Clinical Services Plan (2019)

MINISTRY OF HEALTH

ACKNOWLEDGMENTS

This clinical service plan represents a significant multi-disciplinary effort on the part of many people both within the Ministry of Health and in the non-government sector.

It would not have been possible to draw together a plan on matters as complex and challenging as clinical services delivery without the time and thought committed to the exercise by the Directors of Corporate Services and Hospital Services; Medical Superintendents; Provincial Managers; Working Group Chairs and members; senior clinical staff (medical, nursing and allied health) and staff of the Planning Unit, Workforce Development Unit, Principal Nursing Officer and the World Health Organisation (WHO). The planning process has involved extensive consultation, workshop and working group activity and the commitment made by these staff has been admirable, particularly in light of their already heavy workloads.

To all those who have participated, and particularly those who have led the consultation and review process via the Working Groups, thank you for your time, commitment and intelligent contributions. A list of Working Group members is included at Attachment 1. Thanks to your efforts, Vanuatu now has a much stronger basis to take clinical service development into the next decade.

FOREWORD

As the Director General, I am very pleased to present the Ministry of Health (MoH) Clinical Services Plan (CSP) that aims to provide further guidance to health workers and clinicians to continue supporting and improving the delivery of health service to the people of Vanuatu. Clinical services are central to the health service package of any health systems. Together with public health services, they provide the balance of prevention and treatment required to support and improve population health.

This Clinical Services Plan aims to provide a 'road map' to guide clinical service development in Vanuatu over the next 5-10 years, progressively working towards the standards set out in the Role Delineation Policy (RDP), and the objectives outlined in the National Sustainable Development Plan. The RDP defines the range of health services to be provided at each type of health facility including resources such as staffing, functional space and equipment required to provide the service. It aims to improve the *overall functioning of clinical services within the health system*, to respond better to population health needs.

The Clinical Services Plan is set to achieve;

- More effective response to identified ***population health needs***.
- Improved ***health system functioning***, linking primary care and hospital services and building relationships with non-government organisations providing clinical services in Vanuatu.
- Progressive ***upgrading of clinical services in line with the standards defined in the RDP***
- Better ***quality*** clinical care.
- A guide for ***clinical workforce development***, including specialisation and in-service training.
- A basis for ***more effective investment*** of limited resources and;
- Improved ***health disaster response*** systems.

Our partners and stakeholders play a key role in supporting us to deliver, therefore this Clinical Services Plan also allows for strong partnerships and collaborative approaches of our interventions with our key stakeholders and partners both on-going and yet to be established. We value Aid In Kind contributions from our stakeholders within Vanuatu and abroad and hope for a continuity of engagements in 2020 and beyond. We acknowledge the medical teams that continue to provide us with clinical support that often increases our capacity levels to align with international standards of health care.

I take this opportunity to thank all internal and external partners especially our donor partners for their commitment and continued support to help us deliver the health service that meets people's needs. We are determined that our people will have access to equitable and affordable quality health care.

Yours Sincerely,

REPUBLIC OF VANUATU
DIRECTOR GENERAL OF HEALTH
DIRECTEUR GENERAL DE LA SANTE
REPUBLIQUE DE VANUATU

George Kalfau Taleo
Director General
Ministry of Health

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EXECUTIVE SUMMARY

INTRODUCTION

Clinical services[1] are an integral part of the health system in Vanuatu. With public health services, they provide the balance of prevention and treatment required to support and improve population health.

Clinical services are delivered throughout the health system, from dispensary to referral hospital. The range of services to be provided at each type of health facility is defined in the Role Delineation Policy (RDP). The RDP also defines the staffing, functional \space and equipment required by those services.

PURPOSE

The Clinical Services Plan (CSP) aims to provide a 'road map' to guide clinical service development in Vanuatu over the next 5-10 years, progressively moving towards the standards set out in the RDP.

It aims to improve the *overall functioning of clinical services within the health system*, to respond better to population health needs. This means getting the right balance of services between hospitals and primary health facilities and the providing right mix of specialist services within the hospital system.

PROCESS

This draft CSP has been developed through a process of consultation and analysis, workshop discussions and Working Group review. This process has identified both the main directions for clinical service development and the challenges that need to be tackled to achieve the desired outcomes.

Many of the challenges relate to shortfalls in workforce capacity and capability, and the human resource development required to address these issues. These are largely covered in the *MoH Workforce Development Plan 2018-2030.* The CSP complements this plan and seeks to provide a focus for future clinical workforce development, particularly in terms of specialist training and support.

CHALLENGES (p. 9-12)

The main focus of the CSP is the gaps that affect overall health care delivery and limit access to quality health care for the people of Vanuatu. Briefly, these include

- the limited capacity of provincial hospitals and urban health centres, and too much reliance on referral hospitals
- the pressures of managing emergency and critical care, birthing and neonatal care and the increasing burden of NCD within referral hospitals
- the impact of under-resourced clinical support services such as anaesthetics and biomedical services.

Other challenges identified relate to focusing workforce development, education and training on clinical service priority areas; maintaining service quality; problems with physical infrastructure (buildings and equipment) and issues with communications, management and leadership.

PRIORITIES FOR CLINICAL SERVICE DEVELOPMENT (p 13)

Identified priorities for clinical service planning include:

- Better 'filtering' of demand flowing to referral hospitals (particularly VCH) by
    - A targeted program of support for provincial hospitals
    - Strengthening NCD clinic services at provincial hospital and primary care level

[1] The term 'clinical services' refers to diagnosis, treatment/care and ongoing management of medical conditions by trained health professionals, including doctors, nurses and allied health professionals.

    - Development and implementation of referral protocols.
- Targeting specialist clinical training to key areas of need.
- Quality improvement mechanisms and processes.
- More efficient arrangements for equipment procurement and maintenance.
- Strengthening health disaster response systems.

PROPOSED STRATEGY (p 13-17)

Tackling the challenges identified is a huge job. But if staged over the next three to five years and longer term over the period to 2030, much becomes possible. The proposed strategy is a first step towards defining a 'road map' to strengthen clinical service delivery in Vanuatu, progressively moving towards the standards defined in the RDP.

The main aim of the strategy is to provide a focus for developing clinical services across all health facilities and strengthening those other areas of the health system that are required to support improved clinical services. Some of these strategies will require significant investment but others can be implemented within existing resources.

There are seven main strategic directions:

- Developing the health system, to use resources more effectively
- Building workforce capacity and capability
- Strengthening and refocusing education, training and supervision
- Improving service quality
- Better equipment procurement and management
- Improving existing infrastructure to better support health service delivery
- Improved communications, management and leadership

Each of these directions involves a number of strategies to be considered by various stakeholder groups, including CSP Working Groups; other MoH areas including provincial representatives; development partners and educational institutions.

Priorities and preferred strategies will need to be identified so that these can be translated into an implementation plan, setting out the projects and activities to be undertaken over the next 3-5 years.

1 INTRODUCTION

As the Vanuatu Ministry of Health (MoH) seeks to move towards Universal Health Coverage (UHC) and the health service standards defined in the Role Delineation Policy[2] (RDP), some practical guidance is needed to ensure that services develop effectively.

In its 2017 Health Sector Strategy (HSS), the MoH undertook to prepare a Clinical Service Plan *'to guide systematic and sustainable development and decentralisation of specialist clinical services including linkages with PHC services. The CSP plan will also provide a basis for specialist medical and nursing workforce development and training, and procurement of specialised equipment[3].'*

The Clinical Services Plan (CSP) aims to provide a 'road map' to guide clinical service development in Vanuatu over the next 5 years.

The term 'clinical services' is used in a broad sense, to refer to *diagnosis, treatment/care and ongoing management of medical conditions by trained health professionals, including doctors, nurses and allied health professionals.*

This means that clinical services are provided at all levels of the Vanuatu health system, from Aid Post up to National Referral Hospital. The RDP describes the services – both clinical and public health - to be provided at each level of health facility. The range, complexity and level of specialisation of those services increases as at each level of health facility. A brief description of the role of each health facility is included at Attachment 2.

However, many programs under the umbrella of 'Public Health' within the MoH include some clinical services [eg NCD, TB, Reproductive Health, Eye]. Effective linking of clinical services at the different levels of the health system is important for ensuring timely referral of patients for higher level care and maintaining continuity of care after discharge.

A strong prevention and primary care system is essential to promote population health, improve access to essential health care and reduce pressure on the referral hospital system.

The Clinical Service Planning process has involved

- Review of data on health status, health service delivery and utilisation.
- Consultation and workshop sessions with MoH clinical and management staff as well as non-government service providers involved in clinical service provision.
- Coordination with other planning activities, notably Workforce and Medical Workforce plans and the Hospital Information Management Strategy (See Section 2 below)
- Reference to reports of clinical service reviews, where relevant.

This clinical services plan aims to summarise the key challenges and issues to be dealt with in future clinical service development; to identify clinical service planning priorities and to set out strategies for moving towards the clinical service standards defined in the RDP.

[2]The Role Delineation Policy, updated in 2017-18, describes:

- The range and scope of services – public health, clinical, management, educational and general support - to be provided at each level of facility.
- Minimum staffing standards required to provide those services.
- Infrastructure standards: ie the functional space and essential equipment required.

2 CLINICAL SERVICE PLANNING GOALS

As clinical service planning is relatively new to Vanuatu, it's important to explain why it is happening and what it sets out to achieve.

Clinical Services Planning may have a range of goals, including:

- More effective response to identified *population health needs*.
- Improved *health system functioning*, linking primary care and hospital services and building relationships with non-government organisations providing clinical services in Vanuatu.
- Progressive *upgrading of clinical services in line with the standards defined in the RDP*
- Better *quality* clinical care.
- A guide for *clinical workforce development*, including specialisation and in-service training.
- A basis for *more effective investment* of limited resources.
- Improved *health disaster response* systems.

The emphasis placed on each of these goals may vary over time, as the planning environment changes and policy settings shift. But in general, these goals show the potential benefits of clinical service planning and also provide a point of reference in deciding on priorities and strategies.

3 RELATED PLANNING EXERCISES

3.1 Workforce Planning

It is clear that human resources for health are a critical factor in enabling the MoH to develop and deliver high quality health services and in particular, specialist clinical services, both within the hospital system and beyond. For this reason, the MoH prepared the *MoH Workforce Development Plan 2018-2030*.

A copy of the Executive Summary from the *Workforce Development Plan 2018-2030* is included at Attachment 3.

The workforce plan identifies four key priorities for action:

1 Strengthen workforce capability and ensure skills are targeted to priority areas of need.

2 Strengthen workforce planning, policy and HR management to achieve workforce growth targets and ensure a sufficient supply of skilled health and support workers to meet current and future health needs.

3 Build a positive supportive, sustainable workplace culture that promotes honesty and integrity and enhances health care delivery, staff satisfaction, motivation and work performance.

4 Build organisation-wide leadership capability to ensure MoH is well placed to achieve its vision of an integrated and decentralised health system that promotes universal health coverage.

These workforce priorities, and the actions proposed under them, are not duplicated in the CSP. However, the CSP will provide direction for future clinical service development and identify priority areas for the staff development and recruitment needed to build these services. It will be important for the MoH to coordinate the implementation processes for both plans.

A *Medical Workforce Plan 2018-2025* has also been prepared by the Medical Workforce Support Program (MWSP), to provide a basis for planning medical specialist training and workforce development over the next 7 years. This plan identifies future requirements for medical staffing in both referral hospitals and rural areas, and identifies current and future shortages by clinical specialty. An extract of medical workforce projections from this report is included at Attachment 4.

3.2 Hospital Information Management Systems Planning

The 2017 Hospital Information Management Systems (HIMS) Strategy sets out a proposed investment strategy for the development of HIMS for the Vanuatu Ministry of Health.

The goal of the project is to implement Hospital Information Management Systems that will provide improved information to support evidence-based decision making for:

- Clinicians at the point of care and improved clinical practice
- Planning, monitoring and evaluation
- Hospital management

Investment in the proposed system is expected to lead to higher quality patient care and more effective and efficient delivery of clinical services with consequent financial savings.

A summary of the project strategy is included at Attachment 5.

4 POPULATION HEALTH NEEDS AND PRIORITIES

Vanuatu has a population of around 270,000 and an average annual growth rate of just over 2% p.a. - down from almost 2.5% p.a. in 2007. This population is scattered across 83 islands. Villages in remote areas are often small and isolated, and people who live there pay high transport costs (via boat or truck) to reach health facilities. In the wet season, travel by sea is often dangerous and roads may be cut by flooding. This presents challenges in ensuring that all people have fair access to quality health services.

The VNSO moderate growth rate projection is for a population of around 370,000 by 2030.

The past two decades have seen a strong drift of population to Shefa Province (mostly Port Vila), and to a lesser extent Santo, with population declines in most other provinces. However, most of the population still remains in the rural areas.

The 2017 Health Sector Strategy identified as key health issues

- Increasing prevalence of NCD and its impacts in terms of premature death and increasing levels of disability – e.g. stroke, amputation, blindness and mental health issues.
- Communicable diseases such as TB and STIs.
- Maternal mortality rates
- Mortality rates of children under five, particularly among newborns, and many associated with malnutrition.
- Prevalence of stunting (low height for age) in children.

Within hospitals, concerns arise about the large numbers of patients with late stage complications of undiagnosed or poorly managed NCDs: amputations, renal failure and cancer. This highlights the need to strengthen NCD services at primary care and provincial hospital level.

Other concerns relate to infection control with the emergence of more multi-resistant strains, over-crowding in areas such as birthing and NICU and the difficulty of isolating infectious cases. Poor oral health has also been identified recently as a critical issue throughout Vanuatu.

Additionally, Vanuatu faces particular challenges related to natural disasters, notably cyclones, volcanic eruptions and earthquakes and is vulnerable to rising sea levels associated with climate change. These factors complicate the delivery of health services generally, and also require that hospitals have disaster plans in place to ensure continuing access to essential clinical services in case of emergency.

5 HEALTH SYSTEM FUNCTIONING

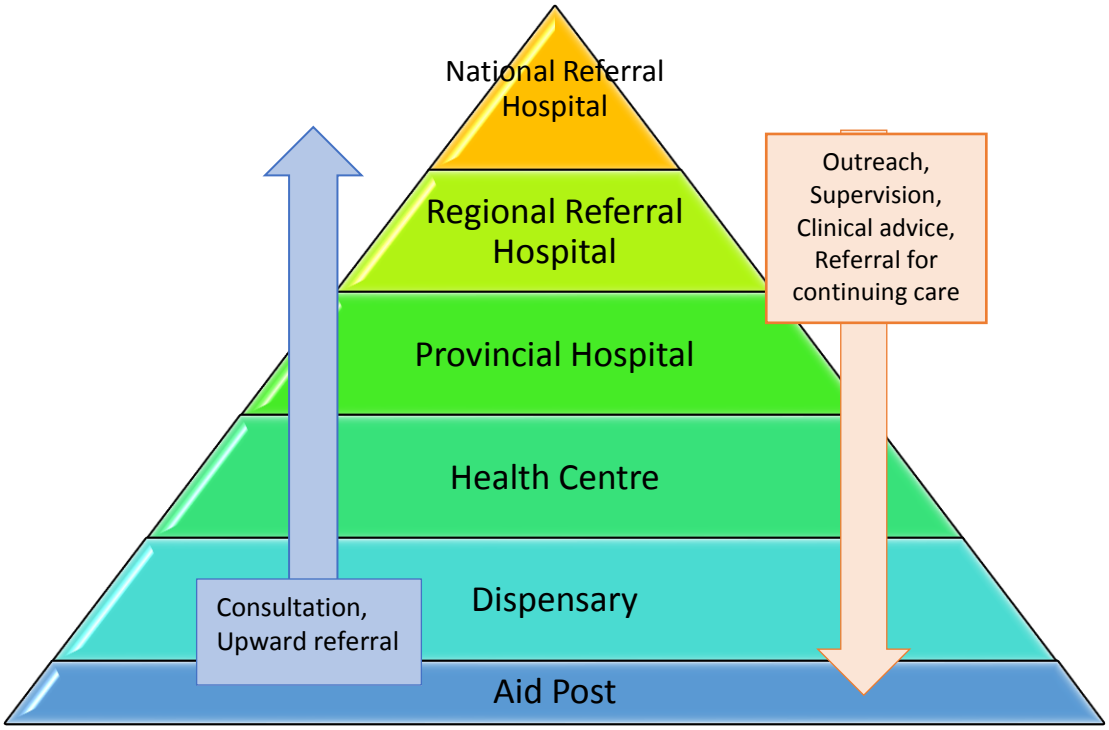
5.1 Health system structure

The Vanuatu health system has six levels of health facility, defined within the RDP.

1. Aid post
2. Dispensary
3. Health Centre
4. Provincial Hospital
5. Regional Referral Hospital
6. National Referral Hospital

These facilities operate in a hierarchy, as shown in Figure 1 below, each level building upon the services below. Attachment 2 provides definitions of the roles at each level.

Figure 1: Health system showing facility roles, Vanuatu 2017



For this system to function effectively, some things are essential:

- The base – the primary care system - needs to be strong, secure and able to absorb most of the demand that flows to it and has a clear reporting and governance structure that is sustainable.
- The range and complexity of services provided increases with each level of health facility, up the pyramid.
- The mix of services provided at each level responds to the health care needs of the population it serves and the priorities identified in planning eg NCD, maternal health
- Facilities are adequately resourced - staff, functional space and equipment - to provide those services.
- Clear channels between the levels allow an efficient upward flow of patients requiring higher level care, and back flow for follow up or continuing care. Referral policies are necessary.
- An effective consultation and supervision system is in place, so that staff in provincial and rural facilities have access to specialist clinical support from referral hospitals.
- Effective coordination of service planning, health care delivery and staff development across government, municipal, NGO and private health services.

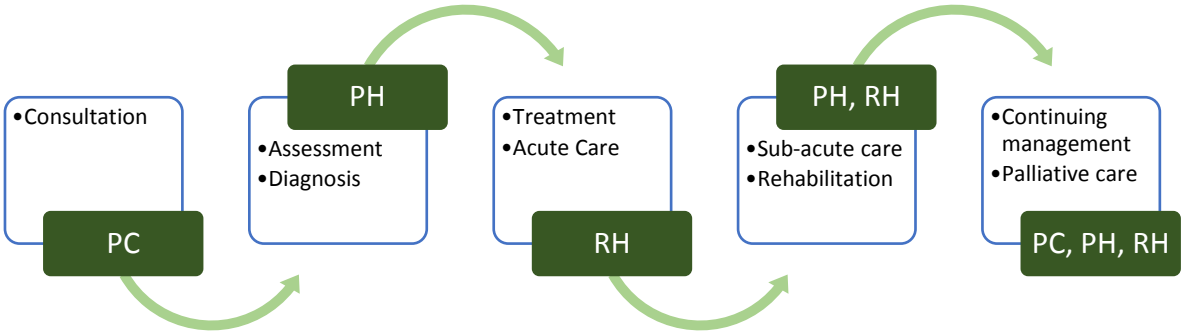
This system should operate to enable people to access the treatment they need, as close to home as possible. It also supports continuity of care, for people with more complex or chronic conditions. Challenges with continuity of care and access to clinical services can be complicated by disaster.

This becomes increasingly important with the increasing prevalence of NCDs such as diabetes, heart disease and cancer. With these conditions, there are multiple stages of care, and these often occur in different health facilities.

Figure 2 below shows the continuum of care for someone with a complex or chronic condition, presenting first to their local primary health centre (or dispensary), being referred to a provincial hospital for diagnosis and then to a referral hospital for acute care.

The patient may then stay in the referral hospital or go back to the provincial hospital for rehabilitation or sub-acute care. After discharge, the patient may get ongoing care/management at the primary care, provincial hospital or referral hospital level.

Figure 2: Continuum of care across health system, showing phases and sites of care



The important thing is that the system enables the patient to get the health care they need, and for the facility providing that care to be connected with the other facilities via referral and patient information systems.

5.2 Health service distribution and utilisation

Overall, Vanuatu has just under 1.4 hospital beds per 1,000 population. Table 1 shows the estimated bed occupancy rates for 2018. Note that this does not include beds in health centres. Including these would increase the capacity in some provinces considerably.

NB: although provincial populations are shown for Vila Central Hospital (VCH) and Northern Provincial Hospital (NPH), their regional catchments are around 135,000 for VCH and 138,000 for NPH. As the National Referral Hospital, VCH has a referral catchment population of over 270,000.

Table 1: Hospital bed distribution by province and population, Vanuatu 2017

Hospital	Role delineation	Province	Provincial Population 2016	Hospital beds 2017	Beds per 1000 population
VCH	National Referral Hospital	Shefa	97,602	131	1.34
NPH	Regional Referral Hospital	Sanma	54,184	112	2.07
Lenakel	Provincial Hospital	Tafea	37,050	43	1.16
Norsup	Provincial Hospital	Malampa	40,928	44	1.08
Lolowei	Provincial Hospital	Penama	32,534	30	0.92
Qat Vaes	Provincial Hospital	Torba	10,161	10	0.98
Vanuatu		**Vanuatu**	**272,459**	**370**	**1.36**

Although the ratio of beds per 1,000 population is relatively low by international standards, the 2018 occupancy rates [See Table 2] do not indicate an excessive level of demand for inpatient care. This apparent under-use of hospitals may reflect the low levels of medical staffing at provincial hospitals and NPH, but may also relate to local preferences for 'kastom' medicine. Note that occupancy rates are not consistent across all wards, with maternity generally having higher levels of utilisation than medical/surgical wards.

Table 2: Inpatient utilisation by hospital, Vanuatu 2016

Hospital	Hospital beds 2017	Admissions 2017	Patient Days 2017	ALOS 2016	Occupancy rate 2017	Outpatient visits 2016
VCH	131	7407	25060	3.4	52%	92129
NPH	112	3353	13671	4.1	34%	32971
Lenakel	43	1978	5979	3.0	39%	19915
Norsup	44	1263	n/a	n/a	25%	9316
Lolowei	30	899	2912	3.2	27%	5226
Qat Vaes	10	44	90	2.0	2%	3427
Vanuatu	**370**	**15033**				**162984**

Within the two referral hospitals, beds are allocated by specialty as shown in Table 3 below.

Table 3: Referral hospital bed distribution by clinical specialty, Vanuatu 2017

Hospital	Medical	Surgical	Paediatric	Maternity	Nursery	TB	Emergency	TOTAL
VCH	39	27	23	23	5	14	?	131
NPH	24	24	14	23	6	17	4	112
TOTAL	**63**	**51**	**37**	**46**	**11**	**31**	**4**	**243**

Attachment 6 shows the full summary of health facilities by province.

6 CURRENT ISSUES IN CLINICAL SERVICE DEVELOPMENT

Vanuatu faces a number of challenges in achieving the kind of health system functionality discussed above, but there are opportunities to improve existing arrangements by focusing on key strategic issues.

6.1 Service gaps that affect system functioning

Currently, there are certain points of weakness in the range and level of services provided within Vanuatu's health system, which affect overall health care delivery. For example:

- Provincial hospitals have been without local medical staffing for some years. Now that doctors are being based there, they lack the equipment and diagnostic support required to provide the level of health care expected. Telecommunications are often limited. This means patients are being transferred unnecessarily to referral hospitals for diagnostic procedures and treatments.
- Urban primary care services are being by-passed by people choosing to attend VCH general outpatient clinics (or the emergency department after hours) for basic primary care. This may be due to the limited services and clinical expertise available at health centres. But it is a poor use of referral hospital resources and it also has a negative impact on the ability to provide quality emergency care. Primary health facilities in SHEFA province need to be strengthened to provide a higher level of care (eg diagnostic services, specialist clinics), and filter referrals to VCH.
- Despite concerns about maternal and neonatal outcomes, birthing, postnatal and special care nursery/NICU services currently function in cramped facilities with minimal midwife and trained neonatal nursing. VCH currently has around 3,000 deliveries per year and as the National Referral Hospital, should be an infrastructure priority.
- Critical care services – including pre-hospital care (ambulance), emergency department and intensive care - are not well developed, even at VCH. This significantly reduces the chance of good outcomes for patients with life threatening conditions, severe injuries or illness.
- The increasing burden of NCD within referral hospitals is felt in several ways
  - More complications admitted at referral hospitals due to lack of earlier management – need to strengthen health promotion and NCD management at all levels
  - Discharging long staying/'chronic' patients from VCH is difficult due to lack of sub-acute beds, rehabilitation, palliative care and home care in both urban and rural settings.
  - Certain disciplines required for NCD management [eg footcare, nutrition] are not sufficiently available in Vanuatu.
- Most service 'gaps' reflect staffing shortages, but some have ripple effects because of the number of other services that depend on them.

  For example, anaesthetics provides 24/7 support to Surgery, Obstetrics, ICU, PICU, ED and emergency resuscitation/intubation throughout the hospital. Yet specialist anaesthetists at referral hospitals currently rely heavily on nurse anaesthetists and locum support; there are no trainees despite a projected shortfall of at least 3 specialist anaesthetists until at least 2024.

  Biomedical engineering services do not have trained staff at the level required to maintain and repair modern hospital equipment. This affects most areas of clinical service. Biomedical support is a priority for clinical services and more biomedical technician training is needed.

  Health information systems are playing increasingly important role in supporting clinical decision making, health service management and enabling continuity of care across different health facilities. Current HIS struggles to achieve the reporting standards that will enable this to occur, and requires substantial investment to become more functional.

  In the interests of moving towards a more functional and balanced health care system, clinical service planning needs to apply a sharp focus on areas such as these.

6.2 Workforce capacity and capability

The issue of workforce capacity and capability is clearly the major factor affecting the ability to provide clinical services at the levels defined in the RDP and is inevitably a major focus of any discussion of future service development.

However, most of the HR issues raised in the CSP consultation process are addressed in the MoH *Workforce Development Plan 2018-2030.* The workforce plan provides an analysis of staffing shortfalls and identifies key issues including:

- Inadequate staffing levels across all services with critical shortages in medical and nursing cadres, including a number of clinical specialist areas and vulnerable areas including rural facilities and hospital front line staff.
- Ageing of the experienced, skilled workforce; a retirement age of 55 years and more reliance on inexperienced younger staff.
- Significant reliance on development partner support to 'top up' specialist workforce supply.
- Anticipated but unknown growth in service demand.

The plan also recognises the issues around staff welfare and HRM that have emerged during CSP consultations and the need to develop '*a positive supportive sustainable workplace culture'* as one of four priorities for action.

Medical workforce issues, and specialist development, are addressed separately in the *Medical Workforce Plan 2018-2025* [Refer Section 2.1]

This identifies minimum specialist workforce requirements for 'core' specialties and projected deficits against these numbers to 2025. This shows persisting shortfalls in all areas, but most acutely in Emergency Medicine, Anaesthetics, Internal Medicine and Paediatrics. Refer to summary at Attachment 3.

It identifies the national role of the specialists in Pathology and Radiology and also highlights the importance of supporting Medical Administration as a specialist non-clinical role and developing rural physician training and public health expertise within the medical workforce.

A Nursing Workforce Strategy is also to be developed by the Principal Nursing officer, to address identified shortages in the nursing workforce. This is expected to align with the Clinical Services Plan.

While these workforce plans are essential, all plans must be considered with the CSP in terms of proposals and priorities and an integrated approach to implementation adopted.

6.3 Training and professional development

Training and professional development have an obvious link with workforce capacity and capability and as such are seen as an important factor in shaping future clinical services. Again, many of the issues that arose in the CSP consultation process are addressed in the Ministry's *Workforce Development Plan*. These include

- Overseas training of health workers is not targeted to areas of need identified by MoH, but reflects individual choices and scholarship opportunities largely decided outside the MoH.
- Much training is 'donor driven' ie directed by development partners rather than as part of a coordinated, planned approach based on service development needs identified by MoH.
- Failure of some scholarship recipients to return to Vanuatu
- Limited local training opportunities and the need to make better use of VHTI and POHLN.
- Limited research opportunities and research funding for clinicians.

Additional challenges identified specifically in relation to Clinical Services include:

- Maintaining sufficient numbers to run services while sending staff for specialist training, particularly overseas for Master's training.
- Lack of induction training, including administration, for clinical staff going to rural areas where they are expected to assume management roles.
- Fair access to CME/CPD (in-service training) for staff in all areas of clinical service, including rural areas, via a planned and coordinated program.
- Senior staff involved in clinical service management and supportive supervision require training/mentoring which is not currently provided.
- Determining the number of trainees for health fields is still a challenge without a formal framework to provide the MOH with accurate data on numbers of students currently undertaking tertiary education in the different health disciplines.

6.4 Quality Standards and Performance Management

While some areas, such as Laboratory Services, have implemented formal quality improvement programs, concerns over service quality more generally have been raised at several points during consultation. These relate partly to staffing levels but specific areas requiring attention have been identified as:

- The need to develop or strengthen nationally applicable policies, protocols, clinical guidelines & SOPs to enable a consistent, evidence-based approach to the provision of clinical care. Specific mention was made of the need for policy direction on patient referral, retrieval and follow up post-discharge.
- The need for improved monitoring of clinical service outcomes, and upgrading the information and reporting systems required for this purpose eg mortality reports.
- Mechanisms for registration and credentialing of clinical staff require review.
- A need for proper regulations, certification arrangements, monitoring and audit provisions to ensure that health practitioners in both government and private sectors comply with the Health Practitioners Act.
- The need for formal systems and staff training in infection control
- Customer service standards.

Responsibility for quality standards is not clearly defined so that these vary quite widely across facilities and within larger hospitals.

6.5 Communications, Management, Leadership

The importance of strengthening management and leadership was noted in both workforce plans, but the CSP consultation process has also highlighted the importance of communications not only in this respect, but also in terms of broader system functioning. Key points include:

- A lack of stakeholder engagement in key decisions at some sites: a sense of 'working in isolation' and the need for a more collaborative approach to clinical service development and management. The NPH Transformation Plan is a good example of how this can work.
- A disconnect in communications between hospitals, MoH and Government and an associated lack of response to concerns raised by clinicians and hospital managers.
- Relationships between clinical services and public health are compromised by the organisational structure and 'silos' which work against collaboration and integrated service planning.
- Information and reporting systems are not being used as well as they might to inform management decisions, or discussions of service performance.

6.6 Equipment

Equipment issues are one of the most frequent causes of frustration for clinicians seeking to provide health services as they have been trained. Specific concerns include:

- Too much reliance on non-standard, donated equipment – the donated equipment policy is not well known and there appears to be limited regulation or scrutiny of the donation process.
- Non-standard and second-hand equipment causes problems with maintenance, repair and procurement of parts, accessories and consumables.
- The current equipment procurement process is perceived as too complicated and difficult.
- Biomedical engineering/technical support needs urgent upgrading.
- The need to strengthen technical capability of staff in handling and use of equipment.

6.7 Infrastructure

The health system in Vanuatu has benefited from recent infrastructure developments, with the new building at VCH housing emergency and outpatient departments; pharmacy; diagnostic services (laboratories, medical imaging), operating theatres and sterilising. Facilities at NPH are being systematically maintained and upgraded through the *NPH Transformation Plan.*

At the same time, widespread issues have been reported with inadequate/dysfunctional space across many health facilities, due to their age, the effects of weather (notably cyclones), environmental challenges (notably volcanoes) and limited maintenance.

- Provincial hospitals have deteriorated and many will require upgrading to provide adequate functional space for both existing clinical services and proposed upgrading of service levels.
- Within VCH, areas where facilities are particularly unsuited to meet current demand and/or clinical requirements include birthing, ICU, NICU, mental health, dental and dietetic.
- Limited capacity to develop multidisciplinary NCD clinics or 'hubs' within existing facilities, particularly in urban clinics.
- Some hospitals are on sites that are vulnerable due to natural disaster risk and may need to be relocated. But there is no long-term development plan for hospital facilities.
- There is no long-term development plan for hospital facilities.

6.8 Traditional Medicine

The issue of traditional medicine and its relationship with western medicine arose in discussions with non-government providers of clinical services and in subsequent Working Group meetings. Strong cultural belief in traditional medicine, particularly in rural areas, means that people often use it in preference to MoH health facilities, only reverting to these if traditional methods fail. Often this is too late.

But MoH health facilities are not always readily accessible and traditional healing is widely accepted in Vanuatu's culture, so that many people make a personal choice to use it. This is likely to continue, particularly while health facilities are not fully staffed or equipped.

Currently, there is limited communication between health professionals and traditional healers to try to bridge the gap between the sectors. The MoH recognised this in the HSS and proposed closer cooperation with traditional healers. The CSP process flagged the need for a national approach on complementary/traditional medicine, starting in selected areas such as palliative care.

7 PRIORITIES FOR CLINICAL SERVICE DEVELOPMENT

Ideally, priorities for action on clinical service development will reflect several different considerations:

- Major population health issues, as identified in the HSS [eg NCD, maternal mortality, child nutrition].
- Potential to make better use of existing resources and improve service quality by 'oiling the wheels' of the system [eg referral policies, support for rural hospitals, clinical guidelines and SOPs]
- Identified service gaps and projected shortages in specialist staffing [eg anaesthetics, ambulance, nutrition, biomedical]

On this basis, identified priorities for clinical service planning include:

- Better 'filtering' of demand flowing to referral hospitals (particularly VCH) by
    - A targeted program of support for provincial hospitals
    - Strengthening NCD clinic services at provincial hospital and primary care level
    - Development and implementation of referral protocols.
- Targeting specialist clinical training to key areas of need.
- Quality improvement mechanisms and processes.
- More efficient arrangements for equipment procurement and maintenance.
- Strengthening health disaster response systems.

Clinical service development priorities are intended to complement priorities identified in the *MoH Workforce Development Plan 2018-2030* [Refer Section 2.1]

8 PROPOSED STRATEGY

Tackling the challenges identified in Section 6 above is a massive undertaking. But if staged over the next three to five years and longer term, over the period to 2030, much becomes possible. The proposed strategy has been developed in consultation with clinicians (medical, nursing and allied health), managers, MoH executive and non-government/private providers as a first step towards defining a 'road map' to strengthen clinical service delivery in Vanuatu, progressively moving towards the standards defined in the RDP.

The main aim of the strategy is to provide a focus for developing clinical services across all health facilities and strengthening those other areas of the health system that are required to support improved clinical services. Some of these strategies will require significant investment but others can be implemented within existing resources.

The proposed strategy has seven main directions:

- Developing the health system, to use resources more effectively
- Building workforce capacity and capability
- Strengthening and refocusing education, training and supervision
- Improving service quality
- Improving equipment procurement and management
- Improving existing infrastructure to better support health service delivery
- Strengthening communications, management and leadership

Each of these directions involves a number of strategies, outlined below. These will be considered by various stakeholder groups, including CSP Working Groups; other MoH areas including provincial representatives; development partners and educational institutions. Priorities and preferred strategies will need to be identified so that these can be translated into an implementation plan, setting out the projects and activities to be undertaken over the next 3-5 years.

8.1 Developing the health system to use resources more effectively

Ensuring that the health system functions as effectively as possible at all levels is one of the most important aspects of clinical service planning. This means identifying and targeting strategic gaps in the range and level of services provided across the system, and directing workforce and other infrastructure development to these areas. The plan also needs to identify new services that are needed but yet to be developed and look at other options for filling gaps in existing services. Proposed strategies include:

8.1.1 Identify key service gaps and clinical service development priorities, so that available resources can be targeted most effectively to fill these gaps.

High priority because existing service is essential/critical (ie life and death) and is seriously under-resourced both currently and as projected into the future:

- Anaesthetics (also covers Intensive Care)
- Emergency department and pre-hospital care (ambulance)
- Blood bank and transfusion services
- Biomedical support
- Disaster response and EMT

High priority because existing services are inadequately resourced to respond to major health issues that have significant impacts on population health.

- NCD management including awareness, prevention, early diagnosis, treatment and rehabilitation services
- Birthing, neonatal care and paediatrics
- General medicine and surgery
- Rehabilitation
- Oral health
- Rural hospitals
- Infection control

High priority because system functioning depends on these services working properly

- Management, leadership and communications
- Health information systems
- Occupational Health and Safety

8.1.2 Strengthen provincial hospitals and primary care services, improving access to quality health care for people in all parts of Vanuatu and enabling referral hospitals to become more specialised.

- Develop formal referral policies, protocols and processes, taking account of specific settings.
- Review user fees and charges so that that these offer incentives for people to utilise primary care services rather than referral hospitals.
- Implement a rural support program including induction training for staff appointed to provincial hospitals; access to CME/CPD and supportive supervision visits; upgrading of diagnostic services, communications and telemedicine facilities.
- Improve integration/continuity with Public Health through a collaborative approach to planning eg NCD service development
- Expand PEN training to primary care settings and strengthen training in the use of tools including monitoring and evaluation of NCD interventions.

8.1.3 Develop new services progressively, in line with RDP including (but not necessarily limited to)

- NCD 'hubs' at all hospital sites, incorporating medical consultation, NCD nursing, diabetic education, foot care, eye care and nutrition advice.
- Rehabilitation services, with physiotherapy, occupational therapy and therapy aides: major centres at NRH and satellite services at provincial hospitals.
- Integrated outreach services
- Upgraded medical imaging services, with portable x-ray, fluoroscopy, OPG and CT scanning services being introduced at referral hospitals (as per RDP).
- Intensive care and high dependency services including paediatric intensive care at NRH
- Clinical pharmacy
- Counselling services

8.1.4 Consider partnership arrangements so that some services are delivered through contracts with private or non-government providers. For example, ambulance and pre-hospital care (including driver paramedic training); blood bank services (including mobile unit); community-based rehabilitation (CBR); counselling and some general support services eg cleaning, security.

8.1.5 Utilise business plans to progress development proposed in CSP, ensuring that priorities for staffing, infrastructure, equipment align with service development priorities.

8.2 Building workforce capacity and capability

8.2.1 Develop clinical workforce capability – interim and longer-term specialist skill development – with development partner/overseas support, based on analysis of service gaps, workforce plans and clinical service priorities.

Specialist medical services

1 Anaesthetics, Emergency Medicine, Internal Medicine, Rural & Remote Medicine
2 Paediatrics, Psychiatry, Surgery, O&G
3 Medical administration

Specialist nursing development

1 Anaesthetics, Emergency, NCD (footcare, diabetes, nutrition), Midwifery
2 IMCI, Neonatal Intensive Care/Special Care, Operating Theatre
3 Intensive Care, Paediatrics/PICU, Surgical/Wound Care, Mental Health, Nursing Admin

Allied health development

1 Biomedical (engineers & technicians)
2 Dietetics/nutrition (including nutrition assistants)
3 Dental (including therapists)
4 Prosthetics/Orthotics
5 Physiotherapy & Occupational Therapy (including therapy aides)
6 Specialist laboratory and medical imaging technicians
7 Specialist pharmacists – clinical and oncology
8 Counselling/social work

8.2.2 Develop new clinical career pathways with suitable pay scales, for specialist nurses.

8.2.3 Increase the numbers of para-professional posts where staff require shorter term training courses, to address selected shortages more quickly. Specific opportunities include:

- pharmacy dispensers
- anaesthetic technicians
- laboratory assistants
- radiology assistants
- therapy aides (physio, OT)

- dental therapy aides
- nutrition assistants

8.2.4 Establish and promote health worker safety, medical and life insurance for all health workers in Vanuatu using existing governance structures and partnerships.

8.3 Strengthening and refocusing education, training and supervision

Many of the proposals under Objective 1.1 in the Workforce Plan relate to strengthening workforce learning and development (training). These proposals are not repeated here.

However, some additional proposals arising from the CSP consultation process include:

8.3.1 Ensure that training plans align with RDP and priorities defined in the CSP and that the Training Committee includes clinical representation.

8.3.2 Build local training capability in areas such as specialist nursing, biomedical technicians and some of the para-professional roles listed in Section 8.2.4. This might be done by extending the role of existing bodies such as VCNE or VHTI or through other arrangements.

8.3.3 Ensure that planned, regular CME/CPD programs are provided in all hospitals with an officer responsible for planning and coordinating these programs, in conjunction with HRD and clinical registration requirements. These should make better use of visiting specialist and overseas teams to deliver educational programs.

8.3.4 Establish a Post-Graduate Clinical Training Committee to direct, organise and supervise post-graduate medical and allied health training, similar to the role of the current Pre-Registration Training Committee, reporting to the National Health Training Committee.

8.3.5 Seek development partner support to bring in specialist nurse educators/consultants to provide on-site training to selected groups of nurses in areas such as ED, ICU, NICU/PICU. A similar program could be applied in certain allied health areas eg specialist diagnostic services, occupational therapy, clinical pharmacy.

8.4 Improving service quality

8.4.1 Implement/strengthen national policies & protocols, treatment guidelines and SOPs

- Identify key areas where national policies, protocols, and clinical guidelines are required
- Review existing materials in these areas and decide whether to use, adapt or replace these
- Ensure these are established and implemented as a priority across all health facilities, with technical assistance if possible.

8.4.2 Review the current structure and functions of the Health Practitioners Board so that it has better secretarial support and can function more effectively to process applications and renewals.

8.4.3 Establish a governance structure to ensure that all medical and allied staff seeking appointments are adequately and appropriately qualified to practice, in all public and private hospitals and health facilities in Vanuatu.

8.4.4 Strengthen and resource Vanuatu Nursing Council to develop and monitor nursing care standards; reinforce the Nursing Code of Conduct and ensure that all nurses are familiar with these standards.

8.4.5 Implement a Code of Conduct for all non-nursing staff.

8.4.6 Improve communications and management (see 8.7 below)

8.5 Improving equipment procurement and management

8.5.1 Use standards defined in the RDP as a basis for equipping health facilities.

8.5.2 Investigate possible fixed-term leasing options for major items of equipment including servicing, local training, maintenance and disposal.

8.5.3 Identify key equipment requirements for each service and prioritise in line with overall service development priorities

8.5.4 Strengthen biomedical technician training including some specialisation eg medical imaging, dental, ICU.

8.5.5 Utilise the equipment policy to promote the standardisation of brands

8.5.6 Pursue procurement contracts that include local staff training, on-going biomedical maintenance and accessories/consumables supply.

8.5.7 Review and update the donated equipment policy and management process: identify officer(s) responsible for overseeing acceptance and management of donated equipment.

8.6 Improving existing infrastructure to better support health service delivery

8.6.1 Review existing facilities against standards in RDP and identify areas of deficiency.

8.6.2 Identify services where deficient facilities may seriously compromise patient care or treatment outcomes, especially where this is due to infection.

8.6.3 Revive the National Assets Management Committee to prepare a longer-term development plan for hospital services, including:

- Identifying and prioritising key projects, taking account of overall clinical service development priorities and problem sites identified in 8.6.2 above.
- Identifying potential relocation sites for vulnerable hospitals.

8.6.4 Review funding opportunities against priority projects list and develop a 'shopping list' for future infrastructure investment.

8.7 Strengthening Communications, Management and Leadership

8.7.1 Improve internal communications within MoH and hospitals by

- Implementing telecommunications and paging systems that facilitate communications within hospitals and with other health facilities
- Establishing a Clinical Services Planning Committee, chaired by Director Curative Services, with senior MoH and hospital representation including clinician, MWSP and VCNE representatives.
- Formal recruitment and appointment for all clinicians, clinical heads of department and hospital management positions.
- Strengthening leadership (see Objective 4.1 of *Workforce Development Plan*) both within hospitals and the health system more broadly through leadership development programs.

8.7.2 Engage external stakeholders and development partners in clinical service development, by

- Developing a 'shopping list' based on a clear, well-coordinated set of priorities for development/improvement of clinical services (new or existing); training; infrastructure and equipment for discussion with Joint Development Partners and other prospective donors.
- Embarking on joint projects with other non-government organisations and Local Authorities to develop and test alternative approaches to clinical service delivery. Regular, formal consultation meetings could provide a starting point for fruitful discussions.

8.7.3 Communicate more effectively with the general public

- Implement telephone and internet systems that enable people to access information and make informed decisions about health and health services.
- Utilise waiting areas [eg ED, OPD, wards] to deliver health promotion programs.
- Clinical staff to provide patient education at all levels, with information sheets for patients and their families to encourage improved self-care and personal responsibility for health.
- Promote better use of clinical services through 'Health Weeks' organised by hospitals and provincial health authrorities.
- Establish a formal complaints and adverse events reporting process (aligned with the PSSM Manual) so that such matters can be addressed in a timely manner.

9 Appendix

9.1 Membership: Clinical Services Planning Working Groups

Medical and Public Health Executive Working Group
Dr. Andy Ilo – MS, NPH - Chairperson
Dr. Santus Wari – A/Director Curative Services - Vice Chair
Dr. Trevor Cullwick – Surgery
Dr. Sereana Natuman – Internal Medicine
Dr. Tony Harry – Obsterics & Gynaecology
Dr. Orelly Thyna - Paediatrics
Dr. Tildena Mandavah - Anaesthetics
Mr. Len Tarivonda – Public Health
Mr. Morris Amos – Shefa Province
Nursing Working Group
Mrs Bertha Tarileo – PNO - Chairperson
Mrs. Tousei Lesteour – NPH -Vice Chair
Mr. Jeffery Samana - VCH
Mrs. Evelyn Emile - VCN
Mrs. Lina Virameme – Operating Theatres
Mrs Myriam Abel – Health Promotion
Allied Health/Clinical Support Working Group
Mr. George Pakoa – Medical Laboratory - Chairperson
Dr. Crystal Garae – Pathology - Vice Chair
Dr. Joe Warsal - Radiology
Mrs Agnes Mathias - Pharmacy
Dr. Maine Rezel - Dental
Mr. Markson Lewa - Dental
Mr. Albert Kaiapam - Physiotherapy
Mrs Jennifer Timothy – Nutrition and Dietetics
Mrs Rachel Takoa – Health Information Systems
Mr. Joel Pakoa - Biomedical

9.2 Health Facility Levels and Roles 2018

AID POST

Provides health promotion, education, prevention of communicable and non-communicable diseases, sanitation, mother and child care, treatment of simple medical problems. Staffed by Village Health Worker.

DISPENSARY

Role includes health education, prevention and control of communicable and non-communicable, diseases, maternal and child care, immunisation, screening, diagnosis and treatment of common diseases and injuries by Registered Nurse (RN).

Dispensary locations defined as remote, by RDP classification, will have enhanced maternal and child care services supported through placement of a Midwife (MW) instead of RN.

HEALTH CENTRE

Provides an enhanced level of primary care. Ideally staffed by Nurse Practioner (NP), MW, RN, and Nurse Aide. More specific expertise is available in maternal and child care. Medical/specialist consultation and management via outreach/mobile specialists or referral to higher level facilities.

Enhanced Health Centres will include Medical Officer staffing where available.

PROVINCIAL HOSPITAL

Provides general medical care, diagnostic services, limited surgical procedures and access to specialist consultation for patients referred from primary health care facilities as well as a local catchment.

Provincial hospitals generally serve a provincial population of 30,000 or more. They include Lenakel (Tafea Province); Lolowei (Penama Province) and Norsup (Malampa Province). Qatvaes (Torba Province) is also classified as a provincial hospital, due to its geographic isolation, although its catchment population is closer to 10,000. Northern Provincial Hospital (NPH) and Vila Central Hospital (VCH) provide provincial hospital services for Sanma and Shefa provinces respectively.

REGIONAL REFERRAL HOSPITAL

Provides general medical care PLUS specialist diagnosis, treatment and management of more serious/complex conditions in patients referred from a number of provinces: NPH covers Sanma, Malampa, Penama and Torba and VCH covers Shefa and Tafea.

NATIONAL REFERRAL HOSPITAL

On top of its regional referral role, VCH functions as the National Referral Hospital, providing a range of more highly specialised diagnostic and treatment services [eg management of major trauma; complex surgery and obstetrics, cardiac investigations, intensive care and rehabilitation services] for patients referred nationwide.

9.3 MoH Workforce Development Plan 2018-2030, Executive Summary and Action Plan

EXECUTIVE SUMMARY

A capable, committed and motivated workforce is central to the success of any business. Getting the right people into the right jobs requires a commitment to attract, develop, retain and recognise talented and motivated employees who are aligned to the vision and values of the organisation.
In MoH we are privileged to have a committed workforce that has proved to be resilient in times of significant internal and external challenges, including responding to and managing the health needs of those affected by natural disaster such as Cyclone Pam and the more recent Manaro volcano disaster in Ambae.

In order to meet the challenges and health needs of our growing population, and to embrace new technologies and innovation in delivering quality health care to all citizens of Vanuatu, MoH needs to ensure their workforce is adequate in supply and appropriately skilled and supported.

The MoH vision for the future is *to have an integrated and decentralized health system that promotes an effective, efficient and equitable health services for the good health and general wellbeing of all people in* Vanuatu "

A key priority to realising this vision is to address workforce issues.

The MoH Workforce Plan outlines the challenges and issues and the strategies required to produce a sustainable workforce; one that is capable of delivering continuously
high-quality health care to the people of Vanuatu.

The Plan has been designed to meet overall MoH strategic and operational framework and aims to integrate with and support the goals and objectives of the NSDP 2016-2030, HSS (2017-2020) and achieve workforce growth in line with MoH organisational structure 2017-2030.

To effectively meet the increasing and shifting demands for health care across all provinces, MoH needs to have the capability within its workforce to achieve this. This includes the capabilities required to implement effective workforce planning that ensures an adequate supply of appropriately qualified health workers are working in the right places, that is, where they are needed most.

MoH faces many challenges including workforce skills shortages and an ageing workforce. Added to this, is the ability to meet the community's needs and expectations and deliver quality health care within the financial constraints and limitations.

To address these and other workforce challenges, the Plan considers the following four (4) Priority Areas for Action to achieve having the right people with the right skills, undertaking the right tasks.

Priority Areas for Action

1. Strengthen workforce capability and ensure skills are targeted to priority areas of need.

2. Strengthen Workforce planning, policy and hr management to achieve workforce growth targets and ensure a sufficient supply of skilled health and support workers to meet current and future health needs.

3. Build a positive supportive, sustainable workplace culture that promotes honesty and integrity and enhances health care delivery, staff satisfaction, motivation and work performance.

4. Build organisation-wide leadership capability to ensure MoH is well placed to achieve its vision of an integrated and decentralized health system that promotes universal health coverage.

9.4 Medical Workforce Plan – projections of minimum requirements and deficits by specialty

The Medical Workforce Plan identified the minimum numbers of medical specialists required to meet current service needs in 'core' specialties at both VCH and NPH. These figures are shown in Table 1. It should be noted that the list of 'core specialties' did not include psychiatry or surgical sub-specialists such as ophthalmology or ENT. It also assumed that single specialists in pathology and radiology could provide nation-wide cover. These figures provide a basis for assessing locum support needs.

Speciality	VCH	NPH
Gen Med	3	2
Gen Surgery	3	2
Obstetrics	3	2
Paediatrics	3	1
Emergency	2	1
Anaesthetics	3	2

Table 1: Proposed minimum specialist workforce required to meet current service needs for 'core' specialties.

Taking account of existing staff and staff currently in training programs, the plan then assessed the future staffing shortages across all specialties, year by year to 2024 against this 'minimum service aspiration'. Table 2 shows the annual shortfalls projected in each discipline, based on current staffing levels, projected retirements and factoring in staff now in training posts.

This shows the most persistent shortages by 2024 to be in anaesthetics, emergency medicine and internal medicine, although shortages are expected to persist in most specialties until 2023, particularly at NPH.

	2019	2020	2021	2022	2023	2024
VCH						
Internal Medicine	1	1	1	1	0	0
General Surgery	1	1	1	0	0	0
O&G	0	0	0	0	0	0
Paediatrics	2	1	1	1	1	0
Anaesthetics	1	1	1	1	1	0
Emergency	1	1	1	1	1	0
Total deficit	**6**	**5**	**5**	**4**	**3**	**0**
NPH						
Internal Medicine	2	2	2	2	2	1
General Surgery	1	1	1	1	0	0
O&G	1	1	1	1	1	1
Paediatrics	2	2	1	1	1	1
Anaesthetics	2	2	2	2	2	2
Emergency	2	2	2	2	2	2
Total deficit	**10**	**10**	**9**	**9**	**8**	**7**

Table 2: Deficits of specialists against minimum service aspiration

The plan also identified the staffing levels required to support sustainable specialist services at both referral hospitals and medical cover at rural health facilities in the longer term – ie around 2025. These figures are shown in Table 3 below. The table also shows expected numbers of trainees and interns within the hospital system at that point. Note that the distribution of specialist staff across the two referral hospitals may need to be adjusted to align more closely with the RDP and the CSP.

Specialty/Field	VCH	NPH	Rural
Rural specialist			20
Anaesthetics	5	2	
Surgery	5	2	
Int. Medicine	5	2	
O&G	5	2	
Paediatrics	5	2	
Emergency	5	2	
Psychiatry	2		
Pathology	1		
Radiology	1		
Medical admin	2	1	
Public health	2	1	
Pre-training placement	4	4	2
In training	20		
Interns	4	2	
Total qualified specialists (with post-graduate qualifications)	**38**	**14**	**20**
Total qualified specialists +Training/interns	**66**	**20**	**22**

Table 3: Long term (expected) mix of medical doctors

Notes

- Assumes minimum number of senior specialists in each specialty is 3 for VCH (except emergency = 2), and 2 for NPH.
- Interns, junior doctors and rural placed junior doctors will require supervision from senior doctors at VCH and NPH

9.5 Vanuatu Hospital Information Management Systems Investment Strategy, Executive Summary

Context

The Vanuatu health system is transitioning from one whose primary focus is on a traditional approach to communicable diseases and primary health care to one more focused on the prevention, detection and treatment of non-communicable diseases. This is being driven by the increasing burden of diseases attributable to non-communicable disease. Within the Ministry of Health, approximately 2/3 of the health care budget is spent on acute hospital care with 1/3 spent on community and primary care.

But currently the capacity in information systems and reporting is almost the mirror image of this. Through the VanPHIS, there is an increasingly sophisticated capacity to capture and report primary care and disease case data, while the capacity to use hospital-based data effectively is limited and to some extent decreasing.

The Hospital Information Management Systems (HIMS) Strategy sets out the proposed investment strategy for the development of the HIMS for the Vanuatu Ministry of Health.

Clinical drivers

Key issues raised by clinicians in consultations were the gaps in information to support continuity of patient care, over time with repeated attendances, between care settings and within facilities. Such continuity of care is essential for the effective care of chronic and non- communicable diseases.

HIMS goals and benefits

The goal of the project is to implement Hospital Information Management Systems that will provide improved information for Vanuatu for evidence-based decision making, for;

- Clinicians at the point of care and improved clinical practice
- Planning, monitoring and evaluation
- Hospital management

This investment then leads to higher quality patient care and more effective and efficient delivery of clinical services with consequent financial savings.

Project scope

The project is expected to take two to three years from commencement approval. This strategy covers the initial full implementation to three hospitals, VCH, NPH and Lenakel with also reports and results viewing remotely at other facilities depending on network access.

Clinical background

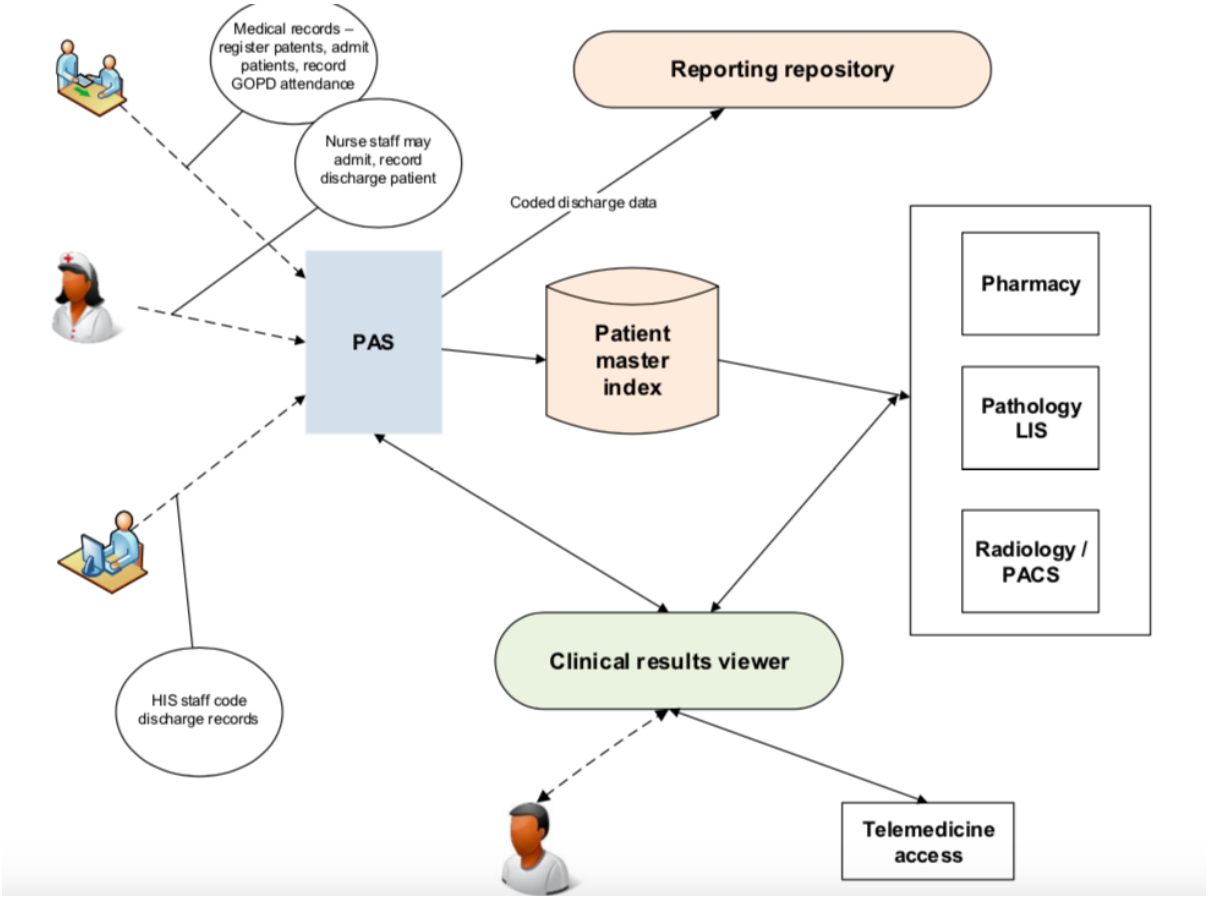
In consultations, clinicians identified their major information frustrations and issues as;

- Lack of information for continuity of care, including loss of charts between attendances
- Point of care access to pathology and radiology results
- Effort involved in preparing monthly and annual reports.

The proposed architecture aims to address those needs straight from the initial implementation, through focusing on the access to and use of information through the reporting repository and the results viewer. Both of these will be accessible from any facility with network access.

System architecture

The diagram below shows the conceptual model of the system components within the overall Hospital Information Management System (HIMS).



Acquisition approach overall

The following table shows the proposed acquisition or development approach for each component of the HIMS.

Component	Approach
PAS – PMI – results viewing	Acquire or build new system which includes these functionalities. Through the rest of this document this is referred to as the Patient Administration System / Electronic Medical Record. (PAS/EMR)
Reporting repository	Extend the current DHIS2 based VANPHIS system used for public health and malaria to provide integrated reporting.
Pharmacy	Use the existing mSupply pharmacy system
Radiology / PACS	Aim to base and extend from existing PACS system in use at VCH.
Pathology LIS	Acquire new system to support laboratory management and provide results for clinician access.

9.6 Summary table of health facilities by Province 2017

Province	Hospital	Health Centre	Dispensary	Aid Post
TORBA	1	3	5	24
SANMA	1	8 (8)	18 (16)	49
PENAMA	2	5 (5)	23 (22)	40
MALAMPA	1	9 (9)	19 (18)	47
SHEFA	1	5 (5)	13 (12)	45
TAFEA	1	4 (3)	13 (11)	40
TOTAL	**6**	**34 (33)**	**91 (84)**	**245**
First figure is total number of facilities: figure in brackets is number open				

Health facilities by Province 2017
[Source: HIS]