

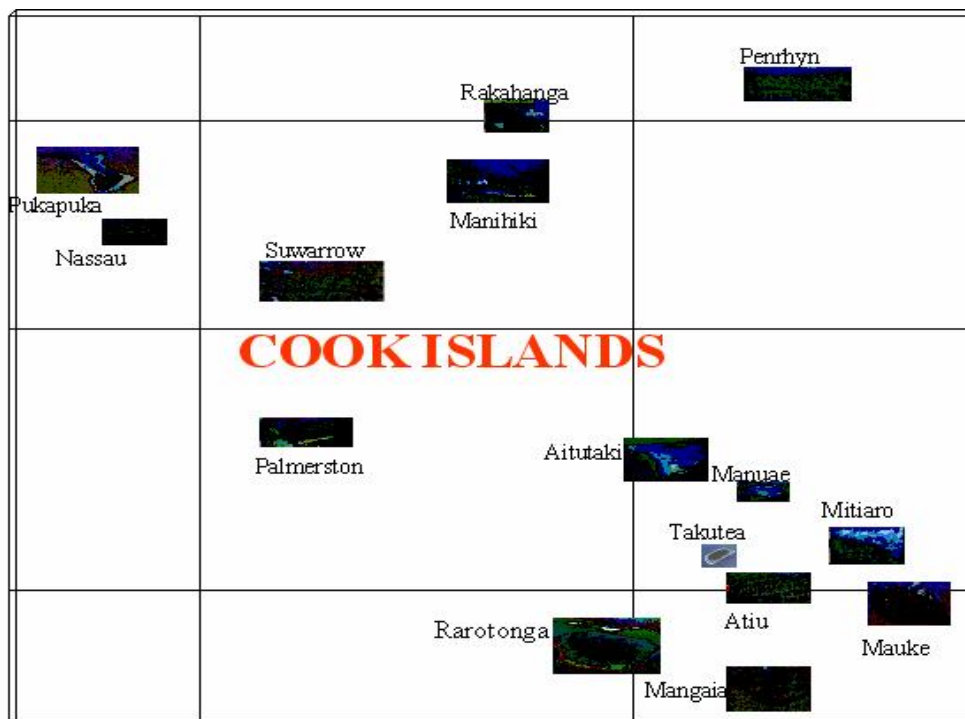
# COOK ISLANDS



## *MINISTRY OF HEALTH*

TE MARAE ORA

### *ANNUAL STATISTICAL BULLETIN*



**STATISTICAL BULLETIN**  
**2007**

***MEDICAL RECORDS UNIT***  
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# PREFACE

I have the pleasure in releasing yet another Ministry of Health Annual Statistical Bulletin, the results' of a year's dedication invested by all those involved in the compiling of once again this useful document. This document is designed to provide in a convenient publication format the latest key health statistical information for the Cook Islands on an annual basis. These statistics are presented as time series for the past five years.

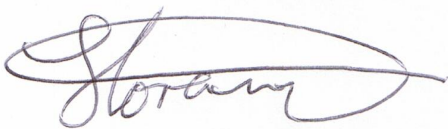
The information contained in this report will be used by the Ministry of Health (MOH) to assist in identifying public health needs, in formulating future plans and advise the Minister of Health on how needs should be addressed, and in assessing progress towards the health outcome targets.

We believe that this report will also be of interest to others, because it provides information that is needed to debate about health needs and priorities that will benefit the people of the Cook Islands.

This bulletin provides key health indicators for creating framework adopted for our planners both in the public and the private sector.

My thanks are extended to the Statistics Staffs for their involvement with the compiling of this useful document in a continuous timely, reliable and quality health statistics. Acknowledgement's also goes to those Ministry of Health Divisional heads and their personnel for the continuous support of this document through their reports, and not forgetting our Outer Island Medical Officers.

For more detailed information or for information on subjects not dealt with or of individual interests, inquiry should be made through the Secretary of Health and the Director of Hospital Health Services.



.....  
Mr Tearoa M.C. Iorangi  
STATISTICS MANAGER

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ANNEX A - Health Indicator

# 1. POPULATION

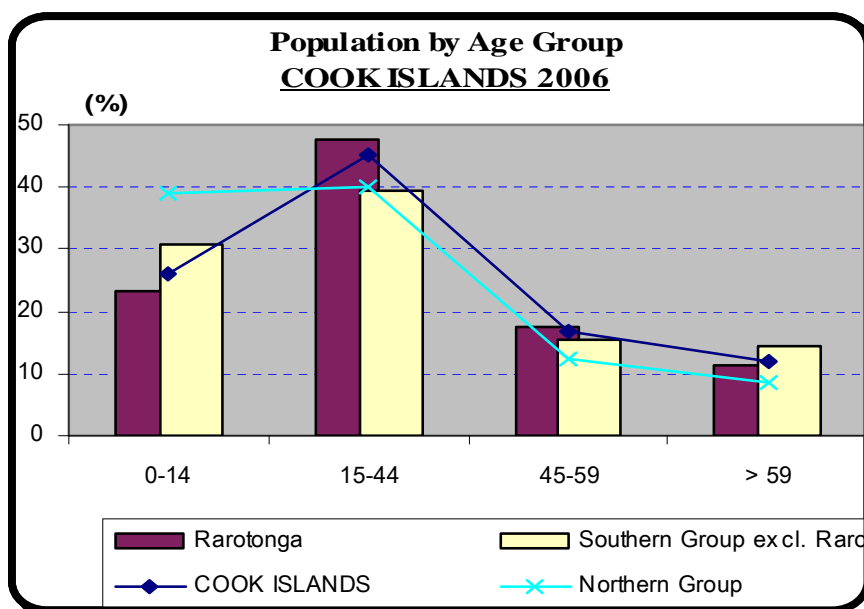


The total population of the Cook Islands reported in 2006 by the National Statistics Office was 19,569. 9,932 (51 percent) were males and 9,637 (49 percent) females. 8,865 were aged between 15 to 44 years; 5,098 between 0 to 14 and 2,319 reported to having ages 60 years and over.

**TABLE 1.1 Population by Region and Age Groups.  
COOK ISLANDS 2006**

Region	Age Group				Total
	0-14	15-44	45-59	> 59	
<b>Population</b>					
COOK ISLANDS	5,098	8,865	3,287	2,319	19,569
Rarotonga	3,319	6,725	2,488	1,621	14,153
Southern Group excl. Raro	1,239	1,587	627	579	4,032
Northern Group	540	553	172	119	1,384
<b>Percentage Distribution</b>					
COOK ISLANDS	26.1	45.3	16.8	11.9	100.0
Rarotonga	23.5	47.5	17.6	11.5	72.3
Southern Group excl. Raro	30.7	39.4	15.6	14.4	20.6
Northern Group	39.0	40.0	12.4	8.6	7.1

The graph below shows that majority of people residing in the Cook Islands were aged between 15 to 44 years. Those islands in the Southern Group excluding Rarotonga reporting the highest number of persons (14 percent) in the 60 years and over age group and Northern Group region reported the highest (39 percent) in the under 15 age group.





## 2. HEALTH FACILITY

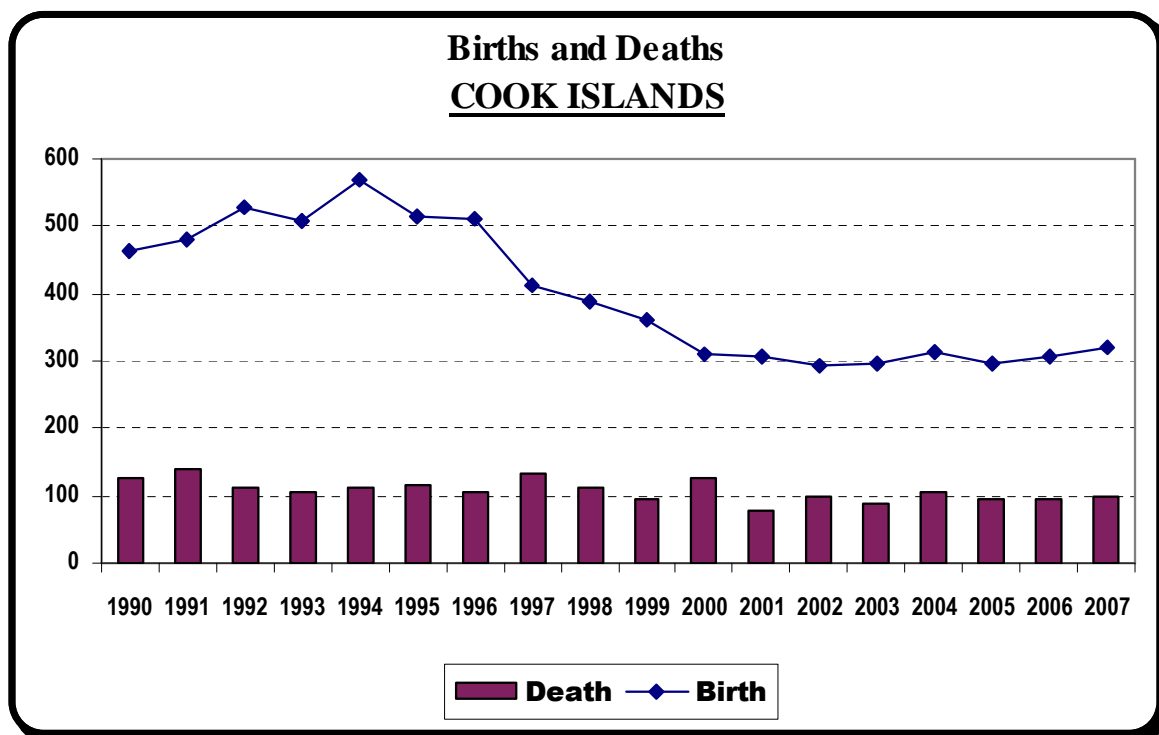
There are a range of health facilities within the Cook Islands varying from hospitals to health centres and child welfare clinics. These can be seen in the following table.

**TABLE 2.1: Health Facilities Available by Region & Island.  
COOK ISLANDS 2007**

REGION & ISLAND	Census Districts	Hospital Beds	Out-patient Clinics	Dental Clinics	Health Centres	Child Welfare Clinics	Private Medical Clinics	Private Dental Clinics
COOK ISLANDS	44	127	9	5	6	50	5	3
RAROTONGA	12	70	2	1	0	27	5	3
SOUTHERN GROUP excl. Rarotonga	20	49	4	4	1	15	0	0
Aitutaki	4	28	1	1	0	8	0	0
Mangaia	6	6	1	1	0	6	0	0
Atiu	5	9	1	0	0	1	0	0
Mauke	3	6	1	1	0	0	0	0
Mitiaro	2	0	0	1	1	0	0	0
NORTHERN GROUP	12	8	3	0	5	8	0	0
Palmerston	1	0	0	0	1	0	0	0
Pukapuka	3	4	1	0	0	3	0	0
Nassau	1	0	0	0	1	0	0	0
Manihiki	2	2	1	0	1	2	0	0
Rakahanga	3	0	0	0	1	1	0	0
Penrhyn	2	2	1	0	1	2	0	0

### 3. VITAL STATISTICS

- Since 1994, there has been a continuous decline in the number of births up to 2002 recording the lowest year ever reported in the Cook Islands
- 2007 number showed an increase of nine (14) births from previous year totaling at 320 live births
- In 2007, 85 percent of births occurred on the main Island Rarotonga
- Mothers referred to the Rarotonga hospital for the delivery of their babies were recorded and reported for the Island of Rarotonga
- Total deaths reported this year is 100
- Rarotonga reported a total death of 74 percent this year
- Infant mortality rate (deaths to less than 1 year age) reported to be 24.8 per thousand live births (8 cases, reported for the Islands of Rarotonga – 5, Pukapuka – 2 and Manihiki). Of the eight, three are males and five females.
- Three (3) cases of fetal death (deaths that occurred after 20 weeks of pregnancy) were reported for this year accounting at a rate of 9 per 1,000 live births. All cases were from Rarotonga.

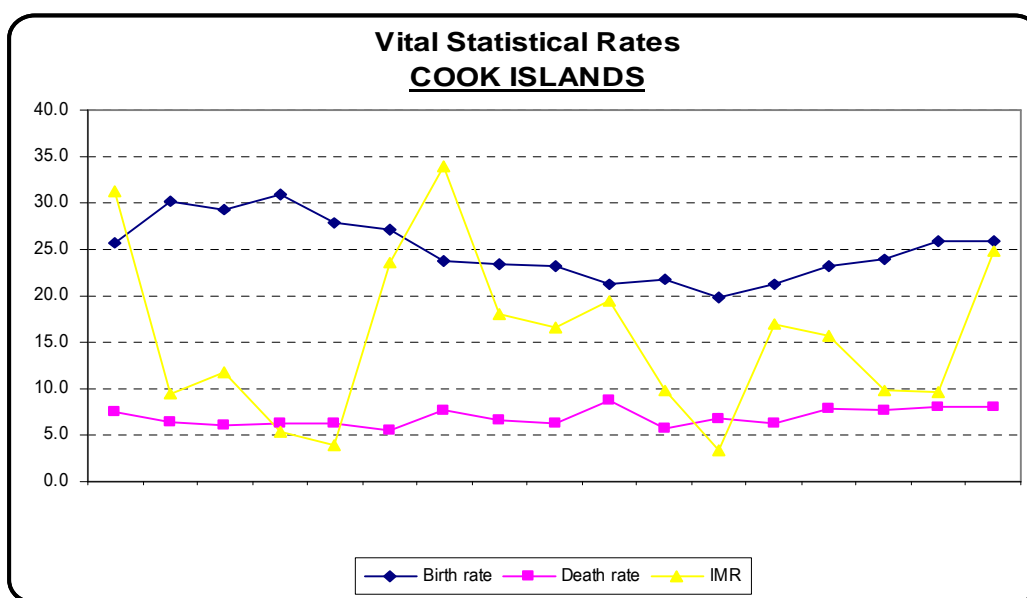




**TABLE 3.1: Number and Rate of Births, Deaths, Infant Deaths, Maternal Deaths and Foetal Deaths.**  
**COOK ISLANDS 1985 - 2007**

YEA R	Live Births		Deaths		Deaths under 1 yr		Maternal Deaths		Foetal Deaths	
	Number	Crude Rate	Number	Crude Rate	Number	Rate	Number	Rate	Number	Rate
1985	433	24.3	130	7.3	13	30.0	0	0	1	2.3
1986	420	24.0	98	5.6	7	16.7	0	0	4	9.4
1987	428	24.5	116	6.5	16	37.4	0	0	2	4.7
1988	425	24.3	93	5.3	3	7.0	0	0	4	9.5
1989	453	25.9	101	5.6	12	26.4	1	2	6	13.1
1990	465	26.6	127	6.9	12	25.8	0	0	2	4.3
1991	479	25.7	140	7.5	15	31.3	0	0	7	14.4
1992	529	30.2	114	6.5	5	9.5	1	2	4	7.5
1993	507	29.3	105	6.1	6	11.8	0	0	5	9.7
1994	568	30.9	114	6.2	3	5.3	0	0	4	7.1
1995	514	27.9	115	6.3	2	4.0	1	2	2	4.0
1996	510	27.1	105	5.6	12	23.5	0	0	4	7.8
1997	412	23.7	134	7.7	14	34.0	0	0	7	17.0
1998	389	23.4	111	6.7	7	18.0	0	0	3	7.7
1999	361	23.3	96	6.2	6	16.6	0	0	4	11.1
2000	309	21.2	127	8.7	6	19.4	0	0	4	12.9
2001	306	21.9	79	5.6	3	9.8	0	0	2	6.5
2002	293	19.8	100	6.8	1	3.4	0	0	2	6.8
2003	295	21.2	88	6.3	5	16.9	0	0	1	3.4
2004	313	23.2	106	7.9	5	15.8	0	0	3	9.6
2005	297	24.0	95	7.7	3	9.9	0	0	6	20.2
2006	306	25.9	94	8.0	3	9.7	0	0	3	9.8
2007	320	25.8	100	8.1	8	24.8	0	0	3	9.4

- Note: 1 - Rate calculating for 1985 were based on 1981 census, while 1986 to 1990 were based on 1986 census and 1991 census.  
2 - Rates are per 1,000 of the population.  
3 - Total Birth does not include Stillbirth.  
4 - Crude birth rate and crude death rate are calculated per thousand Resident population as of 1992



**TABLE 3.2: Live Births and Percentage Distribution by Region & Island and Year.**

**COOK ISLANDS 2004 - 2007**

REGION & ISLAND	2004		2005		2006		2007	
	Number	%	Number	%	Number	%	Number	%
COOK ISLANDS	313	100.0	297	100.0	304	100.0	320	100.0
RAROTONGA	264	84.3	261	87.9	247	81.3	273	85.3
SOUTHERN GROUP excluding Rarotonga	31	9.9	20	6.7	45	14.8	32	10.0
Aitutaki	26	8.3	16	5.4	35	11.5	26	8.1
Mangaia	2	0.6	3	1.0	9	3.0	3	0.9
Atiu	3	1.0	1	0.3	0	0.0	3	0.9
Mauke	0	0.0	0	0.0	1	0.3	0	0.0
Mitiaro	0	0.0	0	0.0	0	0.0	0	0.0
NORTHERN GROUP	18	5.8	16	5.4	12	3.9	15	4.7
Palmerston	0	0.0	0	0.0	0	0.0	0	0.0
Pukapuka/Nassau	16	5.1	10	3.4	11	3.6	13	4.1
Manihiki	1	0.3	5	1.7	1	0.3	1	0.3
Rakahanga	1	0.3	1	0.3	0	0.0	0	0.0
Penrhyn	0	0.0	0	0.0	0	0.0	1	0.3

**TABLE 3.3: Deaths and Percentage Distribution by Region & Island and Year.**

**COOK ISLANDS 2004 - 2007**

REGION & ISLAND	2004		2005		2006		2007	
	Number	%	Number	%	Number	%	Number	%
COOK ISLANDS	106	100.0	95	100.0	94	100.0	100	100.0
RAROTONGA	72	67.9	61	64.2	66	70.2	74	74.0
SOUTHERN GROUP	29	27.4	28	29.5	22	23.4	15	15.0

excluding Rarotonga											
Aitutaki	10	9.4		11	11.6		5	5.3		6	6.0
Mangaia	9	8.5		5	5.3		6	6.4		6	6.0
Atiu	7	6.6		7	7.4		6	6.4		2	2.0
Mauke	1	0.9		5	5.3		3	3.2		1	1.0
Mitiaro	2	1.9		0	0.0		2	2.1		0	0.0
NORTHERN GROUP	5	4.7		6	6.3		6	6.4		11	11.0
Palmerston	0	0.0		0	0.0		0	0.0		0	0.0
Pukapuka/Nassau	4	3.8		5	5.3		3	3.2		8	8.0
Manihiki	0	0.0		0	0.0		2	2.1		3	3.0
Rakahanga	0	0.0		1	1.1		0	0.0		0	0.0
Penrhyn	1	0.9		0	0.0		1	1.1		0	0.0

**TABLE 3.4: Live Births by Region & Island, Year and Sex.  
COOK ISLANDS 2004 - 2007**

REGION & ISLAND	2004			2005			2006			2007		
	Both		Female	Both		Female	Both		Female	Both		Female
	Sexes	Male		Sexes	Male		Sexes	Male		Sexes	Male	
COOK ISLANDS	313	162	151	297	162	135	304	161	143	320	157	163
RAROTONGA	264	141	123	261	138	123	247	138	109	273	131	142
SOUTHERN GROUP excluding Rarotonga	31	14	17	20	15	5	45	20	25	32	17	15
Aitutaki	26	12	14	16	13	3	35	15	20	26	14	12
Mangaia	2	0	2	3	2	1	9	4	5	3	1	2
Atiu	3	2	1	1	0	1	0	0	0	3	2	1
Mauke	0	0	0	0	0	0	1	1	0	0	0	0
Mitiaro	0	0	0	0	0	0	0	0	0	0	0	0
NORTHERN GROUP	18	7	11	16	9	7	12	3	9	15	9	6
Palmerston	0	0	0	0	0	0	0	0	0	0	0	0
Pukapuka/Nassau	16	6	10	10	6	4	11	2	9	13	7	6
Manihiki	1	1	0	5	2	3	1	1	0	1	1	0
Rakahanga	1	0	1	1	1	0	0	0	0	0	0	0
Penrhyn	0	0	0	0	0	0	0	0	0	1	1	0

**TABLE 3.5: Deaths by Region & Island, Year and Sex.  
COOK ISLANDS 2004 - 2007**

REGION & ISLAND	2004			2005			2006			2007		
	Both		Female	Both		Female	Both		Female	Both		Female
	Sexes	Male		Sexes	Male		Sexes	Male		Sexes	Male	
COOK ISLANDS	106	65	41	95	62	33	94	55	39	100	61	39

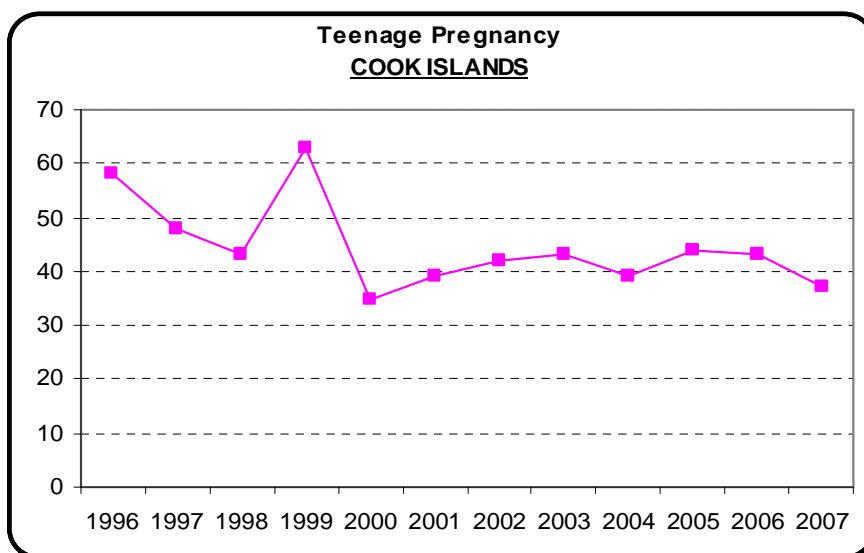
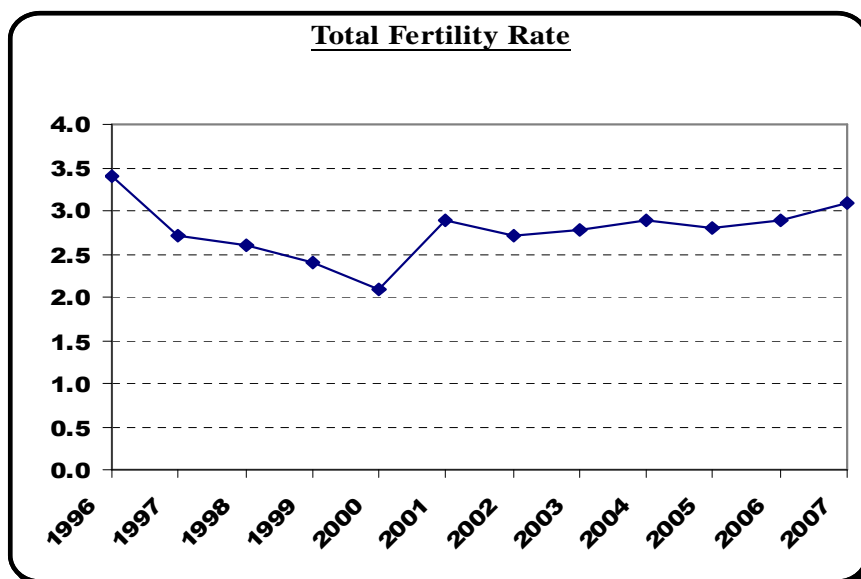
RAROTONGA	72	47	25	61	37	24	66	39	27	74	48	26
SOUTHERN GROUP excluding Rarotonga	29	15	14	28	21	7	22	12	10	15	7	8
Aitutaki	10	6	4	11	9	2	5	3	2	6	2	4
Mangaia	9	4	5	5	2	3	6	2	4	6	3	3
Atiu	7	3	4	7	5	2	6	3	3	2	1	1
Mauke	1	1	0	5	5	0	3	3	0	1	1	0
Mitiaro	2	1	1	0	0	0	2	1	1	0	0	0
NORTHERN GROUP	5	3	2	6	4	2	6	4	2	11	6	5
Palmerston	0	0	0	0	0	0	0	0	0	0	0	0
Pukapuka/Nassau	4	3	1	5	3	2	3	2	1	8	4	4
Manihiki	0	0	0	0	0	0	2	2	0	3	2	1
Rakahanga	0	0	0	1	1	0	0	0	0	0	0	0
Penrhyn	1	0	1	0	0	0	1	0	1	0	0	0

Note: 1. Excludes all Tourists dying in the Cook Islands.

## 4. BIRTH



- 321 women in the Cook Islands were reported to have given birth to a child this year
- Two set of twins was reported for 2007 and both was delivered on Rarotonga
- 20 to 24 year age groupings continued to record the highest number of mothers who giving birth (30 percent in 2007) since 2000
- The average number of children (Total Fertility Rate) that would be born alive to a woman during her lifetime in 2007 remains at 3 (3.1)



**TABLE 4.1: Mothers given Birth by Region & Island and Age of Mother  
COOK ISLANDS 2007**

REGION & ISLAND	Total	Age of Mother							
		< 15	15-19	20-24	25-29	30-34	35-39	40-44	45 +
COOK ISLANDS	321	0	37	97	72	68	26	19	2
RAROTONGA	274	0	33	81	62	59	19	18	2
SOUTHERN GROUP excluding Rarotonga	32	0	4	11 <sup>a</sup>	7	4	5	1 <sup>a</sup>	0
Aitutaki	26	0	3	10	5	2	5	1	0
Mangaia	3	0	0	1	0	2	0	0	0
Atiu	3	0	1	0	2	0	0	0	0
Mauke	0	0	0	0	0	0	0	0	0
Mitiaro	0	0	0	0	0	0	0	0	0
NORTHERN GROUP	15	0	0	5	3	5	2	0	0
Palmerston	0								
Pukapuka/Nassau	13	0	0	5	2	4	2	0	0
Manihiki	1	0	0	0	0	1	0	0	0
Rakahanga	0	0	0	0	0	0	0	0	0
Penrhyn	1	0	0	0	1	0	0	0	0

Note: <sup>a</sup> Denote pairs of twins.

**TABLE 4.2: Mothers Given Birth and Fertility Rates by Age Groupings.  
COOK ISLANDS 1998 - 2007**

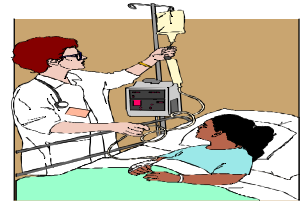
Age Group	Female Resident Population		Number of Mothers									
	1996	2001	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
15-19	808	656	43	63	35	39	42	43	39	45	43	37
20-24	813	491	101	88	84	80	71	77	91	80	86	97
25-29	805	524	118	92	74	66	82	63	73	62	58	72
30-34	695	541	72	62	63	74	47	53	54	54	60	68
35-39	584	524	40	40	42	34	35	41	38	40	44	26
40-44	453	449	9	11	6	11	13	17	14	15	17	21
Total	4,158	3,185	383	356	304	304	290	294	309	296	308	321
<b>Age-Specific Fertility Rate (per 1'000 Women)</b>												
15-19			53	78	43	59	64	66	59	69	66	56
20-24			124	108	103	163	145	157	185	163	175	198
25-29			147	114	92	126	156	120	139	118	111	137
30-34			104	89	91	137	87	98	100	100	111	126
35-39			68	68	72	65	67	78	73	76	84	50
40-44			20	24	13	24	29	38	31	33	38	47
General Fertility Rate (GFR per 1'000 Women)			120	112	95	95	91	92	97	93	97	101
Total Fertility Rate			2.6	2.4	2.1	2.9	2.7	2.8	2.9	2.8	2.9	3.1

GFR = Total Number of Births/Female Population of CBA (15-44).

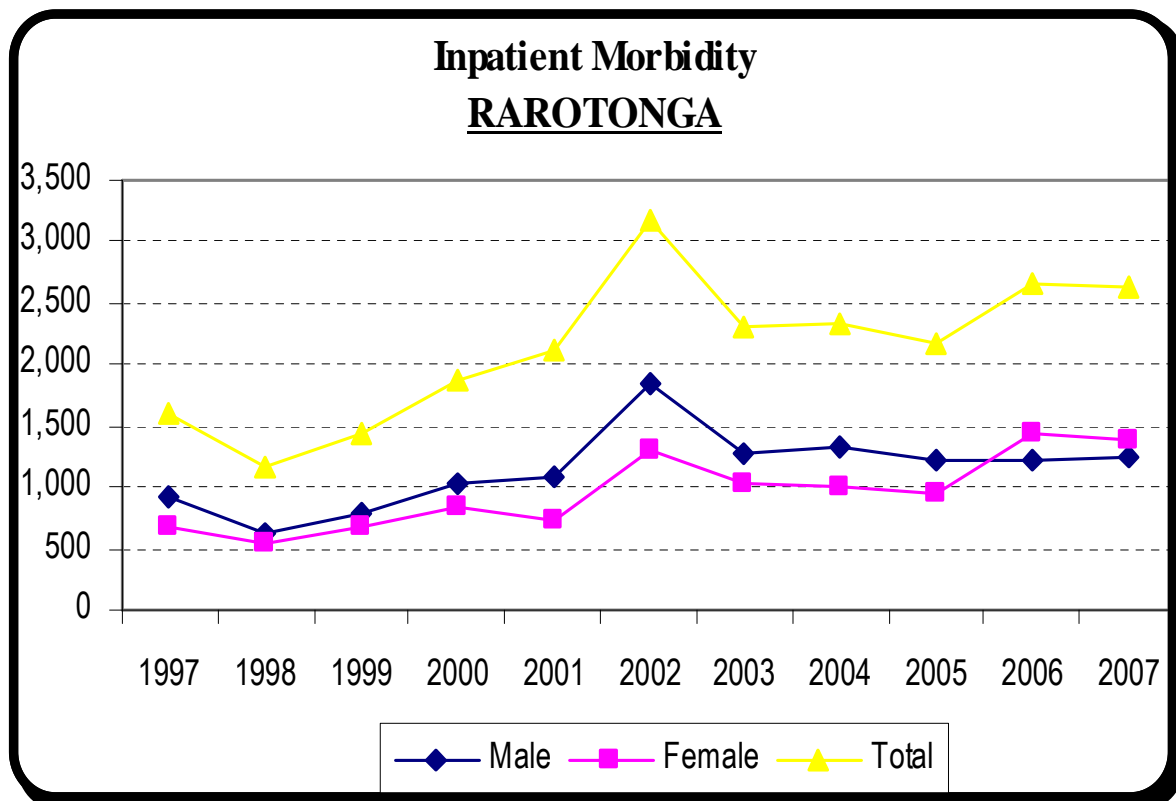
TFR = The average number of children that would be born alive to a woman during her childbearing years in her lifetime.

Note: Mothers whose age is < 15 are included in the 15-19 age groups, those whose age is > 44 are included in the 40-44 age groups.

## 5. MORBIDITY



- In 2007, diseases reported in the Rarotonga hospital for those been admitted for any sort of complaints were 2,630 (1,236 associated with males and 1,394 with females)
- Over 66 percent of diseases and complaints from patients admitted were in the top ten leading causes with further 14 percent (371) were reported for those admitted in the maternity ward for delivery
- Diseases of the Circulatory System made-up of over 35 percent of the top ten causes of inpatient morbidity. Almost 40 percent of those was due to hypertensive diseases
- Diabetes Mellitus comprises over 77 percent of all the Endocrine, Nutritional & Metabolic Diseases & Immunity Disorders as reported for patients admitted in 2007



**TABLE 5.1: Inpatient Morbidity (Diseases) by Year and Sex.**

**RAROTONGA 2006 - 2007**

ICD 10 Code	CAUSE	2006		2007	
		M	F	M	F
	ALL CAUSES	1,220	1,450	1,240	1,394
A00-B99	I Certain infectious and parasitic diseases	36	38	72	91
C00-D48	II Neoplasms	8	17	17	25
D50-D89	III Diseases of blood & blood-forming organs & certain disorders involving the immune mechanism	5	8	6	12
E00-E90	IV Endocrine, nutritional and metabolic diseases	59	67	67	61
F00-F99	V Mental and behavioural disorders	54	39	52	19
G00-G99	VI Diseases of the nervous system	29	33	35	15
H00-H59	VII Diseases of the eye and adnexa	25	26	37	36
H60-H95	VIII Diseases of the ear and mastoid process	13	13	8	6
I00-I99	IX Diseases of the circulatory system	188	160	215	171
J00-J99	X Diseases of the respiratory system	183	182	118	122
K00-K93	XI Diseases of the digestive system	70	60	82	48
L00-L99	XII Diseases of the skin and subcutaneous tissue	42	35	39	31
M00-M99	XIII Diseases of the musculoskeletal system and connective tissue	58	22	72	35
N00-N99	XIV Diseases of the genitourinary system	25	85	50	84
O00-O99	XV Pregnancy, childbirth and the puerperium		339	4	371
P00-P96	XVI Certain conditions originating in the perinatal period	5	12	7	24
Q00-Q99	XVII Congenital malformations, deformations and chromosomal abnormalities	3	7	6	4
R00-R99	XVII I Symptoms, signs and abnormal clinical and laboratory findings, nec	62	48	62	48
S00-T98	XIX Injury, poisoning and certain other consequences of external causes	214	140	174	100
V01-Y98	XX External causes of morbidity and mortality	135	85	109	55
Z00-Z99	XXI Factors influencing health status and contact with health services	6	34	8	36

**TABLE 5.2: Ten Leading Causes of Inpatients Morbidity by Sex. RAROTONGA 2007**

Rank	ICD 10 Code	CAUSE	Both		%	
			Male	Female		
		ALL CAUSES	560	525	1,085	66.2
1	IX	Diseases of the circulatory system	215	171	386	14.7
2	XIX	Injury, poisoning and certain other consequences of external causes	174	100	274	10.4
3	X	Diseases of the respiratory system	118	122	240	9.1
4	I	Certain infectious and parasitic diseases	72	91	163	6.2
5	XIV	Diseases of the genitourinary system	50	84	134	5.1
6	XI	Diseases of the digestive system	82	48	130	4.9
7	IV	Endocrine, nutritional and metabolic diseases	67	61	128	4.9
8	XVII	Symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified	62	48	110	4.2
9	XIII	Diseases of the musculoskeletal system and connective tissue	72	35	107	4.1





**TABLE 5.3: Hospital Morbidity by Age Groupings and Sex.  
RAROTONGA 2007**

ICD 10 CODE	DISEASE	Age Group										TOTAL
		< 1	1-4	5-14	15-24	25-34	35-44	45-54	55-64	65-74	75+	
	<b>ALL CAUSES</b>	<b>68</b>	<b>106</b>	<b>166</b>	<b>419</b>	<b>407</b>	<b>322</b>	<b>246</b>	<b>266</b>	<b>376</b>	<b>258</b>	<b>2,634</b>
<b>A00-B99</b>	<b>I Certain Infectious and parasitic diseases</b>	<b>5</b>	<b>6</b>	<b>30</b>	<b>31</b>	<b>25</b>	<b>24</b>	<b>9</b>	<b>12</b>	<b>16</b>	<b>5</b>	<b>163</b>
	A00-A09 Intestinal and infectious diseases	0	0	1	0	0	0	0	0	0	0	1
	A15-A19 Tuberculosis	0	0	1	0	1	0	0	0	0	0	2
	A20-A49 Other bacterial diseases	0	2	3	0	0	0	0	3	0	0	8
	A50-A89 Viral diseases	0	0	0	1	1	0	0	0	0	0	2
	A90 Dengue fever	0	2	19	22	20	20	9	9	14	5	122
	A92-B34 Other viral diseases	3	1	6	8	2	2	0	0	1	0	23
	B35-B99 Other	0	1	0	0	1	2	0	0	1	0	5
<b>C00-C97</b>	<b>II Neoplasms</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>4</b>	<b>9</b>	<b>7</b>	<b>12</b>	<b>7</b>	<b>42</b>
	C00-C14 Malignant neoplasm of lip, oral cavity and pharynx	0	0	0	0	0	0	0	0	1	0	1
	C15-C26 Malignant neoplasm of digestive organs	0	0	0	0	0	0	1	0	0	1	2
	C30-C39 Malignant neoplasm of respiratory and intrathoracic organs	0	0	0	0	0	0	0	1	0	0	1
	C40-C50 Malignant neoplasm of bone, connective tissue, skin and breast	0	0	0	0	0	0	1	0	1	0	2
	C51-C68 Malignant neoplasm of genitourinary organs	0	0	0	0	0	0	0	1	4	3	8
	C69-C80 Malignant neoplasm of other and unspecified site	0	0	1	0	0	2	2	4	5	3	17
	C81-C96 Malignant neoplasm of lymphoid, haematopoietic & related tissue	0	0	0	1	0	0	0	0	1	0	2
	D00-D09 In situ neoplasms	0	0	0	0	0	1	2	0	0	0	3
	D10-D36 Benign neoplasms	0	0	0	0	1	1	3	1	0	0	6
<b>D50-D89</b>	<b>III Diseases of the blood &amp; blood-forming organs &amp; certain disorders involving the immune mechanism</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>1</b>	<b>4</b>	<b>4</b>	<b>3</b>	<b>0</b>	<b>2</b>	<b>2</b>	<b>18</b>
	D50-D64 Nutritional, haemolytic, aplastic and other anaemias	0	0	0	1	3	4	3	0	2	2	15
	D65-D89 Other	0	0	2	0	1	0	0	0	0	0	3
<b>E00-E90</b>	<b>IV Endocrine, nutritional &amp; metabolic diseases &amp; immunity disorders</b>	<b>0</b>	<b>3</b>	<b>6</b>	<b>0</b>	<b>2</b>	<b>16</b>	<b>12</b>	<b>26</b>	<b>46</b>	<b>17</b>	<b>128</b>
	E10-E14 Diabetes mellitus	0	0	1	0	1	11	11	21	39	15	99
	E00-E07, E15-E35 Other endocrine disorders	0	0	0	0	0	0	0	1	4	1	6
	E50-E68 Other nutritional deficiencies & obesity	0	0	0	0	0	2	1	1	0	0	4
	E70-E90 Metabolic disorders	0	3	5	0	1	3	0	3	3	1	19
<b>F00-F99</b>	<b>V Mental and behavioural disorders</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>27</b>	<b>18</b>	<b>13</b>	<b>7</b>	<b>2</b>	<b>1</b>	<b>1</b>	<b>71</b>

		F10-F19	Mental & behavioural disorders due to psychoactive substance use	0	0	1	26	17	8	5	1	0	1	59
		F00-F09, F20-F99	Other	0	0	1	1	1	5	2	1	1	0	12
<b>G00-G99</b>	<b>VI</b>	<b>Diseases of the nervous system</b>		<b>1</b>	<b>3</b>	<b>1</b>	<b>3</b>	<b>1</b>	<b>10</b>	<b>14</b>	<b>4</b>	<b>7</b>	<b>6</b>	<b>50</b>
		G00-G09	Inflammatory diseases of the central nervous system	1	0	1	1	0	1	1	0	0	0	5
		G40-G47	Episodic and paroxysmal disorders	0	3	0	2	1	7	11	1	0	2	27
		G10-G37, G50-G99	Other	0	0	0	0	0	2	2	3	7	4	18
<b>H00-H59</b>	<b>VII</b>	<b>Diseases of the eye and adnexa</b>		<b>1</b>	<b>1</b>	<b>0</b>	<b>2</b>	<b>2</b>	<b>3</b>	<b>14</b>	<b>16</b>	<b>17</b>	<b>17</b>	<b>73</b>
		H00-H06	Disorders of eyelid, lacrimal system and orbit	0	0	0	0	0	1	1	0	0	1	3
		H10-H59	Other	1	1	0	2	2	2	13	16	17	16	70
<b>H60-H95</b>	<b>VIII</b>	<b>Diseases of the ear and mastoid process</b>		<b>1</b>	<b>1</b>	<b>4</b>	<b>1</b>	<b>1</b>	<b>3</b>	<b>0</b>	<b>2</b>	<b>1</b>	<b>0</b>	<b>14</b>
		H60-H62	Diseases of external ear	1	1	0	0	0	1	0	0	0	0	3
		H65-H95	Other	0	0	4	1	1	2	0	2	1	0	11
<b>I00-I99</b>	<b>IX</b>	<b>Diseases of the circulatory system</b>		<b>0</b>	<b>6</b>	<b>7</b>	<b>4</b>	<b>10</b>	<b>25</b>	<b>41</b>	<b>69</b>	<b>134</b>	<b>90</b>	<b>386</b>
		I00-I09	Rheumatic fever and rheumatic heart diseases	0	0	2	2	1	3	0	1	1	1	11
		I10-I15	Hypertensive diseases	0	1	2	0	2	11	21	35	52	30	154
		I20-I25	Ischaemic heart diseases	0	2	1	0	0	1	7	8	13	14	46
		I26-I52	Diseases of pulmonary circulation & other forms of heart diseases	0	2	2	1	3	7	7	18	62	36	138
		I60-I69	Cerebrovascular diseases	0	0	0	0	1	0	3	3	5	9	21
		I80-I89	Diseases of veins, lymphatic vessels and lymph nodes, nec	0	1	0	0	2	3	3	3	1	0	13
		I95-I99	Other diseases of the circulatory system	0	0	0	1	1	0	0	1	0	0	3
<b>J00-J99</b>	<b>X</b>	<b>Diseases of the respiratory system</b>		<b>17</b>	<b>29</b>	<b>37</b>	<b>14</b>	<b>14</b>	<b>14</b>	<b>22</b>	<b>31</b>	<b>29</b>	<b>33</b>	<b>240</b>
		J00-J06	Acute respiratory infections	2	9	13	6	2	1	0	0	0	0	33
		J10-J18	Influenza and pneumonia	5	7	10	3	4	6	9	13	18	14	89
		J20-J47	Other respiratory infections	10	9	6	1	3	2	6	7	3	16	63
		J45	Asthma	0	4	7	2	4	2	6	9	4	0	38
		J80-J99	Other diseases of the respiratory system	0	0	1	2	1	3	1	2	4	3	17
<b>K00-K93</b>	<b>XI</b>	<b>Diseases of the digestive system</b>		<b>4</b>	<b>18</b>	<b>7</b>	<b>18</b>	<b>10</b>	<b>15</b>	<b>6</b>	<b>19</b>	<b>22</b>	<b>11</b>	<b>130</b>
		K00-K14	Diseases of oral cavity, salivary glands and jaws	0	4	3	3	1	2	0	0	0	0	13
		K20-K31	Diseases of oesophagus, stomach and duodenum	1	1	1	3	0	0	0	2	5	3	16
		K35-K38	Diseases of appendix	0	0	1	3	1	3	0	4	0	0	12
		K40-K46	Hernia	1	0	0	2	1	1	1	1	5	1	13
		K50-K52	Noninfective enteritis and colitis	2	10	2	3	5	4	2	6	5	2	41
		K55-K63	Other diseases of intestines	0	2	0	3	2	2	1	2	1	3	16
		K65-K93	Other	0	1	0	1	0	3	2	4	6	2	19

<b>L00-L99</b>	<b>XII</b>	<b>Diseases of the skin and subcutaneous tissue</b>	<b>1</b>	<b>3</b>	<b>8</b>	<b>5</b>	<b>10</b>	<b>7</b>	<b>8</b>	<b>7</b>	<b>16</b>	<b>5</b>	<b>70</b>
		L00-L08 Infectious of skin and subcutaneous tissue	1	3	7	4	7	5	6	5	14	4	56
		L10-L99 Other	0	0	1	1	3	2	2	2	2	1	14
<b>M00-M99</b>	<b>XIII</b>	<b>Diseases of the musculoskeletal system and connective tissue</b>	<b>0</b>	<b>1</b>	<b>12</b>	<b>4</b>	<b>13</b>	<b>13</b>	<b>19</b>	<b>22</b>	<b>16</b>	<b>7</b>	<b>107</b>
		M00-M25 Arthropathies	0	1	2	2	6	4	10	8	5	3	41
		M10 Gout	0	0	0	0	1	2	4	7	6	3	23
		M30-M36 Other arthropathies	0	0	0	0	1	0	0	0	0	0	1
		M40-M54 Dorsopathies	0	0	1	0	0	4	2	4	2	1	14
		M60-M79 Soft tissue disorders	0	0	3	2	3	0	3	2	3	0	16
		M80-M94 Osteopathies and chondropathies	0	0	6	0	2	3	0	1	0	0	12
<b>N00-N99</b>	<b>XIV</b>	<b>Diseases of the genitourinary system</b>	<b>0</b>	<b>1</b>	<b>3</b>	<b>21</b>	<b>17</b>	<b>23</b>	<b>24</b>	<b>10</b>	<b>18</b>	<b>17</b>	<b>134</b>
		N00-N16 Glomerular & renal tubulo-interstitial diseases	0	0	0	1	1	1	0	0	1	1	5
		N17-N29 Renal failure, Urolithiasis, Other disorders of kidney and ureter	0	0	1	1	4	2	1	8	6	9	32
		N30-N39 Other diseases of the urinary system	0	0	0	3	2	2	2	0	3	0	12
		N40-N51 Diseases of male genital organs	0	0	2	9	0	2	0	1	5	4	23
		N60-N64 Disorders of breast	0	0	0	0	3	2	3	0	0	0	8
		N70-N77 Inflammatory diseases of female pelvic organs	0	0	0	4	2	5	1	0	1	1	14
		N80-N98 Noninflammatory disorders of female genital tract	0	1	0	3	5	9	17	1	2	2	40
<b>O00-O99</b>	<b>XV</b>	<b>Pregnancy, childbirth and the puerperium</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>149</b>	<b>155</b>	<b>64</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>375</b>
		O00-O08 Pregnancy with abortive outcome	0	0	0	3	7	10	1	0	0	0	21
		O10-O16 Oedema, proteinuria & hypertensive disorders in pregnancy, childbirth and the puerperium	0	0	0	1	2	3	0	0	0	0	6
		O20-O29 Other maternal disorders predominantly related to pregnancy	0	0	0	2	5	2	0	0	0	0	9
		O30-O48 Maternal care related to the fetus & amniotic cavity and possible delivery problems	1	0	0	11	5	5	0	0	0	0	22
		O60-O75 Complications of labour and delivery	1	0	0	17	22	2	0	0	0	0	42
		O80-O84 Delivery	3	0	0	111	113	42	1	0	0	0	270
		O85-O92 Complications predominantly related to the puerperium	0	0	0	4	0	0	0	0	0	0	4
		O95-O99 Other	0	0	0	0	1	0	0	0	0	0	1
<b>P00-P96</b>	<b>XVI</b>	<b>Certain conditions originating in the perinatal period</b>	<b>20</b>	<b>2</b>	<b>0</b>	<b>2</b>	<b>6</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>31</b>
<b>Q00-Q99</b>	<b>XVII</b>	<b>Congenital malformation, deformation &amp; chromosomal abnormalities</b>	<b>3</b>	<b>2</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>10</b>
<b>R00-R99</b>	<b>XVIII</b>	<b>Symptoms, signs and abnormal clinical and laboratory findings, nec</b>	<b>9</b>	<b>8</b>	<b>5</b>	<b>17</b>	<b>5</b>	<b>8</b>	<b>11</b>	<b>6</b>	<b>17</b>	<b>24</b>	<b>110</b>
		R00-R09 Symptoms & signs involving the circulatory & respiratory systems	1	0	1	1	0	2	3	1	2	3	14
		R10-R19 Symptoms & signs involving the digestive system and abdomen	1	1	0	7	3	2	5	2	2	3	26

		R20-R23	Symptoms & signs involving the skin and subcutaneous tissue	0	0	0	1	0	0	1	0	0	1	3
		R25-R29	Symptoms & signs involving the nervous & musculoskeletal systems	0	0	0	0	0	0	0	0	0	0	1
		R30-R39	Symptoms & signs involving the urinary system	0	0	1	1	0	1	1	0	5	9	18
		R40-R99	Other	7	7	3	7	2	3	1	3	8	7	48
<b>S00-T98</b>	<b>XIX</b>	<b>Injury, poisoning &amp; certain other consequences of external causes</b>		<b>1</b>	<b>15</b>	<b>27</b>	<b>67</b>	<b>58</b>	<b>39</b>	<b>28</b>	<b>18</b>	<b>14</b>	<b>7</b>	<b>274</b>
		S00-S09	Injuries to the head	0	2	4	19	14	8	2	4	0	1	54
		S10-S29	Injuries to the neck and the thorax	0	0	1	2	0	0	1	0	2	0	6
		S30-S39	Injuries to the abdomen, lower back, lumbar spine and pelvis	0	0	0	4	3	0	2	0	1	0	10
		S40-S69	Injuries to the shoulder, upper arm, elbow, forearm, wrist & hand	1	2	4	12	4	6	4	1	1	0	35
		S70-S99	Injuries to the hip, thigh, knee, lower leg, ankle and foot	0	1	6	18	14	10	6	3	5	5	68
		T00-T07	Injuries involving multiple body regions	0	0	0	3	1	1	1	0	0	0	6
		T08-T14	Injuries to unspecified part of trunk, limb or body region	0	0	0	3	3	2	0	0	1	0	9
		T15-T19	Effects of foreign body entering through natural orifice	0	2	2	0	0	0	0	0	0	0	4
		T20-T32	Burns and corrosions	0	3	0	0	0	0	0	2	2	0	7
		T36-T50	Poisoning by drugs, medicaments and biological substances	0	1	0	1	0	0	0	0	0	0	2
		T51-T65	Toxic effects of substances chiefly non-medicinal as to source	0	2	5	2	14	9	10	7	0	1	50
		T66-T78	Other and unspecified effects of external causes	0	2	0	1	1	1	1	0	0	0	6
		T33-T35, T79-T98	Other	0	0	5	2	4	2	1	1	2	0	17
<b>V01-Y98</b>	<b>XX</b>	<b>External causes of morbidity and mortality</b>		<b>0</b>	<b>7</b>	<b>11</b>	<b>43</b>	<b>39</b>	<b>23</b>	<b>17</b>	<b>12</b>	<b>5</b>	<b>7</b>	<b>164</b>
		V01-V09	Pedestrian injured in transport accident	0	1	0	0	0	0	0	1	0	0	2
		V20-V29	Motorcycle rider injured in transport accident	0	0	5	33	16	10	2	4	0	4	74
		V30-V39, V60-V99	Other transport accidents	0	0	0	1	1	0	1	0	0	0	3
		W00-W19	Falls	0	2	5	2	2	2	1	0	4	2	20
		W20-W49	Exposure to inanimate mechanical forces	0	1	1	1	1	2	2	1	0	0	9
		W50-W64	Exposure to animate mechanical forces	0	0	0	0	1	0	2	0	0	0	3
		X00-X09	Exposure to smoke, fire and flames	0	0	0	0	0	0	0	0	1	0	1
		X40-X49	Accidental poisoning by and exposure to noxious substances	0	3	0	2	13	7	9	6	0	1	41
		X60-X84	Intentional self-harm	0	0	0	0	1	0	0	0	0	0	1
		X85-Y09	Assault	0	0	0	2	2	1	0	0	0	0	5
		X10-X39, X50-X59, Y10-Y98	Other	0	0	0	2	2	1	0	0	0	0	5
<b>Z00-Z99</b>	<b>XXI</b>	<b>Factors influencing health status and contact with health services</b>		<b>0</b>	<b>0</b>	<b>2</b>	<b>9</b>	<b>15</b>	<b>12</b>	<b>0</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>44</b>
		Z00-Z13	Persons encountering health services for examination and investigation	0	0	0	0	1	0	0	0	0	0	1
		Z30-Z39	Persons encountering health services in circumstances related to reproduction	0	0	0	5	12	10	0	0	0	0	27
		Z40-Z54	Persons encountering health services for specific procedures & health care	0	0	2	3	1	1	0	0	2	0	9
		Z55-Z99	Others	0	0	0	1	1	1	0	2	0	2	7

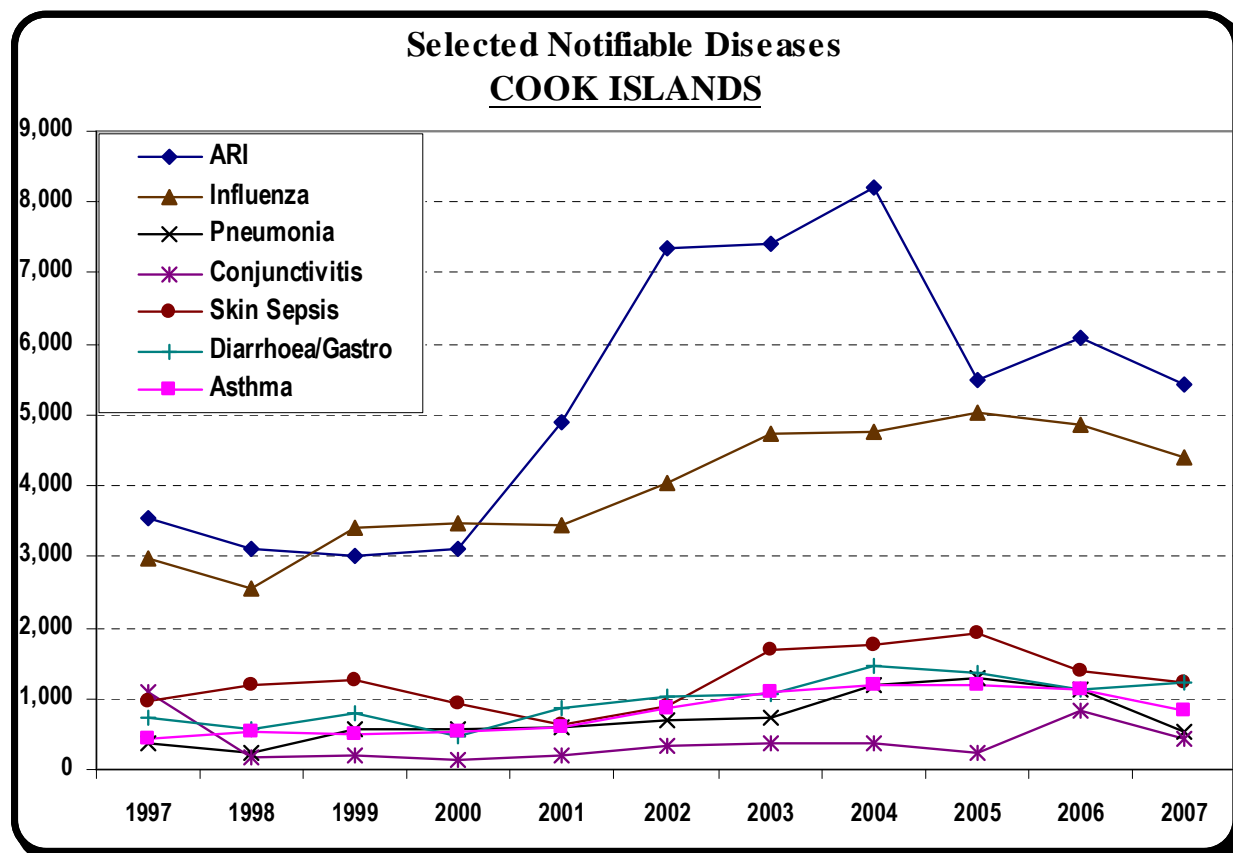
## 6. NOTIFIABLE DISEASE

➤ The ten principal Notifiable diseases reported in the Cook Islands in 2007 were;

1. Acute Respiratory Infectious (ARI)	–	5,428
2. Influenza	–	4,385
3. Dengue Fever	-	1,224
4. Skin Sepsis	-	1,216
5. Asthma	–	834
6. Gastro Enteritis	-	822
7. Mumps	-	735
8. Pneumonia	–	537
9. Conjunctivitis	–	415
10. Diarrhoea (child/adult & infant)	–	409

➤ This year sees the re-emerging of the Mumps disease on all of the Islands

➤ Acute respiratory infectious diseases include nasopharyngitis (common cold), sinusitis, pharyngitis, tonsillitis, laryngitis and tracheitis, upper respiratory infections of multiple or unspecified site, bronchitis and bronchiolitis, fever, sore throat, emphysema.



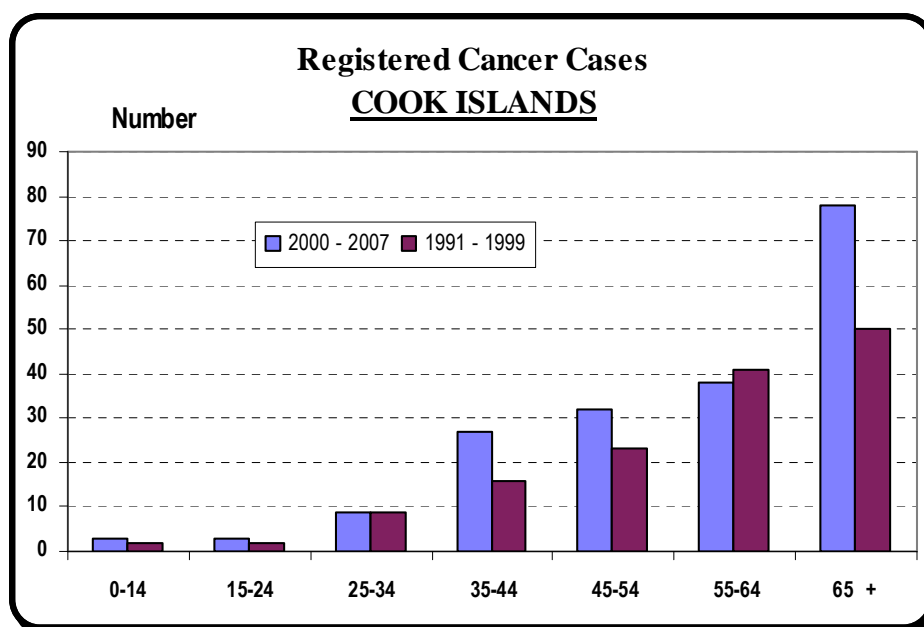


## 7. MALIGNANT NEOPLASM

- 471 cases were reported and registered at the Rarotonga hospital since establishing a register in 1981 to 2007
- 44 percent were reported to be males and 56 percent were females
- Cancer affects everybody but as shown in the table below, it mainly affects our older population and is more common in the over 50 age groups

**TABLE 7.1: Reported Cancer Cases by Age Groupings and Sex.  
COOK ISLANDS 1991 - 2007**

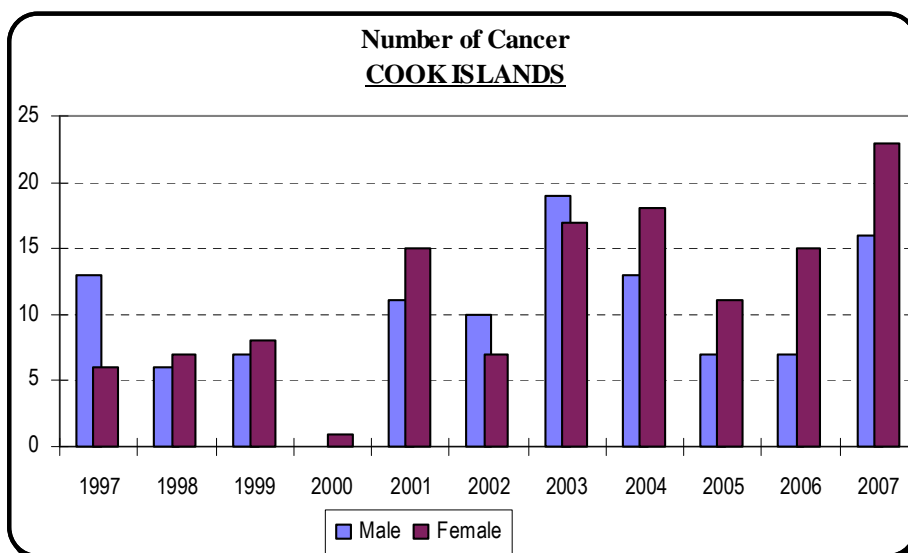
Age Group	2000 - 2007			1991 - 1999		
	Male	Female	Both Sex	Male	Female	Both Sex
0-14	1	2	3	1	1	2
15-24	2	1	3	2	0	2
25-34	0	9	9	1	8	9
35-44	6	21	27	4	12	16
45-54	10	22	32	9	14	23
55-64	18	20	38	25	16	41
65 +	46	32	78	32	18	50
Total	83	107	190	74	69	143





**TABLE 7.2: Prevalence of Cancer Cases Registered  
by Year and Sex.  
COOK ISLANDS 1981 - 2007**

Year	SEX		Both Sex
	Male	Female	
1981	1	0	1
1982	0	0	0
1983	3	6	9
1984	8	19	27
1985	6	13	19
1986	7	14	21
1987	7	13	20
1988	6	9	15
1989	3	7	10
1990	11	6	17
1991	13	13	26
1992	5	0	5
1993	6	11	17
1994	6	8	14
1995	11	9	20
1996	7	6	13
1997	13	6	19
1998	6	7	13
1999	7	8	15
2000	0	1	1
2001	11	15	26
2002	10	7	17
2003	19	17	36
2004	13	18	31
2005	7	11	18
2006	7	15	22
2007	16	23	39
Total	209	262	471

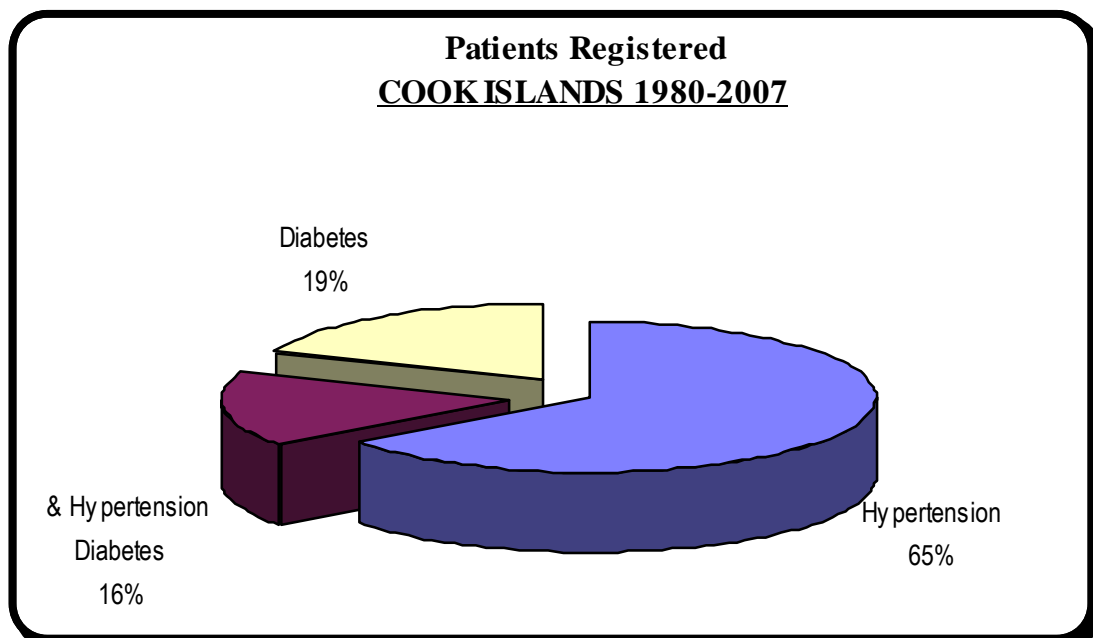


**TABLE 7.3: Cancer Cases by Site, Sex and Age Groupings.  
RAROTONGA 2007**

ICD 10 CODE	SITE	MALE								% Distribution
		0-14	15-24	25-34	35-44	45-54	55-64	65 +	Total	
C00 - D48	ALL SITES	0	0	0	1	2	3	10	16	100.0
C00-C14	Malignant neoplasms of lip, oral cavity and pharynx	0	0	0	0	0	0	1	1	6.3
C18-C21	Malignant neoplasm of colon, rectum and anus	0	0	0	0	0	0	1	1	6.3
C22	Malignant neoplasm of liver & intrahepatic bile ducts	0	0	0	0	1	0	0	1	6.3
C33-C34	Malignant neoplasm of trachea, bronchus and lung	0	0	0	0	0	1	1	2	12.5
C61	Malignant neoplasms of prostate	0	0	0	0	0	0	4	4	25.0
C76-C80	Malignant neoplasm of ill-defined, secondary & unspecified sites	0	0	0	0	1	2	2	5	31.3
C91-C95	Leukaemia	0	0	0	0	0	0	1	1	6.3
D10-D36	Benign neoplasms	0	0	0	1	0	0	0	1	6.3
		FEMALE								
C00 - D48	ALL SITES	0	1	1	2	7	3	9	23	100.0
C43	Malignant melanoma of skin	0	0	0	0	1	0	0	1	4.3
C50	Malignant neoplasm of breast	0	0	0	0	0	0	1	1	4.3
C53	Malignant neoplasm of cervix uteri	0	0	0	0	0	1	0	1	4.3
C54-C55	Malignant neoplasms of other and unspecified parts of uterus	0	0	0	0	0	0	2	2	8.7
C76-C80	Malignant neoplasm of ill-defined, secondary & unspecified sites	0	0	0	1	1	0	6	8	34.8
C82-C85	Non-hodgkin's lymphoma	0	0	0	0	0	1	0	1	4.3
C91-C95	Leukaemia	0	1	0	0	0	0	0	1	4.3
D00-D09	In situ neoplasms	0	0	0	1	2	0	0	3	13.0

## 8. NON COMMUNICABLE DISEASE

- Between 1980 to 2007 over 24 percent of the resident population were diagnosed and registered for hypertension and/or diabetes
- The prevalence table count includes everyone registered from 1980 to 2007 inclusive of those that have died and those gone overseas throughout the years
- Of those registered 65 percent were to have acquired hypertension only, 16 percent having both hypertension and diabetes and 19 percent having Diabetes only
- Hypertension – 66 percent were registered for Rarotonga and 34 percent reported as residing in the outer islands
- Diabetes – 57 percent were registered for Rarotonga and 43 percent reported as residing on any of the outer islands
- Hypertension & Diabetes together – 51 percent were registered for Rarotonga and 49 percent registered for the outer islands
- Outer Islands – new cases reported shows another low count in the last five years from 107 in 2005 to 22 this year



**TABLE 8.1: Prevalence of NCD Cases Registered by Year.  
COOK ISLANDS 1980 - 2007**

		(1) Total Resident Population Estimate	Hypertension		Diabetes		Hypertension & Diabetes		TOTAL	
				%		%		%		%
1999	COOK ISLANDS	15,500	1,549	10.0	329	2.1	295	1.9	2,173	14.0
	Rarotonga		1,031		181		129		1,341	
	Outer Islands		518		148		166		832	
2000	COOK ISLANDS	14,600	1,560	10.7	355	2.4	316	2.2	2,231	15.3
	Rarotonga		1,037		216		135		1,388	
	Outer Islands		523		139		181		843	
2001	COOK ISLANDS	14,000	1,598	11.4	377	2.7	331	2.4	2,306	16.5
	Rarotonga		1,061		223		143		1,427	
	Outer Islands		537		154		188		879	
2002	COOK ISLANDS	14,800	1,651	11.2	417	2.8	351	2.4	2,419	16.3
	Rarotonga		1,076		234		155		1,465	
	Outer Islands		575		183		196		954	
2003	COOK ISLANDS	13,900	1,745	12.6	469	3.4	399	2.9	2,613	18.8
	Rarotonga		1,151		269		190		1,610	
	Outer Islands		594		200		209		1,003	
2004	COOK ISLANDS	13,500	1,811	13.4	509	3.8	423	3.1	2,743	20.3
	Rarotonga		1,188		287		207		1,682	
	Outer Islands		623		222		216		1,061	
2005	COOK ISLANDS	12,400	1,900	15.3	547	4.4	454	3.7	2,901	23.4
	Rarotonga		1,220		299		214		1,733	
	Outer Islands		680		248		240		1,168	
2006	COOK ISLANDS	11,800	1,930	16.4	568	4.8	471	4.0	2,969	25.2
	Rarotonga		1,244		310		226		1,780	
	Outer Islands		686		258		245		1,189	
2007	COOK ISLANDS	12,400	1,985	16.0	590	4.8	497	4.0	3,072	24.8
	Rarotonga		1,286		328		247		1,861	
	Outer Islands		699		262		250		1,211	

**TABLE 8.2: Incidence of NCD Cases Registered by Year.  
COOK ISLANDS 2000 - 2007**

		<sup>(1)</sup> Total Resident Population Estimate	Hypertension							
			Hypertension n	%	Diabetes n	%	& Diabetes n	%	TOTAL n	%
2000	COOK ISLANDS	14,600	69	0.5	26	0.2	27	0.2	122	0.8
	Rarotonga		10		2		7		19	
	Outer Islands		59		24		20		103	
2001	COOK ISLANDS	14,000	38	0.3	22	0.2	15	0.1	75	0.5
	Rarotonga		24		7		8		39	
	Outer Islands		14		15		7		36	
2002	COOK ISLANDS	14,800	53	0.4	40	0.3	20	0.1	113	0.8
	Rarotonga		15		11		12		38	
	Outer Islands		38		29		8		75	
2003	COOK ISLANDS	13,900	94	0.7	52	0.4	35	0.3	181	1.3
	Rarotonga		75		35		22		132	
	Outer Islands		19		17		13		49	
2004	COOK ISLANDS	13,500	66	0.5	40	0.3	24	0.2	130	1.0
	Rarotonga		37		18		17		72	
	Outer Islands		29		22		7		58	
2005	COOK ISLANDS	12,400	89	0.7	38	0.3	31	0.3	158	1.3
	Rarotonga		32		12		7		51	
	Outer Islands		57		26		24		107	
2006	COOK ISLANDS	11,800	30	0.3	21	0.2	17	0.1	68	0.6
	Rarotonga		24		11		12		47	
	Outer Islands		6		10		5		21	
2007	COOK ISLANDS	12,400	55	0.4	22	0.2	26	0.2	103	0.8
	Rarotonga		42		18		21		81	
	Outer Islands		13		4		5		22	

Note: <sup>(1)</sup> Source of population data is the Statistics Office (MFEM) - June quarter

**TABLE 8.3: Prevalence of NCD Cases Registered  
by Region & Island.  
COOK ISLANDS 1980 - 2007**

REGION & ISLAND	Hypertension	Diabetes	Hypertension & Diabetes	Total
COOK ISLANDS	1,985	590	497	3,072
RAROTONGA	1,286	328	247	1,861
SOUTHERN GROUP excluding Rarotonga	512	183	169	864
Aitutaki	215	71	51	337
Mangaia	113	42	41	196
Atiu	96	25	36	157
Mauke	45	36	29	110
Mitiaro	43	9	12	64
NORTHERN GROUP	187	79	81	347
Palmerston	8	1	0	9
Pukapuka/Nassau	80	31	31	142
Manihiki	45	24	21	90
Rakahanga	27	12	18	57
Penrhyn	27	11	11	49

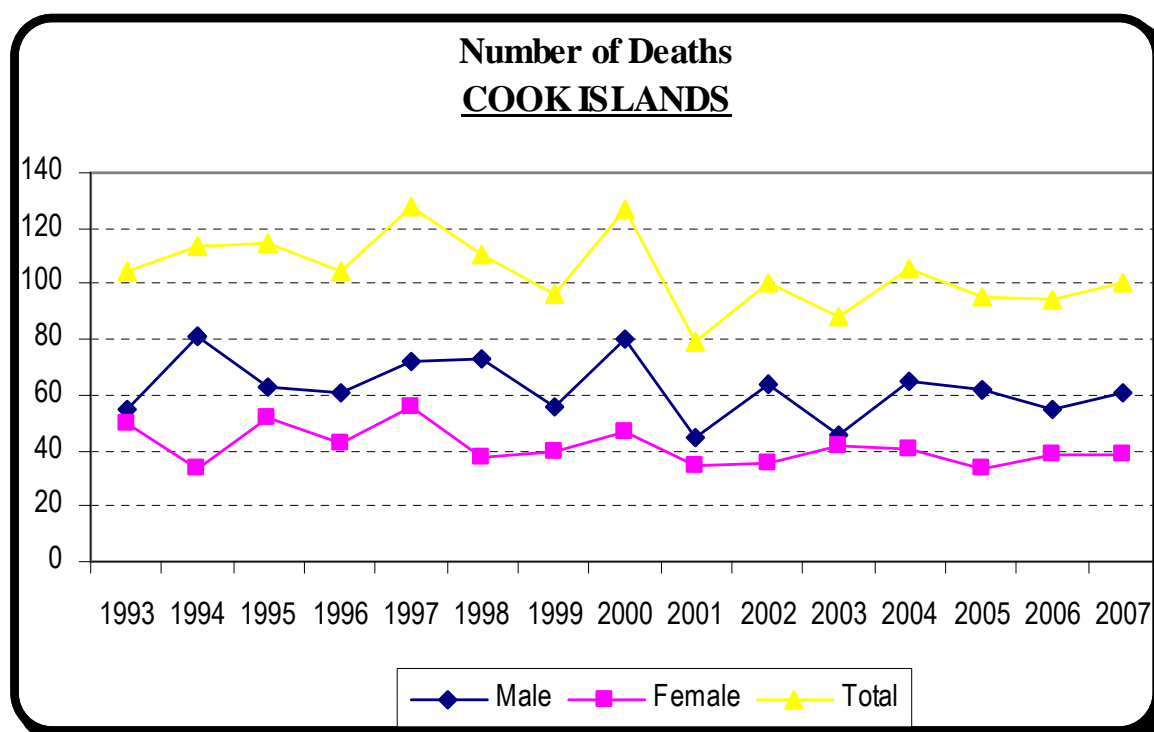
**TABLE 8.4: Incidence of NCD Cases Registered  
by Region & Island.  
COOK ISLANDS 2007**

REGION & ISLAND	Hypertension	Diabetes	Hypertension & Diabetes	Total
COOK ISLANDS	55	22	26	103
RAROTONGA	42	18	21	81
SOUTHERN GROUP excluding Rarotonga	12	2	3	17
Aitutaki	7	2	0	9
Mangaia	2	0	2	4
Atiu	0	0	0	0
Mauke	0	0	0	0
Mitiaro	3	0	1	4
NORTHERN GROUP	1	2	2	5
Palmerston	0	0	0	0
Pukapuka/Nassau	1	0	2	3
Manihiki	0	1	0	1
Rakahanga	0	1	0	1
Penrhyn	0	0	0	0



## 9. MORTALITY

- 100 deaths were reported and registered in the Cook Islands in 2007 of which 74 percent were from Rarotonga
- Diseases of the circulatory system continued reporting the highest causes of deaths in the last three years with 25 percent this year
- Neoplasms showed an increase in the last three years from 56 deaths per 100,000 people to 144 this year
- Diseases of the respiratory system recorded a rate of 59 deaths per 100,000 people this year showing a decline from 110 deaths in 2006
- 61 percent of those dying were males and 39 percent were females for 2007
- It should be noted that the numbers reported in the accompanying tables does not include tourists that died in the Cook Islands
- Coloner cases are not included in the accompanying tables, as well as those Cook Islanders dying overseas





**TABLE 9.1: Selected Cause of Death and Rate by Year.**  
**COOK ISLANDS 2005 - 2007**

Cause of Death	2005		2006		2007	
	Number of death	Rate per 100,000	Number of death	Rate per 100,000	Number of death	Rate per 100,000
Diseases of the Circulatory System	31	250.0	27	228.8	25	211.9
Hypertension	11	88.7	9	76.3	12	101.7
Ischaemic heart disease	7	56.5	9	76.3	5	42.4
Cerebrovascular Disease	2	16.1	1	8.5	3	25.4
Heart Failure	4	32.3	1	8.5	3	25.4
Other	7	56.5	7	59.3	2	16.9
Neoplasms	7	56.5	13	110.2	17	144.1
Liver and intrahepatic bile ducts	2	16.1	0	0.0	1	8.5
Trachea, Bronchus & Lungs	0	0.0	5	42.4	5	42.4
Prostate	0	0.0	2	16.9	5	42.4
Female Breast	2	16.1	0	0.0	2	16.9
Other	3	24.2	6	50.8	4	33.9
Diseases of the Respiratory System	14	112.9	13	110.2	7	59.3
Pneumonia	11	88.7	5	42.4	6	50.8
Bronchitis, Emphysema & Asthma	0	0.0	2	16.9	0	0.0
Other	3	24.2	6	50.8	1	8.5
Endocrine, Nutritional & Metabolic Diseases & Immunity Disorders	10	80.6	15	127.1	10	84.7
Diabetes Mellitus	10	80.6	12	101.7	8	67.8
Other	0	0.0	3	25.4	2	16.9
Symptoms, Signs & Ill-Defined Conditions	6	48.4	7	59.3	9	76.3
Certain Infectious and Parasitic Diseases	3	24.2	2	16.9	5	42.4
Septicaemia	2	16.1	1	8.5	4	33.9
Other	1	8.1	1	8.5	1	8.5
Injury, poisoning and certain other consequences of external causes	9	72.6	10	84.7	10	84.7
Injuries to the head	8	64.5	3	25.4	5	42.4
Other	1	8.1	7	59.3	5	42.4
Mental and behavioural disorders due to use of alcohol	2	16.1	0	0.0	1	8.5
Diseases of the Nervous System	2	16.1	0	0.0	4	33.9
Diseases of the Digestive System	4	32.3	0	0.0	4	33.9
Ulcer of Stomach and Duodenum	1	8.1		0.0		0.0
Chronic Liver disease and Cirrhosis	1	8.1		0.0		0.0
Other	2	16.1		0.0	4	33.9
Certain Conditions Originating in the Perinatal Period	3	24.2	1	8.5	3	25.4
Congenital malformations, deformations & chromosomal abnormalities	0	0.0	1	8.5	0	0.0
Diseases of the Genitourinary System	4	32.3	4	33.9	4	33.9
<b>EXTERNAL CAUSES OF INJURY AND POISONING</b>	9	72.6	10	84.7	10	84.7
Transport accidents	6	48.4	2	1.7	5	4.2
Intentional self-harm	3	24.2	3	25.4	2	16.9
Accidental drowning and submersion	0	0.0	1	8.5	1	8.5
Other	0	0.0	4	33.9	2	16.9

Note: Rates are calculated per 100,000 resident population.

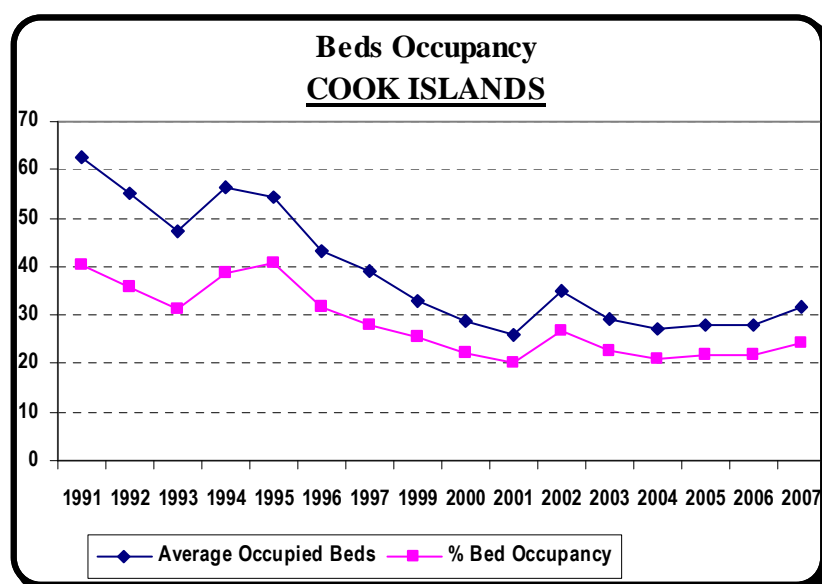
**TABLE 9.2: Death by Cause, Age Groupings and Sex.**  
**COOK ISLANDS 2007**

ICD 10 Tab Code	Underlying Cause of Death	All Age		< 1		1-4		5-14		15-24		25-34		35-44		45-54		55-64		65-74		> 74	
		M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
	<b>ALL CAUSES</b>	<b>61</b>	<b>39</b>	<b>3</b>	<b>5</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>2</b>	<b>1</b>	<b>0</b>	<b>2</b>	<b>2</b>	<b>0</b>	<b>4</b>	<b>2</b>	<b>18</b>	<b>2</b>	<b>11</b>	<b>8</b>	<b>18</b>	<b>18</b>
A00-B99	Certain infectious and parasitic diseases	0	5	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2
A40-A41	Septicaemia	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2
	Other	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C00-D48	Neoplasms	14	3	0	0	0	0	0	0	0	0	0	0	0	0	1	1	4	0	1	0	8	2
C22	Malignant neoplasm of liver and intrahepatic bile ducts	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
C34	Malignant neoplasm of bronchus and lung	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	0
C50	Malignant neoplasm of breast	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
C61	Malignant neoplasm of prostate	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	4	0
C78.0	Secondary malignant neoplasm of lung	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
	Other	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	2	1
D50-D89	Diseases of the blood and bloodforming organs	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
E00-E88	Endocrine, nutritional and metabolic diseases	6	4	0	0	0	1	0	0	0	0	0	0	1	0	0	0	1	1	2	0	2	2
E10-E14	Diabetes Mellitus	5	3	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	1	0	2	2
	Other	1	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
F00-F99	Mental and behavioural disorders due to use of alcohol	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
G00-G98	Diseases of the nervous system	2	2	0	1	0	0	0	0	0	0	0	1	0	0	0	0	1	0	1	0	0	0
I00-I99	Diseases of the circulatory system	16	9	0	0	0	0	0	0	0	0	0	0	1	0	2	1	6	0	4	3	3	5
I10-I13	Hypertension Disease	7	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3	2	1	3
I20-I25	Ischaemic heart diseases	3	2	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	0	0	1	0	0
I50	Heart failure	3	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	1	0
I60-I69	Cerebrovascular Disease	3	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	1	0
	Other	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
J00-J98	Diseases of the respiratory system	1	6	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	3	0	0
J12-J18	Pneumonia	1	5	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	2	0	0
	Other	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0

K00-K93	Diseases of the digestive system	3	1	0	0	0	0	0	0	0	0	0	0	0	2	0	1	0	0	1
N00-N98	Diseases of the genitourinary system	2	2	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	2
P00-P96	Certain conditions originating in the perinatal period	2	1	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
R00-R99	Symptoms, signs & abnormal clinical & laboratory findings, n.e.c.	5	4	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	3	4
S00-T98	Injury, poisoning & certain other consequences of external cause	8	2	0	0	0	0	1	0	2	1	0	1	0	3	0	0	0	1	0
S00-S09	Injuries to the head	4	1	0	0	0	0	1	0	1	1	0	0	0	2	0	0	0	0	0
	Other	4	1	0	0	0	0	0	0	1	0	0	0	1	1	0	0	0	1	0
<b>V01-Y98</b>	<b>External causes of mortality</b>	<b>8</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>2</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>
V01-V99	Transport accidents	4	1	0	0	0	0	0	0	2	1	0	0	0	2	0	0	0	0	0
W00-W19	Falls	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
W65-W74	Accidental drowning and submersion	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
X40-X49	Accidental poisoning by and exposure to noxious substances	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
X60-X84	Intentional self-harm	1	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0

## 10. HOSPITAL INDICES

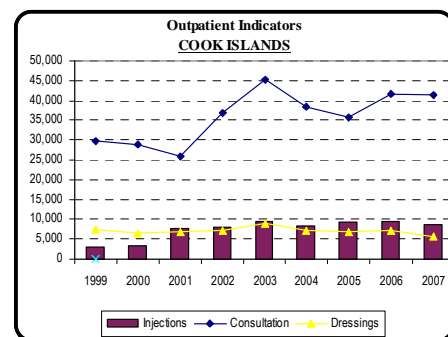
- 2,201 admissions and 2,090 discharges were reported for 2006 in the Cook Islands
- Average occupied bed in the Cook Islands in 2006 was 28 with a bed occupancy of 22 percent



**TABLE 10.1: Patients Admitted and Discharged from Hospital by Region & Island and Bed Occupancy. COOK ISLANDS 2007**

REGION & ISLAND	Number of				Average Occupied Bed	% Bed Occupancy
	Admissions	Discharges	Bed Days Used	Bed Days Available		
COOK ISLANDS	2,006	1,939	11,522	47,085	31.6	24.5
RAROTONGA	1,587	1,521	9,985	25,915	27.4	38.5
SOUTHERN GROUP excluding Rarotonga	370	368	1,349	17,885	3.7	7.5
Aitutaki	273	282	896	10,220	2.5	8.8
Mangaia	55	47	354	2,190	1.0	16.2
Atiu	9	9	13	3,285	0.0	0.4
Mauke	33	30	86	2,190	0.2	0.0
Mitiaro						
NORTHERN GROUP	49	50	188	3,285	0.5	5.7
Palmerston						
Pukapuka/Nassau	34	38	144	1,460	0.4	9.9
Manihiki	7	5	12	730	0.0	1.6
Rakahanga	1	1	1	365	0.0	0.3
Penrhyn	7	6	31	730	0.1	4.2

# 11. OUTPATIENT



- 71 percent of patients came for consultation purposes with an average consultation visit of three, meaning that a doctor sees the same patient three times in 2007
- 15 percent attended for injections and 10 percent attended for dressings only
- Consultations – 61 percent were for Rarotonga, 30 percent were from those in the Southern Group Islands and the remaining were reported for the Northern Group Islands
- Other outpatient indicators reported were Minor Operations and other services such as the ENT clinics, EYE specialists, NCD clinics, Orthopedic, etc, visiting the outer islands and of course home visits conducted mostly in the outer islands

**TABLE 11.1: Number of Outpatient Indicators.  
COOK ISLANDS 2007**

REGION & ISLAND	Consultation	Injections	Dressings	Minor Operations	Home Visits	Others	Total Attendance
COOK ISLANDS	41,414	8,612	5,685	305	691	1,741	58,448
RAROTONGA	25,177	6,531	1,341	27	23	1,257	34,356
SOUTHERN GROUP excluding Rarotonga	12,429	1,272	2,735	152	288	373	17,249
Aitutaki	5,227	323	1,949	78	17	33	7,627
Mangaia	2,262	303	478	46	31	287	3,407
Atiu	2,187	427	215	18	29	53	2,929
Mauke	2,276	49	52	6	87	0	2,470
Mitiaro	477	170	41	4	124	0	816
NORTHERN GROUP	3,808	809	1,609	126	380	111	6,843
Palmerston	0	0	0	0	0	0	0
Pukapuka/Nassau	1,170	512	1,147	52	65	25	2,971
Manihiki	939	149	240	12	108	0	1,448
Rakahanga	148	42	40	1	21	20	272
Penrhyn	1,551	106	182	61	186	66	2,152

**TABLE 11.2: Consultation and Percentage Distribution by Year and Region  
COOK ISLANDS 1995 - 2007**

Year	Consultation	Total Attendance	% Distribution	Resident Population Estimate	Average Consultation
1998	26,858	44,871	59.9	16,600	2
1999	29,662	45,336	65.4	15,500	2
2000	28,740	43,308	66.4	14,600	2
2001	33,408	52,516	63.6	14,000	2
2002	36,982	55,623	66.5	14,800	2
2003	45,340	67,578	67.1	13,900	3
2004	38,464	58,417	65.8	13,500	3
2005	35,711	52,714	67.7	12,400	3
2006	41,730	61,515	67.8	11,800	4
2007	41,414	58,448	70.9	12,500	3
<b>RAROTONGA</b>					
1998	8,147	12,706	64.1	10,010	1
1999	9,579	11,642	82.3	9,830	1
2000	9,956	13,267	75.0	9,650	1
2001	16,871	27,995	60.3	9,451	2
2002	18,608	26,064	71.4	9,270	2
2003	23,423	34,478	67.9	9,090	3
2004	18,263	26,675	68.5	8,910	2
2005	17,857	27,058	66.0	8,730	2
2006	22,719	33,142	68.6	8,550	3
2007	25,177	34,356	73.3	8,820	3
<b>SOUTHERN GROUP</b>					
1998	14,826	24,796	59.8	4,100	4
1999	16,294	26,724	61.0	3,520	5
2000	15,049	24,204	62.2	2,940	5
2001	12,023	17,293	69.5	3,777	3
2002			61.0		4

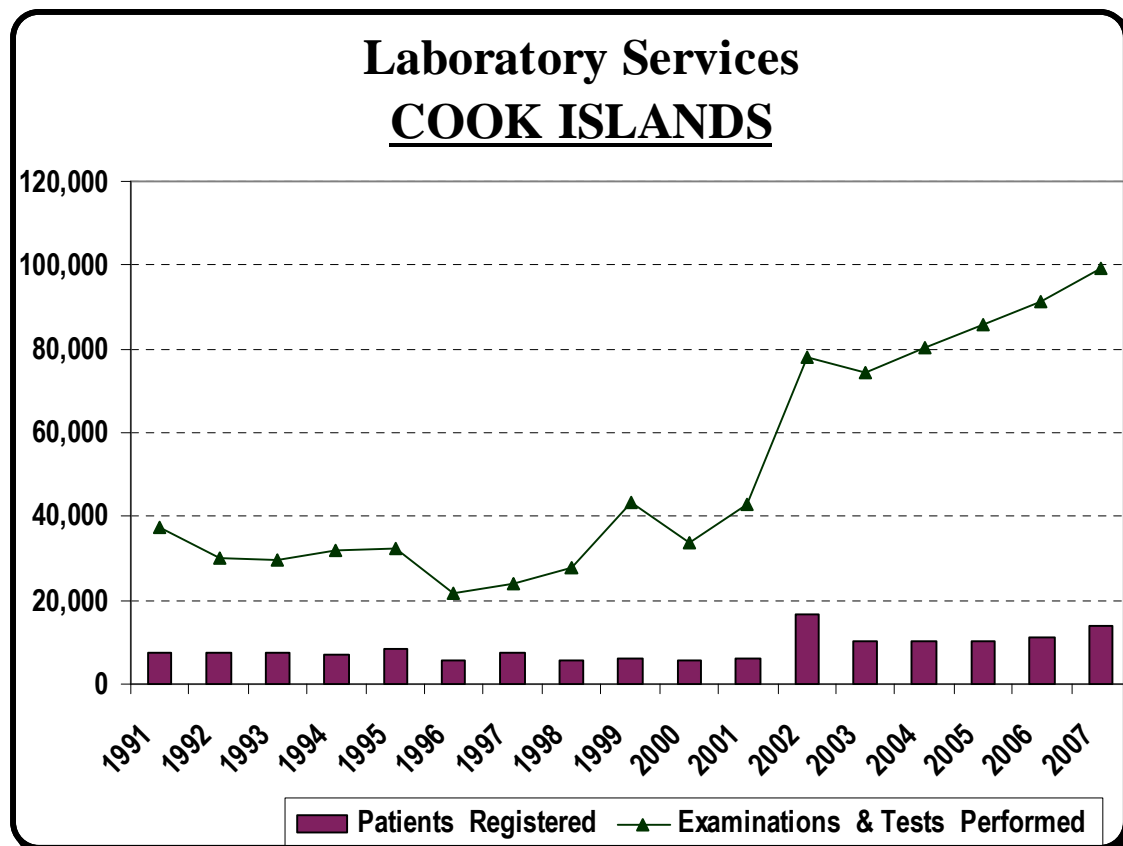
	13,753	22,541		3,400	
2003	16,605	24,879	66.7	3,000	6
2004	15,516	23,882	65.0	2,600	6
2005	13,375	17,645	75.8	2,200	6
2006	14,532	20,362	71.4	1,780	8
2007	12,429	17,249	72.1	1,780	7
<b>NORTHERN GROUP</b>					
1998	3,885	7,369	52.7	2,200	2
1999	3,789	6,970	54.4	2,000	2
2000	3,735	5,838	64.0	1,900	2
2001	4,514	7,228	62.5	1,789	3
2002	4,621	7,018	65.8	1,660	3
2003	5,312	8,221	64.6	1,530	3
2004	4,685	7,860	59.6	1,400	3
2005	4,515	7,504	60.2	1,270	4
2006	4,479	8,011	55.9	1,140	4
2007	3,808	6,843	55.6	1,190	3

- Note:**
1. Population numbers for 1991 and 1996 are from census results.
  2. Cook Islands Population Estimates are from Statistics Office (MFEM)  
Quarterly Statistical Bulletin (Mid year population estimated at June Quarter)
  3. Rarotonga, Southern Group and Northern Group Population Estimates are calculated from the resident population change (1996-2001)



## 12. LABORATORY SERVICES

- 13,674 patients were registered by the laboratory services in the Rarotonga hospital this year. 99,457 examinations and tests were performed with an average of 7 tests; that is, on the average seven types of tests were performed for an individual patient
- 660 tests on Hepatitis B were performed and 2 percent were proven positive. A decline of 2 percent this year from 2006
- Chlamydia testing started in December 2007 with 34 tests performed resulting in seven (7) cases positive
- VDRL, HIV, and STD tests were also performed at the laboratory



**TABLE 12.1: Patients Registered and Examinations & Tests Performed by Year.**

**RAROTONGA, COOK ISLANDS 1991 - 2007**

YEAR	Patients Registered	Examinations & Tests Performed	Average Number of Tests
1991	7,387	37,510	5
1992	7,325	30,215	4
1993	7,202	29,541	4
1994	7,033	31,819	5
1995	8,340	32,417	4
1996	5,524	21,805	4
1997	7,244	24,143	3
1998	5,627	27,476	5
1999	5,905	43,570	7
2000	5,323	33,869	6
2001	6,126	43,121	7
2002	16,567	77,894	5
2003	10,273	74,330	7
2004	9,973	80,136	8
2005	10,193	85,834	8
2006	10,858	91,254	8
2007	13,674	99,457	7

**TABLE 12.2: Positive Cases by Disease and Year.**

**RAROTONGA, COOK ISLANDS 2000 - 2007**

	YEAR							
	2000	2001	2002	2003	2004	2005	2006	2007
<b>STD</b>								
Gonorrhoea	12	17	7	2	2	29	30	16
HIV	0	0	0	2	0	0	0	0
Syphilis	6	11	9	13	4	1	1	1
Candida	61	60	36	59	55	53	45	33
Non Specific Urethritis	37	50	50	40	33	50	9	6
Trichomonas Vaginalis	17	13	13	25	15	24	15	15
Chlamydia								7
Hepatitis B	43	26	32	64	24	41	30	16
<b>OTHERS</b>								
Tuberculosis	0	4	1	0	1	1	0	2
Leprosy	0	0	0	0	0	0	0	0
Bacterial Shigellosis	0	0	0	0	0	0	0	0
Typhoid/Paratyphoid	0	0	0	1	2	0	0	1
Filariasis	3	0	0	0	0	0	0	0
Malaria	0	1	0	1	0	0	0	0
Dengue Fever	0	17	1,348	1	4	0	417	327
Meningitis	0	0	4	0	0	0	0	0

**TABLE 12.3: STI Cases Registered by Type of Tests Performed and Year.  
COOK ISLANDS 2003 - 2007**

Type of Test Performed	2004 Number		2005 Number		2006 Number		2007 Number	
	Tested	Positive	Tested	Positive	Tested	Positive	Tested	Positive
Hepatitis B	649	24	671	41	690	30	660	16
Syphilis	507	4	520	1	507	1	531	1
HIV	518	0	527	0	547	0	555	0
Gonorrhoea	407	2	473	29	487	30	1002	16
Candidiasis	407	55	473	53	487	45	1002	33
Trichomoniasis	407	15	473	24	487	15	787	15
NSU	407	33	473	50	487	9	790	6
Chlamydia *							34	7

Note: NSU (Chlamydia, Virus, Gardinella) - Non Specific Urethritis.

\* Chlamydia started testing in December 2007

**TABLE 12.4: STI and selected communicable cases registered by age groupings  
COOK ISLANDS 2007**

	Total Positive	Age Groups									
		unknown	0 - 14	15 - 19	20 - 24	25 - 29	30 - 34	35 - 39	40 - 44	45 - 49	50 +
STI		0	0	15	13	9	10	4	8	3	0
Gonorrhoea	15	0	0	8	3	0	3	1	0	0	0
HIV	0	0	0	0	0	0	0	0	0	0	0
Syphilis	1	0	0	0	1	0	0	0	0	0	0
Candidiasis	25	0	0	2	4	7	4	2	6	0	0
Non Specific Urethritis	6	0	0	1	1	0	1	0	1	2	0
Trichomonas vaginalis	15	0	0	4	4	2	2	1	1	1	0
Chlamydia	7	0	0	1	0	4	0	1	1	0	0
Hepatitis B	14	0	0	1	2	1	2	3	1	1	2
Others											
Hepatitis C	0	0	0	0	0	0	0	0	0	0	0
Tuberculosis	2	0	0	0	0	0	2	0	0	0	0
Leprosy	0	0	0	0	0	0	0	0	0	0	0
Bacterial Shigellosis	0	0	0	0	0	0	0	0	0	0	0
Typhoid	1	0	0	0	1	0	0	0	0	0	0
Paratyphoid	0	0	0	0	0	0	0	0	0	0	0
Filariasis	0	0	0	0	0	0	0	0	0	0	0
Malaria	0	0	0	0	0	0	0	0	0	0	0
Dengue Fever	327	139	34	14	18	15	19	19	16	8	45

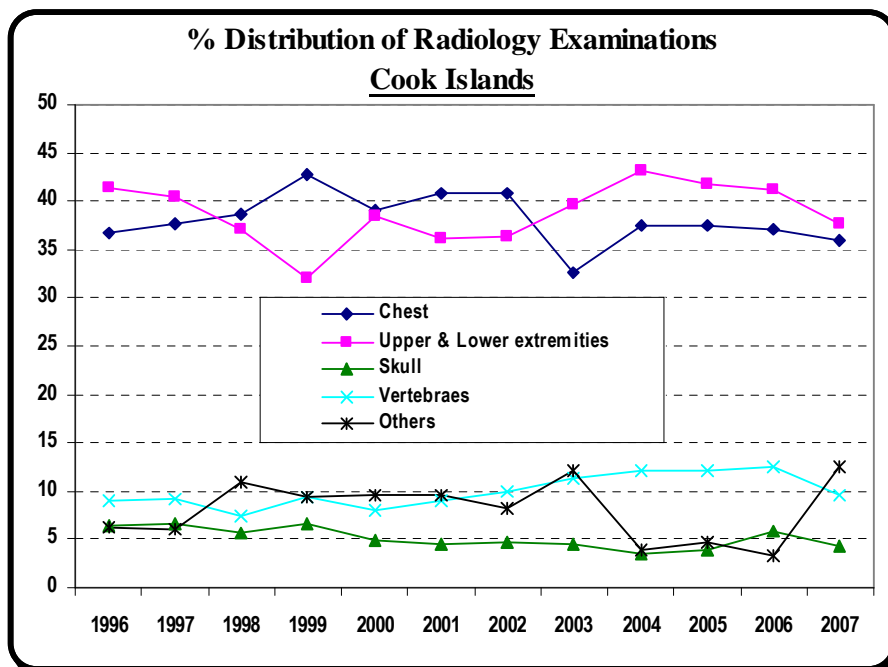
# 13. RADIOLOGY SERVICES



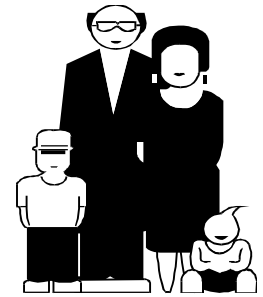
- Examinations performed in 2007 showed an increase from 3,537 to 3,698 with an average of a single examination per patient
- Total patients registered gradually increased from 3,356 to 3,668 in 2007
- The total number of films exposed declined from 4,885 to 4,585 this year
- Other examinations showed an increase of 12.4 percent of the total examinations due to the re-emergence of the mammogram examination program resulting with 8.5 percent

**TABLE 13.1: Examinations and Films exposed by type  
RAROTONGA, COOK ISLANDS 1999 - 2007**

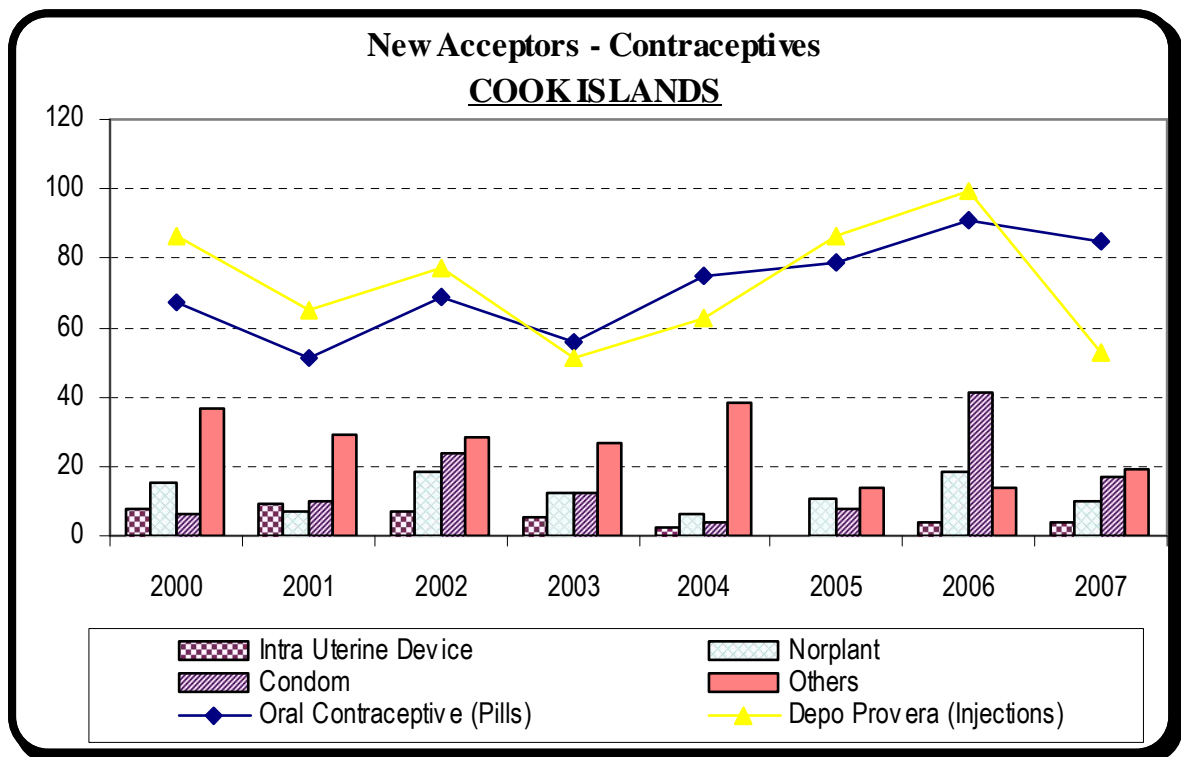
Year	Patients Registered	In-patient	Out-patient/Private	Films Exposed
1999	1,605	653	1,251	2,491
2000	2,480	624	1,933	3,316
2001	2,833	947	2,046	4,045
2002	3,332	994	2,269	4,337
2003	3,916	948	3,145	5,960
2004	3,268	1,533	1,905	4,438
2005	3,179	1,577	1,862	4,669
2006	3,356	1,537	2,000	4,885
2007	3,668	2,604	1,094	4,585



# 14. FAMILY PLANNING



- The total number of women in Child Bearing Ages (15 to 44) in the Cook Islands reported in the 2006 population census was 4,460
- Current users – 29 percent of Child bearing ages reported to were practicing any type of family planning contraceptives in 2007 with 53 percent using oral contraceptive and 38 percent using injections (depo provera)
- New Acceptors – 188 reported were practicing any type of family planning contraceptives with 45 percent using oral contraceptive and 28 percent were using injections (depo provera)
- Current Users – 84 percent of those practicing family planning were residing on Rarotonga
- New Acceptors – 72 percent of those accepting family planning practices were on Rarotonga



**TABLE 14.1: CURRENT USERS - Women on Family Planning Contraceptives by Year. COOK ISLANDS 1999 - 2007**

Contraceptive Type	YEAR								
	1999	2000	2001	2002	2003	2004	2005	2006	2007
All Methods	1,359	1,291	1,331	1,389	1,301	1,345	1,270	1,271	1,289
Oral Contraceptive (Pills)	578	550	614	591	614	682	573	562	681
Intra Uterine Device	21	28	16	20	11	8	3	9	17
Depo Provera (Injections)	598	509	599	621	616	608	640	592	487
Norplant	45	30	22	34	13	12	12	20	31
Condom		45	43	34	20	14	21	72	30
Others	117	129	37	89	27	21	21	16	43

**TABLE 14.2: NEW ACCEPTORS - Women on Family Planning Contraceptives by Year. COOK ISLANDS 1999 - 2007**

Contraceptive Type	YEAR								
	1999	2000	2001	2002	2003	2004	2005	2006	2007
All Methods	223	219	171	223	163	188	198	267	188
Oral Contraceptive (Pills)	69	67	51	69	56	75	79	91	85
Intra Uterine Device	7	8	9	7	5	2	0	4	4
Depo Provera (Injections)	84	86	65	77	51	63	86	99	53
Norplant	11	15	7	18	12	6	11	18	10
Condom		6	10	24	12	4	8	41	17
Others	52	37	29	28	27	38	14	14	19

**TABLE 14.3: CURRENT USERS - Women on Family Planning Contraceptives by Year. RAROTONGA 1999 - 2007**

Contraceptive Type	YEAR								
	1999	2000	2001	2002	2003	2004	2005	2006	2007
All Methods	928	910	1,085	1,005	1,071	1,087	1,050	1,023	1,085
Oral Contraceptive (Pills)	448	471	552	478	514	579	504	481	600
Intra Uterine Device	12	4	16	11	5	2	1	3	10
Depo Provera (Injections)	412	380	464	442	492	465	500	455	390
Norplant	16	15	12	15	13	6	11	14	20
Condom	7	10	12	29	20	14	13	58	25
Others	33	30	29	30	27	21	21	12	40

**TABLE 14.4: NEW ACCEPTORS - Women on Family Planning Contraceptives by Year.  
RAROTONGA 1999 - 2007**

Contraceptive Type	YEAR								
	1999	2000	2001	2002	2003	2004	2005	2006	2007
All Methods	132	117	116	163	119	102	98	167	136
Oral Contraceptive (Pills)	40	35	39	52	42	35	38	60	68
Intra Uterine Device	5	3	7	7	4	2	0	3	4
Depo Provera (Injections)	39	31	30	45	24	19	35	40	34
Norplant	11	13	7	13	12	6	11	14	4
Condom	4	5	4	18	10	3	0	38	8
Others	33	30	29	28	27	37	14	12	18

**TABLE 14.5: CURRENT USERS - Women on Family Planning Contraceptives  
COOK ISLANDS 2007**

REGION & ISLAND	Type of Contraceptive						
	All Methods	Oral	Intra Uterine Device	Depo Provera	Norplant	Condoms	Others
COOK ISLANDS	1,289	681	17	487	31	30	43
RAROTONGA	1,085	600	10	390	20	25	40
SOUTHERN GROUP excluding Rarotonga	167	65	6	79	10	5	2
Aitutaki	131	53	6	57	10	5	0
Mangaia	16	6	0	10	0	0	0
Atiu	0						
Mauke	11	2	0	9	0	0	0
Mitiaro	9	4	0	3	0	0	2
NORTHERN GROUP	37	16	1	18	1	0	1
Palmerston	0						
Pukapuka/Nassau	7	1	0	6	0	0	0
Manihiki	9	8	0	0	0	0	1
Rakahanga	10	6	0	4	0	0	0
Penrhyn	11	1	1	8	1	0	0

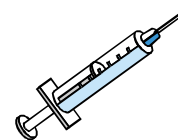
**TABLE 14.6: NEW ACCEPTORS - Women on Family Planning Contraceptives  
COOK ISLANDS 2007**

REGION & ISLAND	Type of Contraceptive						
	All Methods	Oral	Intra Uterine Device	Depo Provera	Norplant	Condoms	Others
COOK ISLANDS	188	85	4	53	10	17	19

RAROTONGA	136	68	4	34	4	8	18
SOUTHERN GROUP excluding Rarotonga	28	10	0	7	6	5	0
Aitutaki	27	10	0	6	6	5	0
Mangaia	1	0	0	1	0	0	0
Atiu	0	0	0	0	0	0	0
Mauke	0	0	0	0	0	0	0
Mitiaro	0	0	0	0	0	0	0
NORTHERN GROUP	24	7	0	12	0	4	1
Palmerston	0	0	0	0	0	0	0
Pukapuka/Nassau	6	1	0	5	0	0	0
Manihiki	4	0	0	3	0	0	1
Rakahanga	3	3	0	0	0	0	0
Penrhyn	11	3	0	4	0	4	0



# 15. IMMUNIZATION



- The table below shows the percentage of children immunized in the first year of life (by 12 months of age) by type in the Cook Islands. This programme has been performed at the highest level, that is, a complete coverage in the last four years (100%)
- The main island Rarotonga had over 100 percent coverage on children immunized before getting to the first birth with some children from the Outer Islands and returning New Zealand and Australia children being given immunization in Rarotonga.
- This year marks the immunization of measles and rubella 1 replacing the measles only injection. This is seen in the table below with a 95 percent coverage reported.
- It should also be noticed that the percentages calculated in the table below were based on the surviving infants for each year

**TABLE 15.1: Percentage Distribution of Children (< 1) Immunized in the First Year of Life and Pregnant Women against Tetanus by Year. COOK ISLANDS 1991 - 2007**

Year	% of children immunized by 12 months of age						% of pregnant women immunized
	BCG	DPT 3	Polio 3	Measles	Measles /Rubella 1	HBV 3	Tetanus 2*
1991	96	87	87	94		71	59
1992	92	84	84	85		96	87
1993	92	97	97	80		96	79
1994	99	85	85	72		76	66
1995	92	89	89	92		82	71
1996	90	75	75	72		65	64
1997	85	93	93	88		99	93
1998	98	93	93	97		88	98
1999	97	92	92	84		90	94
2000	100	92	92	76		98	96
2001	98	90	90	83		93	94
2002	98	97	97	95		93	94
2003	100	96	96	100		94	92
2004	100	100	100	100		100	100
2005	100	100	100	100		100	100
2006	100	100	100	100		100	100
2007	100	100	100		95	100	61

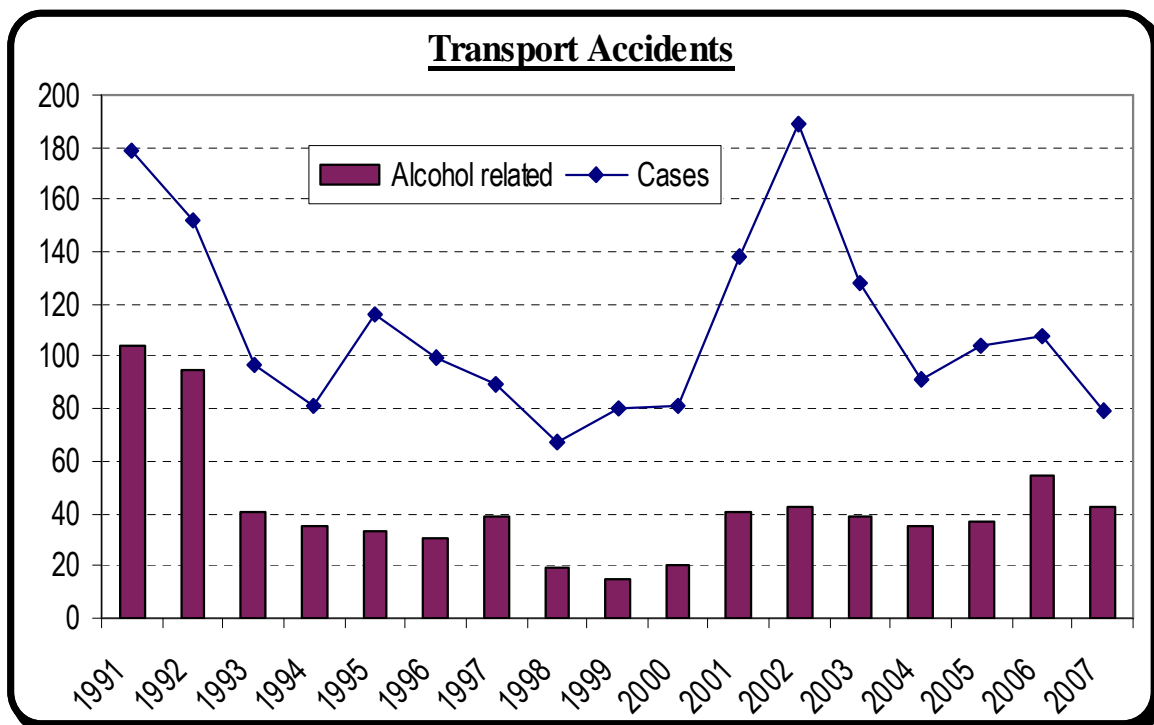
Note: \* Booster included.

Measles/Rubella injections started in July 2006

# 16. MOTOR VEHICLE ACCIDENTS



- 79 patients reported to have been admitted in the Rarotonga hospital due to motor vehicle accidents this year
- 53 percent of these accidents were alcohol related
- A total of five (5) deaths were reported from motor vehicle accidents in 2007. 60 percent of those that died were of alcohol related.
- 50 percent (21 cases) of alcohol related accidents in 2007 were between the ages of 15 to 24
- 94 percent of these transport accidents were motorcycle riders, three percent were pedestrian and 1 percent reported for the first time hang-glider accident injuring the occupant
- 54 percent of these transport accidents suffered head injuries



**TABLE 16.1: Patients Admitted due to Transport Accidents.****RAROTONGA 1997 - 2007**

Type of Accident	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
Transport Accidents	89	67	80	81	138	189	128	91	104	108	79
Alcohol Related Accidents	39	19	15	20	41	42	39	35	37	54	42
Percentage Alcohol Related	43.8	28.4	18.8	24.7	29.7	22.2	30.5	38.5	35.6	50.0	53.2
Alcohol Related Deaths	2	1	1	1	2	2	1	3	1	1	3
Non Alcohol Related Deaths	0	0	1	0	0	0	2	2	2	1	2

**TABLE 16.2: Cases of Alcohol Related Transport Accidents by Age Groupings and Year****RAROTONGA 1997 - 2007**

Age Group	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
0 - 14	0	0	0	0	1	1	0	0	0	0	1
15 - 24	21	9	4	12	16	28	17	17	19	29	21
25 - 34	11	7	6	6	12	4	13	10	7	10	12
35 - 44	5	1	1	2	9	6	5	6	4	9	5
45 - 54	1	1	4	0	2	3	3	2	6	6	2
55 +	1	1	0	0	1	0	1	0	1	0	1
Total	39	19	15	20	41	42	39	35	37	54	42

**TABLE 16.3: Transport Accidents by Sub Category.****RAROTONGA 2000 - 2007**

ICD10	Sub Category	2002	2003	2004	2005	2006	2007
V01-V09	Pedestrian injured in transport accident	6	1	0	2	4	2
V10-V19	Pedal cyclist injured in transport accident	0	0	1	1	0	0
V20-V29	Motorcycle rider injured in transport accident	148	104	77	95	95	74
V40-V49	Car occupant injured in transport accident	4	1	0	0	1	0
V50-V59	Occupant of pick-up truck or van injured in transport accident	4	0	3	0	0	0
V60-V69	Occupant of heavy transport vehicle injured in transport accident	0	0	0	0	0	0
V80-V89	Other land transport accidents	25	22	7	5	6	2
V90-V94	Water transport accidents	1	0	3	1	2	0
V95-V97	Air and space transport accidents						1
V98-V99	Other and unspecified transport accidents	1	0	0	0	0	0

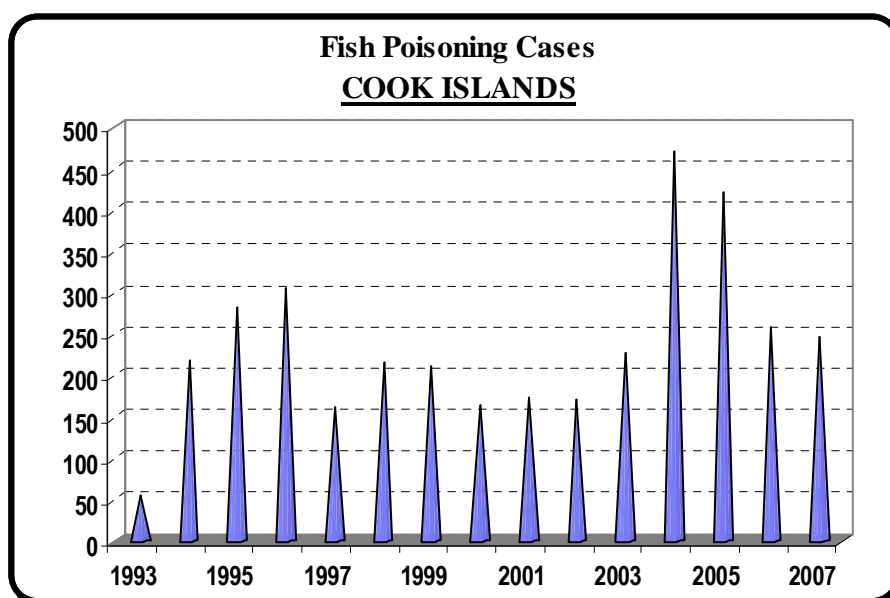
# 17. FISH POISONING (Ciguatera)



- 245 cases of fish poisoning were reported and seen in the Cook Islands in 2007. 75 percent are reported for the Island of Rarotonga
- 184 cases were reported for Rarotonga alone, and 20 percent (37 cases) were hospitalized
- Of the Outer Islands Aitutaki reported to have seen 41 cases, Mangaia – 5, Atiu – 13 and Mauke with 2 cases.

**TABLE 17.1: Fish Poisoning cases by year and sex  
COOK ISLANDS 1996 - 2007**

Year	Cases Seen	Patients Admitted in Rarotonga Hospital		
		Male	Female	Total
1996	304	25	14	39
1997	161	27	20	47
1998	215	23	34	57
1999	209	35	18	53
2000	162	18	6	24
2001	173	21	19	40
2002	169	24	16	40
2003	227	23	17	40
2004	469	33	15	48
2005	421	39	24	63
2006	258	28	15	43
2007	245	20	17	37
Total	3,713	362	252	614





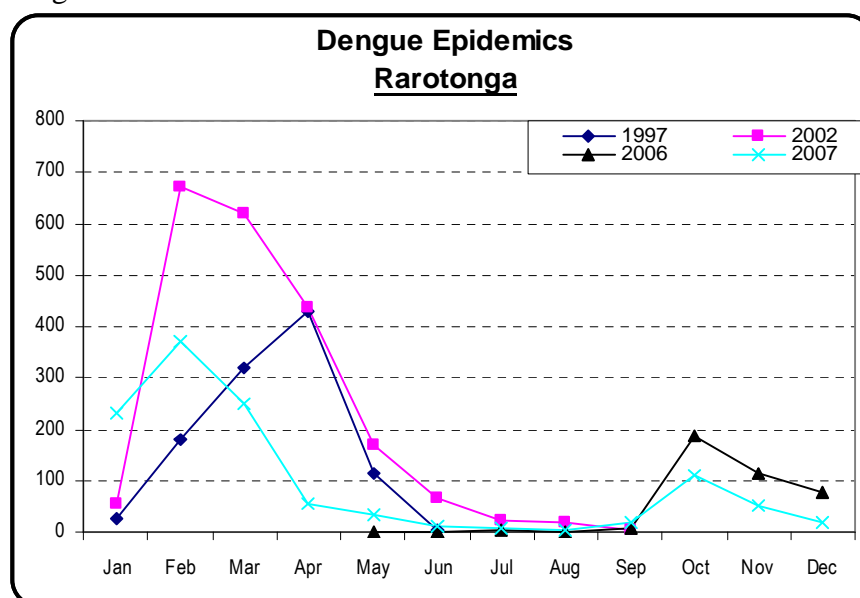
# 19. DENGUE FEVER

Dengue fever is an acute viral infection transmitted by the *Aedes aegypti* mosquito. In some areas the same virus causes haemorrhagic fever, which can be fatal. An attack provides immunity against a particular viral strain for about a year. Mosquitoes become infective about 8 – 12 days after biting an infected person and remain infective for life.

During the current epidemic laboratory tests were used to confirm cases up-to the end of November. Cases reported for December onwards were based on clinical diagnosis applying the following case definition:

***“An acute febrile disease characterized by sudden onset of fever, with two or more of the following; muscle ache, joint pains, inappetence (loss of diet), nausea, vomiting, throat pains, abdominal pains, cough, low platelet count and bleeding.”***

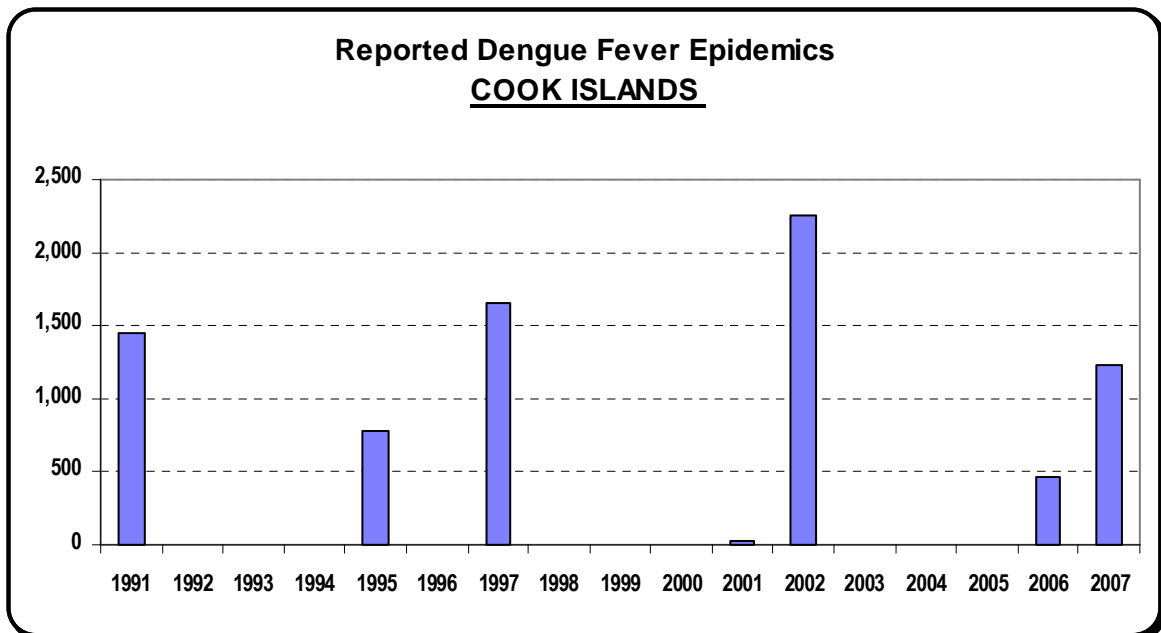
- This year’s epidemic continues from 2006 with the first case confirmed for the end of May. After this another case was confirmed for June followed by three cases for July.
- 232 cases were reported for the month of January peaking in February and slowly descending to two cases in August and started the upward trend again in September
- Confirmed cases during this epidemic was of dengue-2 and dengue-1 type
- The outbreak was severe in Rarotonga and also affecting most of the Outer Islands.
- Outer Islands affected during this time around are Aitutaki, Mangaia, Mauke, Mitiaro and Penrhyn in the Northern Group reported cases most of these cases were people that have visited Rarotonga.
- No deaths were reported during this outbreak but 10 percent of the Rarotonga cases are being admitted in the hospital for management



**TABLE 19.1: Dengue fever cases by Island and year of occurrence.**

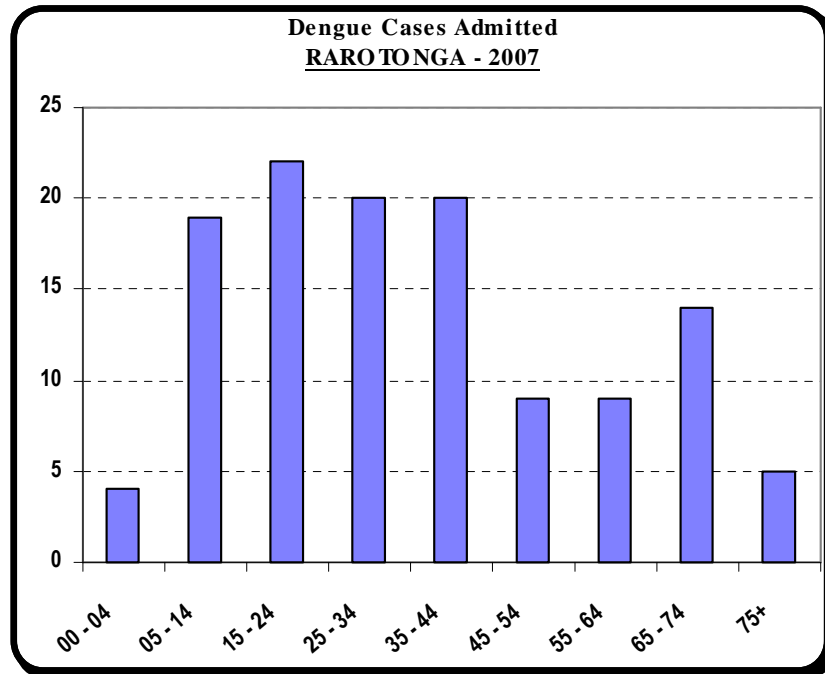
**COOK ISLANDS**

	Years of Occurance									
	1991	1995	1996	1997	2001	2002	2003	2004	2006	2007
COOK ISLANDS	1,451	779	2	1,652	21	2,256	1	4	468	1,224
RAROTONGA	641	583	2	1,075	21	2,059	1	4	389	1,158
SOUTHERN GROUP excl. Rarotonga	608	17	0	59	0	72	0	0	78	63
Aitutaki	462	3	0	20	0	65	0	0	73	25
Mangaia	97	2	0	9	0	0	0	0	3	11
Atiu	0	0	0	3	0	3	0	0	0	0
Mauke	49	12	0	27	0	3	0	0	1	2
Mitiaro	0	0	0	0	0	1	0	0	1	25
NORTHERN GROUP	202	179	0	518	0	125	0	0	1	3
Palmerston										
Pukapuka/Nassau	0	177	0	2	0	5	0	0	0	0
Manihiki	103	0	0	29	0	39	0	0	1	0
Rakahanga	99	0	0	0	0	23	0	0	0	0
Penrhyn	0	2	0	487	0	58	0	0	0	3



**TABLE 19.2: Dengue fever patients admitted  
by age groupings and sex.  
RAROTONGA 2007**

Age Group	Sex		Total
	Male	Female	
00 - 04	2	2	4
05 - 14	11	8	19
15 - 24	6	16	22
25 - 34	6	14	20
35 - 44	7	13	20
45 - 54	5	4	9
55 - 64	4	5	9
65 - 74	7	7	14
75+	2	3	5
Total	50	72	122





**ANNEX A: Health Indicator**  
**COOK ISLANDS 1999 - 2007**

<i>Indicator</i>	<b>YEAR</b>								
	<b>1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>
<b>Area (in 1 000 sq km)</b>	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24
<b>Total Population (Census/Estimates)</b>	16,400	17,900	18,027	18,400	18,400	20,300	20,200	19,569	21,100
<b>Resident Population (Census/Estimates)</b>	15,500	14,600	14,990	14,800	13,900	13,500	12,400	11,800	12,500
<b>Annual population growth rate (%)</b>			-1.1					1.7	
<b>Percentage of population</b>									
- less than 15 years			30.1					26.1	
- 60+ years			10.6					11.9	
<b>Urban population (Rarotonga)</b>	11,250	11,300	12,188	11,400	11,450	11,500	11,550	14,153	14,200
<b>Crude birth rate (per 1 000 population)</b>	23.3	21.2	21.9	19.8	21.2	23.2	24.0	24.5	25.8
<b>Crude death rate (per 1 000 population)</b>	6.2	8.7	5.6	6.8	6.3	7.9	7.7	7.6	8.1
<b>Rate of natural increase of population (% per annum)</b>	1.7	1.3	1.6	1.3	1.5	1.5	1.6	1.7	1.8
<b>Life expectancy at birth (years)</b>									
- Total	67	65	71	70	71	68	69	70	68
- Male	64	61	69	66	69	63	65	68	66
- Female	70	68	73	74	73	73	73	71	70
<b>Infant mortality rate (per 1 000 live births)</b>	16.6	19.4	9.8	3.4	16.9	15.8	9.9	9.7	24.8
<b>Maternal mortality rate (per 1 000 live births)</b>	0	0	0	0	0	0	0	0	0
<b>Child Mortality rate under 5 years old (1,000 population)</b>	0.49	0.45	0.33	0.16	0.27	0.34	0.20	0.15	90.00
<b>% of newborn infants weighing at least 2500gm at birth</b>	97.8	97.0	97.4	99.1	97.6	94.3	97.7	95.4	94.4
<b>(Rarotonga only)</b>									
<b>Deliveries (Rarotonga only)</b>									
- Hospital	258	217	235	234	237	268	267	249	276
- Home	3	7	1	0	4	3	1	0	4
- Twin sets	5	3	2	2	1	4	1	1	2
<b>Percent of population with safe water (estimate)</b>									
- Urban	100	100	100	100	100	100	100	100	100
- Rural	100	100	100	100	100	100	100	100	100
<b>% of population with access to local health services</b>	100	100	100	100	100	100	100	100	100
<b>% of population with adequate excreta disposal facilities</b>									
- Urban	100	100	100	100	100	100	100	100	100
- Rural	100	100	100	100	100	100	100	100	100
<b>Adult literacy rate</b>									
- Both	100	100	100	100	100	100	100	100	100
- Urban	100	100	100	100	100	100	100	100	100
- Rural	99	99	99	99	99	99	99	99	99

**Note:** 1. Life Expectancy - estimates using complete life table method - health stats  
2. Population source is the Statistics Office (MFEM).