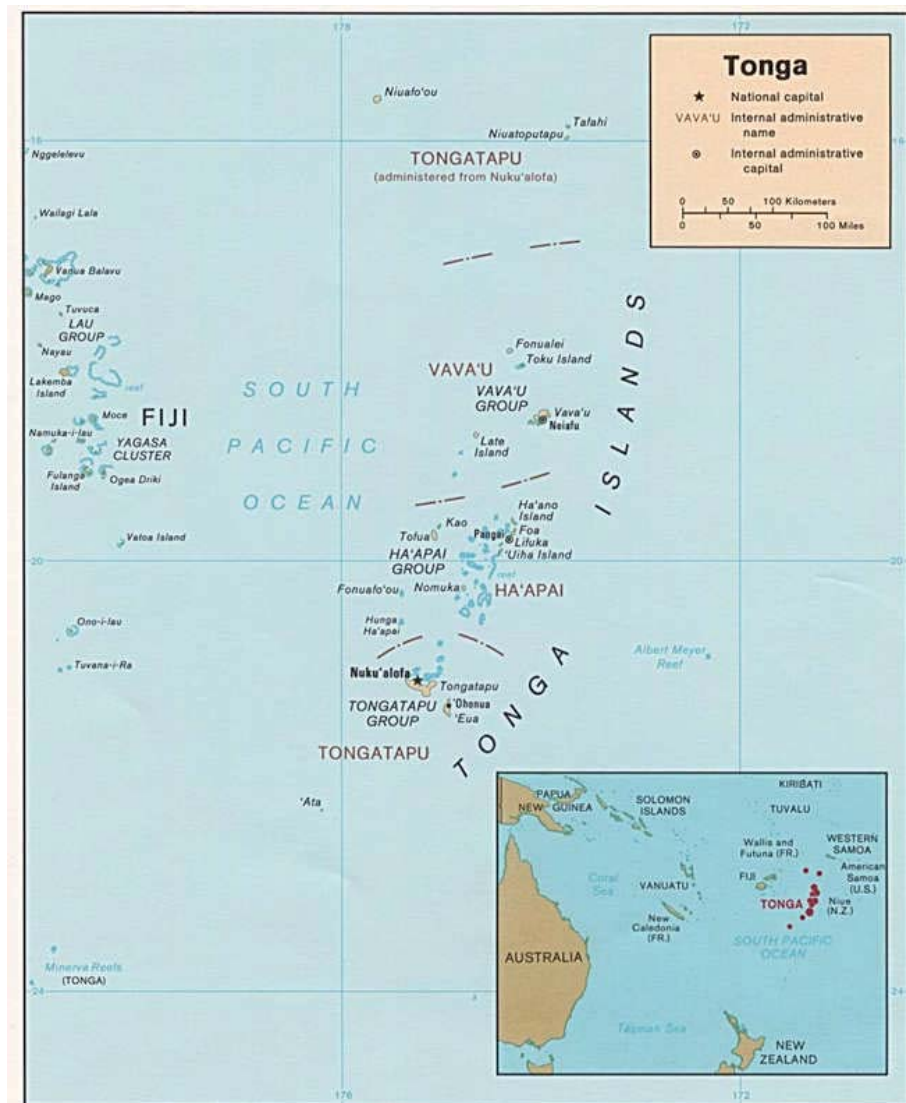


Health Service Delivery Profile

Kingdom of Tonga

2012



Developed in collaboration with WHO
and Ministry of Health, Tonga

Kingdom of Tonga health service delivery profile

Demographics and health situation

The Kingdom of Tonga is made up of 170 islands (36 inhabited) spread over 700,000 square kilometres of ocean (Annex 1).¹ In 2010, the estimated population was 103,600 people with 38% aged less than 14, and only 8% aged 65 years or more.³ Tonga has a high net emigration rate, with 100,000 Tongans living overseas, mostly in Australia, New Zealand and the United States of America.⁴ The majority (70%) of Tonga's population live on the main island of Tongatapu, with the remainder spread across the other four island groups.^{1,2}

Tonga is characterised by generally high levels of access to health care and high quality of life, with health indicators improving over the last 50 years. Most (99%) of Tonga's population have access to improved water and sanitation and 100% have access to appropriate health care services with a regular supply of essential drugs.² Health outcomes are among the best in the East Asia and Pacific regions and there is little absolute poverty. Infant, under-five, and maternal mortality rates have declined, while infectious diseases have been largely brought under control.⁵

Table 1. Key development indicators, Tonga 2009-2011

Indicator	Measure	Year
Human development index	0.7	2011
Adult literacy rate (%)	99.0	2010
Total health expenditure (% of GDP)	3.0	2009
Proportion of people living below national poverty line (%)	22.5	2009
Life expectancy at birth (years)	67	2010
Crude birth rate (per 1,000 population)	26.0	2010
Crude death rate (per 1,000 population)	5.3	2010
Infant mortality rate (per 1,000 live births)	21.5	2010
Maternal mortality rate (per 100,000 live births)	37.1	2010

Sources: MOH 2011;² MFNP 2010;³ WHO 2011;⁴ UNDP 2012⁶ Hufanja S, et al, 2012²⁶

Tonga is faced with a rapidly increasing burden of non-communicable diseases (NCDs): while the proportion of deaths caused by infectious diseases fell from 32% in the 1950s to 6% in the 1990s; the proportion of deaths from diseases of the circulatory system grew from 5.6% to 38% during the same period.⁴ In 2010, NCDs accounted for four of the five leading causes of mortality; were the leading causes of morbidity; 10% of hospital admissions; and 20% of government spending in the health sector.³ The leading causes of mortality are diseases of the circulatory system, followed by neoplasm's and diseases of the respiratory system^{1,2} and increases adult mortality due to NCDs has caused a fall in life expectancy, estimated at 69 for females and 65 for males.²⁶

Health strategies, objectives and legislation

The health sector is well organised and managed by the Ministry of Health, who provide policy advice, manage legislative requirements and operational aspects of health service delivery, and monitor population health outcomes. The Ministry's vision for Tonga is to be the healthiest nation compared to its Pacific neighbours and as judged by international standards by 2020. Key strategic result areas and goals are split into four main themes: (1) Healthy communities and populations through improved services; (2) Health sector development; (3) Staff training and development; and (4) Service partnerships.^{7,8} Of importance to

the Ministry of Health and its planning processes are the various donor and development partners active in Tonga, which include the Asian Development Bank, Australian Agency for International Development, European Union, Government of Japan, New Zealand Agency for International Development, People's Republic of China, Secretariat for the Pacific Community (SPC), WHO, UNFPA and UNICEF.^{9,10}

Corporate planning is carried out every three years, annual management plans are developed by each division and performance monitoring is ongoing.¹¹ The *Annual Report of the Minister of Health* outlines the goals of the health system and specific roles and responsibilities for each program in managing and providing health services. The *Health Services Act* sets out the functions of the Minister of Health, which are, 'to provide and maintain comprehensive hospital and community health services with facilities for the investigation, diagnosis, treatment, rehabilitation from and prevention of disease and ill-health'.¹²

Tonga was the first Pacific nation to launch a *National Strategy to Prevent NCDs* in 2003, which followed a WHO STEP-wise approach.⁴ The second national strategy (2010-2015) targets the four main risk factors associated with NCDs (physical activity, alcohol, tobacco and diet) and has six targets.³ The *Tonga Strategic Development Plan(2011-2014* also acknowledges that the Ministry of Health's mandate is to focus on preventive health and reduce the impact of non-communicable diseases.

Service delivery model

Health care services are decentralised and Government health services are provided free-of-charge. Physical access to care is good for the majority of the population, with the exception of small populations living on isolated islands.¹³ The 2003 Tonga Household Survey showed that 89% of all health services were delivered by public hospitals and only 6% by health centres.⁴ The private sector is small and consists of traditional healers, after-hours practising government-employed doctors, three officially recognised private pharmacies and a small number of for-profit and not-for-profit non-governmental organisations (15 in 2005/06).^{1,5,14}

Two systems of medicine exist in Tonga. One is based on sickness, *mahaki faka-Tonga* (traditional Tongan medicine) and one on disease, *mahaki faka-Palangi* (Western medicine). Tongan people have adopted this dual system, and for diseases thought to have been introduced by Europeans (e.g. diabetes) Western medicine is usually sought, while for traditional Tongan illnesses, treatment is sought by a *Kau Faito'o* (traditional healer). Household data analysis indicates that traditional healers are trusted by the community to fill a perceived gap in healthcare in rural areas.

The provider network

Preventive services and primary curative care are delivered in Tonga's island divisions through a system of one main referral hospital, three community hospitals, 14 health centres and 34 reproductive and child health clinics. Facilities are reasonably well distributed among the population (Table 2).

In 2010, total admissions to the medical ward at Vaiola Hospital equalled 1,317, with an average of 100 admissions per month.² On average, Tongans have one to two outpatient consultations per year, with a relatively high annual hospitalisation rate of about 10%.⁵

Table 2. Distribution of health facilities and beds by island groups in Tonga, 2010

Island division	Population (%)	Govt health facilities	Population per facility	Number of beds	Beds per 1,000	Occupancy rate (%)
Tongatapu	69	27	2,631	199	2.8	60
Vava'u	16	9	1,852	43	2.8	33
Ha'apai	9	8	1,079	22	2.9	25
'Eua	5	4	1,308	17	3.3	19
Niua's	1	4	340	0	0	0
Total	100	52	1,979	281	2.8	49

Sources: MOH 2011;² MFNP 2010;³ Somanathan & Hafez n.d.⁵

Table 3. Summary of health services by facility type in Tonga, 2012

Facility	Essential Services		Expanded Services
	Public health, prevention and outreach	Clinical (primary and secondary)	
Reproductive and child health clinics (34)	<ul style="list-style-type: none"> • Family planning and nutrition • HIV/AIDS and STI prevention • Sanitation and hygiene • Immunization (EPI) • Infection control • School health • Reproductive health • Rheumatic heart screening program 	<ul style="list-style-type: none"> • Primary care • General practitioner services • First aid treatment for emergencies • Management of antenatal care, low risk birthing and postnatal care not requiring hospitalization • Maternal and child health and family planning 	
Health centres (14)	<i>As for reproductive and child health clinics</i> <ul style="list-style-type: none"> • Mental health education and awareness 	<i>As for reproductive and child health clinics</i> <ul style="list-style-type: none"> • Dental clinic • Medical and minor surgical emergencies 	<ul style="list-style-type: none"> • Limited outreach activities to provinces • NGOs <ul style="list-style-type: none"> ○ Mental health services
Community hospitals (3) 87 beds (total)	<i>As for health centers</i> <ul style="list-style-type: none"> • Health surveillance • HIS/AIDS and STI prevention including screening, surveillance and education • Programs for the reduction of tobacco, alcohol consumption, substance abuse and obesity 	<i>As for health centers</i> <ul style="list-style-type: none"> • Dental care (extraction, fillings and dentures) • Management of antenatal care, birthing and postnatal care • Management, treatment and care of STIs including HIV/AIDS • Medical and minor surgical emergencies • Outpatient consultations 	<ul style="list-style-type: none"> • Visiting specialist teams <ul style="list-style-type: none"> ○ Limited outreach services
National referral hospital (1) 199 beds	<i>As for community hospitals</i>	<i>As for community hospitals</i> <ul style="list-style-type: none"> • General practice (primary care) • Emergency department • Operating theatre • Outpatient clinics • Secondary level general medical and surgical services • Treatment for chronic diseases including follow-up care • Laboratory • Radiology • Pharmaceuticals • Dietetics • Physiotherapy • Mental health <ul style="list-style-type: none"> ○ Psychiatric ward ○ Inpatient and outpatient care ○ 12 beds 	<ul style="list-style-type: none"> • Visiting specialist teams <ul style="list-style-type: none"> ○ Hearing services ○ Eye surgery ○ Corrective orthopaedic surgery ○ Rheumatic heart disease • Overseas referrals

Sources: Sorensen 2011;¹ WHO 2011;⁴ Somanathan & Hafez n.d.⁵ AusAID 2009;¹¹ MOH 2007¹⁵

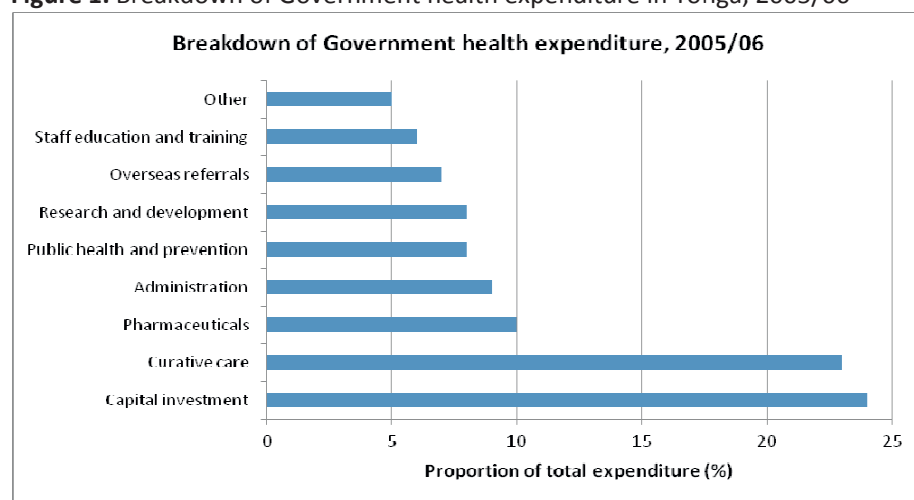
Health financing

Total Ministry of Health expenditure was USD \$11.2 million in 2009/10 (\$107 per capita); or approximately 3% of gross domestic product, however this rises to 6% with donor funding.^{1,14} The share of donor funding has fluctuated between 30-40% of total health budget over the past 10 years.¹⁴ Sixty-nine percent of total expenditure on health services was paid for by Government in 2009/10, mainly from general taxation revenues and support from external development partners, and 31% from private expenditure. Government health care services are free at most facilities; however user fees were introduced in 2009 for inpatient services provided at the national referral hospital.⁵

While the introduction of user fees could undermine the current high level of financial protection, the latest available National Health Accounts (for 2005/06) estimated that household out-of-pocket spending accounted for 8% of total health spending.⁵ Previously, out-of-pocket spending has been attributable to traditional healers (31%), pharmaceuticals (28%), private physicians, dentists and hospitals (22%), Government hospitals (11%), with the remaining 8% attributed to laboratories, public health and 'other'.¹⁴ Private health insurance accounts for a negligible share (0.4%) of total health financing and is primarily used to cover the costs of overseas medical treatment. In response to growing fiscal restraints, in 2009 the Government introduced a social health insurance scheme for workers engaged in the formal sector; however this only represents 12% of the total population.⁵

As demonstrated in Figure 1, only 8% of health expenditure is for public health and disease prevention.¹⁴ Hospital-based care receives around two-thirds of total health expenditure, and this has remained constant over the past five years.⁵

Figure 1. Breakdown of Government health expenditure in Tonga, 2005/06



Source: Ahio *et al* 2010¹⁴

Human Resources

Tonga has a high nurse-to-population ration (Table 4): numbers for doctors, midwives and dental officers are low for the region.^{4,8,14} There are 15 doctors registered as Specialists in the country, however nine have resigned or are on long-leave. In 2010, 34 Tongan nurses had undergone specialist nursing trainings or attachments. Priority areas for advanced specialist training are paediatrics, medicine, surgery, anaesthetics, obstetrics and gynaecology and psychiatry to enable the Ministry to plan for long-term replacement and sustainability of the system. Many of the more qualified and specialised doctors are located at the referral hospital, leaving outer island hospitals to be managed by young and recently graduated doctors. Health centres are mainly managed by health officers and maternal and child health nurses are responsible for the provision of services from their clinics.¹⁶

Table 4. Health professionals in Tonga, 2010

Registered healthcare professionals	Total	Ratio per 1,000 population (2010)
Physicians (doctors and health officers)	62	0.60
Nursing staff	357	3.45
Midwifery staff	21	0.20
Dentists and technicians/assistants	37	0.36
Pharmacists and technicians/assistants	15	0.14
Laboratory scientists and technicians/assistants	28	0.27
Radiographers	7	0.07
Environmental health workers	25	0.24
Public health workers	12	0.12
Medical assistants	22	0.21
Other health workers	143	1.38
Health management staff	50	0.48
Total	779	7.52

Source: HRH Hub 2009¹⁷

Providers of traditional medicine

Traditional healers are an integral part of the informal health sector in Tonga but are not formally recognized by Government as providers of health services.¹⁶ Healers generally describe themselves according to the ailments they treat and cover four main areas: spiritual, injury, those who treat metabolic and internal disorders and healers who treat illnesses with no apparent traditional causes.¹⁸ Healing is not a learned skill but an acquired energy and it is understood as a power, which enables healers to treat and cure illnesses.¹⁹

In 2005/06 there were an estimated 1,000 traditional healers in Tonga, accounting for around USD \$511,400 of spending in cash and in-kind.¹⁴ A survey of 230 healers for the National Health Accounts in 2005/06 found that healers saw an average of seven patients per month. An average of USD \$4 was paid in cash and USD \$7 in the form of in-kind payment.¹⁴

Medicines and therapeutic goods

Tonga has no pharmaceutical manufacturers or wholesalers; relying predominately on supplies from New Zealand and Australia. International donor organizations contributing towards pharmaceuticals include the International Planned Parenthood Federation, UNICEF, Secretariat of the Pacific Community, WHO and Japan International Cooperation Agency.²⁰ Tonga is part of the EC/ACP/WHO partnership on pharmaceutical sector capacity building, which aims to enhance the accessibility, affordability and rational use of essential medicines in 14 Pacific Island Countries and Territories.²¹

The pharmaceutical sector in Tonga is not extensively regulated and there are no legal restrictions on pharmaceutical sales to licensed outlets. However, Tonga has a well-functioning central procurement and distribution scheme.²⁰ The Central Pharmacy and Medical Supplies unit, managed by the Ministry of Health, procures and distributes medicines and therapeutic goods to the hospitals, health centres, reproductive health clinics and a limited number of village health workers.²

Public pharmaceutical expenditure, with the exception of a small amount of international aid, is funded entirely by the Ministry of Health. The total value of medical drugs and supplies issued from the Central Pharmacy in 2010 was USD \$1.1 million (approximately 10% of recurrent health expenditure).² The average

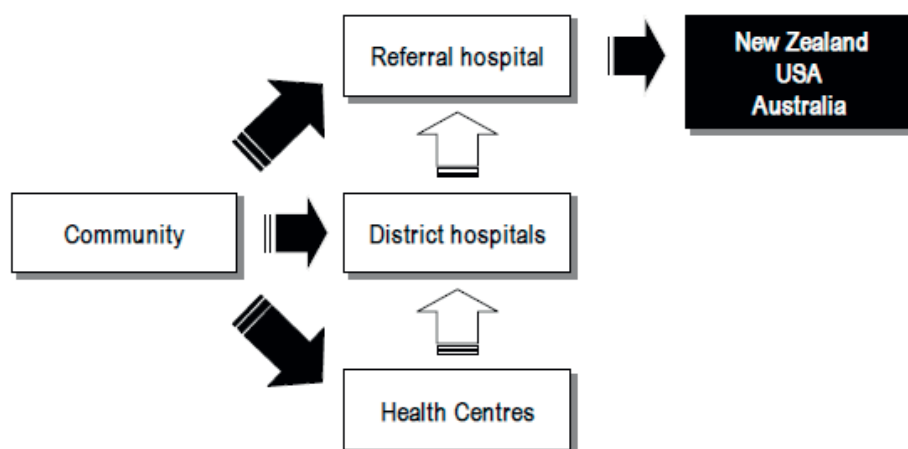
allocation for drugs is too low to cover the rising costs of drugs and medical supplies due to the weakening Tongan Pa'anga against key currencies (New Zealand and Australian dollar).¹⁴ Cost containment measures are in place by the Ministry and include restrictions on prescribing and dispensing for five different levels of medicinal drugs and restrictions on advertising and promotion.²⁰

Referrals and linkages through the provider network

Referrals in Tonga are meant to flow from outer island health centres or hospitals, to the main referral hospital (Figure 2). However, patients tend to by-pass health centres and go directly to district hospitals or Vaiola, placing considerable pressure on hospitals, increasing costs and reducing efficiency.¹¹ There are many reasons for over-utilization of secondary facilities, including:

- Access to doctors as providers of outpatient care in hospitals compared to nurses in primary care facilities
- Easy access to higher-level facilities
- Lack enforcement of the *Patient Referral Policy*
- Absence of any penalties for not using services at the lowest appropriate level.¹⁶

Figure 2. Current referral system in Tonga



Source: Kupu 2000¹⁶

Overseas Treatment Scheme

Due to Tonga's challenges in providing a full range of secondary and tertiary health services to the population, an Overseas Treatment Scheme managed by the Ministry refers patients requiring specialist care to New Zealand or Australia.¹ The *Ministry of Health Referral for Overseas Treatment Policy* establishes the guidelines and processes required to assess, recommend and approve a patient for referral for assessment or treatment by an overseas treatment provider. Overseas referrals are funded through two schemes: the Tongan Government and New Zealand Medical Treatment Scheme. The same referral process applies regardless of funding source. In 2010, Government spent 3.4% of total health budget on overseas referrals.¹

Visiting Specialist Teams

Core secondary services are supported by a schedule of Visiting Specialist Teams. Funding for the teams is provided by the Australian Agency for International Development through the Royal Australasian College of

Surgeon's Pacific Island Program, New Zealand Medical Treatment Scheme, faith-based organisations, Tonga Health Service Strengthening Project and the Ian Stratton Fund. The planning, delivery and management functions have been transferred across to the Ministry of Health in Tonga, who is now responsible for the planning, scheduling and selection of visiting clinical teams.¹

Quality

Health care delivery systems in Tonga seem to be working fairly well. However, quality and effectiveness are limited by various challenges including understaffing at Vaiola Hospital's outpatients department, a lack of senior medical staff on the remote outer islands, a widespread lack of equipment, rationed drugs and medical supplies, and a less-than-sufficient repair and maintenance budget.¹⁴ Like many other low- and middle-income countries, preventive services in Tonga are underfunded, despite evidence which indicates they are more cost-effective in addressing the major health problems.²²

There is no formal monitoring or evaluation of clinical outcomes for patients treated by Visiting Specialists or for those referred overseas for treatment.¹

Equity

The fact that most health care is free at the point of use contributes to reasonably equitable access across the population. The current tax-based health financing system in Tonga allows for cross-subsidisation, with fewer inequalities in service utilisation than in many other countries in the region.⁵ Hospitals are maintained even where utilisation rates are low, in order to ensure access to services in areas with low population density (see Table 2).

However, despite near universal coverage, inequalities in health care utilisation exist across socioeconomic groups. The Tonga Household Survey (2003) showed the poorest quintile reported 0.86 outpatient consultations per person per year, compared to 1.39 consultations in the richest quintile.⁵ Further, disparities exist between Tongatapu, the main island, and outer islands. Plane and boat connections to some of the smaller islands are not frequent and can take up to one day in travel time from the district town. In the most scattered group of islands (Ha'apai) the Ministry of Health does not have access to a boat for outreach visits or patient retrieval.²³

Mortality and morbidity data also suggest that health care is inequitable on a geographic basis. Some necessary preventive activities are limited by a lack of access to basic supplies and diagnostic equipment on the outer islands. Significant travel times to the hospital in Ha'apai and the absence of a hospital in the Niuaus mean that access to hospital facilities is more limited in these islands.¹⁴ As stated in *Tonga's Second National Millennium Development Goals Report (2010)*:

- Under-five and infant mortality rates are not disaggregated by region or sex, making it impossible to assesses for inequality between groups
- There are variations in the contraceptive prevalence rate by island group. Access to contraceptive services is available to everyone; however there is no system to measure the level of inequality of service.³

Demands and constraints on the service delivery model

A challenge facing Tonga as a small country is how to provide the full range of secondary and tertiary health services to meet the needs of the population, given its limited resources. While Tonga is reasonably well provisioned for basic level clinical services, it is unrealistic, inefficient and not cost-effective or clinically feasible to expect the Tongan health system to fund or deliver a full range of high-level secondary or tertiary services. These are provided through the Visiting Specialists Teams or Overseas Treatment Scheme.

Staff capacity and retention continues to be a challenge. The system is vulnerable due to the long lead-in time from undergraduate training to the completion of specialist training.¹ In an attempt to address this, Government has increased salary and wages from 60% of total health budget in 2003/04, to 65% in 2008/09. In absolute terms, this has resulted in an almost doubling of budget allocation to wages, from USD \$4.3 to \$8.2 million.⁵ In parallel with this, operational spending has decreased, and the provision of funds for essential operating costs is extremely limited (around USD \$600,000 annually).⁵ A number of operational items are now seriously under-funded, including travel and communication and maintenance.

Although non-communicable diseases account for a large share of Tonga's disease burden, cost-effective primary and secondary prevention strategies account for a small share of allocated resources. In the majority of cases, NCDs are diagnosed late and require more expensive, acute medical care. Out-patient contact rates are low, while hospitalisation rates are high. While health centres are intended to be the more cost-effective, 'front line' of health care, the growing tendency to bypass them and seek treatment at hospitals (even for minor ailments) needs to be addressed, particularly given the shortage of doctors. Some strategies are already in place, such as the establishment of a super clinic staffed by a doctor and the introduction of user fees at Vaiola Hospital.^{11,22}

Indicators of progress

The Ministry of Health's *Corporate Plan* establishes goals for each of the strategic result areas with detailed strategies and targets. Monitoring and evaluation of the Ministry's performance is done using key performance indicators. Additional mechanisms, such as the use of a Balanced Scorecard, Executive Performance Appraisal System and a detailed Annual Report are also in place to report on achievement of strategic goals.¹⁴ A total of 117 key performance indicators make up the Ministry's monitoring and evaluation framework over two strategic result areas (health system performance measures and health status indicators) and these are heavily focused on program outputs and outcomes.²⁴

- **Health system performance.** Tonga delivers a good range of general clinical services in the core areas of surgery, medicine, anaesthetics, obstetrics, gynaecology, mental health and paediatrics. The facilities provided at the main referral hospital in Tongatapu (Vaiola) are relatively new and have been well-planned to meet the needs of the population. However, access to basic health services in the Ha'apai and Vava'u island groups are inadequate. There is also a very low maintenance budget, which means the state of health assets and facilities is likely to be deteriorating over time
- **Health status indicators.** Tonga has performed relatively well compared with neighbouring Pacific countries, especially given a fairly low health sector share of total government recurrent spending. Tonga has reached and successfully maintained a low child mortality rate, partly as a result of a highly successful immunisation program; a high percentage of deliveries in health facilities, and a well structured public nursing child health program. However there are two clear challenges to this good health performance: the growing incidence of NCDs and a tight current macroeconomic and fiscal position that has led the Government to make significant cuts in health spending.¹⁴
- According to the 2012 NCD Risk Factors Report²⁷, the prevalence of NCDs in Tonga is very high: the prevalence of overweight in adults in 92.1% and the prevalence of obesity is the second highest in the world at 68.7%; the prevalence of raised blood cholesterol in adults was 49.7%

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