

GOVERNMENT OF TONGA



REPORT

of the

MINISTER

of

Health

for the year

2005

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1. ORGANISATIONAL OBJECTIVES AND FUNCTIONS

The Ministry of Health is responsible for the delivery of preventative and curative health services in the country.

1.1. Strategic Directions

The Ministry's **VISION** for the future is "MAKING A DIFFERENCE" and "CORE PURPOSE is,

To respond effectively to the health needs of the Tongan people by providing the appropriate range and level of high quality health services and being accountable for the outcomes of these services.

The Ministry's **CORE VALUES** are,

- Commitment to quality care
- Professionalism and accountability
- Care and compassion
- Commitment to education and training

The Ministry's **DARING GOAL** is,

To be the healthiest nation in the Pacific Rim as judged by international standards and determinants.

1.2. Strategic Key Result Areas And Goals

1.2.1. Healthy Communities and Populations through improved services

- Prevent or delay the onset of cardiovascular disease and diabetes, and to reduce complications and improve the quality of life through health promotion and improved management.
- Improve mental health services by improving the management of chronic psychiatric patients in the community and decrease the number of re-admissions.
- Decrease motor vehicle injuries and emergencies in Tonga and improve the services available to manage them.
- Improve the health of the Tongan people by ensuring equitable access to, and rational use of, safe and effective drugs of good quality.
- Reduce the incidence of dental decay in Tonga.
- Clearly identify existing cancer cases and increase the early detection of cancer in Tonga.
- Extend and develop general and specialised health promotion services.
- Develop strategies to prevent substance abuse.
- Support child and adolescent health and development.
- Combat communicable diseases with a focus on HIV/AIDS, Tuberculosis, and Filariasis.
- Develop community health services by gaining community support for the health centres and developing a team approach.
- Support services development in the island hospitals.
- Develop clinical services through improved clinical care and staffing.

1.2.2. Health Sector Development

- Significantly improve the efficiency and effectiveness of management systems and processes.
- Provide the Tonga health system with an efficient and effective financial management system.
- Provide the Tongan health system with improved facilities and equipment and to maintain these well.
- Strengthen informed decision making within the Ministry of Health through the provision of appropriate information management.

1.2.3. Staff Training and Development

- Improve and strengthen workforce management and development.
- Continue to organise formal education, and in service training programs for staff.
- Prioritise training needs.
- Develop workforce planning processes.

1.2.4. Service Partnerships

- Work with Non Government Organisations, communities, other Government departments and donor organisations to implement these priorities.

1.3. Programme Objectives and Mission Statement

Operationally the Ministry mirrors the budget structure to facilitate programme evaluation and consists of six programmes,

1. Leadership, policy advice and programme administration
2. Preventative health care services
3. Curative health care services
4. Dental services
5. Nursing services
6. Health planning and information services

1.3.1. Programme 1: Leadership, policy advice and programme administration

Programme Objectives and Mission Statement: To provide efficient and effective support services to the Ministry and all health districts with regard to administration, human resources and financial management, transport and communication services.

1.3.2. Programme 2: Preventative health services

Programme Objectives and Mission Statement: To help the people in Tonga to achieve the highest attainable level of health as defined by World Health Organisation's constitution as "a state of complete physical, mental and social well-being and not merely the absence of infirmity", by:

- Significantly reduce morbidity and mortality due to infectious diseases.
- Provide environmental health services which result in a healthier community due to improved regulation, monitoring and health promotion activities.
- Assisting all health providers in the promotion of health through their respective areas of care and to empower the public at large in looking after their own health.
- Providing effective services to the health of mothers, children and others through a reproductive health strategic approach extending community health services to the people who need our services the most.

1.3.3. Programme 3: Curative health services

Programme Objectives and Mission Statement: To be able to provide the best possible care for patients, to prioritise areas that need change and to use the available resources in the most appropriate and effective way.

1.3.4. Programme 4: Dental services

Programme Objectives and Mission Statement: To respond effectively to the oral health needs of the people of Tonga by providing preventive and curative oral health programmes, information and services and be responsible for its outcomes.

1.3.5. Programme 5: Nursing services

Programme Objectives and Mission Statement: To contribute to the health of the national through the provision of the best possible nursing care services.

1.3.6. Programme 6: Health Planning and Information services

Programme Objectives and Mission Statement: To provide efficient and effective health planning, health information, project planning and medical records services to its customers and stakeholders within and from outside the Ministry locally, regionally and internationally.

In implementing its services and activities the Ministry is governed by the following Acts:

- Tobacco Act 2001/Tobacco Control (Amendment) Act 2004
- Public Health Act 1992
- Mental Health Amendment Act 2001
- Health Practitioners Registration Act 1991
- Health Services Act 1991
- Garbage Act 1945

2. HEALTH ADMINISTRATION AND MANAGEMENT

In delivering its services to the public, the Ministry is divided into six functional divisions,

- Administration
- Health Planning and Information
- Public Health
- Medical
- Nursing
- Dental

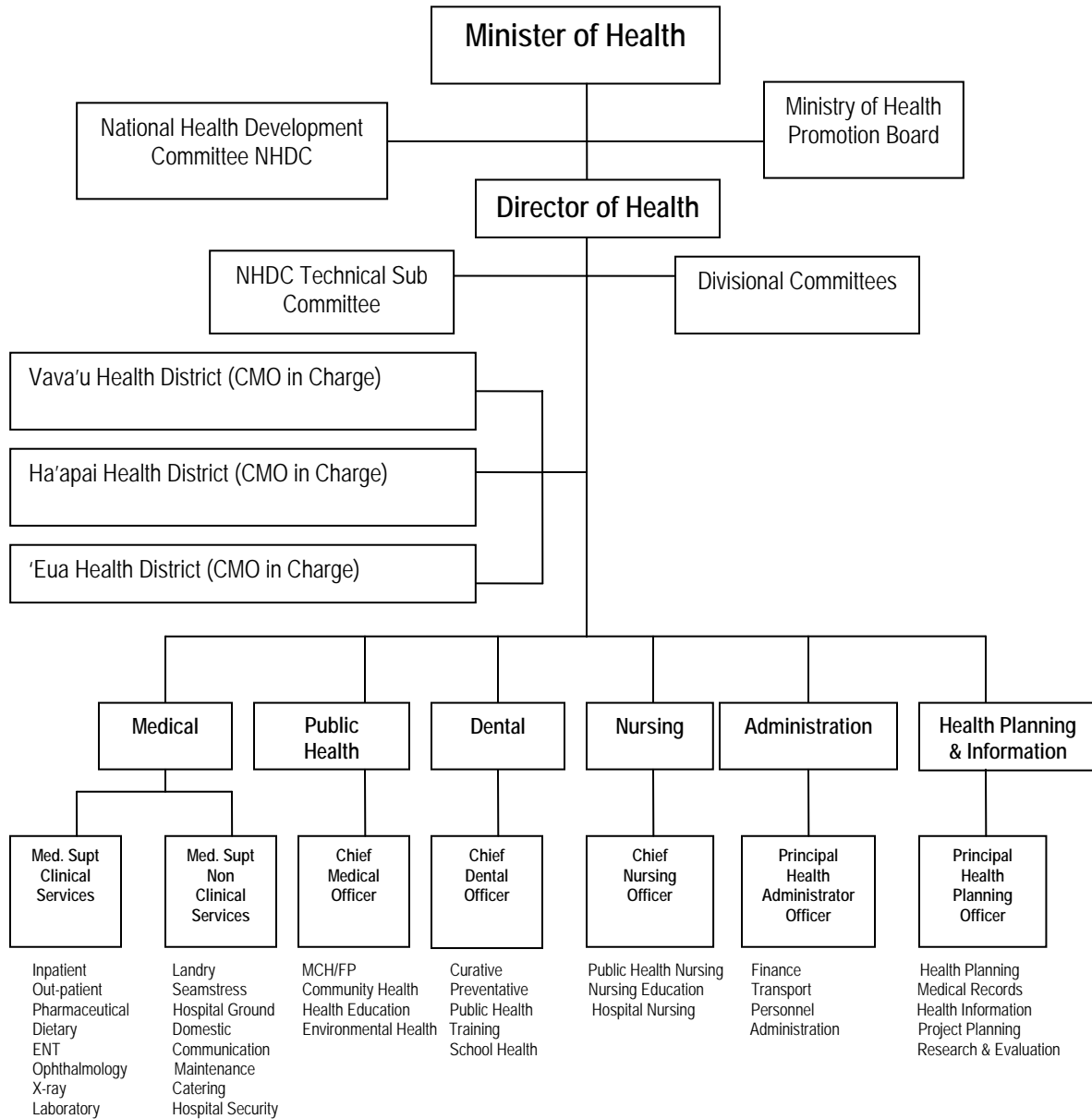
Divisional heads are responsible to the Director of Health for the implementation of each Division's services.

2.1. Ministry of Health Executive

As of 31 December 2005 the following officers were responsible for the administration and management of the Ministry and its respective Divisions.

Minister of Health	Dr Viliami Ta'u Tangi
Head of Department	Dr Litili 'Ofanoa
Administration	Mr Tu'akoi 'Aho Principal Health Administrator
Dental	Dr Viliami Sikalu Latu Chief Dental Officer
Health Planning and Information	Mr Taniela Sunia Soakai Principal Health Planning Officer
Medical Superintendent	Dr Siale 'Akau'ola Medical Superintendent, Clinical Services
Medical Superintendent	Dr 'Akanesi Makakaufaki Medical Superintendent, Support Services
Nursing	Ms 'Amelia Lata Malu Chief Nursing Officer
Public Health	Dr Malakai 'Ake Chief Medical Officer, Public Health

2.2. Organization Structure



2.3. District Hospitals

As of 31 December 2005 the following officers were responsible for the management of the outer island health districts.

Prince Ngu Hospital
Vava'u Health District

Dr Edgar 'Akau'ola
Chief Medical Officer

Niu'ui Hospital
Ha'apai Health District

Dr Lisiate 'Ulufonua
Acting Chief Medical Officer

Niu'eiki Hospital
'Eua Health District

Dr. 'Elenoa Matoto
Acting Chief Medical Officer

3. OVERVIEW OF HEALTH INDICATORS

The health situation for Tonga in the last five years is reflected in the following table.

Table 1 Health Indicator(s) For Tonga 2001 – 2005

INDICATOR		2005	2004	2003	2002	2001
1	Estimated Population ('000)	102.3	101.8	101.4	101.0	100.7
2	Annual Population growth	0.3	0.3	0.3	0.3	0.3
3	Percentage of Population less than 14 years	35**	36**	36**	36**	37**
	Percentage of population 65 years and over	6**	6**	5.9**	5.8**	5.7**
4	Percentage of urban population	36	36	36	36	36
5	Rate of natural increase	20.4	17.7	20.2	18.4***	19.4***
6	Crude Birth Rate	25.7	23.8	26.2	24.2***	25.1***
7	Crude Death Rate	5.3	6.1	5.8	5.8***	5.7***
8	Maternal Mortality Rate (per 100,000)	227.8	82.3*	0	78.2*	0.0*
9	Life Expectancy at Birth (combined)					
	Life Expectancy (Male)	70	70	70	70	70
	Life Expectancy (Female)	72	72	72	72	71
10	Infant Mortality Rate	11.8	15.7	12.8	9.8	13.0
11	Perinatal Mortality Rate (per 1,000 live births)	10.8	10.3	13.2	15.8	18.5
12	Total Health expenditure ('000)	14845	13019	11294	9895	9545
	Per Capita	145	130***	116***	108***	104***
	As a percentage of total recurrent budget	10.4	11.6***	10.4***	10.6***	11.5***
13	Health workforce					
	Medical Officers at post	45	41	42	32	35 ***
	Health Officers at post	21	20	21	20	26
	Nursing and Midwifery at post	362	316	343	326	322
14	Percentage of population with safe water supply	97	94	97	97	97
15	Percentage of household with adequate sanitary facilities	97	90	94	94.7	94
16	Immunization coverage	99.5	99.6	98.5	97	93.4
17	Percentage of pregnant women immunized with tetanus toxoid	95.7	92	93	94.7	81.1
18	Percentage of population with access to appropriate health care services with regular supply of essential drugs within one hours walk	100	100	100	100	100
19	Percentage of infants attended by trained personnel	100	100	100	100	95.3
20	Percentage of married couples practicing contraception	19.7	23	22.1	23.1	33.6
21	Percentage of pregnant women attending ante natal care	99	99	98.7	98.5	98.5
22	Percentage of deliveries conducted by trained personnel	96.1	98	97	95.1	95.3
23	Total Fertility Rate	3.4	3.8	3.4	3.3	3.4

* Maternal Mortality Rate has been calculated using standard formula (per 100,000 live births).

** Calculated based on the assumption fertility rates will decrease and life expectancy will increase overtime.

*** Amended from statistic published in 2001 and 2004 Annual Report.

3.1. Life Expectancy

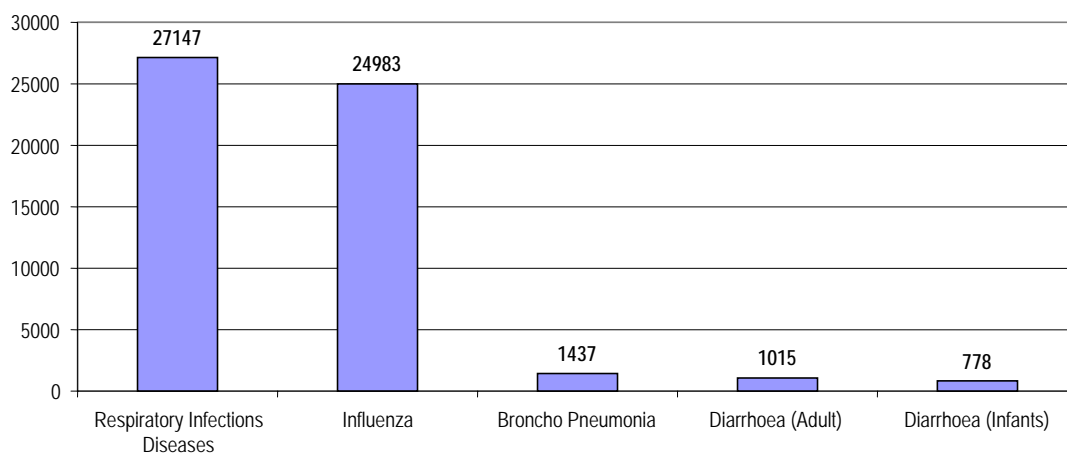
The projected life expectancy at birth in 2005 for females is 72 and 70 for males.

3.2. Projected Population

The results of the 1996 population census indicate the country's population was 97,784 and the projected population for Tonga for 2005 is 102,369 increasing to 103,647 by 2008.

3.3. Morbidity (Notifiable Disease)

Table 2 Five Leading Causes of Notifiable Disease for 2005



The most commonly reported Notifiable Disease for 2005 are the Respiratory Infection Group (27174 cases) followed by Influenza/Influenza like illnesses (24983 cases). There is almost a 20 fold difference between these 2 leading disease categories and the third, bronchopneumonia (1437 reported cases) and levelling off at 1015 and 778 cases of adult and infant diarrhoea respectively. It is emphasised however that the influenza cases reported are not serologically confirmed cases.

Further consultation with appropriate health personnel confirms that apart from the absence of serological confirmation the diagnosis is also clinically non-specific due to the use of the term influenza for a majority of cases ranging from mild viral illnesses such as the common cold to headaches and body aches lasting 2 to 3 days or more severe viral illnesses.

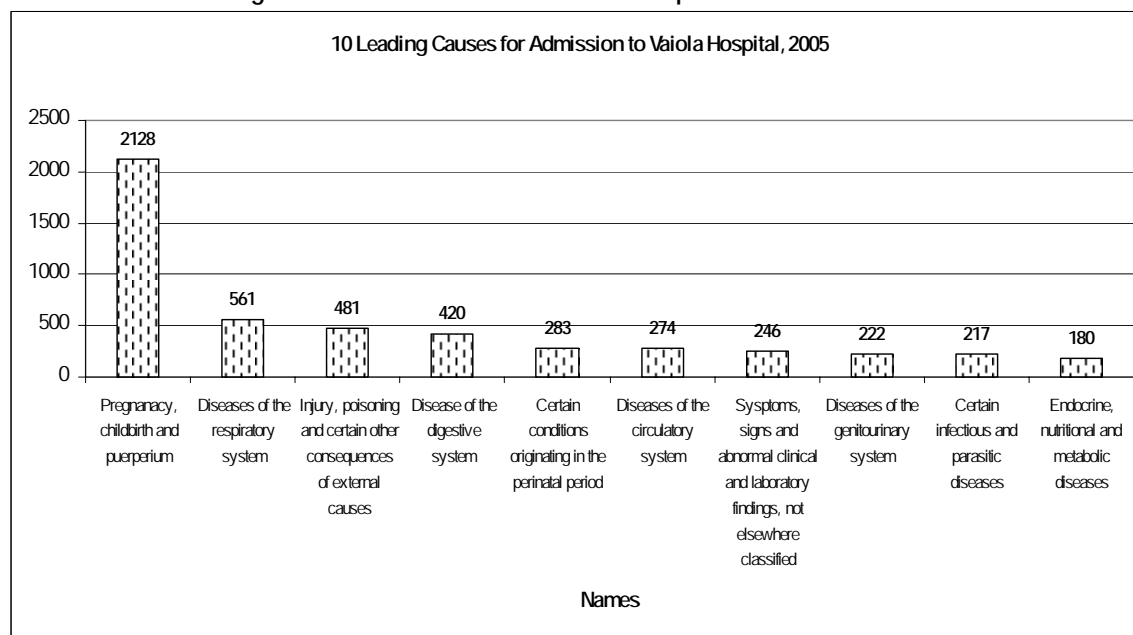
Genuine efforts are being put in place to rectify this inappropriate reporting practice but will need more vigilant and dedicated efforts from personnel submitting Notifiable Diseases reports. In addition to securing accurate disease reports it will facilitate the equally important and current process of developing strategies with the view of the imminent threat of influenza 'shift' and 'drift' possibilities.

The major Notifiable Diseases for Tonga for over 2 decades has been respiratory followed by diarrhoea. Bronchopneumonia as a major Notifiable Disease has a relatively low fatality rate accounting for only 41 deaths in 200 with over 50% of respiratory disease deaths occurring among the elderly (75 and over). The high male to female mortality ration is replicated among the respiratory diseases. There was a male to female ratio of 7 to 1 among deaths due to respiratory causes among the 65 to 74 age group and 2 to 1 overall (male to female).

It is acknowledge however that the absence of death does not equate with the absence of health and the endemicity of respiratory infections translate to morbidity costs including economic, social as well as the quality of life burdens. Similarly, diarrhoea while represented by low figures is a preventable condition and can be managed simply and at an affordable cost.

3.4. Morbidity (Vaiola Hospital)

Table 3 Ten Leading Causes of Admission to Vaiola Hospital - 2005



Pregnancy and pregnancy related issues are the leading cause of admission to Vaiola Hospital. This category also includes a small proportion of patients who have some type of complication which is associated with pregnancy. The WHO Country Health Information Profile reports by WHO, the birth rate for Tonga as (26) which is lower than other Pacific Island countries such as Samoa (CBR=29) and Tuvalu (CBR=27). There are some concerns in relation to the increased maternal death rate which are being managed by improved screening of maternal risk factors (heart disease and hypertension).

The second leading cause of admissions are diseases of the respiratory system with a high proportion in the 0-13 age group. While prevalence rates are high, mortality in this age group is low and reflects the excellent services rendered by the Paediatric ward and clinical support services. A second significant group is chronic obstructive airway disease affecting mainly males (60) and is considered to be related to smoking.

Injury and poisoning are the third major cause for admission. The majority of these patients are males with head injuries. The cause of the head injuries vary and include motor vehicle accidents and assault. Most of the injuries in this category are preventable and require education and legislation to reduce the incidence.

More than 50% of the patients admitted with diseases related to digestive system are aged 1-12. The majority of these patients suffered from gastroenteritis. The Paediatrician Specialist outlines in

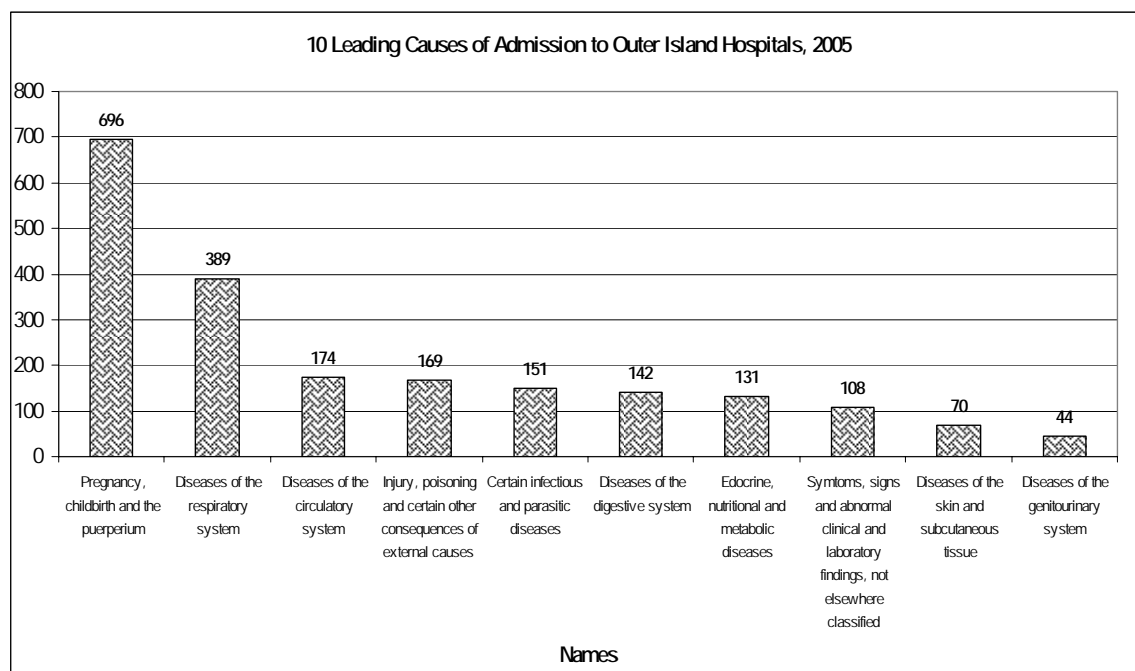
table 29 that there was an epidemic of gastroenteritis in August to December 2005 resulting in a six (6) deaths, the highest in the last five years.

Certain conditions originating in the perinatal period is the fifth leading cause for admission. Forty three percent (43%) of this group are babies with jaundice, which is well managed with low mortality.

In summary, women and children are the groups represented in the five leading causes for admission, however this does not mean they are in poor health. Women and children have a high incidence of admission but a low mortality rate. The highest mortality is in the sixth to tenth leading causes of admission and are related to lifestyle disease (diabetes and heart disease).

3.5. Morbidity (Outer Island Hospitals)

Table 4 Ten leading causes of admission – Outer Islands 2005



The profile for leading cause of admission for the Outer Islands Hospitals is similar to Vaiola Hospital, The main reason for admission is pregnancy childbirth and the puerperium followed by respiratory diseases. These two categories consist mainly of women and children with a small proportion of adult males with chronic obstructive airway disease.

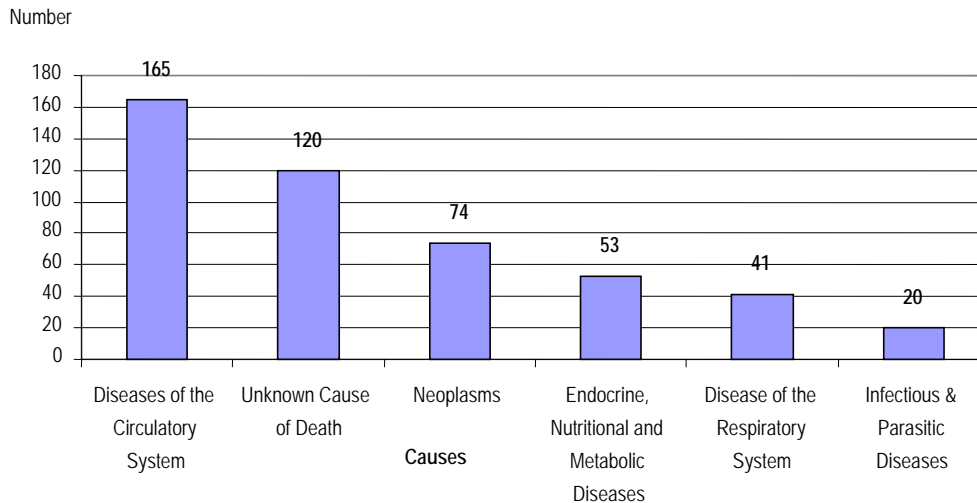
Circulatory disease is ranked third in the outer island hospitals compared to sixth for Vaiola Hospital. In general, there are more older people accessing health services in the outer islands than Tongatapu and this may influence circulatory disease figures.

The injury and poisoning category in the outer islands is different to Vaiola Hospital. The majority of the patients treated in the injury and poisoning category for the outer island complained of food poisoning that was generally sea food related. The remainder were general injuries similar to Vaiola Hospital.

In summary, the major difference between the ten leading causes of admission related to perinatal admission and can be explained by the differences in population profile and mobility of those in child bearing age group.

3.6. Mortality

Table 5 Reported Leading Causes of Mortality for 2005



Diseases of the Circulatory System are the leading cause of death in Tonga. This has been the trend over the last decade. The alignment of this pattern with neighbouring Pacific countries gives testimony to repeated documentation of cardiovascular disease and other non communicable disease as an established epidemic in the region calling for extreme measures to combat this epidemiological transition.

The number of deaths where the cause of death was unknown unfortunately was just marginally lower at second place. It is a major concern of course in such a situation where the second biggest number of deaths occurs and the cause of these are undetermined. The situation may not be immediately amendable given the rarity of post mortems performed, a practice that may continue for some time yet.

More than 50% of all deaths among this category are due to cardiac arrest/infarct alone and a disproportionate number of males dying compared to females at a ratio of 2 to 1. It is true that the majority of these deaths are among the 65 plus year olds there are increasing cardiac deaths occurring in 2005 and in recent years among a younger age group such as those events occurring among 35 to the mid 50 year olds and as young as 24 years old.

Cancer has continued to make its presence palpable and the second leading cause of death (excluding the deaths with undetermined causes). While the reported cancer is well below the expected incidence there nevertheless appears to be a mixed pattern with 'Western' cancer patterns where lung and colorectal predominate in both genders, breast in women and prostate as well as a 'developing' country pattern with cancer of female genital organs, liver and stomach being high. The ministry has been aware and is taking steps to meet this serious problem as outlined in the Cancer Registry Section report.

A major burden with significant economic implications as well as burden to families and quality of life among individuals is the high death toll due to diabetes. Among the deaths reported in 2005 for Endocrine, Nutritional and Metabolic Causes there were 53 deaths reported. Of these 53 deaths diabetes was the cause of death for 51 of them.

While respiratory infectious diseases remain the leading Notifiable Diseases the number of people dying from diabetes (51) still outweighs those dying from diseases of the respiratory system (41). The predominance of respiratory infections is in line with recent decades and neighbouring countries' patterns.

It is acknowledge that the high 'Influenza' reported is in fact not confirmed influenza or clinical influenza either in the majority of cases and is making efforts to rectify this misclassification.

4. HEALTH RESOURCES

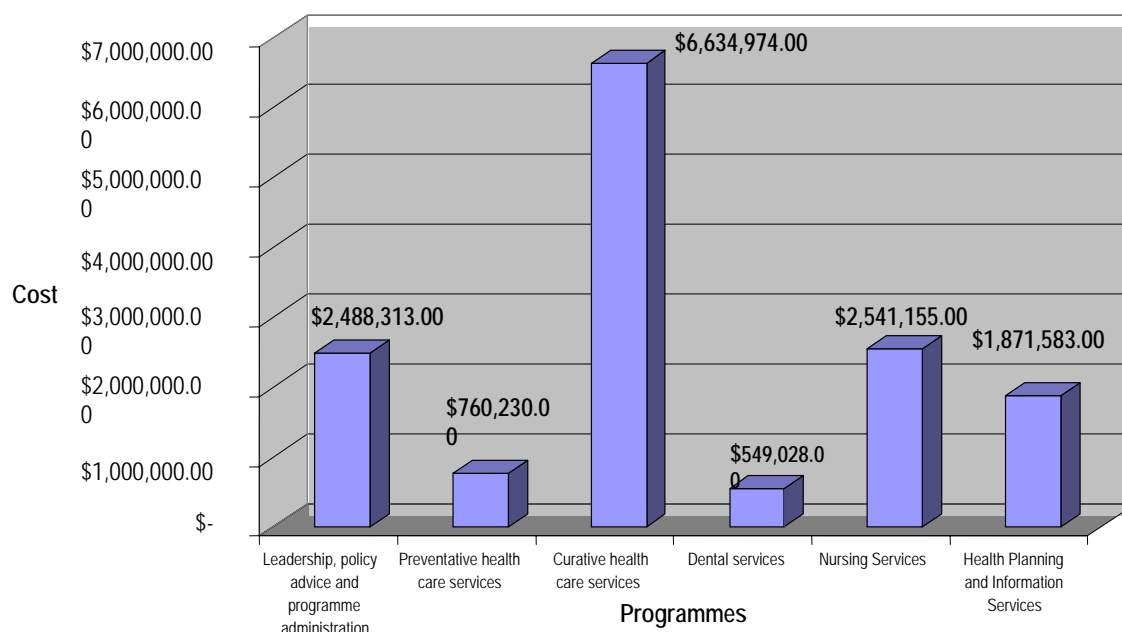
In proposing to Government the annual budget for the Ministry reports under four programme areas,

- Leadership, policy advice and programme administration
- Preventative health care services
- Curative health care services
- Dental services
- Nursing services
- Health Planning and Information services

4.1. Financial Resources

The total recurrent allocation for the Ministry for the 2005-2006 financial year was \$14,845,283.00 with an estimated expenditure per head of \$145. The allocation to health represents 10.4 percent of government's total budget. Budget details can be found in Appendix 2 and 3.

Table 6 Ministry of Health Estimates 2005-2006



4.2 Human Resources for Health

Table 7 Officials and Personnel of the Ministry of Health by Post, 2001-2005

POST	2005		2004		2003		2002		2001	
	Est Post	Post Filled	Est Post	Post Filled	Est Post	Post Filled	Est Post	Post Filled	Est Post	Post Filled
Hon. Minister of Health	1	1	1	1	1	1	1	1	1	1
Administration	9	7	8	6	8	5	8	6	8	5
Medical Staff	103	75	83	63	85	65	88	66	90	70
Dental Staff	53	43	45	41	46	43	52	37	52	38
Nursing Staff	421	362	400	315	380	342	385	325	381	321
Technical Staff	158	121	161	130	164	132	166	113	161	121
Accounting and Clerical	57	47	51	47	50	44	47	43	45	45
Supervisory and Domestic	169	154	193	177	196	160	186	122	176	147
Total	971	810	942	780	930	792	933	713	914	748

The Ministry has a total of 971 established posts with only 810 positions being filled in 2005. Different approaches were adopted by the Ministry to perform the duties of critical vacant posts such as merging responsibilities, employ daily paid staff, outsourcing of services such as security and maximized utilization of available human resources.

The Ministry continues to place priority in the development of its various cadres of health personnel, through in-service, local training, overseas attachments and formal programmes at both undergraduate and postgraduate levels.

The Ministry conducted various local workshops and trainings as part of its ongoing staff development initiative. The Ministry participates in local training under the auspicious of the Civil Service Training and Community Development Training Centres. Medical and dental undergraduates continue to be trained overseas.

4.3 Staff Promotions

In acknowledging academic achievements and outstanding performance the following staff members of the Ministry were promoted during the year.

Table 8 Staff Promotions for 2005

Names	From	To	Effective Date	Public Service Commission Decision
Dr Faka'osi Pifeleti	Medical Officer Special Grade	Senior Medical Officer	4/1/05	PSCD.No.3 of 28/1/05
Dr Ma'ata Sikalu	Medical Officer Special Grade	Senior Medical Officer	4/1/05	PSCD.No.3 of 28/1/05
Dr 'Ana 'Akau'ola	Medical Officer Special Grade	Senior Medical Officer	4/1/05	PSCD.No.3 of 28/1/05
Dr Lemisio Sa'ale	Medical Officer	Medical Officer Special Grade	4/1/05	PSCD.No.3 of 28/1/05
Dr Siosaia Piukala	Medical Officer	Medical Officer Special Grade	4/1/05	PSCD.No.3 of 28/1/05
Dr Lisiate 'Ulufonua	Medical Officer	Medical Officer Special Grade	4/1/05	PSCD.No.3 of 28/1/05
No'otapa'ingatu Fakatulolo	Student Nurse	Staff Nurse	1/2/05	PSCD.No.132 of 31/3/05
Kasanita Fifita	Student Nurse	Staff Nurse	1/2/05	PSCD.No.132 of 31/3/05
Lupe Fifita	Student Nurse	Staff Nurse	1/2/05	PSCD.No.132 of 31/3/05
Mele H. Filise	Student Nurse	Staff Nurse	1/2/05	PSCD.No.132 of 31/3/05

Names	From	To	Effective Date	Public Service Commission Decision
Sulia F. Fonua	Student Nurse	Staff Nurse	1/2/05	PSCD.No.132 of 31/3/05
Maika Fungalei	Student Nurse	Staff Nurse	1/2/05	PSCD.No.132 of 31/3/05
Meliame K. Halatanu	Student Nurse	Staff Nurse	1/2/05	PSCD.No.132 of 31/3/05
Manatu Langi	Student Nurse	Staff Nurse	1/2/05	PSCD.No.132 of 31/3/05
Lesieli Lavelua	Student Nurse	Staff Nurse	1/2/05	PSCD.No.132 of 31/3/05
'Asinate Likiliki	Student Nurse	Staff Nurse	1/2/05	PSCD.No.132 of 31/3/05
Uaisele. Mafi	Student Nurse	Staff Nurse	1/2/05	PSCD.No.132 of 31/3/05
Melesipa. Matania	Student Nurse	Staff Nurse	1/2/05	PSCD.No.132 of 31/3/05
Talaheu. Pifeleti	Student Nurse	Staff Nurse	1/2/05	PSCD.No.132 of 31/3/05
Fatafehi Soakai	Student Nurse	Staff Nurse	1/2/05	PSCD.No.132 of 31/3/05
'Aholata Taione	Student Nurse	Staff Nurse	1/2/05	PSCD.No.132 of 31/3/05
Makelesi Tangi	Student Nurse	Staff Nurse	1/2/05	PSCD.No.132 of 31/3/05
Tupou Tauhelangi	Student Nurse	Staff Nurse	1/2/05	PSCD.No.132 of 31/3/05
Fipe Taufu'i	Student Nurse	Staff Nurse	1/2/05	PSCD.No.132 of 31/3/05
Mounu Tupou	Student Nurse	Staff Nurse	1/2/05	PSCD.No.132 of 31/3/05
Tovika Vailea	Student Nurse	Staff Nurse	1/2/05	PSCD.No.132 of 31/3/05
Sesimani Vuki	Student Nurse	Staff Nurse	1/2/05	PSCD.No.132 of 31/3/05
Satua Pongi	Nurse Midwife	Senior Nurse Midwife	1/3/05	PSCD.No.65 of 1/3/05
'Onita Tupou	Nurse Midwife	Senior Nurse Midwife	1/3/05	PSCD.No.65 of 1/3/05
'Ana Paletu'a	Nurse Midwife	Senior Nurse Midwife	1/3/05	PSCD.No.65 of 1/3/05
Satua Kanongata'a	Public Health Nurse	Senior Public Health Nurse	1/3/05	PSCD.No.65 of 1/3/05
Kaloni Folau	Staff Nurse	Senior Public Health Nurse	1/3/05	PSCD.No.65 of 1/3/05
'Ana Vaka'uta	Public Health Nurse	Senior Public Health Nurse	1/3/05	PSCD.No.65 of 1/3/05
Mele Havealeta	Principal Staff Nurse	Senior Nurse Sister	1/3/05	PSCD.No.65 of 1/3/05
Mele Falemata	Senior Staff Nurse	Nursing Sister	1/3/05	PSCD.No.65 of 1/3/05
'Ilaivaha Mafi	Senior Staff Nurse	Nursing Sister	1/3/05	PSCD.No.65 of 1/3/05
Losa Lea	Staff Nurse	Senior Staff Nurse	1/3/05	PSCD.No.65 of 1/3/05
Kaupo'u Taufu'a	Staff Nurse	Senior Staff Nurse	1/3/05	PSCD.No.65 of 1/3/05
'Iunaise Fisi'ilose	Staff Nurse	Senior Staff Nurse	1/3/05	PSCD.No.65 of 1/3/05
Lupe Kaihea	Staff Nurse	Senior Staff Nurse	1/3/05	PSCD.No.65 of 1/3/05
'Ailine Fosita	Wardmaid	Domestic Supervisor	1/3/05	PSCD.No.65 of 1/3/05
'Alilia Vuna	Seamstress	Seamstress Supervisor	1/3/05	PSCD.No.65 of 1/3/05
Sioeli Fukofuka	Sterile Supply Asstant	Senior Sterile Supply Supervisor	1/3/05	PSCD.No.65 of 1/3/05
Mele Vainikolo	Senior Nursing Sister	Assistant Matron	1/3/05	PSCD.No.65 of 1/3/05
Pinomi Latu	Staff Nurse	Nursing Sister	1/3/05	PSCD.No.63 of 1/3/05
Louhangale Sauaki	Clerk Class II	Accounting Officer Diplome	1/3/05	PSCD.No. 64 of 1/3/05
Mita Vaka	Assistant Pharmacist Trainee	Assistant Pharmacist Grade II	3/1/05	PSCD.No.242 of 13/6/05
Neini Tulikaki	Assistant Pharmacist Trainee	Assistant Pharmacist Grade II	3/1/05	PSCD.No.242 of 13/6/05
Masani 'o Salome 'Anau	Assistant Pharmacist Trainee	Assistant Pharmacist Grade II	3/1/05	PSCD.No.242 of 13/6/05
Finau Silipa Latu	Assistant Pharmacist Trainee	Assistant Pharmacist Grade II	3/1/05	PSCD.No.242 of 13/6/05
Ma'ata Veituna Palu	Assistant Pharmacist Trainee	Assistant Pharmacist Asst Grade II	3/1/05	PSCD.No.242 of 13/6/05
Dr. 'Akanesi Makakaufaki	Senior Medical Officer	Medical Superintendent	1/7/05	PSCD.No. 407 of 7/10/05
Dr. Toakase Fakakovikaetau	Senior Medical Officer	Specialist Paediatrician	1/7/05	PSCD.No. 407 of 7/10/05
Lasini Sinamoni	Senior Accounting Officer	Principal Accounting Officer	1/7/05	PSCD.No. 407 of 7/10/05
Tupou Kainga	Chief Clerk	Accounting Officer	1/7/05	PSCD.No. 407 of 7/10/05
'Alapasita Havea	Clerk Class II	Clerk Class I	1/7/05	PSCD.No. 407 of 7/10/05
Siosifa Kafa	VIP	Senior VIP	1/7/05	PSCD.No. 407 of 7/10/05

Names	From	To	Effective Date	Public Service Commission Decision
No'otapa'ingatu Fakatulolo	Staff Nurse	Staff Nurse Diplomate	1/7/05	PSCD.No. 407 of 7/10/05
Kasanita Fifita	Staff Nurse	Staff Nurse Diplomate	1/7/05	PSCD.No. 407 of 7/10/05
Lupe M. Fifita	Staff Nurse	Staff Nurse Diplomate	1/7/05	PSCD.No. 407 of 7/10/05
Mele Filise	Staff Nurse	Staff Nurse Diplomate	1/7/05	PSCD.No. 407 of 7/10/05
Sulia F. Fonua	Staff Nurse	Staff Nurse Diplomate	1/7/05	PSCD.No. 407 of 7/10/05
Maika Fungalei	Staff Nurse	Staff Nurse Diplomate	1/7/05	PSCD.No. 407 of 7/10/05
Meliame Halatanu	Staff Nurse	Staff Nurse Diplomate	1/7/05	PSCD.No. 407 of 7/10/05
Manatu Langi	Staff Nurse	Staff Nurse Diplomate	1/7/05	PSCD.No. 407 of 7/10/05
Lesieli Lavelua	Staff Nurse	Staff Nurse Diplomate	1/7/05	PSCD.No. 407 of 7/10/05
'Asinate Likiliki	Staff Nurse	Staff Nurse Diplomate	1/7/05	PSCD.No. 407 of 7/10/05
Uaisele Mafi	Staff Nurse	Staff Nurse Diplomate	1/7/05	PSCD.No. 407 of 7/10/05
Pelesipa Matania	Staff Nurse	Staff Nurse Diplomate	1/7/05	PSCD.No. 407 of 7/10/05
Talaheu Pifeleti	Staff Nurse	Staff Nurse Diplomate	1/7/05	PSCD.No. 407 of 7/10/05
Fatafehi Soakai	Staff Nurse	Staff Nurse Diplomate	1/7/05	PSCD.No. 407 of 7/10/05
'Aholata Taione	Staff Nurse	Staff Nurse Diplomate	1/7/05	PSCD.No. 407 of 7/10/05
Makelesi Tangi	Staff Nurse	Staff Nurse Diplomate	1/7/05	PSCD.No. 407 of 7/10/05
Tupou Taelangi	Staff Nurse	Staff Nurse Diplomate	1/7/05	PSCD.No. 407 of 7/10/05
Fipi Taufu'i	Staff Nurse	Staff Nurse Diplomate	1/7/05	PSCD.No. 407 of 7/10/05
Mounu Tupou	Staff Nurse	Staff Nurse Diplomate	1/7/05	PSCD.No. 407 of 7/10/05
Tovika Vailea	Staff Nurse	Staff Nurse Diplomate	1/7/05	PSCD.No. 407 of 7/10/05
Sesimani Vuki	Staff Nurse	Staff Nurse Diplomate	1/7/05	PSCD.No. 407 of 7/10/05
Silaiti Kakala	Dental Technologist	Dental Prosthodontist (redesignation)	1/7/05	PSCD.No. 407 of 7/10/05
Poaki Totau	Computer Operator Grade III	Computer Operator Grade II	1/7/05	PSCD.No. 407 of 7/10/05
Pelenatita Siasau	Computer Operator Grade III	Computer Operator Grade II	1/7/05	PSCD.No. 407 of 7/10/05
Sosefina Moa	Clerk Class III	Clerk Class II	1/7/05	PSCD.No. 407 of 7/10/05
Polonitina Tai	Assistant Pharmacist. Grade II Trainee	Assistant Pharmacist Grade II	11/3/05	PSCD.No.369 of 7/10/05
Paea Langoia	Health Officer	Senior Health Officer	7/10/05	PSCD.No.370 of 7/10/05
Talanoa Tufui	Dental Therapist Trainee	Dental Therapist	1/7/05	PSCD.No.292 of 20/7/05
Keti Mavae Sikalu	Dental Therapist Trainee	Dental Therapist	1/7/05	PSCD.No.292 of 20/7/05
Lusia Latu Salt	Dental Therapist Trainee	Dental Therapist	1/7/05	PSCD.No.292 of 20/7/05
Etta Afu	Dental Therapist Trainee	Dental Therapist	1/7/05	PSCD.No.292 of 20/7/05
Salote Tava	Dental Therapist Trainee	Dental Therapist	1/7/05	PSCD.No.292 of 20/7/05
Lusiola Kinikini	Dental Therapist Trainee	Dental Therapist	1/7/05	PSCD.No.292 of 20/7/05
Tupou S. Tupou	Dental Therapist Trainee	Dental Therapist	1/7/05	PSCD.No.292 of 20/7/05
Nukonuka Mafile'o	Public Health Assistant Grade II	Public Health Assistant Grade I	7/10/05	PSCD.No.367 of 7/10/05
Tupou Mapakaitolo	Senior Nurse Midwife	Snr Nursing Sister	9/12/05	PSCD.No.460 of 9/12/05
Mele Pongj Finau	Senior Staff Nurse	Nursing Sister	9/12/05	PSCD.No.460 of 9/12/05
Langi Tupou	Senior Staff Nurse	Nursing Sister	9/12/05	PSCD.No.460 of 9/12/05
Folole Palelei	Clinical Nursing Tutor	Nursing Sister	9/12/05	PSCD.No.460 of 9/12/05
Salome Toko	Staff Nurse	Senior Staff Nurse	9/12/05	PSCD.No.460 of 9/12/05
Lona Uaisele	Staff Nurse	Senior Staff Nurse	9/12/05	PSCD.No.460 of 9/12/05
Tupou Fangupo	Staff Nurse	Senior Staff Nurse	9/12/05	PSCD.No.460 of 9/12/05
Sisifa Pongia	Staff Nurse	Senior Staff Nurse	9/12/05	PSCD.No.460 of 9/12/05
Valeti Laulaupea'alu	Public Health Nurse	Senior Public Health Nurse	9/12/05	PSCD.No.460 of 9/12/05
Sanitina Makaafi	Public Health Nurse	Senior Public Health Nurse	9/12/05	PSCD.No.460 of 9/12/05
Manafonu Siola'a	Public Health Nurse	Senior Public Health Nurse	9/12/05	PSCD.No.460 of 9/12/05
Vasitai Toli	Public Health Nurse	Senior Public Health Nurse	9/12/05	PSCD.No.460 of 9/12/05
Leaola Tuiaki	Nurse Midwife	Senior Public Health Nurse	9/12/05	PSCD.No.460 of 9/12/05
Dr. 'Alani Tangitau	Medical Officer	Senior Medical Officer	2/12/05	PSCD.No.133 of 9/5/06

4.4 Staff Retirement

The Ministry acknowledges the dedicated service provided by the following officers who retired from the service during the year.

Table 9 Staff Retirement for 2005

Name	Post	Effective Date	Public Service Commission Decision
Tukuile'o Holani	Staff Nurse	31/3/05	PSCD.No.19 of 28/1/05
Mele Sita Mafile'o	Laboratory Maid	31/3/05	PSCD.No.130 of 31/3/05
Mele Tu'ikolovatu Tu'ikolovatu	Public Health Assistant Grade I	1/3/05	PSCD.No.76 of 1/3/05
Viliami Tautua'a	Senior Hospital Executive Officer	13/6/05	PSCD.No.246 of 13/6/05
Keleni Kava	Staff Nurse	20/7/05	PSCD.No.309 of 20/7/05
Lokasi Langi	Wardsmaid	20/7/05	PSCD.No.310 of 20/7/05
Paula Taufu Tovo	Male Orderly	7/10/05	PSCD.No.381 of 7/10/05
Keio Kava	Dental Chairside	2/11/05	PSCD.No.426 of 2/11/05
Setefano Faiva	Hospital Security Officer	2/11/05	PSCD.No.444 of 2/11/05
Simoa Ariff	Seamstress	2/11/05	PSCD.No.427 of 2/11/05
'Aisake Fifita	Garbage Remover	1/3/05	PSCD.No.29 of 28/1/05
Fapiola Mafi	Nursing Sister	3/4/05	PSCD.No.86 of 1/3/05
Maile Sonasi Hu'ahulu	Driver	1/2/05	PSCD.No.85 of 1/3/05
Tevita Nau	Sludge Bed Attendant	1/2/05	PSCD.No.84 of 1/3/05
Selu Sefesi	Public Facilities Attendant	31/5/05	PSCD.No.265 of 13/6/05
Soana Kafatolu	Senior Public Health Nurse	1/9/05	PSCD.No.319 of 20/7/05
'Asinate Ma'u	Senior Public Health Nurse	25/4/05	PSCD.No.145 of 31/3/05

4.5 Staff Appointment

Through its ongoing staff development, training and services requirements the following officers were appointed to the Ministry during the year.

Table 10 New Appointment for 2005

Name	Post	Effective Date	Public Service Commission Decision
Filipe Taufu	Medical Records Officer	1/2/05	PSCD.No.50 of 28/1/05
Dr Sione Pifeleti	Medical Officer	4/1/05	PSCD.No.6 of 28/1/05
Dr Kyan Ahdieh	Medical Officer	29/1/05 (extended for 1yr)	PSCD.No.2 of 28/1/05
'Asinate Kolofo'ou Taukei'aho	Clerk Class III (NTT)	31/3/05	PSCD.No.112 of 31/3/05
Hispaniola Iketau	Clerk Class III (Hp)	1/4/05	PSCD.No.112 of 31/3/05
Dr Catherine Latu	Medical Officer	7/2/05	PSCD.No.106 of 1/3/05
Sione Tu'i	Health Officer	3/3/05 (re-appointed)	PSCD.No.57 of 1/3/05
'Elisi Tupou	Health Project Officers	2/2/05	PSCD.No.56 of 1/3/05
Sione Po'uliva'ati	Lab Technician Grade I	4/1/05	PSCD.No.55 of 1/3/05
Dr Violet H. Erasito Tupou	Medical Officer	1/2/05	PSCD.No.156 of 3/5/05
Vaha Selsoni	Driver (Vv)	15/6/05	PSCD.No.237 of 13/6/05
Leo 'Onesi	Groundskeeper (NTT)	21/6/05	PSCD.No.237 of 13/6/05
Fakalelu Tupou	Laundrymaid (NTT)	21/6/05	PSCD.No.237 of 13/6/05
Siesia Vehikite	Computer Assistant	13/6/05	PSCD.No.237 of 13/6/05
Sione Anga'aetau Puafisi	Driver (TWBP)	13/6/05	PSCD.No.236 of 13/6/05
Kolianita Alfred	Hospital Administrator	16/8/05	PSCD.No.338 of 22/8/05
Mele Savelio	Staff Nurse	5/9/05 (re-appointed)	PSCD.No.365 of 7/10/05
Meleane Kava	Health Promotion Grade II	13/10/05	PSCD.No.367 of 7/10/05
Silivelio Ponove	Driver	13/10/05	PSCD.No.367 of 7/10/05

Name	Post	Effective Date	Public Service Commission Decision
Nafetali Ma'u	Driver	13/10/05	PSCD.No.367 of 7/10/05
Pelelina 'Aho	Student Nurse	7/2/05	PSCD.No.132 of 31/3/05
Lesieli 'Ahomana	Student Nurse	7/2/05	PSCD.No.132 of 31/3/05
'Elenoa Aleamotu'a	Student Nurse	7/2/05	PSCD.No.132 of 31/3/05
Mele Latai 'Alofi	Student Nurse	7/2/05	PSCD.No.132 of 31/3/05
Neomai Fatai	Student Nurse	7/2/05	PSCD.No.132 of 31/3/05
Seinilangi Fifita	Student Nurse	7/2/05	PSCD.No.132 of 31/3/05
Solomone Filiai	Student Nurse	7/2/05	PSCD.No.132 of 31/3/05
Nita Fonua	Student Nurse	7/2/05	PSCD.No.132 of 31/3/05
Toakase Fusikata	Student Nurse	7/2/05	PSCD.No.132 of 31/3/05
Esiola Halaifonua	Student Nurse	7/2/05	PSCD.No.132 of 31/3/05
Pelinita Hapa	Student Nurse	7/2/05	PSCD.No.132 of 31/3/05
Finau Hoefi	Student Nurse	7/2/05	PSCD.No.132 of 31/3/05
Kesaia Katoa	Student Nurse	7/2/05	PSCD.No.132 of 31/3/05
Sela Latu	Student Nurse	7/2/05	PSCD.No.132 of 31/3/05
'Ilaiaane Lolohea	Student Nurse	7/2/05	PSCD.No.132 of 31/3/05
'Ofa He Lotu Lolomana'ia	Student Nurse	7/2/05	PSCD.No.132 of 31/3/05
Faneloa Lynch	Student Nurse	7/2/05	PSCD.No.132 of 31/3/05
Mele Katoanga Ma	Student Nurse	7/2/05	PSCD.No.132 of 31/3/05
Kasilini Ma'ake	Student Nurse	7/2/05	PSCD.No.132 of 31/3/05
Aulola Mafi	Student Nurse	7/2/05	PSCD.No.132 of 31/3/05
Latu Telu Mafi	Student Nurse	7/2/05	PSCD.No.132 of 31/3/05
Loleta Mafi	Student Nurse	7/2/05	PSCD.No.132 of 31/3/05
Lofitu Mailangi	Student Nurse	7/2/05	PSCD.No.132 of 31/3/05
Penisimani Moli	Student Nurse	7/2/05	PSCD.No.132 of 31/3/05
Sateki Nateitei	Student Nurse	7/2/05	PSCD.No.132 of 31/3/05
Pauline Ongosia	Student Nurse	7/2/05	PSCD.No.132 of 31/3/05
Salesi P Po'oi	Student Nurse	7/2/05	PSCD.No.132 of 31/3/05
Dheodosia Panuve	Student Nurse	7/2/05	PSCD.No.132 of 31/3/05
Patric Semi	Student Nurse	7/2/05	PSCD.No.132 of 31/3/05
Malia Sete	Student Nurse	7/2/05	PSCD.No.132 of 31/3/05
Kalolaine Tau'aho	Student Nurse	7/2/05	PSCD.No.132 of 31/3/05
Makasiamane Taulangovaka	Student Nurse	7/2/05	PSCD.No.132 of 31/3/05
Siosua Taumoha'apai	Student Nurse	7/2/05	PSCD.No.132 of 31/3/05
'Amanaki Tausisi	Student Nurse	7/2/05	PSCD.No.132 of 31/3/05
Lesieli Tautua'a	Student Nurse	7/2/05	PSCD.No.132 of 31/3/05
Veili Tonga	Student Nurse	7/2/05	PSCD.No.132 of 31/3/05
Katokakala Tu'itupou	Student Nurse	7/2/05	PSCD.No.132 of 31/3/05
Luamanu Tu'itupou	Student Nurse	7/2/05	PSCD.No.132 of 31/3/05
Misiteli 'Unga	Student Nurse	7/2/05	PSCD.No.132 of 31/3/05
Mesui Vaiotei	Student Nurse	7/2/05	PSCD.No.132 of 31/3/05
Tukuange Veatupu	Student Nurse	7/2/05	PSCD.No.132 of 31/3/05
Fuamalingi Kupu	Wardmaid	1/3/05	PSCD.No.63 of 31/3/05
'Iunisi Uhi	Public Health Sister Graduate	14/2/05 (re-appointed)	PSCD.No.63 of 31/3/05
Tamaline Tokotaha	Wardmaid	9/12/05	PSCD.No.454 of 9/12/05
'Anitilose Blake	Wardmaid	9/12/05	PSCD.No.454 of 9/12/05
Telela Fusitu'a	Wardmaid	9/12/05	PSCD.No.454 of 9/12/05

5. INTERNATIONAL COLLABORATION

5.1 International meetings attended by the Honourable Minister of Health.

The Minister of Health, Hon. Dr Viliami Ta'u Tangi attended the following international meetings and conference during the year.

- Meeting of Ministers of Health for the Pacific Island countries, Apia, Samoa, 14-17/3/05.
- Commonwealth Health Ministers Meeting, Geneva, Switzerland, 15/5/05.
- World Health Assembly (WHA), Geneva, Switzerland, 16-25/5/2005.
- 116th Executive Board Meeting of WHO, Switzerland, Geneva, 26-28/5/2005.
- High Level Forum on Health MDGs in Asia and the Pacific, Tokyo, Japan, 21-22/6/2005.
- Fifty-Sixth Session of the World Health Organization Regional Committee for the Western Pacific Region, Noumea, New Caledonia, 19-23/9/2006.

5.2 International and regional meetings attended by the Director of Health.

The Director of Health, Dr Litili 'Ofanoa attended the following international and regional meetings;

- Workshop on Drinking Water Quality Standards and Monitoring in Pacific Island Countries, Nadi, Fiji, 7-10/2/2005.
- 6th Global Conference on Health Promotion, "Policy and Partnership for Action: Addressing the Determinants of Health". Bangkok, Thailand, 7-11/8/2006.

5.3 International Collaborations.

The Ministry throughout the year continued its collaboration with various international organisations in the following areas;

- The 2004-2005 WHO Detailed Programme Budget for Tonga
- The Medical Treatment Scheme under the New Zealand Governments Bilateral Aid Programme with Tonga
- The Twinning Programme with St. John of God Hospital, Ballarat, Victoria, Australia
- Diabetic Project with the Prince of Wales Hospital, New South Wales, Australia
- The World Bank Health Sector Support Project
- European Union Project
- Government of Japan Grant Aid Project for the Upgrading and Refurbishment of Vaiola Hospital

5.4 Tonga Health Sector Support Project.

The Tonga Health Sector Support Project, effective in February 2004, is funded under a World Bank Loan, IDA Credit Number 3814 0 – TON. It is a 5 year project and the Credit is for US \$10.94 million with US\$1.4 million counterpart funding from the Government of Tonga.

Project Objective: The objective of the project is to support health reform in Tonga within the framework of its Corporate Plan by improving the capacity of the Ministry of Health to develop and implement health policy and to improve the functional and technical quality of health facilities.

The project consists of the following components,

(i) Strengthening Health Care Financing: This component involves a review, developing and implementation of policies which define the funding and overall allocation of resources to health services. In particular, it will strengthen the capacity of the Ministry of Health to identify approaches towards strengthening the financing of health care (including resource mobilization), improving the allocation of available resources, and developing an appropriate public-private partnership.

(ii) Improving the Health Information System: This component assists the Ministry in developing capacity and establishing structures for Information Management and IT Management. It is anticipated that communication and access to management information throughout the Ministry will be improved. It undertakes to implement and establish an appropriate integrated computerized information systems for patient care at Vaiola Hospital and develop a population-based information system. Capacity will be developed within the Ministry to design, implement field and targeted facility based surveys and surveillance systems to collect data on a periodic and at hoc basis.

(iii) Upgrading of Health Infrastructure: This component will support the first phase of the design and implementation of rehabilitation and facilities improvement at the Vaiola Hospital to overcome identified major deficiencies and to improve functional relationships and the overall operational efficiency of the hospital. These developments will be guided by the master plan for the hospital and will enhance the hospital's capacity to efficiently meet its future service obligations.

Project Management: The component includes the operation of the Project Management Unit (PMU), which will provide project support functions, including day-to-day management, monitoring and coordination of Project activities among implementing units, procurement, accounting, disbursement and financial management, liaising with and reporting to the Project Director, communicating with the IDA. The project will fund project management consultants, travel, training and other administrative expenses. The Project Director is supported by an Implementation Coordinator, an Accountant, a Procurement Officer and an Administrative Assistant.

Project Status: Since effectiveness in February 2004, a total of US\$5.7 million from the total credit of USD\$12.38 million has been committed with 42% of total credit proceeds disbursed.

Health Care Financing Component:

- The National Health Accounts Report 2001/02 and NHA Report 2003/04 have been completed and endorsed by the Ministry of Health.
- Various surveys – Tonga household surveys, surveys of donors, traditional healers, insurance companies and non-governmental agencies in the health sector which are necessary to collect information for the development of the NHA have now been completed and analyzed.
- User fees option was adopted and recommendation for further discussion on health insurance scheme.

Health Information Component:

- Standardization of clinical data
- Implementation of revised Births and Death registration
- Implementation of revised admission/discharge and consent forms
- Developed of a Tonga Health Data Dictionary
- Develop IT systems

Infrastructure Redevelopment of Vaiola Hospital:

- Package A included the construction of the Psychiatric Ward, Kitchen and Laundry and fit outs were completed in December 2005



Package A



Package A

- Package B1, funded under Government of Japan Grand Aid, included the Clinical Services Building, (3 Operating Theatres, ICU, Recovery, Xray, Pathology, Inpatient Pharmacy and Biomedical Engineering workshop). Surgical and Obstetric Ward (6 delivery suites and Special Care Nursery Building completed by February 2006.



Package B1



Package B1

- Packages B2 is the Medical, Paediatric Wards Building and Isolation Ward is expected to start construction in May 2006.
- Packages C, D, E and F is expected to complete the redevelopment of Vaiola Hospital will be completed at a later stage.
- A Waste Management Plan has been developed and implemented.
- An Estate Policy and Implementation plan is being developed.
- Training of middle and senior management level has commenced.

6. HEALTH DISTRICTS

6.1 'Eua Health District

6.1.1. Management

Dr 'Elenoa Matoto, Acting Chief Medical Officer is responsible for managing Niu'eiki Hospital and the 'Eua health district and is supported by 1 Health Officer.

6.1.2. Objectives

The hospitals objectives are:

- To promote the "Healthy Island" concept in 'Eua.
- To improve maternal and child health services.
- To increase awareness of the people of 'Eua regarding non-communicable disease especially diabetes, hypertension and heart disease.
- To increase the rate of family planning usage in 'Eua.
- To improve the skills and knowledge of staff in order to provide quality care to the people of 'Eua.
- To maintain a high rate of childhood immunization coverage.
- To foster and improve relationship between the health sector and public.
- To increase community awareness and partnership programme.

6.1.3. Functions

The hospital's function is:

- To provide quality health care and to cater for the health needs of the people of 'Eua.

6.1.4. Nursing

Nursing Sister 'Ana Hausia is responsible for managing nursing services in 'Eua and is supported by 10 nursing staff.

6.1.5. Laboratory

Laboratory Technician Grade II, Mrs Lalamea Tu'ipulotu is responsible for managing and delivering laboratory services at Niu'eiki.

All specimen are referred to Vaiola Hospital for analysis.

6.1.6. Dental

Senior Dental Therapist, Mr Sione Halahala is responsible for managing and delivering dental services in 'Eua. Services provided during the year includes oral examination, minor surgery, filling, tooth extraction, antenatal dental care and the school dental health programme

6.1.6.1. Objectives

The section's objectives are,

- To introduce medical records for patients rather than log book.
- To improve the process of ordering supplies.
- To update knowledge and skills of staff.
- To upgrade equipment and instrument in the department.
- To improve functioning of equipment and reduce breakdowns.
- To recruit 1 dental therapist or dental chairside assistant.

6.1.7. Environmental Health

Public Health Inspector Grade II, Mrs 'Amelia Vea is responsible for environmental health services and include village, retail and wholesale meat selling premises inspection, garbage and waste disposal and construction inspection.

6.1.7.1. Objectives

The section's objectives are,

- Upgrade healthy living standard of the island.
- Attend efficiently to all public complaints.
- 100% inspection of all food establishments.

6.1.8. Administrative Support

Junior Clerk, Mrs 'Unaloto Sateki is responsible for clerical and financial duties and daily paid Junior Medical Recorder Ms Puataukanave Mala'efo'ou is responsible for medical records services.

6.1.9. Auxiliary Staff

Niu'eiki Hospital employs the standard compliment of non-clinical support staff which includes drivers, laundry, catering, domestic, Security, and grounds keepers.

6.1.10. Milestones

In delivering its services, the following were identified as milestones during the year,

- Collected \$31185.40 for the 'Eua Hospital Week.
- Purchase a new ECG machine from the fund collected during the Hospital Week.
- Hospital Visiting Committee bought a new lawn mower, cooler and a freezer for the kitchen.
- Medical equipment were donated by the 'Eua residing community in New Zealand.

6.2. Ha'apai Health District

6.2.1 Management

Health services in the Ha'apai group are provided through 1 Hospital (Niu'ui) at Pangai, 2 Health Centres and 3 Reproductive Health Clinics. Acting Chief Medical Officer Dr Lisiate 'Ulufonua is responsible for managing Ha'apai health services in Ha'apai and is supported by 1 Medical Officer and 2 Health Officers. There was a total of 48 staff working in Niu'ui Hospital during the year.

6.2.2 Objectives

The hospital's objectives are,

- To carry out its core functions in accordance with the national mission with its allocated financial and human resources.
- To review and reinforce regular health preventative activities thus promoting healthy living in the communities of Ha'apai in the next five years.
- To provide high quality health care to the people of Ha'apai with adequate staffing and upgraded equipments for the next five years.
- To support regular in-service training to all the healthcare givers of Ha'apai for the next ten years.
- To upgrade the information and technical service available for the Ha'apai health service in the next five years.
- To upgrade the Staff Quarters for the next three years.
- To continue seeking assistance from Ha'apai people residing abroad.
- To identify development partners to provide ongoing foreign assistance to the health needs of the Ha'apai people.
- To continue supporting the Ha'apai Hospital Board of Visitors as a means to work towards health for all.

6.2.3 Functions

The hospital's functions are,

The Ha'apai health service had various core functions trying to emphasise not only on Curative Health Service but with more commitment to preventative community based approach to the people.

- Preventative community based health service.
- Curative health hospital and community based health service.
- Dentistry preventative outreach to the community mainly primary schools.
- Dentistry curative hospital and community health service.
- Patient Transferral to Vaiola Hospital.

6.2.4 Financial Allocations

Niu'ui Hospital was allocated \$487,896 and was utilized for operation, maintenance and purchase of technical equipment.

6.2.5 Medical Officers.

The Ha'apai health service had been very fortunate to have three medical officers assigned to Niu'ui when the year commenced which was a significant milestone thus whereby significant activities were carried out.

However, this team did not last long due to the Ministry's long term planning thus only one medical officer remained at Niu'ui for the last 2 months of the year.

Despite the Ha'apai health service managed to deliver its services to its people.

6.2.6 Nursing

Senior Nursing Sister Mele Havealeta is responsible for the supervision and management of all nursing staffs. A total of 12 clinical nursing staff are assigned to Niu'ui Hospital.

Senior Nurse Midwife 'Onita Tupou is responsible for managing Public Health Nursing services and is supported by 6 public health nursing staff.

6.2.7 Dental

Dental Therapist Meleseini Veituna is responsible for the provision of dental services and is supported by Dental Chair-side Assistant Ms. Silipa Tou'anga and were both replaced by Dental Therapist Lusiola Finau and Dental Chairside Assistant 'Elesi Manufekai in September 2005.

6.2.8 Laboratory

Laboratory Technician Grade II Ms. Senisaleti Pasikala is responsible for the provision of laboratory services.

6.2.9 Radiology

Assistant Radiographer Grade II Mr Siosifa Pahulu is responsible for the provision of x-ray services. Most x-rays carried out were chest x-rays and orthopaedic cases. Film processing continues to be performed manually.

6.2.10 Diabetic and Hypertension

In the year 2005, there were 16 more newly diagnosed cases of hypertension, 21 new cases with diabetes and hypertension. One case needed Amputation and 50 cases needing daily dressing. Currently, there are a total of 651 patients attending NCD Clinic in Ha'apai.

Table 11 Diabetic and Hypertension

Patients Profile for NCD Clinisc	Number
Newly DX HTN	16
Newly DX Dm and HTN	21
Amputation	1
Dressing	50
Death	9
Screening for Dm and HTN	124
Patients admitted with DFS	22
Patient access of fitness for Tooth Extraction	31
Total number of HTN	342
Total number of DM/HTN	309
Total number of patients	651

6.2.11 Milestones

In delivering its services, the following were identified as milestones during the year,

- The Dental Clinic was renovated by the Ballarat Rotary Club in conjunction with the Fofu'anga Club of Melbourne.
- The Japanese Government donated a new van to enable travel in support of the outreach program to the primary schools.

6.3. Vava'u Health District

6.3.1. Management

Chief Medical Officer Dr. Edgar 'Akau'ola is responsible for managing health services in the Vava'u District and is supported by 3 Medical Officers. Health services in Vava'u are provided through Prince Wellington Ngu Hospital at Neiafu and 4 Health Centres at Tefisi, Ta'anea, Falevai, and Hunga.

The primary responsibility of the Vava'u Health District is to improve the health of the people by promoting healthy lifestyle and prevent health problems, detecting and treating disease with available treatment.

6.3.2. Clinical Services

Dr. Edgar 'Akau'ola is responsible for the provision of clinical services and was supported by Medical Officers Dr. Siaki 'Ela Fakauka, Dr. Tupou Pua'a and Dr Sela Takitaki.

6.3.3. Nursing

- Nursing Sister Graduate 'Akesa Halatanu is responsible for the supervision and management of all nursing staffs. A total of 23 clinical nursing staff are assigned to Ngu Hospital.
- Sister 'Ilisapeti Kolopeaua who is responsible for managing public health nursing services and is supported by 9 public health nursing staff.

6.3.4. Laboratory

Laboratory Technician Grade II Mr. Timote Fakasi'i'eiki and Mr. Sione 'Inia are responsible for the provision of laboratory services.

6.3.5. Pharmacy

Assistant Pharmacist Grade II Mr. Petelo Manu is responsible for the provision of pharmaceutical and dispensing services and is supported by Assistant Pharmacist Grade II Mr. Ma'u Tu'ineau.

6.3.6. X-Ray

X-Ray Technician Grade II Mrs. 'Atomi Palu is responsible for the provision of x-ray services.

6.3.7. Dental Services

Acting Senior Dental Officer Dr. Doris Young is responsible for the provision of dental services and is supported by Dental Assistant Mrs. 'Anaseini Lauti and Dental Therapist Mrs. Nasinu Mahe.

Dental services provided include oral health education, dental scaling and prophylaxis, fissure sealants for class 2 children, restorations, root canal therapy, and extractions.

6.3.8. Environmental Health

Public Health Inspectors Grade II Mr. Leopino Fa'asolo and Mr. Manase Malua are responsible for provision of environmental health services and are supported by three sanitation officers and 1 daily paid sanitation officer.

6.3.9. Medical Record

Medical Recorder Ms. Kaliopeta Vainikolo is responsible for the provision of medical record services and is supported by Junior Medical Recorder Ms. Palaniketi Talia'uli.

6.3.10. Diabetic Clinic

Dr. Pua'a is responsible for conducting the Diabetic programme and is supported by Staff Nurse Losa Lea.

Table 12 Diabetic programme for Ngu Hospital - 2005

Month	Diabetes	Hypertension	Dressing	Home Visit	Total Attendance
Jan	200	164	22	10	396
Feb	255	160	20	25	460
Mar	249	140	40	18	447
Apr	192	167	45	4	408
May	393	239	11	23	666
Jun	117	126	6	23	266
Jul	216	205	7	15	488
Aug	164	155	4	17	340
Sept	209	241	8	23	481
Oct	175	143	13	12	343
Nov	232	196	13	23	464
Dec	115	107	4	7	320
Total	1819	1796	128	128	3645

Table 13 Newly Diagnosed, 2005

New Cases	M	F
Diabetes-DM	8	13
HTN-Hypertension	9	13
Stroke	6	6
IHD	2	2
RHD	1	1
DM and HPT	9	13
Total New Cases	35	48

6.3.11. Operating Theatre and Anaesthesia

Dr Fakauka and Dr Pua'a were responsible for Operating Theatre and Anaesthesia and are supported by Sister 'Akanesi 'Avala and Staff Nurse Salome Toko.

Table 14 Major Anaesthesia Cases, 2005

Month	Sedate	LA	Spinal	GA	Block	Minor	Major	Total patients
Jan	3	16	6	8	-	82	9	124
Feb	1	4	5	7	-	14	5	36
Mar	4	16	6	10	-	26	13	75

Apr	2	1	4	-	-	3	5	15
May	2	8	9	-	-	18	6	43
Jun	6	5	4	3	-	9	8	35
Jul	1	5	8	10	-	19	6	49
Aug	2	-	5	-	-	2	7	16
Sept	2	-	6	-	19	24	4	55
Oct	5	40	7	10	-	64	17	143
Nov	5	5	2	-	-	16	3	31
Dec	4	7	15	-	-	19	11	56
Total	37	107	77	48	19	296	94	683

Table 15 Major Surgical Cases, 2005

Month	D&C	C-section	Hydrocelectomy	Appendicectomy	Herniotomy
Jan	-	2	-	4	1
Feb	1	5	-	-	-
Mar	-	5	-	2	3
Apr	-	4	-	-	-
May	-	4	-	2	-
Jun	1	3	1	1	-
Jul	-	7	-	-	-
Aug	-	4	-	-	-
Sept	-	3	-	-	-
Oct	1	4	-	1	-
Nov	-	2	-	1	-
Dec	-	8	-	2	1
Total	3	51	1	13	5

6.3.12. Transport Services

Senior Driver Mr. Poutele Kupu is responsible for this section with the assistance of four Drivers.

6.3.13. Administration Services

Computer Operator Grade II Ms. Pelenatita Siasau, First Class Clerk Ms. Sesili Tu'ifua and two daily paid clerks are responsible for this section.

6.3.14. Milestones

In delivering its services, the following were identified as milestones during the year,

- EU project in progress
 - Completion of 5 quarters renovation
 - Completion of hospital compound fence
 - 4 computers, 1 photocopier machine, 1 TV/DVD screen set and 1 radio tape
 - 2 lawnmowers and 2 weed-eater machines
- 2 containers were received from the Vava'u Lahi Health Trust, Auckland which contains hospital goods, beds and lines.
- Arrival of Dr Sela Takitaki to increase the number of doctors to 4.

6.4. Niuatoputapu Health District

6.4.1. Management

Medical Officer, Dr. Sione 'Akau'ola was responsible for managing the Centre until July when Dr. Sepiuta 'Aho Lopati took over. Dr. Lopati is supported by a Midwife, Dental Therapist, 2 Senior Staff Nurses and 4 supporting staff.

6.4.1.1. Objectives

The Centre's objectives are:

- To provide the best possible quality health care to all people of Niuatoputapu and Tafahi Islands with the available resources.
- To improve patient-care and staff performance.
- To increase community awareness regarding common non-communicable diseases.
- To improve patient competency in home care of acute diarrhoea and acute respiratory diseases.
- To establish effective patient referral procedure for Likamonu Health Centre.
- To strengthen community involvement in strategies to improve overall health.
- To have 100% coverage and follow up for anti-filariasis medications.

6.4.1.2. Functions

The Centre's functions are:

Clinical services

- Conduct outpatient consultation from Monday through Friday, after hours and weekends.
- Conduct clinics on Tuesday and Thursday and follow up of defaults.
- Conduct minor surgery and dressings.
- Conduct monthly visits to Tafahi for clinics/consultation and village inspection.

Public Health services

- Provide maternal and child health care delivery.
- Provide antenatal and postnatal care.
- Conduct family planning.
- Provide immunization .
- Conduct health promotion activities.
- Conduct regular health community visits.
- Conduct village and retail stores inspections.
- Clear sailing yachts.

6.4.2. Dispensary

Conduct pharmaceutical and dispensing services.

Table 16 Clinical services, 2005

Conditions	Total
Admissions	60
Patient referral	4
Deaths	2
Births	8
Diabetic	12
Hypertension	22

Diabetic and hypertension	15
Cardiac	7
DM/HTN/Cardiac	3
Minor surgeries (I&D, circumcision and lumpectomy)	30

6.4.3. Nursing services, 2005

Mrs. Taufa Mone and Mrs. Monika 'Uvea are responsible for clinical nursing services and assist with both inpatient and outpatient care.

Table 17 Immunization coverage

Condition	Percentage
Immunization coverage	83

6.4.4. Dental Services, 2005

Provide conservative treatment, extractions and tooth fillings.

Dental Therapist Nenase Latu is responsible for the conservative treatment, extractions and tooth fillings.

Table 18 Treatment, extractions and tooth fillings - 2005

Condition	Number
Patient examined and treated Adult – 209 Children – 62 Expected mothers - 20	291
Antibiotic	21
Tooth fillings Permanent – 48 Temporary – 53	101
Tooth extractions	169
Tooth caries	89
Periodontic	76
Scaling	33
Polishing	25
Others	25

6.4.5. Milestones

In providing its services, the following were identified as milestones during the year,

- Dr. Sione 'Akau'ola completed his 1 year posting in Niuatoputapu and departed for Tongatapu in June.
- New Zealand High Commission donated 13 kVA new generators.
- Collected \$7,000 during the hospital week.
- Purchase of ECG machine, diagnostic set, laryngoscope, pulse oximeter and ambu-bag with fund received during the hospital week.

6.5. Niuafu'ou Health District

6.5.1. Management

Health Officer, Sione T. 'Ulufonua is responsible for managing health services in Niuafu'ou and is supported by 1 Public Health Nurse, 1 clinical nurse and 2 non clinical support staff.

6.5.1.1. Objectives

The centre's main objectives are:

- To improve the quality of inpatient services in the Island.
- To improve oral health.
- To improve the mother and child health by strengthening family planning method.
- To enforce public health act regarding cigarette smoking.
- To improve the source of electrical energy in the Island.
- To strengthen workers relationship and incentive.

6.5.1.2. Functions

The centre's functions are:

Curative

- Out patient and emergency.
- Special out patient clinic for hypertension and diabetic monthly.
- Antenatal care once a week.
- Postnatal care.
- Dental care and school visit.
- Home visit and follow up of cases.
- Immunization.

In Patient

- Admission of very ill patients and those who prefer admission.
- Admission of all delivery mother and baby.
- Referral of cases requiring further treatment and management.

Preventive

- Health education.
- Village inspection and sanitation.
- Retail store and food handler inspection.
- Village development committee.
- Youth development committee.
- Village and patient transfer fund committee.

7. PUBLIC HEALTH SERVICES

7.1. Management

Chief Medical Officer, Dr Malakai 'Ake is responsible for managing this Division and is supported by a Health Administrator. The Division consists of six sections, (Communicable Diseases, Reproductive Health, Community Health, Environmental Health, Health Promotion and Non Communicable Diseases).

7.2. Communicable Diseases

Senior Medical Officer, Dr. Seini Kupu is responsible for managing this section and is supported by 3 Public Health Assistants.

7.2.1. Objectives

The section's objective is:

- To reduce the incidence and prevalence of communicable diseases through implementation of strategies outline in many health care programs/projects, and through policy development and legislation to facilitate implementation of certain public health interventions.
- To maintain the high standard of provision of necessary services for visa applicants, employment recruits and food handlers at all times.
- To maintain the high level of cure rates of DOTS, and to improve the detection rate (10%) of current of pulmonary tuberculosis and screening of contacts.
- To improve surveillance of certain diseases especially the outbreak prone diseases like dengue, typhoid and influenza like illness.
- To collaborate more effectively with all stakeholders that provide services for STI including HIV/AIDS, in planning, implementation and monitoring of all strategies developed so far, and in accordance with the National Strategic Plan for Response to STI including HIV/AIDS.
- To ascertain proper management of all patients admitted to Isolation/Infectious Ward, or those that were being discharged and need to be followed up at home.
- To ensure the capacity of the staff are developed appropriately and to ensure a safe working environment, both for staffs and users of our services.

7.2.2. Functions

The section's functions are:

- Develop guidelines for prevention and control of outbreak prone diseases like dengue, influenza like illness (ILI), typhoid and others as situation arises.
- To develop treatment protocols as in STI syndromic case management flow charts.
- To manage the suspected/confirmed STI patients including tracing and treat all possible partner(s). Management implies on history taking, diagnosis, treatment, counselling including condom promotion, and follow up. The same approach applies to the identified contacts.
- To implement and monitor DOTS strategy as outlined in the Global Fund to fight AIDS, TB and Malaria proposal for Tonga.
- To continue management of the Isolation/Infectious Ward.
- Responsible for the processing of visa applicants, food handlers and employment recruits.
- To work closely with relevant clinicians in management of infectious disease index patients as well as contacts in the community eg. Meningococcal meningitis and typhoid.

7.2.3. Financial Allocation

The section was allocated \$5,969 was utilized for purchase of technical equipment.

7.2.4. Milestones

In delivering its services, the following were identified as milestones during the year,

- Ms Nukonuka Mafile'o completed a 3 week training in Fiji on the management of leprosy.

- Dr Kupu and Mr Saia Penitaini attended a regional workshop for 6 countries that were undertaking the second generation surveillance surveys.
- Dr Kupu and Ms Betty Blake attended the annual Pacific Islands Region Country Coordinating Mechanism in Nadi, Fiji.

STI including HIV/AIDS Program

- Dr S. Kupu and Health Officer Lineti Koloï conducted a 5 days training workshop for health workers (30) on STI case management, both syndromic ally and specific infection treatment, at the Tonga Medical Association building. The training was funded from Global Fund to fight AIDS, TB and Malaria.
- Throughout the year, the Section saw patients with STI's in the STI clinic, mainly gonorrhoea and Trichomonas as in the Table below.

Table 19 Confirmed curable sexually transmitted infections 2005

Age Group	Gonorrhoea			Trichomonas		Others	
	Male	Female	Total	Male	Female	Male	Female
10-15	0	0	0	0	0	0	0
16-20	6	0	6	0	0	0	0
21-25	21	0	21	0	1	0	0
26-30	2	1	213	0	2	0	0
31-35	2	0	32	0	0	1	0
36-40	0	0	20	0	0	0	0
41-45	0	0	00	0	0	0	0
46-50	1	0	01	0	0	0	0
51-54	0	0	10	0	0	1	0
55-60	0	0	00	0	0	0	0
Sub-Total	32	1	33	0	3	2	0
Total = 38							

TB-DOTS Program

- There are 4 units of DOTS management nationwide. The Project continues its management of positive cases on outpatient basis unless the patient is very sick or there are other underlying conditions(s) that warrant being admitted.
- From WHO standard, Tonga needs to improve its detection rate while cure rate needs to be maintained at 85% and higher. The TB drugs are provided through the recurrent budget of the Ministry.

Table 20 Newly diagnosed patients treated for TB, both as sputum positive or extrapulmonary

Age Group (years)	Sputum positive		Sputum negative - Extrapulmonary	
	Male	Female	Male	Female
<5	0	0	0	0
5-15	1	0	0	0
16-25	2	0	3	3
26-35	1	3	0	0
36-45	2	0	0	0
46-55	0	0	0	0
56-65	2	1	0	0
>65	1	1	0	0
Total	9	5	3	3

- The Section through the assistance of the Global Fund had increased its multimedia awareness program by developing spots for TB DOTS TV and Radio spots.

- During the World TB Day, there were poster and essay competition on the theme: "Treatment starts with detection" in Vava'u while in Tongatapu, banners were erected at different spots in the villages; T-shirts were printed with the logo and other health promotion messages and WHO donated bags and T-shirts with IEC pamphlets.

Typhoid Fever

- For the last 5 years, there had been marked decrease of salmonella typhi typhoid fever. One of the important findings that may be contributing to an improved control and prevention of typhoid fever included the success of identifying at least one healthy carrier. Other contributing factors included improved sanitation and living conditions.
- The section collaborates with the Environment Health section and Laboratory services on the management of identified cases. In 2005, we were not able to identify any healthy carrier(s) for all confirmed typhoid cases, and about 90% of the index patients were from Fotuha'a or had spent some time in Fotuha'a.

Table 21 Confirmed salmonella typhi typhoid cases by age and sex 2005

Age group (years)	Male	Female	Total
<5	1	0	1
5-10	2	1	3
11-15	1	0	1
16-20	0	0	0
21-25	0	0	0
26-30	1	0	1
31-35	0	0	0
36-40	0	0	0
41>	0	0	0
Total	5	1	6

7.3. Environmental Health

Medical Officer Special Grade Dr. Reynold 'Ofanoa is responsible for managing this section and is assisted by 1 Supervising Public Health Inspector, 2 Senior Public Health Inspector, 1 Senior Public Health Inspector Graduate, 1 Public Health Inspector, 1 Public Health Inspector Grade I, 9 Public Health Inspector Grade II and 13 supported staff.

7.3.1. Financial Allocation

The section was allocated \$174,054.00 for the implementation of its four main activities.

7.3.2. Objectives

The section's objectives are:

- To reduce the incidence of communicable diseases in Tonga.
- To upgrade and develop the village water supply systems.
- To provide an effective services to the community.
- To improve management of environmental health activities.

7.3.3. Functions

The section's functions are:

- To provide adequate and high standard of environmental health services to the public.
- To promote and implement improved access to safe water and food.
- To promote improved sanitation practices.

7.3.4. Milestones

In delivering its services, the following were identified as milestones during the year,

- 98% of the total population access to portable community water supplies.
- Health care waste management was introduced to the hospital and health centres and are collected on a regular basis and disposed under the Public Health Inspector's supervision.

7.4. Health Promotion

Senior Medical Officer, Dr Viliami Puloka is responsible for managing this section and is supported by 8 Health Promotion Officers, 2 Technician, 1 daily paid staff and 1 Japanese Volunteer.

7.4.1. Functions

This section's functions are,

- To identify at risk persons/ groups within the health staff as well as people throughout Tonga.
- To screen health staff and people on weight, height, waist, body fat, blood sugar level and blood pressure.
- To work together with National NCD Committee and its Sub Committees in prevention and control of NCDs.
- To collect and analyse statistics on risk factors for NCDs.
- To provide in service training for staff.
- To identify training needs, particularly formal training.
- To establish a Health Promotion Foundation.
- To allocate staff according to functions of the service.
- To develop professional production techniques.
- To support the WHO program of International health days and other programs.

7.4.2. Objectives

The section's objectives is,

- To empower the public at large, improve their health status by providing primary preventive services and also supportive mechanism for every health program and services throughout the Ministry.

7.4.3. Financial Allocation

The section was allocated \$20,719 and was utilized for broadcasting of TV programs, purchase office supplies, technical equipment, printing and stationaries. The section received support from partners such as WHO, SPC, PAHP and AusAID.

7.4.4. Activities

During the year, the section was able to implement the following activities.

Radio Programme: The section continued to coordinate the various radio programmes of the Ministry. A total of 170 radio programmes were produced and broadcasted.

Table 22 Number of radio programmes produced and broadcasted - 2005

No	Subject	No. of Programmes	No	Subject	No. of Programmes
1	Diabetes	50	11	Special Clinic	2
2	Health Promotion	25	12	Surgical Ward	2
3	Dental Health	24	13	Clinical Services	2
4	Talkback	24	14	Filariasis	2
5	Tobacco Act	8	15	Nutrition	1
6	Community Activity	8	16	Ear, Nose, Throat	1
7	Out patient	7	17	Medical Record	1
8	Outer Island programme	5	18	Eye Clinic	1
9	Environmental Health	4	19	Foot care	1
10	Communicable Disease	2		Total	170

TV Programme: The use of television to promote priority health issues in Tonga is one of the major responsibilities of the section. A total of 93 TV programmes were produced and telecasted during the year.

Table 23 Number of Television programmes produced and telecasted - 2005

No	Television Programmes	No. of programmes
1	Diabetes	26
2	Community Health Promotion	18
3	Tobacco	18
4	Dengue Fever	8
5	Filariasis	4
6	Foot sepsis	4
7	Foot care	3
8	Ante Natal and Immunisation	2
9	Obesity	2
10	Healthy eating	1
11	Hospital Service	1
12	Stroke	1
13	Hypertension	1
14	Environmental Health	1
15	Typhoid	1
16	Cancer Pap smear	1
17	Women and Children health	1
	Total	93

7.4.5. Milestones

In providing its services, the following were identified as milestone during the year.

- **Trainings and Workshops**
 - Review of National NCD strategic plan on 17 February 2005.

- Workshop on Tobacco Control Act Enforcement on 21-25 February 2005.
- Training with the Taxi Drivers and Owners on Tobacco Act on the 8 June 2005.
- Training with the Bus Drivers and Owners on Tobacco Act as well on the 19 June 2005.
- Tobacco Cessation training workshop on 8 – 11 November 2005 led by Sue Taylor.
- Training workshop with the Police force and Custom Officers on Tobacco Control Act on the 2-4 November 2005
- **Special award of community support**
 - Rev. Semisi Fonua was awarded a certificate of appreciation plus cheque of T\$500-00 for his efforts to support enforcing tobacco act in sport.
 - Mr Peseti Ma'afu was awarded with a certificate and cheque of T\$500-00 as a role model for exercising.
 - Mr Mana Latu was awarded a certificate and cheque of T\$500-00 for supplying vegetables consistently to the public.
- **Implementing of the Fifth MDA campaign (Filariasis)**
 - MDA campaign completed its final intervention beginning 2 October until December 2005.
- **Recruited of staff for Tobacco control program**
 - Mr Sione Vanisi was employed on the 7 November 2005 to be the Cessation Officer for Tobacco Control.
 - Mr Niutupuivaha Fakakovikaetau was appointed as the Enforcement Officer of Tobacco Control Act.
- **Demonstration of exercise at the Foundation Laying Ceremony of Vaiola Hospital**
 - Health Promotion staff grouped together with other health staff and demonstrated a good example of exercising.



7.5. Community Health

Supervising Public Health Officer, Mr. Simone Tei is responsible for managing this section and is supported by 3 Senior Health Officers, 2 Nurse Practitioners, 19 Health Officers and 1 Clerk Typist.

Community health services entail health services beyond the boundaries of the four hospitals in the country. Services are delivered from 7 rural Health Centres in Tongatapu, 2 in Ha'apai, 3 in Vava'u and 1 each in Niuatoputapu and Niuafu'ou. The Health Centre is the base from which comprehensive primary health care services are delivered to the community.

7.5.1. Objectives

The section's objectives are:

- To promote community participation in repairing, renovation and maintenance of health centre premises.
- To educate and promote healthy life style in the community
- To improve data collection and reporting system from the health centres.
- To coordinate, plan and implement school health programmes.
- To upgrade staff skills and knowledge
- To improve the patient referral system from health centres to hospitals.
- To engender and motivate Health Officer to rural and isolated areas.

7.5.2. Functions

The Health Centre's functions are:

Treatment

- Provide 24-hour primary health care services to its community.
- Provide limited inpatient care at health centres.
- Refer patients requiring specialized medical and nursing service.
- Provide follow up of cases referred from hospitals.
- Provide rural dispensary services.
- Provide Diabetic clinic and follow up defaults.

Family Health

- Provide supervised childcare, immunization, family planning, antenatal care and referral of patients requiring hospital care.
- Provide immunization for tetanus, measles, whooping cough, polio and diphtheria.

Dental Health

- Provide and assist with the provision of dental services.

Disease Control

- Control communicable diseases through case finding, default tracing, surveillance, immunization and assistance with treatment.
- Promote programmes for nutritional improvement through community, schools and liaison with other agencies.
- Advise on and promote suitable water supplies, methods of waste disposal, housing and vector control.

Health Education

- Promote personal and community awareness of the value of health, importance of nutrition, environmental sanitation, personal hygiene, and community cooperation with disease control activities.

Community Involvement:

- Work with communities to promote participation and contribution to the management of rural health services.
- Cooperate, assist and integrate services within a rural health district.
- Report regular on health status of the population and activities carried out within the service.

Table 24 Health Centre Visits (Tongatapu)

	Total
Kolonga	6,971
Mu'a	9,894
Fua'amotu	5,690
Vaini	4,309
Houma	4,251
Nukunuku	4,730
Kolovai	4,973

7.5.3. Financial Allocation

The section was allocated \$39,250 and was utilized for purchasing of office supplies, training of staff, grounds keeping, printing and stationery.

7.5.4. Milestones

In delivering its service, the following were identified as milestones during the year.

- Achievement through partnership with the community.
 - Renovation of Fua'amotu, Houma, Mu'a, and Nukunuku Health Centres.
 - Monthly meeting conducted with Health Officers and District Officers.
 - Seven new vehicles purchased by the communities and Republic of China for all health centres.
 - Establishment of a Health Committee in Kolonga with membership consisting of Town Officers and District Officers.
- Training
 - One Health Officer pursued 3 months attachment at FSM, Fiji.
 - Establishment of a new filing system (boxes and charts) in the Health Centres through collaboration with the Health Information Consultant recruited by the Health Sector Support Project.
 - Availability of more drugs in the Health Centres like anti HTN and DM Drugs.
 - The Health Sector Support Project provided bins and liner bags for collection of health care waste.

8. MEDICAL SERVICES

8.1. Management

Medical Superintendent, Clinical Services, Dr Siale 'Akau'ola is responsible for the administration and management of Vaiola Hospital and is supported by the Hospital Administrator, Ms. Kolianita Alfred. Hospital is divided along the traditional medical disciplines by wards and specialities and supported by clinical and non-clinical services.

8.2. Paediatric Ward

Specialist Paediatrician Dr Toakase Fakakovi is responsible for managing the ward and the Special Care Nursery (SCN) and is supported by 2 Residential Medical Officer (Australian Volunteer), 1 Medical Intern, 20 Nursing and 1 non clinical support staff.

8.2.1. Objectives

The section's objectives are:

- To improve and upgrade patient management and staff performance.
- To upgrade and maintain ward equipments and facilities.
- To ensure and maintain best infection control.
- To reduce overall inpatients case fatalities by 10%.
- To reduce inpatients mortality from common illnesses by 10%.
- To develop protocols and guidelines for management and treatment of common paediatric and neonatal illnesses.
- To organize and implement CDD and Acute Respiratory Infection workshops for health care workers to help decrease the overall morbidity and mortality from these illnesses throughout the country.
- To establish and register Vaiola Hospital as a Baby Friendly Hospital.

8.2.2. Functions

The section's functions are:

- Provide the best possible health services to ensure best physical, social and economical development and good health status for all children aged 0 to 14 years in Tonga.
- Provide care for acutely ill children and those with chronic diseases.
- Special care for premature babies.
- Support and care for disabled children.
- Refer children who need overseas treatment.
- Provide health education for staff, parents and the public regarding child care.
- Provide support and advice to all other hospitals and health centres in the country.
- Collaborate with other sections (Public Health, Obstetric) and organizations that are directly involved in the care of children.
- Continuous improvement and upgrading of health services for the children of Tonga.

8.2.3. Financial Allocations

The ward was allocated \$ 5,000.00 for the purchase of non-clinical supplies.

Medical Personnel.

- In 2005, there were 2 residential medical Officers when Dr Catherine Latu joined us in March 2005 in addition to Dr Kyan Ahdieh, Australian Volunteer and 2 interns for 6 months.
- For the first time we had 2 health officers rotating to us for a month each but unfortunately this did not continue for the entire year. With 3 permanent doctors in the ward, we were able to provide Out Patient Department service during normal working hours from Monday to Thursday.

Paediatric Ward Nursing Staff

Nursing Sister Mele Kapani continued to be the charge nurse in 2005. New rotating nurses come and go but fortunately most of the experienced nurses were kept in the ward and again, this helped uphold the standard we want to keep our service at. The very rare occasion of calling in nurses from other wards to work in the ward demonstrates how dedicated these nursing staff are to provide service to the children. In time of illness, other staff quickly step in to cover.

With the breaking down of the ICU services, nurses from both wards especially the Paediatric Ward with no ICU training were forced to care for critically ill patients in the respective wards. These were of course with no extra support in most cases. Despite the emotional and physical drain, the staff continue to provide these services to the best of their ability. In time of short staff, the quality of care were always maintained.

Ideally for both wards to have a dedicated clinical nursing consultant apart from the Sister-in-Charge to be directly responsible for teaching and maintaining good quality clinical care. Currently this role is performed by the Specialist Paediatrician who has a lot of other responsibilities.

Special Care Nursery Nursing staff

A midwife is now in charge of the SCN. At the best of time we have 6 permanent nursing staff in the unit who always strive to provide the best of care for the babies in the country. These nurses staff the 3 shifts when the workload is high and proceed on deferred leave when workload is lessens. Consequently, quality care in the ward was maintained throughout the year.

8.2.4. Milestones

In delivering its services, the following were identified as milestones during the year:

- World Health Organisation donated an infant heater for the SCN.
- Senior Medical Officer Toakase Fakakovikaetau was promoted to Specialist Paediatrician.
- An addition to our staff this year was Dr. Catherine Latu which allowed the medical staff to provide GOPD consultation from Monday to Friday 9am – 5pm through out the year, the best medical staffing ever for Paediatric.
- Saving 10 out of 12 cases of Hybernatraemia during the gastroenteritis epidemic is a big milestone for us. Medical, nursing and laboratory staff worked 24 hours during these months to save these children.
- Introducing the Hib vaccine in May 2005 is a milestone to all health care services in Tonga but most importantly to the people and children of Tonga. Death from meningitis alone was only 3 this year compared to 5 last year. We should look forward to less mortality from meningitis and septicaemia especially among infants from now onward.
- Although more admissions this year the total deaths and case fatality rate for Paediatric was less compared to last year, 30 % of these deaths could not have been prevented. Unfortunately the same can't be said for SCN who had more deaths this year but again 54% of them could not have been prevented at least in the Tonga set up.
- Once again it is of some comfort to know that most children who died in Tongatapu died in the hospital. This had definitely contributed to the higher fatality rate for the year but may also reflect that more if not all people are seeking our help and accepting our service when they are sick. For us, this showed that we get the opportunity to provide our service to every sick child in Tongatapu, and the opportunity to give them the best care we can. Equally important this also improved the quality of our death statistic in our report.
- Determining the prevalence of LBW for the last 6 years had been a step forward into having our figures right. Prevalence of LBW in Tonga is 23 per 1000 live-births.
- 3 cases of Congenital hypothyroidism highlights that this problem is not uncommon in Tonga, although 2 in one year is more than what we expected from a world prevalence of 1/4000. I am sure some infants had lost their lives from this problem without being diagnosed before.
- Paediatric and SCN must admit that we have just enough monitors to gather for most our needs most of the time. SCN has been given a new infant heater by the WHO.

Provided below is a summary of the wards activities during the year.

The Paediatric Service provides service to children from age 0 – 14 years; total of 25,806, 36.2 % of the population of Tongatapu.

Table 25 Paediatric population of Tongatapu

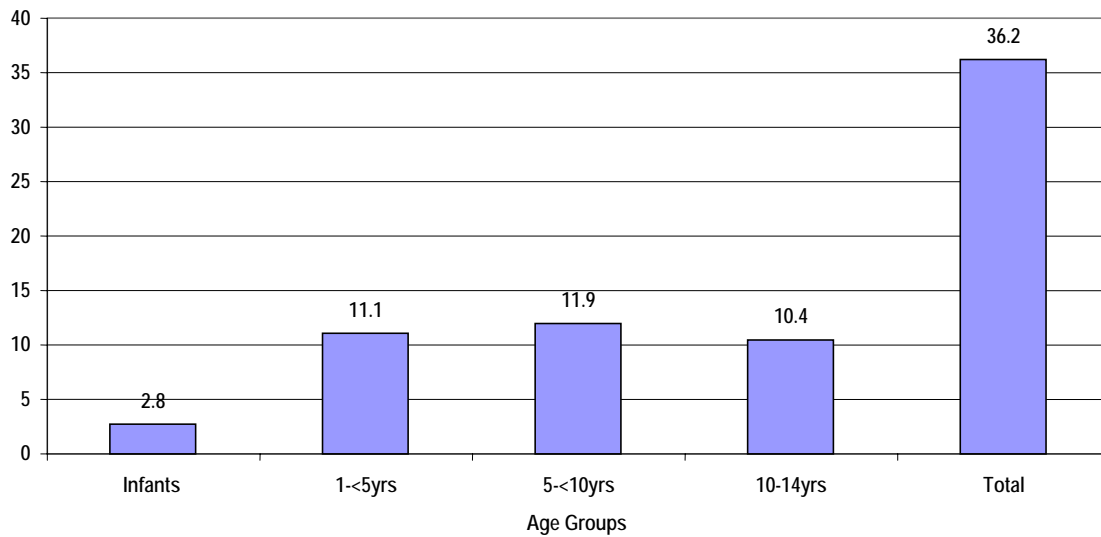
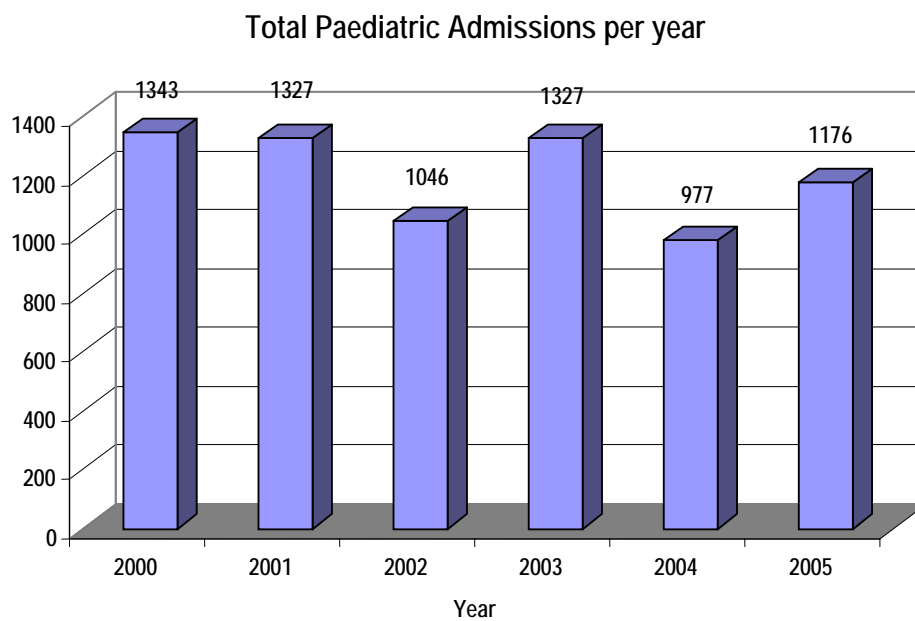
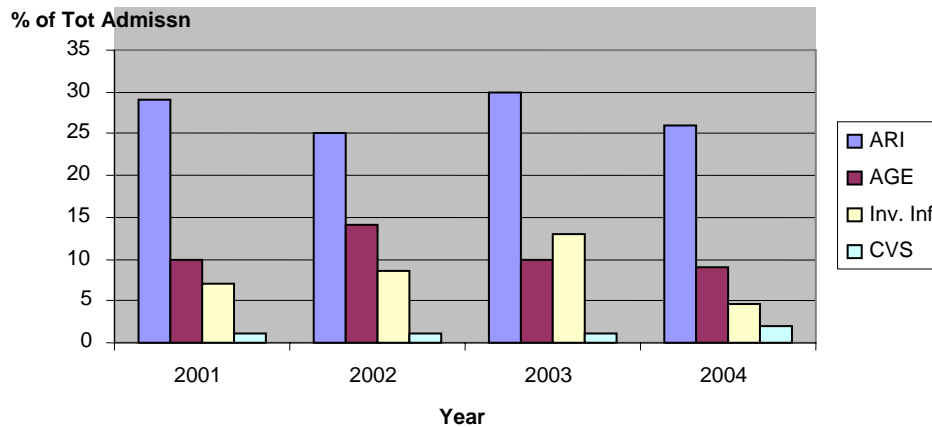


Table 26 Paediatric admission for 2005



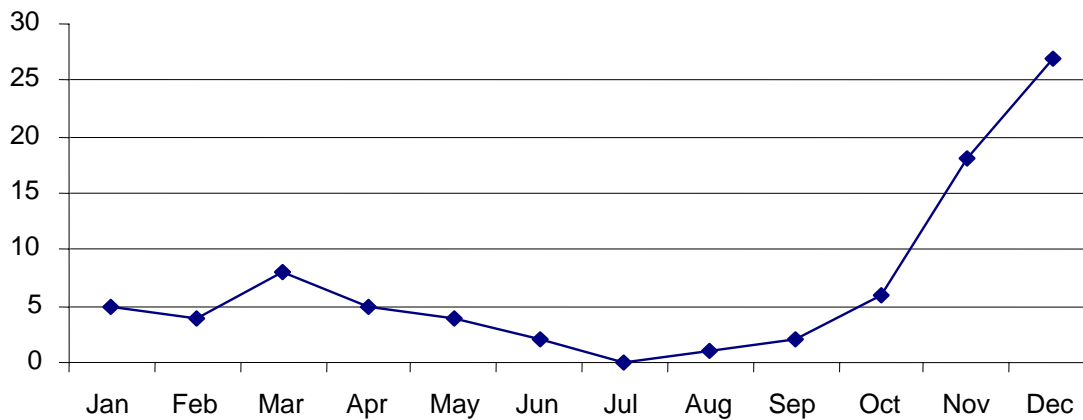
- Paediatric ward had the most admissions during December (128) with a quite month in August with 62 admissions only. A lethal viral Gastroenteritis epidemic that started in October and peaked in December accounted for the large amount of admissions this month.
- Acute Respiratory Infection (ARI) continued to be the major cause of admission to Paediatric ward with Bronchiolitis contributing 49%, Pneumonia 42% and with 9% due to Asthma.

Table 27 Common and Serious Causes of Admissions



- Acute Gastroenteritis again account for 10% of all medical admissions with a clear epidemic during the summer month. This has always been the pattern for the previous years but this epidemic had more children complicated by hypernatremia and claimed 4 deaths in Tongatapu and 2 from Vava'u, the highest deaths from gastroenteritis in the last 5 years.

Table 28 Gastroenteritis cases by month, 2005



Three new cases of Congenital Hypothyroidism were diagnosed this year, one after the age of one year who has migrated to New Zealand, one diagnosed at 6 weeks with poor weight and one diagnosed in New Zealand with the Guthrie test. Altogether there are 3 cases currently under our care. World prevalence is 1 / 4000 and less among black people and obviously we are looking at more than expected, 2 infants in one year (1/1000).

Case Fatalities

Compared to last year we had more admissions but less fatalities

Table 29 Total admissions and total number of deaths in the last 6 years

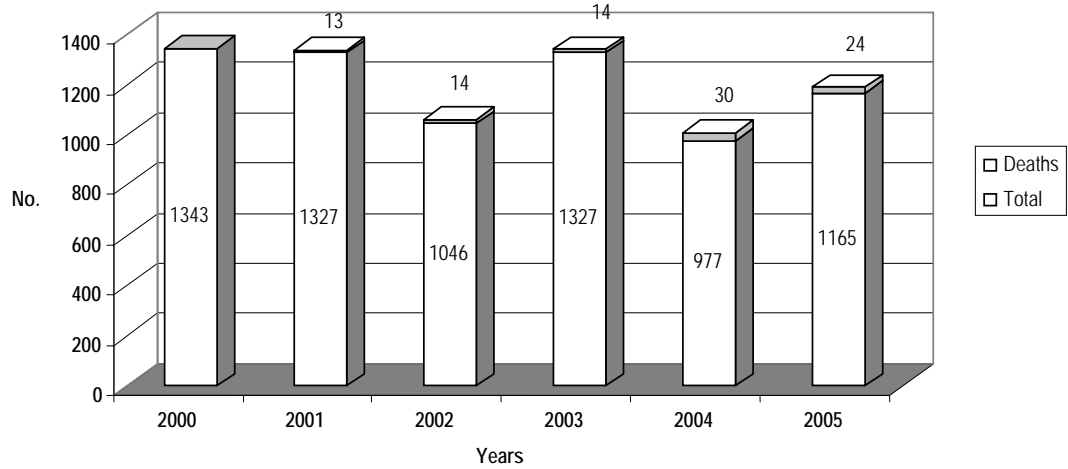


Table 30 Case Fatalities by Gender 2001 - 2005

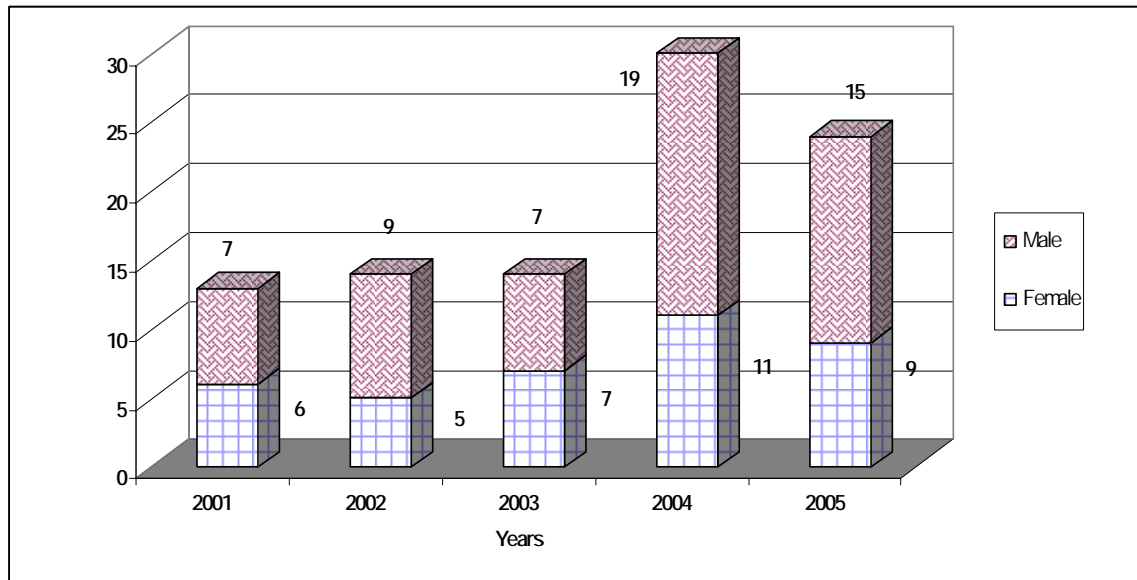
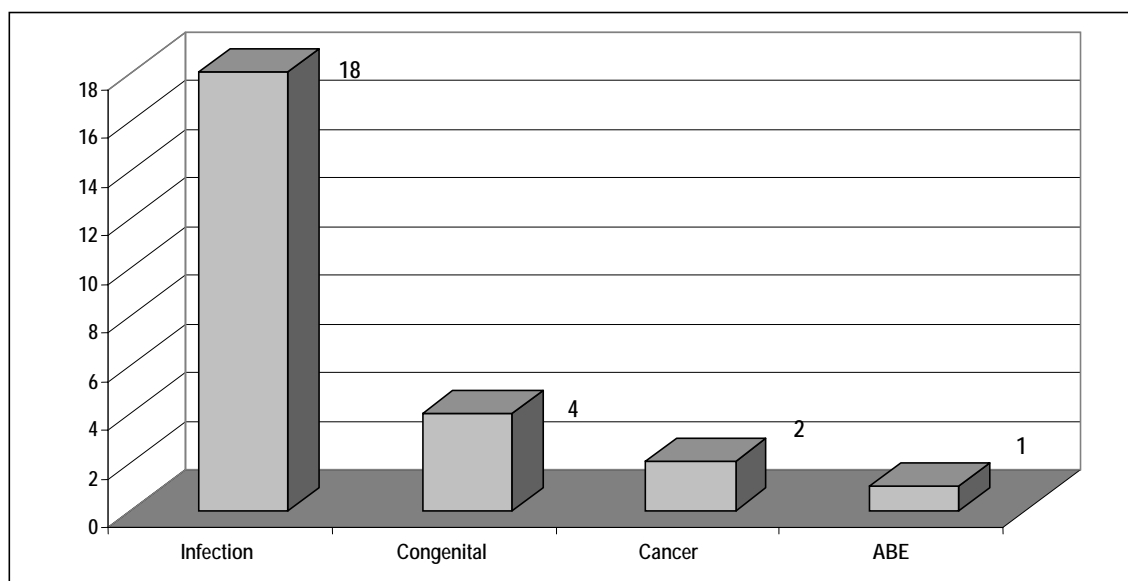


Table 31 Causes of Fatalities among Paediatric patients, 2005



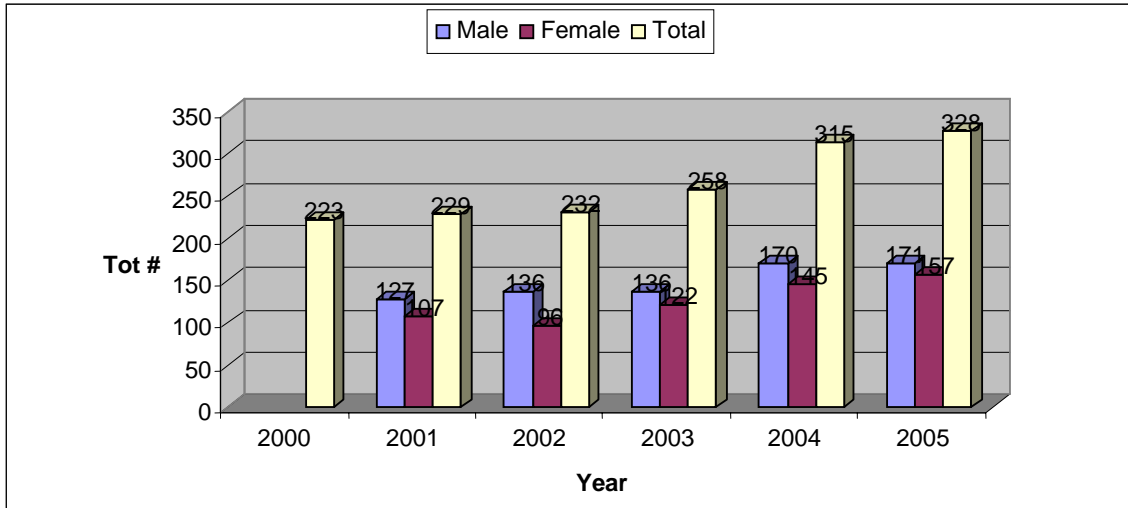
- Infectious disease has always been the major cause of deaths among Paediatric patients causing 75% of deaths in 2005.
- Breakdown of the 18 patients who died of infectious cause were as follows:
 - 7 died of septicaemia - all infants with one case of Meningococcaemia
 - 3 from meningitis - 1 infants, 1 under 5 from Staphylococcal meningitis and 1 older than 5 years. The low prevalence of meningitis and age distribution here is very different from previous years high-lighting the impact of the introduction of Hib vaccine at the 1st half of this year
 - 3 from Pneumonia – all infants with 2 aspiration pneumonia. Pneumonia alone is a very rare cause of death in Tonga but Aspiration pneumonia from Tongan medicine had not only cause a lot of morbidity this year but had resulted in 2 deaths.
 - 2 from Acute gastroenteritis, both infants, one on arrival from severe dehydration and the other from hypernatraemia.
 - One infant died from pertusis, unfortunately no specimen was able to collect from this patient for laboratory confirmation but it was atypical clinical case.
 - One infant died from Hepatitis A, not an uncommon outcome for hepatitis at this age.
 - Finally an unfortunate 12 years old boy died of Acute Bacterial Endocarditis within 12 hours of admissions.
- 4 patients died from Congenital abnormalities:
 - 3 had Congenital heart diseases 2 inoperable (1 AVSD, 1TAPVR) and the other 1 with TGA with no funding for overseas treatment available at the time.
 - One infant died from inoperable biliary atresia.
- Cancer caused 2 deaths in Paediatric this year, one 13 years old Trisomy 21 with ALL and one under 5 years old with a lung mass.

The Case Fatality Rate among Paediatric Inpatients of Vaiola Hospital for the Year 2005 (24 out of 1165 admissions) was 20.6 per 1000, a decrease of 10 per 1000 from 2004. At least 7 (29% - as bolded) of these deaths were not preventable. Out of the 12 confirmed cases of hypernatramic dehydration we had during the gastroenteritis epidemic at the end of the year only 2 died from hypernatraemia, a recognized high mortality risk complication

Special Care Nursery

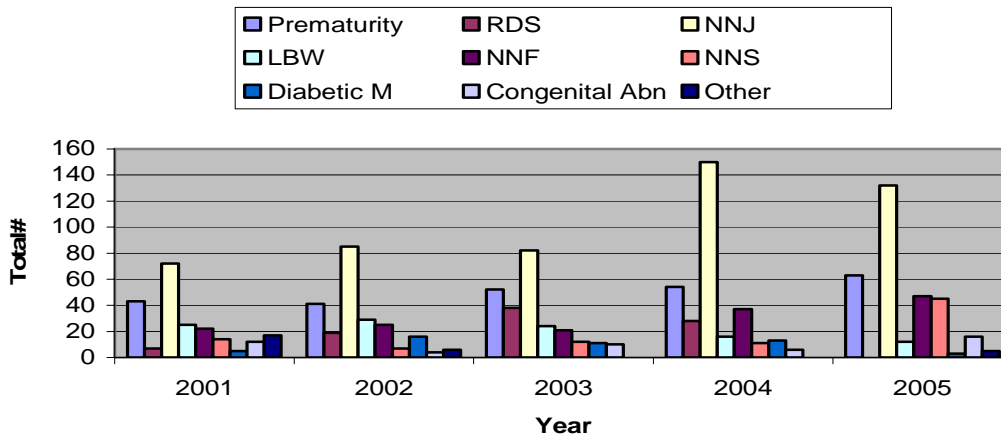
Admissions to the Special Care Nursery in 2005 was the highest in the last decade with 328 babies and almost equal number of male (52%) and female(48%)

Table 32 Total number of admission to the SCN Year 2000-2005



- High rate of admissions occurred during the month of January and August with 35 admissions each and November had the least number of admissions (<20).

Table 33 Causes of Admissions to SCN, 2001 - 2005



- Neonatal Jaundice and Prematurity had always been the 2 most common causes of admission to the special care nursery.
- For 2005, 40% of admissions were due to jaundice with 70% being due to Physiological jaundice again reflecting how poor / slow we are starting early breastfeeding. 30% of jaundice was due to ABO incompatibility but with early diagnosis and treatment of jaundice we again were able to prevent the need for Exchange transfusion this year. The last time we did Exchange transfusion was in 2002 and we hope to keep that record.
- Prematurity caused 19% of admission with babies ranging from 26 to 36 weeks gestational age and birth weight of as little as 935 grams. This year a 27 weeks baby with Birth Weight of 1120 grams

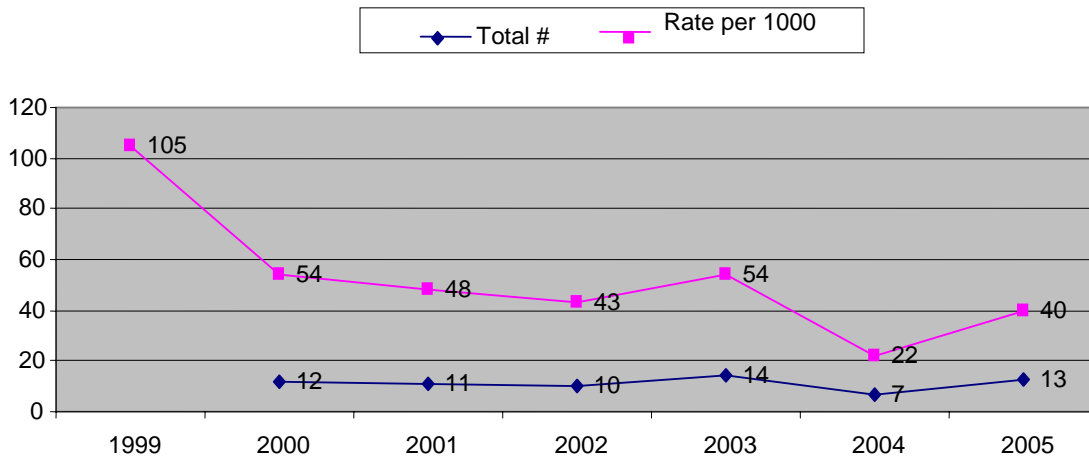
survived from the unit. The smallest to survive from our unit was a 27 weeks baby in 2002 with BW of 880 grams.

- Neonatal fever (14%) and Neonatal sepsis (13%) were the third and fourth common causes of admission.
- Congenital abnormalities contributed 5% (16cases) of admission compared to only 2% (6cases) last year. Not only was this more common this year it also accounted to majority of neonatal deaths with 43% (7 out of 16) mortality rate.
- Low Birth Weight (LBW) alone as the cause of admission to SCN caused 4% of admissions, however almost all Premature babies were low birth weight. In total there were 71 LBW babies born in Vaiola out of 1988 total deliveries in 2005. This gives a prevalence rate 3.6% of LBW for Tongatapu and 2.7% for the whole of Tonga with 2617 total live-births for 2005 .
- We were able to audit the LBW prevalence in Tonga as in Annex IV Table 3, for the last 6 years. Using the Vaiola LBW as numerator to the total live-births for the whole kingdom gave a very close estimation of LBW prevalence in Tonga which averaged at 23 per 1000 live-births for the last 6 years.
- Other uncommon causes of admission include meconium aspiration (2%), babies of diabetic mothers (1%) and others. The biggest baby born in Vaiola in 2005 weighed 5380 grams.
- 28 babies needed CPAP this year compared to 10 last year and 7 (25%) of them died, CPAP had certainly saved the lives of the other 75%.

Case Fatalities in the SCN, 2005

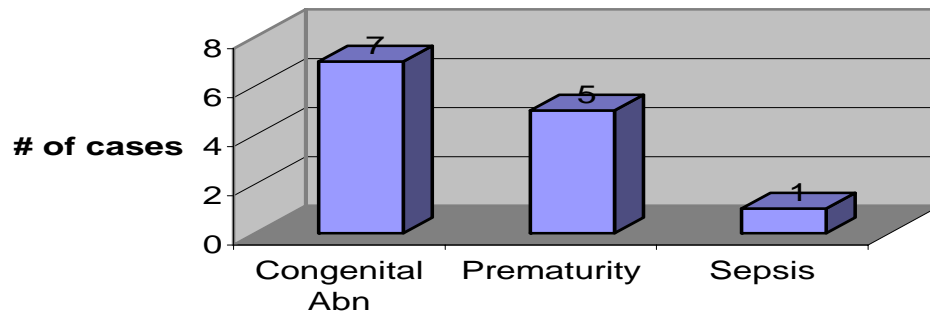
- In the year 2005 SCN had 15 deaths, 8 deaths more than last year; 2004 had the least deaths in the last 5 years with only 7 deaths (Graph 6.2.4, Annex IV Table 4).

Table 34 Case Fatality rate in Vaiola SCN in the year 1999 - 2005



- More female babies (70%) died than male babies. The most common cause of death was congenital abnormality (54%) in contrast to Prematurity, the major cause of death in the 4 preceding years.
- Of the 7 deaths from Congenital abnormalities 5(71%) had multiple systems involved, one had congenital hypoplastic kidneys and one with congenital lung mass.
- 5 (38%) died from Prematurity all due to severe hyaline membrane diseases with the eldest being a 33 weeks baby. Others were 26, 29 and two 30 weeks.

Table 35 Causes of fatalities in SCN for 2005



- Only one baby died from sepsis who was a full term baby.

The Case Fatality Rate for the Special Care Nursery for the Year 2005 was 40 per 1000 compared to 22 in 2004. Although more deaths, more than half (54%) of these were due to congenital abnormalities, which could not be prevented not only in our set up here in Tonga but also in most hospitals around the world.

Infants and under 5 mortality rate

- Using the Vaiola Figures of infant deaths will give a very close if not the exact rate of IMR for Tonga. There were 33 infant deaths altogether in Vaiola hospital and using 1988 live births for Tongatapu and 2617 for the whole of Tonga will give a IMR of 16.6 and 12.6 per 1000 respectively.
- There were 2 under 5 deaths giving a U5MR of 0.25 for Tongatapu (7922) and 0.18 for the whole of Tonga (11178).

8.3. Surgical Ward

Senior Medical Officer Dr. Samson Mesol is responsible for managing the ward and assisted by 1 Surgeon Specialist Dr David Innes. Nursing Sister Seneti Fakahua, headed the team of 16 nurses and 4 non-clinical support staff.

8.3.1. Objectives

The ward's objectives are:

- To deliver safe surgical quality services to our customers with the best possible health outcomes for the people of Tonga, and to practice surgical services within the Ministry of Health with available resources at all time.
- To ensure that most surgical clients are provided with enough health education at all times.
- To continue to value surgical staff by enhancing staff sense of pride and commitment through ongoing training, allow flexibility and innovative practice in all level of services.
- To practice good communication skills through revising staff job descriptions according to each staff roles and responsibilities.
- To promote team work and training of staff at all levels.

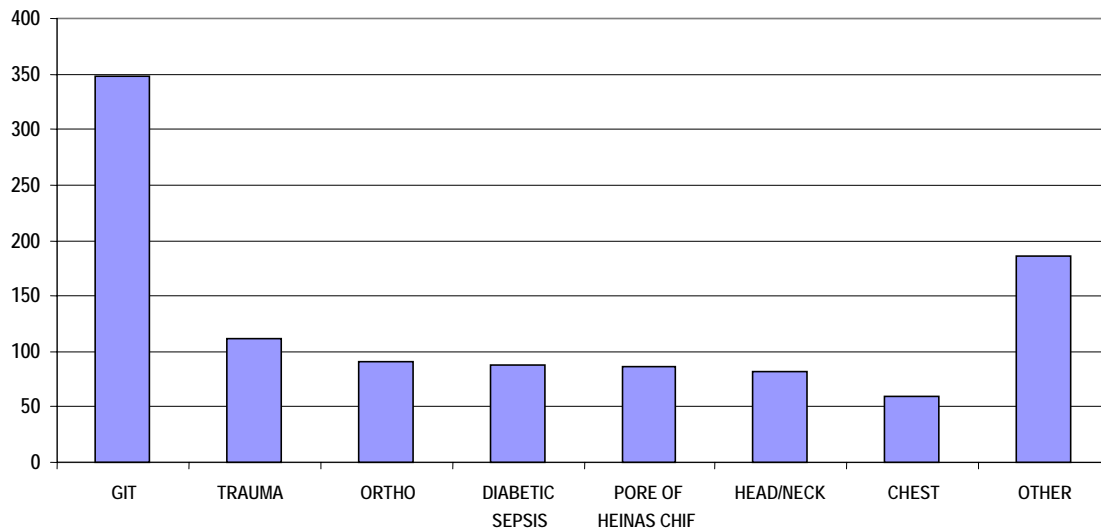
8.3.2. Functions

The ward's functions are:

- Treat and manage all patients presenting with surgical problems.

- Provide safe, efficient, effective and timely pre-operative and post-operative services for those undergoing surgery above the age of 12 years
- Determine, screen and stabilize clients for surgery.
- Provide effective health education for surgical patient at all times.
- Conduct ongoing training for staff of surgical ward.
- Respond effectively to surgical referral of clients from community clinics, Outer Islands and overseas referral when needed.
- Provide safe and clean working environment in the ward by ensuring that instrument and equipment is available and in good condition at all time.
- Follow-up discharge patients and out patient surgical patients by providing Special Outpatient Clinic on Monday, Wednesday and Fridays.

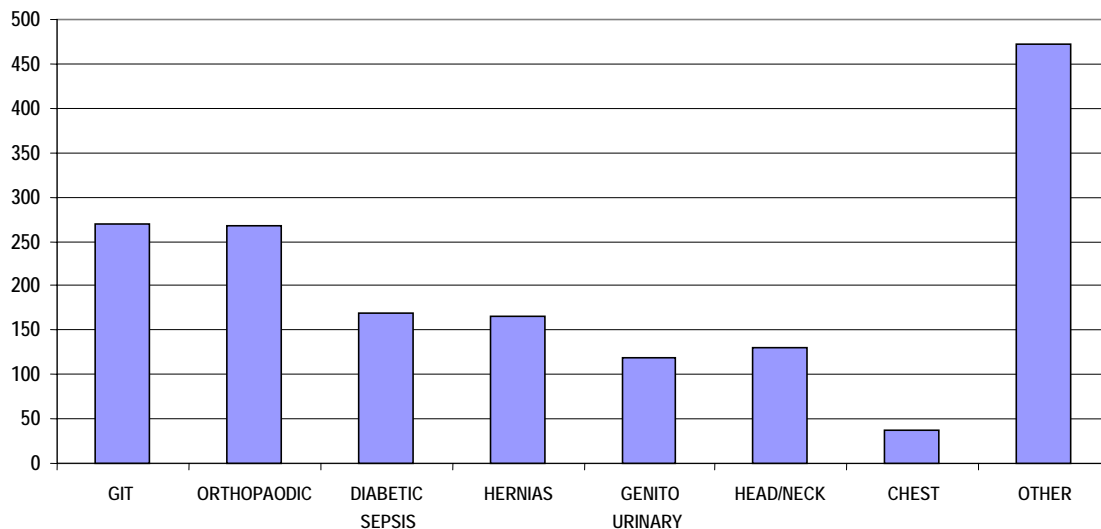
Table 36 Surgical Admissions for 2005



There were 1052 surgical admissions for 2005.

Note: Trauma includes non-specific diagnoses such as MVA, assault, fall, working injury and rugby injury.

Table 37 Operations and Procedures in Operating Theatre for 2005



The total number of procedures performed in 2005 was 1632.

Note:

- Gastroscopy and sigmoidoscopy are included in GIT procedures.
- Plaster changes/removals/applications are included in orthopaedics.
- There were 21 major amputations (BKA or AKA) performed last year, all diabetic related. That is a definite increase.
- Majority of the Genitors cases were circumcisions.

8.3.3. Financial Allocations

The ward was allocated \$5,000.00 and was utilized for purchase of non clinical supplies and equipment.

8.3.4. Milestones

In delivering its services, the following were identified as milestones during the year,

- Dr David Innes, Surgeon Specialist joined the Surgical Unit in January 2005 and has contributed significantly to the delivery of surgical services. Most notably in the teaching and supervision of interns and registrars.
- Dr Saia Piukala sat his Part I, Surgical exam in Fiji after having being super here. He has passed with very high grades that he has gone to Fiji, full time to complete his masters.
- For the first time in many years, the division was able to run 3 weekly outpatients clinics.
- Hon. Minister of Health continued to provide clinical surgical services.
- Interplast Australia spend 2 weeks in September 2005.
- The club foot team visited in October 2005, a service this country cannot do without.
- Mr Persy Pearce, Paediatric surgeon spend a week with the ward in November 2005.

8.4. Medical Ward

Senior Medical Officer Dr Sione Latu is responsible for managing this wards and is supported by 1 Medical Officer, 1 intern, and 16 nursing staff.

8.4.1. Objectives

The wards objectives are:

- To teach medical staff the ethical standard of integrity and professionalism viewed as the traditional hallmarks of the physician.
- To emphasize the principles of evidence-based medical treatment, discussed in the context of cost-effective, outcomes-oriented care.
- To provide ongoing education opportunities of the highest calibre to practitioners.
- To review and develop programs that will answer the needs of health care reform and better train medical staff in the environments of the future.
- To formalise the Standard Treatment Guidelines as Treatment Protocols for management of internal medicine cases.
- To reduce morbidity and mortality related to Non-communicable diseases and related complicated through a concerted primary care approach and risk factor management on a secondary prevention level.
- To send another RMO for postgraduate training at the Masters level and another at the Fellowship level.

8.4.2. Functions

The wards functions are:

- To provide comprehensive, longitudinal, humane and cost effective medical care to the ill and expert health counsel to individual patients and to the community as a whole.
- To act as a responsive resource in affairs related to general internal medicine and primary care for the national with a particular emphasis on the health care needs of Tonga. This includes consultation medicine (inter-departmental, inter-island and overseas referrals).
- To educate medical staff in the field of general internal medicine recognizing that it is an integral part of primary care.

8.4.3. Financial Allocations

The ward was allocated \$5,000.00 and was utilized for purchase of equipment and office supplies.

Outpatients Services:

- We have 5 formal Special Outpatient Clinics of which 1 is on a 1 in 3 rotational basis between Vaiola Hospital, Mu'a Health Centre (for the Eastern Districts) and Kolovai Health Centre (for the Western Districts).
- An average of between 20-25 patients per clinic with an average duration between clinics re-visits of 608 weeks.
- There are approximately 1-2 new patients per clinic. Clinics are held for only approximately 48 weeks of the year making it a total of 240 Special Medical Outpatient Clinics per year.
- Using 25 patients/clinic patient will be seen between 6-8 times/year so that the pool of clinic patients is in the vicinity of 750-1,000 with a new intake rate of close to 40-8% per clinic.
- NCDs and related complications accounted for almost 80% of the mortality within the Medical Ward (76/99) deaths) and assuming all were clinic patients (which invariably they are and highlights the issue of non-compliance with management and clinic review) the attrition rate should be in the vicinity of 15-20% annually (taking into account amongst other things like emigration, voluntary defaulting, clinic discharges, clinical cure etc.). The 'clinic pool' would therefore be increasing at about close to 10% per year. These figures do not take into account the significant number of outpatients cases seen and reviewed in the Medical Ward.

Inpatients Services:

- The total admissions for the year were 1064 as compared to 1452 in 2004 and 1475 in 2003.

Table 38 Leading Causes of Admissions to the Medical Ward, 2005

Diseases	Total	Percentage
Miscellaneous/Non-categorised diagnosis	266	25
Cardiac related diagnosis	164	15
Diabetes related diagnosis	107	10
COPD	99	9
LRTI/Pneumonia	72	7
Hypertension related diagnosis	65	6
Stroke	60	6
Viral illness	52	5
GIB/PUD	45	4
Malignancy	43	4
Renal failure	38	4
Septicaemia	31	3
Asthma	22	2
TOTAL	1064	100

- There was a drop in the total annual number of admission from the previous year of close to 30%. This was most evident in the months during the Civil Servants Strike where the daily occupancy rate was down to less than 20%.
- NCDs and related complications account to close to 55% of the total admissions. The average length of stay/admission was about 5.7 days however, in certain chronic diseases like COPD where because of our inability to provide domiciliary oxygen their average length of stay was heavily skewed to the left by a factor of 4-5 times. This obviously has a great negative impact in terms of the financial and social burden of the disease and the loss of productivity (in terms of QALYS) both at the communal and national levels.

Mortality

A total of 99 deaths were recorded by the ward in comparison to 91 in 2004 and 90 in 2003.

Table 39 Medical Ward Mortality 2005

Causes of death	Total	Percentage
Cardiac related diagnosis	19	20
Malignancy	17	17
Stroke	15	15
Renal failure	11	11
COPD	10	10
Septicaemia	9	9
Miscellaneous/Non-categorised diagnosis	7	7
GIB/PUD	5	5
Diabetes related diagnosis	4	4
LRTI/Pneumonia	2	2
TOTAL	99	100

- NCDs and related complications again take the four top positions for the commonest causes of mortality at the Medical Ward. They account for close to 80% of total mortality even though they only account for 55% of the total admissions. The big 'movers' up the table are malignancy, stroke and renal failure which is not surprisingly considering the 'terminal' nature of these diseases once diagnosed.
- The proportion of deaths related to malignancy would have surpassed cardiac related diagnosis considering that a significant proportion of patients chose to spend their remaining times at home with loved ones and this a reflection of the current cultural decorum regarding the 'dying entity/process'. Sepsis only accounts for less than 15% of deaths which is a reflection of disease transition phenomenon from infectious diseases to NCDs seen globally.
- The proportion of deaths due to diabetes has been diluted by the singularly-based cause of death classification. Diabetes is disease with myriad presentations and is invariably involved in many of the deaths seen.

8.4.4. Milestones

In providing its services, the following were identified as milestones during the year,

- Senior Medical Officer participated in IARC Cancer Epidemiology Course in May, 2005.
- Pan-Pasifika Medical Association and TMA Conference held here in August, 2005.
- Dr Michael Micholson, a volunteer cardiologist from Tasmania, spent a month sabbatical here in November.
- More staff nurses enrolling with the numerous computer courses offered at our Computer Lab.

8.5. Obstetrics and Gynaecology

Senior Medical Officer, Dr. Semisi. F. Latu is responsible for managing this ward and is supported by 2 Senior Medical Officers and 25 nursing staff.

8.5.1. Objectives

The wards objectives are:

Obstetrics

- To send Interns on minimum of 4 months Obstetric attachment.
- To secure postgraduate trainings for doctors to staff the outer island hospitals.
- To offer local midwifery course to cater for the needs of island hospitals.
- To obtain mobile ultrasound machine for emergency use in Obstetric Ward.
- To attain emergency obstetric equipment in Obstetric Ward.
- To implement clinical protocol in Vaiola Hospital.
- To transfer clinical protocol to the islands.
- To screen for gestational diabetes by OGT on all mothers.
- To undertake routine ultrasound scanning at 20-24 weeks gestation.
- To conduct regular 6 months visit to the outer islands.
- To introduce antenatal STI surveillance in Vaiola Hospital.
- To provide information leaflets and media production.
- To introduce evening antenatal classes.

Gynaecology

- To implement clinical protocol in Vaiola Hospital.
- To transfer clinical protocol to the islands.
- To conduct Pap smear screening for cervical cancer in gynaecology outpatient clinic.
- To provide a colposcope to gynaecology clinic.
- To secure clinical attachment for nursing staff to an overseas hospital.
- To provide information leaflets and media production.

8.5.2. Functions

The wards functions are:

- Conduct and supervise the antenatal clinic.
- Conduct and supervise the gynaecological clinic.
- Provide family planning services, including contraception and infertility services.
- Provide obstetrics services to all patients admitted in pregnancy, labour, and puerperium.
- Provide services to all patients admitted with gynaecological problems.
- Advise and/or provide service to all obstetric and gynaecological cases referred from health centres, private clinics, and district hospitals in the outlying islands.

8.5.3. Financial Allocations

The ward was allocated \$4,000.00 for the purchase of equipment and supplies.

8.5.4. Milestones

In providing its services, the following were identified as milestones during the year,

- Continued education was carried out during the year, including regular ward meeting, ward round, individual case discussions and workshops.
- Antenatal clinic at Vaiola Hospital is fully staffed by clinical nurses and doctors.
- In October 2005, a Workshop on Reproductive Health was carried out for nurses, health officers and young doctors and was emphasized on:
 - Essential Obstetrics
 - PPH
 - Hypertension in pregnancy
 - Diabetes in pregnancy
 - Family Planning
 - Public awareness issues
 - Counselling on FP
 - IUCD and voluntary sterilization
 - Sexually Transmitted Infections
 - Men as partners
- Dr 'Aivi Puloka and Sr Sela Paasi visited Vava'u and Ha'apai and conducted a Reproductive Health workshop. This was also an opportunity for Dr Puloka to attend to problem cases in the islands and some of them were transferred to Vaiola Hospital for further treatment.
- A cardiac monitor with pulse oxymeter is now available in Obstetric Ward which helps with management of our intensive care patients.
- The Clinical Protocol was completed and officially presented to the Director of Health during the Reproductive Health Training/Workshop in October. Copies have been distributed to the outer islands for use until it is review in the future.
- GDM screening with OGTT is now carried out in the ward.
- Routine ultrasound scanning of the antenatal patients is continuing and has been very helpful.
- A training on the use of colposcope for screening cervical cancer cases was carried out in April but there were not enough number of patients to be screened.
- The Interns spent 4 months at the department compared to 3 month in the previous years. The longer period spent in the department the more beneficial as they would be more prepared to manage high risk cases/emergency cases in the outer islands.

8.6. Anaesthesia and Intensive Care Unit

Anaesthetist Specialist, Dr. Bernard Tu'inukuafe is responsible for managing these services and is supported by 1 Senior Medical Officer, 1 Medical Officer, and 1 Senior Health Officer.

8.6.1. Objectives

The section's objectives' are:

- To ensure a continuous level of high standard anaesthetic services.
- To assist as much as possible in intensive care management.
- To continue education and training of ICU and anaesthetic staff.
- To maintain a high level of equipment, drugs and facilities.

8.6.2. Functions

The section's functions' are:

- Provide a safe and high standard of anaesthetic services to patients undergoing operative procedures.
- Assist with the intensive care management of critically ill patients.
- Provide pre anaesthetic and postoperative assessment and care of patients.
- Assist with the resuscitation and transport of critically ill patients.

8.6.3. Financial Allocations

The section was allocated \$10,000.00 and was utilized for purchase of equipment.

Table 40 Summary of activities performed during the year

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
No. of GA	144	123	91	99	108	109	116	93	135	134	99	93	1344
No. of Spinals	17	17	25	31	26	31	27	26	24	19	21	24	288
No. of Epidurals	2	2	1	4	-	7	3	1	1	-	-	-	21
No. of Blocks	37	12	7	10	8	11	9	10	5	6	3	13	131
No. of Sedations	-	6	4	4	5	3	1	3	6	3	4	4	43
No. of Locals	21	42	44	52	38	73	35	35	38	43	39	52	512
												Total	2339

Table 41 Admission for Intensive Care Unit for the year 2005

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
No. of Admission	3	2	11	4	8	1	7	4	5	6	6	8	65
No. of patients survived	3	1	9	3	6	-	7	-	4	3	5	7	48
No. of patients died	-	1	2	1	2	1	-	4	1	3	1	1	17
No. of Neo/Infants	-	1	1	1	2	1	1	-	2	2	2	1	14
No. of Ventilated patients	-	2	-	-	1	1	-	-	-	2	-	-	6
Male	2	-	6	1	8	-	5	3	5	1	4	7	42
Female	1	2	5	3	-	1	2	1	-	5	2	1	23
No. of Adults	3	1	10	3	6	-	6	4	3	4	4	7	51
												Total	266

8.6.4. Milestones

In providing its services, the following were identified as milestone during the year,

- Dr Maureen Nelson, an anaesthetist sponsored by the Commonwealth Secretariat completed her 3 years contract in February 2005. We are very thankful for her dedicated service.
- The Intensive Care Nursing Training Programme consisting of 10 staff nurses started in February and would last for a year.
- Senior Health Officer, Mr. Talilotu To'ia attended a 1 week anaesthetic conference in the Cook Islands in September 2005.

8.7. Mental Health

Senior Medical Officer, Dr Mapa Puloka is responsible for managing mental health services and is supported by 1 Medical Officer, 7 Nursing Staff, 1 Mental Health Welfare Officer, 1 Psychiatric Social Worker and 7 Psychiatric Assistants.

8.7.1. Objectives

The section's objectives' are:

- To ensure the continuity of skilled and committed staff.
- To improve the quality follow-up of psychiatric patients, eg. the establishment of a half way house is a need indeed.
- To develop mental health services in the outer Islands.

- To promote knowledge in mental health and dissolve misconceptions, stigmatization, ignorance and discrimination.
- To implement legislation especially the provisions of the current Mental Health Act No. 8 of 2001.
- To develop network.
- To improve the interdisciplinary management of psychiatric in-patients.
- To purchase appropriate equipment for management of psychiatric in-patients.

8.7.2. Functions

The section's functions' are:

- Treat and contain acute psychiatric cases and emergencies.
- Treat and rehabilitate chronic psychiatric cases.
- Provide psychiatric care to patients who have suffered institutionalization and to continue the process of deinstitutionalization.
- Treat and contain forensic psychiatric cases according to the provision of the Mental Health Act 2001.
- Follow-up outpatient cases and to continue psycho-social rehabilitation (PSR).
- Implement an "Open Door Policy" for drop in cases with psychiatric problem and respite care. Patients admitted via open door policy are known as "revolving door patients" or RDP.
- Ensure active participation in matters related to the promotion of mental health

8.7.3. Financial Allocations

The section was allocated \$83,251.00 and was utilized for the purchase of supplies and equipment.

Table 42 Summary of community based activities performed during the year.

Activities	Number
Number of RDP admission for 2005	83
Number of admission via section 23 of the Mental Health Act 2001 (02/01/05 – 31/12/05)	79
Number of Mental Health Review Tribunal (MHRT) Meeting in 2005	38
Number of applications for extended orders to the Mental Health Review Tribunal (MHRTC) were approved	57
Number of Community Treatment Orders issues	35
Number of consultation Liaison Psychiatry (CLP) for the year 2005	4
Number of admissions pursuant to the requirement of the Criminal Offence Act	5
Number of home visits for the year 2005	3222
Number of new outpatients for the year 2005	38
Number of attendants for the Psychiatric Special Outpatient Clinic (SPOC)	876
Number of defaulters of SOPC (16% compare to 37.2% in 2004)	142
Total number of deaths for the year 2004 (all outpatient)	3
(Causes of death: - 1 unknown	
- 1 cardiac arrest	
- 1 suicide	

Table 43 No. of Admission by Gender

No. of male admission	65
No. of female admissions	28
Female to Male admission ratio	1:2.0
No. new cases	37
No. of female new admissions	9
No. of male new admissions	28
Female to male new admission ratio	1:3
No. of readmissions	56

No. of male readmissions	37
No. of female readmissions	19
Female to male readmission	1:2

8.7.4. Milestones

In providing its services the following were identified as milestones during the year:

- We have now moved to the new psychiatric unit. The new unit has more space, well ventilated and the structure fits the requirement of the patients and staff.
- A continued reduction of the number of readmission to the psychiatric unit as a result of continuing medication on wheel (MOW), out-reach programme and frequent home visit to patient's home in the community.
- The Fiefa programme has started an outreach programme.
- A five day commemoration of the Mental Health Day 2005 was carried out. The theme for this year was "Mental and Physical health across the Lifespan".

8.8. Operating Theatre

Nursing Sister Tangiketatau Taulanga is responsible for managing this service and is supported by 1 Nursing Sister, 1 Senior Staff Nurse, 10 Staff Nurses, and 2 support staff.

8.8.1. Objectives

The section's objectives are:

1. To provide experience, trained staff to maintain and expand the services, to save life in emergencies and to promote improved health.
2. To provide staff with adequate in-service education to enable them to maintain and expand their knowledge and skills required for competent practice.
3. To maintain quality and standard services at all times.
4. To provide a safe working environment.

8.8.2. Functions

The section's functions are:

- To provide a high quality services whether it is pre-operative or post-operative or during the operation that is professionally sound, cost effective and to comply with the ethical principles of the Ministry of Health.
- To provide a good services for the comfort of the patient undergoing surgery.
- To explain to patients Theatre procedure both pre-op and post-operative so as to reduce the anxiety the patient may have concerning his/her sickness.
- To encourage staff to be involved in policy formation.
- To participate in the recruitment of staff.

8.8.3. Financial Allocations

The section was allocated T\$5000.00 and was utilized for the purchase of supplies and medical equipment.

8.8.4. Milestones

In providing its services, the following was identified as milestone during the year,

- Twinning Programme with St. John of God Hospital, Ballarat, Australia donated surgical equipment and supplies.
- The Clubfoot Team donated an electric tourniquet.
- Hon. Dr Viliami Tangi donated a new rectal biopsy set.
- Dr Innes donated uniforms, sigmoid set and other useful instruments.
- Plastic Team donated supplies.

8.9. Ophthalmology

Medical Officer Special Grade Dr Paula Vivili is responsible for managing this section and is supported by 1 Health Officer and 1 Nursing Staff.

8.9.1. Objectives

This section's objectives are:

- To ensure that Eye care is considered as a priority area.
- To provide appropriately trained staff to carry out primary care education of the public.
- To provide adequately equipped facilities to ensure provision of quality eye care at all.
- To strengthen cataract services and develop an audit of outcomes.
- To develop an appropriate diabetic eye disease screening and management programme.
- To provide low cost glasses.
- To develop a system for assessing and detecting the extent of eye problems in Tonga.
- To develop a system for the delivering of eye care services both centrally and also an outreach component.

8.9.2. Financial Allocations

The section was allocated \$10,000.00 for Technical Equipment which is used to support services of the section. A large amount of equipment and consumables are provided by visiting teams. The section provides all the Eye Care equipments of the country and staff undertake outreach trips to the outer islands to provide these services. Referrals are also made to the section from the outer islands.

The section continued to benefit from services provided by visiting teams. Their contribution both in expertise and equipment plays an integral role in the Section's ability to provide the services it does. The following teams visited during the year.

- Hawaiian Eye Foundation (Hawaii)
- Pacific Island Project (AusAID, Australia)
- Surgical Eye Expedition (USA)
- Volunteer Ophthalmic Services Overseas (NZ)

8.9.3. Milestones

In delivering its services, the following were identified as milestones during the year,

- **Visitors**
 - Dr Judy Newman, a paediatric ophthalmologist from the USA visited and was organized through Surgical Eye Expeditions.
 - Dr John Corby accompanied by Dr Tom Prater and the team visited in June and toured the islands.
 - Dr Toohey, Dr Willoughby and optometrists Duncan Bush and an ophthalmic nurse Julie Smith visited in September and have the opportunity to tour the islands.

- Dr Timothy Crane from Hawaii visited for two days arranged through the Surgical Eye Expeditions and Hawaii Eye Foundation.
- **Donations**
 - Laser for treating diabetes eye disease donated by Timothy Crane of Kauai, Hawaii.
 - Operating microscope from Dr John Corby and the Hawaiian Eye Foundation
- **WHO Funding**
 - WHO funded programme for Primary Eye Care which include training of staff in Tongatapu, Vava'u and Ha'apai. The funding also covered some equipment for the program.
- **Telemedicine**
 - The section uses the internet to contact colleagues overseas regarding the management of complicated patients. This is done through emailing photos of patients of consultations mainly to Auckland Eye in New Zealand and Drs Toohey and Willoughby in Australia.
- **Meetings and Conferences**
 - Royal New Zealand and Australian College of Ophthalmology (RANZCO) Annual Conference: Dr Paula Vivili attended this conference meeting in November held in Australia funded by the RANZCO. The meeting resulted in forging new ties and relations for the Pacific Islands including Tonga.
 - The Fred Hollows Foundation (NZ) Pacific Eye Health Workshop: Dr Paula Vivili and Nursing Staff Meleane Eke attended this workshop in November held in Suva, Fiji funded by the Fred Hollows Foundation. The meeting discussed topics such as research, refraction and trainings. Presentation was done by Dr Vivili on 'Myopia in school children', and again Dr Vivili was re-elected as Chairman of Pacific Eye Care Society (PacEYES). An announcement also made at the meeting was the set up of the Pacific Eye Institute (PEI) in the Solomons and post graduate courses in ophthalmology will also offers for both doctors and nurses. These courses will be accredited through the Fiji School of Medicine.
- **Outreach**
 - During the year the section was able to carry out two trips to Vava'u, one trip to Ha'apai and 'Eua, Training of staff in the outer islands in Basic Eye Care is an important component in the long term sustainability of the Outreach programme. WHO funded these visits.

8.10. Ear Nose Throat

Senior Medical Officer, Dr. Lei Saafi is responsible for managing this specialty service and is supported by 1 Medical Officer and 1 Staff Nurse.

8.10.1. Objectives

The Clinics objectives are:

- To promote cost-effective patient management through;
 - Providing high standard clinic management techniques
 - Faster but safe discharge of patients from the wards
- To improve the service by upgrading management techniques.
- To recruit and train 1 more ENT Surgeon.
- To establish a new audiometry service.
- To provide 'on the job training' to the staff.
- Provide health education especially to parents on ear hygiene, prevention of foreign bodies lodging in ENT areas.
- To reduce overseas referrals.

8.10.2. Functions

The Clinic's functions are:

- Provide 24 hour coverage for in-patients and all acute emergencies at OPD.
- Manage all ENT problems and their complications, both in outpatient and inpatient.
- Perform weekly (Monday) ENT routine operations.
- Conduct four weekly Out Patient sessions for new patients and follow-up.
- Establish and maintain links with Health Centers, district hospitals and private practitioners.
- Keep proper recordings for the section.

8.10.3. Financial Allocations

The section was allocated \$5,000.00 for the purchase of supplies and equipment.

8.10.4. Milestones

In providing its services, the following were identified as milestones during the year,

- Recruiting of Dr Tevita Vakasiuola to the ENT team.
- Purchase of Computer for the unit.
- Dr Ngalu Havea again visited Tonga with the Ear, Nose and Throat Pacific Island Project Team during July 2005 for 10 days.

8.11. Emergency and General Outpatients

Medical Officer Special Grade, Dr. Lemisio Sa'ale is responsible for managing this section and is supported by 4 Medical Officers, 1 Senior Health Officer, 12 Nursing Staff and 2 support staff.

8.11.1. Objectives

The section's objectives are:

- To improve quality of services for patients seeking emergency and outpatient care.
- To provide ongoing training of staff (doctors and nurses).
- To improve its management and planning.
- To improve relationships with other disciplines within the hospital.

8.11.2. Functions

The section's functions are:

- Provide in-hospital emergency and outpatient services
- Provide pre-hospital emergency ambulance services.

Pre-Hospital Emergency Ambulance Services

- This service has been implemented and further improvements are needed in area of equipment, staffing and ongoing education of staff.

In-Hospital Emergency and Outpatient Services

- Emergency cases are transferred immediately to the Emergency Room (ER).
- All other patients are registered and triage using the international triage system (1 to 5). They are seen according to their triage scale.

8.11.3. Financial Allocations

The ward was allocated \$4,000 and was utilized for implementation of its activities.

Table 44 The table summarizes the six main services provided by the department.

Service	2005	2004	2003
Consultations	69064	67,329	70,577
Emergencies	535	593	839
Dressings	7,196	6,354	5,715
Minor Operations	325	584	836
Nebulizations	4,380	4,072	3,174
Ambulance	43	45	43

Table 45 The table and graph reflects the trends for the last nine years.

	1997	1998	1999	2000	2001	2002	2003	2004	2005
Emergencies	381	396	415	731	793	983	839	593	535
Dressings	31,092	43,992	41,672	13,029	13,782	15,504	5,715	6,354	7,196
Minor Ops.	600	744	1,127	1,044	1,020	655	836	584	325
Nebulization	5,255	6,128	3,789	4,065	4,855	4,619	3,174	4,072	4,380

Total number of emergencies continues to decrease from 2004 to 2005.

Table 46 Other activities performed per month in 2005 in comparison to 2004

	Dressing		Injections		Minor Ops		Nebulizes		ECG	
	2005	2004	2005	2004	2005	2004	2005	2004	2005	2004
Jan	714	624	516	390	28	26	401	366	50	42
Feb	653	553	812	405	35	31	368	341	74	80
Mar	678	588	550	448	35	28	390	299	70	69
Apr	597	537	490	393	28	20	380	372	61	60
May	536	536	472	353	27	18	392	346	71	76
Jun	547	447	494	364	35	26	438	446	73	76
Jul	639	539	310	363	26	33	400	357	63	64
Aug	600	608	414	299	20	22	316	336	80	89
Sep	480	470	485	288	11	12	324	356	66	65
Oct	546	446	506	346	20	7	300	282	84	81
Nov	605	505	458	407	31	7	381	392	49	39
Dec	601	501	579	373	29	354	290	179	36	35
TOTAL	7,196	6,354	6,086	4,429	325	584	4,380	4,072	777	776

Table 47 Emergency cases per month in 2005 in comparison to 2004

Year	Admission		Discharge Home		Death On Arrival		Emergency Death	
	2005	2004	2005	2004	2005	2004	2005	2004
Jan	32	39	5	8	4	2	4	0
Feb	38	37	7	10	5	5	0	0
Mar	48	28	7	9	1	7	3	3
Apr	32	27	9	12	4	7	1	0
May	45	48	8	11	2	4	0	3
Jun	35	46	5	7	3	4	1	2
Jul	37	43	5	8	2	5	1	1
Aug	12	34	1	8	6	3	3	2
Sep	16	42	3	3	3	4	0	0

Oct	20	29	4	5	8	7	0	0
Nov	33	24	5	4	2	6	0	3
Dec	59	28	11	5	2	7	3	3
TOTAL	407	425	70	90	42	61	16	17

- 76% of all emergencies were admitted and 13% sent home on medications. Of all admissions from Emergency Room:
 - 51% to medical ward
 - 28% to surgical ward
 - 20% to paediatric ward
 - <1% to ICU (3 cases only)
 - <1% to obstetric ward (1 case only)
- Total death in 2005 decreases from 78 in 2004 to 58 only. The most common cause of death resulted from acute cardiac MI (56%), respiratory diseases (12.5%, and injuries (12.5%).

8.11.4. Milestones

In providing its services, the following were identified as milestones during the year,

- Dr. Lemisio Sa'ale was promoted to Medical Officer Special Grade in July 2005.
- Airport disaster exercise
 - Hospital disaster plan revived with Dr. David Innes as the Organizer.
 - One airport disaster exercise undertaken on 20 July 2005.
 - There is still room for improvement especially those activities at the airport.
- Visiting Consultants
 - Cherry Pretty, an Emergency Nurse from St. John of God Hospital, Australia visited the department for one month and conducted teaching sessions and workshops.

8.12. CLINICAL SUPPORT SERVICES

8.12.1. National Centre for Diabetes and Cardiovascular Diseases

Chief Medical Officer, Clinical Services, Dr. Taniela Palu is responsible for managing the Centre and is supported by 2 Nutritionist and 3 Nursing staff.

8.12.2. Objectives

The Centre's principle objectives are:

- To prevent or delay the onset of complications caused by diabetes and cardiovascular diseases, and to improve their management hence ensuring a more productive and healthy population.
- To participate and support the establishment of National policies for the integrated prevention and control of diabetes and cardiovascular diseases.
- To develop and implement integrated strategies for the prevention of diabetes and cardiovascular diseases, with emphasis on primary prevention and promotion of healthy lifestyles.
- To increase community-based detection and control of diabetes and cardiovascular disease.
- To establish or strengthen the management of diabetes and cardiovascular diseases and their complications (Tertiary prevention).
- To establish and strengthen appropriate epidemiological surveillance and monitoring for diabetes and cardiovascular disease and their risk factors.
- To further strengthen the development of human resources and research for the prevention and control of diabetes and cardiovascular disease.

- To maintain and strengthen the working partnership with the Australian Centre for Diabetes Strategies at the Prince of Wales Hospital in Sydney, Australia and to ensure the continuity of the AusAID funded Tonga Diabetes Project.

8.12.3. Functions

The Centre's functions are:

- Provide specialist care for all-inpatients and out patient diabetics in Tonga.
- Provide advice on diabetic management to other hospitals and health centres.
- Provide education and training for health workers on diabetes and NCD.
- Work closely with the Health Promotion and NCD Section of the Public Health Division on prevention strategies relating to diabetes and NCD risk factors intervention and management.
- Advise the Hon. Minister of Health and Director of Health of the National Plan for the prevention and control of diabetes and cardiovascular diseases.
- Provide advice to other Ministries on issues relating to diabetes and cardiovascular disease through the National NCD Committee and participate in the subcommittees of the National NCD.
- Work closely with the Australian Centre for Diabetes Strategies of the Prince of Wales Hospital in planning and implementing the Tonga Diabetes Project funded by AusAID.
- Serve as a referral centre for diabetes and cardiovascular diseases.

Table 48 Daily Attendance

Month	Clinic	Rebook & Refill	Dental	HbA1c	Screening	New Cases	
						M	F
Jan	393	80	67	23	31	7	26
Feb	649	39	27	28	63	6	18
Mar	724	32	21	59	63	10	15
Apr	630	37	19	0	14	5	4
May	571	32	19	0	52	8	18
June	660	27	18	5	32	3	6
July	506	31	19	4	28	6	10
Aug	405	22	7	22	24	2	13
Sept	640	48	18	15	35	5	8
Oct	545	46	13	2	44	8	11
Nov	565	34	27	0	41	2	11
Dec	447	36	9	4	16	1	6
Total	6735	464	264	162	443	63	146

- A record is kept of the daily attendance at the Diabetes Centre as shown in the above table. The main reasons for visits are:
 - Clinic appointments.
 - Refill of medication or rebook of appointments.
 - Clarification for dental extraction.
 - Screening for diabetes.
 - Dressing of ulcers. (refer to Dressing)
- Diabetic wound dressing is conducted 3 days a week and daily for patients with ulcers and those requiring daily dressings.
 - Comparing the statistics for dressings in 2004 and 2005, these were the significant findings:
 - The number of dressings has decreased significantly in 2005. However, there were more people dressed. This shows that patients came with ulcers and wounds that needed to be dressed daily rather than on alternate days.

- There was a significant decrease (24%) in the number of diabetic patients admitted for sepsis. Unfortunately, there were more amputations, reflecting late presentation to the Diabetes Centre.

Table 49 Dressing

Month	No. of dressing	No. of people dressed	Admission from NCD	No. of amputations
January	349	78	6	5
February	318	65	5	2
March	268	55	5	3
April	277	48	4	1
May	319	45	2	1
June	190	44	2	0
July	148	48	0	2
August	122	27	2	1
September	163	49	2	1
October	213	50	0	1
November	214	65	0	1
December	149	20	0	0
TOTAL	2730	594	28	18

Screening

A total of 443 individuals were screened and 135 were confirmed diabetic i.e FBS >7 mmol/L, and 74 had Impaired Glucose Tolerance(IGT) i.e FBS 6.1– 7 mmol/L. This makes a total of 209 (47% of total screened). The following table shows the gender distribution of the new cases i.e 57% of these patients are females.

Table 50 New Cases - 2005

MONTH	NEW CASES		TOTAL
	Female	Male	
January	26	7	33 – 27 DM; 6 IGT
February	18	6	24 – 13 DM; 11 IGT
March	15	10	25 – 15 DM; 10 IGT
April	4	5	9 – 5 DM ; 4 IGT
May	18	8	26 – 16 DM; 10 IGT
June	6	3	9 – 8 DM ; 1 IGT
July	10	6	16 – 11 DM ; 5 IGT
August	13	2	15 – 12 DM ; 3 IGT
September	8	5	13 – 10 DM ; 3 IGT
October	11	8	19 – 11 DM ; 8 IGT
November	11	2	13 – 10 DM ; 3 IGT
December	6	1	7 – 7 DM ; 0 IGT
TOTAL	146	63	209 – 135 DM; 74 IGT

DM: confirmed diabetic

IGT: Impaired Glucose Tolerance

Refill and Rebook

A majority of these people are for rebook of appointments. Refill of medication is done using the Medication card which usually is valid for 2 to 3 months, unless they defaulted their clinic appointments.

Glycated Haemoglobin test

Less patients were tested this year as compared to 2004. This is due to unavailability of reagent testing strips which are supplied through the Diabetes Tonga Project funded by AusAID, the Vaiola Hospital Board of Visitors or by Bayer through the QAAMS(Quality Assurance For Aboriginal Medical Services) which works in collaboration with RCPA Quality Assurance Programs.

8.12.4. Milestones

In providing its services, the following were identified as milestones during the year,

- **Annual Strategic Planning Workshop**
 - In February, the Diabetes centre staff carried out a one day Strategic Planning workshop to review and plan current and future activities for 2005.
- **Diabetes Centre Transport**
 - The Diabetes Centre started its community outreach activity in 2003 by decentralization of the service to hold Diabetes clinics in the Health centres. This program was greatly affected by the unavailability of a transport for the times scheduled to visit the Health centres. The Tonga Diabetes Project funded by AusAID provided funding for an eight seater van for the Centre which was made available in May.
- **Duty visit to outer islands**
 - In June through to July, a combined team from the Diabetes centre and the Eye clinic visited the islands of 'Eua, Vava'u and Ha'apai and spend 2 – 3 days at each to conduct refresher workshops for the health workers and clinical consultations for diabetic patients. A total of 260 patients were seen.
- **Mobile clinic**
 - A major concern of the Diabetes centre for years now is the inaccessibility of the Centre and Health centres to immobile patients and the difficulty these patients face when travelling to the Centre for clinic appointments and it has been a plan to be able to visit these patients at home but was not possible due to transport problems. The availability of the vehicle for the Centre, enabled this program to begin in September. Patients seen in this visit include:
 - Amputees
 - CVA patients
 - Patients who are unable to walk
 - Patients with end stage complications
 - Others who have difficulty travelling to the centre
 - This program is carried out every Thursday afternoon and the number of patients seen ranges from 10 to 20 per day. The visiting team carries out all routine tests done during clinic appointments, including eye check for retinopathy and taking of blood for kidney function test. 31 villages were visited with a total of 123 patients seen.
- **Review of Treatment Guideline for Diabetes Type II**
 - A one day workshop for all doctors and nurses concerned was held in September to review the Treatment Guideline for Diabetes Type II in Tonga and was led by Professor Stephen Colagiuri.
 - This workshop was unique in that Professor Colagiuri is the chairperson of the IDF Clinical Guideline Taskforce that developed the Global Treatment Guideline for Type 2 Diabetes which was completed in July, and Tonga was the first to review its Guideline accordingly.

- **Urinary Microalbumin/Creatinine Ratio**
 - The Diabetes centre is now able to carry out this test using the DCA Machine with special reagent strips donated by Professor Stephen Colagiuri.
- **Save Feet Campaign**
 - During the Diabetes Strategic Planning workshop at the beginning of the year, it was proposed that there is a need to conduct a 'Save Feet' campaign as foot problems seemed to be the most common, yet preventable complication in Tonga.
 - This coincided with the World Diabetes Day theme for 2005 which was "Put Feet First. Prevent Amputations".
 - Visits to Vava'u, Ha'apai and 'Eua were scheduled to conduct the campaign by ways of holding workshops to health workers concentrating on the Feet anatomy, feet problems, prevention of amputations, wound and ulcer management.
 - The visiting team was led by Dr Paula Vivili and the staff of the Centre. Radio programs were recorded in Vava'u on the same issues.
 - Due to other commitments and shortage of staff, the visit to 'Eua was rescheduled for early 2006.
 - In Tongatapu, during the Diabetes week (7th - 14th, Nov) the Diabetes Centre staff visited all 7 Health centres to conduct education sessions for patients on Foot care and preventing amputations.
- **Gestational Diabetes Screening for Vava'u and Ha'apai**
 - During the duty visit to the outer islands earlier, a concern raised was the inability to conduct screening for GDM in the islands and related to the lack of glucose powder. World Health Organisation donated measuring scales for use in Vava'u and Ha'apai for the programme
 - During the visit to conduct the Save Feet campaign, we included Senior Nurse Midwife Leti Siliva who is currently in charge of this program in Vaiola to teach the procedures involved and the organisation of such a program.
 - A nurse was selected to carry out this program in each of the island hospitals. The measuring scale from Vaiola was taken to Ha'apai to weigh supplies for a few months while awaiting their own.

8.13. Nutrition and Dietetic

Two (2) Nutritionists are responsible for managing the section. One has been on special leave since December 2003.

8.13.1. Objectives

The section's objectives are,

- To develop and implement integrated strategies for the prevention of non communicable diseases with emphasis on health promotion and healthy lifestyles.
- To increase community awareness of risk factors and to decrease the incidence of non communicable diseases.
- To strengthen patient education to inpatients and outpatients.
- To enhance and maintain nutritional status of patients.
- To ensure that inpatients receive well and appropriate healthy diet while in the hospital.

8.13.2. Functions

The section's functions are,

- Provide special care for all inpatients and outpatients with diet related problems.
- Provide advice on nutrition to the public.
- Provide education and training for all health workers on nutrition and related topics.
- Work closely with the Public Health section on health promotion issues.

- Provide advice to other Ministries on nutrition issues through the National Food and Nutrition Committee, Ministry of Education and Non-Government Organisation.

A Diet Clinic operates on Tuesdays and Thursdays and follow up of diabetic patients is performed daily and inpatients are seen as referred.

Table 51 Outpatients - Diet clinics for diabetics on Tuesdays and Thursdays.

Month	No. of patients attending	Month	No. of patients attending
January	50		
February	47	August	35
March	37	September	31
April	17	October	26
May	48	November	30
June	35	December	28
July	26	TOTAL	410

Table 52 Tube feed cases are mainly referred from ICU and Medical Ward

Type of case	Number
Diabetes	25
Hypertension	15
Lipid lowering	20
Weight reduction	50
Malnutrition	2
High protein	5
Tube feed	15
TOTAL	132

8.13.3. Milestones

In providing its services, the following was identified as milestones during the year,

- The Nutrition and CVD Risk Factor survey of School children in Tonga.

8.14. Laboratory

Dr. Siale 'Akau'ola, Senior Medical Officer is responsible for managing this section and is supported by 29 technical, 2 clerical and 4 supporting staff.

8.14.1. Objectives

The sections objectives are:

- To provide quality laboratory services at all times.
- To promote staff development through continuous education and training.
- To provide a safe and productive working environment.
- To improve communication and problem solving skills.
- To upgrade laboratory capability in Outer Island Laboratories.
- To comply with the law and statutes of the Kingdom of Tonga.

8.14.2. Functions

The sections function is:

- Provide customers with high quality cost effective services in all aspects, and the standard of such services to comply with or exceed all accepted ethical and professional principles, as embodied in any accreditation criteria that may, at some time, apply in Tonga.

8.14.3. Financial Allocations

The section was allocated \$136,100 and was utilized for purchase of office supplies, technical equipment and supplies, medical supplies, overseas laboratory costs, health laboratory costs, and hospital supplies (blood transfusion).

Provided below is a summary of services provided by the Laboratory during the year.

- The total number of tests performed in 2005 (169,187) decreased by 2,840 tests from the previous year. This decrease reflects the period when the civil servants dispute occurred.
- The 13 specimens sent overseas for B.pertussis IgM antibody testing proved 8 positive of which 7 were confirmed and 1 was indeterminate.
- There were 35 specimens tested for ANA and 4 were positive of which 1 was diagnostic SLE and 3 were highly suggestive of SLE.
- There were 67 positive dengue cases during the year and mostly from the outer islands.

Table 53 Number of major pathogens isolated throughout the Kingdom during the Year 2005

Particulars	2005	%	2004	%	2003	%	2002	%
Salmonella typhi	7	0.70	4	0.60	27	3.26	6	0.73
Other Salmonella	2	0.20	0	0.00	0	0.00	8	0.98
Shigella	12	1.20	11	1.64	14	1.69	48	5.88
Escherishia Coli	178	17.80	113	16.82	167	20.14	179	21.91
Klebsiella	70	7.00	45	6.70	66	7.96	62	7.59
Proteus	80	8.00	66	9.82	63	7.60	48	5.88
Pseudomonas	71	7.10	46	6.85	65	7.84	66	8.08
Staph Aureus	117	11.70	74	11.01	110	13.27	89	10.89
Pneumococcus	7	0.70	8	1.19	20	2.41	17	2.08
Haemophilus	26	2.60	12	1.79	21	2.53	14	1.71
Strep/Group A	10	1.00	15	2.23	6	0.72	2	0.24
Neisseria Gonorrhoea	49	4.90	111	16.25	35	4.22	40	4.90
N. Meningitidis	3	0.30	2	0.30	6	0.72	4	0.49
V. Parahaemolyticus	7	0.70	7	1.04	0	0.00	0	0.00
M. Tuberculosis	0	0.00	0	0.00	28	3.38	54	6.61
Others	361	36.10	158	23.51	201	24.25	184	22.52
TOTAL	1000	100	672	100	829	100	821	100

- 7 typhoid cases were confirmed in 2005 (2 from children of the same household in Veitongo and 5 other case from the Ha'apai Group).
- E. Coli is still the most commonly isolated pathogen.
- Staph aureus, second most commonly isolated pathogen has 99% resistance to penicillin. Resistance rate to penicillin in 1996 was 92.2%.
- N. Gonorrhoea which became unprecedented second in year 2005 (111 isolated) dropped to sixth place with 49 isolated only.

8.14.4. Milestones

In providing its services, the following were identified as milestones during the year,

- Principal Medical Pharmacist Mrs. Ane Ika pursued the Health Informatics course funded by WHO in the Computer Lab from 4 -7 April 2005.
- Senior Medical Scientist Mrs. Latu Soakai pursued the following trainings.
 - Chemical Management training sponsored by AusAID in the Department of Environment from 26 – 27 April 2005.
 - Management Skills training also sponsored by AusAID in the Department of Environment from 12 - 13 October 2005.
- Senior Medical Scientist Ms. Mary Fakahau attended an Antimicrobial Resistance Surveillance Programme in Manila funded by W.H.O from 6 – 9 June 2005.
- Senior Lab Technician Mr. Siale'uvea Finau attended a Regulation of Blood and Blood Products – Safety and Quality Control and Anti Virus Strategy workshop in Canberra Australia funded by AusAID from 20 -24 June 2005.
- Mr. Finau was granted a NZ scholarship to pursue study for a Master in Science on Forensic Pathology in New Zealand.
- Senior Laboratory Technician Mr. Sitanilei Hoko completed his B.Sc in Medical Laboratory Technology funded by W.H.O. and is doing his required practical attachment before returning to Tonga next year.
- Lab Technician Grade 1 Mrs. Fele'unga Vaka'uta pursued the following trainings,
 - Leadership Skills training funded by AusAID from 29 – 30 September 2005.
 - Clinical Laboratory Technology training in Japan funded by JICA from 4 November 2005 through 8 February 2005.
- Lab Technician Grade II Ms. Sokopeti Litili pursued training on Leadership Development funded by AusAID from May – June 2005.
- Lab Technician Grade II Mr. 'Epitani Vaka pursued training on Blood Bank Technology in PPTC, Wellington funded by W.H.O from 8 August through 6 September 2005.
- Clerk Class III Ms. Lu'isa Tupou pursued training on Production and Writing Technical Information funded by NZAid in the Datec Computer Room from 16 - 20 May 2005.
- WHO, Tonga office donated two computer and a printer to the Blood Transfusion Unit and Reception for donor recruitment work and data collection and input.
- Laboratory supporters donated a new computer and printer for staff use.

8.15. Radiology

Dr. 'Ana 'Akau'ola, Medical Officer Special Grade is responsible for managing this section and is supported by 11 technical and 1 clerical staff.

8.15.1. Objectives

The section's objectives are:

- To provide good quality x-ray and ultrasound services at all times in order to assist the clinicians at arriving at right diagnosis of patients undergoing investigation.
- To work well together with other medical staff so as to provide satisfactory radiological diagnostic service.
- To ensure staff knowledge and skills are up to standard by providing ongoing on the job education at all time.

8.15.2. Functions

The section's function is:

- To provide radiological diagnostic services to clinicians and to the public.

Table 54 Ultrasound examinations performed - 2005

Examination	No. of cases
Obstetric	1487
Pelvis	966
Upper Abdomen	922
Small parts breast, thyroid, testis	226
Others	37
Echocardiogram	370
Total	4008

8.15.3. Financial Allocations

The section was allocated \$45,500.00 and was utilized for the purchase of technical equipment, medical and office supplies.

8.15.4. Milestones

In delivering its services, the following were identified as milestone during the year:

- Dr Edgar 'Akau'ola was promoted to Chief Medical Officer, Ngu Hospital.
- Dr 'Ana 'Akau'ola was promoted to Senior Medical Officer In-charge of Radiology.
- Mr Takumi Nishigaki, Japanese Senior Volunteer returned to Japan in October 2005 after being with this section for 2 years. He was a most dedicated sonographer and echo-cardiographer.

8.16. Pharmacy

Principal Pharmacist, Mrs. Melenaite Mahe is responsible for managing this section and is supported by 31 established staff.

8.16.1. Objectives

The section's objective is,

- To provide good quality, safe, effective and affordable essential drugs and standard medical supplies at all times to all the people of Tonga and ensure its rational use.

8.16.2. Functions

The section's functions are:

- Ensure availability of safe, effective, affordable and good quality drugs and medical supplies for the people of Tonga.
- Ensure proper selection of drugs and medical supplies through the National Drugs and Medical Supplies Committee.
- Ensure best procurement practice is used.
- Ensure appropriate storage conditions are used and effective and timely distribution process is in place.
- Ensure that legislative framework is operational.
- Ensure that rational use and appropriate information are available.
- Ensure best pharmacy practice is adopted.

8.16.3. Financial Allocations

The section was allocated \$1,304,251 and was utilized for purchase of medicinal drugs and medical supplies.

The Central Pharmacy and Medical Store (CPMS) has five units. Administration, Manufacturing, Procurement/Drug Registration, Stores and Distribution, and Dispensing.

Administration

- This section is responsible for handling correspondences, filing, personnel and financial management.
- Maintaining of vote book and preparation of vouchers for payment of local and overseas expenditures.

Manufacturing

- The Manufacturing unit was staffed by a complement of four personnel during the year.

Table 55 Production Output for 2005

Item	No. of Batches		Total	
	2005	2004	2005	2004
Oral Preparation	271	185	16712L	10474 L
Dermatological Preparation	197	173	2712.45L 190kg	2679L 226kg
Extemporaneous	187	164	28.59L	23.56L 1kg
Total	655	522	19,453.04L 190kg	13,177.26 L 277 kg

Production output for 2005 increased by 26% from the previous year.

Procurement and Registration

- The Procurement and Registration unit have been merged to ensure improved efficiency.
- A Procurement Officer is responsible for procurement of all drugs and medical supplies that are stored and distributed throughout the country.
- Drugs and medical supplies are procured worldwide.
- Tenders are released for the majority of requirements and smaller items are procured directly from the supplier.
- An Assistant Pharmacist Grade II is responsible for conducting product registration for the country as required by the Therapeutic Good Act 2001.
- Registration is done based on what is currently used with the need to utilize paper registration where products would be screened before they are registered to be used in the country. The aim is to ensure that only effective, safe and good quality products are allowed into the country.

Stores and Distribution

- This section is responsible for receiving all incoming goods, checked, record and stored for distribution upon receipt of requisitions from all stations throughout Tonga.
- This section provides services for 4 Hospitals, 14 Health Centres, 34 Reproductive Health Clinics and few village health workers throughout Tonga.

- The distribution to the outer islands is done on a bimonthly basis but some are more frequent depending on the availability of drugs and supplies.
- Supplies for Vaiola Hospital Pharmacy is done on a weekly basis and it is planned that there should be limited areas in the hospital who would get their supplies direct.
- The distribution of the locally manufactured products was as follows: Vaiola Hospital 77%, Prince Ngu Hospital 9%, and Niu'ui Hospital 4%. Niu'eiki Hospital 2%, Health Centres 3% and Others 4%. 1% of goods were reported to be damaged or expired.

Dispensing

- Dispensing Counter is an extension of the outpatient dispensing at Vaiola for a limited range of items, which are available only from the Central Pharmacy and Medical Store to be monitored.
- There is a need to move this to Vaiola Pharmacy but until there is enough space and better monitoring system established, services would continue to be provided from Central Pharmacy and Medical Store, Old Vaiola.

Table 56 Central Pharmacy and Medical Store Dispensing Counter Record

Month	Pres	Items	Salbutamol Inhaler	Beclomethasone Inhaler	Insulin 70/30	Isophane Insulin	Soluble Insulin	Repeat
Jan	389	1465	228	119	79	112	7	189
Feb	477	1256	200	100	184	83	2	228
Mar	487	1434	197	104	221	79	3	264
Apr	385	1302	182	120	190	79	5	260
May	457	1419	233	149	206	61	3	279
June	428	1352	231	142	191	76	5	281
July	548	1546	148	91	157	64	5	237
Aug	609	1574	142	100	226	79	2	288
Sep	639	1563	189	132	237	69	6	422
Oct	633	1603	184	109	172	82	3	438
Nov	576	1567	184	117	215	70	3	478
Dec	695	1704	154	46	216	72	5	482
Total	6323	17785	2272	1329	2404	926	49	4005

- The dispensing counter receives 9% (11% in 2004) of the total cost of items issued out of the Central Pharmacy and Medical Store. Stock discrepancies continue to decrease due to better stock control.
- The Asthma Project improved the management of asthma and more patients are now on Beclomethasone (956 in 2004 vs. 1329 in 2005 – increased by 39%). This reduced the use of Salbutamol inhaler from 3192 to 2272 (drop by 29%). Ventolin inhaler use drop by 920 while Beclomethasone usage was increased by 373 inhalers.
- There was a decrease in the use of soluble insulin (from 62 to 49 vials) while the use of Mixtard slightly increases (from 2268 to 2404 vials).
- There was a slight increase in the total number of prescriptions (0.6%), total number of items (7%) and the total number of repeat prescription (15%) dispensed from the CPMS this year compared to last year.

Vaiola Hospital Pharmacy

- Mr. Siutaka Siua is in charge of Vaiola Pharmacy and is supported by 2 Assistant Pharmacist Grade I, and 6 Assistant Pharmacist Grade II.
- The pharmacy is responsible for outpatients and inpatients dispensing and also participates in a monthly basis visits to Mu'a and Kolovai Health Centres to replenish patient's medication that are not available in the Health Centre.

Table 57 Prescriptions record for Vaiola Pharmacy 2005

Month	AM SHIFT					OPD		PM SHIFT				
	Pres	Items	Wards	Repeats		Pres	Items	Pres	Items	Wards	Repeats	
				Pres	Items						Pres	Items
Jan	7,120	12,600	696	1,287	2,122	395	594	4,021	8,960	320	302	496
Feb	7,325	12,764	760	1,329	2,629	401	604	4,601	9,622	300	396	556
Mar	9,172	16,384	1,580	1,374	3,034	479	690	7,259	15,436	636	408	607
Apr	9,017	15,876	980	1,314	2,997	425	702	7,102	15,101	597	402	612
May	8,765	13,956	917	1,345	2,768	411	604	6,987	13,575	505	378	539
Jun	7,021	1,251	721	1,039	2,976	396	478	4,783	9,544	321	356	586
Jul	6,567	1,012	698	712	1,876	395	482	3,242	7,987	154	187	324
Aug	5,342	7,980	423	654	1,569	298	389					
Implementing of our new computerizing system for labelling and the Pharmacy closing at 4:30pm												
Sep	6,136	8,568	890	-	-	304	399	876	1,012	235	289	567
Oct	8,248	15,238	900	-	-	545	787	806	998	132	176	323
Nov	7,315	13,305	786	-	-	413	679	1,128	1,478	-	-	-
Dec	7,344	13,601	875	-	-	534	780	1,332	1,563	-	-	-
Total	89,372	132,535	10,226	9,054	19,971	4,996	7,188	42,137	85,276	3,200	2,894	4,610

- A computerised dispensing mSupply system was launched at Vaiola Hospital Pharmacy in September to ensure complete accurate patient medication records, clear labelling, better presentation, and a form of drug inventory. This is a big improvement in the delivery of the Vaiola Hospital Pharmacy services including the ability to pick up repeat medications that were not captured in the previous recording system.
- There were more people (increased by 34%), more number of items (increase by 8%), more number of repeats prescriptions dispensed during the AM shift this year compared to 2004. Last year, more and more people are using the pm shift and the number of prescriptions dispensed is nearly three quarters of those dispensed during normal hours. However this year less people are using the pm shift and the OPD after normal working hours. This may have been due to the industrial action during the month of July and August and also due to the cut back in the Vaiola hospital opening hours.

Prince Ngu Hospital Pharmacy

- Prince Ngu Hospital Pharmacy is managed by 2 Assistant Pharmacists Grade II.
- The Pharmacy operates from Monday to Saturday from 8.30am to 4.30pm and again from 5.00pm to 11.00pm Monday to Sunday. After hours medications are dispensed by the nurses.
- Pharmacy officers are rostered on-call duties to replenish the stock when they ran out.

Table 58 Prescriptions Record for Prince Ngu Hospital Pharmacy 2005

Month	AM SHIFT				OPD		PM SHIFT	
	Pres	Items	Wards	Repeats	Pres	Items	Pres	Items
Jan	2505	4350	627	324	454	808	786	1410
Feb	2232	4367	542	315	437	675	1079	1862
Mar	3664	7069	678	404	298	506	1734	2911
Apr	2733	5057	473	539	136	233	958	1488
May	3228	5940	501	484	79	134	1573	2918
Jun	3002	5497	558	545	68	104	1745	3294
Jul	2121	3322	634	379	50	88	783	1383
Aug	1967	3260	568	478	614	1011	104	165
Sep	2128	3367	564	465	768	1258	-	-

Oct	2293	3640	480	560	807	1277	-	-
Nov	2370	4024	481	766	866	1386	-	-
Dec	2128	3426	499	417	835	1392	-	-
Total	30,371	53,319	6,605	5,676	5,412	8,872	8,762	15,431

- There is an increase in the number of prescriptions (increase by 2.7%) and number of items (increase by 5.7%) dispensed during normal working hours.
- There was an increase in the number of repeat prescription (increase by 8%) and the number of ward items (26%) dispensed.
- There was a big reduction in the number of prescriptions and the number of items dispensed from the OPD, however this is because the Pharmacy was opened also at the pm shift (i.e. 5.00pm – 11.00pm every night) up until the industrial action in July and August.

Niu'ui Hospital Pharmacy

- A single Assistant Pharmacist Grade II is responsible for the operation of the Niu'ui Hospital Pharmacy.

Table 59 Prescriptions Record for Niu'ui Hospital Pharmacy 2005

Month	Pres	Items	Repeat	After hours	Items
Jan	987	1271	281	300	590
Feb	907	1321	207	251	531
Mar	791	1121	195	309	599
Apr	995	1761	176	247	530
May	911	1311	216	291	603
Jun	930	1453	346	301	639
Jul	1127	1531	251	213	420
Aug	1211	1621	197	327	689
Sept	1287	1653	233	285	535
Oct	1011	1521	267	274	501
Nov	1193	1627	819	262	487
Dec	957	1356	201	243	499
Total	12307	17547	3389	3303	6623

- There is an increase in the number of attendance and the number of repeats during the normal working hours this year compared to last year.
- There is also an increase in the number of attendance and the number of items dispensed during after hours.
- The number of asthmatic this year has nearly doubled the number recorded last year.
- The number of diabetic patients relying on insulin injections has increased dramatically.

Niu'eiki Hospital Pharmacy

- A single Assistant Pharmacist Grade II is responsible for pharmaceutical services at Niu'eiki Hospital.

Table 60 Prescriptions Record for Niu'eiki Hospital Pharmacy 2005

Month	Normal Hours						After hours - OPD			
	Pres		Items		RPTs		Pres		Items	
	2004	2005	2004	2005	2004	2005	2004	2005	2004	2005
Jan	546	959	839	1437	301	401	260	202	487	343
Feb	594	854	904	1345	232	369	392	237	612	413
Mar	741	1123	1284	1746	288	429	322	244	686	317
Apr	748	1101	1134	1706	376	384	586	251	960	320
May	613	1086	972	1742	331	382	378	308	660	565
Jun	530	892	895	1275	357	491	105	194	269	379
Jul	644	671	1100	1123	365	354	145	252	276	385

Aug	848	245	1394	350	270	200	164	200	270	200
Sep	823	854	1284	1351	315	373	210	150	355	255
Oct	764	800	1159	1251	466	300	250	106	408	164
Nov	898	617	1396	1330	419	406	756	115	390	200
Dec	772	786	1161	1223	336	302	188	276	331	429
Total	8,521	10,188	13,522	1,5879	2,161	4,391	3,243	2,535	5,704	3,970

- Number of prescription and the number of items dispensed during normal hours increased by 20% and 17% respectively. The biggest percentage increased was the number of repeat prescriptions, which was increased by about 103%. However, there was a decreased in the number of prescription and number of items dispensed from the OPD. That is, 21% and 30% respectively.
- The supplies to the outer-islands were satisfactory. Oxygen supplies seemed to be a major challenge in all the hospitals.

8.16.4. Milestones

In providing its services, the following were identified as milestones during the year,

- The mSupply dispensing module was installed at the Vaiola Hospital Pharmacy during September, 2005 with the help of Mr. Craig Drown. The AusAid through the Tonga Health Project supported the initiative and WHO assisted with funding the project.
- **Overseas workshop**
 - Mrs. Melenaite Mahe and Ms. Sela Moa from Labour and Commerce attended a workshop held in Suva Fiji on TRIPS. This was to enlighten those in the pharmaceutical sector on the effects of availability and affordability of essential drugs and issues related to WTO.
 - Melenaite Mahe also visited manufacturers in Malaysia to see how they operate in relation to other manufacturers.
 - Ms. Losaline Titiuti attended two workshops on Counterfeit held in Manila Phillipines and in Canberra Australia.
 - Mr. Siutaka Siua attended a training workshop on Regulation of Prescription Medicine and capacity building on Anti-HIV medications.
 - Ms. Melesisi Finefeuiaki attended training in Copenhagen on procurement.
- **Staffing**
 - The six trainees have completed their training and have all been promoted to the post of Assistant Pharmacist Grade II.

8.17. Central Sterilising Supply Department

The Sterile Supervisor Mr Tangitau Fukofuka is responsible for managing this service. He is assisted by two Sterile Assistants. Senior Nursing Sister Lavinia Vakasiuola joined the CSSD staff to strengthen the service but left towards the end of the year.

8.17.1. Functions

The section's function is,

- To provide sterile surgical instruments and linen for the operating theatre, wards, health centres and clinic in adequate supply at all times.

8.17.2. Objectives

The section's objectives are,

- To maintain quality standard of service at all times.

- To ensure standard sterile procedures are followed at all times.
- To ensure adequate supply of instrument and linen is maintained in adequate quantity at all times.
- To maintain a harmonious working environment within the section and between staff and other sections and divisions.

8.17.3. Financial Allocations

The section was allocated TOP\$2,000.00 which was used to purchase special quality cleaning chemicals for instruments from overseas.

The major part of CSSD work is sterilizing 20 different kinds of trays, for specific procedures in adequate supply, round the clock. This is a phenomenal demand on this service with only three staff working in the section. The number required of these different trays is over two hundred daily. This is in addition to the daily demand for linen and instrument from the operating theatre.

8.18. Non Clinical Support Services

The Medical Superintendent Support Services Dr 'Akanesi Makakaufaki is responsible for managing this Division. She is assisted by the Hospital Administrator, Mrs Kolianita Lavemai Alfred and the Senior Hospital Executive Officer, Mr Filipe Taufa. The Division consists of nine sections: Maintenance, Domestic, Catering, Laundry, Seamstress, Grounds-Keeping, Security, Central Sterile Supply Division and Switchboard Operation. Each Section has a supervisor taking care of the operation of the section.

8.18.1. Functions

The Division's functions are:

- The core function of the Medical Superintendent Support Service Office is to ensure that all the sections are providing efficient and effective service that meet the needs of both patients and staff in a cost effective way.
- Facilitates all overseas patient referral travelling requirements and the provision of all administrative requirements.

8.18.2. Objectives

The Division's objectives are:

- To upgrade the quality of the service in all sections.
- To cut cost to the lowest level possible without compromising the quality of the service provided.
- To improve communication with staff through regular meetings and dissemination of information.
- To identify training needs for staff that would empower them and further enhance performance.
- To ensure that all the appropriate facilities and equipment needed for best practice in each section are provided.
- To develop plans for future development that would further enhance service delivery in a cost effective way.

8.18.3. Financial Allocations

The division was allocated over \$900,000 divided to each section. The Medical Superintendent, Support Services monitors expenditures through managing procurement cooperatively with each supervisors to develop procedures and processes to address problem areas.

Hospital Forms

- This task for management is allocated with a separate budget totalling \$20,000.00. However this budget not only finances all hospital forms but also office supplies and technical equipment are included in this budget.
- The division is responsible to ensure that all sections and divisions of Vaiola Hospital, health centres and health clinics needs for these standard hospital forms are provided in the required quantity, efficiently and effectively.
- There are 27 different kinds of forms, the majority of these are for patients needs. To highlight the demand on this service, 685,008 forms provided for hospital use for a six months period. This utilized 56.9% of the budget.

8.18.4. Milestones

In delivering its services, the following were identified as milestones during the year.

- Infection control training was conducted towards the end of the year for all the Domestic, Catering and the Laundry Staff. As a result of the training, new procedures for each section were developed and implemented. New tools and equipment were identified and purchased and staff were greatly motivated to improve performance.
- Training for the Seamstress Staff was conducted by a trainer from 'Ahopaniolo Technical College to upgrade skill, knowledge and performance.
- New car park labelling and procedures were developed to bring order to this area.
- For many years, the Catering expenditure always exceeded the budget. At the beginning of the new financial year, expenditure had consistently been below budget due to reformed management strategies being implemented in this section. In the last financial year, expenditure exceeded budget by \$15,000.00.
- New work plans for the grounds keeping greatly improved service quality and made a big difference to the environment.
- A visit from the World Bank Waste Management Specialist conducted training to staff on managing waste.

8.19. Hospital Security

The staff providing this service are from two separate organizations. There are three staff working for the Ministry of Health, while the majority of the security staff belongs to the private company, Sapoi Security Firm. Extra staff were recruited during the industrial action to protect and safe guard other properties of the Ministry of Health.

8.19.1. Functions

The section's function is:

- To provide Security Service to all hospital staff and all hospital facilities in the compound of the Ministry of Health.

8.19.2. Objectives

The section's objectives are:

- To upgrade the standard of the security service provided especially in the management of visitors movement and patient attendants.

- To ensure security and safety of patients, staff and properties of the Ministry within the Hospital compound is in place.
- To educate the public in all aspects and procedures of our security service so they would understand and peacefully comply and cooperate with our security staff. This is vital to the success, efficiency and effectiveness of this service.

8.19.3. Financial Allocations

The section was allocated \$40,000 for the security contract. Staff capacity during the industrial action was doubled because of increased demand from the ministry.

8.19.4. Milestones

In delivering its services, the following were identified as milestones during the year:

- Hiring of the security staff from private sector is a recent endeavour by the Ministry to upgrade this service.

8.20. Laundry

This section consists of 1 supervisor, 6 laundry maids and 4 laundry man.

The core function of this section is to provide quality laundry and ironing for all hospital linen and staff uniforms.

8.20.1. Objectives

The section's objectives are:

- To provide quality laundry and ironing service for Ministry of Health.
- To further explore ways of obtaining detergents and chemical suitable to remove stains from linen and manage contaminated linen in the best way possible.
- To procure a new boiler unit that provides the necessary temperature for quality laundry.
- To explore the possibility of a solar heater system in order to solve fuel cost.
- To improve linen collection and sorting through procurement of laundry bags and trolleys.
- To produce laundered linen that are white and spotless at all times.
- To encourage enthusiasm, collaboration and cooperation from all staff in the Ministry to check, stock take and record accurately at all contact points, in the flow of linen, the amount of linen they handle.

8.20.2. Financial Allocations

The section was allocated \$5,000.00 budget. This budget is utilized for the purchase of washing detergents and chemicals.

There have been 155,884 linen pieces washed for the year in 3657 loads of washing. There are three washing machines, one large and two smaller ones. There are two dryers and one presser for ironing purposes.

8.20.3. Milestones

In delivering its services, the following were identified as milestones during the year,

- The Staff all participated in the infection control training towards the end of the year.
- Improved financial management and costs reductions.
- New laundry procedures are being developed to upgrade quality service.
- Competitive bidding for laundry detergents undertaken.

8.21. Seamstress

Seamstress Supervisor Mrs 'Atilila Vuna is responsible for this section. Two daily paid seamstress support the supervisor.

8.21.1. Functions

The core function of this section's are:

- To provide high quality seamstress service for Vaiola Hospital, Health Centres and clinics at all times.
- Outer island Hospital linen are also provided from the linen budget.
- To sew uniforms for Nurses and other staff in the Ministry of Health

8.21.2. Objectives

The section's objectives are:

- To sew the number of specified uniforms required by nursing staff and other support service staff in the standard and quantity required.
- To sew all the necessary bed linen required at Vaiola Hospital and Health Centres.
- To sew all theatre and CSSD linen required in adequate supply.
- To control expenditure to match budget without compromising quality to the service.

8.21.3. Financial Allocations

The section was allocated \$25,000.00 for linen which is managed by the Matron. This provides for all the linen needs of the Vaiola Hospital, the outer island hospitals and all the health centres and clinics. Donations in kinds of linen supplies continue to come from overseas donors. A great proportion of our linen are provided through this channel. Tongan communities overseas are becoming important contributors to the Ministry's linen supply, mainly from New Zealand and Australia. These Tongan communities have also provided supplies as for the outer island hospitals of Vava'u, Ha'apai and 'Eua.

8.21.4. Milestones

In delivering its services, the following were identified as milestones during the year,

- A one week training to upgrade staff skill and knowledge was conducted by an instructor from 'Ahopanilolo Technical School.
- Facilities and working conditions were greatly improved by providing fans, comfortable chairs and carpets for staff use.
- Sewing machines were repaired and spare parts provided.

8.22. Grounds Keeping

Mr 'Ofa Viau is the supervisor responsible for this section and he is supported by 4 staff.

8.22.1. Functions

The core function of this section's are:

- To ensure that the hospital grounds are maintained at all times.
- To maintain and develop the flower gardens in the hospital compound to a high standard.
- To clean and pick up the rubbish in the compound and dispose it in a hygienic and sustainable manner.

8.22.2. Objectives

The section's objectives are:

- To maintain high quality grounds keeping service at all times.
- To coordinate the collection and disposing of waste with other staff and departments.
- To maintain staff morale through supervision and motivation at all times.
- To ensure adequate and quality equipment and facilities are maintained.
- Need to look for some landscaping professional to develop the hospital compound to a state be fitting the new environment.

8.22.3. Financial Allocations

The section was allocated \$10,000.00 to cover cost for equipment, uniforms, technical supplies and fuel. Quite often, hired service for landscaping is needed during this new development project for Vaiola.

8.22.4. Milestones

In delivering its services, the following were identified as milestones during the year,

- Staff meeting and assistance with work plan development was achieved.
- Fuels expenditures was greatly reduced.
- One lawn mower and weed eater machines, uniforms and boots plus protective glasses, gardening equipment such as knives and hedge cutter were purchased.

8.23. Domestic

This section consists of 1 Domestic Supervisor, 8 Wards Maid, 6 Orderlies, 1 Public Convenient Attendant and 7 Psychiatric Assistant.

8.23.1. Functions

The core function of this section's is:

- To provide quality cleaning service to all areas of the hospital. They may also accommodate other small tasks for patient's needs while performing their duties in the wards.

8.23.2. Objectives

The section's objectives are:

- To develop new cleaning procedures in order to upgrade quality service.
- To purchase all the necessary equipment and facilities required by staff to produce best service.
- To closely supervise and monitor and manage staff in order to improve performance and service quality.

- To closely monitor procurement in order to control cost.
- To identify training needs and implement accordingly.

8.23.3. Financial Allocations

The section was allocated \$35,000.00 for its services. This covers for all cleaning chemicals and equipment for Vaiola Hospital and all peripheral health Centres in Tongatapu.

8.23.4. Milestones

In delivering its services, the following were identified as milestones during the year,

- All staff participated in the infection control training.
- New cleaning procedures were developed to enhance performance.
- New equipment needed to improve quality service were purchased.
- Improved understanding and communication with staff was developed.

8.24. Switchboard Operations

The Senior Telephone Operator, Mrs Luseane Polota is responsible for this service and is supported by five other staff. One operator is stationed at the new administration building permanently.

8.24.1. Functions

The core function of this section's is:

- To provide quality telephone communication service for the Ministry of Health at all times.

8.24.2. Objectives

The section's objectives are:

- To upgrade quality service so as to minimise complaints regarding staff performance.
- To explore ways of controlling telephone usage by staff to reduce cost.
- To develop training programmes in order to empower both operator and hospital staff alike in knowledge and understanding of the service.
- To further review the service and cost cutting strategies as future development in reducing expenditures.
- To enhance customer service skills of the telephone operators through training and education.

8.24.3. Financial Allocations

The section was allocated \$150,000 for its services and covers the cost of outgoing telephone calls. An average spending of nearly \$18,000 monthly on telephone calls.

8.25. Catering Services

Mrs 'Ana 'Akau'ola, Acting Chief Cook is responsible for this section and is supported by 7 Assistants Cooks.

8.25.1. Functions

The core function of this section's is:

- To provide high quality meals for patients. They also provide meals for live-in student nurses and staff who are required to work through meal times without a meal break.

8.25.2. Objectives

The section's objectives are:

- To ensure that patient's diets provided are of high quality and appropriate for their health needs.
- To identify training needs for staff that would further enhance performance and quality service.
- To upgrade procurement and stocktaking procedures in order to control cost.
- To ensure all necessary equipment and facilities are provided.

8.25.3. Financial Allocations

The section was allocated \$205,000.00. This provides for patients' and staffs' diets and for the procurement of technical equipment. This budget was always exceeded by expenditures for many years in the past. Expenditures had since been consistently below budget right to the end of the year in December.

The catering service prepare three meals, Breakfast, Lunch and Dinner daily for patients and staff as explained before. They provide an average of 120 meals for each meal time but this can rise to a maximum of 150 meals. As cost of living rises, meals are becoming more costly to provide.

8.25.4. Milestones

In delivering its services, the following were identified as milestones during the year,

- Training was conducted for staff in infection control which greatly empowers staff in proper food handling standards and cleaning procedures.
- New procedures were developed which contributed tremendously to our achievement in Budget control which were: new menu developed and used as the basis for procurement of food items and ordering the right quantity of meal ingredients required per person for each meal. All these information were utilized to put a tight control on spending as mentioned earlier.
- New tools and equipment were purchased.
- Stock control measures were instituted that discouraged excessive food wastage, stock loss, and also encourage staff cooperation and honesty.

8.26. Maintenance

Senior Hospital Engineer, Mr. Tu'ifua Taumoefolau is responsible for managing this section and is supported by 16 staff.

8.26.1. Objectives

The section's objectives are:

- To stock most vital spares.
- Enforce planned maintenance for all facilities and equipment.
- To improve provision of medical gases
- Improve monitoring of hospital equipments and facilities.
- To develop best-practice equipment management and maintenance processes.
- Introduce regular equipment maintenance program for the island hospitals.
- To develop a facility maintenance program for Vaiola Hospital.

- To appropriate manage the use of utilities.
- To appropriately manage and improve equipment purchases.
- Establish cost of repairs for biomedical equipment record.

8.26.2. Functions

The section's functions are:

- Sourcing and procurement of equipment and spare parts from overseas.
- Commission and decommission of equipment.
- Provide engineering maintenance services for equipment and facilities.
- Perform minor alterations to facilities.
- Prepare proposals for improvement of equipment and facilities.

Table 61 Medical Gas: Oxygen produced at the Vaiola Oxygen Concentrating Plant

Year	Number of large oxygen cylinders produced	Number of large oxygen cylinders purchased	Total Number of large oxygen cylinders supplied.
2000	1272	52	1324
2001	1700	42	1742
2002	1701	18	1719
2003	2226	30	2256
2004	2530	66	2596
2005	2574	10	2584

Large Medical air = 81 cylinders
 Large Nitrous Oxide = 9 cylinders

The Vaiola Hospital Steam Boiler used a total of 58,325 litres of diesel. The significant decrease from last year is mainly due to better maintenance of the steam system.

Table 62 Steam Boiler Consumption

Year	Boiler fuel (Diesel) Consumption, litre
2000	97969
2001	98393
2002	69023
2003	60378
2004	58325
2005	59100

8.26.3. Milestones

In providing its services the following were identified as milestones during the year.

- Mr. Tu'ifua Taumoefolau was admitted to the degree of Master of Philosophy in Mechanical Engineering from the Australian National University in March 2005.
- In February, Mr. Sioli Manu traveled to Ha'apai to carry out repairs/maintenance of dental equipment.
- Mr. Osaiasi 'Alatini carried out electrical work in the same month in Ha'apai. This included repairs to the standby generator, mortuary cooler, and installation of extra electrical fittings.
- In May, Mr. Manu traveled to Vava'u and Ha'apai to carry out repairs and maintenance to dental equipment.

- In July Mr. 'Alatini and Mr. T. Taumoeofolau traveled to Niuatoputapu and installed a new generator that was donated by the New Zealand Government.
- In September, Mr. Feleti Eke traveled to Vava'u to repair the CSSD autoclave.
- In September, Mr. Manu also traveled to Ha'apai with the Balart Rotary group to install new dental equipment.
- In December, Mr. Manu traveled to 'Eua to carry out maintenance of Dental equipment.
- Mr. 'Ofeina Soakai went on a one month staff exchange to the Engineering Department of St. John of God Hospital, Ballarat. The knowledge gained in this on-the-job training is very beneficial for the Vaiola Maintenance Section.

9. NURSING SERVICES

9.1. Management

Chief Nursing Officer Mrs Lata Malu is responsible for the efficient and effective management of the Nursing Division.

The division's goal is to contribute to the health of the nation through the provision of the best possible nursing care services.

The division is made up of three sections,

- Hospital Nursing
- The Queen Salote School of Nursing
- Reproductive Health

9.2. Vaiola Hospital Nursing

Matron, Mrs. Valoa Fifita is responsible for the management and administration of this section and is supported by 1 Assistant Matron, 6 Senior Nursing Sister, 1 Assistant Senior Nursing Sister, 5 Nursing Sister Graduate, and 189 nursing staff.

9.2.1. Vaiola Hospital Nursing

9.2.1.1. Objectives

The section's objectives are:

- Improve and upgrade nursing staff's management.
- Upgrade standard of hospital nursing services.
- Review and provide policies and regulation for the improvement of staff performance.
- Upgrade nursing staffs skills and knowledge.

9.2.1.2. Functions

The section's functions are:

- To provide best quality nursing services to all patients.
- To implement therapeutic measures ordered by Medical Officers with intelligent application to patients.
- To co-operate with all hospital staff and services to facilitate and improve patient management.
- To support in-service and post basic training of nurses.

9.2.2. Financial Allocation

The section was allocated \$44,000.00 and was utilized for purchase of uniforms for nurses, linen requirements for all hospitals and health centres.

9.2.3. Milestones

In providing its services, the following were identified as milestones during the year,

- The Vaiola Hospital Board of Visitors continues their assistance by raising \$200,000 during the annual Hospital Week.
- Mr. John MacDonald from St. John of God Hospital visited and assisted with training of the ICU students, as well as donating 2 containers of hospital equipments to Vaiola Hospital.
- Ms Marianne Crowe and Ms Cheryl Pretty also of St. John of God Hospital visited and worked in Outpatient Department and Surgical Ward.
- Trainings implemented:
 - Senior Staff Nurse Piuela Tu'akalau and Staff Nurse Lona Uaisele attended one month attachment at St. John of God Hospital in Ballarat, Australia.
 - Senior Staff Nurse Mele Pongi attended a two weeks workshop on HIV in Fiji.
 - Staff Nurse Daphne Mahoni attended 6 months training in special care nursing in New Zealand.
 - Staff Nurse Meleane Eke attended one week workshop on eye treatment in Fiji.
 - Staff Nurse pursues one year ICU training commencing February 2005.

9.3. Queen Salote School of Nursing (QSSN)

Mrs 'Ana Kavaefiafi, Principal, Queen Salote School of Nursing is responsible for the management and administration of the School and is supported by 7 nursing education staff, 1 Computer Operator Grade III and 1 Librarian.

9.3.1. Objectives

The schools objectives are:

- To provide a continuous process of curriculum development/review based on evidence-based practice and assessment of its effectiveness in the preparation of students for nursing practice.
- To develop the full potential of the nursing student to enable him/her to apply the knowledge and skills in various health care setting.
- To direct educational programme to utilize physical, medical and social sciences and humanities as foundation for learning the art and science of nursing.
- To develop appropriate instructional strategies to cope with individual differences of the learner.
- To render student-based training to nursing students.
- To provide transport for student's field experience.
- To effectively manage all post-basic nursing training.
- To provide a forum where others can contribute to the preparation of future nurses.
- To utilize other health professionals in the training of nursing students.
- To upgrade all staff of QSSN to degree level for implementation of diploma level training for nurses.
- To upgrade and maintain the physical facilities at QSSN to sufficiently accommodate staff offices, a science laboratory, a nursing science laboratory, a library, and a staff common room with rest room facilities.
- To facilitate the upgrading of instruments and equipments in hospital wards as support service for student learning.

9.3.2. Functions

The school functions are:

- Develop, implement and evaluate a curriculum which is academically sound, scientifically based, culturally acceptable, socially appropriate and internationally recognized.
- Recruit and prepare suitable nursing candidates (Basic and Post-Basic Nursing), for quality and effectively health care delivery to the people of the Kingdom of Tonga.
- Work collaboratively within the Nursing Division and other divisions of the Ministry to maintain the highest standards of nursing practice for nurses in Tonga.
- Provide an educational programme that will continuously upgrade the knowledge and skills of nurses both locally and in isolated areas.
- Initiate a programme that prepares the staff of QSSN to function at an optimum level of competency.

9.3.3. Financial Allocations

The School was allocated \$14,234.00 for implementation of its various activities during the year.

9.3.4. Meetings and Workshops

The School conducted, facilitated or attended the following meetings and workshops.

- Sr 'Ana Kavaefiafi and Kathy Ramsay, Breast Feeding Workshop, 7-11 February 2005.
- Male Nurse Graduate Peni Havea, Breast Feeding Workshop, 14-18 February 2005.
- Sr 'Ana Kavaefiafi, Reproductive Health Workshop, Fiji, 2-11 May 2005.
- Sr 'Ana Kavaefiafi, International Confederation of Midwives 27th Congress, Brisbane, 21-28 July 2005.
- Sr 'Ana Kavaefiafi, Pacific Medical Association, TMA Conference Room, Tonga, 22 August 2005.
- Sr Kathy Ramsay, STI Management Workshop, 1 September 2005.
- Sr 'Ana Kavaefiafi, ARI Workshop 4 & 6 October 2005.
- Sr 'Ana Kavaefiafi, Diabetes Guideline, 19 October 2005.
- Management Workshop for Clinical Nurses, 4-8 April 2005
- Curriculum Development and Review Workshop, 12-15 April 2005

During the year, the school was fortunate to be visited by these Consultants and to host overseas nursing students.

- Mrs Mary MacManus, AUT Head of Nursing and Midwifery.
- Mr Thevi Pather, Camosun College of Nursing, Canada.
- 8 Nursing students from Camosun College of Nursing gained 5 weeks Clinical Experience in Vaiola and the Community, 7 May – 14 June 2005

9.3.5. Milestones

In providing its services during the year, the following have been identified as milestones,

- The approval of QSSN Bond to be used for Student Nurses.
- Post-Graduate Course in Critical Care Nursing commenced 1st March 2005. The first course of its kind to be implemented by QSSN.
- First 21 graduates from the Diploma of Nursing Programme.
- Queen Salote School of Nursing staff participated in on-line courses offered by POLHN Centre, Ministry of Health.

9.4. Reproductive Health

Supervising Public Health Sister, Mrs Sela Paasi manages this section and is supported by 1 Senior Nursing Sister, 3 Nursing Sister Graduate and 41 Public Health Nurses.

9.4.1. Objectives

The section's objectives are:

- To develop skilled and committed staff to meet the evolving roles of public health nurses.
- To improve and upgrade staff performance.
- To improve communication, teamwork, and cooperation, and reduce conflicts and misunderstanding among health workers.
- To provide effective and quality reproductive health services to women of child bearing age through:
 - Easy access to reproductive health, adolescent and sexual health.
 - Maintaining high coverage of ante natal and post natal care.
 - Helping couples and individuals to plan their families.
- To promote safe motherhood with continuing low mortality rates and high coverage levels of all services
- To ensure and monitor good health and normal development among infants and under five years old children through good immunization coverage, good nutrition and good care management of childhood illnesses in the community.
- To promote and improve the rate of exclusive breast feeding babies at 4 months and six months.
- To maintain and equip the Health Clinics and Health Centres with necessary services and adequate equipment.
- To upgrade public health nurses in public speaking and computer literacy skills.
- Conduct regular meetings, liaise with other community programmes and conduct regular island visits.
- Conduct awareness programmes through radio and TV which are funded by UNFPA.
- To assist in developing an occupational health standard for all public health staff.

9.4.2. Functions

The section's functions are:

- To provide effective and quality services to mothers, infants, children, adolescents and others through reproductive health strategic approaches throughout the Kingdom of Tonga. This includes:
 - Training preparation of nurses with updated knowledge and skills, to deal with her daily activities.
 - Set up goals and objectives through collaboration and discussion with all nurses of the section.
 - The provision of quality ante natal care and post natal care to women of child bearing age throughout the Kingdom.
 - Providing services for the adolescent population.
 - Helping couples to plan their family.
 - Making family planning methods available to clients based on their choice.
 - Provision of immunization services to ante natal mothers, school children, under five years old children and infants as directed by the National Immunization Policy.
 - Provision of awareness programmes through radio and TV.
 - Responsible for the school health and school clinics.
 - Responsible for the regular assessment of the under five years old children and infants
 - Promote and encourage mothers to exclusively breast feeding their babies for at least four months to six months.
 - Responsible for the community nursing services to sick people as well as healthy people.

- Collaboration, coordination, teamwork and participation with other health care workers, other health sections, NGO and some government ministries and sectors in a wide range of community development initiatives and activities.

9.4.3. Financial Allocations

The section was allocated \$51,650 for implementation of its services and also received financial support from UNFPA and WHO.

9.4.4. Milestones

In providing its services, the following were identified as milestones during the year,

- Five days Management, Review and Planning Workshop of the section was officially opened by HRH Princess Salote Pilolevu Tuita and the UNFPA Representative Mr. Najib M. Assifi, Dr. Annette Robertson and Lorna Rolls attended the Opening Ceremony.
- Sr. Graduate Afu Tei attended the Community Health Administration Course in Okinawa, Japan early January 2005.
- Introduction of HIB vaccines in April 2005.
- Dr. 'Aivi Puloka, Sr. 'Ana Kavaefiafi and Sr. Sela Paasi attended the Reproductive Health Technical Workshop in Suva, Fiji in May 2005.
- Supervising Public Health Sister Sela Paasi attended the Regional Immunization Management Workshop in Noumea early May 2005.
- Supervising Public Health Sister Sela Paasi in her position as the President of the Tonga Nurses Association attended the Commonwealth Nurses Federation Biennial General Meeting as from 17-18 May 2005 in Singapore, and the ICN Council of National Representatives (CNR) 21-23 May and the ICN Congress as from 24-26 May 2005 in Taipei, Taiwan.
- The second edition of the Policy for National Immunization Programme and the Immunization Handbook for health workers were endorsed by the Ministry of Health in August 2005.
- Electronic registry of Immunization Services and Family Planning.
- Cold Chain Policy was also endorsed by the Ministry of Health in 2005.
- Consultant Dr. Salesi Katoanga from UNFPA conducted a:
 - Rapid needs assessment of clinic – based Family Planning and Sexually Transmitted Infections
 - Facility needs assessment for Family Planning and Emergency Obstetric Care (FP/EmoC) in October 2005 with the support of the enumerators – Sr. Sela Paasi, Sr. Talau Takau, Senior Nurse Mid Wife Falahola Lavaki.
- Good partnership and effective collaboration between the Ministry of Health, people of the community and TFHA were strengthened in working towards production of outputs in both reproductive health and adolescent reproductive health programmes.
- Public Health Nurses attend various trainings, workshops, seminar meetings throughout the year.
- Supervisory visits to the clinics and health centres in Tongatapu by supervisors and were conducted throughout the year at regular intervals.
- Reproductive Health services and clinics at Ha'apai, Vava'u and 'Eua was visited once in 2005.
- Weekly Radio Programme for Nurses continued throughout the year were made possible with WHO funding.

10. DENTAL SERVICES

Chief Dental Officer, Dr. Viliami Telefoni Latu is responsible for managing and coordinating dental services to ensure the services delivered are efficient and effective, monitor and maintain high quality standards to ensure the ongoing improvement in the dental services.

10.1. Objectives

The division's objectives are,

- To reduce the incidence of dental caries and other oral health problems.
- Provide best available treatment to people seeking dental care with available resources.
- To ensure that all people in Tonga have access to the best possible care to achieve optimal oral health.
- To comply with the laws and statutes of the Kingdom of Tonga.
- To create and maintain a working environment that is safe and productive to maintain the interest and motivation of staff.
- To use every problem identified as an opportunity for improvement.

10.2. Functions

The division's functions are,

- Prevent dental diseases
- Promote oral health
- Treat dental diseases
- Provide curative and preventive dental care for the people of Tonga
- Ensure the public has access to the best oral health care

The dental establishment consists of 47 posts of which 41 were filled with 6 vacancies. This consist of 1 Chief Dental Officer, 2 Principal Dental Officer, 4 Senior Dental Officer, 5 Dental Officer, 4 Senior Dental Therapist, 6 Dental Therapist, 1 Dental Technologist, 1 Senior Dental Technician, 7 Dental Chairside Assistant, 7 Dental Therapist Trainee, 1 Dental Sterile Supply Assistant, 1 Dental Computer Assistant, and 1 Dental Receptionist.

Dental services are made available to the public through dental outpatient and inpatient services at Vaiola Hospital and health centres for the people of Tongatapu, Prince Wellington Ngu Hospital and Health centres for the people of Vava'u, Niu'ui Hospital and Health centre for Ha'apai people, Niu'eiki Hospital for 'Eua, as well as Likamonu Health Centre for Niuafo'ou and Tu'akifalelei Health Centre for Niuafo'ou.

These services were provided during the year:

- Ongoing oral health promotion and education.
- Actively support and enforce improvement of oral hygiene.
- Provide advice and instruction on appropriate use of fluoride.
- Educate people how to control intake of sugar.
- Support and encourage continued education of dental staff.
- Continue school dental preventive programme.
- Continue "Bright Smile Bright Future", "Fluoride Mouth Rinse", and "Pit and Fissure Sealants" programmes.
- Training of 7 Dental Therapist.

10.3. Financial Allocations

The Division was allocated \$110,000.00 and was utilized to facilitate efficient and effective deliverance of curative services, school dental services and public health (excluding schools).

10.4. Milestone

In delivering its services, the following were identified as milestones during the year,

- WHO funded workshops on Awareness and Oral Health Promotion for Health Officers, Midwives and Public Health Nurses; selected communities in Tongatapu, Vava'u and Ha'apai.
- Decline of caries rate from DMF3 to DMF2 in 12 years school children.
- Ballarat Dental Team from Australia upgraded and equipped the Niu'eiki Dental Clinic.
- 2 more Primary Schools included in the Fluoride Mouth Rinse Programme in Tongatapu.
- Extension of Pits and Fissure Sealant programme to Vava'u and Ha'apai.

11. ADMINISTRATION

11.1. Management

Principal Health Administrator, Mr Tu'akoi 'Ahio is responsible for managing the division.

The Division's general vision is doing the right thing right.

The Division's core mission is to respond effectively to all the support services required by the Ministry in term of:

- Administrative and Corporate Services
- Personnel and Human Resource Management
- Financial Management
- Transport Services

11.2. Administrative and Corporate Services

The Principal Health Administrator manages this section and is supported by 1 Clerk Class II.

11.2.1. Objectives

The section's objectives are:

- To improve staff morale through improved communication and recognition of achievement.
- To improve basic management skills of section heads within the division.
- To establish a standard timeframe for processing of Administrative Procedures.
- To have an up to date and accurate asset register of capital and office equipment and furniture of the Ministry.

11.2.2. Functions

The section's functions are:

- Provide relevant induction and administrative training program for the officers.
- Conduct weekly and monthly meeting.
- Regular follow up and recognition of achievement.
- Develop a participatory (team work) environment through team meetings, delegation of work.
- Develop a monitoring mechanism to monitor the performance.
- Conduct individual coaching and mentoring.
- Develop a register format.
- Coordinate the collection and update of information for each centre/station.
- Provide an annual updated record to Director of Health and Hon. Minister of Health.
- Staff awareness.

11.2.3. Financial Allocations

This section was allocated \$3,750 and was utilized for office operation.

11.2.4. Milestones

In providing its services, the following were identified as milestones during the year

- Administrative procedures and policies are transparent to all staff of the Ministry of Health (staffing matters and policies were made available to divisions and sections within the Ministry).
- Clear timeframe for some administrative procedures (supporting letters for visa and loan application).
- Asset register developed. Asset register collection and update information for Tongatapu, Vava'u and Ha'apai.

11.3. Personnel and Human Resource Management

The Health Administrator, Mrs. 'Olivia Tu'ihalamaka who is responsible for these services is currently on study leave. The Computer Operator Grade III, Ms. Moli Kiola is currently managing this section and is supported by 3 staff.

11.3.1. Objectives

The section's objectives are,

- To ensure staff has the knowledge, skills and motivation to provide a high quality human resource management (HRM) support service.
- To provide effective and efficient HRM systems and processes.
- To retain staff.
- To provide staff with further training in HRM and filing system.
- To improve filing system.
- To improve the record of all correspondence in the Ministry.

11.3.2. Functions

The section's functions are,

- To provide human resource management services to the Ministry of Health, including all health services.
- Computerize leave entitlement of all staff in the Ministry.
- Computerize casual and sick leave for all staff of the Ministry.
- Computerize cabinet decisions 2004/05.
- Renew all the cover of the personal and working files.
- Register all inwards and outward correspondences.
- Maintain personal and operation files.

11.3.3. Financial Allocations

This section was allocated \$100.00 and was utilized for office operation.

The tables below summarizes the number of P.S.C. Decisions and C.D. Decisions received during the year. There is a total of 1,123 personal files and 552 operational files.

Table 63 Public Service Commission Decisions, 2005

Particulars	No.
Study leave without pay	1
Dismissal	15
Retirement	6
Resignation	12
Termination	5
Promotion	105

Particulars	No.
Appointment	67
Retirement on Medical Ground	10
Increment credit	1
Others	8
Total	230

Table 64 Cabinet Decisions, 2005

Particulars	No.
Cash payment	3
Courses, training and meetings	7
Others	41
Total	51

11.3.4. Milestones

In delivering its services, the following were identified as milestones during the year,

- Updated staff list using Micro Pay.
- Inwards flow system for the files.
- Outwards flow system for all correspondence (internal and external).
- Computerized leave entitlements.

11.4. Financial Management

Senior Accountant, Ms. Sesimani Taulanga is responsible for managing this section and supported by 18 staffs. The section was allocated \$15,500.00 for office operation.

11.4.1. Objectives

The Section's objectives are:

- To provide a timely payment of staff salary, wages, allowance and Income tax.
- To improve revenue collection within the Ministry of Health and achieve annual revenue target.
- To provide updated and regular financial reports.
- To provide budget to all cost centres and monitor expenditure against the Budget.
- To produce a realistic Draft Estimates annually.
- To broaden staff skills in Sun System.

11.4.2. Functions

The Section's functions are:

- Salary and Wages Payment.
- Revenue Collection.
- Financial Management.
- Preparation of Draft Estimates and Budgeting.

11.4.3. Milestones

In delivering its services, the following were identified as milestones during the year,

- Achieved Revenue target for 2004/05 fiscal year.
- Monthly report distributed to Programme Managers on a monthly basis.
- Prepared and paid 2,836 vouchers.

11.5. Transport Services

Transport Supervisor, Mr. Tu'itavake Lavaki is responsible for managing this section and supported by 22 drivers.

11.5.1. Objectives

The section's objective is:

- To ensure the availability of transport for the efficient mobilization of health personnel and distribution of medical supplies and equipment throughout the district.

11.5.2. Functions

The section's functions are:

- Pick up and drop staff at P.M. and night duty (especially nurses and medical officers)
- Driving the Ministry's vehicles.
- Send and deliver message as required.
- Look after the vehicles.
- Maintaining vehicles in good and clean condition.

11.5.3. Financial Allocations

The section was allocated \$223,823 and was utilized for purchase of fuel and maintenance of vehicles.

In Tongatapu there are 31 vehicles and 22 of these were funded and provided by external donors while 9 were funded by the Government. In Vava'u, there are 5 vehicles with 3 funded by external donors and 2 by Government. In Ha'apai, there are 2 vehicles and both were funded by external donors. In 'Eua, there are 2 vehicles and external donor and Government funded each. In Niuatoputapu there is only 1 vehicle and was funded by Government. In Niuafu'ou, there is one vehicle and was funded by an external donor.

11.5.4. Milestones

In delivering its services, the following were identified as milestones during the year,

- 11 new vehicles.
- Standby ambulance.
- Staff roster to meet work needs.

12. HEALTH PLANNING AND INFORMATION

12.1. Management

Acting Principal Health Planning Officer Mr. Sione V. Hufanga was responsible for managing the Division which consists of the Health Planning, Health Information, Information Technology, Medical Records, Health Projects.

The Division's objective is to provide efficient and effective, health planning, health information, project planning and medical records services to its customers within and from outside the Ministry locally, regionally and internationally.

12.2. Health Planning

This section is headed by the Principal Health Planning Officer and is assisted by a Health Planning Officer and a Computer Operator Grade II.

The section's mission statement is; to provide efficient, timely and effective health planning services to the Ministry and partner organizations.

12.2.1. Objectives

Table 65 The sections key result areas and objectives are:

Key Result Area	Objective
1. Staffing and staff development	<ul style="list-style-type: none">▪ To ensure the required number of staff with the appropriate knowledge and skills are employed to provide efficient and effective health planning services.▪ To provide opportunities for staff training▪ To secure funding for staff training▪ To prioritize training needs
2. Planning approach for health services In Tonga	<ul style="list-style-type: none">▪ To document the planning process▪ To disseminate the planning approach and educate staff
3. Master Plan for Vaiola Hospital	<ul style="list-style-type: none">▪ To prepare a Master Plan and Stage 1, facilities plan for Vaiola▪ To undertake detailed Stage II facilities planning
4. Policy development capabilities	<ul style="list-style-type: none">▪ To establish research capability▪ To provide support for development of relevant health policies
5. Concepts of evaluation and health outcomes	<ul style="list-style-type: none">▪ To evaluate planning processes▪ Develop the concept of key performance indicators
6. National Health Development Committee	<ul style="list-style-type: none">▪ Formulation of recommendations on matters pertaining to health policy, including legislation and regulations as required.▪ Formulate training and human resources plans.▪ Determine the programmes and projects required to fulfil the health development plan, and recommending development and recurrent estimates to support the programmes▪ Fostering intra-service and inter-organizational cooperation and coordination of the various health programmes in operation.▪ Monitor the implementation of programmes and updating plans and programmes.

12.2.2. Functions

The sections functions are:

- In consultation with programme managers responsible for the development, implementation and monitoring of the Ministry's Corporate planning process.
- Development, implementation and monitoring of the bi-annual WHO Programme Budget.
- Liaise with donor agencies in regard to development projects and activities.
- Provide secretariat functions for the National Health Development Committee.
- Prepare, implement and monitor the Ministry's Development Estimates.
- Oversee activities related to human resource training and development.

12.2.3. Financial Allocations

The Section was allocated \$17,000 and was utilized to purchase office supplies, printing and stationery, and processing of the Ministry's staff overseas training needs.

12.2.4. Milestones

In providing its services, the following were identified as milestones during the year,

- Principal Health Planning Officer, Mr. Taniela Sunia Soakai continues his appointment with WHO as a Human Resource Specialist Workforce Planning, October 2004 – December 2005, WHO Headquarters, Geneva, Switzerland.
- Health Project Officer, Ms. Elsie Tupou assumed duty in February 2005.
- Foundation laying ceremony of Package B1 of the Master Plan for the Upgrading and Refurbishment of Vaiola Hospital was undertaken on 23 February 2005.
- Ceremony for commencement of Package A, construction of the Master Plan was undertaken on 11 May 2005.
- Health Planning Officer, Mrs. Mafi Hufanga attended in-country training on "Writing and Producing Technical Information" from 16 – 27 May 2005.
- Computer Operator Grade III, Mrs. Poaki Totau was promoted to Computer Operator Grade II with effect from 01 July 2005.
- Job descriptions of staff of the section were reviewed and updated.

12.3. Health Information

Health Statistics Officer, Mr Sione Hufanga is responsible for managing this section and is supported by 3 staff.

12.3.1. Objectives

Table 66 The section's objectives are:

Key Result Areas	Objectives
Adequate number of skilled and committed staff	<ul style="list-style-type: none">▪ To train staff.▪ To provide staff with further training in health information management and data analysis.▪ To ensure staff understand their job description.
Efficient and effective health information systems	<ul style="list-style-type: none">▪ To improve data analysis capability.▪ To improve data quality to international standard.▪ To improve the reporting of clinical information.▪ To benchmark health status information with other Pacific Islands▪ To improve report production.
Adequate facilities, equipment and supplies	<ul style="list-style-type: none">▪ Improve work space.▪ To ensure quality of computers and other office supplies are above average expectation.

12.3.2. Functions

The section functions are:

- Computerize district hospital discharge data.
- Computerize Health Centre weekly and monthly reports.
- Computerize Hospital weekly/monthly reports.
- Disseminate health information locally, regionally and internationally.
- Prepare statistical tables for the Annual Report of the Hon. Minister of Health.
- Computerize Births and Deaths data.
- Liaise with Justice and Statistics Department in matters pertaining to births and deaths registration.

12.3.3. Financial Allocations

The section was allocated \$4,000 and was utilized for the purchase of office supplies and maintenance of equipment.

12.3.4. Milestones

In providing its services, the following were identified as milestones during the year,

- Computer Operator Grade I, Ms. Nauna Paongo successfully completed her online training for a Post Graduate Diploma in Health Informatics with the University of Otago.
- Ms. Paongo attended the Global Youth Tobacco Survey (GYTS) in Manila, Philippines.
- Ms. Paongo attended the HINARI workshop in Suva, Fiji.
- Health Information Management Association of Australia conducted in country training on Coding and Medical Terminology for Health Information and Medical Records staff.
- Job descriptions for staff of the section were reviewed and updated.
- Implementation of new Certificate of Live Birth Policy and Procedure on 07 March 2005.
- Health Statistics Officer, Mr. Sione Hufanga attended a two weeks workshop on Pacific Health Research in Auckland New Zealand from 30 May – 10 June 2005.
- Approval of new admission and discharge form by the Health Information Steering Committee in November 2005.

12.4. Information Technology

Computer Programmer, Mr. Tu'amelie Paea is manages the section and assisted by 2 daily paid Computer Operator Grade III.

12.4.1. Objectives

The section's objectives are:

- To align IT services with the current and future needs of the Ministry.
- To improve the quality of the IT services delivered.
- To ensure adequate staffing levels.
- To ensure computer standards are maintained.
- To optimize support and development costs.
- To improve data quality.
- To improve quality of LAN, WAN and internet.

12.4.2. Functions

The section's function is:

- Responsible for supporting of computers within the Ministry and developing policies and procedure for procurement of new IT equipment.

Table 67 Number of computers within the Ministry of Health, 2005

Division/Section	No. of computers	Division/Section	No. of computers
Administration	22	Health Centres	1
Medical	24	Vava'u District	1
Public Health	11	Ha'apai District	1
Dental	1	'Eua District	1
Nursing	5	Niua District	1
Health Planning & Information	18	PMU	4
Computer Lap	12	Tonga Health Project	2
Pharmacy	11	TOTAL	115

Table 68 Number of computers in the Ministry of Health, 2005

Network	Number of computers
Health	75
Medical Store	7
Queen Salote School of Nursing	1
Computer Lab	12
Standalone computers	20
TOTAL	115

Table 69 Computers installed during year, 2005.

Section/Division	No. of computers
Medical Records/Health Planning & Information	3
Pharmacy/Medical Store	3
Dental	1
ENT/Medical	1
Hospital Administration/Medical	1
Obstetrics/Medical	1
Laboratory/Medical	2
Health Promotion/Public Health	1
Health Information/Health Planning & Information	1
Maintenance/Medical	1 Laptop
Health Information/Health Planning & Information	1 Laptop
TOTAL	14 Desktops/2 Laptops

12.4.3. Milestones

In providing its services, the following were identified as milestones during the year:

- Establishment of IT Service Support Desk and Database.
- Extend computer network connections:
- Medical Records/Health Planning and Information
- Health Promotion/Public Health
- Dispensary/Medical Ward

12.5. Medical Records

Senior Medical Records Officer in Charge, Ms 'Ofa Mafi is responsible for managing this section and is supported by 8 staff.

12.5.1. Objectives

The section's objectives are:

- To continue training and development of Medical Records staff.
- To have proper completed records.
- To ensure staff understand their job description.
- To have a proper secondary storage area to accommodate all inactive records for future reference, research and education purposes.
- To cull inactive medical records to allow storage space for active medical records.
- Ensure a single record is created to each patient containing all Outpatient and Inpatient history.
- To ensure an accurate and complete electronic PMI is maintained to accurately identify each patient and allocate a single unique hospital number.

12.5.2. Functions

The section's functions are:

- Ensure all medical record inpatient and outpatient needs are attended to.
- Ensure all admissions, transfer and separation procedures are completed and in order.
- Attend to all health care professionals' requests regarding patients' medical records.
- Ensure notifiable diseases as required by the Public Health Act 1992.

- Issuing of death certificates.

12.5.3. Financial Allocations

The section was allocated \$3150.00 and was utilized for purchase of office supplies and equipment.

12.5.4. Milestones

In providing its services, the following were identified as milestones during the year,

- Health Information Management Association of Australia conducted in-country training in coding and medical terminology for Health Information and Medical Records staff. Following this training, seven new coders were awarded Certificates.
- Recruited 4 new daily staff to help with the section. On-the-job training is conducted continuously to ensure skilled and committed staff.
- HSSP Consultant Ms Jackie Kent is assisting the Medical Record Section to improve coding skills.
- Staff attended in-country courses like Customer Services and Management Training Programme.
- Short course in ICD-10 Coding in Brisbane, Australia and staff exchange with St. John of God Hospital, Ballarat.

12.6. Health Project

Health Project Officer, Ms Elsie Tupou is responsible for managing this section.

12.6.1. Objectives

The section's objectives are:

- Increase the number of projects approved and implemented.
- To develop a plan for the Ministry's equipment/renovation and new building needs.
- To prioritize and maintaining the Ministry training needs.
- To improve staff knowledge and skills by further training.
- To provide efficient and effective secretarial tasks to the Training Development Committee.

12.6.2. Functions

The section's functions are:

- In collaboration with programme managers to develop, implement and monitor health projects relating to purchase of equipment and renovation of Ministry's building.
- Liaise with project donors in regard to development projects and activities.
- Provide secretariat functions for the Training Development Committee.

12.6.3. Milestones

In delivering its services, the following were identified as milestones during the year.

- Ms. Tupou attended workshop held in the Tonga Medical Association building on Project Proposal from the 21-24 February 2005.
- Ms. Tupou attended workshop held in the Tonga Medical Association on Management Development from 9/5-1/7/2005.
- EU Project Program One completed with two activities implemented. The Renovation of 5 existing staff quarters and fencing of hospital compound in Prince Ngu Hospital.

- EU Project Program Expenditure Two begins in 2005 with \$2,374,522.00 approved for 18 activities to be implemented in 2006.

12.7. Research Unit

Senior Medical Officer, Dr. Sunia Foliaki is responsible for managing the section and is supported by one daily paid clerk.

12.7.1. Objectives

The section's objectives are:

- To be the primary recipient and processor of all health research proposals submitted to the Ministry of Health and its consequent submission to the Director of Health and/or the National Health Ethics and Research Committee.
- To initiate and recommend to the Ministry of Health appropriate health research.
- To conduct specific health research as approved by the Ministry of Health.
- To collaborate and coordinate national and international health research involving the Ministry of Health.
- To ensure that any collaboration is mutually agreed on in terms of conduct of research and Intellectual Property matters.
- To coordinate and develop health research capacity for local staff.

12.7.2. Functions

The section's function are:

- Promote, collaborate and conduct appropriate and high quality health research on priority issues affecting the health of the people of Tonga and the development of national capacity to undertake health research.

Provided below is a summary of the section's activities during the year.

Asthma Self Management Project

The Research Unit has completed at least 12 months of conducting a special clinic for all asthmatics (all age groups) in Tongatapu. A Total of 179 clients were seen at the asthma clinic in 2005 as compared to 212 seen in 2004. Of the initial 159 asthmatics that were regularly reviewed and participated in 2005 in the Asthma Self Management Project, 80 have completed a second interview to evaluate the impact of the study.

Cancer in Pacific Populations Study

This study has 3 arms: (i) a descriptive analyses of cancer incidence and mortality in Tonga; (ii) a case – control study of breast cancer in women in Tonga beginning from the 1st January 2005 to 31st December 2006; (iii) the women with breast cancer who agree to participate in the case-control study will also form the basis of a follow-up study, which will examine factors that determine cancer survival. Eleven cases of cancer of the breast were diagnosed and referred to Vaiola in 2005. Only 3 of these clients have been interviewed and registered to participate in the study, the rest wither being overseas, passed away without the chance to be interviewed or not yet contacted.

The study is closely linked to the establishment of Tonga's Cancer Registry detailed below. A similar study is being carried out in Fiji, Samoa and Niue as well as among Pacific people in New Zealand.

Cancer Registry

Cancer has been the second leading cause of mortality in Tonga for more than 5 years now. Tonga's population is projected to yield between at least 500 to 550 cancer cases a year. Despite the lack of a Cancer Registry (the current Registry having been approved in late 2004 with one established staff), available evidence suggests Tonga's cancer pattern to follow those experienced in more industrialised countries with high cancer of the colon, lung and breast cancer among women as opposed to Melanesian countries which follow a developing country pattern. All laboratory reports of cancer cases have been collected from 1990 to now. All cases diagnosed with cancer are electronically available from 2001 onwards, likewise deaths due to cancer from 2000. Preliminary discussions have been undertaken and has enabled the cancer registry to have access to the latter 2 data sets. This has facilitated the management and analysis of more meaningful and accurate data on cancer for research, projection and health planning purposes. As expected there is a significant amount of data missing from the laboratory records even if allowances are made to those cancer cases presenting late that were not actually biopsies for histological examination. A total of 650 laboratory records were available for the last 10 years out of an expected 5,000 cases. Furthermore, less than 20% of expected cancer cases are reported annually to and tabled by the Ministry of Health. Of those that have been tabled and reviewed, there are of course indications of the need for auditing and further training in coding. A full analysis has not been done given the amount of work needed to enter and verify more than 10 years of data. However certain patterns stand out to support that Tonga's cancer incidence and pattern does in fact comply with those seen in developed countries. Other "interesting" findings are a high than expected incidence of endometrial cancer and a disproportionate high number of breast cancers among a younger age group. An area looked at more closely in the breast cancer case control study is the assessment of survival among breast cancer patients and its relation to various biological and management indicators. The above preliminary approval for reconciliation of laboratory data with the Health Planning and Information data would greatly assist the Ministry of Health's effort to secure meaningful and quality cancer data for assessment of prevention and control strategies in cancer.

Pacific Obesity Prevention in Communities (OPIC) Project

The OPIC Study is a 5 year study and commenced in 2005; as a collaborative study between the Ministry of Health (Tonga), Fiji School of Medicine (FSM), Fiji Ministry of Health, the University of Auckland and Deakin University of Australia. **(OPIC) PROJECT.** OPIC has begun collecting data and implementing the OPIC Study in Nukunuku, Houma and Kolonga. The interventions used in this project include education, policy, environmental and social strategies in several settings such as schools, churches, villages and neighbourhoods.

A full time Research Assistant funded by OPIC whose primary task to oversee data management for the OPIC project has been employed since December 2005. His role will include spending one day of the week for the lifetime of OPIC to assist with other health research activities of the Research Unit. Initially the newly employed OPIC Research Assistant was to be based directly under the Research Unit as OPIC's contribution to the establishment of a Research Unit within the Ministry of health (Tonga). This has not followed and is being looked into.

Prevalence of Group B Streptococcus (GBS) among pregnant women in Vaiola Hospital

The Research Unit is a Co-Investigator of the above study with the Paediatric Unit as Principal Investigator.

Training of Health Personnel (Research, Epidemiology and Statistics)

A limited number of lectures were given to final year nurses of the Queen Salote School of Nursing on research and epidemiology. These however were and are conducted on an ad hoc basis awaiting final integration of research methodology and epidemiology and statistics into the nursing curriculum. It is hoped that other health

sections would encourage closer collaboration and involvement of the Research Unit within their programmes for improving and evaluating their activities as they see appropriate.

12.7.3. Milestones

In delivering its services, the following were identified as milestones during the year,

Asthma Self Management Intervention Study:

- Phase one of the study was completed with over 170 cases of asthma seen and followed up. Secondary interviews were conducted to assess the impact of the intervention.
- The study was commenced in Vava'u in January 2006. Preliminary results were encouraging with the mean daily Peak Expiratory Flow Rate (PEFR) readings increased by 17% from 352 $l \cdot min^{-1}$ to 413 $l \cdot min^{-1}$. Similarly, asthmatics reporting having woken from sleep needing a reliever 2 or more nights over the last 7 days fell from 51% to 14% over a 6 month period.

The special clinic for asthmatics is supported and in collaboration with Dr Sione Latu (Medical Ward) and Dr Toakase Fakakovi (Paediatric Ward).

Tonga Cancer Registry:

The Research Unit has entered all available laboratory registered cancer cases from 1990 to now. The total records available as referred to above indicate a gross underestimation of projected incidence for Tonga. The Unit has recently (January 2006) been granted approval to download cancer registered cases from the Health Planning and Information Division. Merging of data from the Health Planning and Information with the Laboratory data has served as an "audit" for other mortality data at both sources. The Tonga Cancer Registry hopes to report preliminary descriptive findings in the first 2 months of 2006 given access to Ministry of Health figures.

In terms of data quality it is evident (as alluded to above) that training in coding is highly recommended for both clinicians and coders alike, given our reliance on reported figures for reporting, projection and planning purposes. It would of course serve to minimise inappropriate classification of cancer as well as other diseases. It is also evident that a conciliation of laboratory, Health Planning and Information as well as cancer data from other areas including the outer islands and individual wards and doctors is more than desirable.

Resource Person Health Research Council of New Zealand/WHO Training on Research:

The Senior Medical Officer/Research Unit was invited to be part of the Faculty for the Health Research Council of New Zealand/WHO Regional Training on Health Research for Pacific Health Personnel in Auckland in May 2005.

ISAAC Steering Committee Meeting:

The Senior Medical Officer/Research Unit as a member of the ISAAX Steering Committee attended the Annual Meeting held at the Chinese University of Hong Kong from the 5th to 6th November 2005.

13. ACKNOWLEDGEMENT

I wish to acknowledge my appreciation to the Director of Health and all staff of the Ministry of Health for their loyalty, cooperation and dedication during the year, without which much of what is contained in this Annual Report would not have been achieved.

I wish to make special mention of the villages and districts throughout the Kingdom that have embraced and supported the Ministry's efforts to extend its services to the community and request this excellent relationship be continued into the future.

I am indebted to members of the Royal Family, Honourable Ministers of the Crown, Nobles of the Realm, Heads of Government Departments, Development Partners and Agencies, Non Government Organisations which the Ministry was associated with for the valuable partnership and support throughout 2005.

Appendix 1 Officials and Personnel of the Ministry of Health by Posts, 2001- 2005

POST	2005		2004		2003		2002		2001	
	EST	POST	EST	POST	EST	POST	EST	POST	EST	POST
	POST	FILLED	POST	FILLED	POST	FILLED	POST	FILLED	POST	FILLED
MINISTER OF HEALTH	1	1	1	1	1	1	1	1	1	1
ADMINISTRATION	9	7	8	6	8	5	8	6	8	5
Director of Health	1	1	1	1	1	1	1	1	1	1
Principal Health Planning Officer	1	1	1	1	1	1	1	1	1	1
Principal Health Administrator	1	1	1	1	1	1	1	1	1	1
Health Administrator	4	3	3	3	3	2	3	2	3	1
Hospital Administrator	1	1	1	0	1	0	1	1	1	1
Assistant Secretary	1	0	1	0	1	0	1	0	1	0
MEDICAL STAFF	103	75	83	63	85	65	88	66	90	70
Royal Physician	1	1	1	1	1	1	1	1	1	1
Medical Superintendent	2	2	2	2	1	1	1	1	1	1
Chief Medical Officer	4	2	4	2	4	2	4	4	4	4
Senior Medical Officer	14	10	15	10	15	12	15	12	15	11
Medical Officer Special Grade	10	4	7	4	7	4	7	4	7	4
Medical Officer	31	22	25	21	26	22	26	14	26	22
Chief Surgeon Specialist	1	1	1	1	1	0	1	0	1	0
Anaesthetist Specialist	2	1	2	2	2	2	2	2	2	1
Physician Specialist	1	0	1	0	1	0	1	0	1	0
Obstetrician Gynaecologist Specialist	1	0	1	0	1	0	1	0	1	0
Paediatric Specialist	1	0	0	0	0	0	0	0	0	0
Medical Officer Trainee	2	1	0	0	0	0	0	0	0	0
Supervising Health Officer	1	1	1	1	1	1	1	1	1	1
Senior Health Officer	5	4	5	4	5	4	5	5	4	3
Health Training Co-coordinator	1	0	1	0	1	0	1	1	1	1
Health Officer	16	16	17	15	19	16	22	21	25	21
Health Officer Trainee	10	10	0	0	0	0	0	0	0	0
DENTAL STAFF	53	43	45	41	46	43	52	37	52	38
Chief Dental Officer	1	1	1	1	1	1	1	1	1	1
Principal Dental Officer	2	2	2	2	2	2	2	2	2	2
Senior Dental Officer	5	4	5	5	5	5	4	4	4	4
Dental Officers	9	6	8	5	9	8	8	7	8	5
Senior Dental Therapist	4	4	4	4	4	4	4	4	4	4
Dental Therapist	13	13	6	6	6	6	8	6	8	7
Senior Dental Technician	1	1	1	1	1	1	1	0	1	0
Dental Prosthodontist	1	1	1	1	1	1	1	1	1	1
Dental Technician	2	2	0	0	0	0	0	0	0	0
Dental Receptionist	1	1	1	1	1	1	1	0	1	0
Dental Sterile Supply Assistant	1	1	1	1	1	0	1	0	1	0
Dental Therapist Trainee	5	0	7	7	7	7	7	0	7	0
Dental Chairsides Assistant	8	7	8	7	8	7	14	12	14	14
NURSING STAFF	421	362	400	315	380	342	385	325	381	321
Chief Nursing Officer	1	1	1	1	1	1	1	1	1	1
Matron	1	1	1	1	1	1	1	1	1	1
Assistant Matron	1	1	1	0	1	0	1	1	1	1
Supervising Public Health Sister	1	1	1	1	1	1	1	1	1	1
Senior Nursing Sister	6	5	5	5	5	5	5	5	3	3
Nursing Sister	18	15	16	14	16	14	15	11	16	13
Senior Staff Nurse	26	22	25	20	25	20	25	18	22	18
Assistant Senior Nursing Sister	1	1	1	1	1	1	1	1	1	1
Staff and Student Nurse	245	219	258	200	228	219	233	211	243	211
Staff Nurse Diplomate	21	21	0	0	0	0	0	0	0	0
Principal Q.S.S.N	1	1	1	1	1	1	1	1	1	1
Nursing Sister Graduate	8	6	8	7	8	7	8	8	8	5
Senior Tutor Sister	2	1	2	2	2	2	2	2	2	2
Senior Nurse Midwife	16	16	9	8	16	15	18	15	18	15
Public Health Sister	2	2	2	2	2	2	2	2	2	2
Public Health Sister Graduate	3	3	3	2	3	2	3	2	3	2

Officials and Personnel of the Ministry of Health by Posts, 2001- 2005

POST	2005		2004		2003		2002		2001	
	EST	POST	EST	POST	EST	POST	EST	POST	EST	POST
	POST	FILLED	POST	FILLED	POST	FILLED	POST	FILLED	POST	FILLED
Public Health Nurse	18	8	20	12	21	11	20	9	20	16
Public Health Nurse Midwife	3	2	3	3	3	3	0	0	0	0
Nurse Midwife	18	12	17	12	20	16	25	16	19	16
Senior Public Health Sister	1	1	1	1	1	1	1	1	1	1
Tutor Sister (Graduate)	4	4	4	4	4	3	4	2	3	3
Clinical Nurse Tutor	1	1	1	1	1	1	1	1	1	1
Clinical Nurse Tutor (Graduate)	1	1	1	1	1	1	1	1	1	0
Senior Public Health Nurse	17	12	14	11	14	11	14	13	11	7
Librarian	1	1	1	1	1	1	1	1	1	0
Nurse Practitioner	2	2	2	2	1	1	1	1	1	0
Public Health Senior Nurse Midwife	2	2	2	2	2	2	0	0	0	0
TECHNICAL STAFF	158	121	161	130	164	132	166	113	161	121
Senior Health Promotion Officer	1	1	1	1	1	1	1	1	1	0
Health Promotion Officer	1	1	1	1	1	1	1	0	1	1
Health Promotion Officer Graduate	1	1	0	0	0	0	0	0	0	0
Health Promotion Officer (Education)	1	1	2	2	2	1	2	1	2	2
Health Promotion Assistant Grade II	2	2	3	2	3	3	3	3	3	3
Senior Health Education Technician	1	0	1	0	1	0	1	1	1	1
Senior Health Education Assistant Grade II	1	0	1	1	1	1	1	1	1	1
Health Promotion Officer Grade I	2	1	2	1	2	2	2	2	2	2
Health Promotion Officer Grade II (Education)	3	0	0	0	0	0	0	0	0	0
Health Promotion Officer (Technician)	1	1	1	1	1	1	1	1	1	1
Health Promotion Technician Trainee	1	1	1	1	1	1	1	1	1	1
Supervising Public Health Inspector	1	1	1	1	1	1	1	1	1	1
Senior Public Health Inspector	2	2	2	2	2	2	3	2	3	2
Public Health Inspector Graduate	1	1	1	1	1	1	0	0	0	0
Public Health Inspector	1	1	1	1	0	0	0	0	0	0
Public Health Inspector Grade I	1	1	1	1	2	2	1	1	1	1
Public Health Inspector Grade II	14	10	11	11	15	11	16	10	18	14
Public Health Inspector	1	0	0	0	0	0	0	0	0	0
Public Facilities Attendant	1	1	3	2	3	2	3	0	3	0
Sanitation Officer	4	4	5	4	5	4	5	3	5	3
Water Maintenance Officer	3	3	3	3	3	3	3	0	3	0
Public Health Assistant Grade I	3	2	3	3	3	3	2	2	2	2
Public Health Assistant Grade II	3	2	3	2	3	2	3	2	3	3
Principal Pharmacist	1	1	1	1	1	1	1	1	1	1
Senior Pharmacist Graduate	1	1	1	1	0	0	0	0	0	0
Pharmacist Graduate	2	2	2	2	3	1	3	2	3	0
Senior Pharmaceutical Technologist	1	0	1	1	1	1	1	1	1	1
Assistant Pharmacist Grade I	3	3	3	3	3	3	3	3	3	3
Assistant Pharmacist Grade II	15	15	14	11	16	13	16	13	16	14
Assistant Pharmacist Trainee	2	0	6	6	6	6	6	6	0	0
Procurement Officer	1	1	1	1	1	1	1	1	1	1
Stock Control Officer	1	1	1	1	1	1	1	1	1	1
Principal Medical Scientist	1	1	1	1	1	1	1	1	0	0
Senior Medical Scientist	3	3	3	3	3	3	3	3	3	3
Medical Scientist	3	2	3	3	3	2	3	2	3	2
Senior Laboratory Technician	1	1	1	1	1	1	1	1	1	1
Laboratory Technician Grade I	4	4	4	4	3	3	4	4	4	4
Laboratory Technician Grade II	15	14	15	12	16	15	16	11	16	11
Assistant Laboratory Technician Grade II	5	4	7	4	7	0	7	0	7	5
Senior Radiology Technologist	1	1	1	1	1	1	1	1	1	1
Radiographer	1	0	1	1	1	1	1	1	1	1
Senior Ultrasonographer	1	1	1	1	1	1	1	1	1	1
Radiographer Graduate	1	0	1	0	1	0	1	0	1	0
Assistant Radiographer Grade I	5	2	5	2	5	2	5	2	5	2
Assistant Radiographer Grade II	7	6	7	6	7	7	9	5	5	5
Radiology Technologist	1	1	1	1	1	1	1	1	1	1
Assistant Radiographer Trainee	3	0	3	0	1	0	1	0	5	4
Assistant Radiographer Trainee Grade II	1	0	1	0	0	0	0	0	0	0
Psychiatric Assistant Grade I	1	0	0	0	0	0	0	0	0	0

Officials and Personnel of the Ministry of Health by Posts, 2001- 2005

POST	2005		2004		2003		2002		2001	
	EST	POST	EST	POST	EST	POST	EST	POST	EST	POST
	POST	FILLED	POST	FILLED	POST	FILLED	POST	FILLED	POST	FILLED
Psychiatric Assistant Grade II	7	5	9	7	9	9	9	7	9	7
Mental Health Welfare Officer	2	1	2	1	2	1	2	0	2	1
Psychiatric Social Worker	1	1	1	1	1	1	1	1	1	1
Nutritionist	2	2	2	2	2	2	2	2	2	2
Physiotherapist	1	1	1	1	1	1	1	1	1	1
Occupational Therapist	1	0	0	0	0	0	0	0	0	0
Health Statistics Officer	1	1	1	1	1	1	1	1	1	1
Computer Programmer	1	1	1	1	1	0	1	0	1	0
Computer Operator Grade I	1	1	1	1	1	1	1	1	1	1
Senior Medical Record Officer	2	0	1	0	1	0	1	0	1	0
Health Project Officer	1	1	1	0	1	1	1	1	1	1
Health Planning Officer	1	1	1	1	1	1	1	0	1	0
Senior Sterile Supply Supervisor	1	0	1	0	1	1	1	1	1	1
Sterile Supply Supervisor	1	1	1	1	1	1	1	1	1	1
Sterile Supply Assistant	4	4	6	5	6	5	6	4	6	4
ACCOUNTING AND CLERICAL	57	47	51	47	50	44	47	43	45	45
Senior Accountant	1	1	1	1	1	0	1	0	1	1
Principal Accounting Officer	1	1	1	1	1	1	1	1	1	1
Accounting Officer	2	2	1	1	1	1	1	1	1	1
Senior Hospital Executive Officer	1	1	1	1	1	1	1	1	1	1
Clerk Class I	3	3	2	2	2	2	2	2	2	2
Clerk Class II	3	3	5	4	5	4	3	3	3	3
Medical Record Officer	1	0	1	0	1	0	1	1	1	1
Senior Medical Recorder	1	1	1	1	1	1	1	1	1	1
Medical Recorder	3	3	3	3	2	2	2	2	3	3
Junior Medical Recorder	10	5	7	7	8	8	6	6	6	6
Typist Clerk Grade III	1	1	1	1	1	1	2	2	2	2
Computer Operator Grade II	3	3	0	0	0	0	0	0	0	0
Computer Operator Grade III	7	5	8	8	6	6	6	5	5	5
Computer Assistant	9	9	10	9	13	12	13	13	13	13
Health Registry Recorder	2	2	2	2	2	2	1	1	1	1
Financial Analyst	1	0	1	0	0	0	0	0	0	0
Accounting Officer Diplome	2	2	2	2	1	0	1	1	1	1
Clerk Class III	6	5	4	4	4	3	5	3	3	3
SUPERVISORY AND DOMESTIC	169	154	193	177	196	160	186	122	176	147
Medical Storeman	1	1	1	1	1	1	1	1	1	1
Assistant Medical Storeman	1	1	1	1	1	1	1	0	1	0
Storeman Clerk	1	1	1	1	1	1	1	0	2	0
Store Assistant	3	3	4	3	4	2	4	3	4	3
Chief Cook	2	2	3	2	3	2	3	0	3	2
Assistant Cook	14	14	15	13	15	13	14	5	10	10
Seamstress Supervisor	1	1	1	0	1	0	1	1	1	1
Seamstress	1	1	4	2	4	3	4	3	4	4
Domestic Supervisor	2	2	2	1	2	1	2	1	2	1
Laundry Supervisor	1	1	1	1	1	1	1	0	1	0
Laundryman	5	5	7	5	7	4	7	3	6	0
Laundry Maid	12	11	13	12	12	10	11	6	12	12
Male Orderlies	16	16	17	15	19	15	18	10	18	17
Wardmaids	23	16	29	22	29	24	28	14	28	26
Laboratory Maid	5	5	5	5	5	5	5	5	5	5
Dental Maid	1	0	1	0	1	1	1	1	1	1
Transport Supervisor	1	1	1	1	1	1	1	1	1	1
Senior VIP Driver	1	1	0	0	0	0	0	0	0	0
VIP Driver	1	1	1	1	1	1	1	1	1	1
Driver	26	23	27	27	26	25	21	21	21	21
Senior Driver	1	1	1	1	1	1	1	1	1	1
Mechanic	1	0	1	1	1	1	1	1	1	0
House Keeper	2	2	4	2	4	2	4	2	4	2
Groundskeeper	7	6	9	5	9	5	9	5	9	8
Caretakers	2	2	2	2	2	2	2	2	2	2

Officials and Personnel of the Ministry of Health by Posts, 2001- 2005

POST	2005		2004		2003		2002		2001	
	EST	POST	EST	POST	EST	POST	EST	POST	EST	POST
	POST	FILLED	POST	FILLED	POST	FILLED	POST	FILLED	POST	FILLED
Building Tradesman Leading Hand	1	1	1	1	1	1	1	1	1	1
Steam Maintenance Fitter	1	1	1	1	1	1	1	1	1	1
Boilerman	2	2	2	2	2	2	2	2	2	2
Refrigeration Mechanic	1	1	1	1	1	1	1	0	1	1
Leading Hand Electrician	1	1	1	1	1	1	1	1	1	1
Master	1	1	1	1	1	1	1	1	1	1
Oxygen Plant Operator	1	1	1	1	1	1	1	1	1	0
Engineer	1	1	1	1	1	1	1	1	1	1
Senior Telephone Operator	1	1	1	1	1	1	1	1	1	1
Telephone Operator	4	4	4	4	4	3	4	4	4	3
Painter	1	1	2	2	2	2	2	2	1	1
Senior Hospital Engineer Graduate	1	1	1	1	0	0	0	0	0	0
Plumber	2	2	1	1	2	2	2	1	1	1
Kitchen Hand	2	2	2	2	2	2	2	1	2	1
Plumber Tradesman Leading hand	1	1	1	1	1	0	1	1	1	1
Sewage Plant Operator	1	1	1	1	1	1	1	1	1	1
Hospital Fitter Electrician	1	1	1	0	2	2	2	1	2	2
Hospital Service Foreman	1	1	1	1	1	1	1	1	1	1
Hospital Maintenance Electrician	1	1	1	1	1	1	1	1	1	1
Technician Electromedical	1	1	1	1	1	1	1	1	1	1
Mechanical Supervisor	1	1	1	1	1	1	1	1	1	1
Handyman	1	1	1	1	2	1	1	0	1	0
Hospital Security Officer	5	5	9	6	10	7	9	8	9	8
Security Officer	1	1	1	1	1	1	2	0	2	0
Garbage Removal Supervisor	1	0	1	1	1	1	1	1	0	0
Garbage Remover	3	3	3	3	3	3	3	2	0	0
GRAND TOTAL	971	810	942	780	930	792	933	713	914	748

Source : Civil List

Description : This table present the staff establishment of the Ministry of Health from 2001to 2005.

**Appendix 2 Estimates of Health Expenditure and Revenue Government of Tonga,
Fiscal Years 2001/2002 – 2005/2006**

FISCAL YEAR	MINISTRY OF HEALTH GROSS RECURRENT EXPENDITURE	MINISTRY OF HEALTH TOTAL REVENUE	MINISTRY OF HEALTH NET RECURRENT EXPENDITURE	PROJECTED POPULATION OF TONGA	MINISTRY OF HEALTH GROSS RECURRENT EXPENDITURE PER HEAD
2005/2006 (Est)	14845304.00	1737140.00	13108164.00	102369	145
2004/2005 (Prov)	13291021.80	364102.28	12926919.52	101865	130
2003/2004 (Prov)	11765173.00	336136.35	11429036.65	101404	116
2002/2003 (Act)	10919797.00	298015.79	10621781.21	101002	108
2001/2002 (Act)	10472061.00	274268.16	9544818.00	100673	104

Source: Program Budget Estimate of the Government of Tonga
Tonga Population Census 1996 Demographic Analysis, Statistics Department
Tonga Government Gazette, 27th June 2005
Ministry of Finance

Description: This table contains data of financial resources allocated from the Government of Tonga to the Ministry of Health. It also shows the revenue generated from services delivered by the Ministry of Health and deposited with the Ministry of Finance. The Net Recurrent Expenditure column is derived as the difference between Gross Recurrent Expenditure and Total Revenue. The Gross Recurrent Expenditure per head is derived by dividing Gross Recurrent Expenditure by Projected Population Column.

(Act) - Official amount that has been Gazetted.
(Prov) - Provisional amount provided by Ministry of Finance but has been not Gazetted
(Est) - Estimated Amount from the Budget Estimate of the Government of Tonga for the Current Financial Year.

Note: All data in this table have been revised from the Annual Report 2004 except Projected Population. This revision was based on the adjustment of the Gross Recurrent Expenditure and Ministry of Health's Total Revenue column from Estimated to Actual and Provisional Amounts.

**Appendix 3 Ministry of Health Recurrent Expenditure and Government Recurrent Expenditures:
Government of Tonga, 2001/2002 - 2005/2006**

FISCAL YEAR	HEALTH SERVICES EXPENDITURE	TOTAL GOVERNMENTS RECURRENT EXPENDITURE	% OF TOTAL GOVERNMENT EXPENDITURE
2005-2006 (Est)	14845304	143333724	10.4%
2004-2005 (Est)	13344463	114576468	11.6%
2003-2004 (Est)	11544180	112980798	10.2%
2002-2003 (Act)	10144818	98632662	10.3%
2001-2002 (Act)	9744818	85939341	11.3%

Source: Program Budget Estimate of the Government of Tonga
Tonga Population Census 1996 Demographic Analysis, Statistics Department
Tonga Government Gazette, 27th June 2005
Ministry of Finance

Description: This table contains the Gross Recurrent Expenditure of the Ministry of Health and the Government of Tonga. The percentage of Total Government Expenditure is derived from the Ministry and the Government's Recurrent Expenditure.

Appendix 4 Transport Services: 2005

	Vaiola		Ngu		Niu'ui		Niu'eiki		NTT		NF		TOTAL	
	2005	2004	2005	2004	2005	2004	2005	2004	2005	2004	2005	2004	2005	2004
Established drivers	17	19	5	5	2	2	1	1	1	1	1	1	27	29
Un-established drivers	2	2	1	1	1	0	1	1	0	0	0	0	5	4
Number of Vehicles	31	23	5	5	2	1	2	2	1	1	1	1	42	33
Motor cycles	0	0	1	3	1	2	0	0	1	1	0	0	3	6

Source: Transport Section-Manual Data Collection

Description: This table reflects the number of drivers employed by the Ministry, as well as the number of vehicles operated by the Ministry of Health in 2004 and 2005.

Appendix 5 Population by Gender, 1996 – 2005

YEARS	BOTH	MALE	FEMALE
2005	102369	52260	50109
2004	101865	51975	49890
2003	101404	51711	49693
2002	101002	51473	49529
2001	100673	51273	49400
2000	100283	51019	49264
1999	99821	50732	49089
1998	98372	49875	48497
1997	98077	49725	48352
1996	97784	49576	48208

Source: Tonga Population Census 1996 Demographic Analysis, Statistics Department

Description: This data was extracted from the Tonga Population Census 1996 to project the estimated population for 2005. Note that there are slight differences between this table and the Tonga Population Census 1996 but this is attributed to decimal point rounding.

Appendix 6 Population Break Down by Gender and Age Group, 2005

AGE GROUPS	TOTAL	ACCUMULATE %	MALE	FEMALE
ALL AGES	102369	100	52260	50109
0 - 4	11914	12	6154	5760
5 - 9	12004	12	6212	5792
10 - 14	12217	12	6405	5812
15 - 19	11388	11	6081	5307
20 - 24	10755	11	5542	5213
25 - 29	7703	8	3922	3781
30 - 34	5680	6	2858	2822
35 - 39	5710	6	2903	2807
40 - 44	4872	5	2426	2446
45 - 49	4203	4	2002	2201
50 - 54	3700	4	1748	1952
55 - 59	3105	3	1454	1651
60 - 64	2846	3	1384	1462
65 - 69	2389	2	1232	1157
70 - 74	1812	2	918	894
75 +	2071	2	1019	1052

Source: Tonga Population Census 1996 Demographic Analysis, Statistics Department

Description: The above data was extracted from the Tonga Population Census 1996 to show the estimated population and age group for 2005 and age group. Please note that there are slight differences between this table and the Tonga Population Census 1996 but this is attributed to decimal point rounding.

Appendix 7 Reported Livebirths, Total Deaths and Infant Deaths Under 1 Year, 2000 – 2005

YEARS	LIVEBIRTHS		DEATHS		INFANT DEATHS	
	TOTAL	CRUDE BIRTH RATE*	TOTAL	CRUDE DEATH RATE *	TOTAL	INFANT MORTALITY RATE **
2005	2634	25.7	543	5.3	31	11.8
2004	2429	23.8	617	6.1	38	15.7
2003	2658	26.2	588	5.8	34	12.8
2002	2442	24.2	581	5.8	24	9.8
2001	2531	25.1	579	5.7	33	13.0
2000	2457	24.6	649	6.5	32	13.0

* Rate per 1,000 population

** Rate per 1,000 livebirths

Source: Death Database, Health Information Section
 Livebirth Database, Health Information Section
 Vaiola Hospital Mortuary Registration Book
 Admission and Discharge Database, Health Information and Medical Records Section

Description: The table reflects the absolute number and rate of livebirths, deaths and infant deaths for the whole of Tonga.

Appendix 8 Reported Livebirths by Age of Mother And District, 2005

AGE OF MOTHER	WHOLE KINGDOM	TONGATAPU	VAVA'U	HA'APAI	EUA	NTT
Under 15	1	1	0	0	0	0
15 - 19	83	68	8	6	1	0
20 - 24	649	508	95	33	12	1
25 - 29	751	598	98	37	16	2
30 - 34	641	496	106	29	8	2
35 - 39	385	287	64	20	12	2
40 - 44	112	85	14	10	3	0
45 - 49	12	7	4	1	0	0
TOTAL	2634	2050	389	136	52	7

Source: Livebirth Certificates issued by the Ministry of Health.

Description: This table captures the distribution of livebirths by age of mother and by district. The primary data source of this database is the duplicate copies of the Certificate of livebirth which are issued by staff of the Ministry of Health for livebirths occurring in hospitals, health centres and the community.

Limitations: There is a small percentage of livebirths that may not be captured in the Ministry's livebirth process. A validation process is taking place between the Health Information Database, Reproductive Health Section and Obstetric Wards data to improve reporting. The discrepancies between these sources are now less than 2%.

Appendix 9 Reported Deaths By Age And District, 2005

AGE GROUP	WHOLE KINGDOM				DISTRICT				
	BOTH	F	M	Accum %	Tongatapu	Vava'u	Ha'apai	'Eua	Niua's
< 1	31	16	15	6%	29	1	0	1	0
1 - 4	8	4	4	1%	6	1	0	1	0
5 - 14	6	2	4	1%	5	1	0	0	0
15 - 24	17	6	11	3%	15	1	1	0	0
25 - 34	20	9	11	4%	19	0	1	0	0
35 - 44	23	8	15	4%	20	1	0	1	1
45 - 54	58	23	35	11%	50	6	0	2	0
55 - 64	76	33	43	14%	66	8	2	0	0
65 - 74	124	47	77	23%	98	18	6	2	0
75 +	180	74	106	33%	143	27	4	5	1
TOTAL	543	222	321	100%	451	64	14	12	2

Source: Medical Records Inpatient Death Database.
Vaiola Hospital Mortuary Registration Book
Death Certificates issued by the Ministry of Health.

Description: This table reflects the pattern of mortality by age group, sex and districts irrespective of cause of death.

Limitation: It is acknowledge that there may be significant numbers of unreported deaths especially those who die in the community and the isolated islands. Further work is being undertaken to validate community deaths.

Appendix 10 Health Facilities by District, 2005

DISTRICT	LOCATION	ESTIMATED POPULATION	AVAILABLE HEALTH FACILITY		
			HOSPITAL	HEALTH CENTRE	MCH CLINIC
TONGATAPU	Tofoa	70119	1	0	19
	Kolonga	5001	0	1	0
	Mu'a	5661	0	1	0
	Fua'amotu	4054	0	1	0
	Vaini	6285	0	1	0
	Houma	4313	0	1	0
	Nukunuku	3137	0	1	0
	Kolovai	3549	0	1	0
	VAVA'U	Neiafu	16452	1	0
Ta'anea		2399	0	1	0
Falevai		1322	0	1	0
Tefisi		2486	0	1	0
HA'APAI	Hihifo	8518	1	0	5
	Nomuka	769	0	1	0
	Ha'afeva	1341	0	1	0
'EUA	Niu'eiki	5165	1	0	3
NIUA'S	Niutatoputapu	1343	0	1	1
	Niuafo'ou	769	0	1	1

Source: Estimated Population based on Statistics Department projections.

Description: This is a list of health facilities (Hospital, Health Centre and MCH Clinic), their location and the estimated population living in these area served by the respective health facility.

Assumption: Due to a lack of precise indicators to measure the population mobility and the variance of natural increase, the Ministry assume that the proportion of the population living in each place remain the same over time.

Appendix 11 Health Services: Hospital Activities, 2005

SERVICES	HOSPITAL				TOTAL 2005	YEARS			
	VAIOLA	NGU	NIU'UI	NIU'EIKI		2004	2003	2002	2001
1. BED CAPACITY AND OCCUPANCY									
Bed Capacity: Beds	199	61	25	18	303	303	303	302	302
Bassinets	38	12	5	2	57	57	57	57	57
Bed Occupancy %: Beds	43%	26%	28%	14%	37%	36%	34%	39%	39%
Bassinets	34%	11%	17%	14%	27%	18%	44%	46%	46%
2. SUMMARY INFORMATION OF PATIENTS:									
Discharge: Adult	4302	998	520	235	6055	6413	6906	6302	6918
Children	726	137	132	48	1043	942	1173	1026	1189
Infants	751	87	69	27	934	764	773	705	953
TOTAL DISCHARGE	5779	1222	721	310	7381	8119	8852	8033	9060
Deaths: Adult	125	17	7	3	152	185	149	184	182
Children	9	2	0	2	13	16	12	7	7
Infants	2	4	1	1	8	30	15	10	23
TOTAL DEATHS	136	30	10	6	182	239	176	201	212
TOTAL PATIENTS DAYS									
Adult	27440	5147	2049	775	35411	35341	37201	38427	43013
Children	3963	645	545	173	5326	4259	5206	5021	6030
Infants	4657	481	308	104	5550	3785	3853	3995	4979
AVERAGE LENGTH OF STAY									
Adults	6	5	4	3	5	6	5	5	6
Children	5	5	4	4	5	5	4	5	5
Infants	6	6	4	4	5	5	5	4	5
3. CONFINEMENTS:									
Delivery: Normal	1662	332	148	130	2272	2471	2483	2411	2226
Breech	29	4	2	0	35	23	38	49	58
Forceps	24	1	0	0	25	28	38	32	53
Cesarean	237	52	9	0	298	270	229	248	143
Total: Livebirths	1968	399	180	129	2676	2814	2723	2780	2455
Still Birth	19	4	5	0	28	20	32	33	27
4. OUT-PATIENT DEPARTMENT:									
Consultation	69064	30430	19145	10374	129013	129412	140515	157191	129906
5. SURGICAL OPERATION:									
In-patient	1535	678	0	0	2213	2096	1687	1737	2885
Post Operative Infection	2	0	1	0	3	0	2	7	0
Death During Operation	0	0	0	0	0	0	0	2	1
Minor Operation	1913	296	10	0	2219	1910	2059	2230	2099
Major Operation	734	94	32	0	860	784	766	1066	786
General	1344	48	0	0	1392	1505	1579	1655	1663
Spinal	288	77	11	0	376	221	203	186	242
Local	512	107	2	0	621	439	494	643	351
6. DENTAL SERVICES:									
Patient Seen	34952	7115	2700	2018	46785	49277	44461	38705	44438

Sources Admission and Discharge Database, Medical Records Section
 Obstetric Ward Manual Registration
 Outpatient Department Manual Registration
 Surgical Ward Manual Registration
 Dental Division Manual Registration

Description: This table summarizes major activity in the four main hospitals in Tonga for 2005 and over the last five years.

Appendix 12 Health Services: Health Centre Activities, 2005

ACTIVITY	WHOLE KINGDOM	TONGATAPU							HA'APAI		NIUA'S	
		MU'A	KOLONGA	FU'AMOTU	VAINI	NUKUNUKU	HOUMA	KOLOVAI	NOMUKA	HA'AFEVA	NTT	NF
1. OUT-PATIENTS:												
Treatment:												
First Visit	43402	11979	7908	3788	3356	4066	3098	4397	1744	3066	0	0
Revisit	2791	588	454	346	426	357	213	161	85	161	0	0
Ante-Natal:												
First Visit	15	0	0	0	0	15	0	0	0	0	0	0
Revisit	17	0	0	0	0	17	0	0	0	0	0	0
Post - Natal:												
First Visit	12	0	0	0	0	12	0	0	0	0	0	0
Revisit	7	0	0	0	0	7	0	0	0	0	0	0
Child Health:												
First Visit	343	0	18	0	0	236	0	89	0	0	0	0
Revisit	114	0	7	0	0	98	0	9	0	0	0	0
1 - 5 Years:												
First Visit	973	0	48	0	0	590	0	335	0	0	0	0
Revisit	112	0	11	0	0	92	0	9	0	0	0	0
Family Planning:												
First Visit	6	0	0	0	0	6	0	0	0	0	0	0
Revisit	16	0	0	0	0	16	0	0	0	0	0	0
2. HOME VISIT:												
Treatment:												
First Visit	195	37	0	17	12	33	9	0	23	64	0	0
Revisit	178	20	0	10	12	46	17	0	46	27	0	0
Ante-Natal:												
First Visit	3	0	0	0	0	3	0	0	0	0	0	0
Revisit	2	0	0	0	0	2	0	0	0	0	0	0
Post - Natal:												
First Visit	1	0	0	0	0	1	0	0	0	0	0	0
Revisit	1	0	0	0	0	1	0	0	0	0	0	0
Child Health:												
First Visit	9	0	0	0	0	9	0	0	0	0	0	0
Revisit	14	0	0	0	0	14	0	0	0	0	0	0

Appendix 13 Health Services: Health Centre Activities, 2005

ACTIVITY	WHOLE KINGDOM	TONGATAPU							HA'APAI		NIUA'S	
		MU'A	KOLONGA	FU'AMOTU	VAINI	NUKUNUKU	HOUMA	KOLOVAI	NOMUKA	HA'AFEVA	NTT	NF
1 - 5 Years:												
First Visit	6	0	0	0	0	6	0	0	0	0	0	0
Revisit	10		0	0	0	10	0	0	0	0	0	0
Family Planning:												
First Visit	0	0	0	0	0	0	0	0	0	0	0	0
Revisit	4	0	0	0	0	4	0	0	0	0	0	0
3.IN-PATIENTS:												
Beds Available	10	0	2	0	0	0	0	0	2	6	0	0
Admission	95	0	0	0	0	17	0	0	10	68	0	0
Patients days	231	0	0	0	0	0	0	0	45	186	0	0
4.SURGERY & ANAESTHESIA:												
Minor Surgery	426	54	138	69	76	19	19	33	4	14	0	0
Local Anaesthesia	169	14	88	3	3	11	16	12	12	10	0	0
5. CLINICAL TESTS:												
Specimen Examine: Urine	0	0	0	0	0	0	0	0	0	0	0	0
Blood	6	0	0	0	0	6	0	0	0	0	0	0
Faeces	0	0	0	0	0	0	0	0	0	0	0	0
Sputum	0	0	0	0	0	0	0	0	0	0	0	0
6. REFERRAL TO HOSPITAL:												
No. of Patients	208	35	17	17	7	27	26	37	1	41	0	0
7. SCHOOL HEALTH:												
School Visit	49	2	8	4	0	22	0	0	7	6	0	0
8. TETANUS TOXOID:												
Pregnant Women: First Visit	24	0	0	14	0	5	0	5	0	0	0	0
Second Visit	9	0	0	1	0	6	0	2	0	0	0	0
Booster	10	0	0	0	6	4	0	0	0	0	0	0
Other Persons: First Visit	152	26	78	0	2	12	8	17	0	9	0	0
Second Visit	47	0	36	0	0	9	0	0	0	2	0	0
Booster	30	19	0	0	3	3	5	0	0	0	0	0
9. DEATHS REPORT:												
Number of Death	0	0	0	0	0	0	0	0	0	0	0	0

Source: Health Officers' Monthly Report

Description: Summary of the 9 major activities delivered in the health centres and the number of services delivered. The statistics three Health Centres in Vava'u are not included in this table due to limited number of Health Officers to run these clinics.

Appendix 14 ENT Clinic: Inpatient and Outpatient Treatment, 2002 - 2005

ACTIVITY	2005	2004	2003	2002
A. TOTAL CONSULTATION	3226	3290	3292	3611
B. CAUSES OF COMPLAINTS:				
Otitis Media (Acute)	382	289	389	313
Otitis Media (Chronic Suppurative)	603	616	607	614
Otitis Media (Serious or Glue)	189	157	181	207
Otitis Externa (All Kinds)	246	269	318	382
Chronic Mastoiditis	7	20	9	8
Rhinitis (All Kinds)	63	96	83	129
Nasal Polypi	30	32	50	23
Sinusitis (Acute & Chronic)	42	71	82	87
Foreign Body (Ear)	125	135	170	162
Foreign Body (Nose)	36	19	24	28
Foreign Body (Trachea or Bronchus)	0	0	0	0
Foreign Body (Oesophagus)	12	7	7	9
Eczema	126	86	119	143
Wax Impaction	499	699	611	704
Tonsillitis	73	38	49	55
Quinsy	0	1	3	8
Generalised Pharyngitis	36	9	27	30
Laryngitis (Acute & Chronic)	4	5	1	4
Epiglottitis/Nasal Polyps	0	2	1	0
Laryngo-tracheitis	0	1	1	0
Epistaxis	32	28	36	31
Tumors (All kind)	15	13	10	9
Thyroid Tumor	21	30	52	35
Trauma (All kind)	37	33	38	44
Others	648	634	424	586
Total complaints	3226	3290	3292	3611
Minor Operations	298	302	148	144
Major Operations	221	226	130	62
Total Operations	519	528	278	206
D. INPATIENTS 5 LEADING CAUSES OF ADMISSION	1) Post-op care for Tonsillectomy and acute Tonsillitis (21) 2) Sinus surgery including FESS and Sinusitis (20) 3) Polypectomy (16) 4) Thyroidectomy including Parotidectomy & submandibulectomy (13) 5) Mastoiditis and post-op care for Mastoidectomy (6)	1) Post-op care for Tonsillectomy and acute Tonsillitis (19) 2) Sinus surgery including FESS and Sinusitis (16) 3) Thyroidectomy including Parotidectomy & submandibulectomy (12) 4) Polypectomy (9) 5) Mastoiditis and post-op care for Mastoidectomy (9)	1) Sinus surgery including FESS (25) (2) Polypectomy (10) 3) Quinsy/Acute tonsillitis & Post-op care for tonsillectomy (22) 4) Thyroidectomy including Parotidectomy & submandibulectomy (14) 5) Turbinectomies/Ethmoidectomy including Septoplasty (16)	1) Post-op care for Tonsillectomy (26) (2) Sinus surgery including FESS (Functional Endoscopic Sinus Surgery) (15) 3) Polypectomy (11) 4) Foreign bodies from throat & Oesophagus & nose (10) 5) Thyroidectomy (6)
No. of Admission	84	72	87	101

Source: ENT Section Manual Registration

Description: This table contains the major conditions treated for both inpatients and outpatients as reported by the ENT clinic for 2005 and the previous three years.

Appendix 15 Ophthalmic Clinic: Examination and Treatment, 2005

ACTIVITY	DISTRICT								YEARS		
	VAIOLA		NGU		NIU'UI		NIU'EIKI		2005	2004	2003
	2005	2004	2005	2004	2005	2004	2005	2004			
Routine Test	91	706	108	292	225	190	0	0	424	1188	141
Refraction	200	603	235	299	0	136	245	540	680	1578	503
Conjunctivities	496	404	0	0	0	0	0	0	496	404	645
Diabetic eye check	1089	388	0	160	0	45	32	0	1121	593	740
Presbyopia	470	215	0	0	0	0	0	0	470	215	2023
Cataract	353	268	0	60	0	30	0	20	353	378	448
Contusions Eye injury	149	40	0	0	0	0	0	0	149	40	17
Pterygium	135	142	0	20	0	15	0	0	135	177	106
Corneal Ulcer	50	50	0	0	0	0	0	0	50	50	30
Glaucoma	2	3	0	0	0	0	0	0	2	3	3
Uveitis	49	20	0	0	0	0	0	0	49	20	14
Review	685	431	0	60	0	10	0	0	685	501	569
Others	132	661	0	0	0	0	0	0	132	661	947
Minor Surgery	23	10	2	15	1	0	0	0	26	25	46
Major Surgery	108	45	18	38	0	8	0	0	126	91	161
Argon Laser for Retinopathy	129	40	8	30	13	5	0	0	150	75	90
Yag for Capsulotomy	10	4	0	1	0	0	0	0	10	5	26
TOTAL SERVICES	4171	4030	371	975	239	439	277	560	5058	6004	6509

Source: Ophthalmic Section Manual Registration

Description: This table contains the main conditions treated and services provided by the ophthalmic clinic in the four district hospitals for 2005 and the previous two years.

Appendix 16 Vaiola Hospital Outpatient Special Clinics, 2001 - 2005

ACTIVITY	2005	2004	2003	2002	2001
1. DIABETIC CLINIC					
Total Register	2434	2463	2247	2017	1808
No. of Attendances	8277	10094	13984	13837	15114
Dressings	3194	3175	4065	2863	3502
Others	423	6919	9919	3716	3527
Mode of Therapy:					
Insulin and OHA	460	415	450	355	288
Oral Hypoglycemic Agents	1637	1798	1366	1442	1333
Insulin	98	30	35	20	6
Diet Alone	285	220	396	200	181
Special Tests:					
Micro Albuminium	-	-	115	20	28
Glycated Haemoglobin	162	411	110	147	326
No. of new cases	209	246	270	209	154
No. of old cases	2225	2199	1977	1808	1654
2. HYPERTENSION CLINIC					
Responsible Medical Officer (s)	1	1	2	2	2
No. of Attendances	716	1087	1051	1154	1189
Male	333	586	581	351	439
Female	383	501	470	803	754
No. of new cases	41	NA	51	57	68
No. of old cases	948	1087	1051	1097	1171
3. GENERAL MEDICAL CLINIC					
Responsible Medical Officer (s)	1	2	2	3	2
No. of Attendances	686	476	381	303	405
Total No. of Patients	949	585	413	420	615
4. CARDIAC CLINIC					
Responsible Medical Officer (s)	1	2	2	3	2
No. of Attendances	1476	1085	785	1320	1172
No. of RHD	NA	NA	NA	3	N/A
No. of RHD referred overseas	NA	NA	NA	2	N/A
No. of IHD	NA	NA	NA	0	N/A
5. PEDIATRIC CLINIC					
Responsible Medical Officer (s)	2	2	2	1	1
No. of patients	605	850	1122	910	768
Male	260	458	400	408	336
Female	181	392	539	502	432
No. of Attendances	441	NA	939	1250	N/A
<i>Pediatric cardiac clinic</i>					
No. of patients	426	405	104	275	313
Male	165	200	39	108	133
Female	152	185	39	105	93
No. of Attendances	317	385	78	213	226
6. SURGICAL CLINIC					
Responsible Medical Officer (s)	3	3	3	3	3
No. of patients	1612	1378	1002	2605	1680
Male	650	763	650	1130	909
Female	513	615	352	883	771
7. CHEST CLINIC					
Responsible Medical Officer (s)	1	1	2	2	2
No. of Patients	840	913	525	513	823
Male	344	441	182	183	284
Female	283	417	206	185	300
No. of Attendances	627	858	388	308	305

NA- Not Available

Source: Special Clinics Manual Registration and the Diabetic Database

Description: This table captures the clinician's workload in the seven special clinics, and the numbers of visits for 2005 and the previous four years.

Appendix 17 X-Ray and Ultrasound Examination by Hospitals, 2001- 2005

SITE	YEARS					HOSPITALS		
	2005	2004	2003	2002	2001	VAIOLA	NGU	NIU'UI
CHEST								
Routine investigation for diseases, injuries and reviews	3219	3390	3911	3476	3731	2780	269	170
Routine for injuries	170	472	196	259	176	130	35	5
Routine for government services & visas	1993	1711	1594	1925	1462	1902	85	6
ABDOMEN RADIOGRAPHY								
Plain Abdomen	298	348	302	348	385	230	51	17
Ba Meal	24	37	52	47	57	24	0	0
Ba Enema	19	40	45	33	25	19	0	0
(I.V.P and Cystogram) Urography	20	44	48	0	87	20	0	0
Obstetric and Gyenecology radiography Mother & foetus	28	21	45	29	30	0	22	6
Pelvimetry	0	0	0	0	0	0	0	0
Hysterosalpingogram	0	1	0	0	2	0	0	0
Intrauterine Contraceptive Device	0	1	0	5	4	0	0	0
BONE RADIOGRAPHY:								
Extremeties	1688	1886	2264	2278	2194	1400	212	76
Thoracic Spine	101	78	56	94	58	47	53	1
Skull & Facial Bones	580	805	897	1248	938	497	59	24
Pelvis & Hips	203	262	218	237	270	155	40	8
Lumbosacral spine	304	370	414	376	396	238	59	7
Cervical spine	192	252	304	274	235	154	24	14
SCREENING PROGRAMME: MISCELLANEOUS								
Myelogram	19	12	25	10	13	19	0	0
Venogram	0	1	0	1	4	0	0	0
Sialogram	0	0	0	0	1	0	0	0
Foreign Bodies	41	27	18	12	10	41	0	0
Ultrasound:								
Obstetric	1487	1742	1944	1096	1505	1487	0	0
Upper Abdomen	922	914	769	584	601	922	0	0
Pelvis and Lower Abdomen	966	692	476	916	655	966	0	0
Breast, Thyroid and other small parts	226	170	148	131	172	226	0	0
Echo Cardiography	370	379	15	122	43	370	0	0
TOTAL	12870	13655	13741	13501	13054	11627	909	334

NA - Not Available

Source: X-ray and Ultrasound Manual Registration

Description: This table contains the number of X-ray and Ultrasound examinations and screenings that were performed in the hospitals in 2005 and the previous four years.

Appendix 18 Laboratory Tests Referred and Performed in the Hospital Laboratories, 2001-2005

TYPE OF TEST	2005	2004	2003	2002	2001	%	TT	VV	HP	'EUA
Blood	156635	160097	155896	160443	157997	93%	125839	24010	5055	1731
Urine	8279	7590	6830	8338	11446	5%	6721	1413	145	0
Stool and Rectal swabs	1251	1475	1552	1865	2055	1%	1123	79	49	0
Sputum	541	443	840	1458	1306	0%	541	0	0	0
Cerebro-Spinal Fluids	317	215	242	243	343	0%	317	0	0	0
Pleural & Other body fluids	140	110	194	120	104	0%	140	0	0	0
Skin Scrapping	138	173	95	128	155	0%	135	3	0	0
Water	15	12	65	474	250	0%	15	0	0	0
Leprosy skin biopsy	0	8	0	0	0	0%	0	0	0	0
Medico - legal Test	5	2	2	8	0	0%	5	0	0	0
Semen	0	5	30	70	74	0%	0	0	0	0
Pus & Other swab	1235	1071	1106	1537	1449	1%	1215	9	11	0
Bone Marrow	0	3	7	2	8	0%	0	0	0	0
Cytology	109	162	125	104	184	0%	109	0	0	0
Histology	522	661	623	664	819	0%	522	0	0	0
Food	0	0	0	0	2	0%	0	0	0	0
Tissues	0	0	0	0	0	0%	0	0	0	0
TOTAL	169187	172027	167607	175454	176192	100%	136682	25514	5260	1731
Specimens for oversease tests:										
Blood	425	463	457	615	609	91%	425	0	0	0
Sputum / TB Sensitivity	0	0	0	0	1	0%	0	0	0	0
Body Fluid	0	0	0	0	0	0%	0	0	0	0
Bone Marrow	0	0	0	0	0	0%	0	0	0	0
Block	39	0	0	0	0	8%	39	0	0	0
Tissues	0	4	27	27	26	0%	0	0	0	0
Urine	2	3	1	6	0	0%	2	0	0	0
Miscellaneous	1	0	0	0	0	0%	1	0	0	0
TOTAL	467	470	485	648	636	99%	467	0	0	0

Source: Laboratory Manual Registration

Description: This table contains the types of tests referred and performed in the hospitals laboratories in 2005 and the previous 4 years.

Appendix 19 Laboratory Tests Performed by Unit, 2005

UNIT	WHOLE KINGDOM		Vaiola	Ngu	Niu'ui	Niu'eiki
	No.	%				
Haematology	87528	52%	61442	21099	3811	1176
Blood Transfusion	30811	18%	26216	2856	1195	544
Biochemistry	36255	21%	36255	0	0	0
Microbiology	13757	8%	11933	1559	254	11
Histology and Cytology	831	0%	831	0	0	0
Medical Legal	5	0%	5	0	0	0
TOTAL	169187	100%	136682	25514	5260	1731

Source: Laboratory Manual Registration

Description: This number of laboratory tests performed by each unit in the respective hospitals in 2005.

Appendix 20 Dental Services: Patients Seen & Services Provided by Health Districts, 2001-2005

ACTIVITY	DISTRICTS							TOTAL	YEARS				
	TT	VV	HP	'EUA	NTT	NF	H/C		2005	2004	2003	2002	2001
Number of Patients seen	34952	7115	2700	2018	291	NA	1683	48759	51538	47180	40206	45041	
Adult	29680	5640	2106	1652	209	NA	1448	40735	37216	36722	30279	35102	
Children	3798	1119	415	254	62	NA	235	5883	12112	8282	7583	7675	
Expectant Mothers	1474	356	179	112	20	NA	0	2141	2210	2266	2344	2254	
Services Rendered	63954	7040	3425	3432	606	NA	21720	100177	97605	108163	50175	50604	
Oral Examination	34952	7115	2700	2018	373	NA	1683	48841	41425	47180	40206	41480	
Dental Extraction:													
Total No. of teeth removed	15141	2108	1133	476	165	NA	792	19815	25607	36719	21497	20594	
Caries	11138	1567	608	249	89	NA	489	14140	16194	20956	14824	13768	
Perio	3684	357	375	188	76	NA	225	4905	3675	15763	1696	1599	
Conservative:													
Temporary Fillings	9852	962	576	306	53	NA	189	11938	9477	12039	10760	10619	
Permanent Fillings	8977	525	438	649	101	NA	89	10779	7956	5994	4997	5637	
Simple Amalgam	2802	86	75	152	26	NA	29	3170	2611	2301	2176	1871	
Conpound Amalgam	1984	173	26	95	27	NA	30	2335	1776	1265	1187	1460	
Composite Amalgam	1972	207	256	379	48	NA	30	2892	2147	1563	1629	1269	
Endodontic Treatment	2219	59	16	23	0	NA	0	2317	2788	1075	952	1119	
X-rays (Periapical)	720	22	65	0	0	NA	0	807	1362	1034	907	982	
Preventive:													
Oral Hygiene Instruction	1557	165	384	0	0	NA	173	2279	2536	47130	5765	6735	
Scaling	724	67	113	0	0	NA	8	912	1007	708	667	470	
Polishing	677	26	50	0	0	NA	6	759	720	660	356	220	
Gingival treatment	0	0	0	0	0	NA	0	0	36	206	137	64	
Antibiotic Therapy	1155	523	153	143	21	NA	34	2029	2692	2553	2818	3519	
Dental Prosthetic:													
a. Full Upper	132	0	0	0	0	NA	0	132	52	98	68	133	
b. Full Lower	125	0	0	0	0	NA	0	125	36	95	65	96	
c. Partial Upper	190	0	0	0	0	NA	0	190	279	187	289	270	
d. Partial Lower	50	0	0	0	0	NA	0	50	135	81	86	114	
e. Repair	146	4	27	0	0	NA	0	177	168	273	271	312	
f. Rebase	1	0	0	0	0	NA	0	1	5	13	11	1	
g. Relining	14	0	0	0	0	NA	0	14	22	35	24	27	
h. Easing	32	5	0	0	0	NA	0	37	80	92	123	71	
Orthodontic Therapy	35	0	0	0	0	NA	0	35	18	46	4	27	
Operations:													
a. Minor Oral Surgery	305	0	0	0	0	NA	0	305	372	159	848	302	
b. Major Oral Surgery	38	0	0	0	0	NA	0	38	72	NA	45	65	
c. OMF Surgical	NA	NA	NA	NA	NA	NA	NA	NA	0	0	0	0	
School Visited:													
Primary School	57	12	3	0	0	NA	0	72	77	80	61	70	
Secondary School	0	1	0	0	0	NA	0	1	9	10	0	0	
No. of Visits to School	161	13	32	0	0	NA	0	206	471	150	174	199	
No. of Children participating	10426	1030	750	0	0	NA	0	12206	15492	15267	0	33905	
Fluoride Programme:													
Pre-school	4	0	2	0	0	NA	0	6	5	3	0	3	
Primary school	13	0	4	0	0	NA	0	17	12	10	0	9	
No. of Children examine & treated with fluoride oral hygiene	2839	0	750	0	0	0	0	3589	2385	3563	0	1337	
No. of visits to these school	510	0	180	0	0	NA	0	690	76	66	0	NA	
Fissure Sealant Prog:													
No. of Children participating	1128	0	0	0	0	NA	0	1128	76	66	0	NA	
No. of teeth seal	4225	0	0	0	0	NA	0	4225	0	0	0	0	

NA - Not Available

Source: Dental Division Manual Registration

Description: Statistics of the main services delivered by the Dental Division in 2005 and the previous four years, and a profile of the patients receiving these services. These services are delivered in hospitals and some health centres.

Appendix 21 Psychiatric Ward Admissions, 2001-2005

CAUSES	2005	2004	2003	2002	2001
Schizophrenia	30	50	88	82	22
Schizoaffective disorder	0	3	8	8	3
Bipolar mood disorder	23	42	65	56	19
Acute and transient psychotic disorder	2	0	2	1	4
Personality and behavioural disorder due to brain disease, damage and dysfunction	3	0	4	0	0
Other Non-Organic psychosis	3	2	0	0	4
Delusional disorder	1	1	1	2	2
Other anxiety disorder	0	0	1	0	0
Other non-organic psychotic disorder and panic disorder	0	0	0	0	0
Dementia	3	5	5	7	4
Other mental disorder due to brain damage, and dysfunction and physical disease	2	2	3	10	5
Mental retardation	1	10	4	1	3
Mental and behavioural disorders due to use of alcohol	0	0	2	0	1
Mental and behavioural disorders due to use of cannabinoids	0	0	2	0	2
Conduct disorder	1	1	6	8	1
Mental and behavioural disorder due to psychoactive substance use	4	6	8	3	4
Non-organic sleep disorder, unspecified	0	0	0	0	0
Dissociative (conversion) disorder	0	0	0	0	2
Borderline Personality disorder	0	0	0	0	0
Other schizophrenic-like disorder	0	0	2	0	0
Obsessive compulsive disorder	0	0	0	0	1
Acute stress disorder	0	0	0	0	1
Panic disorder	0	0	0	0	1
Alcohol withdrawal	1	0	0	0	0
Adjustment disorder with parasuicidal act	3	0	0	0	0
Schizotypal Disorder	1	0	0	0	0
Medical induced movement disorder	0	0	1	3	1
Adjustment disorder	4	7	26	2	8
Recurrent depressive disorder	0	1	7	10	0
Depressive episode	0	0	1	1	0
Conduct disorder and Organic Amnestic	1	0	0	0	0
Mental Retardation and Bipolar affective disorder	3	0	0	0	0
Mental and behavioural disorder associated with the puerprium NEC	0	0	0	0	1
Dissocial personality disorder	1	1	3	0	2
Manic episode	4	3	0	3	4
Tic disorder	0	0	0	0	1
Paranoid Personality disorder	0	0	2	0	0
Mental disorder, not otherwise specified	2	0	5	2	1
TOTAL ADMISSIONS	93	134	246	199	97

Source: Mental Health Ward Manual Registration

Description: Statistics on the causes of admission to the Psychiatric Ward for 2005 and the previous four years.

Appendix 22 Queen Salote School of Nursing Student Roll, 2002-2005

Class	No. Students		Graduates	Resigned	Termination
	1/01/2005	31/12/2005			
2002	24	21	21	0	3
2003	26	21+1*	0	*	4
2004	30	26	0	0	4
2005	42	*38	0	0	4
TOTAL	122	107	21	0	15

- One student was referred for Overseas treatment but is still on the QSSN Roll.

Source: Queen Salote School of Nursing Student Roll

Description: Total number of new nursing students recruited at the beginning of each training program since 2002. This also indicates the number of students that successfully completed the training program, and those who left without completing.

Appendix 23 Laundry Services Provided, 2005

Equipment / Activities	Washing Equipment						Washing		Labelling
	W/Mach	Dry Spinner	Dryer	Roller	Presser	Loads	Pieces	Uniform	New Linen
No	3	1	2	0	1	3657	153876	0	2008

Source: Laundry Section Manual Registration

Description: Statistics of laundry equipment operating in 2005 and the washing and labeling undertaken.

Appendix 24 ANC Attendance (New) by Trimester and District, 2005

TRIMESTER	TONGA		TT		VV		HP		'EUA		NIUA'S	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Early (12 weeks)	234	9%	120	7%	26	7%	57	25%	18	13%	13	33
I (13-20 weeks)	680	28%	423	25%	111	28%	77	34%	59	44%	10	25
II (21-32 weeks)	1166	47%	821	49%	206	52%	80	35%	42	31%	17	43
III (33+)	348	14%	274	16%	47	12%	12	5%	15	11%	0	0
No Booking (no ANC)	37	2%	32	2%	4	1%	0	0%	1	1%	0	0
TOTAL	2465	100%	1670	99%	394	100%	226	100%	135	100%	40	100%

Source: Reproductive Health Section

Description: This table provides the number of mothers attending the Ante Natal Clinic by the stages of pregnancy by District for 2005.

Appendix 25 Causes of Complaint During Pregnancy, 2005

CAUSES	TONGA	TT	VV	HP	'EUA	NIUA'S
	No.	No.	No.	No.	No.	No.
1. Bleeding Ante Postpartum	19	14	3	1	0	1
2. Hypertension	49	31	8	3	4	3
3. Diabetes	56	47	4	3	0	2
4. Teenage Pregnancy	68	45	9	13	0	1
5. Elders (too old)	359	238	62	32	18	9
6. Frequent births (less than 2 yrs)	560	403	91	28	27	11
7. Too many children (more than 4)	653	421	130	64	27	11
8. Anaemia	30	23	2	4	1	0
9. Other	9	6	1	2	0	0
TOTAL	1803	1228	310	150	77	38

Source: Reproductive Health Section

Description: Statistics of the major causes of complaints during pregnancy by district for 2005.

Appendix 26 Deliveries by Attendant and Place of Birth, 2005

Place of Birth	Traditional Birth Attendant	Medical Officers	Nurses	Health Officers	Others	No. of Deliveries for 2005	No. of Deliveries for 2004
Home	58	0	25	0	3	86	93
HC & Clinics	0	1	26	10	0	37	32
Hospital	0	660	1858	0	40	2558	2587
Others	0	0	0	0	1	1	1
TOTAL	58	661	1909	10	44	2682	2713

Source: Reproductive Health Section Manual Registration

Description: This table provides statistics on the location of deliveries and the type of personnel attending the delivery for 2005. This information was compiled by Public Health Nurses. This number of deliveries counts all livebirths irrespective of whether the babies have been issued a Certificate of livebirth or not.

Appendix 27 Immunization Programme Coverage, 2005

Immunization	Tonga			Tongatapu		Vava'u		Ha'apai		'Eua		Niua's		
		Tot	Imm.	%	Tot	Imm.	Tot	Imm.	Tot	Imm.	Tot	Imm.	Tot	Imm.
BCG	1	2717	2697	99.7%	1973	1954	400	400	182	182	133	132	29	29
POLIO	1	2526	2523	99.9%	1837	1835	366	365	172	172	124	124	27	27
	2	2392	2386	99.7%	1740	1734	342	342	170	170	116	116	24	24
	3	2143	2128	99.3%	1597	1582	298	298	157	157	68	68	23	23
DPT	1	1451	1450	99.9%	1164	1163	111	111	143	143	33	33	0	0
	2	1312	1306	99.5%	1080	1074	66	66	142	142	24	24	0	0
	3	1112	1100	98.9%	988	976	25	25	85	85	14	14	0	0
HEP B	1	2717	2717	100%	1973	1973	400	400	182	182	133	133	29	29
	2	2509	2506	99.9%	1825	1823	366	365	167	167	124	124	27	27
	3	2219	2206	99.4%	1633	1620	311	311	140	140	112	112	23	23
DPT/HIB	1	1837	1833	99.8%	1362	1359	265	264	137	137	46	46	27	27
DPT/HIB	2	1938	1930	99.6%	1459	1451	276	276	120	120	59	59	24	24
DPT/HIB	3	1720	1718	99.9%	1254	1252	273	273	115	115	55	55	23	23
HIB	1	3913	3893	99.5%	2814	2794	684	684	203	203	173	173	39	39
	2	3535	3525	99.7%	2704	2694	524	524	151	151	121	121	35	35
	3	1989	1974	99.2%	1671	1658	181	181	94	94	28	28	15	13
MR	1	2622	2612	99.7%	1854	1848	421	417	185	185	122	122	40	40
	2	2053	2016	98.2%	1488	1453	271	270	122	122	135	135	37	36
DPT	4	2184	2152	98.5%	1467	1439	422	419	85	85	168	168	42	41
TOTAL		42889	42672	99.5%	31883	31682	6002	5991	2752	2752	1788	1787	464	460

Source: Reproductive Health Manual Registration

Description: This table shows the type immunization provided by Public Health Nurses, the coverage rate of immunization for 2005.

Appendix 28 Infant Nutritional Mode, 2005

Nutritional Mode	TONGA		Tongatapu		Vava'u		Ha'apai		'Eua		Niua's	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
A. Exclusive Breast Feeding:												
(4 - 12 months)	1904	87%	1299	83%	326	98%	144	100%	112	89%	23	92%
B. No Breast Feeding:												
(4 - 12 months)	119	5%	108	7%	8	2%	0	0%	3	2%	0	0%
C. Breast Feeding with Supplement:												
(4 - 12 months)	612	28%	474	30%	125	38%	0	0%	11	9%	2	8%
Total No. of Mother's interviewed	2198		1572		331		144		126		25	

Source: Reproductive Health Manual Registration

Description: This table shows the number and rates of the different types of infant feeding for the main island of Tonga as reported by mothers who were interviewed for 2005.

Appendix 29 Number of New Acceptors by Method, 2005

DISTRICT	IUD	PILL	CONDOM	RHYTHM	VAS	TUB	DEPO	OTHERS	TOTAL
Tongatapu	75	181	119	64	0	74	395	29	937
Vava'u	12	50	37	42	0	49	109	0	299
Ha'apai	16	23	12	29	0	14	70	1	165
Eua	6	7	4	3	0	8	23	0	51
Niua's	4	2	6	6	0	1	12	1	32
TFH	21	68	113	0	94	0	33	0	329
Total	134	331	291	144	94	146	642	31	1813
%	7%	18%	16%	8%	5%	8%	35%	2%	100%

Source: Reproductive Health Manual Registration

Description: This table shows the number of new users of contraceptives by method for the main islands of Tonga in 2005.

Appendix 30 Total Contraceptive Users by Method and Age, (Method Mix), 2005

AGE GROUP	IUD	PILL		CONDOM	RHYTHM	VAS	TUB	DEPO	OTHERS	TOTAL
		C	M							
Below 20	4	6	10	8	0	0	0	38	5	71
20 - 24	50	38	46	54	26	0	4	213	6	437
25 - 29	93	73	76	98	75	0	74	365	10	864
30 - 34	134	67	66	88	76	0	139	411	28	1009
35 - 39	132	64	38	80	83	0	317	342	20	1076
40 - 44	87	39	7	26	48	0	231	206	19	663
45 +	25	8	1	7	18	0	119	71	17	266
TFHA	90	158	3	224	0	103	0	158	0	736
TOTAL	615	453	247	585	326	103	884	1804	105	5122

C:- Combined
M:- Mini-pill

Source: Reproductive Health Manual Registration

Description: This table shows the contraceptive users by method and age group for 2005.

Appendix 31 Reasons for Discontinuation of Family Planning, 2005

REASONS	IUD	PILL	CONDOM	RHYTHM	DEPO	OTHERS	TOTAL
Over Age	0	0	1	1	6	4	12
Want a child	2	33	14	10	80	1	140
Client Failure	0	0	1	2	1	0	4
Method Failure	0	2	0	0	0	0	2
Husband refusal	0	0	1	0	4	0	5
Pregnant	0	33	19	9	29	5	95
Migrated Out	0	0	0	0	3	0	3
Nurse failure	0	1	0	0	0	0	1
Side effect	1	0	0	0	3	0	4
Other	1	5	4	2	29	1	42
TOTAL	4	74	40	24	155	11	308
Tongatapu	52	395	261	201	846	180	1935
Vava'u	1	68	24	12	86	3	194
Ha'apai	2	4	12	5	63	6	92
'Eua	0	0	0	0	0	0	0
Niua's	1	2	4	7	6	2	22

Source: Reproductive Health Manual Registration

Description: This table shows statistics of those who discontinue using contraceptive methods based on patient reported reasons for 2005 by district.

Appendix 32 Tb Case Notification, Detection and Cure Rates, 2002-2005

Year	Smear Positive	Smear Negative	Extra Pulm TB	Retreatment Cases	Total	Notification (All types)	CASE DETECTION	
							All type	Smear Pos
							WHO est. (89/100000)	WHO est. (40/100000)
2002	22	2	2	2	28	28	31%	55%
Cure rate					79%			
2003	11	3	2	0	16	16	18%	28%
Cure rate					88%			
2004	8	3	1	0	12	12	14%	30%
Cure rate					88%			
2005	11	3	5	0	19	19	21%	48%
Cure rate					89%			
Total	52	11	10	2	75			
Ave. Cure rate					86%			

Source: Communicable Disease Manual Registration

Description: This table shows the reported TB cases, cure rates and the case detection from 2002 until 2005.

Appendix 33 Confirmed Curable STI's by Age and Gender, 2005

Age Group	Gonorrhoea		Trichomonas		Others		Total
	Male	Female	Male	Female	Male	Female	
10 - 15	0	0	0	0	0	0	0
16 - 20	6	0	0	0	0	0	6
21 - 25	21	0	0	1	0	0	22
26 - 30	2	1	0	2	0	0	5
31 - 35	2	0	0	0	1	0	3
36 - 40	0	0	0	0	0	0	0
41 - 45	0	0	0	0	0	0	0
46 - 50	1	0	0	0	0	0	1
51 - 55	0	0	0	0	1	0	1
Total	32	1	0	3	2	0	38

Source: Communicable Disease Manual Registration

Description: This table presents the number of cases of Sexually Transmitted Infections for 2005 by age group and sex.

Appendix 34 Environmental Health Services by District, 2005

	DISTRICTS				YEAR			
	TT	VV	HP	'EUA	2005	2004	2003	2002
SANITARY INSPECTION								
Occupied Allotment	6255	4982	1158	1476	13871	13248	18889	11293
Unoccupied Allotment	786	240	256	291	1573			
Private Dwelling	5857	4487	1108	1066	12518	15788	19560	13311
BBQ & Hawkeries	65	14	15	2	96	0	0	0
Butcher Shops	2	0	0	0	2	4	6	3
Bakeries	22	5	2	1	30	18	23	17
Aerated Water Factory	1	0	0	0	1	3	6	4
Food Stored	297	287	92	62	738	1988	1807	1612
Restaurant	37	16	5	0	58	64	99	73
Snack Bars	28	4	3	0	35	14	31	33
Inspection of Building Plans								
Building sites	154	11	22	0	187	450	327	279
Private Dwelling	150	60	19	0	229	141	282	225
Septic tank				0	0	339	1679	280
Public Building	4	8	3	0	15	205	76	73
Inspection of Water Supplies								
Piped	4959	2801	296	1248	9304	10933	12540	8253
Well	13	10	15	0	38	92	207	92
Spring	0	0	0	1	1	1	1	1
Rain Water	3443	2400	1152	1127	8122	9943	10933	6206
Inspection of Toilet Facilities								
Water Sealed Toilet	628	28	379	322	1357	4455	4920	4055
Pit Lathne	569	1862	459	401	3291	2554	5493	2806
Septic tank	3652	2494	296	651	7093	5459	6203	3607
Household without	51	4	24	0	79	66	87	98
Food Condemned								
Chicken Meat (KG)	-	-	-	-	0	0	21172	17660
Mutton(KG)	-	-	-	-	0	0	7650	2766
Canned Food (No.of cans)	0	42	-	-	42	0	1753	3150
Flour (bags)	-	-	-	-	0	0	1512	1646
Fish (KG)	0	281	-	-	281	0	945	950
Registration of Food Establishment								
Butcher Shops	2	0	0	0	2	9	6	2
Bakeries	22	4	2	1	29	17	25	17
Ice Cream Factory	1	0	0	0	1	3	5	4
Food Stored	297	291	92	62	742	1988	1904	1612
Food Handlers	425	354	272	88	1139	5742	6575	5028
Restaurant	28	12	5	0	45	64	91	73
Snack Bars	28	4	3	0	35	14	55	33
Hawkers	65	14	15	2	96	118	201	115
Garbage Collection								
Registered Premises	290	400	0	0	690	1073	1011	1034
Community Education								
Public Meetings	8	18	12	22	60	72	164	64
Radio Programme	2	4	4	1	11	11	16	13
TV Programme	0	0	0	0	0	8	3	7
Issuance of Notices:								
No. of complaints	29	33	56	21	139	152	331	291
Cases taken to court	0	33	56	18	107	76	96	63
Cases convicted	0	30	52	11	93	67	29	32
Cases dropped	0	3	4	7	14	9	67	31
Vector Control:								
No. of Premises fumigated	127	17	15	17	176	235	678	599
Meat Inspection:								
Bovine Carcass	0	4	0	14	18	27	111	88
Pork Carcass	0	0	0	6	6	18	16	37

Source: Environmental Health Manual Registration

Description: This table present the major environmental health activities undertake in 2005 and the previous three years.

Appendix 35 Medically Certified Causes of In-Patient and Out-Patient Deaths by Age Group, 2005

CAUSES	TOTAL			<1		1 - 4		5-14		15-24		25 - 34		35-44		45 - 54		55 - 64		65 - 74		75 +	
	T	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
INFECTIOUS AND PARASITIC DISEASES	20	13	7	0	0	0	0	0	0	1	0	1	0	0	0	2	3	2	2	3	1	4	1
Tuberculosis	2	2	0									1						1					
Septicaemia	14	9	5							1						1	2	1	1	2	1	4	1
Dengue Fever	1	1	0													1							
Hepatitis B	3	1	2														1		1	1			
NEOPLASMS	74	44	30	0	0	0	0	1	0	0	2	2	3	2	1	5	6	8	9	12	6	14	3
Malignant Neoplasm of lip,oral cavity and pharynx	2	1	1															1				1	
Malignant Neoplasm of stomach	8	6	2														1	3		1		2	1
Malignant Neoplasm of colon	4	2	2									1							2			1	
Malignant Neoplasm of liver	6	6	0											2		1		2		1			
Malignant Neoplasm of Pancreas	2	1	1																	1	1		
Malignant Neoplasm of other digestive organs	5	4	1																1	1		3	
Malignant Neoplasm of Lungs	12	8	4													3			1	3	2	2	1
Malignant Neoplasm of breast	4	0	4														1		1		2		
Malignant Neoplasm of female genital organs	8	0	8								1						3		2		1		1
Malignant Neoplasm of Prostate	6	6	0																	2		4	
Leukemia	3	2	1					1				1	1										
Malignant Melnoma of skin	2	2	0													1				1			
Non-Hodgkin's Lymphoma	1	1	0																	1			
Malignant Neoplasm of ill defined,secondary & unspecified sites	6	4	2														1	2	1	1		1	
Neoplasm of uncertain or unknown behaviour	5	1	4								1		2		1				1				
DISEASES OF BLOOD AND BLOOD FORMING	2	1	1	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Aplastic Anaemias	1	0	1								1												
Thrombocytopenia	1	1	0					1															
ENDOCRINE,NUTRITIONAL AND METABOLIC	53	23	30	0	0	0	0	0	0	0	0	0	0	4	0	4	2	3	9	5	14	7	5
Diabetes Mellitus	50	22	28											4		4	1	3	9	4	14	7	4
Hypoglycaemia	1	1	0																	1			
Metabolic Disorders	1	0	1																				1
Disorders of other endocrine glands	1	0	1													1							
DISEASES OF THE NERVOUS SYSTEM	5	2	3	0	0	0	0	1	0	0	0	1	1	0	0	0	0	0	2	0	0	0	0
Meningitis	2	1	1					1											1				
Epilepsy	1	0	1										1										
Other Inflammatory Diseases	2	1	1									1							1				

Medically Certified Causes Of In-Patient And Out-Patient Deaths By Age Group, 2005 (continued from previous page)

CAUSES	TOTAL			<1		1 - 4		5-14		15-24		25 - 34		35-44		45 - 54		55 - 64		65 - 74		75 +	
	T	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
DISEASES OF THE CIRCULATORY SYSTEM	164	113	51	1	0	0	0	0	1	0	1	0	2	3	2	11	4	20	4	35	10	44	27
Rheumatic Heart Diseases	2	0	2	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	1	-	-	-
Hypertensive Diseases	13	11	2	-	-	-	-	-	-	-	-	-	-	-	-	1	-	6	-	2	-	2	2
Myocardial Infarction	25	21	4	-	-	-	-	-	-	-	-	-	1	-	4	-	5	-	5	1	6	3	-
Ischaemic Heart Disease	12	8	4	-	-	-	-	-	-	-	-	-	-	-	1	-	2	-	3	1	2	3	-
Pulmonary Heart Diseases	6	5	1	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	2	1	2	-	-
Cardiac Arrest	64	43	21	-	-	-	-	1	-	1	-	-	1	1	4	2	4	3	15	1	19	12	-
Other form of Heart Disease	1	0	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Heart Failure	19	13	6	1	-	-	-	-	-	-	-	-	-	1	1	1	-	1	6	1	5	3	-
Cardiovascular Diseases	8	3	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	3	3	-
Stroke	11	8	3	-	-	-	-	-	-	-	-	-	-	-	1	1	-	-	2	2	5	-	-
Other Diseases of the circulatory system	2	1	1	-	-	-	-	-	-	-	-	1	-	-	-	-	1	-	-	-	-	-	-
Other Cerebrovascular Diseases	1	0	1	-	-	-	-	-	-	-	-	-	1	-	-	-	-	1	-	-	-	-	-
DISEASES OF THE RESPIRATORY SYSTEM	41	27	14	1	1	0	1	0	0	0	0	0	1	0	1	2	1	1	1	7	1	16	7
Pneumonia	9	5	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	4
COAD	10	10	0	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	3	-	6	-	-
Asthma	5	3	2	-	-	-	-	-	-	-	-	-	-	-	2	1	-	1	-	-	-	1	-
Upper Respiratory Infection	4	2	2	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	1
Other Diseases of Respiratory System	13	7	6	1	-	1	-	-	-	-	1	-	1	-	-	-	-	-	2	1	4	2	-
DISEASES OF THE DIGESTIVE SYSTEM	12	6	6	0	1	0	0	0	0	0	0	0	0	1	2	0	0	2	3	0	1	2	-
Diseases of stomach & duodenum	1	0	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Gastroenteritis	1	0	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Peptic Ulcer	1	1	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-
Diseases of Liver	5	2	3	-	-	-	-	-	-	-	-	-	-	1	-	-	-	2	2	-	-	-	-
Other diseases of digestive system	4	3	1	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	1	1
MENTAL & BEHAVIOURAL DISORDERS	1	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Mental disorder due to use of alcohol	1	1	0	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-
DISEASES OF THE GENITOURINARY SYSTEM	6	3	3	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0	0	1	1
Pyelonephritis	1	0	1	-	-	-	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-
Renal Failure	5	3	2	-	-	-	-	-	-	-	-	-	-	-	1	-	1	1	-	-	-	1	1
Disorders of female genital tract	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PREGNANCY, CHILDBIRTH AND PUERPERUM	2	0	2	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0
Postpartum Haemorrhage	2	0	2	-	-	-	-	-	-	-	-	1	-	1	-	-	-	-	-	-	-	-	-
CERTAIN CONDITIONS ORIGINATING IN THE PERINATAL PERIOD	5	0	5	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Prematurity	2	0	2	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Neonatal cardiac failure	1	0	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bacterial Sepsis of newborn	1	0	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hydramnios	1	0	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Medically Certified Causes Of In-Patient And Out-Patient Deaths By Age Group, 2005 (continued from previous page)

CAUSES	TOTAL			<1		1 - 4		5-14		15-24		25 - 34		35-44		45 - 54		55 - 64		65 - 74		75 +	
	T	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
MALFORMATIONS, DEFORMATIONS ABNORMALITIES	2	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Congenital Malformation of circulatory	2	1	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SYMPTOMS, SIGNS AND ILL DEFINED	21	9	12	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	7	11
Symptoms involving the circulatory & respiratory system	2	2	0												1					1			
Senility	16	6	10																			6	10
Cardiogenic Shock	1	1	0			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-
Unknown cause of death	2	0	2	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
INJURY AND POISONING	14	13	1	1	0	1	1	0	0	4	0	2	0	2	0	1	0	0	0	1	0	1	0
Motor Vehicle Accident	1	1	0			1																	
Asphyxiation	1	0	1				1																
Burn	1	1	0	1	-																		
Drowning	1	1	0	-	-	-	-							1	-	-	-						
Electrocution	1	1	0	-	-	-	-								1	-	-						
Assault	3	3	0	-	-	-	-			3													
Poisoning	1	1	0	-	-	-	-															1	-
Unspecified causes of injury	5	5	0							1		2		1							1		
UNKNOWN CAUSE OF DEATH	120	64	56	11	7	3	2	1	1	5	2	5	1	4	2	6	6	8	3	10	15	11	17
GRAND TOTAL	543	321	222	15	16	4	4	4	2	11	6	11	9	15	8	35	23	43	33	77	47	106	74

Source: Medical Records Inpatient Death Database.
 Vaiola Hospital Mortuary Registration Book
 Death Certificates issued by the Ministry of Health.

Description: This table displays the statistics of specific causes of deaths by sex and age group for 2005.

Appendix 36 Reported Cases of Selected Notifiable Diseases by District, 2001-2005

DISEASES	DISTRICT				YEAR				
	TT	VV	HP	'EUA	2005	2004	2003	2002	2001
Typhoid	2	0	2	0	4	9	21	5	14
Basillary Dysentery	5	0	1	0	6	4	9	8	0
Fish Poisoning	7	9	15	1	32	32	35	17	54
Food Poisoning	86	10	9	3	108	70	260	58	0
Gastroenteritis	83	14	7	11	115	232	175	637	216
Amoebic Dysentery	0	0	0	0	0	0	4	0	0
Dysentery Unclassified	9	0	4	0	13	5	9	9	0
Diarrhoea (Infants only)	714	37	11	16	778	671	1035	1396	1452
Diarrhoea (Adult only)	795	121	65	34	1015	1011	1285	1273	1459
TUBERCULOSIS									
Pulmonary Tuberculosis	5	3	1	2	11	13	12	32	9
Other Tuberculosis	20	1	0	0	21	4	16	1	1
OTHER BACTERIAL DISEASES									
Leprosy	0	0	0	0	0	0	0	0	0
Diphtheria	0	0	0	0	0	0	0	0	0
Leptospirosis	0	0	0	0	0	0	0	0	0
Pertussis (Whooping Cough)	2	0	2	0	4	0	0	0	0
Septic Sore Throat	3	1	0	0	4	3	3	0	0
Meningococcal Meningitis	3	1	0	0	4	3	3	7	0
Tetanus	0	0	0	0	0	0	1	0	0
VIRAL DISEASES :									
HIV/AIDS	0	0	0	0	0	0	0	1	0
Poliomyelitis	0	0	0	0	0	0	0	0	0
Measles	1	0	0	0	1	0	5	595	0
Rubella	0	0	0	0	0	0	0	276	0
Encephalitis	1	1	0	0	2	7	2	3	0
Trachoma	0	0	0	0	0	0	0	0	0
Chicken Pox	39	4	0	1	44	52	110	53	119
Dengue	10	27	16	3	56	60	194	0	0
Mumps	6	0	0	0	6	1	0	0	0
OTHER INFECTIOUS DISEASES									
Gonorrhoea	33	1	0	0	34	112	42	44	34
Non Gonococcal Urethritis	0	0	0	0	0	0	0	0	0
Yaws	0	0	0	0	0	0	0	0	0
Filariasis	0	0	0	0	0	0	0	0	0
DISEASES OF NERVOUS SYSTEM									
Meningitis	18	4	2	5	29	23	14	23	0
DISEASE OF EYE									
Conjunctivitis	496	19	0	3	518	55	254	154	71
RHEUMATIC FEVER									
Rheumatic fever, Acute	2	0	0	0	2	1	5	0	0
DISEASES OF RESPIRATORY SYSTEM									
Lobar Pneumonia	35	1	3	1	40	35	131	10	0
Broncho Pneumonia	1212	64	71	90	1437	1947	1056	1498	1975
Influenza	19827	2646	1693	817	24983	20057	21597	22395	21622
All Respiratory Infections Diseases	21152	2711	1767	1517	27147	20819	24311	24082	25717
DIRECT OBSTETRIC CAUSES:									
Puerperal Fever	6	1	0	0	7	7	5	1	8

Source: Notifiable Disease Electronic Registration

Description: This table displays the number of notifiable diseases occurring in each district in 2005 and the previous four years.