000	00000	00000	00000	
	Comb. Pill (COP)							00000	00000	00000	00000	00000	
Injection								00000	00000	00000	00000	00000	
Ovulation								00000	00000	00000	00000	00000	
Condom								00000	00000	00000	00000	00000	
Loop/IUD								00000	00000	00000	00000	00000	
Implant								00000	00000	00000	00000	00000	
REACCEPTORS													
Pills	Brst fd pill (POP)							00000	00000	00000	00000	00000	
	Comb. Pill (COP)							00000	00000	00000	00000	00000	
Injection								00000	00000	00000	00000	00000	
Ovulation								00000	00000	00000	00000	00000	
Condom								00000	00000	00000	00000	00000	
Loop/IUD								00000	00000	00000	00000	00000	
Implant								00000	00000	00000	00000	00000	
PERMANENT													
Tubaligation								00000	00000	00000	00000	00000	
Vasectomy		00000	00000	00000	00000	00000							
Referred		00000	00000	00000	00000	00000		00000	00000	00000	00000	00000	

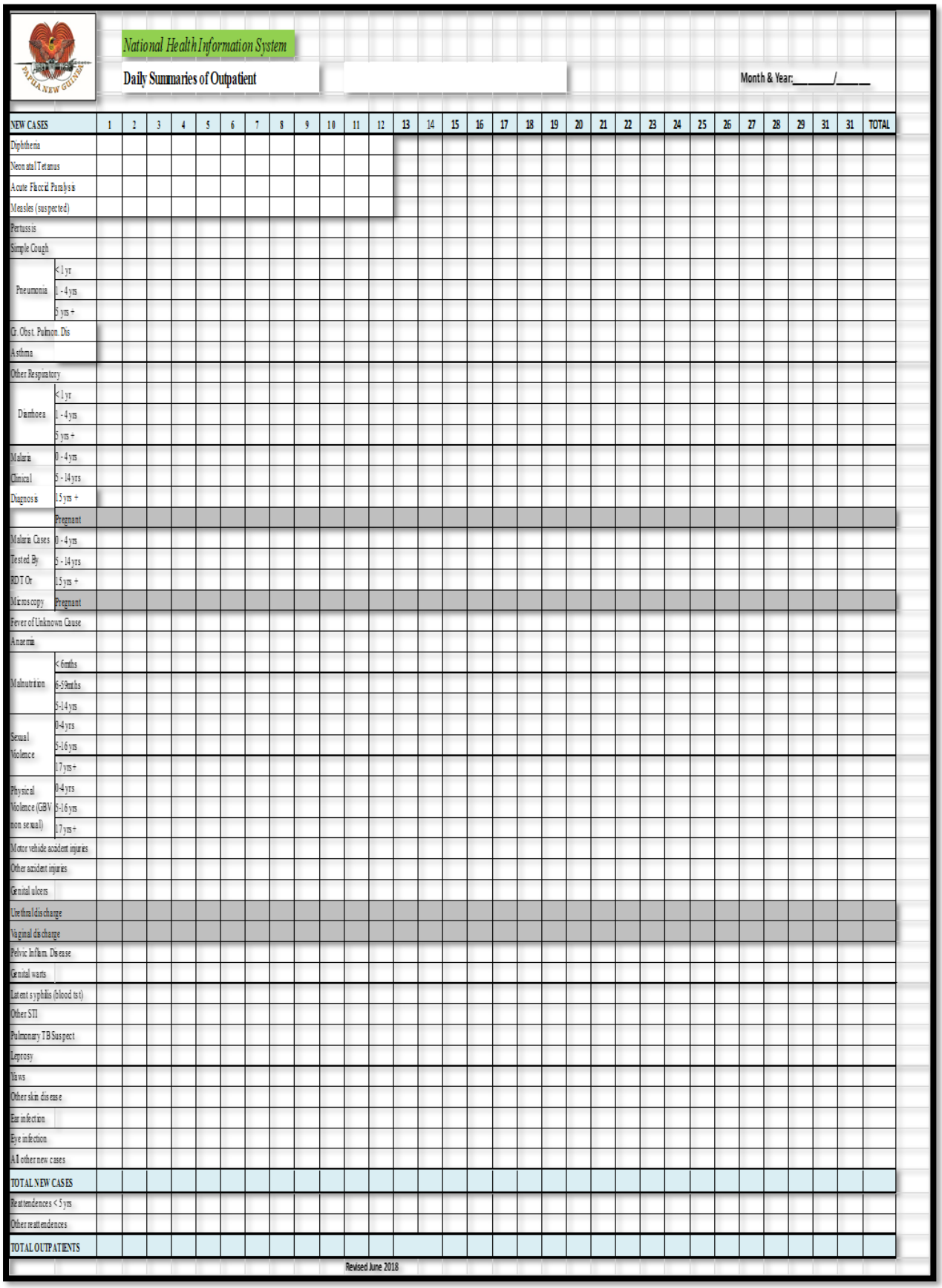
Antenatal Tally Sheet

Date: / /

ATTENDANCES		Females Only											TOTAL
1st Visit		00000	00000	00000	00000	00000	00000	00000	00000	00000	00000	00000	
		00000	00000	00000	00000	00000	00000	00000	00000	00000	00000	00000	
		00000	00000	00000	00000	00000	00000	00000	00000	00000	00000	00000	
4th Visit		00000	00000	00000	00000	00000	00000	00000	00000	00000	00000	00000	
		00000	00000	00000	00000	00000	00000	00000	00000	00000	00000	00000	
Others		00000	00000	00000	00000	00000	00000	00000	00000	00000	00000	00000	
		00000	00000	00000	00000	00000	00000	00000	00000	00000	00000	00000	
		00000	00000	00000	00000	00000	00000	00000	00000	00000	00000	00000	
		00000	00000	00000	00000	00000	00000	00000	00000	00000	00000	00000	
Mothers screened for syphilis	Tested	00000	00000	00000	00000	00000	00000	00000	00000	00000	00000	00000	
	Treated	00000	00000	00000	00000	00000	00000	00000	00000	00000	00000	00000	
IMMUNIZATION													
T. Toxoid	1st dose	00000	00000	00000	00000	00000	00000	00000	00000	00000	00000	00000	
	2 nd dose	00000	00000	00000	00000	00000	00000	00000	00000	00000	00000	00000	
	Booster	00000	00000	00000	00000	00000	00000	00000	00000	00000	00000	00000	
		00000	00000	00000	00000	00000	00000	00000	00000	00000	00000	00000	
		00000	00000	00000	00000	00000	00000	00000	00000	00000	00000	00000	

Revised June 2018

ANNEX 6 OPD DAILY SUMMARY



National Health Information System

Daily Summaries of Outpatient

Month & Year:_____/_____

NEW CASES		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	31	31	TOTAL
Diphtheria																																	
Neonatal Tetanus																																	
Acute Flaccid Paralysis																																	
Measles (suspected)																																	
Pertussis																																	
Simple Cough																																	
Pneumonia	<1 yr																																
	1 - 4 yrs																																
	5 yrs +																																
Cr. Obst. Pulmon. Dis																																	
Asthma																																	
Other Respiratory																																	
Diarrhoea	<1 yr																																
	1 - 4 yrs																																
	5 yrs +																																
Malaria	0 - 4 yrs																																
Clinical	5 - 14 yrs																																
Diagnosis	15 yrs +																																
	Pregnant																																
Malaria Cases	0 - 4 yrs																																
Tested By	5 - 14 yrs																																
RDT Or	15 yrs +																																
Microscopy	Pregnant																																
Fever of Unknown Cause																																	
Anaemia																																	
Malnutrition	< 6mths																																
	6-59mths																																
	5-14 yrs																																
Sexual Violence	0-4 yrs																																
	5-16 yrs																																
	17 yrs +																																
Physical Violence (GBV non sexual)	0-4 yrs																																
	5-16 yrs																																
	17 yrs +																																
Motor vehicle accident injuries																																	
Other accident injuries																																	
Genital ulcers																																	
Urethral discharge																																	
Vaginal discharge																																	
Pelvic Inflam. Disease																																	
Genital warts																																	
Latent syphilis (blood tst)																																	
Other STI																																	
Pulmonary TB Suspect																																	
Leprosy																																	
Yaws																																	
Other skin disease																																	
Ear infection																																	
Eye infection																																	
All other new cases																																	
TOTAL NEW CASES																																	
Reattendences < 5 yrs																																	
Other reattendences																																	
TOTAL OUTPATIENTS																																	

Revised June 2018

ANNEX 7 CHILD HEALTH DAILY SUMMARY

NHIS-Child Health Daily Summary sheet

HC Name:_____ Month:_____ Year:

Clinical Site/School →																																
Attendances		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Total
< 6 months	New																																
	Reatt																																
6 - 59 months	New																																
	Reatt																																
Nutrition -																																	
< 6 months	< - 3 z score																																
	-3 to -2 z score																																
	> - 2 z score																																
6 - 59 months	< - 3 z score																																
	-3 to -2 z score																																
	> - 2 z score																																
	MUAC - Red																																
	MUAC - Yellow																																
	MUAC - Green																																
Immunization																																	
BCG	W/in 24 hr																																
	< 1 Week																																
	> 1 Week																																
Hepatitis B	W/in 24 hr																																
	> 24 hr																																
DTP/Hib/Hep_B (Penta-Valent)	1st d < 1 yr																																
	2nd d < 1 yr																																
	3rd d < 1 yr																																
	> 1 yr																																
bOPV (Sabin)	1st d < 1 yr																																
	2nd d < 1 yr																																
	3rd d < 1 yr																																
	> 1 yr																																
IPV	3-11 months																																
PCV 13	1st d < 1 yr																																
	2nd d < 1 yr																																
	3rd d < 1 yr																																
	> 1 yr																																
Measles Rubella (MR)	6-8 months																																
	9 - 17 months																																
	18-23 months																																
	> 24 months																																
Vitamin A	6 -11 months																																
	12 -59 months																																
Albendazole	12 -59 months																																
School Health (Immunisation & Nutrition)																																	
School Entry	Measles Rubella																																
	T.Toxoid																																
	Vitamin A																																
	Deworming																																
	Red MUAC																																
	Yellow MUAC																																
	Green MUAC																																
School Leaving	Measles Rubella																																
	Vitamin A																																
	Deworming																																
	T.Toxoid																																
	Red MUAC																																
	Yellow MUAC																																
	Green MUAC																																

ANNEX 8 FAMILY PLANNING AND ANC TALLY SHEET

National Health Information System

Family Planning Tally Sheet

Clinic: Date: / /

N. ACCEPTORS		Males					Total	Females					Total
Pills	Brst fd pill (POP)							00000	00000	00000	00000	00000	
	Comb. Pill (COP)							00000	00000	00000	00000	00000	
Injection								00000	00000	00000	00000	00000	
Ovulation								00000	00000	00000	00000	00000	
Condom								00000	00000	00000	00000	00000	
Loop/IUD								00000	00000	00000	00000	00000	
Implant								00000	00000	00000	00000	00000	
REACCEPTORS													
Pills	Brst fd pill (POP)							00000	00000	00000	00000	00000	
	Comb. Pill (COP)							00000	00000	00000	00000	00000	
Injection								00000	00000	00000	00000	00000	
Ovulation								00000	00000	00000	00000	00000	
Condom								00000	00000	00000	00000	00000	
Loop/IUD								00000	00000	00000	00000	00000	
Implant								00000	00000	00000	00000	00000	
PERMANENT													
Tubaligation								00000	00000	00000	00000	00000	
Vasectomy		00000	00000	00000	00000	00000							
Referred		00000	00000	00000	00000	00000		00000	00000	00000	00000	00000	

Antenatal Tally Sheet

Date: / /

ATTENDANCES		Females Only											TOTAL
1 st Visit		00000	00000	00000	00000	00000	00000	00000	00000	00000	00000	00000	
		00000	00000	00000	00000	00000	00000	00000	00000	00000	00000	00000	
		00000	00000	00000	00000	00000	00000	00000	00000	00000	00000	00000	
4th Visit		00000	00000	00000	00000	00000	00000	00000	00000	00000	00000	00000	
		00000	00000	00000	00000	00000	00000	00000	00000	00000	00000	00000	
Others		00000	00000	00000	00000	00000	00000	00000	00000	00000	00000	00000	
		00000	00000	00000	00000	00000	00000	00000	00000	00000	00000	00000	
		00000	00000	00000	00000	00000	00000	00000	00000	00000	00000	00000	
		00000	00000	00000	00000	00000	00000	00000	00000	00000	00000	00000	
Mothers screened for syphilis	Tested	00000	00000	00000	00000	00000	00000	00000	00000	00000	00000	00000	
	Treated	00000	00000	00000	00000	00000	00000	00000	00000	00000	00000	00000	
IMMUNIZATION													
T. Toxoid	1st dose	00000	00000	00000	00000	00000	00000	00000	00000	00000	00000	00000	
	2 nd dose	00000	00000	00000	00000	00000	00000	00000	00000	00000	00000	00000	
	Booster	00000	00000	00000	00000	00000	00000	00000	00000	00000	00000	00000	
		00000	00000	00000	00000	00000	00000	00000	00000	00000	00000	00000	
		00000	00000	00000	00000	00000	00000	00000	00000	00000	00000	00000	

ANNEX 9 MALARIA REGISTER

National Health Information System

Health Facility Malaria Register

Province : _____ Facility : _____

District : _____ Month/Yr : _____

NO.	DATE	AGE	SEX	Diagnostic Tool Used	T. Result	Treatment (Full Course)
Total No. of Patients						

Explanatory Notes :

(1) The type of test used to confirm malaria cases eg. Blood Slide , RDT or Clinical Diagnosis

(2) State type of result eg. Pf, Pv, Po, Pm, Pf/mix, Neg or no Result (NR)

(3) State type of result eg. Pf, Pv, Po, Pm, Pf/mix, Neg or no Result (NR)

At the end of each calendar month, add up the number of people receiving ACT course and record on page 2 of the NHIS Monthly Report.

2011

ANNEX 10 DISCHARGE REGISTER

NHIS15 - Monthly Discharge Sheet

Province:_____ District: _____ HF: _____ Date:_____

Name of Patient	MEDICAL RECORD #	Proc Y/N	Comp Y/N	Days	Sex	Age	YMD	Diagnosis text - Disease/ nature of injury	ICD Code	Diagnosis text - External Cause of injury	2nd diagnosis code	Dis H/A D/T

Proc= operation/procedure performed in Operating Threatre

Comp = Postoperative complication (Y or N)

H = Discharge home

A = Absconded

D = Died

T = Transferred

ANNEX 11 INVENTORY FORM

NATIONAL INVENTORY OF HEALTH FACILITIES 2011

HF Name _____ District _____ Province _____

INSTRUCTIONS - PLEASE READ FIRST

Place a circle around each answer that applies. If more than one answer is correct then use more than one circle.

Transport Available	**(Vehicle)**	**Motorbike**	**Boat**	**None**

Some items may not be available now e.g. the vehicle may have broken down. If this is only a temporary problem, then you should still circle the item.

Transport Available	**(Vehicle)**	**Motorbike**	**(Boat)**	**None**

If, however, the item will not be available for most of the next six months you should indicate that the item is not available.

Transport Available	**Vehicle**	**Motorbike**	**Boat**	**(None)**

For Number of Staff in Centre, please state how many are M = Male and how many are F = Female

Agency *(Please specify)*	Government	Mission	Others			
General						
Transport Available	Vehicle	Motorbike	Boat / Dinghy	Bicycle	None	
Communications	Telephone	Radio	None			
Power	Main Supply	Generator	Solar	None		
Water	Piped	Tanks	Pump	River	None	
Delivery Room with Sink & Running Water	Yes	No				
Facilities	**Inpatient**	**Obstetrics**				
Number of Beds						
Equipment						
General	Microscope	BP Machine	Nebuliser	Oxy concentor	Oroscope	None
Fridge	Gas	Electric	Solar	None		
If Gas Fridge, Do you have?	Gas	Sp/cylinder	Sp/Full of gas	None		
Steriliser	Fish Kettle	Pr. Cooker	Boiler	Electric	None	
Suction pump	Foot	Electric	None			
Scales	Adult	Hanging	None			
Standard Treatment Manuals	Adult 2003	Child 2005	Obs/Gyn 2005	TB/Lep 2003	F/ Planning 2000	None
Child Health	Bebi Buk	Birth reg from	Protocol check lst	None		
Lamp	Examination	Operating	Hurricane/coleman	Headlamp	Others	None

Number of Staff at Centre this year	**Male**	**Female**		**Male**	**Female**
Doctor			Health Inspector		
HEO			Malaria Control		
Nursing Officers			Dental Therapist		
CHW/Hospital Orderlies			Laboratory Assistant		
Casuals			Other (admin,drivers,security)		
Number of Staff Based at Aidposts					

Supervision			
Visits by Doctor in last 12 months	0	1 - 2	3+
Visits by PHO staff in last 12 months	0	1 - 2	3+
Visits by DHA staff in last 12 months	0	1 - 2	3+

Functional Aidpost	
Total Number of Aidposts HC Supervised	
Number Closed last 12 months	

Disposal of patient/clinical waste							
How disposed of	Pit	Burial	Burning (open)	Incinerator	Uban collection	Other	None

Accomodation		**Accomodation**	
Total number of houses		No.of houses need replacement	
No. of Permanent		No.of houses need maintanenance	
No. of Semi - Permanent		No.of houses under construction	

Visit by maintenance staff last 12 months	0	1-2	3+

Declaration **Forms should be filled in by OICs of health facilities and checked by Provincial Health Information Officer**

Filled in by _____ **Position** _____ **Date** _____

Checked by _____ **Position** _____ **Date** _____

ANNEX 12 CHANGE OF STATUS FORM

New or upgrade

NHIS16A - Health Facility Status Change Form

New or Upgraded

Facility Name

Location Province LLG

District / CU

Type of Facility Now: Aidpost | Sub-Centre | Health Centre | Rural Hosp | Urban Clinic | Hospital

Before: Nothing | Aidpost | Sub-Centre | Health Centre | Rural Hosp | Urban Clinic | Hospital

Please circle answers that apply

Date Opened/ Upgraded

Agency *(Specify)*: Government | Mission | Other

Which mission or other agency?

Services Provided

Family Planning	School Health	Health Inspections
Antenatal Care	Outpatient Care	Other (please specify)
Deliveries	Inpatient Care	

Please circle answers that apply

Catchment Population in year

Other populations to be changed

If a facility is opened or upgraded indicate how this will affect the catchment Populations of neighboring facilities. See overleaf how to calculate population

Form Filled in by e

1. INSTRUCTIONS FOR PHO

1 ***Instructions***

1.1 ***1. This form (NHIS16A) is to be completed by Provincial Health Offices***

2. Use this form for newly opened or upgraded facilities

   eg. Aidpost to sub-centre

3. Use NHIS16B form for closed or downgraded facilities

4. Send the completed form to NHIS unit, Monitoring Evaluation and Research Branch, NDoH

Your cooperation will help the Department of Health to keep accurate

2. CATCHMENT POPULATION OF A FACILITY

Working Out the location and Catchment Population of a Facility

1. Obtain:

A census book for your province – this was published by the National Statistical Office after the 1990 census; it contains a listing of all census units and census divisions with their populations.

And:

A census map for your province – these are published by the National Statistical Office and show the approximate location of all census units and census divisions and some major landmarks.

And:

A copy of volume 2 of the National Health Plan 1996 – 2000.

2. Mark the location of the new health facility on the map.

3. Work out which census unit is closest to the facility.

4. Record the census unit number (eg.007,) and local level government (LLG) ward (eg.05) on this form.

5. Draw a line on the map to mark out the area covered by a facility.

6. Work out which census units are served by the facility – those that fall within the line.

7. Refer to the 2000 census book to work out the total population of the census units covered by the facility.

If some census units are served by 2 facilities then their population should be divided by 2 and assigned to each facility.

3. HEALTH STATUS CHANGE FORM (CLOSED OR DOWNGRADED)

NHIS16B - Health Facility Status Change Form

Closed or Downgraded

Facility Name

Closed	Aidpost	Sub-Center	Health Centre	Rural Hosp	Urban Clinic	Hospital

Aidpost	Sub-Center	Health Centre	Rural Hosp	Urban Clinic	Hospital

Location Province LLG

District Ward/CU

Type of Facility Now

Before

Date Close/ Downgraded

Reason for Change

4. INSTRUCTIONS FOR PHO

2 ***Instructions***

2.1 ***1. This form (NHIS16B) is to be completed by Provincial Health Offices***

2. Use this form for closed or downgraded facilities

   eg. Sub-center to Aidpost

3. Use NHIS16A form for new or upgraded facilities

4. Send the completed form to NHIS unit, Monitoring Evaluation and Research Branch, NDoH

Your cooperation will help the Department of Health to keep accurate records of the health facility.

5. LOCATION AND CATCHMENT POPULATION OF A FACILITY

Working Out the location and Catchment Population of a Facility

1. Obtain:

A census book for your province – this was published by the National Statistical Office after the 1990 census; it contains a listing of all census units and census divisions with their populations.

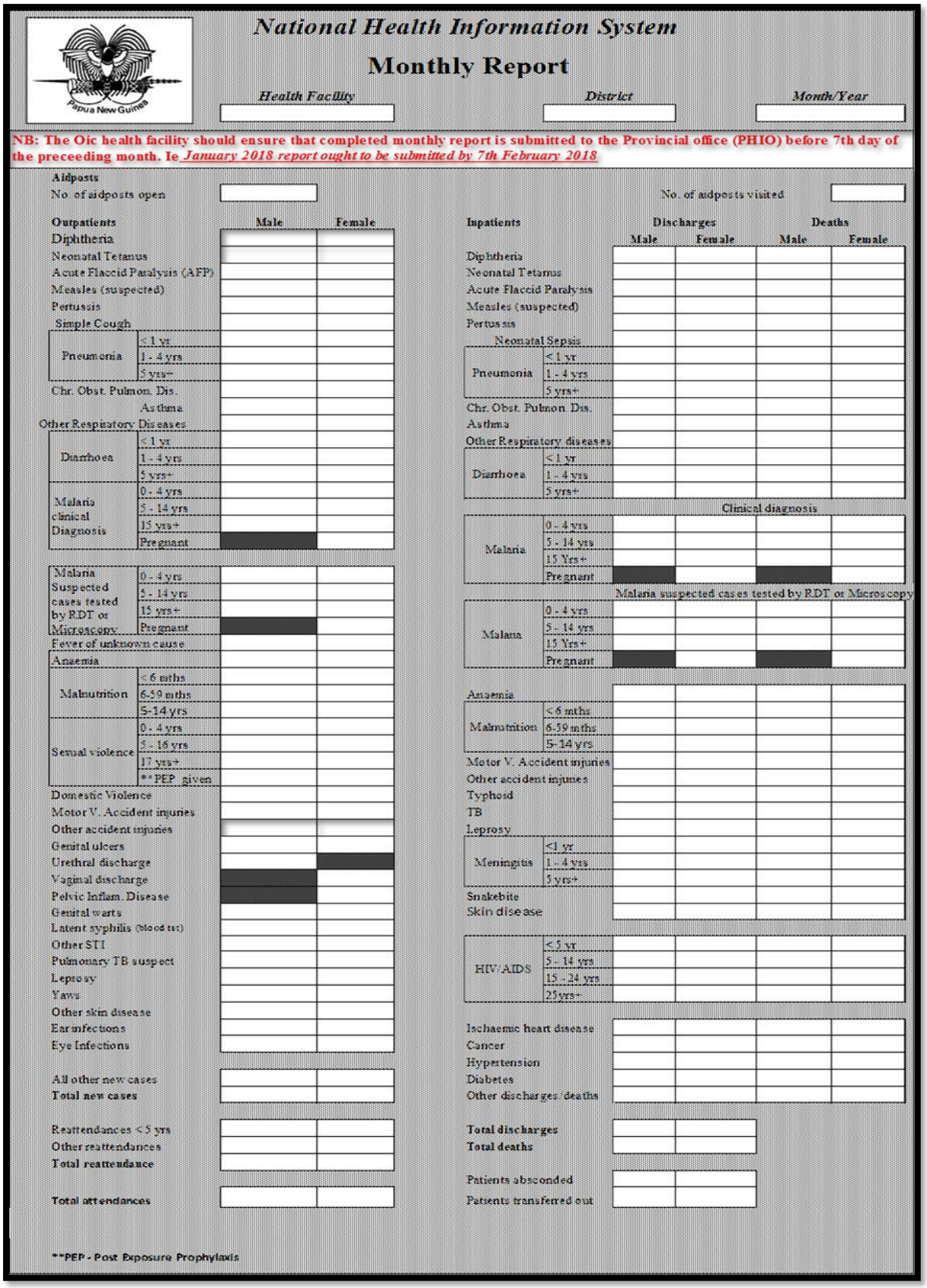
And:

A census map for your province – these are published by the National Statistical Office and show

the approximate location of all census units and census divisions and some major landmarks.

ANNEX 13 MONTHLY REPORTING FORM

Page 1



National Health Information System

Monthly Report

Health Facility | District | Month/Year

NB: The Oic health facility should ensure that completed monthly report is submitted to the Provincial office (PHIO) before 7th day of the preceeding month. Ie *January 2018 report ought to be submitted by 7th February 2018*

Aidposts

No. of aidposts open

No. of aidposts visited

Outpatients		Male	Female
Diphtheria			
Neonatal Tetanus			
Acute Flaccid Paralysis (AFP)			
Measles (suspected)			
Pertussis			
Simple Cough			
Pneumonia	< 1 yr		
	1 - 4 yrs		
	5 yrs+		
Chr. Obst. Pulmon. Dis.			
Asthma			
Other Respiratory Diseases			
Diarrhoea	< 1 yr		
	1 - 4 yrs		
	5 yrs+		
Malaria clinical Diagnosis	0 - 4 yrs		
	5 - 14 yrs		
	15 yrs+		
	Pregnant		
Malaria Suspected cases tested by RDT or Microscopy	0 - 4 yrs		
	5 - 14 yrs		
	15 yrs+		
	Pregnant		
Fever of unknown cause			
Anaemia			
Malnutrition	< 6 mths		
	6-59 mths		
	5-14 yrs		
Sexual violence	0 - 4 yrs		
	5 - 16 yrs		
	17 yrs+		
	**PEP given		
Domestic Violence			
Motor V. Accident injuries			
Other accident injuries			
Genital ulcers			
Urethral discharge			
Vaginal discharge			
Pelvic Inflam. Disease			
Genital warts			
Latent syphilis (blood tst)			
Other STI			
Pulmonary TB suspect			
Leprosy			
Yaws			
Other skin disease			
Ear infections			
Eye Infections			
All other new cases			
Total new cases			
Reattendances <5 yrs			
Other reattendances			
Total reattendance			
Total attendances			

Inpatients		Discharges		Deaths	
		Male	Female	Male	Female
Diphtheria					
Neonatal Tetanus					
Acute Flaccid Paralysis					
Measles (suspected)					
Pertussis					
Neonatal Sepsis					
Pneumonia	< 1 yr				
	1 - 4 yrs				
	5 yrs+				
Chr. Obst. Pulmon. Dis.					
Asthma					
Other Respiratory diseases					
Diarrhoea	< 1 yr				
	1 - 4 yrs				
	5 yrs+				
Clinical diagnosis					
Malaria	0 - 4 yrs				
	5 - 14 yrs				
	15 Yrs+				
	Pregnant				
Malaria suspected cases tested by RDT or Microscopy					
Malaria	0 - 4 yrs				
	5 - 14 yrs				
	15 Yrs+				
	Pregnant				
Anaemia					
Malnutrition	< 6 mths				
	6-59 mths				
	5-14 yrs				
Motor V. Accident injuries					
Other accident injuries					
Typhoid					
TB					
Leprosy					
Meningitis	< 1 yr				
	1 - 4 yrs				
	5 yrs+				
Snakebite					
Skin disease					
HIV/AIDS	< 5 yr				
	5 - 14 yrs				
	15 - 24 yrs				
	25 yrs+				
Ischaemic heart disease					
Cancer					
Hypertension					
Diabetes					
Other discharges/deaths					
Total discharges					
Total deaths					
Patients absconded					
Patients transferred out					

**PEP - Post Exposure Prophylaxis

Malaria Diagnosis

Microscopy

Male	**0 - 4 Yrs**	**5 - 14 Yrs**	**15 Yrs+**
Total Tested			
P. Falciparum			
P.Vivax			
P. Malariae			
P. Ovale			
Mixed			
Negative			

Female	**0 - 4 Yrs**	**5 - 14 Yrs**	**15 Yrs+**
Total Tested			
P. Falciparum			
P. Vivax			
P. Malariae			
P. Ovale			
Mixed			
Negative			

Rapid Diagnostic Test

Male	**0 - 4 Yrs**	**5 - 14 Yrs**	**15 Yrs+**
Total Tested			
P. falciparum			
Non PF			
Mix			
Negative			
Failed			

Female	**0 - 4 Yrs**	**5 - 14 Yrs**	**15 Yrs+**
Total Tested			
P. falciparum			
Non PF			
Mixed			
Negative			
Failed			

No. of Artemisinin combination (ACT) courses commenced (Outpatient)	
No. of Artemisinin combination (ACT) courses commenced (Inpatient)	

HIV Testing

	Tested		**HIV+**		**Referred Treatment**	
	Male	**Female**	**Male**	**Female**	**Male**	**Female**
Antenatal						
0 - 4 Yrs						
VCT						
Donor						
STI						
TB						
Others						

No. of patients currently on HIV treatment	**Male**	**Female**
< 5 yrs		
5 - 14 yrs		
15 - 24 yrs		
25 yrs +		

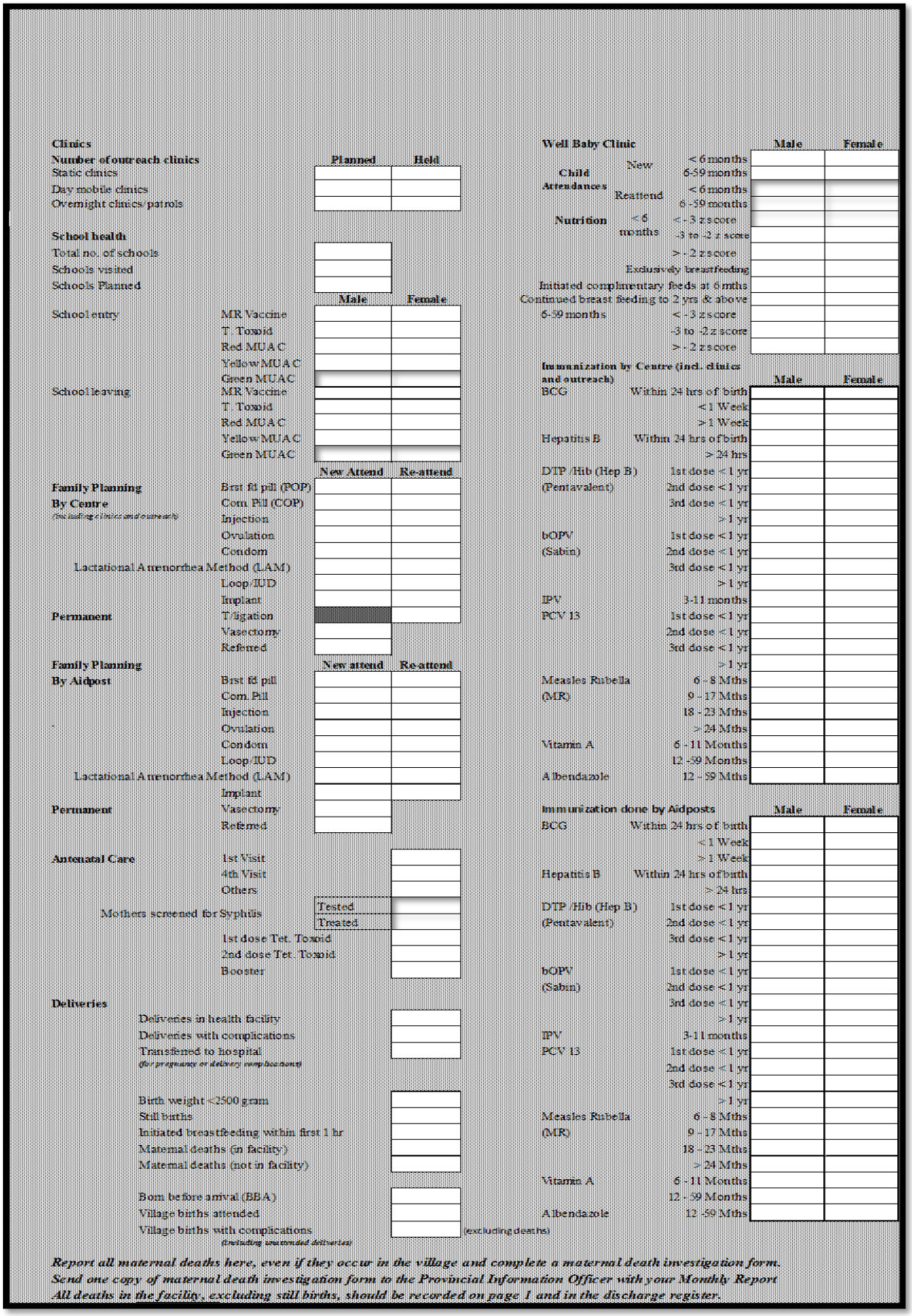
Leprosy	**PB**		**MB**	
	Male	**Female**	**Male**	**Female**
Total new cases				
Children <15 yrs (a)				
15 years & above (b)				
Total registered cases (a + b)				
Disability Gr.2 new cases				

Finishing treatment this month	**PB**		**MB**	
	Male	**Female**	**Male**	**Female**
Treatment Completed				
Lost to follow up (Defaulters)				
Died				
Not evaluated				
Total				

Tuberculosis

No. of new TB patients of all types detected in the month	
No. of retreatment TB patients of all types detected in the month	

If the facility has any TB patients, be sure to complete the TB reporting each quarter.



Clinics

Number of outreach clinics

	Planned	Held
Static clinics		
Day mobile clinics		
Overnight clinics/patrols		

School health

Total no. of schools	
Schools visited	
Schools Planned	

		Male	Female
School entry	MR Vaccine		
	T. Toxoid		
	Red MUAC		
	Yellow MUAC		
	Green MUAC		
School leaving	MR Vaccine		
	T. Toxoid		
	Red MUAC		
	Yellow MUAC		
	Green MUAC		

Family Planning By Centre *(including services and outreach)*

	New Attend	Re-attend
Brst fd pill (POP)		
Com. Pill (COP)		
Injection		
Ovulation		
Condom		
Lactational Amenorrhea Method (LAM)		
Loop/IUD		
Implant		
Permanent Tubigation		
Vasectomy		
Referred		

Family Planning By Aidpost

	New attend	Re-attend
Brst fd pill		
Com. Pill		
Injection		
Ovulation		
Condom		
Loop/IUD		
Lactational Amenorrhea Method (LAM)		
Implant		
Permanent Vasectomy		
Referred		

Antenatal Care

1st Visit	
4th Visit	
Others	
Mothers screened for Syphilis: Tested	
Mothers screened for Syphilis: Treated	
1st dose Tet. Toxoid	
2nd dose Tet. Toxoid	
Booster	

Deliveries

Deliveries in health facility	
Deliveries with complications	
Transferred to hospital *(for pregnancy or delivery complications only)*	
Birth weight <2500 gram	
Still births	
Initiated breastfeeding within first 1 hr	
Maternal deaths (in facility)	
Maternal deaths (not in facility)	
Born before arrival (BBA)	
Village births attended	
Village births with complications *(excluding unattended deliveries)*	(excluding deaths)

Well Baby Clinic

		Male	Female
Child Attendances	New < 6 months		
	New 6-59 months		
	Reattend < 6 months		
	Reattend 6 -59 months		
Nutrition < 6 months	< -3 z score		
	-3 to -2 z score		
	> -2 z score		
	Exclusively breastfeeding		
	Initiated complimentary feeds at 6 mths		
	Continued breast feeding to 2 yrs & above		
6-59 months	< -3 z score		
	-3 to -2 z score		
	> -2 z score		

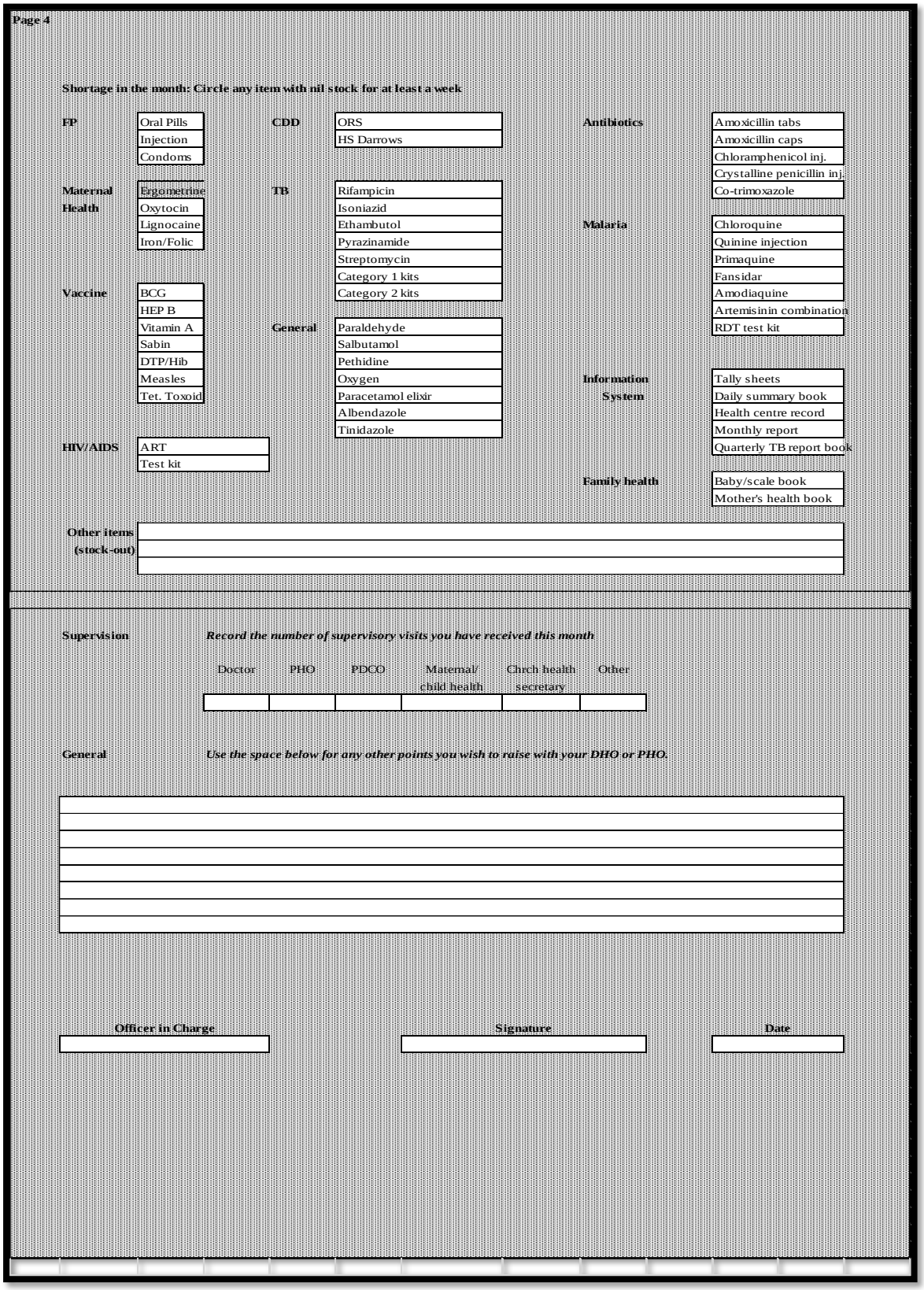
Immunization by Centre (incl. clinics and outreach)

		Male	Female
BCG	Within 24 hrs of birth		
	< 1 Week		
	> 1 Week		
Hepatitis B	Within 24 hrs of birth		
	> 24 hrs		
DTP /Hib (Hep B) (Pentavalent)	1st dose < 1 yr		
	2nd dose < 1 yr		
	3rd dose < 1 yr		
	> 1 yr		
bOPV (Sabin)	1st dose < 1 yr		
	2nd dose < 1 yr		
	3rd dose < 1 yr		
	> 1 yr		
IPV	3-11 months		
PCV 13	1st dose < 1 yr		
	2nd dose < 1 yr		
	3rd dose < 1 yr		
	> 1 yr		
Measles Rubella (MR)	6 - 8 Mths		
	9 - 17 Mths		
	18 - 23 Mths		
	> 24 Mths		
Vitamin A	6 - 11 Months		
	12 - 59 Months		
Albendazole	12 - 59 Mths		

Immunization done by Aidposts

		Male	Female
BCG	Within 24 hrs of birth		
	< 1 Week		
	> 1 Week		
Hepatitis B	Within 24 hrs of birth		
	> 24 hrs		
DTP /Hib (Hep B) (Pentavalent)	1st dose < 1 yr		
	2nd dose < 1 yr		
	3rd dose < 1 yr		
	> 1 yr		
bOPV (Sabin)	1st dose < 1 yr		
	2nd dose < 1 yr		
	3rd dose < 1 yr		
	> 1 yr		
IPV	3-11 months		
PCV 13	1st dose < 1 yr		
	2nd dose < 1 yr		
	3rd dose < 1 yr		
	> 1 yr		
Measles Rubella (MR)	6 - 8 Mths		
	9 - 17 Mths		
	18 - 23 Mths		
	> 24 Mths		
Vitamin A	6 - 11 Months		
	12 - 59 Months		
Albendazole	12 - 59 Mths		

Report all maternal deaths here, even if they occur in the village and complete a maternal death investigation form. Send one copy of maternal death investigation form to the Provincial Information Officer with your Monthly Report All deaths in the facility, excluding still births, should be recorded on page 1 and in the discharge register.



Page 4

Shortage in the month: Circle any item with nil stock for at least a week

FP	Oral Pills	**CDD**	ORS	**Antibiotics**	Amoxicillin tabs
	Injection		HS Darrows		Amoxicillin caps
	Condoms				Chloramphenicol inj.
					Crystalline penicillin inj.
Maternal Health	Ergometrine	**TB**	Rifampicin		Co-trimoxazole
	Oxytocin		Isoniazid		
	Lignocaine		Ethambutol	**Malaria**	Chloroquine
	Iron/Folic		Pyrazinamide		Quinine injection
			Streptomycin		Primaquine
			Category 1 kits		Fansidar
Vaccine	BCG		Category 2 kits		Amodiaquine
	HEP B				Artemisinin combination
	Vitamin A	**General**	Paraldehyde		RDT test kit
	Sabin		Salbutamol		
	DTP/Hib		Pethidine	**Information System**	Tally sheets
	Measles		Oxygen		Daily summary book
	Tet. Toxoid		Paracetamol elixir		Health centre record
			Albendazole		Monthly report
HIV/AIDS	ART		Tinidazole		Quarterly TB report book
	Test kit			**Family health**	Baby/scale book
					Mother's health book

Other items (stock-out)

Supervision ***Record the number of supervisory visits you have received this month***

Doctor	PHO	PDCO	Maternal/ child health	Chrch health secretary	Other

General ***Use the space below for any other points you wish to raise with your DHO or PHO.***

Officer in Charge **Signature** **Date**

CONTACT

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