



National Health Information Bulletin

2018

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Foreword and acknowledgements

From the Secretary of Health

Kia Orana

Access and availability to accurate and reliable health information is crucial for enhancing and sustaining the provision of health care services in the Cook Islands. This annual statistical bulletin provides a glimpse of the health status of people living in the Cook Islands.

It also reflects the health sector performance translated in the bulletin following data derived from the patient information management system MedTech, departmental registers and other health facilities reporting.

The health information presented will inform the direction of the Ministry namely by identifying priority areas in health including policy and legislative gaps – ultimately striving towards realizing improved health outcomes for people living in the Cook Islands.

It is the Ministry's aim to ensure that government and the wider community including international stakeholders have access to accurate and reliable health statistics. The report also provides basic tabulated data readily available for researchers.

As stated earlier, this report translates the unwavering dedication of all TMO health staff to whom I extend gratitude and acknowledgement. Ensuring documentation of your day to day work sustains a basis from which to produce this annual report.

For further clarification of information including those not published in this report, direct enquiries through the Secretary of Health and/or the Director of Funding and Planning.



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Mr Bob Williams
Secretary of Health

Executive summary

Te Marae Ora Ministry of Health Cook Islands ([Te Marae Ora], TMO), is the main provider of health care in the Cook Islands and has a regulatory function through various legislations in protecting public health. It is responsible for planning and providing health care services to the Cook Islands 14,802 residents (people permanently living in the Cook Islands in 2016). In the 10 years between 2006 and 2016, the Cook Islands population decreased slightly but increased in number of people 65 years and older.

A child born in the Cook Islands would expect to live 76 years - 72 years if it is a boy and 80 years if it is a girl. There were 228 live births in 2018, 26% lower than 14 years ago. On average, each woman in 2018 had 2.5 children down from 2.8 a decade ago. A small proportion (5%) of babies were born with a low birth weight (<2,500g). The numbers of teenage mothers have been steadily decreasing over the past ten years. In 2018, 10% of 227 mothers were in their teens.

The incidence of notifiable infectious diseases have been decreasing since 2013, skin sepsis remains the most common, with approximately 2000 cases per year. Sexually transmitted diseases increased to 175 cases in 2018, an increase of 28% from five years ago, which these levels have not been seen in nearly 10 years. Once common, only six cases of ciguatera poisoning were reported in 2018.

Non-communicable diseases are still very prevalent in the Cook Islands. Hypertension accounts for half of NCD diagnosed cases and diabetes accounts for another one in five cases. Cardiovascular disease (CVD) and hypertension are the main causes of death from NCD, numbers of death from both conditions have decreased significantly over the past four years.

In 2016 and 2017, there were 3,555 dental consultations, up 50% from levels in 2012 and 2013. Fillings, general consultation, and extractions were the most common reasons for dental visits.

Those suffering with a mental disorder or illness can be diagnosed with a combination of conditions. In 2015/2016, numbers of mental health cases has increased since 2009/2010 in all disorder groups except for a slight decrease of schizophrenia cases. Anxiety, the most common diagnosis, was twice as common as other disorders.

The Cook Islands has two hospitals. Rarotonga being the main hospital has a 70 bed facility providing both secondary inpatient and outpatient as well as primary care services. There were 1600 patients admitted to Rarotonga Hospital in 2018, up 6% on the previous year. Rarotonga Hospital had an inpatient bed occupancy of 33%. Aitutaki Hospital has a 28 bed facility - 227 patients were admitted with an inpatient bed occupancy of 6%.

The most common cause of inpatient admissions in 2018 was heart disease (228 cases) up 17.9% on the previous year followed by diseases of the digestive system (122 cases) up 13.1% on the previous year. In 2017 the second and third most common conditions, hypertensive and respiratory system diseases dropped by 36% and 62% respectively.

Overall, the number of deaths has increased in the last few years to 123 in 2018. Heart Disease and Diabetes contributing to over half of those deaths. Nearly three quarters of all deaths were related to non-communicable diseases. Among children, the Infant Mortality Rate (IMR) remains low, less than five infant deaths in 2018 equalled a IMR of 23 deaths per 1,000 live births in the Cook Islands.

Introduction and overview

The Cook Islands is a country made up of 15 islands and atolls with a land area of 240 square kilometres scattered over 2 million kilometres of the Pacific Ocean. The Cook Islands consists of two main groups – the northern group and the southern group. The majority of the population lives in the southern group. Rarotonga is the main and largest of the islands, and is the site of the main urban centre of Avarua. These islands are located within 8 and 23 degrees south and between 156 and 167 degrees west. Such distances over the wide ocean linking these small island populations is challenging to the development of transportation and communication systems.

The Cook Islands is governed by a Prime Minister who is the leader of the majority party in the legislature, and the legislature is elected by popular vote every four years.

The major economic activities in the Cook Islands are tourism and financial services. Market-oriented agricultural production is the main source of income on some islands.

Cook Islanders make up most of the population, with a steadily increasing population of expatriates, largely composed of New Zealanders, Asians and people from other Pacific Island countries, notably Fiji. English and Cook Islands Maori are the official languages of the Cook Islands.

Health services and information provision in the Cook Islands

Te Marae Ora is the main provider of health care in the Cook Islands; and has a regulatory function through various legislations in protecting Public Health. Health services range from Public health (inclusive of primary care) to secondary care. These services are supplemented by visiting specialist teams. Access to tertiary services is through referral to New Zealand health providers. There are also a small number of private health providers on the island. Overall, the Cook Islands are relatively well equipped to provide basic primary and secondary level care.

The Cook Islands has an established health information system (HIS), which is producing an adequate amount of information for use in decision-making in planning. The primary health management information system is MedTech32. It offers a relatively user-friendly platform for health workers to enter and access patient information from all islands. The system allows for basic information for many hospital activities including daily recording of patient management, in-patient admission, transfer and discharge; outpatient case registrations, invoicing and consultations; surgery details; special clinic services; laboratory services; prescription records; radiology services; discharge planning, pregnancy and birth records; post-natal follow-ups; immunisation records; oral health; and death registrations for individuals and families.

Health facilities in the Pa Enua (outer islands) are able to connect to MedTech32 via the internet, providing an important information bridge back to the TMO on Rarotonga. All the remaining information systems are mostly paper based which is being digitised. Future plans are to get this data electronically stored as a component of the data warehouse.

Health information continues to use the international statistical classification of diseases (ICD10) to code its morbidity and mortality data (that is the underlying cause of death as certified by a medical officer or nurse practitioner in some of the outer islands). The mortality tabulation list 1 with 103 conditions or groupings is used in the Cook Islands for the coding of its underlying causes of death.

Data exclusions in this report

Data in this bulletin does not include:

- Births and deaths of patients referred overseas
- Patients referred and living overseas for chronic conditions
- Non Cook Islanders.

Due to technical problems data loss was experienced by TMO. Between June 2014 to May 2015 records were lost except in the following areas:

- Notifiable diseases
- Morbidity classifications
- Outpatient consultations.

Note: Some data for 2017 report has been updated and information provided in this release might be different from those previously published, as these are being revised. The 2018 information produced are of provisional status and may change in future publications of these national information bulletins.

Table 1: Key facts

KEY FACTS		2011	2016	2017	2018
Overall	Cook Islands census population resident numbers	14,97	14,802	14,802	14,802
	Total Fertility Rate (TFR per woman)	2.8	2.5	2.4	2.5
	<i>Total number of deaths</i>	97	101	92	123
	Crude Death Rate (CDR per 1,000)	6.5	8.8	8	11
	Total Potential Years of Life lost				7292
At Birth	Total number of births	284	243	231	228
	Life Expectancy at birth (5 year period)	75.7	73.6	74.1	75.7
	Crude Birth Rate (CBR per 1,000)	19.0	16.4	15.6	15.4
	Fetal (neonatal) Mortality Rate (per 1,000)		4.1	0	13
Under 5 years	Cook Islands population under 5 years	1,481	1,261	1,261	1,261
	Under 5 Mortality (per 1,000 children)		4	4.1	7.2
	<i>Number of Inpatients</i>	193	212	141	204
	% under 5	13.0	16.8	11.2	16.2
	<i>Number Outpatient Consultations</i>	5,033	5,736	5,239	5,196
	Consult Per child	3.4	4.5	4.2	4.1
	Cook Islands population 5-14 years	2,851	2,736	2,736	2,736
5 to 14 years	Life Expectancy at 5 years				71.1
	Infant Mortality Rate (per 1,000 children under 15 years)		8.2	13	13.2
	<i>Number of Inpatients</i>	127	236	228	249
	% 5-14 year olds	4.5	8.6	8.3	9.1
	<i>Annual Outpatient Consultations</i>	5,896	5,800	6,955	7,018
	Consult Per child	2.1	2.1	2.5	2.6
15-34 years	Cook Islands population 15-34 years	4,098	3,867	3,867	3,867
	Life Expectancy at 15 years				61.3
	Teenage (adolescent, 15-19 years) Fertility Rate	62.0	41.7	43.4	38.2
	NCD Mortality (% of people aged 15-64)		25.7	24.2	18.9
	NCD Premature Death (% of people aged 30-69)		23.9	22	19.9
	<i>Mental Disorder cases (Number of under 34 year olds)</i>	15	28	22	
	<i>Number of Inpatients</i>	519	478	458	504
	% 15-34 year olds	12.7	12.4	11.8	13.0
	<i>Number Outpatient Consultations</i>	8,480	10,058	12,602	13,086
	Consult Per person	2.1	2.6	3.3	3.4
35-64 years	Cook Islands population 35-64 years	5,202	5,394	5,394	5,394
	Life Expectancy at 35 years				43.0
	<i>Number of Inpatients</i>	564	412	499	567
	% 35-64 year olds	10.8	7.6	9.3	10.5
	<i>Number Outpatient Consultations</i>	12,86	17,545	20,038	22,478
	Consult Per person	2.5	3.3	3.7	4.2
	<i>Mental Disorder cases (35-59 years)</i>	14	24	28	
65 years and older	Cook Islands population 65+ years	1,342	1,544	1,544	1,544
	Life Expectancy at 65 years				18.1
	NCD Mortality (%)		52.5	47.3	53.5
	<i>Number of Inpatients</i>	453	408	408	454
	% of people 65 year or older	33.8	26.4	26.4	29.4
	<i>Number Outpatient Consultations</i>	5,621	7,450	7,472	8,440
	Consult Per person	4.2	4.8	4.8	5.5

Cook Islands resident population

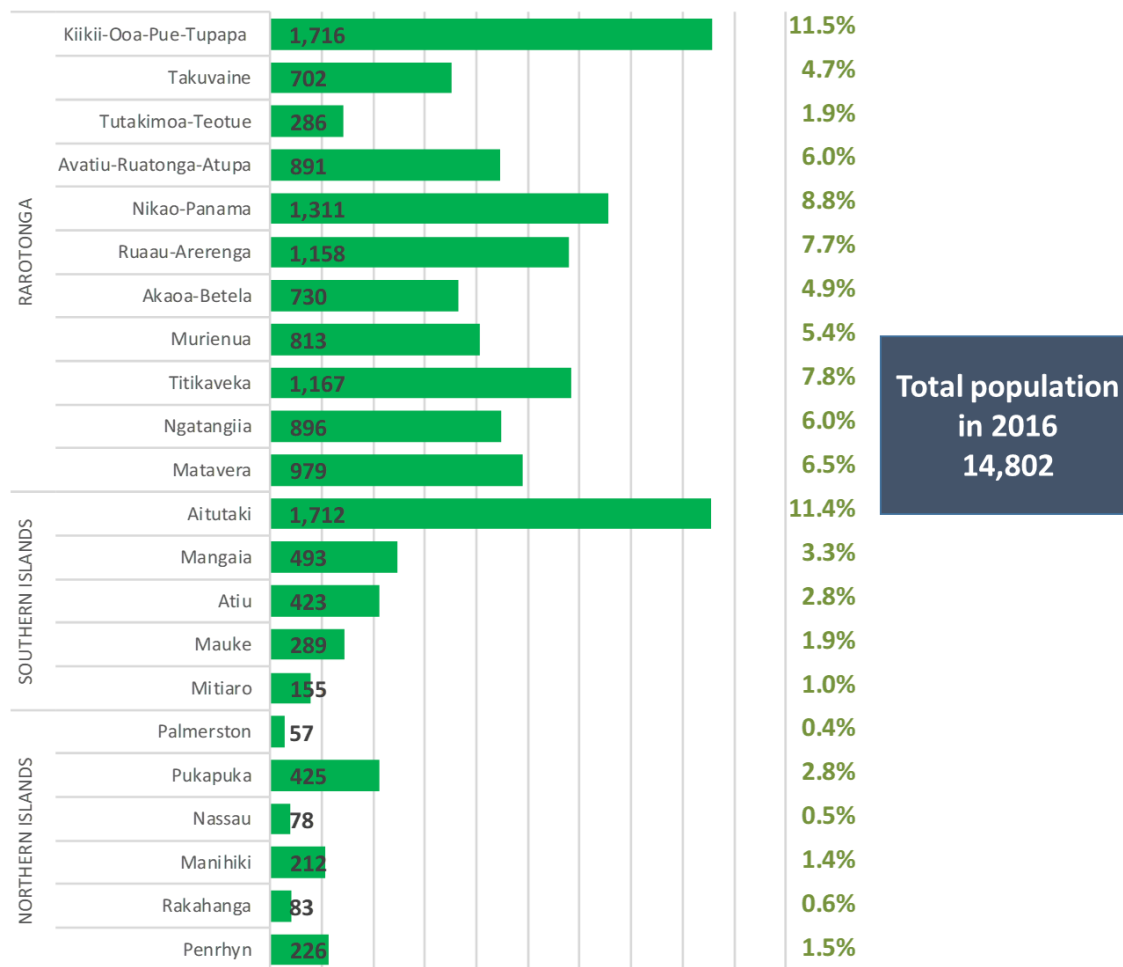
The total population of the Cook Islands as reported in the 2016 Census is 17,434, including 14,802 Cook Islands residents (people permanently living in the Cook Islands) and visitors present during the time of the census. The total excludes Cook Islands residents that were overseas during the census.

The number of residents living in the Cook Islands declined slightly by 1% from 14,977 in 2011 to 14,802 in 2016.

Seven out of ten (72%) of all Cook Islands residents lived on the main island, Rarotonga; 28% live in the Pa Enua. Of that figure 21% live on the southern islands of Aitutaki, Atiu, Mangaia, Mauke and Mitiaro (see Figure 1). The remaining 7% live in the northern islands of Palmerston, Manihiki, Rakahanga, Pukapuka, Nassau and Penrhyn.

While the majority of people reside on Rarotonga, one in four people aged 60 years plus live in the southern group islands of Aitutaki, Atiu, Mangaia, Mauke and Mitiaro. For those 15 years old and younger, one in ten live in the northern group islands; and just under one in four in the southern group islands outside of Rarotonga.

Figure 1: Populations by region 2016



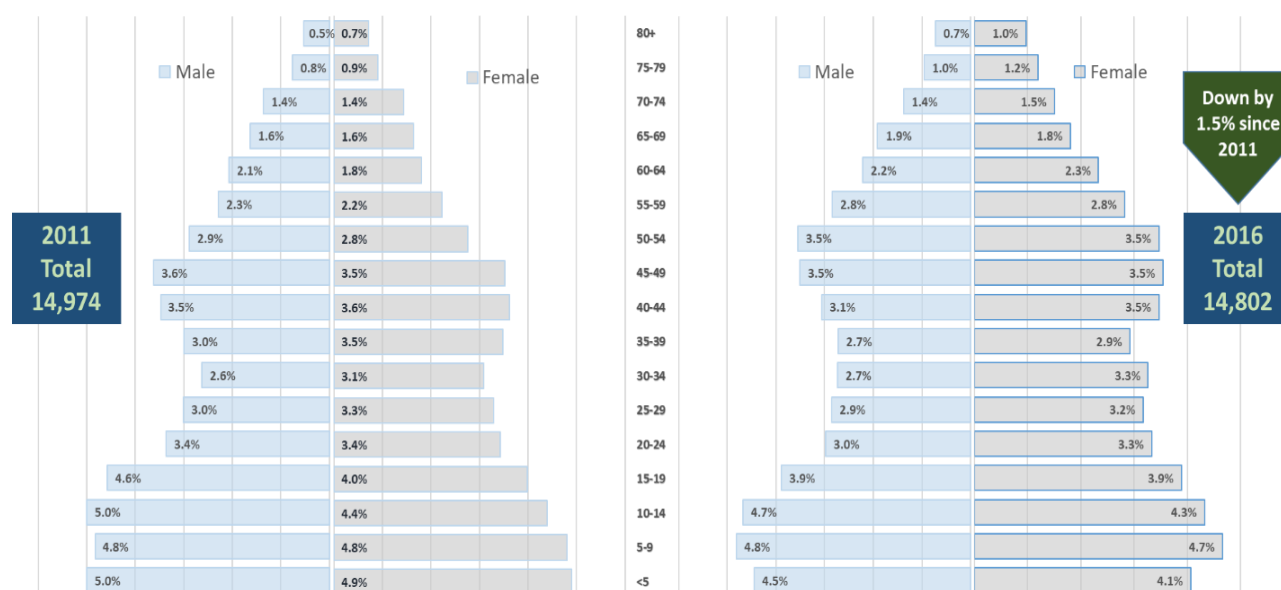
The population pyramids in **Figure 2** show the slight overall decline in the resident population of the Cook Islands between 2011 and 2016 as well as highlighting changes in the overall age distribution of Cook Islands residents, particularly among the age groups under 45 years. It clearly shows an aging population.

Firstly, this is a consequence of an outflow of children and those of young working ages, represented by a decreased transference in numbers of people in 5 to 39 year age groups in 2011, to their respective 5 year older cohorts of 2016. This highlights signs of strong outward migration rather than mortality. The main incentives for migration are likely to be further education, greater employment opportunities, and higher wages overseas.

In the five years between 2011 and 2016, the Cook Islands population decreased overall but increased in numbers of people 50 years and older

Conversely, there was an increase in the proportions of men and women aged 50 years or older, increasing by 19% from 23% of the 2011 population to 28% in 2016. **Note:** Older people are living longer lives indicating a shift to a cohort of healthier and active older people.

Figure 2: The age distribution of the resident population by gender



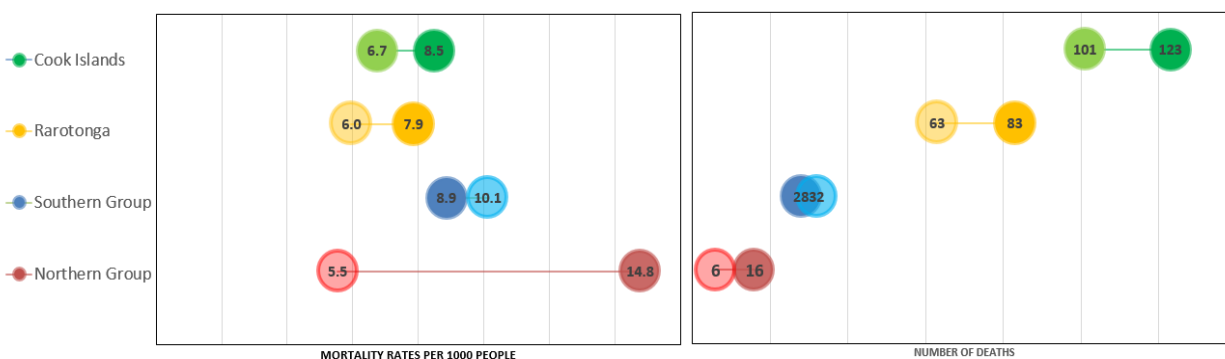
Mortality

In the Cook Islands, all deaths that occur in a hospital or health centre are issued a death certificate with a copy provided to the family before burial. For those who died outside a health facility, a Coroner's investigation and report is provided to the health officer in charge, before the deceased can be released to the family for burial.

In 2018, 127 Cook Islands residents died, up 17.8% from 2016. That represents a mortality rate of 8.5 deaths per 1,000 people.

Figure 3 shows the number of deaths in the Cook Islands by island groups between 2016 and 2018. As expected the majority of death occurs on Rarotonga with over 60% for both years. However, the mortality rates were generally higher in the Pa Enua, over the two years, mortality rates in the southern group were 38% higher and 48% higher in the northern group.

Figure 3: Death rates by Island group 2016 (light shade) and 2018 (dark shade)

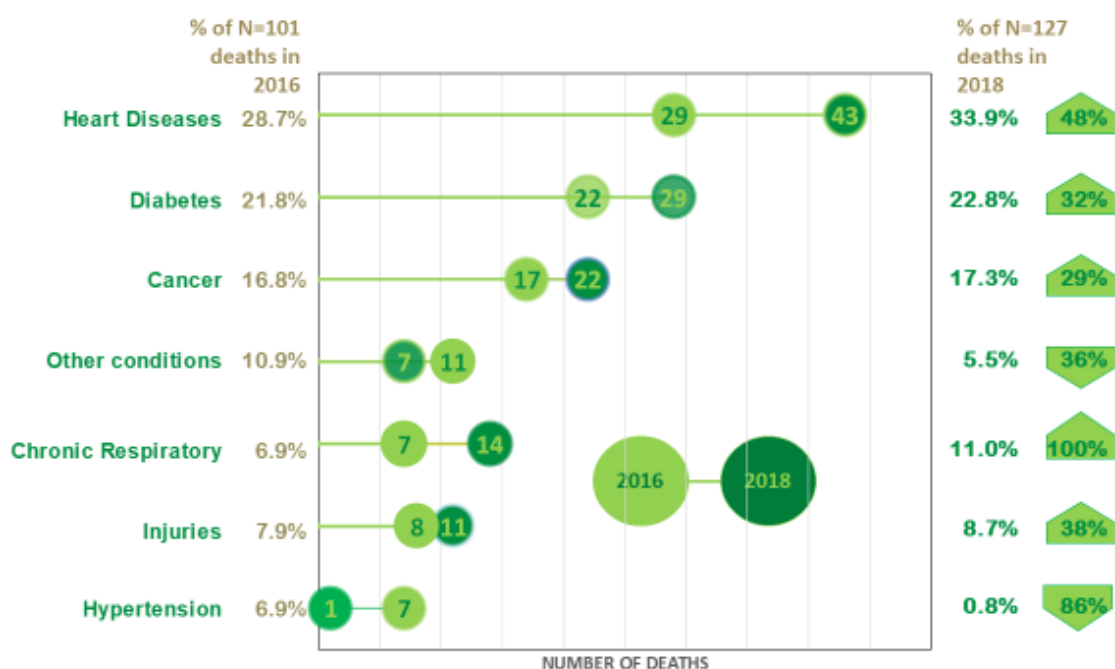


Main cause of death

The main causes of death of people in the Cook Islands are influenced by the age profile of the population as well as common causes of morbidity. Diseases of the circulatory system groupings (hypertension, stroke and diseases associated with the heart) were the main underlying cause of deaths in the Cook Islands from 2016 to 2018.

Figure 4 shows the leading underlying causes of death in the Cook Islands in 2017 and 2016 was from heart diseases - up 48% since 2016, and diabetes, up 32%. Heart diseases and diabetes accounted for 50-56% of all deaths in the Cook Islands.

Figure 4: Main cause of death by ICD10 groups 2016 - 2018



Life expectancy and potential years of life loss

Life Expectancy, or the years of life remaining (see **Figure 5**) is calculated from the numbers of deaths reported in each age cohort and reflects the patterns of mortality in each year. In 2018, the life expectancy for Cook Islanders at birth is 76 years. This was 5 years higher for girls than boys. Based upon mortality patterns for the years 2013 to 2018, girls would expect to live 81 years while boys would expect to live 75 years. By the age of 45 years, men and women would expect to live a further 35 and 38 years, respectively.

Heart disease remains the major cause of potential years of life loss. Other conditions overtook diabetes and cancer as the second most common cause.

Between 2016 and 2018, more than 400 Cook Islands residents died - equating to 7292 potential years of life loss (PYLL). The PYLL adjusts each reported death by the potential years each person should expect to have lived and their potential years counted as a loss.

Figure 5: Life expectancy years of life remaining at different stages of life

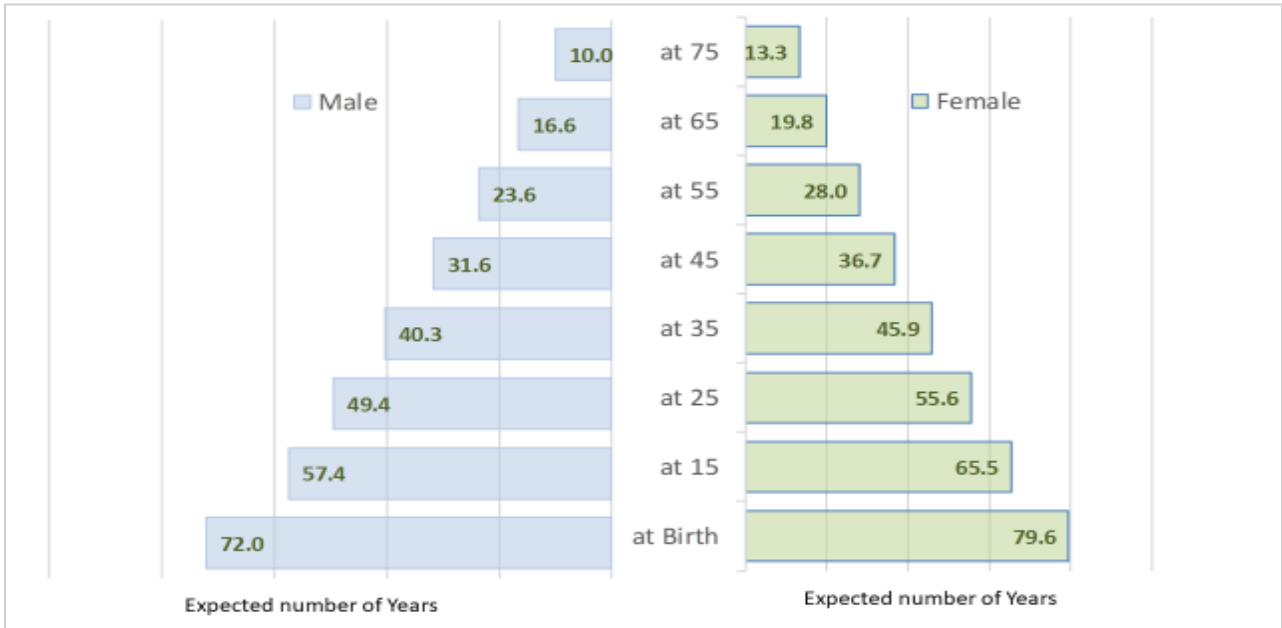
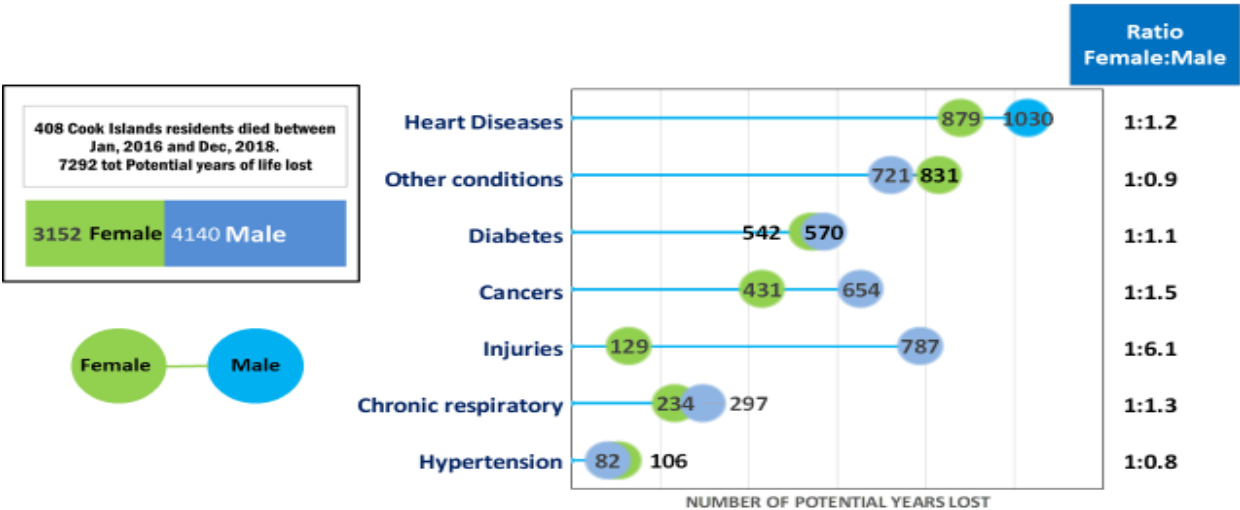


Figure 6 shows the potential years of life lost by cause of death. Heart disease remains the major cause of potential years of life loss. Other conditions overtook diabetes and cancer as the second most common cause. That is a result of other conditions occurring among younger people resulting in greater potential loss.

Figure 6: Potential years of life loss

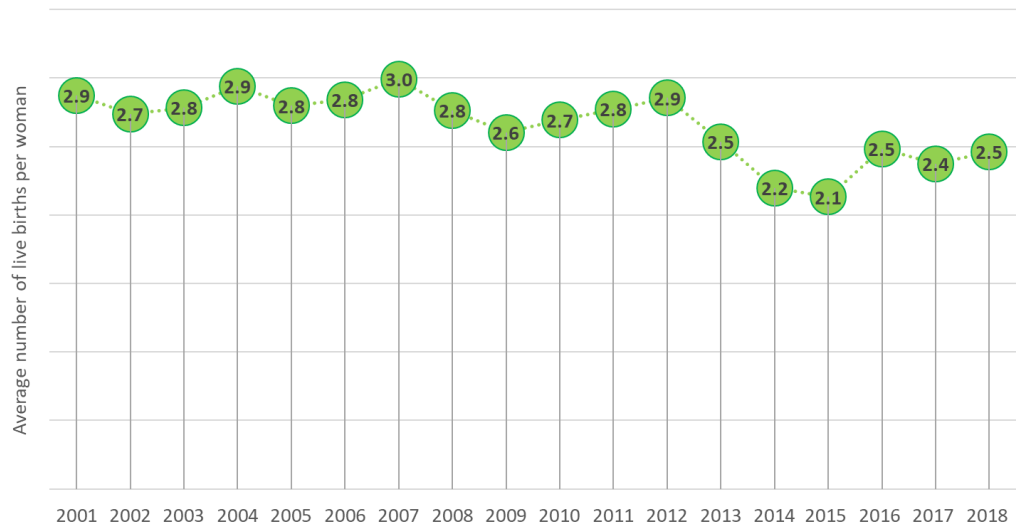


Maternal and child health

Fertility

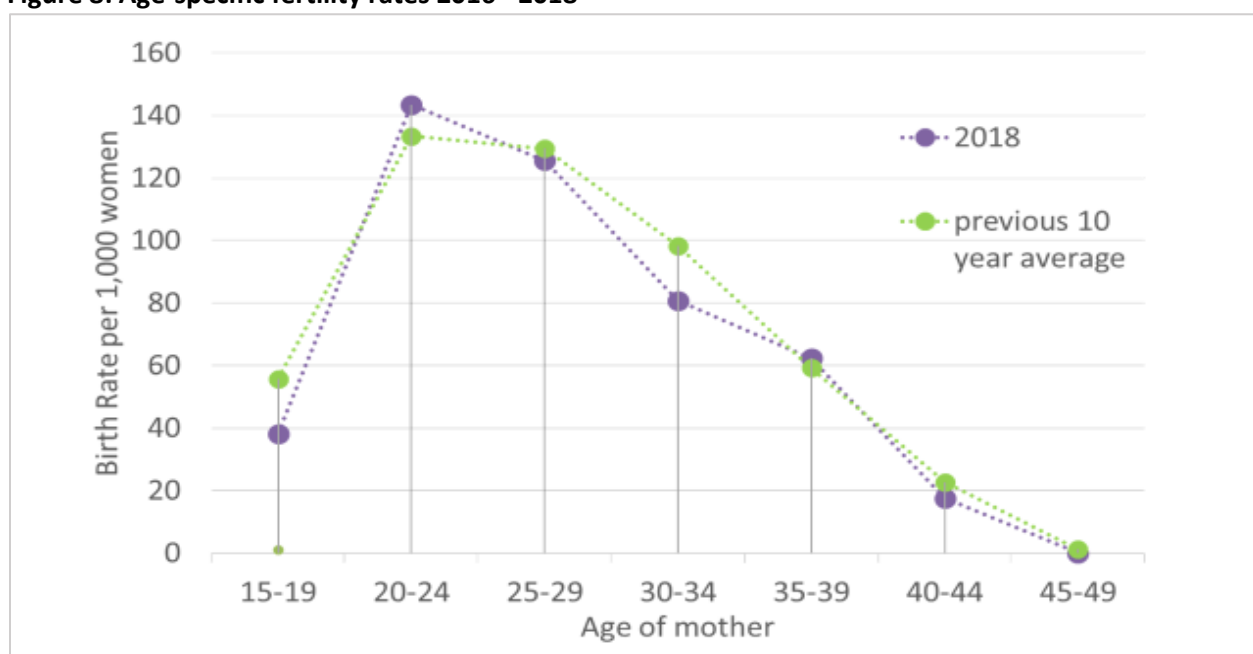
Total fertility rate (TFR) is a measure of the average number of children a woman would give birth to during her lifetime if she were to pass through her child-bearing years (15 - 49 years) experiencing the present day age specific fertility rates. **Figure 7** shows that the TFR has continuously declined steadily from three births per woman to two.

Figure 7: Total fertility rate



In **Figure 8**, the highest number of births in the Cook Islands in 2018 occurred amongst mothers aged between 20 to 24 years. This is unlike 2017 where fertility is evident among 25 to 29 year old group.

Figure 8: Age-specific fertility rates 2016 - 2018



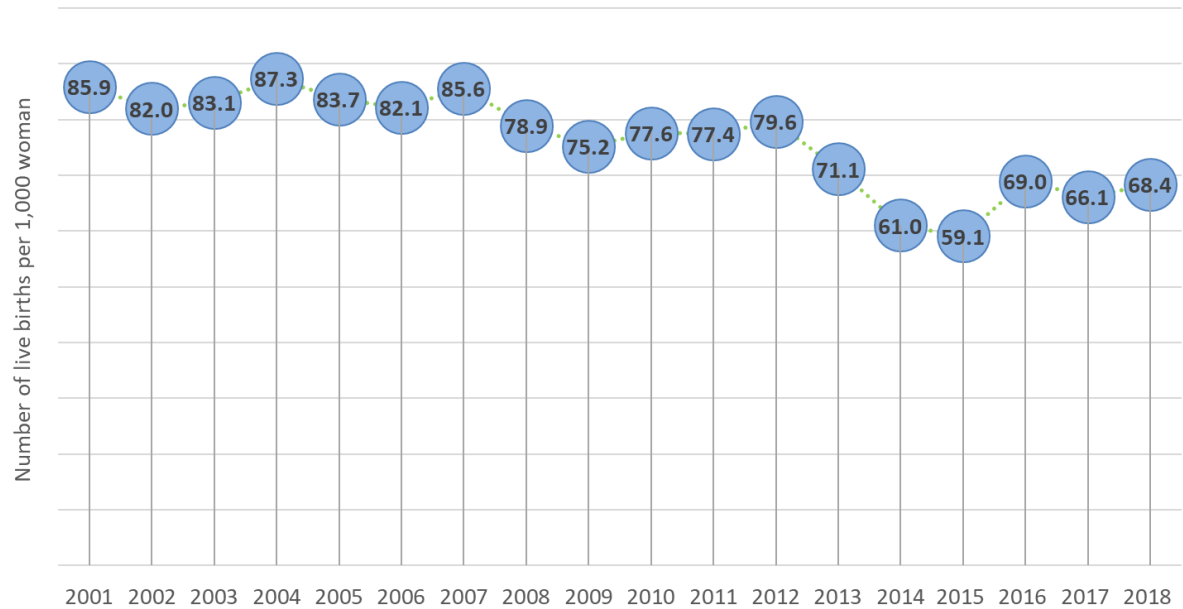
Teenage pregnancies and the number of births to adolescent mothers aged 15 to 19 in 2018 recorded at 38 per thousand, that is, below 40 per thousand unlike the previous three years which were steady at 40.

Live births in the Cook Islands

Between 2009 and 2018 there was a total of 2,553 live births in the Cook Islands. The majority of these births were males (1,312 males as opposed to 1,241 females), equivalent to almost 109 males for every 100 females born. The total number of live births delivered in the Cook Islands continued to decline over the last ten years since 2009 from 280 in 2009 and 232 in 2018. The pattern has decreased from around 280 per year prior to 2013 to approximately 230 per year after 2014.

Crude birth rate (CBR) depicts the number of live births as a proportion of the total resident Cook Islands population each year, including those with permanent resident status. As illustrated in **Figure 9** the CBR, since 2016 has returned to pre-2013 levels, around 20 per 1000 people each year, after a drop to around 17.5 births per 1000 people between 2013 and 2015.

Figure 9: 2009-2018 crude birth rates

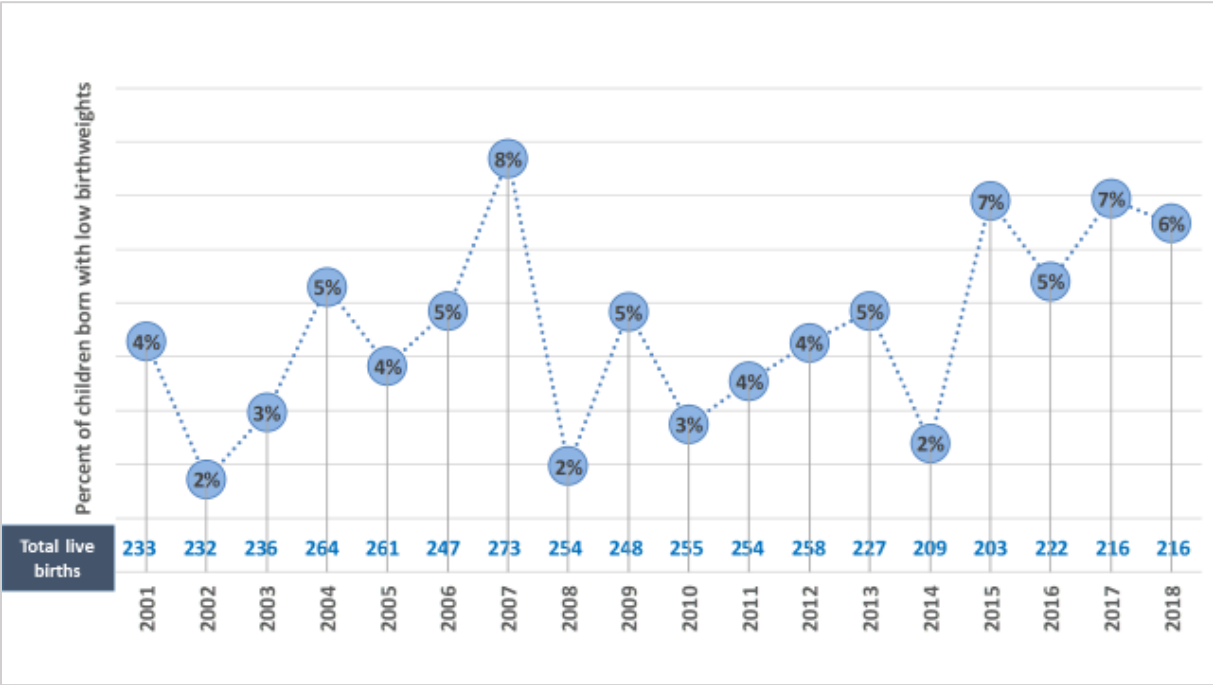


In the Cook Islands, nine out of ten live births are delivered on the main island of Rarotonga. In the past 10 years babies were born in Aitutaki, Mangaia and Atiu, Pukapuka and Manihiki.

Low birth weight

The normal birth weight is between 2500 to 4200 grams and low birth weight babies are those born with a weight of less than 2500 grams. **Figure 10** shows fluctuations in the number of births with low birth weight, ranging between 21 births in 2007 to the lowest of five in 2014. The smoothed series (a rolling average of three years) shows low birth weight numbers fluctuated between 8 and 14 over time but the overall trend was flat.

Figure 10: Number of births with birth weight less than 2500g in Rarotonga 2004 - 2018

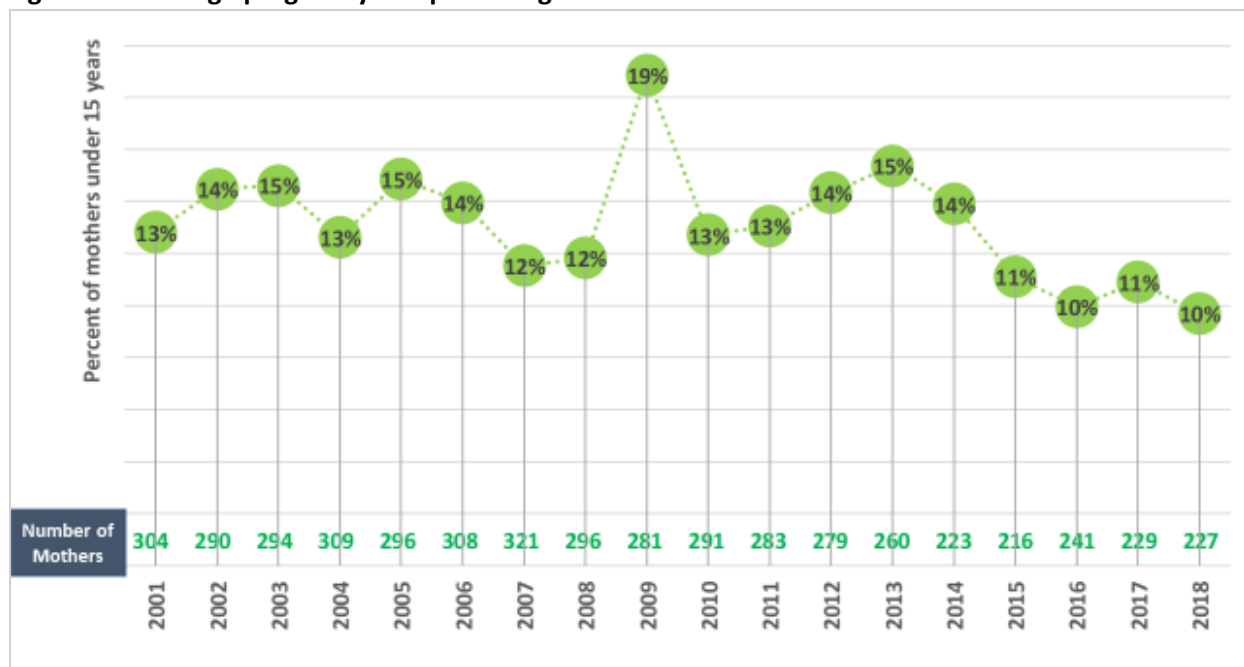


Reproductive health

Teenage pregnancies

The number of births to adolescent mothers aged 15 to 19 for the last 20 years is showing fluctuations from the highest of 63 in 1999 to 22 in 2018, with an average of 37 births each year (see **Figure 11**). The percentage of these mothers to the total mothers that have given birth, ranges below 20%, that is, with the highest of 19% in 2009 to 10% recorded for 2018.

Figure 11: Teenage pregnancy and percentages to births 1999 - 2018



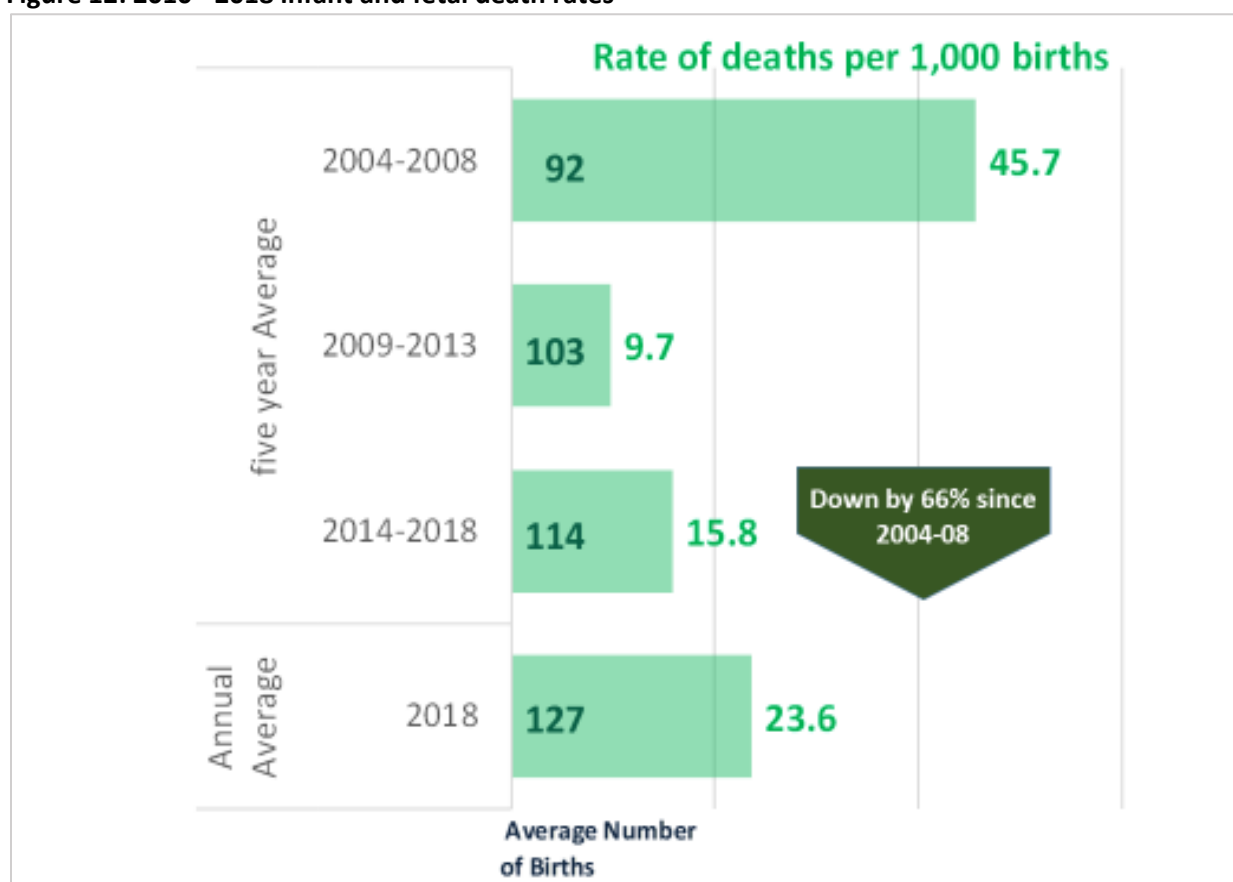
Child health

Infant and fetal death rates

Infant mortality rate (IMR) remains below ten deaths per 1,000 live births in the Cook Islands between 2010 to 2016 to over 13 in 2017 and 2018 (see **Figure 12**). With fewer than 300 live births per year, these rates are susceptible to small number distortions and the latter aberrations result from three deaths per year. The rates of fetal deaths (also known as stillbirths) have also remained below ten deaths per 1000 live births since 2010 until in 2018 when three cases fetal deaths were also reported.

The historic low rates were attributed, by many, to the prevention measures implemented by TMO with an aim to improve IMR. Such measures included the promotion of good nutritional practices and raising awareness programs for antenatal and postnatal services.

Figure 12: 2010 - 2018 infant and fetal death rates



Public Health

Notifiable diseases

A notifiable (reportable) disease is any disease that is required, by law, to be reported to government authorities. The collation of this information allows the appropriate authorities to monitor the disease and provides an early warning mechanism for possible outbreaks. All cases are clinically diagnosed and confirmed by laboratory tests. Notifiable diseases include; Anthrax, Asthma, Bronchitis, Cholera, Chickenpox, Conjunctivitis, Dengue, Diarrhea, Fish poisoning (ciguatera), Food poisoning, Otitis media, Influenza, Pneumonia, Rheumatic fever, Scabies, Skin sepsis.

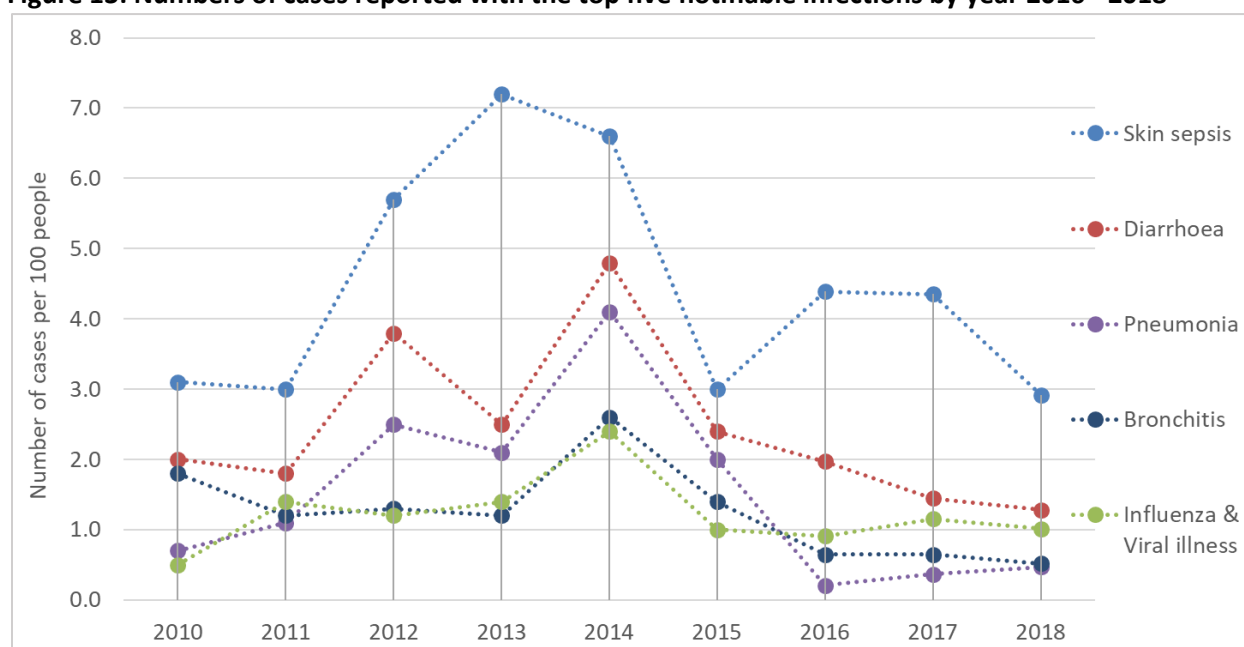
Top notifiable diseases

The top five infectious diseases reported in the Cook Islands between 2016 and 2018 are: skin sepsis, approximately 2000 cases per year; gastroenteritis/diarrhea approximately 800 cases; pneumonia, just over 300 cases; approximately 300 cases of bronchitis; and around 600 cases of influenza and viral illness (see **Figure 13**). Skin sepsis was the most prevalent condition of the five infections, more than twice that of the next highest infection, Gastroenteritis and diarrhea.

Ciguatera poisoning

Ciguatera (fish poisoning) is a food borne illness caused by eating fish that is contaminated by ciguatera toxin. These toxins are commonly found among large reef fishes. The toxin is harmless to the fish however, when consumed by a human being they become poisonous and can cause nausea, pain, cardiac and neurological symptoms. A monthly average of six cases were reported in 2016 and 2017 whereas an average of two cases reported for 2018. The highest reported cases in each were in June 2016 with 12 cases and 13 cases reported in January 2017, and for 2018 is in the month of August with six cases.

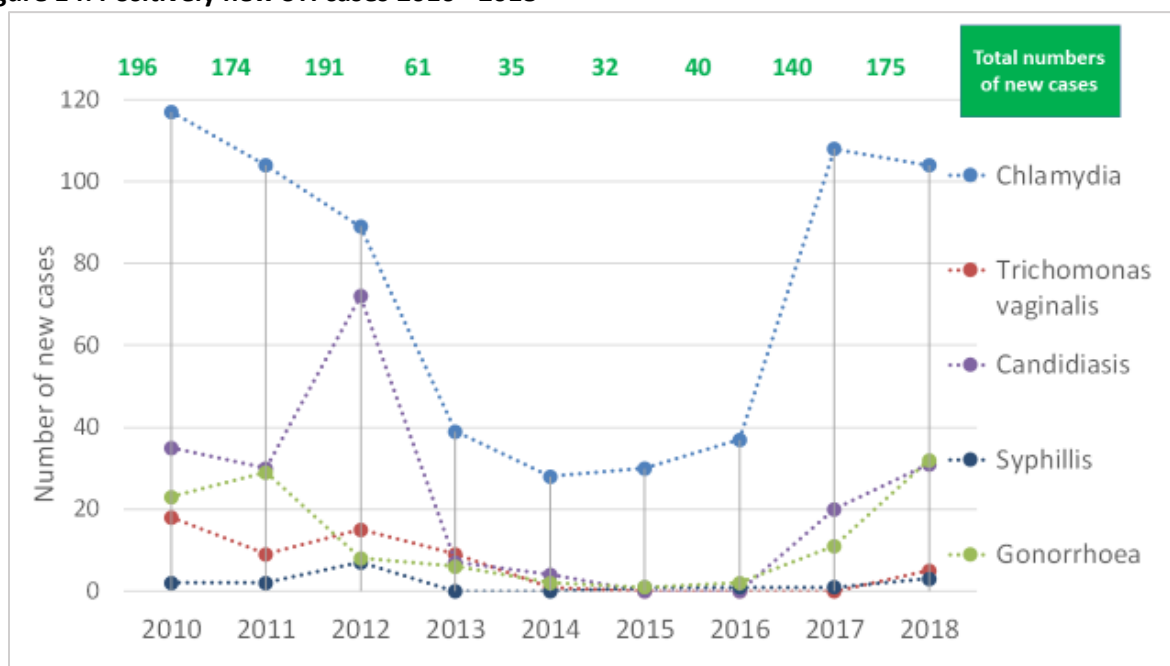
Figure 13: Numbers of cases reported with the top five notifiable infections by year 2016 - 2018



Sexually transmitted Infections

Sexually transmitted infections (STI) continued to decline in numbers within the last five years (2013-2017) in the Cook Islands from a total of 330 cases in 2009 to 178 cases in 2018 with a slight increase from 149 cases in 2017 to 2018. Chlamydia continues to be the most prevalent type throughout the years making over half of the total diagnosed, that is, from 54% in 2013 to 58% in 2018. It should be noted that all these are laboratory confirmed cases. **Figure 14** shows that chlamydia is the main STI in the Cook Islands for the last three years (2016-2018) ranging from 28 cases in 2014 to 108 cases reported in 2017.

Figure 14: Positively new STI cases 2016 - 2018



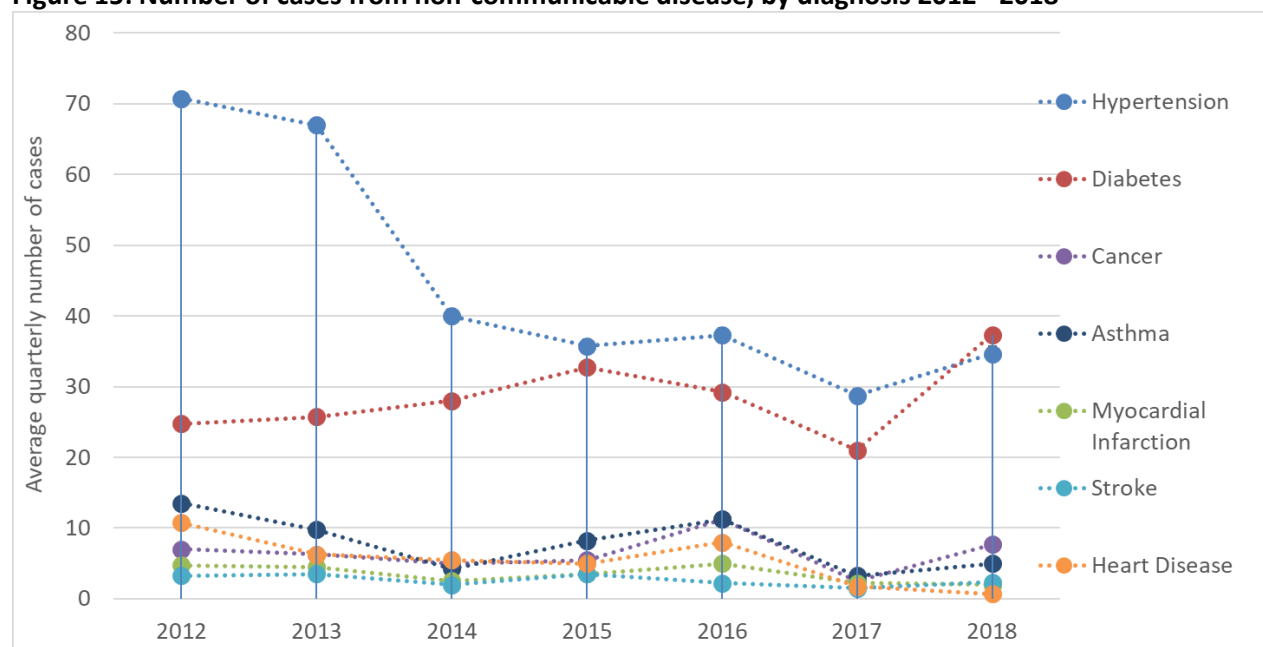
Non-communicable diseases

Non-communicable diseases (NCDs), as the name suggests, are a range of diagnosed conditions that are not transmitted by direct contact from person to person. Non-communicable diseases include: stroke, heart disease, cancer, diabetes. They may be chronic- long term and life threatening or acute - short-term serious episodes from which recovery can be without detriment.

Incidence of non-communicable diseases

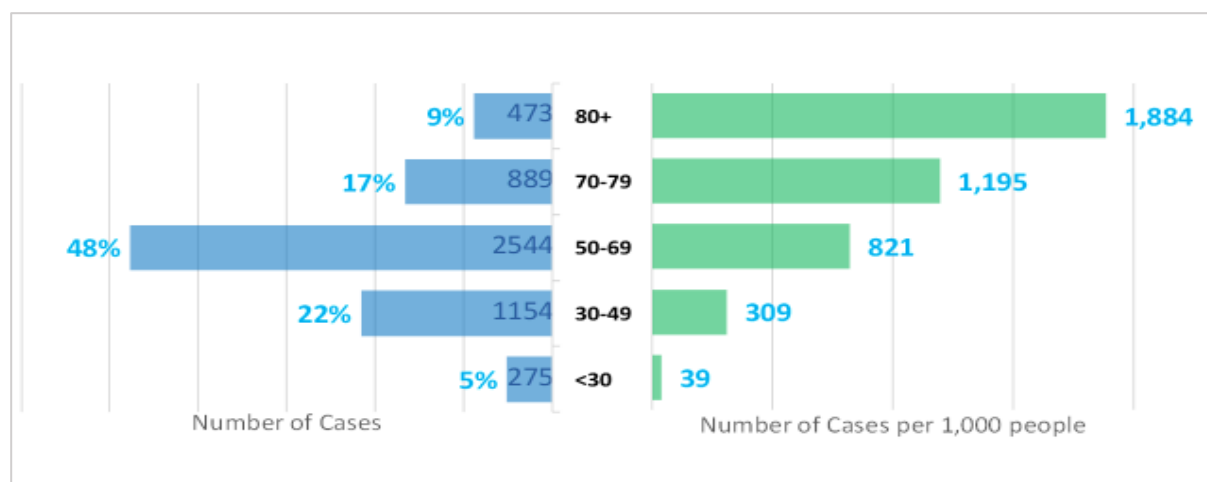
Diabetes and hypertension are the most prevalent NCD in the Cook Islands. Hypertension accounts for 50% of NCD cases in the Cook Islands. There were an average of 119 new cases of hypertension per year during 2014-2018. There have been approximately 5000 Cook Islanders diagnosed with an NCD over the last 20 years - 51% are male and 49% are female. Many cases have multiple conditions which include hypertension, heart disease and heart failure.

Figure 15: Number of cases from non-communicable disease, by diagnosis 2012 - 2018



The greatest number of reported NCD cases in people, over the 2008 - 2017 period occurred between the ages of 50 and 70 years. Approximately 50% of all cases occurred to people in this age group (see **Figure 16**). Twenty eight percent of cases occurred in people aged 70 and older while 22% in people aged 30 to 49 years. Comparatively few cases occurred to people under the age of 30. People in the over 70 years age bracket, occurrence of NCD cases is at a rate of more than one per person, and as many as 1.8 cases per person over 80 years of age.

Figure 16: Rates of non-communicable disease by age 2008-2017



Deaths from non-communicable diseases

Annually NCDs are the main cause of deaths in the Cook Islands comprising over 70% of the overall death rate for the last three years as shown in **Figure 17**. **Note:** This is dependent on the medical death certificates completed by the medical officers or nurse practitioners in the outer islands, and registered at the Ministry of Justice.

On average, there are 83 deaths per year from non-communicable disease (NCD). Total deaths from NCD have decreased by 11% between 2015 and 2018. Over a half (57%) of NCD deaths were diagnosed with cardiovascular disease (CVD), one third had hypertension and just under a quarter had cancer. Deaths can have multiple diagnoses so total proportions across disorder groups add to more than 100%.

Figure 17: Percentage of NCD deaths 2016 – 2018

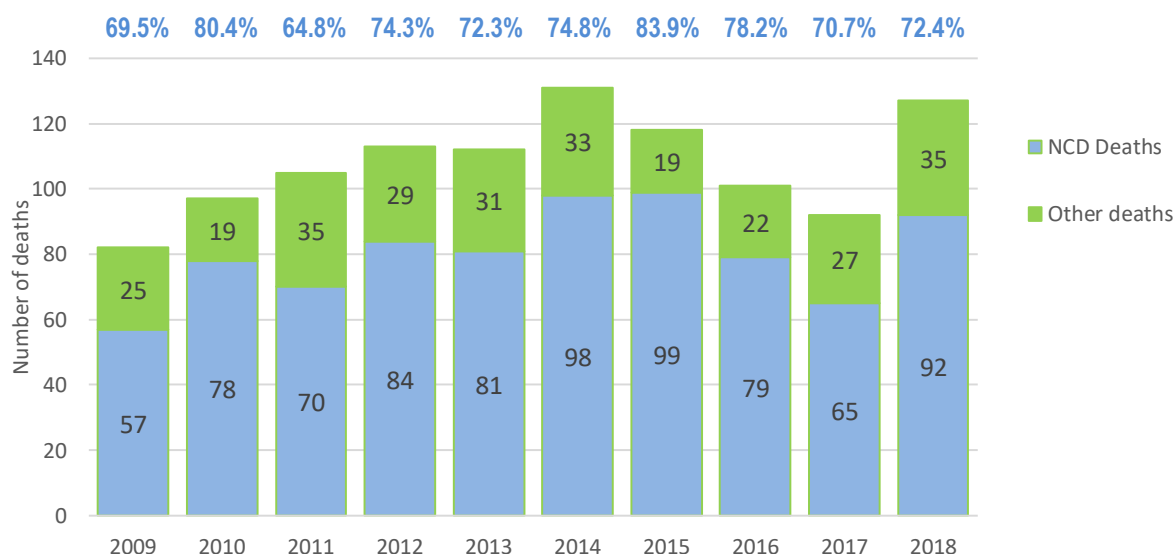
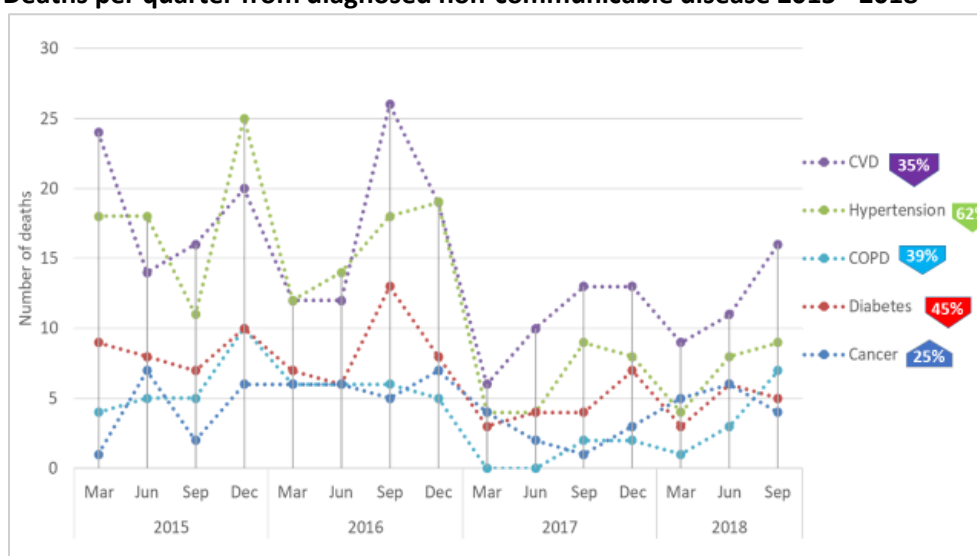


Figure 18 show most conditions related to deaths have declined since 2015, down by as much as 62% for hypertension from 72 in 2015 to an estimated 28 in 2018. Cancer mortality has increased 25% from 16 in 2015 to an estimated 20% in 2018.

Figure 18: Deaths per quarter from diagnosed non-communicable disease 2015 - 2018



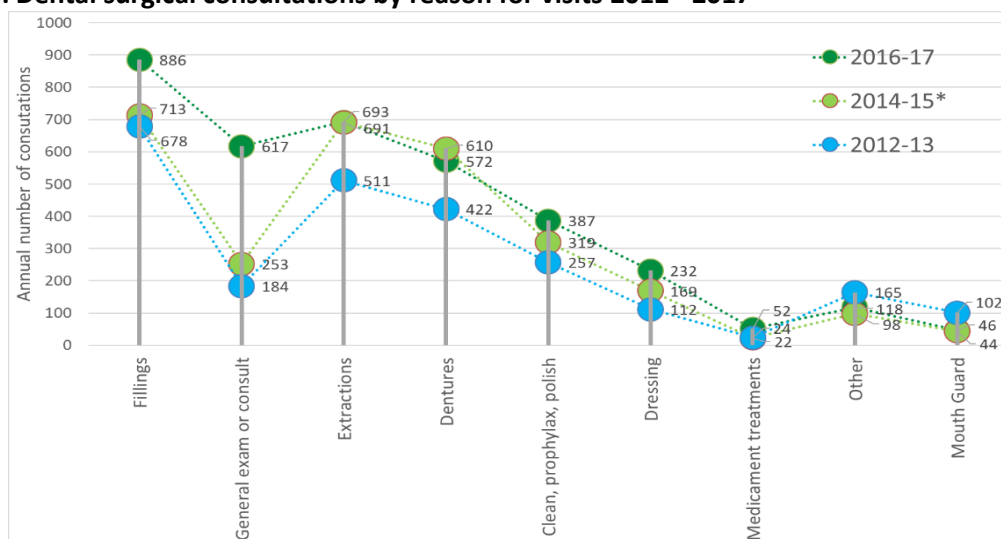
Dental Health

In 2016 and 2017, on average, 3,555 dental consultations were performed on Cook Islands residents. One in four (866) consultations required fillings, nearly one in five (693) resulted in extractions, 17% (617) were general examinations (see **Figure 19**). Overall, there were increases in most reasons for dental visits since 2012 and 2013.

In 2016 and 2017, on average, 3,555 dental consultations occurred. A 50% increase from the average between 2012 and 2013.

Except for a sharp decline in mouth-guard consultations, down from over 100 prior to 2014 to 44 in 2016 and 2017.

Figure 19: Dental surgical consultations by reason for visits 2012 - 2017



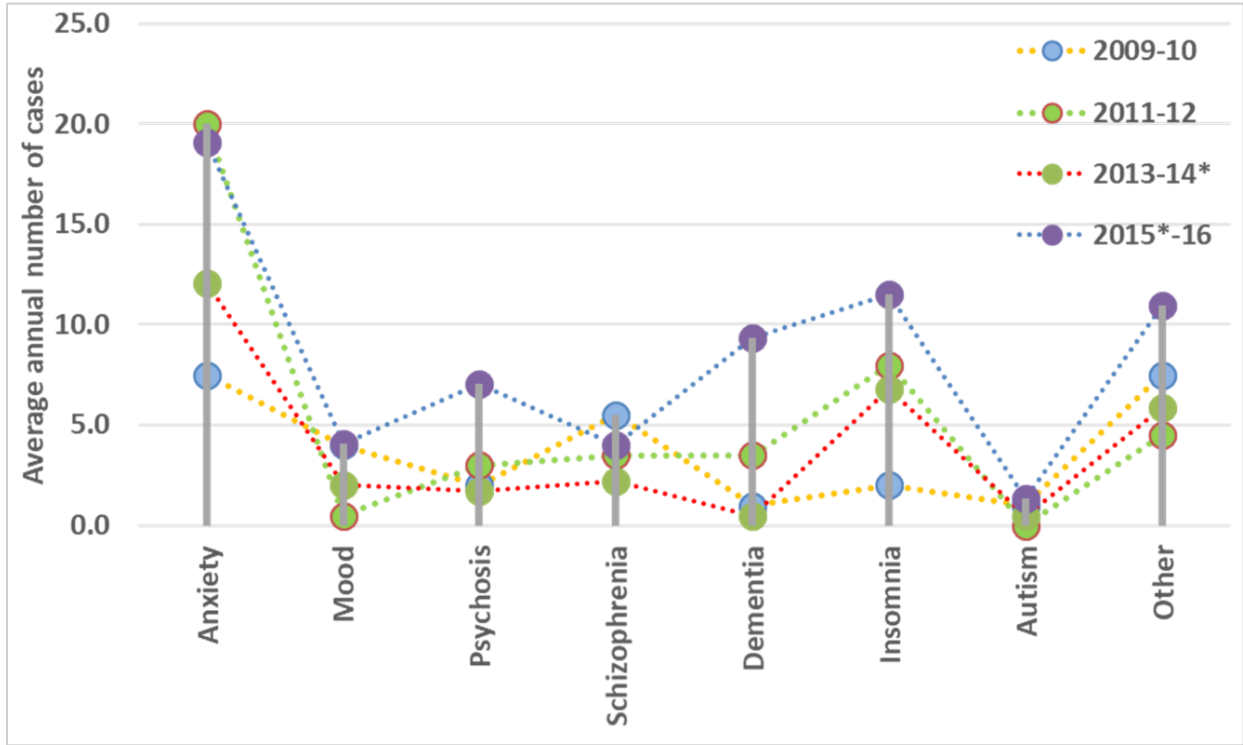
*2014-15 numbers were adjusted to account for under-reporting in those years

Mental health services

Diagnosed cases

The awareness and management of mental illnesses or disorders in the Cook Islands has certainly increased with better facilities and follow-up systems in place. By 2016, in the Cook Islands there were 85 cases diagnosed with a mental disorder, more than double the number in 2009 (see **Figure 20**). The most common disorders were anxiety related disorders affecting around 13 people per year, peaking at 30 in 2012. The next common disorders were insomnia and dementia affecting on average four and seven people per year.

Figure 20: Mental health cases by diagnosis 2009 - 2016



**2014-15 numbers were adjusted to account for under-reporting in those years*

Three out of 10 patients diagnosed with a mental disorder were 60 or older influenced by dementia as the third most common disorder. For those under 60 years of age, 9% were under 20 years, 21% were between 20 and 29 years, another 20% were 30 to 39 years.

Deaths from self-Inflicted Injury

In total, five deaths from intentional self-harm (suicide) occurred in 2018 with the majority of the cases on Rarotonga and two in the Pa Enua. see **Figure 21**). This brings the total number of suicides in the Cook Islands to 22 deaths within the last ten years from 2009 to 2018. Of that number 19 (86%) were men.

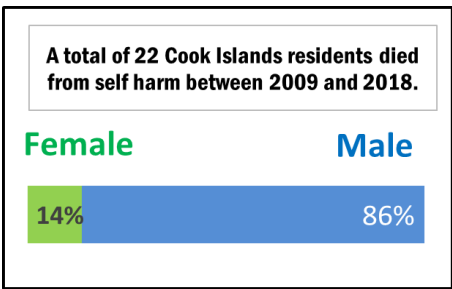
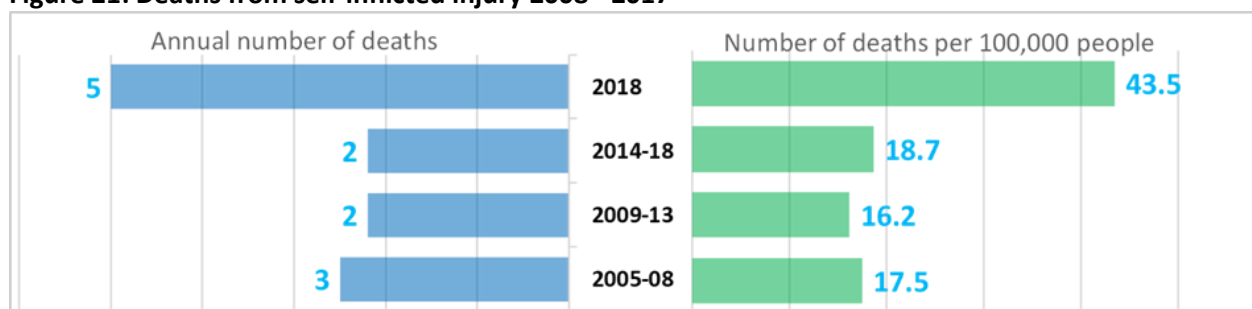


Figure 21: Deaths from self-inflicted injury 2008 - 2017

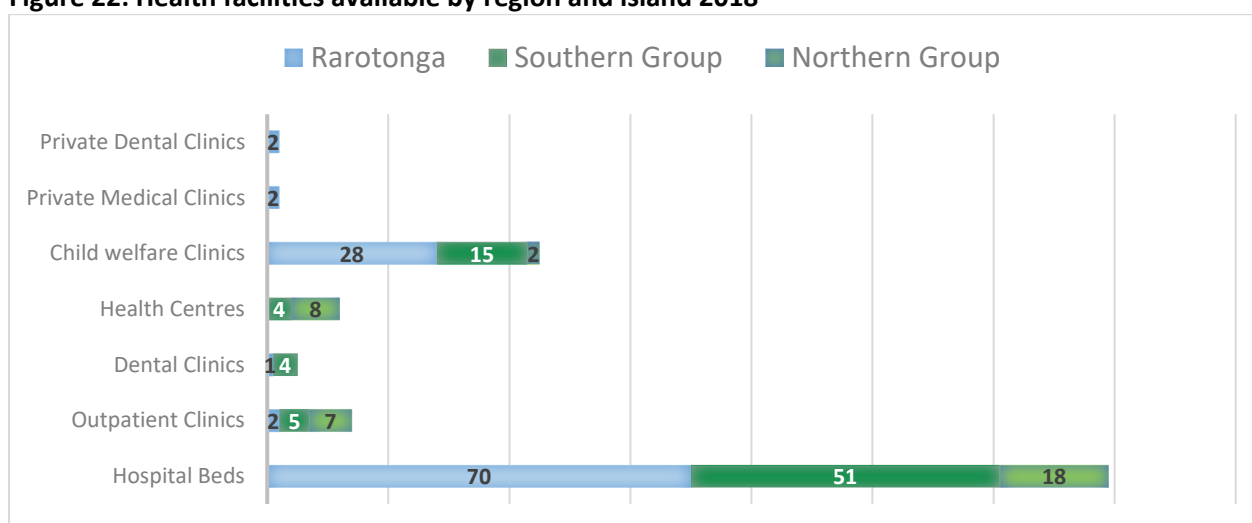


Health services

Hospital facilities in the Cook Islands

Health services are provided from two hospitals, one located on Rarotonga and another on Aitutaki. The provision of basic health services to other islands are managed by nurse practitioners and on some Islands by a registered nurse based at local health centres. **Figure 22** shows the various health facilities in the Cook Islands.

Figure 22: Health facilities available by region and island 2018

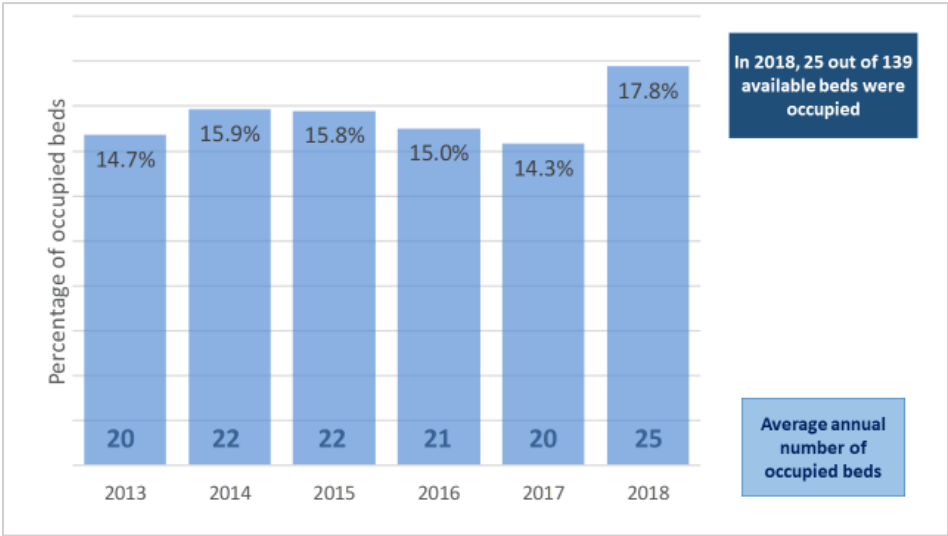


Hospital occupancy

Hospital occupancy reflects the utilisation of the Cook Islands' two inpatient hospitals. **Figure 23** shows, on average 22 beds are occupied daily in the period 2014 - 2018. In Rarotonga where there is a 70 bed occupancy, on average 22 beds are occupied. On Aitutaki there is a 28 bed occupancy hospital, on average two beds were occupied daily over the five year period. This calculation is based from the total number of inpatient days each year divided by the numbers of beds available for inpatient use. Overall the Cook Islands overall the bed occupancy rate has been quite flat prior to 2018. On average 16% of daily available beds are occupied. In 2018, bed occupancy increased by 17% over previous years.

The overall increase was driven by increased occupancy at Rarotonga Hospital. Bed occupancy increased by 24% to 33% in 2018 from 26% in previous years. This indicates an increase in the number of admissions and/or patients are staying longer before being discharged due to the severity of their conditions. On Aitutaki it is showing a declining trend from 8% in 2014 to 6% in 2018. A similar trend is seen in all other islands

Figure 23: Admissions bed occupancy percentage 2013 - 2017



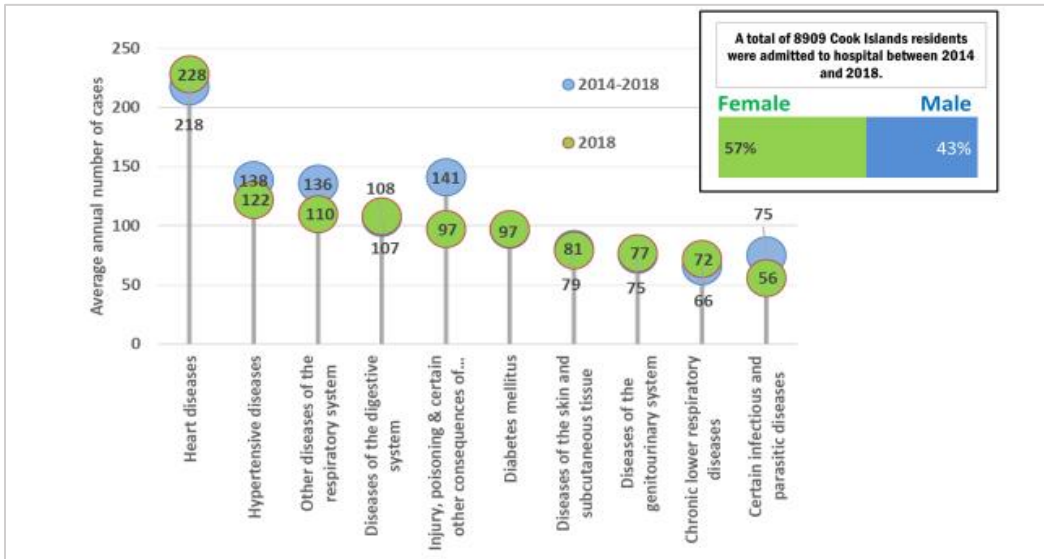
Hospitalisations

Common causes of Inpatient admissions

Over the last five years, the main cause of admissions in the Cook Islands was heart diseases, around 218 cases per year (see **Figure 24**). The top 10 leading causes of patients admitted for further care accounted for 62% of the total morbidity in 2018. **Note:** that the figure reports number of cases of diagnosed morbidity (disease), not the number of patients seen.

The most common cause of inpatient admissions for women were for respiratory diseases, genitourinary system and hypertension cases. For males the most common were heart conditions, injuries, poisoning and skin diseases.

Figure 24: Ten leading causes of inpatient admissions 2017 - 2018



Hospital admissions by Island groups

Figure 25 shows a significant movement of patients to the main hospital and/or further overseas from the Pa Enua centres with the admission numbers mostly reported fewer than ten.

Figure 25: Number of admissions by Island 2016 - 2018

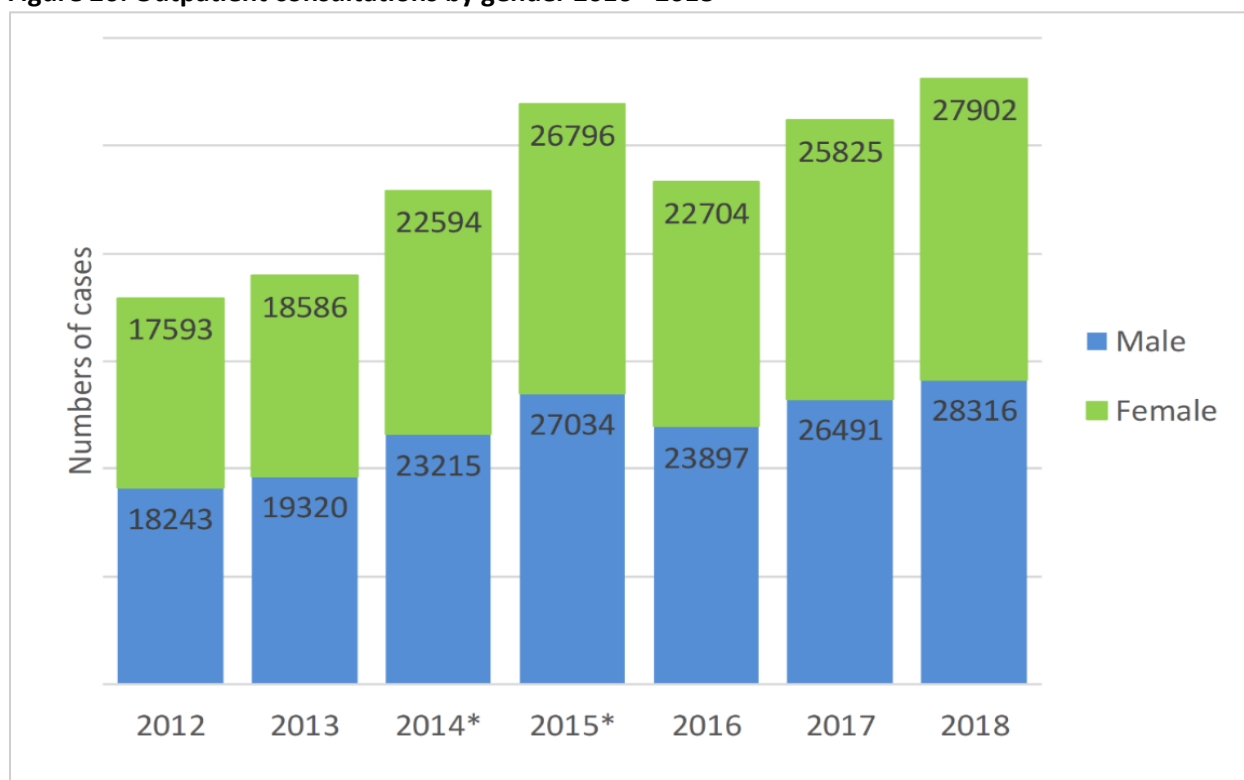


From 2015 to 2017 over 46,000 consultations were recorded from the hospital and the health centre visits at the general outpatients department. The most common services provided in the outpatient are the dressings of open wounds and injections (see **Figure 26**).

Outpatient service visits

The outpatient department in the Cook Islands provides consultations, dressings, injections, minor operations and other services required for specialised clinics and visiting specialists.

Figure 26: Outpatient consultations by gender 2016 - 2018



**Numbers have been adjusted for missing records in these years*

Referral patterns from the Pa Eヌua

Patients that reside in the Pa Eヌua are referred to the main Island of Rarotonga for additional secondary level health care. Cases that are more complicated are then referred to New Zealand for complex secondary and tertiary level care not provided at Rarotonga Hospital.

Figure 27 shows a slight increase between 2014 and 2018. However, the pattern is punctuated by a dip in the middle three years to recover at a peak in 2018. Numbers ranged from the 232 in 2016 to 298 in 2018, with an average of 261 patients each year. Overseas patients ranged from 116 in 2014 to 197 in 2018.

Primarily referrals to Rarotonga for the last three years are from Aitutaki, at a rate of around 100 patients per year. Followed by Mangaia and Atiu, at around 36 patients per year. An average of over 21 patients were referred from Pukapuka and Nassau, 14 from Penrhyn and 12 from Manihiki. Southern group referrals increased over the last few years while northern group referrals declined.

Figure 27: Number of patients from Pa Eヌua referred to Rarotonga Hospital or overseas 2014 -2018



Motor vehicle crashes

There had been a high number of road traffic crashes occurring in the Cook Islands mainly from motor bikes as a result from speeding, driving carelessly on the road and driving under the influence of alcohol. Some of these crashes occurred due to the condition of the roads and domestic animals (dogs) wandering freely across public roads.

Figure 28: Admissions due to transport crashes in Rarotonga 2009 - 2018

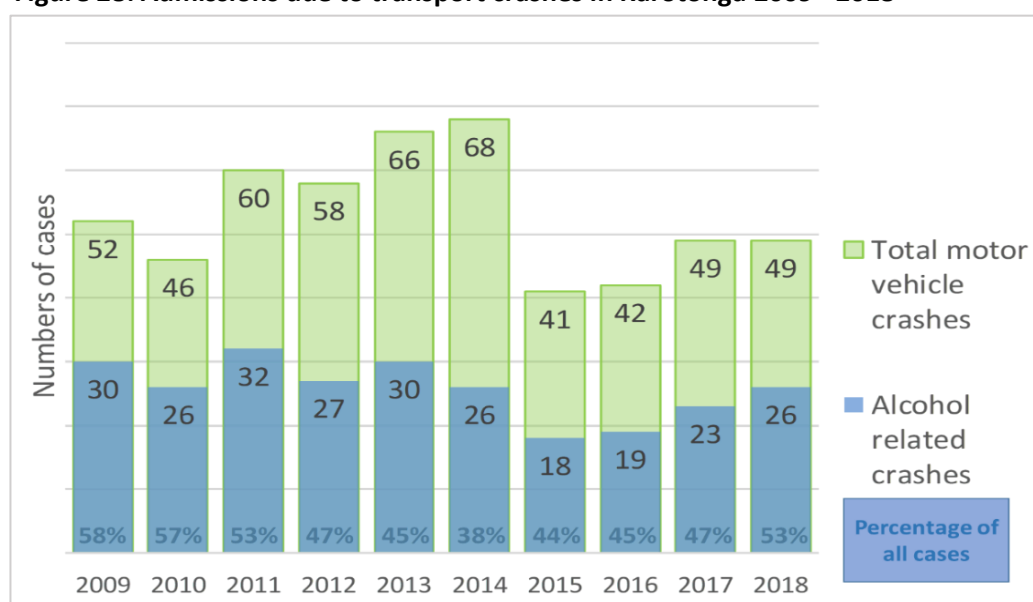
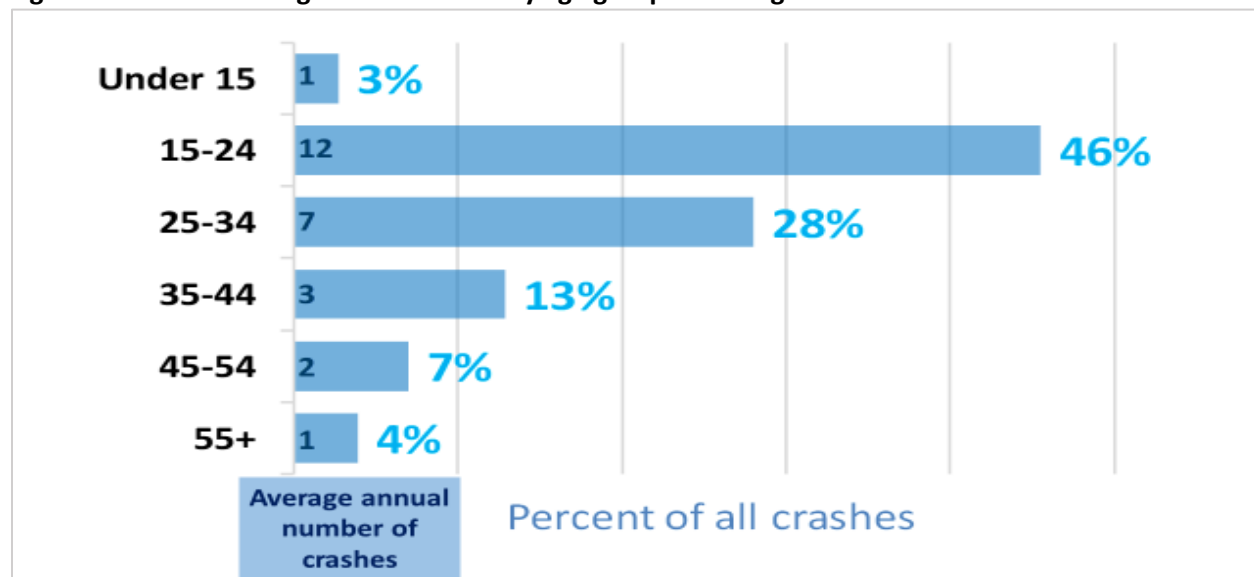


Figure 28 shows the high number of hospitalised transport crashes to the Rarotonga Hospital due to the severity of the injury and those with alcohol consumption for the years 2009 to 2018. The number of crashes in the last five-year period ranges between the lowest of 41 in 2015 to 68 the highest in 2014, with an average of almost 50 cases a year.

Alcohol related crashes shows a decline over the years from 30 in 2009 to 26 in 2018. However looking at the rates in comparison to the overall number of crashes admitted for the same period, this is showing high reported at an average of just over 50% a year. That is for every two crashes occurring one of it is of alcohol related.

Figure 29 shows that over the last ten years most alcohol related motor vehicle crashes that required hospital admission occurred among 15-34 year age groups. They account for nearly three quarters of alcohol related hospital admissions from motor vehicle crashes.

Figure 29: Annual average motor vehicle by age group Rarotonga 2009 - 2018



APPENDICES

Appendix 1: Data Sources

There are several indicator sets in use in the Cook Islands and many are not completely compatible due to differences in indicator definitions, hence 20 national core indicators were developed to give a broader picture of health, and the operation of TMO activities identified in the National Health Information Strategy 2015-2019.

Such activities include the continuous capacity building with certifiers and coders to reduce the proportion of deaths coded to ill-defined causes; and to improve on completions of several specifically designed MedTech32 templates, to become the main data source register and act as the main data collection tools as well for most of these indicators.

MedTech32

This is a highly modular fully featured practice management system. MedTech32 provides the stability required to maintain the integrity of your data. It features a very stable database and has become integral in optimizing the efficiency of many medical practices. It can also be utilised in both primary and secondary health care environments.

Its major core functionality includes:

- Demographics – records containing extensive information on patient demographic;
- Clinical Notes – covers medications, disease classifications and electronic receipt of pathology and radiology results, an outbox
- Recalls and Screening – templates necessary for any special requirements, as well as the basic recalls including: hypertension, cervical screening, and diabetes. The recall function vastly increases practice efficiency and the facility is available to automatically generate recall letters
- Prescribing
- Accounts – provides comprehensive accounting functions and is able to generate a wide range of standard and customized reports.

MedTech32 also provides other functions such as:

- Health Assessment and Management Tools – includes a cardiovascular risk assessment tool, growth charts, and Ministry of Health treatment guidelines
- A Drawing Tool for Anatomical References
- Attachments Manager – able to link files directly to an individual patient record
- Interface with Laboratory Results – to receive electronic lab results that can then be charted and graphed
- Query Builder – useful reporting tool that provides the ability to integrate most of the data that has been entered into MedTech32
- Immunisation – interfaces with the national immunization register
- Interfacing with Third Party Applications.

Also apart from data entry, training on the use of these data are provided to users enabling them to analyse what they have inputted or documented as a means of developing a culture of information use among data collectors and users.

These MedTech32 templates are specifically the:

- Outpatient triaging and cardiovascular risk assessment, clinics triaging (CVR1)
- NCD register (NCDREG)
- Cancer (CANCER)
- Fish Poisoning (FISH)

- Dengue-Zika-Chickungunya (DENZIK)
- Syndrome (SYND) - for acute fever and rash, diarrhea, prolonged fever and influenza like-illness (ILI)
- Admission (ADM)
- Discharged (DIS)
- Death (D)
- Injury Surveillance (CIIS)
- Road Traffic accident (MVA)
- Baby birth details (BIRTH)
- Mothers details (BIRTH2)
- Antenatal clinic (ANC)
- Post Natal clinic (PNC)
- Gestational Diabetic (GDMN)
- Outpatient Stats (OPD)
- OPD Triage Template (TRIAGE)
- Body Mass Index (BMI)
- Patient Referral NZ (REFER)
- Patient Referral OI (REFOI)
- Dental details (DENT1, DENT2, DENT3, DENT4, DENT5, DENT6)

Furthermore, through the read codes of MedTech32 for disease classifications on all patients consulted at any of the health facility in the Cook Islands, and other modules associated with MedTech32, such as the appointment books system and the invoicing system used to capture any health data.

Appendix 2: Data tables

Table 1.4: Resident population by sex, usual residence and five year age groupings

COOK ISLANDS 2016

Sex: Both

Location	Age Groups																	
	Total	<5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	>79
RAROTONGA	10,649	850	940	862	822	742	700	683	644	742	769	746	605	487	384	293	221	159
Kikii-Ooa-Pue-Tupapa	1,716	139	143	140	146	125	115	113	112	114	121	114	84	92	59	45	29	25
Takuvaine	702	57	63	60	61	61	39	50	42	47	47	50	44	31	16	11	8	15
Tutakimoo-Teotue	286	35	24	22	15	24	15	17	17	20	18	19	15	17	15	4	6	3
Avatiu-Ruatonga-Atupa	891	61	85	65	61	65	63	61	43	63	66	60	52	52	30	22	23	19
Nikao-Panama	1,311	113	128	115	118	87	66	87	89	106	104	84	62	52	55	21	13	11
Ruaau-Arerenga	1,158	81	82	93	74	95	87	85	77	79	75	77	74	47	42	36	35	19
Akooa-Betela	730	61	73	53	67	54	47	35	44	39	69	48	46	33	23	20	10	8
Murienua	813	74	62	65	54	68	59	45	52	53	61	56	42	36	25	29	19	13
Titikaveka	1,167	84	111	90	85	51	74	67	69	78	82	102	79	47	51	44	34	19
Ngatangia	896	64	74	64	68	56	60	63	47	60	78	62	64	34	38	28	23	13
Matavera	979	81	95	95	73	56	75	60	52	83	48	74	43	46	30	33	21	14
SOUTHERN ISLANDS	3,072	275	327	331	222	142	137	144	139	170	214	224	177	152	144	116	87	71
Aitutaki	1,712	168	184	179	108	93	93	102	97	88	115	117	89	72	70	66	44	27
Mangaia	493	34	46	69	45	21	5	9	19	25	38	37	37	27	26	25	16	14
Atiu	423	37	51	45	29	9	25	15	14	26	37	29	22	24	23	13	13	11
Mauke	289	23	22	28	27	10	11	14	6	23	9	25	24	18	15	11	9	14
Mitiao	155	13	24	10	13	9	3	4	3	8	15	16	5	11	10	1	5	5
NORTHERN ISLANDS	1,081	136	138	138	108	52	56	61	52	53	61	70	56	32	21	17	9	21
Palmerston	57	6	5	9	8	3	1	3	4	3	3	-	1	2	3	1	1	4
Pukapuka	425	62	61	58	46	22	26	19	11	15	20	30	19	13	4	7	2	10
Nassau	78	12	12	10	13	4	2	4	1	5	3	5	4	-	-	2	1	-
Manihiki	212	24	21	21	13	5	14	10	10	12	18	23	19	8	8	4	-	2
Rakahanga	83	6	8	6	7	4	2	9	6	8	7	1	5	5	3	2	2	2
Penrhyn	226	26	31	34	21	14	11	16	20	10	10	11	8	4	3	1	3	3
COOK ISLANDS	14,802	1,261	1,405	1,331	1,152	936	893	888	835	965	1,044	1,040	838	671	549	426	317	251

Table 1.4: Resident population by sex, usual residence and five year age groupings (continued)

COOK ISLANDS 2016

Sex: Male

Location	Age Groups																	
	Total	<5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	>79
RAROTONGA	5,199	438	474	439	407	342	330	309	309	351	382	365	305	242	198	144	96	68
Kikii-Ooa-Pue-Tupapa	857	68	80	78	70	61	48	47	59	50	67	54	48	49	34	18	14	12
Takuvaine	341	28	30	27	34	33	22	23	17	21	25	27	19	15	9	5	2	4
Tutakimoo-Teotue	144	21	12	13	5	15	6	6	9	10	8	8	8	7	10	2	4	-
Avatiu-Ruatonga-Atupa	431	31	34	32	34	28	34	26	21	28	36	33	21	30	16	9	8	10
Nikao-Panama	612	56	65	45	57	35	37	38	41	48	50	41	30	23	25	10	7	4
Ruaau-Arerenga	565	42	43	50	40	42	37	35	34	43	37	40	29	30	20	20	13	10
Akooa-Betela	363	35	34	30	32	24	24	17	21	17	29	25	27	18	13	12	3	2
Murienua	400	36	30	37	26	27	30	26	21	29	32	25	22	19	11	14	10	5
Titikaveka	564	48	57	42	44	23	33	30	38	37	34	50	43	16	26	20	15	8
Ngatangia	438	32	39	33	27	26	29	32	23	23	44	30	33	17	20	15	9	6
Matavera	484	41	50	52	38	28	30	29	25	45	20	32	25	18	14	19	11	7
SOUTHERN ISLANDS	1,524	145	174	176	108	72	62	71	67	73	106	118	89	67	72	52	40	32
Aitutaki	860	97	101	95	50	44	41	51	47	40	52	63	42	32	34	32	25	14
Mangaia	253	18	29	38	20	15	1	4	10	8	23	17	22	14	14	11	4	5
Atiu	202	16	22	20	17	4	11	10	5	14	18	17	9	12	10	6	7	4
Mauke	136	11	13	18	17	5	6	4	4	8	3	10	12	4	10	3	2	6
Mitiao	73	3	9	5	4	4	3	2	1	3	10	11	4	5	4	-	2	3
NORTHERN ISLANDS	569	76	65	77	61	27	31	25	26	29	32	43	26	18	13	8	5	7
Palmerston	28	4	2	4	5	2	1	1	1	2	1	-	-	2	3	-	-	-
Pukapuka	221	38	32	29	26	13	11	6	6	8	11	19	8	5	1	3	2	3
Nassau	36	5	3	8	6	3	1	2	1	1	-	5	-	-	-	1	-	-
Manihiki	120	13	10	13	8	1	9	4	6	7	9	13	11	7	5	2	-	2
Rakahanga	41	3	3	3	2	2	1	6	2	5	4	1	2	2	2	1	1	1
Penrhyn	123	13	15	20	14	6	8	6	10	6	7	5	5	2	2	1	2	1
COOK ISLANDS	7,292	659	713	692	576	441	423	405	402	453	520	526	420	327	283	204	141	107

Table 1.4: Resident population by sex, usual residence and five year age groupings (continued)

COOK ISLANDS 2016

Sex: Female

Location	Age Groups																	
	Total	<5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	>79
RAROTONGA	5,450	412	466	423	415	400	370	374	335	391	387	381	300	245	186	149	125	91
Kiikii-Ooa-Pue-Tupapa	859	71	63	62	76	64	67	66	53	64	54	60	36	43	25	27	15	13
Takuvaine	361	29	33	33	27	28	17	27	25	26	22	23	25	16	7	6	6	11
Tutakimoo-Teotue	142	14	12	9	10	9	9	11	8	10	10	11	7	10	5	2	2	3
Avatiu-Ruatonga-Atupa	460	30	51	33	27	37	29	35	22	35	30	27	31	22	14	13	15	9
Nikao-Panama	699	57	63	70	61	52	29	49	48	58	54	43	32	29	30	11	6	7
Ruaau-Arerenga	593	39	39	43	34	53	50	50	43	36	38	37	45	17	22	16	22	9
Akooa-Betela	367	26	39	23	35	30	23	18	23	22	40	23	19	15	10	8	7	6
Murienua	413	38	32	28	28	41	29	19	31	24	29	31	20	17	14	15	9	8
Titikaveka	603	36	54	48	41	28	41	37	31	41	48	52	36	31	25	24	19	11
Ngatangia	458	32	35	31	41	30	31	31	24	37	34	32	31	17	18	13	14	7
Matavera	495	40	45	43	35	28	45	31	27	38	28	42	18	28	16	14	10	7
SOUTHERN ISLANDS	1,548	130	153	155	114	70	75	73	72	97	108	106	88	85	72	64	47	39
Aitutaki	852	71	83	84	58	49	52	51	50	48	63	54	47	40	36	34	19	13
Mangaia	240	16	17	31	25	6	4	5	9	17	15	20	15	13	12	14	12	9
Atiu	221	21	29	25	12	5	14	5	9	12	19	12	13	12	13	7	6	7
Mauke	153	12	9	10	10	5	5	10	2	15	6	15	12	14	5	8	7	8
Mitiaro	82	10	15	5	9	5	-	2	2	5	5	5	1	6	6	1	3	2
NORTHERN ISLANDS	512	60	73	61	47	25	25	36	26	24	29	27	30	14	8	9	4	14
Palmerston	29	2	3	5	3	1	-	2	3	1	2	-	1	-	-	1	1	4
Pukapuka	204	24	29	29	20	9	15	13	5	7	9	11	11	8	3	4	-	7
Nassau	42	7	9	2	7	1	1	2	-	4	3	-	4	-	-	1	1	-
Manihiki	92	11	11	8	5	4	5	6	4	5	9	10	8	1	3	2	-	-
Rakahanga	42	3	5	3	5	2	1	3	4	3	3	-	3	3	1	1	1	1
Penrhyn	103	13	16	14	7	8	3	10	10	4	3	6	3	2	1	-	1	2
COOK ISLANDS	7,510	602	692	639	576	495	470	483	433	512	524	514	418	344	266	222	176	144

**Table 2.1: Number and rate of births, deaths, infant deaths,
maternal deaths and fetal deaths
COOK ISLANDS 1985 - 2018**

YEAR	Live Births		Deaths		Deaths under 1 yr		Maternal Deaths		Fetal 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	2	4.6
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	9.3
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	9.8
1994	568	30.9	114	6.2	3	5.3	0	0	4	7.0
1995	514	27.9	115	6.3	2	4.0	1	2	2	3.9
1996	510	27.1	105	5.6	12	23.5	0	0	4	7.8
1997	412	23.5	134	7.7	14	34.0	0	0	7	16.7
1998	389	23.3	111	6.6	7	18.0	0	0	3	7.7
1999	361	23.1	96	6.2	6	16.6	0	0	4	11.0
2000	309	20.6	127	8.5	6	19.4	0	0	4	12.8
2001	306	21.7	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	16.0	0	0	3	9.5
2005	297	21.7	95	6.9	3	10.1	0	0	6	19.8
2006	304	20.5	94	6.4	3	9.9	0	0	3	9.8
2007	320	21.8	100	6.8	8	25.0	0	0	3	9.3
2008	293	20.5	65	4.5	2	6.8	0	0	3	10.1
2009	280	21.1	82	6.2	0	0.0	0	0	3	10.6
2010	289	24.3	97	8.2	1	3.5	0	0	2	6.9
2011	284	19.3	108	7.3	2	7.0	0	0	1	3.5
2012	292	20.4	113	7.9	2	6.8	0	0	0	0.0
2013	261	18.5	112	7.9	0	0.0	0	0	0	0.0
2014	223	16.4	131	9.6	0	0.0	0	0	0	0.0
2015	218	16.8	118	9.1	1	4.6	0	0	1	4.6
2016	243	21.1	101	8.8	2	8.2	0	0	1	4.1
2017	231	20.1	92	8.0	3	13.0	0	0	0	0.0
2018	228	19.8	127	11.0	3	13.2	0	0	3	13.0

Note: 1 - Source for population data is the mid-year population estimated at June Quarter, Statistics Office

2 - Crude birth rate and crude death rate are calculated per 1,000 resident population as of 1992

3 - Deaths of children under one year of age per 1,000 live births

4 - Total Birth does not include Stillbirth

5 - Resident population comprises only those normally resident in the Cook Islands

Table 2.2: Live Births by Region & Island, Year and Sex
COOK ISLANDS 2015 - 2018

REGION & ISLAND	2015			2016			2017			2018		
	Both Sexes	Male	Female	Both Sexes	Male	Female	Both Sexes	Male	Female	Both Sexes	Male	Female
COOK ISLANDS	218	107	111	243	125	118	231	117	114	228	112	116
RAROTONGA	203	98	105	222	112	110	216	107	109	216	107	109
SOUTHERN GROUP excluding Rarotonga	10	7	3	17	11	6	14	9	5	10	4	6
Aitutaki	9	7	2	12	8	4	12	8	4	10	4	6
Mangaia	0	0	0	3	1	2	0	0	0	0	0	0
Atiu	1	0	1	2	2	0	2	1	1	0	0	0
Mauke	0	0	0	0	0	0	0	0	0	0	0	0
Mitiaro	0	0	0	0	0	0	0	0	0	0	0	0
NORTHERN GROUP	5	2	3	4	2	2	1	1	0	2	1	1
Palmerston	0	0	0	0	0	0	0	0	0	0	0	0
Pukapuka/Nassau	5	2	3	3	1	2	1	1	0	2	1	1
Manihiki	0	0	0	1	1	0	0	0	0	0	0	0
Rakahanga	0	0	0	0	0	0	0	0	0	0	0	0
Penrhyn	0	0	0	0	0	0	0	0	0	0	0	0

Table 2.3: Mothers given Birth by Region & Island and Age of Mother
COOK ISLANDS 2018

REGION & ISLAND	Age of Mother								
	Total	< 15	15-19	20-24	25-29	30-34	35-39	40-44	45 +
COOK ISLANDS	227	0	22	71	59	39	27	9	0
RAROTONGA	215	0	21	69 ^a	55	35	26	9	0
SOUTHERN GROUP excluding Rarotonga	10	0	1	1	3	4	1	0	0
Aitutaki	10	0	1	1	3	4	1	0	0
Mangaia	0	0	0	0	0	0	0	0	0
Atiu	0	0	0	0	0	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	2	0	0	1	1	0	0	0	0
Palmerston	0	0	0	0	0	0	0	0	0
Pukapuka/Nassau	2	0	0	1	1	0	0	0	0
Manihiki	0	0	0	0	0	0	0	0	0
Rakahanga	0	0	0	0	0	0	0	0	0
Penrhyn	0	0	0	0	0	0	0	0	0

Note: ^a Denote a pair of twins

**Table 2.4: Mothers given Birth by Region & Island and Age of Mother
COOK ISLANDS 2017**

REGION & ISLAND	Age of Mother								
	Total	< 15	15-19	20-24	25-29	30-34	35-39	40-44	45 +
COOK ISLANDS	229	0	25	56	76	40	20	12	0
RAROTONGA	214	0	25	54	71	36 ^{aa}	16	12	0
SOUTHERN GROUP excluding Rarotonga	14	0	0	2	5	3	4	0	0
Aitutaki	12	0	0	1	4	3	4	0	0
Mangaia	0	0	0	0	0	0	0	0	0
Atiu	2	0	0	1	1	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	1	0	0	0	0	1	0	0	0
Palmerston	0	0	0	0	0	0	0	0	0
Pukapuka/Nassau	1	0	0	0	0	1	0	0	0
Manihiki	0	0	0	0	0	0	0	0	0
Rakahanga	0	0	0	0	0	0	0	0	0
Penrhyn	0	0	0	0	0	0	0	0	0

Note: ^{aa} Denote 2 pair of twins

**Table 2.5: Mothers Given Birth and Fertility Rates by Age Groupings
COOK ISLANDS 2009 - 2018**

Age Group	Female Resident Population			Number of Mothers									
	2006	2011	2016	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
15-19	630	597	576	54	37	37	41	40	31	24	24	25	22
20-24	545	512	495	72	85	70	80	76	54	59	63	56	71
25-29	473	493	470	67	55	71	65	64	57	53	56	76	59
30-34	554	462	483	45	57	47	56	38	49	45	59	42	39
35-39	551	521	433	37	38	40	33	31	21	21	29	20	27
40-44	540	542	512	7	17	17	16	10	11	13	9	12	9
45-49	457	528	524	0	2	1	0	1	0	1	1	0	0
Total	3,750	3,655	3493	282	291	283	291	260	223	216	241	231	227
Age-Specific Fertility Rate (per 1'000 Women)													
15-19				86	59	62	69	67	52	40	42	43	38
20-24				132	156	137	156	148	105	115	127	113	143
25-29				142	116	144	132	130	116	108	119	162	126
30-34				81	103	102	121	82	106	97	122	87	81
35-39				67	69	77	63	60	40	40	67	46	62
40-44				13	31	31	30	18	20	24	18	23	18
45-49				0	4	2	0	2	0	2	2	0	0
General Fertility Rate (per 1'000 Women)				75	78	77	80	71	61	59	69	66	65
Total Fertility Rate				2.6	2.7	2.8	2.9	2.5	2.2	2.1	2.5	2.4	2.3

GFR = Total Number of Births/Female Population of CBA (15-49).

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

Note: Mothers whos age is < 15 are included in the 15-19 age groups,
those whos age is > 49 are included in the 45-49 age groups.

Table 2.6: Suspected cases of notifiable diseases by year
COOK ISLANDS: 2013 - 2018

Disease	2013	2014	2015	2016	2017	2018
Acute Respiratory Infection	9,181	9,933	9,235	8,753	8,774	8,297
Asthma	84	52	31	66	78	133
Bronchitis	465	450	435	303	337	141
Chickenpox	37	51	19	50	44	145
Chikungunya			11	0	0	0
Conjunctivitis	199	152	171	100	40	70
Dengue	4	5	0	0	0	1
Diarrhoea child/adult	221	182	143	204	109	129
Diarrhoea infant	17	5	7	3	3	7
Diphtheria	0	0	0	0	0	0
Filariasis	0	0	0	0	0	0
Fish Poisoning	90	65	41	69	69	29
Food Poisoning	40	34	28	54	49	14
Gastroenteritis	725	653	594	655	646	585
Influenza & Viral Illness	514	420	324	424	605	670
Leprosy	0	0	0	0	0	0
Measles	1	0	0	0	0	4
Meningitis	2	1	0	1	0	1
Mumps	5	1	0	2	0	9
Otitis Media	270	268	317	231	242	256
Pneumonia	813	725	637	397	192	266
Rheumatic fever (acute & chronic)	15	7	10	24	10	64
Scabies	317	162	140	206	145	123
Skin Sepsis	2,746	1,152	938	2,046	2,278	1,641
Whooping Cough (Pertussis)	4	0	0	1	0	1
Yaws	0	0	0	0	0	0

Table 2.7: Ciguatera (Fish poisoning) cases seen by year and month
COOK ISLANDS: 2000 - 2018

Year	MONTH												TOTAL
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
2000	9	14	17	9	14	11	0	5	15	9	24	11	138
2001	13	24	7	8	7	6	7	17	13	15	12	4	133
2002	32	25	18	22	19	7	3	4	9	22	13	9	183
2003	20	20	16	28	12	14	5	9	22	19	33	29	227
2004	65	40	45	44	47	23	26	33	39	22	46	39	469
2005	25	17	49	59	50	41	29	33	26	32	31	29	421
2006	25	16	27	27	20	13	12	15	30	31	24	18	258
2007	24	25	20	27	27	23	18	12	20	24	7	18	245
2008	28	36	15	14	20	13	14	14	17	19	18	15	223
2009	19	13	13	9	11	8	7	8	5	11	16	9	129
2010	5	10	10	7	11	9	11	2	4	1	5	3	78
2011	5	3	9	20	8	4	13	10	6	9	6	9	102
2012	10	13	4	4	6	5	6	6	8	11	12	5	90
2013	11	8	6	13	0	3	6	6	4	8	21	4	90
2014	6	8	5	4	2	1	3	2	12	6	7	9	65
2015	4	5	3	2	1	2	1	3	6	4	5	5	41
2016	5	8	9	2	3	12	6	4	5	3	5	7	69
2017	13	9	12	3	5	10	2	4	5	4	0	2	69
2018	3	1	5	2	0	0	2	6	3	2	3	1	28

**Table 2.8: Inpatient Morbidity (Diseases) by Year and Sex
COOK ISLANDS 2014 - 2018**

			2014		2015		2016		2017		2018	
ICD 10 Code	CAUSE		M	F	M	F	M	F	M	F	M	F
Number of Hospital Admissions			826	964	696	955	756	993	703	1,031	845	1,140
A00-B99	I	Certain infectious and parasitic diseases	47	41	67	54	27	40	21	25	5	5
C00-D48	II	Neoplasms	29	4	12	5	9	3	11	12	15	14
D50-D89	III	Diseases of blood & blood-forming organs & certain disorders inv	12	13	10	21	10	19	5	21	13	17
E00-E90	IV	Endocrine, nutritional and metabolic diseases	70	57	73	66	82	71	63	74	79	71
F00-F99	V	Mental and behavioural disorders	35	6	20	11	21	15	15	15	20	14
G00-G99	VI	Diseases of the nervous system	10	19	14	14	13	10	8	15	9	16
H00-H59	VII	Diseases of the eye and adnexa	28	31	11	22	23	34	21	24	16	34
H60-H95	VIII	Diseases of the ear and mastoid process	2	0	1	3	0	0	1	0	3	5
I00-I99	IX	Diseases of the circulatory system	200	169	216	170	192	164	148	189	175	163
J00-J99	X	Diseases of the respiratory system	81	95	134	131	125	81	75	104	97	108
K00-K93	XI	Diseases of the digestive system	65	56	54	41	67	38	58	48	68	54
L00-L99	XII	Diseases of the skin and subcutaneous tissue	44	33	41	33	56	35	51	31	76	32
M00-M99	XIII	Diseases of the musculoskeletal system and connective tissue	28	5	21	7	35	10	21	8	18	8
N00-N99	XIV	Diseases of the genitourinary system	35	46	24	42	43	42	14	54	26	53
O00-O99	XV	Pregnancy, childbirth and the puerperium	0	281	0	229	0	275	0	256	0	288
P00-P96	XVI	Certain conditions originating in the perinatal period	0	0	0	4	0	2	1	1	0	0
Q00-Q99	XVII	Congenital malformations, deformations and chromosomal abnorm	0	0	0	1	0	0	1	0	0	0
R00-R99	XVIII	Symptoms, signs and abnormal clinical and laboratory findings, no	55	43	73	78	33	45	18	37	17	24
S00-T98	XIX	Injury, poisoning and certain other consequences of external cause	156	83	76	65	86	38	64	40	58	39
V01-Y98	XX	External causes of morbidity and mortality	59	48	26	24	27	26	48	37	19	19

**Table 2.9: Ten leading causes of inpatient morbidity by sex
COOK ISLANDS: 2018**

Rank	CAUSE	Male	Female	Both Sexes	%
	ALL CAUSES	550	496	1,046	61.6
1	Heart diseases	129	99	228	13.4
2	Diseases of the digestive system	68	54	122	7.2
3	Hypertensive diseases	46	64	110	6.5
4	Diseases of the skin and subcutaneous tissue	76	32	108	6.4
5	Injury, poisoning & certain other consequences of external causes	58	39	97	5.7
6	Diabetes mellitus	50	47	97	5.7
7	Diseases of the genitourinary system	26	53	79	4.7
8	Pneumonia	41	36	77	4.5
9	Other diseases of the respiratory system	32	40	72	4.2
10	Chronic lower respiratory diseases	24	32	56	3.3

**Table 2.10: Ten leading causes of inpatient morbidity by sex
COOK ISLANDS: 2017**

Rank	CAUSE	Male	Female	Both Sexes	%
	ALL CAUSES	473	544	1,017	68.8
1	Heart diseases	83	104	187	12.7
2	Hypertensive diseases	65	85	150	10.1
3	Other diseases of the respiratory system	49	68	117	7.9
4	Diseases of the digestive system	58	48	106	7.2
5	Injury, poisoning & certain other consequences of external causes	64	40	104	7.0
6	Diabetes mellitus	42	53	95	6.4
7	Diseases of the skin and subcutaneous tissue	51	31	82	5.5
8	Diseases of the genitourinary system	14	54	68	4.6
9	Chronic lower respiratory diseases	26	36	62	4.2
10	Certain infectious and parasitic diseases	21	25	46	3.1

Table 2.16: Admissions due to road traffic crashes**RAROTONGA: 2009 - 2018**

Type of Accident	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Transport Crashes - Rarotonga	52	46	60	58	66	68	41	42	49	49
Male	35	28	41	35	46	42	22	24	31	31
Female	17	18	19	23	20	26	19	18	18	18
Alcohol Related	30	26	32	27	30	26	18	19	23	26
Percentage Alcohol Related	58%	57%	53%	47%	45%	38%	44%	45%	47%	53%
Alcohol Related Deaths	2	2	4	2	4	4	3	1	1	3
Non Alcohol Related Deaths	0	0	0	2	2	1	2	0	0	0
Transport Crashes - Outer Islands								4	3	4
	COOK ISLANDS									
Total Resident Deaths	3	2	4	5	6	6	5	1	1	4
Visitor and Contractor Deaths									2	4
Resident population estimates	13,300	11,900	14,700	14,300	14,100	13,600	13,000	11,500	11,500	11,500
Rate /100,000 resident population	22.6	16.8	27.2	35.0	42.6	44.1	38.5	8.7	8.7	34.8

**Table 2.17: Admissions due to alcohol related transport accidents
by age groupings and year****RAROTONGA: 2009 - 2018**

Age Group	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
0 - 14	0	2	0	5	0	0	0	0	0	0
15 - 24	15	12	16	9	13	12	8	6	13	13
25 - 34	7	5	7	7	12	8	7	8	3	8
35 - 44	6	5	4	6	1	1	2	2	4	2
45 - 54	1	1	3	0	2	3	1	1	3	3
55 +	1	1	2	0	2	2	0	2	0	0
Total	30	26	32	27	30	26	18	19	23	26

Table 2.18: Mortality by region & island, year and sex**COOK ISLANDS: 2015 - 2018**

REGION & ISLAND	2015			2016			2017			2018		
	Both Sexes	Male	Female	Both Sexes	Male	Female	Both Sexes	Male	Female	Both Sexes	Male	Female
COOK ISLANDS	118	59	59	101	63	38	92	50	42	127	68	59
RAROTONGA	71	34	37	63	44	19	62	36	26	83	49	34
SOUTHERN GROUP excluding Rarotonga	40	21	19	32	16	16	25	12	13	28	13	15
Aitutaki	15	5	10	13	5	8	13	6	7	14	6	8
Mangaia	8	5	3	9	5	4	3	1	2	8	3	5
Atiu	7	5	2	4	3	1	2	0	2	5	4	1
Mauke	7	5	2	3	1	2	5	4	1	1	0	1
Mitiaro	3	1	2	3	2	1	2	1	1	0	0	0
NORTHERN GROUP	7	4	3	6	3	3	5	2	3	16	6	10
Palmerston	0	0	0	0	0	0	2	1	1	0	0	0
Pukapuka/Nassau	2	2	0	2	1	1	1	0	1	9	2	7
Manihiki	1	0	1	1	0	1	0	0	0	3	3	0
Rakahanga	0	0	0	0	0	0	2	1	1	0	0	0
Penrhyn	4	2	2	3	2	1	0	0	0	4	1	3

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

Table 2.19: Selected common underlying causes of mortality by year and rate
COOK ISLANDS: 2016 - 2018

Cause of Death	2016		2017		2018	
	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	36	313.0	29	252.2	44	382.6
Hypertension	7	60.9	2	17.4	1	8.7
Ischaemic heart disease	5	43.5	9	78.3	14	121.7
Cerebrovascular Disease	13	113.0	10	87.0	11	95.7
Heart Failure	0	0.0	0	0.0	0	0.0
Other	11	95.7	8	69.6	18	156.5
Neoplasms	17	147.8	15	130.4	22	191.3
Liver and intrahepatic bile ducts	1	8.7	2	17.4	3	26.1
Trachea, Bronchus & Lungs	6	52.2	5	43.5	4	34.8
Prostate	3	26.1	4	34.8	3	26.1
Female Breast	2	17.4	0	0.0	0	0.0
Other	5	43.5	4	34.8	12	104.3
Diseases of the Respiratory System	7	60.9	10	87.0	14	121.7
Pneumonia	2	17.4	5	43.5	7	60.9
Bronchitis, Emphysema & Asthma	4	34.8	5	43.5	5	43.5
Other	1	8.7	0	0.0	2	17.4
Endocrine, Nutritional & Metabolic Diseases & Immunity Disorders	25	217.4	17	147.8	21	182.6
Diabetes Mellitus	22	191.3	16	139.1	21	182.6
Other	3	26.1	1	8.7	0	0.0
Symptoms, Signs & Ill-Defined Conditions	0	0.0	0	0.0	4	34.8
Certain Infectious and Parasitic Diseases	3	26.1	4	34.8	2	17.4
Septicaemia	3	26.1	3	26.1	2	17.4
Other	0	0.0	1	8.7	0	0.0
Injury, poisoning and certain other consequences of external causes	8	69.6	4	34.8	11	95.7
Injuries to the head	5	43.5	2	17.4	8	69.6
Other	3	26.1	2	17.4	3	26.1
Mental and behavioural disorders due to use of alcohol	0	0.0	0	0.0	0	0.0
Diseases of the Nervous System	1	8.7	3	26.1	2	17.4
Diseases of the Digestive System	0	0.0	2	17.4	2	17.4
Chronic Liver disease and Cirrhosis		0.0	2	17.4	0	0.0
Other		0.0	0	0.0	2	17.4
Certain Conditions Originating in the Perinatal Period	0	0.0	2	17.4	2	17.4
Congenital malformations, deformations & chromosomal abnormalities	2	17.4	1	8.7	0	0.0
Diseases of the Genitourinary System	0	0.0	5	43.5	2	17.4
EXTERNAL CAUSES OF INJURY AND POISONING	8	69.6	3	26.1	11	95.7
Transport accidents	1	8.7	1	8.7	4	34.8
Intentional self-harm	3	26.1	1	8.7	5	43.5
Other	4	34.8	1	8.7	2	17.4

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

Source for population data is Statistics Cook Islands Quarterly Vital Statistics and Population Estimates

COOK ISI ANDS: 2018

[illegible]

COOK ISLANDS: 2017

[illegible]

Table 3.1: Number of cases referred overseas and to Rarotonga
COOK ISLANDS: 2009 - 2018

PERIOD	Overseas	Island										
		TOTAL	Aitutaki	Mangaia	Atiu	Mauke	Mitiaro	Palmerston	Pukapuka/ Nassau	Manihiki	Rakahanga	Penrhyn
2009	137	197	61	30	29	22	11	3	21	11	0	9
2010	158	289	98	62	27	17	27	8	22	8	4	16
2011	150	228	70	41	20	18	13	9	17	13	10	17
2012	172	280	132	37	19	16	20	5	18	15	1	17
2013	134	273	98	40	30	22	22	5	24	17	7	8
2014	116	280	117	35	32	26	16	0	13	22	4	15
2015	155	237	99	25	27	29	15	9	11	8	2	12
2016	120	232	68	32	26	25	13	3	21	19	4	21
2017	147	258	99	33	32	23	20	4	27	7	5	8
2018	197	298	132	43	49	19	9	6	16	9	3	12
QUARTER												
2014 Mar	35	58	20	6	10	4	3	0	2	7	0	6
Jun	26	90	40	15	10	9	4	0	0	8	3	1
Sep	28	67	25	5	8	9	6	0	7	4	0	3
Dec	27	65	32	9	4	4	3	0	4	3	1	5
2015 Mar	42	60	25	5	3	1	6	7	7	3	0	3
Jun	37	103	43	12	16	16	6	1	1	3	1	4
Sep	39	35	15	3	2	11	2	0	1	0	0	1
Dec	37	39	16	5	6	1	1	1	2	2	1	4
2016 Mar	34	63	14	8	5	7	4	2	5	7	3	8
Jun	24	75	27	15	9	9	2	0	4	3	1	5
Sep	30	50	15	4	3	4	5	0	7	6	0	6
Dec	32	44	12	5	9	5	2	1	5	3	0	2
2017 Mar	32	71	27	2	11	5	8	0	9	3	1	5
Jun	36	93	26	21	11	13	7	4	6	3	1	1
Sep	47	56	27	7	7	2	4	0	4	1	3	1
Dec	32	38	19	3	3	3	1	0	8	0	0	1
2018 Mar	39	66	29	5	16	2	0	3	9	0	0	2
Jun	34	90	34	16	15	5	3	3	2	8	0	4
Sep	71	70	35	11	6	9	5	0	2	0	0	2
Dec	53	72	34	11	12	3	1	0	3	1	3	4

**Table 3.2: Patients admitted and discharged from hospital
by region & island and bed occupancy
COOK ISLANDS: 2018**

REGION & ISLAND	Number of				Average Occupied Bed	% Bed Occupancy
	Admissions	Discharges	Bed Days Used	Bed Days Available		
COOK ISLANDS	1,962	1,872	9,021	50,735	24.7	17.8
RAROTONGA	1,663	1,643	8,301	25,550	22.7	32.5
SOUTHERN GROUP excluding Rarotonga	273	209	635	18,615	1.7	3.4
Aitutaki	227	192	607	10,220	1.7	5.9
Mangaia	22	3	8	2,190	0.0	0.4
Atiu	13	7	13	3,285	0.0	0.4
Mauke	9	5	5	2,190	0.0	0.2
Mitiaro	2	2	2	730	0.0	0.3
NORTHERN GROUP	26	20	85	6,570	0.2	1.3
Palmerston	0	0	0	0	0.0	0.0
Pukapuka/Nassau	10	8	25	1,460	0.1	1.7
Manihiki	11	6	40	2,920	0.1	1.4
Rakahanga	3	5	19	730	0.1	2.6
Penrhyn	2	1	1	1,460	0.0	0.1

**Table 3.3: Patients admitted and discharged from hospital by region & island
and bed occupancy
COOK ISLANDS 2017**

REGION & ISLAND	Number of				Average Occupied Bed	% Bed Occupancy
	Admissions	Discharges	Bed Days Used	Bed Days Available		
COOK ISLANDS	1,866	1,835	7,272	50,735	19.9	14.3
RAROTONGA	1,568	1,558	6,548	25,550	17.9	25.6
SOUTHERN GROUP excluding Rarotonga	283	264	673	18,615	1.8	3.6
Aitutaki	237	220	599	10,220	1.6	5.9
Mangaia	20	16	27	2,190	0.1	1.2
Atiu	10	10	10	3,285	0.0	0.3
Mauke	8	8	16	2,190	0.0	0.7
Mitiaro	8	10	21	730	0.1	2.9
NORTHERN GROUP	15	13	51	6,570	0.1	0.8
Palmerston	0	0	0	0	0.0	0.0
Pukapuka/Nassau	3	2	4	1,460	0.0	0.3
Manihiki	7	5	31	2,920	0.1	1.1
Rakahanga	2	3	11	730	0.0	1.5
Penrhyn	3	3	5	1,460	0.0	0.3

**Table 3.4: Patients admitted and discharged from, or dying in hospital
by month and bed occupancy
RAROTONGA: 2018**

Month	Number of			Total Discharges & Deaths	Number of Bed Days		Average Occupied Bed	% Bed Occupancy
	Admissions	Discharges	Deaths		Available	Used		
January	111	111	7	118	2,170	488	15.7	22.5
February	100	91	3	94	1,960	390	13.9	19.9
March	144	139	3	142	2,170	655	21.1	30.2
April	115	106	5	111	2,100	564	18.8	26.9
May	138	124	4	128	2,170	790	25.5	36.4
June	210	204	2	206	2,100	992	33.1	47.2
July	154	145	1	146	2,170	658	21.2	30.3
August	175	164	5	169	2,170	834	26.9	38.4
September	145	138	3	141	2,100	723	24.1	34.4
October	136	131	1	132	2,170	818	26.4	37.7
November	114	125	1	126	2,100	770	25.7	36.7
December	121	125	5	130	2,170	619	20.0	28.5
Total	1,663	1,603	40	1,643	25,550	8,301	22.7	32.5

**Table 3.5: Patients admitted and discharged from, or dying in hospital
by month and bed occupancy
RAROTONGA: 2017**

Month	Number of			Total Discharges & Deaths	Number of Bed Days		Average Occupied Bed	% Bed Occupancy
	Admissions	Discharges	Deaths		Available	Used		
January	123	118	1	119	2,170	482	15.5	22.2
February	113	107	3	110	1,960	447	16.0	22.8
March	122	117	3	120	2,170	480	15.5	22.1
April	119	119	3	122	2,100	433	14.4	20.6
May	185	178	5	183	2,170	542	17.5	25.0
June	129	120	2	122	2,100	620	20.7	29.5
July	120	116	1	117	2,170	448	14.5	20.6
August	160	149	6	155	2,170	630	20.3	29.0
September	147	126	3	129	2,100	981	32.7	46.7
October	110	109	1	110	2,170	427	13.8	19.7
November	118	113	1	114	2,100	524	17.5	25.0
December	122	119	5	124	2,170	494	15.9	22.8
Total	1,568	1,491	34	1,525	25,550	6,548	17.9	25.6

Table 3.6: Outpatient consultations by year, sex and age groups
COOK ISLANDS 2012 - 2018

COOK ISLANDS 2012 - 2018																	
Year	Age Groups																
	Total	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70+	Unknown
	Sex: Both																
2012	35,836	4,097	4,279	2,232	2,204	2,291	1,752	1,839	1,661	2,018	2,183	2,338	1,735	1,693	1,727	3,763	24
2013	37,906	5,033	3,573	2,323	2,455	2,202	1,905	1,918	1,675	2,206	2,399	2,658	1,993	1,930	1,806	3,815	15
2014	19,087	1,597	1,942	1,247	1,160	1,180	1,100	1,063	926	1,118	1,299	1,413	1,210	1,033	842	1,949	8
2015	31,401	3,571	2,834	1,757	1,790	1,708	1,619	1,599	1,513	1,704	2,161	2,375	2,007	1,815	1,510	3,433	5
2016	46,601	5,736	3,134	2,666	2,771	2,695	2,475	2,117	2,188	2,585	3,187	3,599	3,344	2,642	2,406	5,044	12
2017	52,316	5,239	4,200	2,755	2,975	3,129	3,430	3,068	3,017	3,128	3,704	3,845	3,619	2,725	2,386	5,086	10
2018	56,218	5,196	4,054	2,964	3,210	3,154	3,511	3,211	3,368	3,481	3,717	4,236	4,436	3,240	2,708	5,732	0
	Sex: Male																
2012	18,243	2181	2169	1181	1157	1025	828	812	708	976	1092	1337	882	979	944	1962	10
2013	19,320	2640	1834	1218	1221	1002	829	840	718	1107	1228	1473	1020	1083	982	2116	9
2014	9,673	891	990	651	592	557	544	449	479	480	709	737	622	517	439	1,012	4
2015	15,770	2,001	1,442	912	882	777	773	603	678	789	1,126	1,254	982	945	812	1,793	1
2016	23,897	3,067	1,579	1,411	1,320	1,187	1,166	940	1,087	1,221	1,827	1,857	1,810	1,435	1,332	2,653	5
2017	26,491	2,720	2,195	1,400	1,340	1,478	1,576	1,442	1,442	1,558	2,003	1,935	1,898	1,482	1,294	2,724	4
2018	28,316	2,732	2,137	1,476	1,440	1,409	1,617	1,513	1,665	1,830	1,958	2,124	2,268	1,657	1,548	2,942	0
	Sex: Female																
2012	17,593	1916	2110	1051	1047	1266	924	1027	953	1042	1091	1001	853	714	783	1801	14
2013	18,586	2393	1739	1105	1234	1200	1076	1078	957	1099	1171	1185	973	847	824	1699	6
2014	9,414	706	952	596	568	623	556	614	447	638	590	676	588	516	403	937	4
2015	15,631	1,570	1,392	845	908	931	846	996	835	915	1,035	1,121	1,025	870	698	1,640	4
2016	22,704	2,669	1,555	1,255	1,451	1,508	1,309	1,177	1,101	1,364	1,360	1,742	1,534	1,207	1,074	2,391	7
2017	25,825	2,519	2,005	1,355	1,635	1,651	1,854	1,626	1,575	1,570	1,701	1,910	1,721	1,243	1,092	2,362	6
2018	27,902	2,464	1,917	1,488	1,770	1,745	1,894	1,698	1,703	1,651	1,759	2,112	2,168	1,583	1,160	2,790	0

Table 3.7: CURRENT USERS - Women on Family Planning Contraceptives by Year.
COOK ISLANDS 2012 - 2018

Contraceptive Type	YEAR						
	2012	2013	2014	2015	2016	2017	2018
All Methods	1,150	1,296	1,201	1,040	990	963	887
Prevalence Rate (%)	31.5	35.5	32.9	28.5	27.2	26.5	24.4
Oral Contraceptive (Pills)	436	505	448	428	393	380	341
Intra Uterine Device	59	14	6	2	7	2	12
Depo Provera (Injections)	487	677	630	515	482	472	419
Norplant/Jadelle	86	65	60	58	81	98	111
Condom	35	32	41	31	22	2	0
Others	47	3	16	6	5	9	4

Life table for Males: 2014-2018

Life table for males: 2014-2016															
Age group	Reported Resident population				Mortality		Probability of		Life table parameters		Years		Life		
	x	nx	ax	Deaths (Nx)	Deaths Dx	rate mx	dying qx	surviving px	Radix lx	Deaths dx	lived Lx	Tx	expectancy ex	confidence interval	
														L 95% CI	U 95% CI
<5	0	5	0.2	659	0.8	0.00121	0.00604	0.99396	100000	604	497584	7200966	72.01	68.46	75.56
5-9	5	5	0.5	713	0	0.00000	0.00000	1.00000	99396	0	496980	6703382	67.44	64.00	70.88
10-14	10	5	0.5	692	0.4	0.00058	0.00289	0.99711	99396	287	496263	6206403	62.44	59.00	65.88
15-19	15	5	0.5	576	2.2	0.00382	0.01892	0.98108	99109	1875	490858	5710140	57.61	54.21	61.02
20-24	20	5	0.5	441	0.4	0.00091	0.00452	0.99548	97234	440	485072	5219281	53.68	50.50	56.85
25-29	25	5	0.5	423	1.4	0.00331	0.01641	0.98359	96794	1589	480000	4734210	48.91	45.81	52.01
30-34	30	5	0.5	405	0.6	0.00148	0.00738	0.99262	95206	703	474272	4254210	44.68	41.81	47.56
35-39	35	5	0.5	402	2	0.00498	0.02457	0.97543	94503	2322	466710	3779938	40.00	37.21	42.79
40-44	40	5	0.5	453	1.4	0.00309	0.01533	0.98467	92181	1414	457372	3313228	35.94	33.41	38.48
45-49	45	5	0.5	520	5	0.00962	0.04695	0.95305	90768	4261	443184	2855856	31.46	29.04	33.88
50-54	50	5	0.5	526	1.6	0.00304	0.01509	0.98491	86506	1306	429267	2412672	27.89	25.70	30.08
55-59	55	5	0.5	420	6.8	0.01619	0.07780	0.92220	85200	6629	409430	1983405	23.28	21.14	25.42
60-64	60	5	0.5	327	3.4	0.01040	0.05067	0.94933	78572	3981	382905	1573975	20.03	18.16	21.91
65-69	65	5	0.5	283	9.8	0.03463	0.15935	0.84065	74590	11886	343237	1191070	15.97	14.28	17.66
70-74	70	5	0.5	204	3.6	0.01765	0.08451	0.91549	62704	5299	300274	847834	13.52	12.52	14.53
75+	75	19	0.5	248	26	0.10484	1.00000	0.00000	57405	57405	547559	547559	9.54		

Life table for Females: 2014-2018

Life table for Females: 2014-2018															
Age group	Reported Resident population (Nx)				Mortality		Probability of		Life table parameters			Life expectancy confidence interval			
	x	nx	ax	Deaths Dx	rate mx	dying qx	surviving px	Radix lx	Deaths dx	Years lived Lx	Tx	ex	confidence interval		
													L 95% CI	U 95% CI	
<5	0	5	0.2	602	1	0.00166	0.00825	0.99175	100000	825	496700	7958396	79.58	76.38	82.78
5-9	5	5	0.5	692	0	0.00000	0.00000	1.00000	99175	0	495875	7461696	75.24	72.28	78.20
10-14	10	5	0.5	639	0.4	0.00063	0.00313	0.99688	99175	310	495100	6965821	70.24	67.28	73.20
15-19	15	5	0.5	576	0.2	0.00035	0.00173	0.99827	98865	171	493896	6470722	65.45	62.56	68.34
20-24	20	5	0.5	495	0	0.00000	0.00000	1.00000	98694	0	493468	5976825	60.56	57.70	63.42
25-29	25	5	0.5	470	0.2	0.00043	0.00213	0.99787	98694	210	492943	5483358	55.56	52.70	58.42
30-34	30	5	0.5	483	0.4	0.00083	0.00413	0.99587	98484	407	491401	4990415	50.67	47.85	53.49
35-39	35	5	0.5	433	1.2	0.00277	0.01376	0.98624	98077	1350	487010	4499013	45.87	43.11	48.64
40-44	40	5	0.5	512	0.6	0.00117	0.00584	0.99416	96727	565	482223	4012004	41.48	38.90	44.06
45-49	45	5	0.5	524	2.2	0.00420	0.02077	0.97923	96162	1998	475816	3529781	36.71	34.17	39.24
50-54	50	5	0.5	514	2	0.00389	0.01927	0.98073	94164	1814	466286	3053965	32.43	30.04	34.83
55-59	55	5	0.5	418	3.4	0.00813	0.03986	0.96014	92350	3681	452547	2587680	28.02	25.72	30.32
60-64	60	5	0.5	344	2.2	0.00640	0.03147	0.96853	88669	2791	436368	2135132	24.08	21.98	26.18
65-69	65	5	0.5	266	5.8	0.02180	0.10339	0.89661	85878	8879	407194	1698764	19.78	17.82	21.74
70-74	70	5	0.5	222	4.6	0.02072	0.09850	0.90150	77000	7585	366036	1291570	16.77	15.42	18.13
75+	75	27	0.5	320	24	0.07500	1.00000	0.00000	69415	69415	925533	925533.5	13.33		