

Pacific Biomedical Network Meeting





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DESIGNATION: Engineer/Manager Health
Facilities Standards

COUNTRY: Papua New Guinea

TOPIC: **Equipment Governance System:
National Equipment Committee**

THE HUMAN LIFE CYCLE



Corporate/Organizational Governance Framework

Corporate Governance Framework

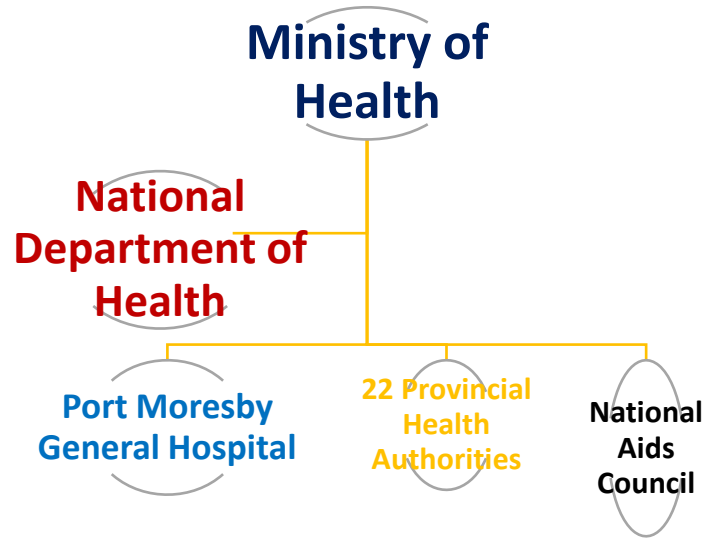


Clinical Governance Framework



Levels Care &
Complexity of
Healthcare
Facilities
Infrastructure
& Biomedical
Technology

Health Sector Management & Governance Structure



Health Care Service Delivery Framework
(integrating Clinical Standards & Public Health)

Clinical Services complexities increases proportionately with levels of services and so as facility infrastructure and medical equipment/technology



Healthcare Facilities Inventory, Investment & Recurrent Cost Est.:

- **High Value Capital Investment (CAPEX – K24.402 Billion)**
- **Operational Costs (OPEX – K2.44 Billion annually)**

Facility Type	Number of Health Facilities	Est. Unit Investment Cost (PGK)	Total Est. Investment Cost (PGK)	Est. Unit Recurrent Cost (PGK)	Total Unit Est. Recurrent Cost (PGK)
Level 1 - Aid Post/ Health Post	3757	1,500,000	5,635,500,000	150,000	563,550,000
Level 2 -Community Health Post/ Health Sub Centre	515	3,500,000	1,802,500,000	350,000	180,250,000
Level 3 - Health Centre	196	15,000,000	2,940,000,000	1,500,000	294,000,000
Level 3 - Urban Clinic	78	8,000,000	624,000,000	800,000	62,400,000
Level 4- District Hospital	14	50,000,000	700,000,000	5,000,000	70,000,000
Level 5 - Provincial Hospitals	21	500,000,000	10,500,000,000	50,000,000	1,050,000,000
Level 6 -PMGH	1	2,000,000,000	2,000,000,000	200,000,000	200,000,000
Specialist Hospital: Laloki Psychiatric Hospital	1	200,000,000	200,000,000	20,000,000	20,000,000
Est. Total	4,583 (619 HF closed)		24,402,000,000		2,440,200,000

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Challenges (Weakness & Threats)

WHAT ARE THE CHALLENGES FACED BY YOUR BIOMEDICAL SERVICES RELATING TO NATIONAL MEDICAL EQUIPMENT COMMITTEE?

- Lack of dedicated and effective medical equipment Governance Committee at NDOH, PMGH and 22 Provincial Health Authorities.
- Lack of leadership and governance towards effective management of biomedical engineering services at healthcare facilities.
- Medical Equipment issues at healthcare facilities are not addressed effectively.
- Lack of up-to-date data and information of medical equipment at health facilities to inform decision making.
- Lack of medical equipment database and dashboard for effective monitoring and management of medical equipment issues
- Lack of timely replacement of outdated medical equipment.

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Challenges (Weakness & Threats)

WHAT ARE THE CHALLENGES FACED BY YOUR BIOMEDICAL SERVICES RELATING TO NATIONAL MEDICAL EQUIPMENT COMMITTEE?

- Lack of proper planning and execution of equipment planned preventative maintenance system
- Inadequate funding for medical equipment replacement
- Lack of biomedical equipment maintenance funding
- Lack of medical equipment maintenance calibration and testing equipment
- Poor condition and setup of biomedical engineering maintenance workshops at PMGH and Provincial Hospitals.
- Lack of capacity building training and development of biomedical technicians and engineers
- Lack of adequately skilled and experienced biomedical engineering workforce at health facilities
- Lack of medical equipment disposal system for proper disposal of equipment.

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Opportunities & Strengths

- The National Department of Health has a Biomedical Engineering section within the Health Facilities Standards Branch to manage and coordinate Biomedical Engineering Services and Standards across the 22 PHAs and PMGH
- Biomedical Engineering Service capacity is available across 19 provincial specialist hospitals and national specialist referral hospital out of the 22 provinces.
- 6 main private biomedical equipment supply and maintenance companies available in PNG apart from other smaller ones.
- A four-year Bachelor of Biomedical Engineering course commenced in 2020 at PNG University of Technology with the first graduates expected in early 2024.
- National Biomedical Equipment Policy developed and guiding implementation.

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Opportunities & Strengths

- Asset Management Policy developed and guiding implementation.
- Health Infrastructure and Medical Equipment Technology Standards developed and applied as part of the NHSS volume 3.
- Medical equipment replacement program annually funded through the health sector capital investment budget.
- Some funding for medical equipment maintenance is consistently provided under the annual budget.
- Medical equipment committees is a requirement of the medical equipment management policy for all provincial health authorities to have under governance their charters.

Strategic Approach: Equipment Lifecycle Management System

An Asset Information Strategy establishes the framework for asset management, the status or condition of health assets, and whether they are performing according to their intended use.



- **An Asset Planning Strategy** determines whether assets should be acquired, upgraded, maintained or disposed of.
- **A capital Investment Strategy** spells out which asset will be acquired, upgraded or replaced, and how this will be done.
- **An Asset Operational and Maintenance Strategy**, gives a structured process to carry out the everyday use and care of assets
- **An Asset Disposal Strategy** identifies assets that are surplus to needs, are not performing, or are becoming uneconomical to maintain.

Recommendations

- 3 MAIN RECOMMENDATIONS FOR YOUR COUNTRY **(PRIORITY AREAS)**
- **Strengthen Biomedical Equipment Governance System at the National Department of Health and at 22 Provincial Health Authorities level by establishing and improving performance of committees.**
- **Conduct audit of biomedical equipment and workshops at PMGH and 22 Provincial Health Authorities.**
- **Improve and strengthen the Biomedical Engineering workforce capacity and capability through ongoing capacity building training and development programs.**
- **Improve and strengthen biomedical equipment maintenance management system at the Port Moresby General Hospital and 22 Provincial Health Authorities.**
- **Establish and strengthen system for the safe disposal of obsolete medical equipment.**