

**21st Edition  
(Revision 2)**



**MINISTRY OF HEALTH  
BRUNEI DARUSSALAM**

# **HEALTH INFORMATION BOOKLET 2016**

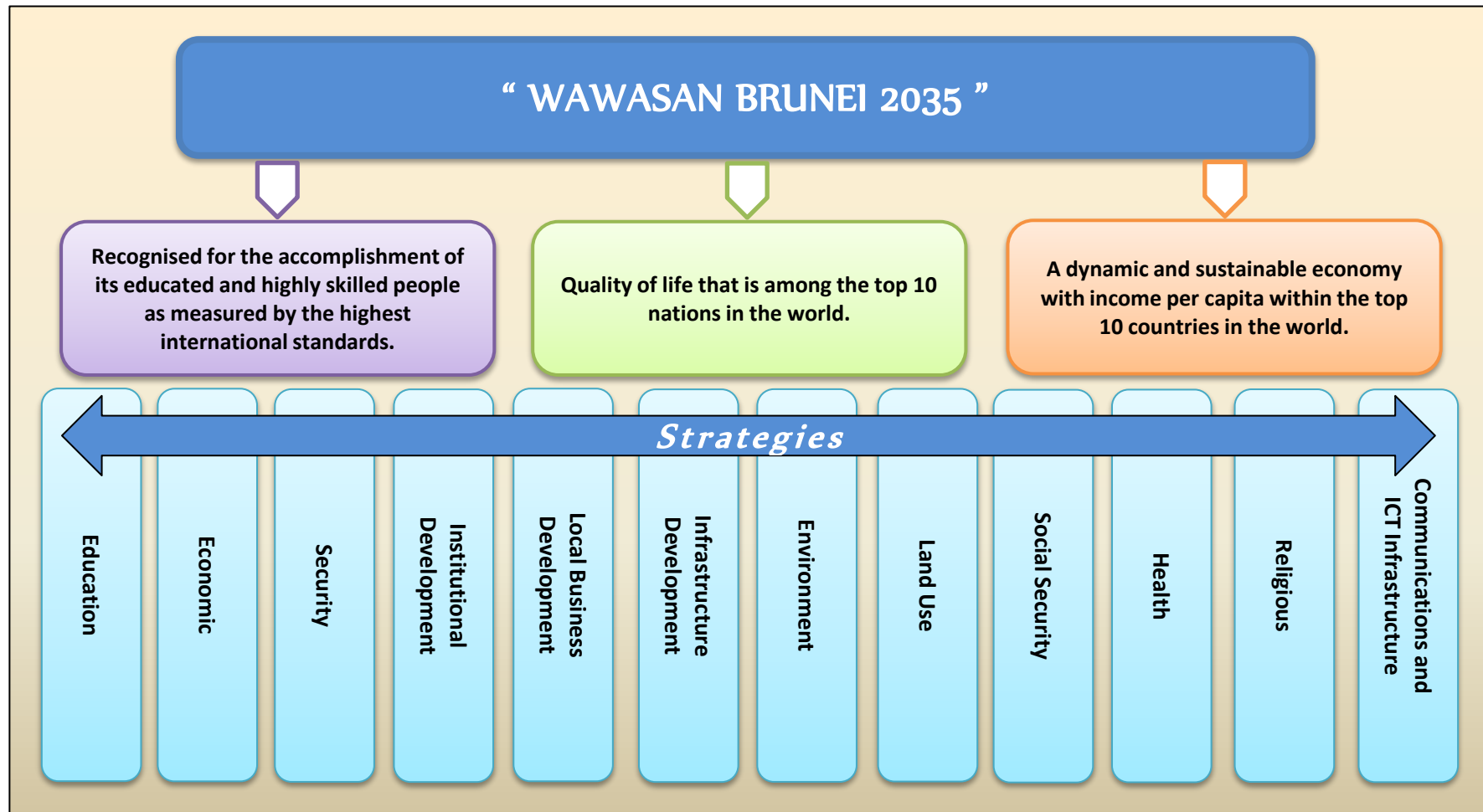
**DATA MANAGEMENT  
OFFICE OF POLICY AND FORESIGHT  
MINISTRY OF HEALTH  
BRUNEI DARUSSALAM**

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# Brunei Darussalam's Vision and Strategies



# Ministry of Health's Vision and Organisational Values



## VISION

'together towards a healthy nation'

## PURPOSE

'to improve the health and wellbeing of the **people of Brunei Darussalam** through a **high quality and comprehensive health care system** which is effective, efficient, responsive, affordable, equitable and accessible to all in the country'

## OUR PRIORITIES

01

to make "health everyone's business"

02

to enhance quality of service delivery

03

to prevent and control non-communicable diseases



### dynamic

we embrace change and develop our people through having a "growth mindset" we thrive on the opportunity to continuously improve



### client first

our clients define us



### excellence

we uphold the highest level of professionalism, where everyone matters and everyone delivers the highest quality service every time

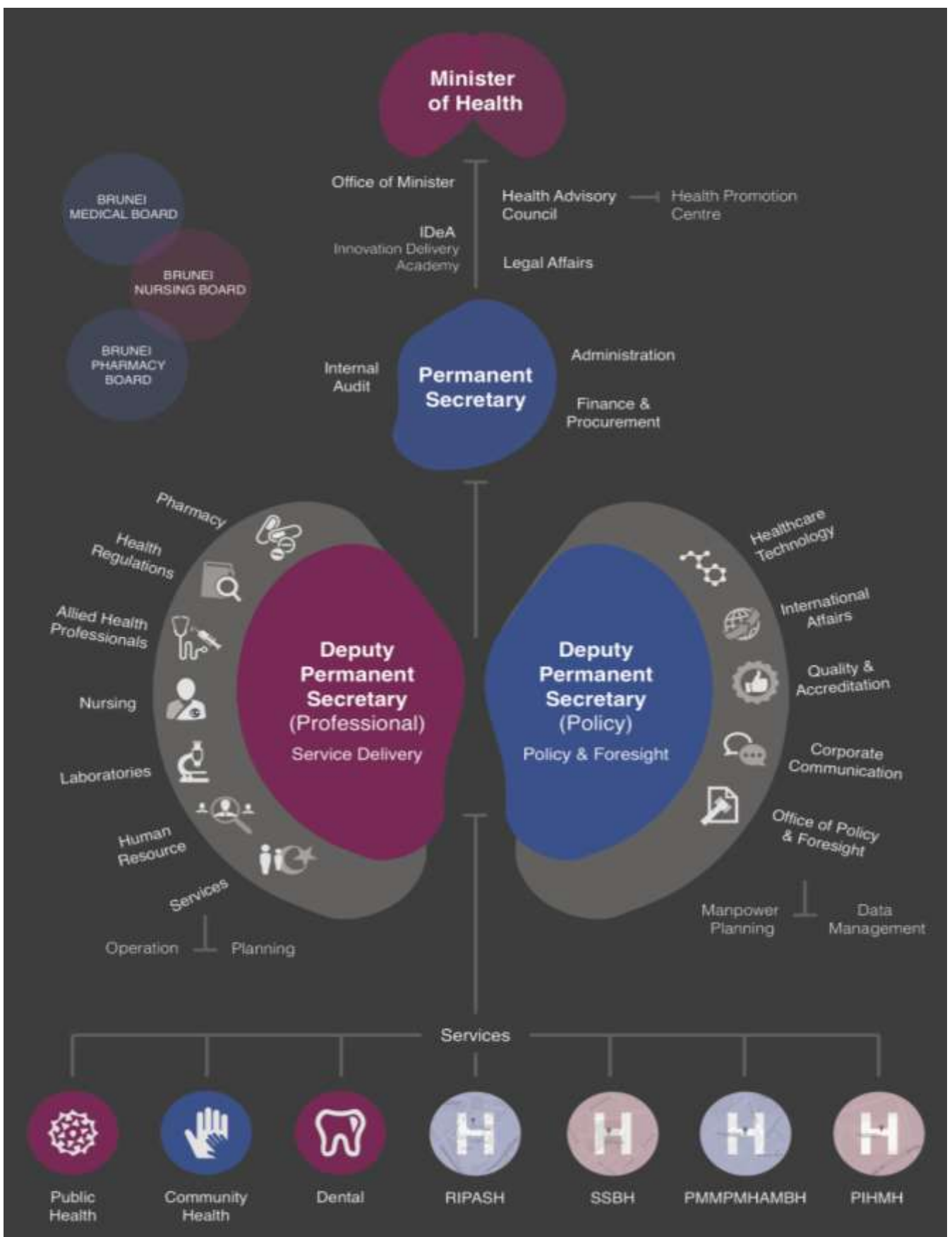
## ORGANISATIONAL VALUES



### together

we are one and we embrace diversity  
we are united through one common purpose

# Organisational Structure



# Population (2016)



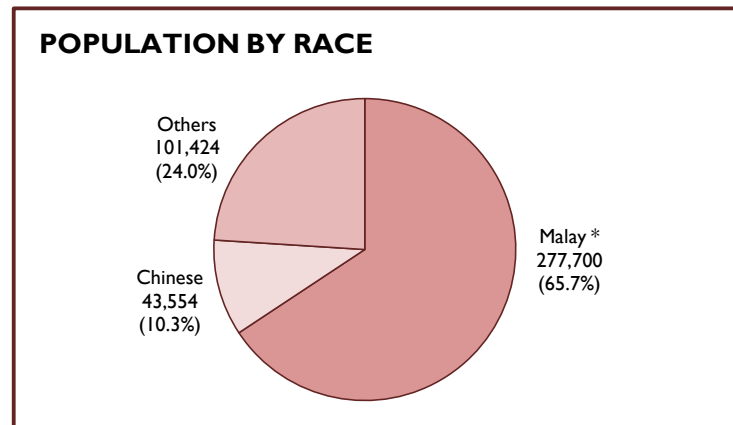
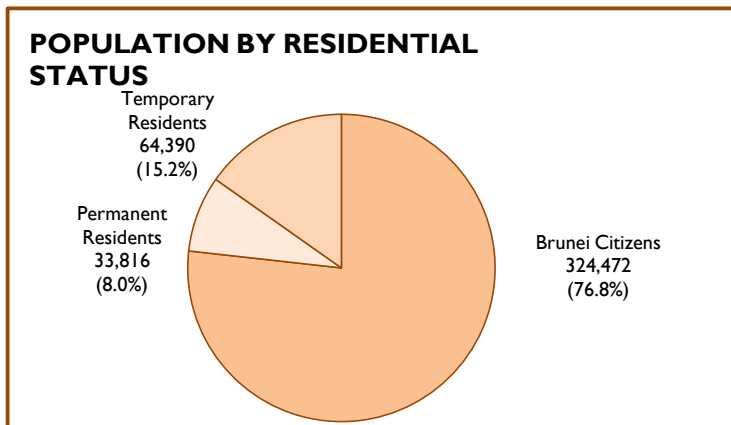
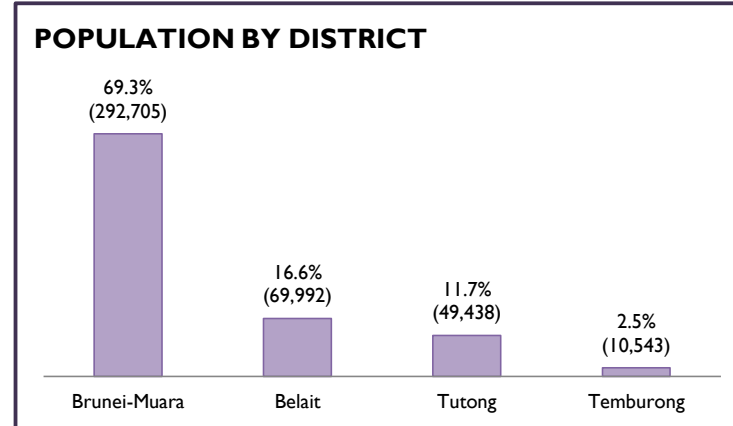
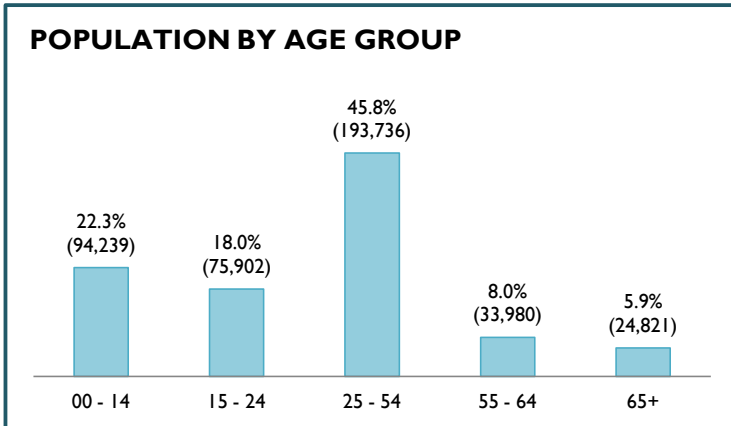
**TOTAL POPULATION**  
422,678 PEOPLE



**MALE**  
216,832 PEOPLE



**FEMALE**  
205,846 PEOPLE



Note :

\* Includes Other Indigenous Groups of the Malay race namely Belait, Bisaya, Brunei, Dusun, Kedayan, Murut and Tutong.

Source :

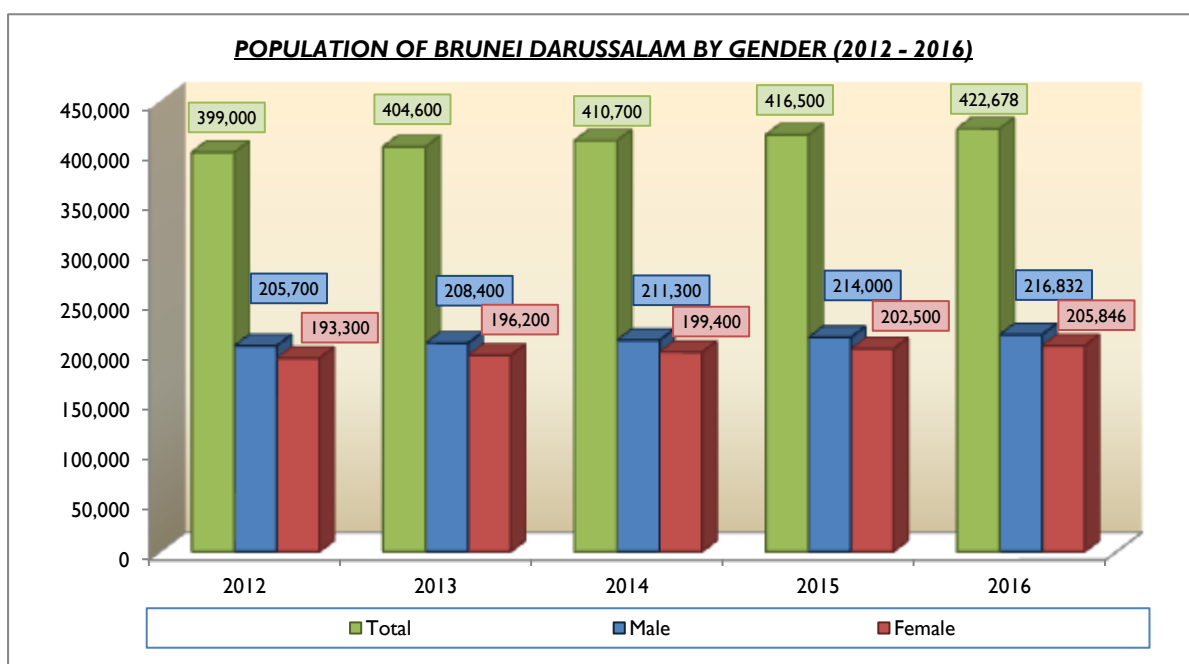
Department of Economic Planning and Development, Prime Minister's Office

## Population Distribution by Age

Age Group (in thousands)		2012	2013	2014	2015	2016
0 - 4	:	30.0	29.7	29.3	28.9	28.595
5 - 9	:	32.9	32.2	31.5	30.7	29.986
10 - 14	:	35.5	35.5	35.6	35.6	35.658
15 - 19	:	35.3	35.7	36.0	36.3	36.692
20 - 24	:	38.4	38.6	38.8	39.0	39.210
25 - 29	:	39.3	39.4	39.7	39.9	40.038
30 - 34	:	36.8	36.9	37.0	37.0	37.034
35 - 39	:	33.9	34.0	34.2	34.4	34.538
40 - 44	:	30.3	30.4	30.7	31.0	31.157
45 - 49	:	25.2	25.7	26.5	27.0	27.722
50 - 54	:	20.5	21.1	21.8	22.5	23.247
55 - 59	:	15.1	16.2	17.1	18.2	19.348
60 - 64	:	9.7	11.0	12.1	13.4	14.632
65 - 69	:	6.0	6.8	7.7	8.6	9.461
70 - 74	:	4.2	4.6	4.9	5.3	5.602
75 - 79	:	3.0	3.3	3.7	4.0	4.384
80 - 84	:	1.7	2.0	2.3	2.6	2.888
85 & Over	:	1.2	1.5	1.8	2.1	2.486

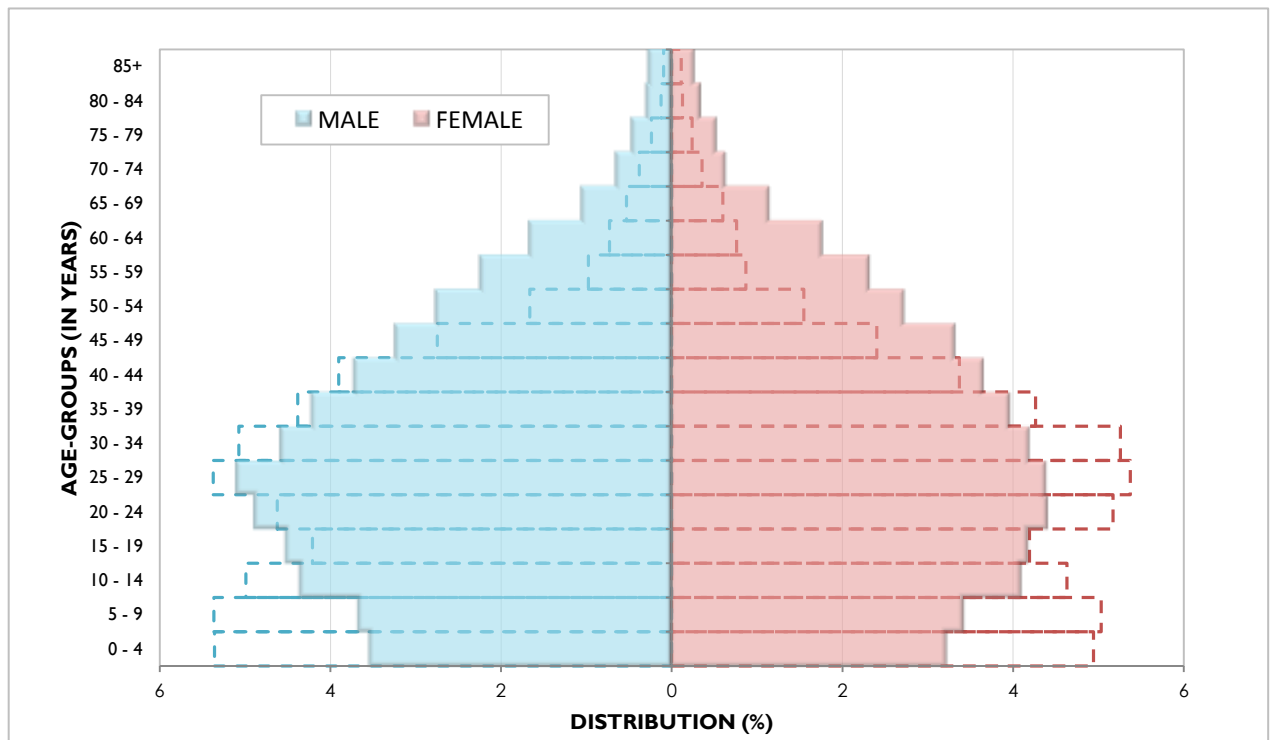
Source :

Department of Economic Planning and Development, Prime Minister's Office





## Population Pyramid (2016)



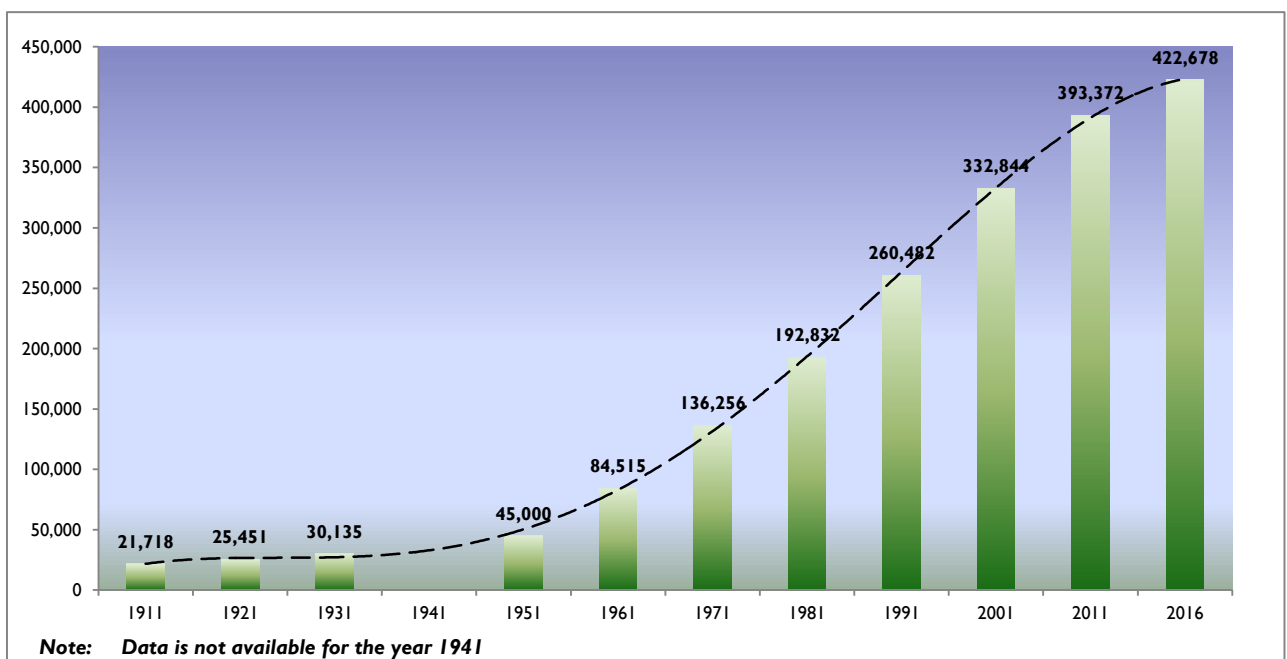
**Total population in 2001** -----  
**Total population in 2016** —————

Note:

Population pyramid shows percentage distribution of population by gender and age-groups.

For example, (0 - 4) age-group for the year 2016 is represented with 6.7% of total population in which 3.5% and 3.2% are made up of male and female population respectively.

## Population Trend of Brunei Darussalam (1911 - 2016)

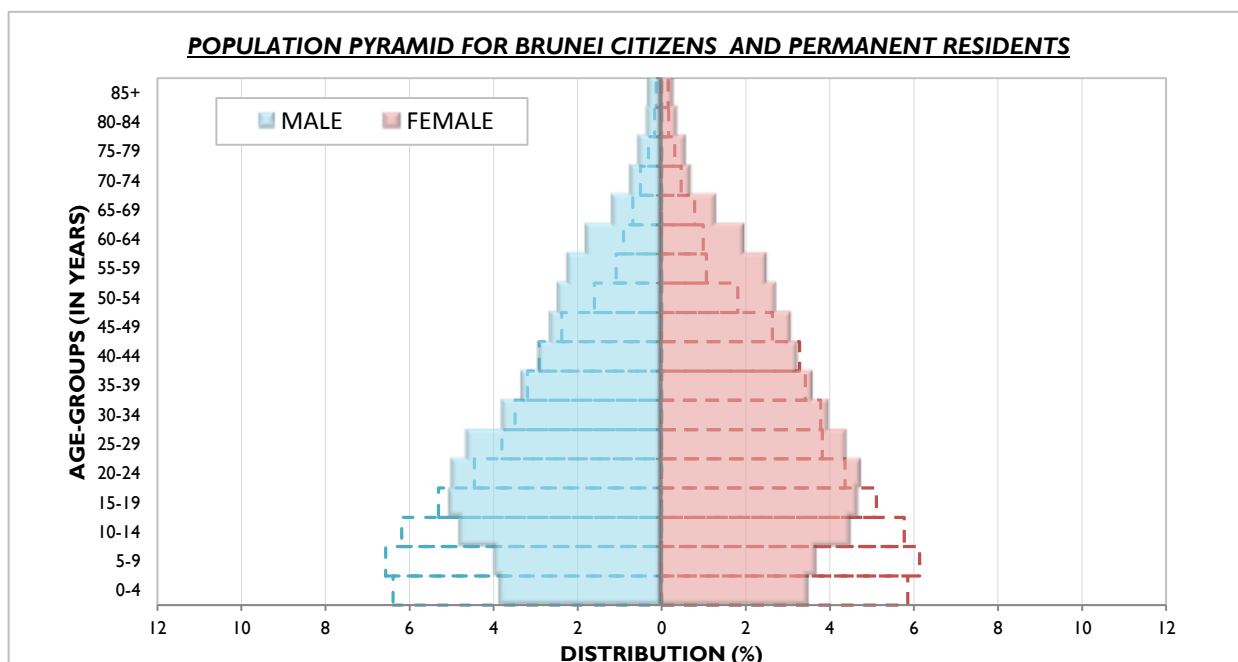


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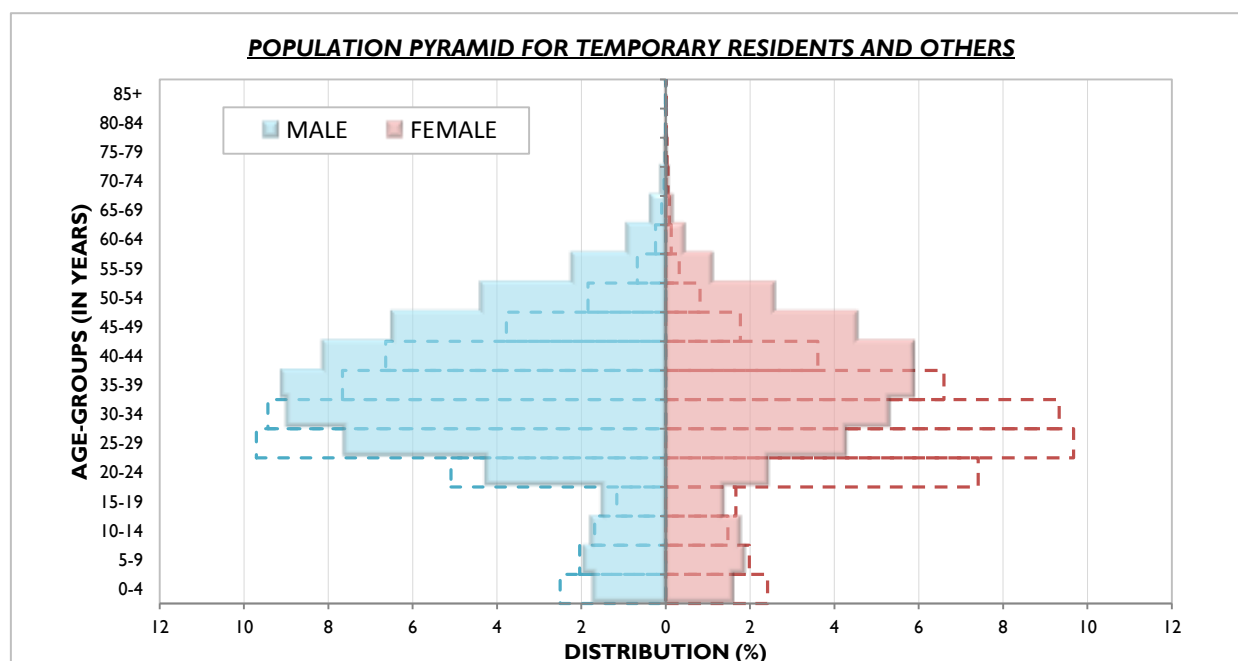
Department of Economic Planning and Development, Prime Minister's Office



# Population Pyramid by Residential Status for the Years 2001 and 2016



Total population in 2001 -----  
Total population in 2016 \_\_\_\_\_



Population aged 60 years and above for the year 2016 is represented with 9.3% of total population in which 4.5% and 4.8% are made up of male and female population respectively.

On the residential status, the share of the Brunei Citizens was around 76.8%, Permanent Residents 8.0% and Temporary Residents 15.2%. As is the case of affluent countries with small populations, the foreign proportion of the population is rather high. The relatively high number of foreign population is being contributed by the number of working immigrants.

Source: Department of Economic Planning and Development, Prime Minister's Office

## Vital Statistics

	2012	2013	2014	2015	2016
Crude Birth Rate (per 1,000 Population) :	17.3	16.5	16.8	16.1	15.2
General Fertility Rate (per 1,000 Female Population Aged (15-49)) :	59.6	57.2	58.4	56.2	54.3
Total Fertility Rate (per Female Population Aged (15-49) ) :	1.9	1.9	1.9	1.8	1.8
Crude Death Rate (per 1,000 Population) :	3.0	3.5	3.6	3.7	3.9
Infant Mortality Rate (per 1,000 Live Births) :	9.3	7.8	7.3	8.8	8.2
Late Fetal Death Ratio (per 1,000 Live Births) :	3.9	5.5	6.4	5.1	3.1
Perinatal Mortality Ratio (per 1,000 Live Births) :	7.5	8.4	9.0	8.7	6.8
Early Neonatal Mortality Rate (per 1,000 Live Births) :	3.6	2.8	2.6	3.6	3.7
Late Neonatal Mortality Rate (per 1,000 Live Births) :	1.7	0.9	1.2	1.8	1.1
Neonatal Mortality Rate (per 1,000 Live Births) :	5.4	3.7	3.8	5.4	4.8
Post Neonatal Mortality Rate (per 1,000 Live Births) :	3.9	4.0	3.5	3.4	3.4
Under 5 Mortality Rate (per 1,000 Live Births) :	10.3	9.7	8.7	10.3	10.4
Number of Maternal Deaths * :	3	1	1	4	0
Maternal Mortality Ratio (per 100,000 Live Births) :	43.4	15.0	14.5	59.7	0.0
Maternal Mortality Ratio (per 1,000 Live Births) :	0.43	0.15	0.15	0.60	0.00
Life Expectancy At Birth - Total :	78.1	77.1	77.4	77.4	77.4 <sup>(p)</sup>
- Male :	76.3	75.7	75.9	76.9	76.7 <sup>(p)</sup>
- Female :	79.9	78.4	78.8	78.0	78.1 <sup>(p)</sup>
Percentage of Newborns Weighing At Least 2500g At Birth :	87.9	88.2	88.1	88.2	89.6
Percentage of Deliveries by Trained Health Personnel :	99.8	99.7	99.9	100.0	100.0
Per Capita GDP at current prices (B\$) Thousand :	59.7	56.0	52.7	42.7	37.3

Note :

\* - as per registered by Birth , Death and Adoption Section, Immigration and National Registration Department and amended for coding misclassifications by the Statistics Unit, Ministry of Health.

(p) - Provisional

## Vital Statistics

Country	Life Expectancy at Birth (MALE)	Life Expectancy at Birth (FEMALE)	Life Expectancy at Birth (BOTH SEXES)	Maternal Mortality Ratio (per 100,000 livebirths)	Under-five Mortality Rate (per 1000 livebirths)	Neonatal Mortality Rate (per 1000 livebirths)
<i>Latest available year</i>	<i>2015</i>					
<b>BRUNEI DARUSSALAM *</b>	<b>76.7</b>	<b>78.1</b>	<b>77.4</b>	<b>0</b>	<b>10.4</b>	<b>4.8</b>
MALAYSIA	72.7	77.3	75.0	40	7.0	3.9
SINGAPORE	80.0	86.1	83.1	10	2.7	1.0
AUSTRALIA	80.9	84.8	82.8	6	3.8	2.2
AUSTRIA	79.0	83.9	81.5	4	3.5	2.1
BELGIUM	78.6	83.5	81.1	7	4.1	2.2
CZECHIA	75.9	81.7	78.8	4	3.4	1.8
DENMARK	78.6	82.5	80.6	6	3.5	2.5
FINLAND	78.3	83.8	81.1	3	2.3	1.3
FRANCE	79.4	85.4	82.4	8	4.3	2.2
GERMANY	78.7	83.4	81.0	6	3.7	2.1
GREECE	78.3	83.6	81.0	3	4.6	2.9
ICELAND	81.2	84.1	82.7	3	2.0	0.9
IRELAND	79.4	83.4	81.4	8	3.6	2.3
ITALY	80.5	84.8	82.7	4	3.5	2.1
JAPAN	80.5	86.8	83.7	5	2.7	0.9
REPUBLIC OF KOREA	78.8	85.5	82.3	11	3.4	1.6
LUXEMBOURG	79.8	84.0	82.0	10	1.9	0.9
NETHERLAND	80.0	83.6	81.9	7	3.8	2.4
NEW ZEALAND	80.0	83.3	81.6	11	5.7	3.1
NORWAY	79.8	83.7	81.8	5	2.6	1.5
OMAN	75.0	79.2	76.6	17	11.6	5.2
PORTUGAL	78.2	83.9	81.1	10	3.6	2.0
SPAIN	80.1	85.5	82.8	5	4.1	2.8
SWEDEN	80.7	84.0	82.4	4	3.0	1.6
SWITZERLAND	81.3	85.3	83.4	5	3.9	2.7
UK	79.4	83.0	81.2	9	4.2	2.4

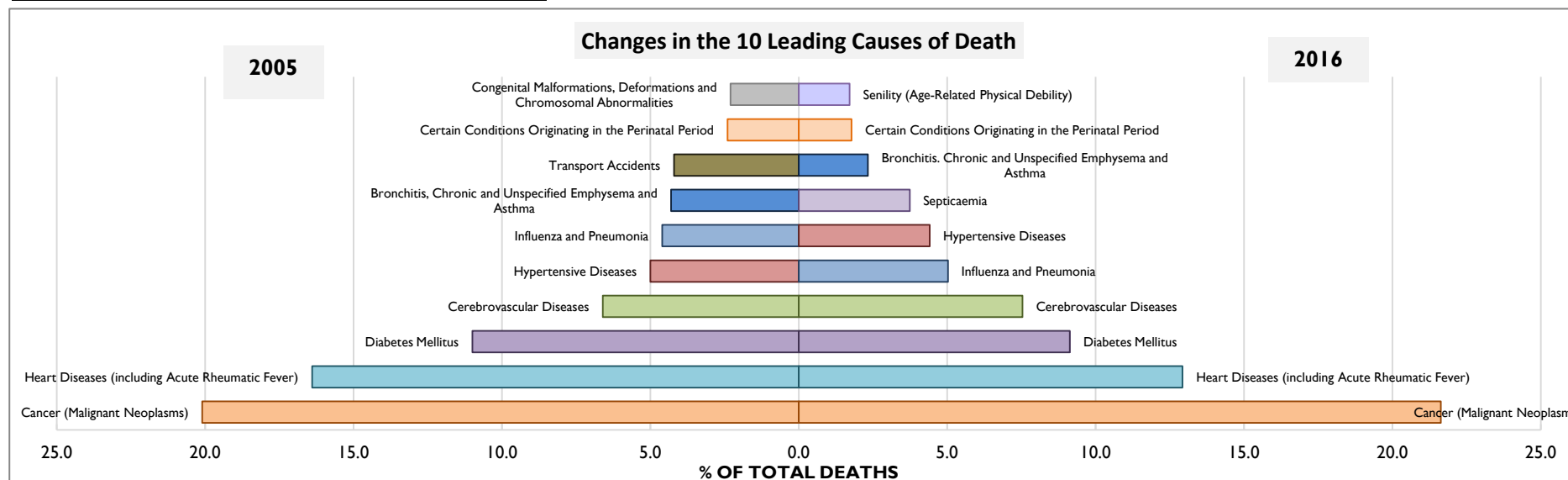
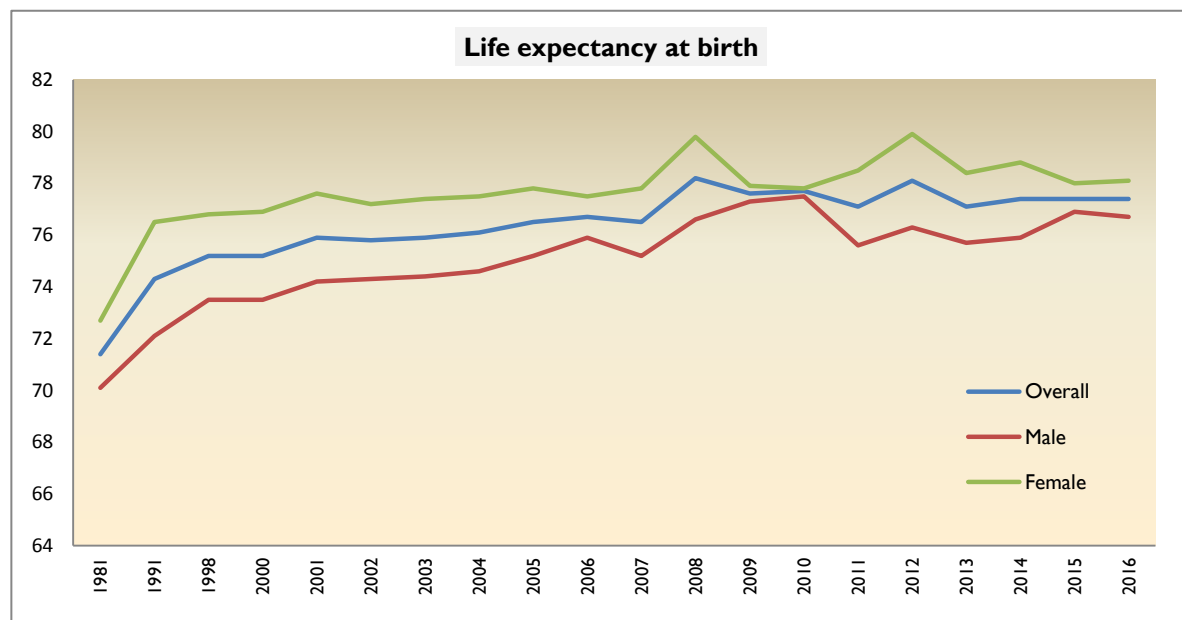
REFERENCE WORLD HEALTH STATISTICS 2017 : MONITORING HEALTH FOR THE SDGs, WHO PUBLICATION

Note :

\* - latest available year (2016 data)

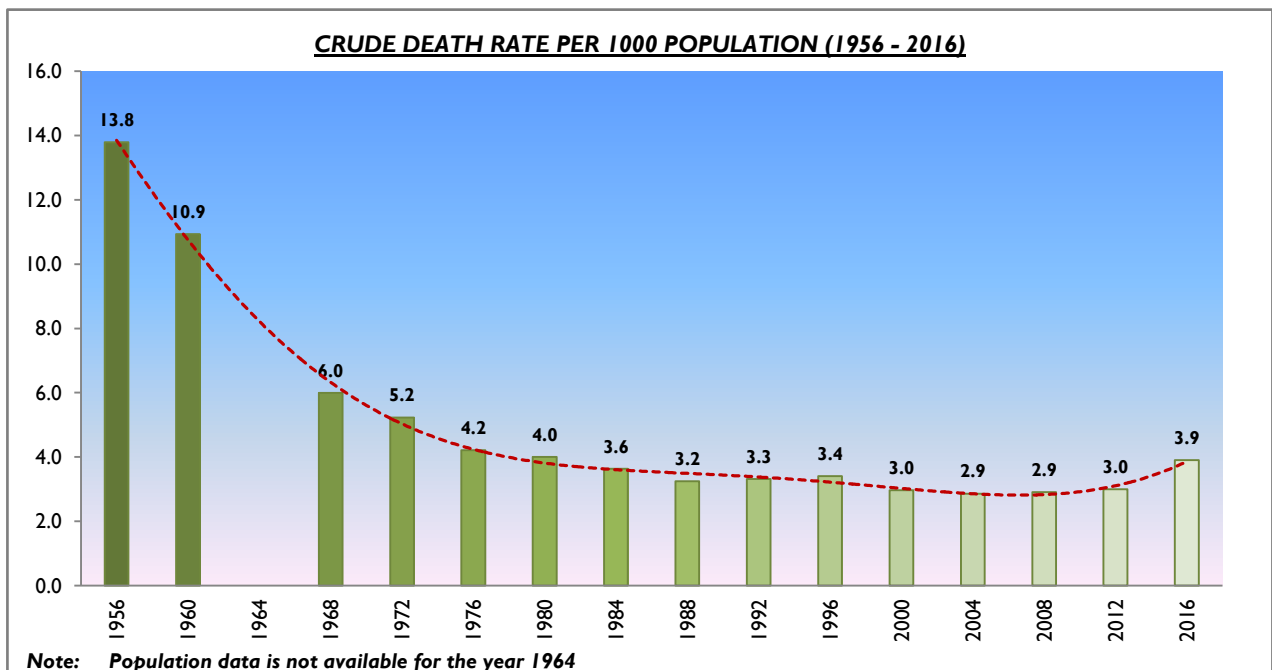
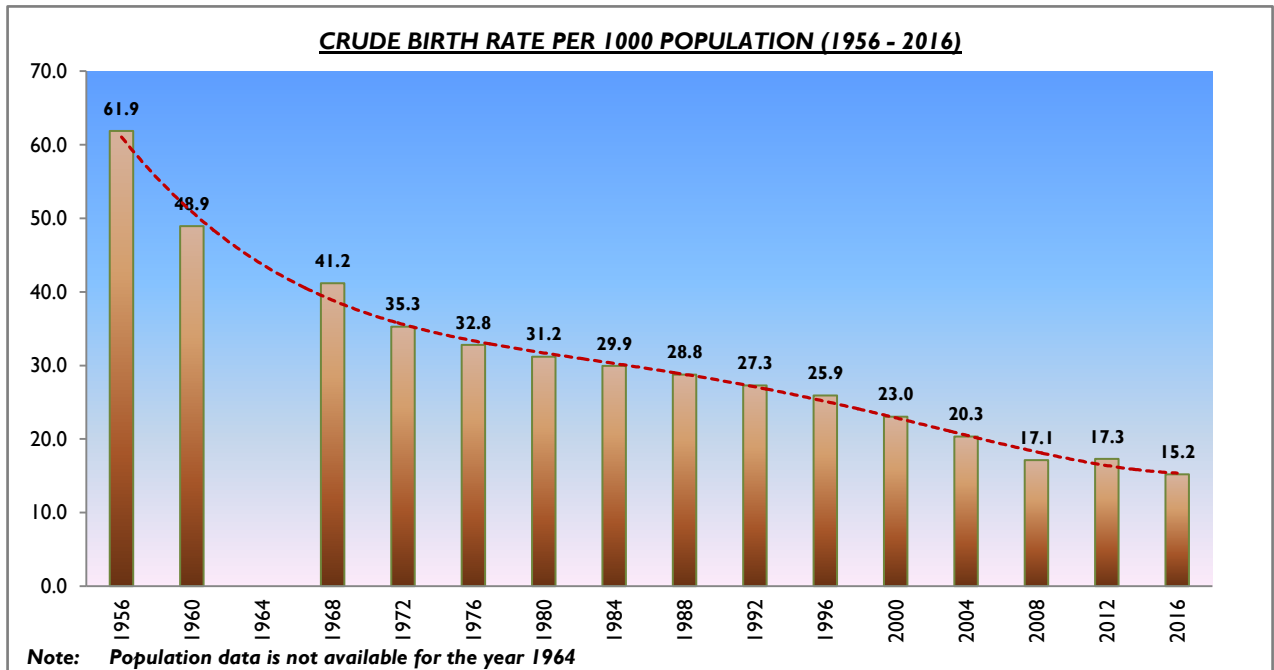
## Life expectancy at birth

Year	Life Expectancy (in years)		
	Male	Female	Overall
1981	70.1	72.7	71.4
1991	72.1	76.5	74.3
2001	74.2	77.6	75.9
2011	75.6	78.5	77.1
2012	76.3	79.9	78.1
2013	75.7	78.4	77.1
2014	75.9	78.8	77.4
2015	76.9	78.0	77.4
2016	76.7 <sup>(p)</sup>	78.1 <sup>(p)</sup>	77.4 <sup>(p)</sup>



## Crude Birth Rate and Crude Death Rate

The crude birth rate of Brunei Darussalam has declined from 23.0 in 2000 to 15.2 per 1000 population in 2016 whilst the crude death rate is 3.9 per 1000 population in 2016.



## Sustainable Development Goals (SDGs)

In 2015, the Millennium Development Goals (MDGs) has come to the end of their term. On 25 September 2015, the United Nations (UN) General Assembly adopted the new development agenda "Transforming our world: the 2030 agenda for sustainable development". The post-2015 agenda comprising 17 Sustainable Development Goals (SDGs) and 169 targets, including one specific goal for health with 13 targets.



## Sustainable Development Goals (SDGs)

Goals and Targets	Indicators for Monitoring progress	Brunei Darussalam's Current Status Related to Health (2016 data)
<b>Goal 3 : Good Health and Well-Being</b>		
Target 3.1 : By 2030, reduce the global maternal mortality ratio to less than 70 per 100,000 live births	3.1.1 Maternal mortality ratio (per 100,000 live births)	0.0 per 1,000 livebirths (no maternal death)
	3.1.2 Proportion of births attended by skilled health personnel (%)	100.0 %
Target 3.2: By 2030, end preventable deaths of newborns and children under 5 years of age, with all countries aiming to reduce neonatal mortality to at least as low as 12 per 1,000 live births and under-5 mortality to at least as low as 25 per 1,000 live births	3.2.1 Under-five mortality rate (per 1,000 live births)	10.4 per 1,000 livebirths
	3.2.2 Neonatal mortality rate	4.8 per 1,000 livebirths
Target 3.3: By 2030, end the epidemics of AIDS, tuberculosis, malaria and neglected tropical diseases and combat hepatitis, water-borne diseases and other communicable diseases	3.3.1 Number of new HIV infections per 1,000 uninfected population, by sex, age and key populations	0.09 per 1,000 population
	3.3.2 Tuberculosis incidence per 1,000 population	0.57 per 1,000 population
	3.3.3 Malaria incidence per 1,000 population	0.02 per 1,000 population
	3.3.4 Hepatitis B incidence per 100,000 population	0.08 per 1,000 population
	3.3.5 Number of people requiring interventions against neglected tropical diseases	Chikugunya 1; Dengue Fever 83; Dengue Haemorrhagic Fever 1; Filariasis 5; Leptospirosis 0
Target 3.4: By 2030, reduce by one third premature mortality from non-communicable diseases through prevention and treatment and promote mental health and well-being	3.4.1 Mortality rate attributed to cardiovascular disease, cancer, diabetes or chronic respiratory disease	Probability of dying between the ages of 30 and 70 years from non-communicable diseases (cardiovascular diseases, cancer, diabetes or chronic respiratory diseases) : 14.1 %
	3.4.2 Suicide mortality rate	1.7 per 100,000 population



## Sustainable Development Goals (SDGs) (cont'd)

Goals and Targets	Indicators for Monitoring progress	Brunei Darussalam's Current Status Related to Health (2016 data)
<b>Goal 3 : Good Health and Well-Being</b>		
Target 3.5: Strengthen the prevention and treatment of substance abuse, including narcotic drug abuse and harmful use of alcohol	3.5.1 Coverage of treatment interventions (pharmacological, psychosocial and rehabilitation and aftercare services) for substance use disorders	...
	3.5.2 Harmful use of alcohol, defined according to the national context as alcohol per capita consumption (aged 15 years and older) within a calendar year in litres of pure alcohol	...
Target 3.6: By 2020, halve the number of global deaths and injuries from road traffic accidents	3.6.1 Death rate due to road traffic injuries	4.0 per 100,000 population
Target 3.7: By 2030, ensure universal access to sexual and reproductive health-care services, including for family planning, information and education, and the integration of reproductive health into national strategies and programmes	3.7.1 Proportion of women of reproductive age (aged 15-49 years) who have their need for family planning satisfied with modern methods	...
	3.7.2 Adolescent birth rate (aged 10-14 years; aged 15-19 years) per 1,000 women in that age group	9.6 per 1,000 (aged 15-19) female population
Target 3.8: Achieve universal health coverage, including financial risk protection, access to quality essential health-care services and access to safe, effective, quality and affordable essential medicines and vaccines for all	3.8.1 Coverage of essential health services (defined as the average coverage of essential services based on tracer interventions that include reproductive, maternal, newborn and child health, infectious diseases, non-communicable diseases and service capacity and access, among the general and the most disadvantaged population)	...
	3.8.2 Number of people covered by health insurance or a public health system per 1,000 population	...
Target 3.9: By 2030, substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination	3.9.1 Mortality rate attributed to household and ambient air pollution	...
	3.9.2 Mortality rate attributed to unsafe water, unsafe sanitation and lack of hygiene (exposure to unsafe Water, Sanitation and Hygiene for All (WASH) services)	...
	3.9.3 Mortality rate attributed to unintentional poisoning	0

Note :

... - not available. (Metadata is either undergoing review or awaiting technical assistance)

## Sustainable Development Goals (SDGs) (cont'd)

Goals and Targets	Indicators for Monitoring progress	Brunei Darussalam's Current Status Related to Health (2016 data)
<b>Goal 3 : Good Health and Well-Being</b>		
Target 3.a: Strengthen the implementation of the World Health Organization Framework Convention on Tobacco Control in all countries, as appropriate	3.a.1 Age-standardized prevalence of current tobacco use among persons aged 15 years and older	18 % <sup>#</sup>
Target 3.b: Support the research and development of vaccines and medicines for the communicable and non-communicable diseases that primarily affect developing countries, provide access to affordable essential medicines and vaccines, in accordance with the Doha Declaration on the TRIPS Agreement and Public Health, which affirms the right of developing countries to use to the full the provisions in the Agreement on Trade-Related Aspects of Intellectual Property Rights regarding flexibilities to protect public health, and, in particular, provide access to medicines for all.	3.b.1 Proportion of the population with access to affordable medicines and vaccines on a sustainable basis	...
	3.b.2 Total net official development assistance to medical research and basic health sectors	...
Target 3.c: Substantially increase health financing and the recruitment, development, training and retention of the health workforce in developing countries, especially in least developed countries and small island developing States	3.c.1 Health worker density and distribution	Doctors 16 per 10,000; Dentist 2 per 10,000; Pharmacist 2 per 10,000; Nurses and Midwives 69 per 10,000
Target 3.d: Strengthen the capacity of all countries, in particular developing countries, for early warning, risk reduction and management of national and global health risks	3.d.1 International Health Regulations (IHR) capacity and health emergency preparedness	84.6%

Note :

\* - 2nd National Health and Nutritional Status Survey (NHANSS), Phase 2 : 5 - 75 years old

... - not available. (Metadata is either undergoing review or awaiting technical assistance)

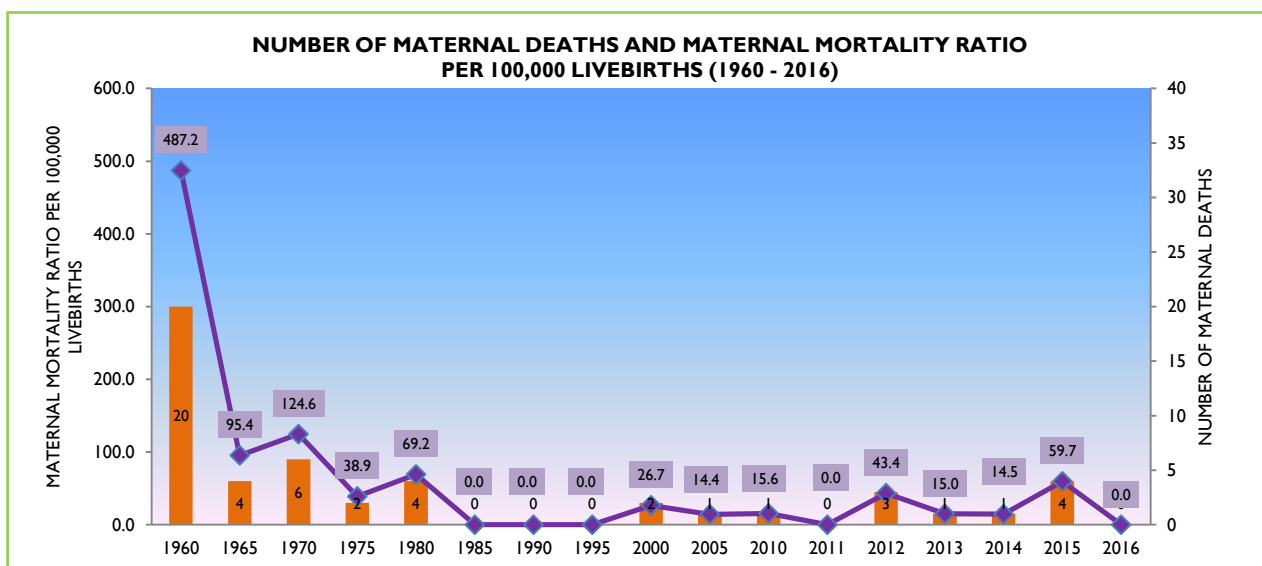
# Sustainable Development Goals (SDGs)

## GOAL 3: GOOD HEALTH AND WELL-BEING

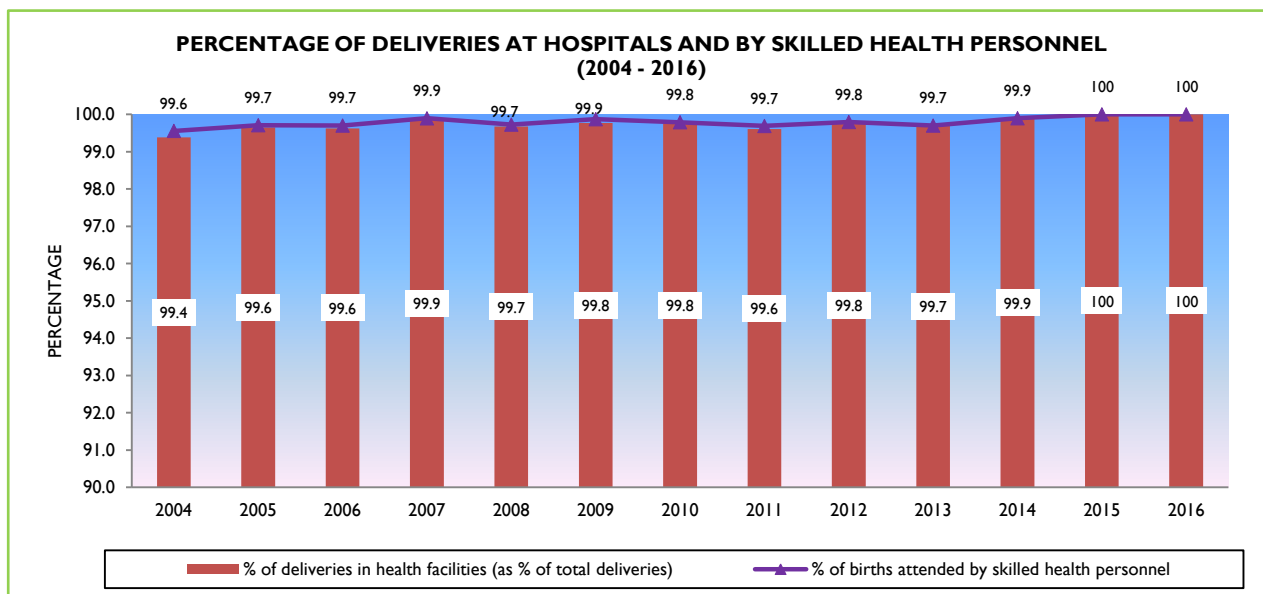
**Target 3.1: By 2030, reduce the global maternal mortality ratio to less than 70 per 100,000 live births**

The Maternal Mortality Ratio (MMR) in Brunei Darussalam has shown a marked decline since the 1960s - from 487.2 per 100,000 live births in 1960 down to 0.0 per live birth in 1990. Since then, the MMR has shown slight fluctuations and consistently very low maternal mortality ratio (MMR). In 2016, no maternal death was recorded.

It must be noted that Brunei Darussalam's small population and relatively low live births (around 7,000 annually) makes calculation of MMR sensitive to small changes and any small fluctuations will result in significant rise in MMR. The very low value of MMR can be attributed to the high access to reproductive health care, immunisation programmes as well as high percentage deliveries in hospitals by skilled health personnel.



Almost all deliveries in Brunei Darussalam are attended by skilled health personnel who supervise, provide care and advice to women during pregnancy, labour and the postpartum period. They also conduct deliveries and care for the newborn child.



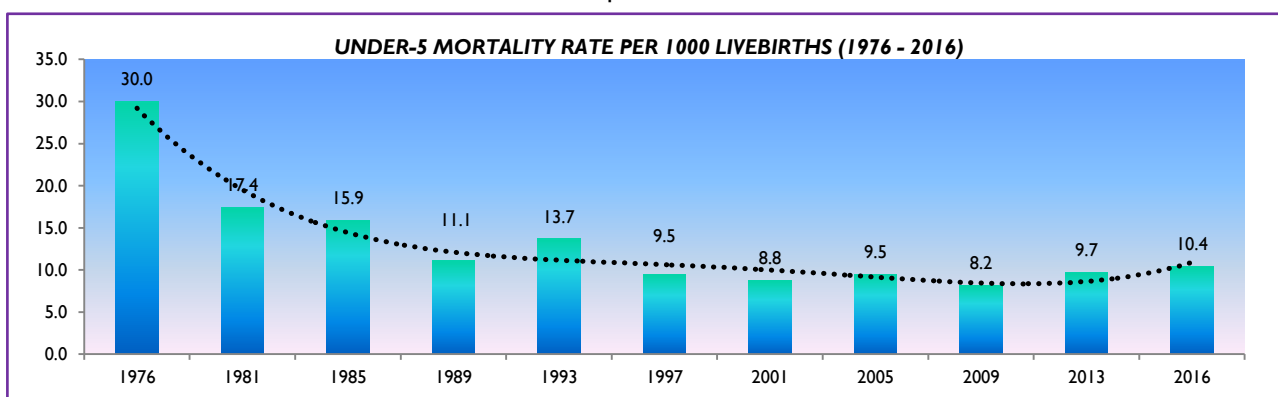
# Sustainable Development Goals (SDGs)

## GOAL 3: GOOD HEALTH AND WELL-BEING

**Target 3.2: By 2030, end preventable deaths of new-borns and children under 5 years of age, with all countries aiming to reduce neonatal mortality to at least as low as 12 per 1,000 live births and under-5 mortality to at least as low as 25 per 1,000 live births**

Brunei Darussalam has been able to gradually reduce the under-5 mortality rate (U5MR) from 30 deaths per 1000 livebirths in 1976 to 10.4 deaths per 1000 livebirths in 2016. The current challenge is to achieve further reductions in U5MR where the data analysis from 2004 to 2016 showed a high proportion of neonatal deaths, mainly due to perinatal conditions and congenital abnormalities.

Abortion in Brunei Darussalam is only legal when it will save a woman's life. The prohibition does not permit the termination of a pregnancy even when there is a high risk to the baby's life. For example, in certain conditions originating in the perinatal period or congenital malformations, which are the leading causes of infant mortality in Brunei Darussalam. In 2016, this caused more than 62.7 percent of total under five deaths.



	2012	2013	2014	2015	2016
1	Certain Conditions Originating In The Perinatal 38	Certain Conditions Originating In The Perinatal 26	Certain Conditions Originating In The Perinatal 24	Certain Conditions Originating In The Perinatal 27	Certain Conditions Originating In The Perinatal 29
2	Congenital Malformations, Deformations and Chromosomal Abnormalities 9	Congenital Malformations, Deformations and Chromosomal Abnormalities 15	Congenital Malformations, Deformations and Chromosomal Abnormalities 17	Congenital Malformations, Deformations and Chromosomal Abnormalities 26	Congenital Malformations, Deformations and Chromosomal Abnormalities 13
3	Septicaemia 2	Cancer 3	Septicaemia 2	Heart Diseases 2	Cancer 7
4	Cancer 2	Transport Accidents 3	Diarrhoea and Gastroenteritis of Presumed Infectious Origin 1	Accidental Drowning and Submersion 2	Septicaemia 4
5	Heart Diseases 2	Heart Diseases 2	Other Intestinal Infectious Diseases 1	Cancer 1	Heart Diseases 2
6	Influenza & Pneumonia 2	Septicaemia 1	Cancer 1	Exposure to Smoke, Fire and Burns 1	Influenza & Pneumonia 1
7	Bronchitis, Chronic & Unspecified Emphysema & 1	Influenza & Pneumonia 1	Anaemias 1		Bronchitis, Chronic & Unspecified Emphysema & 1
8	Assault 1	Unspecified Acute Lower Respiratory Infection 1	Heart Diseases 1		Transport Accidents 1
OTHERS **	14	13	12	8	9
TOTAL	71	65	60	67	67

Note : \* - No other single cause of death.

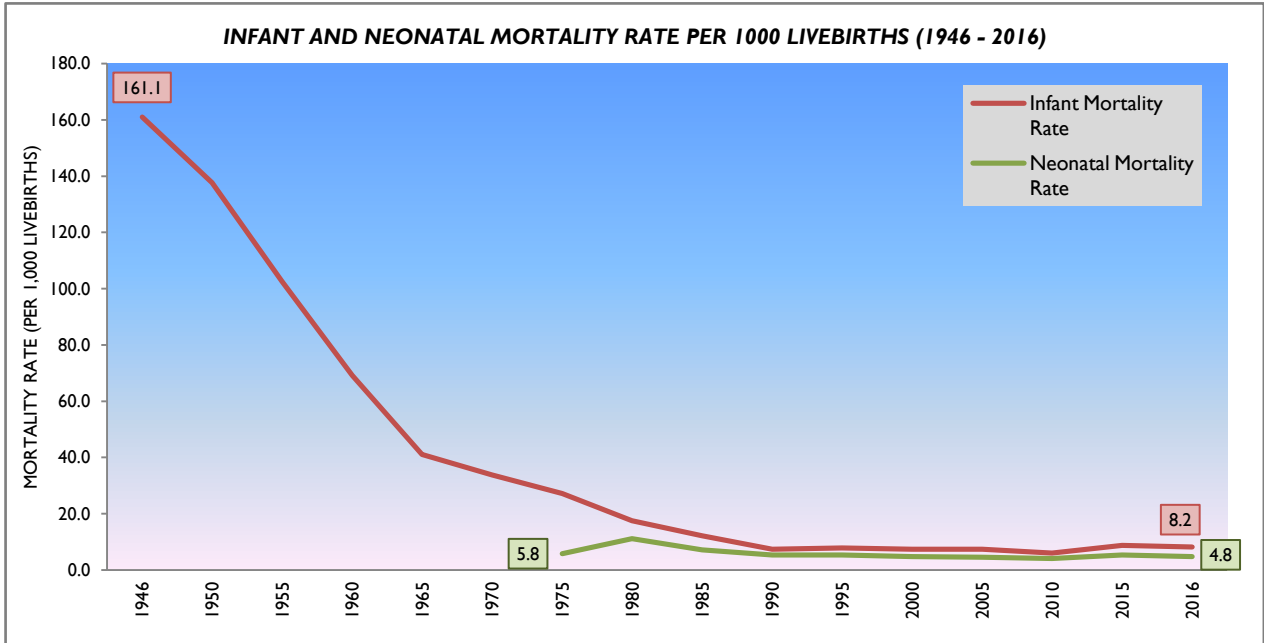
\*\* - Remainders.

# Sustainable Development Goals (SDGs)

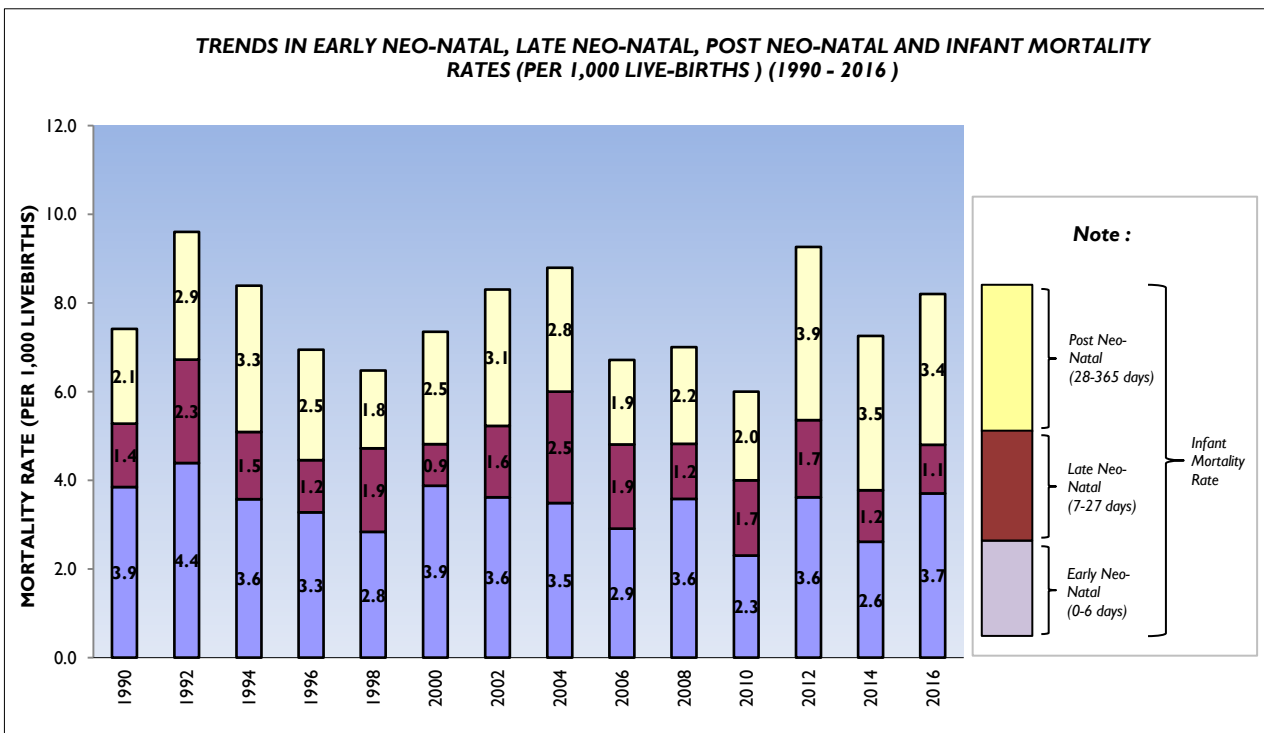
## GOAL 3: GOOD HEALTH AND WELL-BEING

**Target 3.2: By 2030, end preventable deaths of new-borns and children under 5 years of age, with all countries aiming to reduce neonatal mortality to at least as low as 12 per 1,000 live births and under-5 mortality to at least as low as 25 per 1,000 live births**

Brunei Darussalam's infant mortality rate has reached a steady state since 1990 and is on par with figures in developed nations. Infant mortality rate has declined rapidly from 50.8 per 1000 livebirths in 1962 to 8.2 per 1000 livebirths in 2016.



Data from 2004-2016 showed over two thirds of deaths occurred during early and late neonatal periods, mainly due to perinatal conditions and congenital abnormalities. In 2016, deaths occurring at infant period (less than 1 year) account for 79.1% of total deaths in USMR.



## Health Facilities (2016)

<b>MEDICAL CARE</b>	<b>NUMBER</b>
- HOSPITALS	5 <sup>(1)</sup>
- MEDICAL CLINICS (Ministry of Defence)	8
- DIALYSIS CENTRES	7
<b>HEALTH SERVICES</b>	
- HEALTH CENTRES	14
- HEALTH CLINICS	6
- MATERNAL AND CHILD HEALTH CLINICS	7
- TRAVELLING HEALTH CLINICS	5
- FLYING MEDICAL SERVICES	2
<b>DENTAL SERVICES</b>	
- DENTAL SERVICES AT:	
HOSPITALS	4
HEALTH CENTRES	1
HEALTH CLINICS	15
STATIC SCHOOL CLINICS	44
MOBILE SQUAD	11
TRAVELLING (FLYING TEAM)	0
<b>PRIVATE HEALTH SERVICES</b>	
- HOSPITALS <sup>(2)</sup>	2
- HEALTH CENTRE	1 <sup>(3)</sup>
- HEALTH CLINICS	34 <sup>(4)</sup>
- DENTAL CLINICS	5 <sup>(5)</sup>

Note :

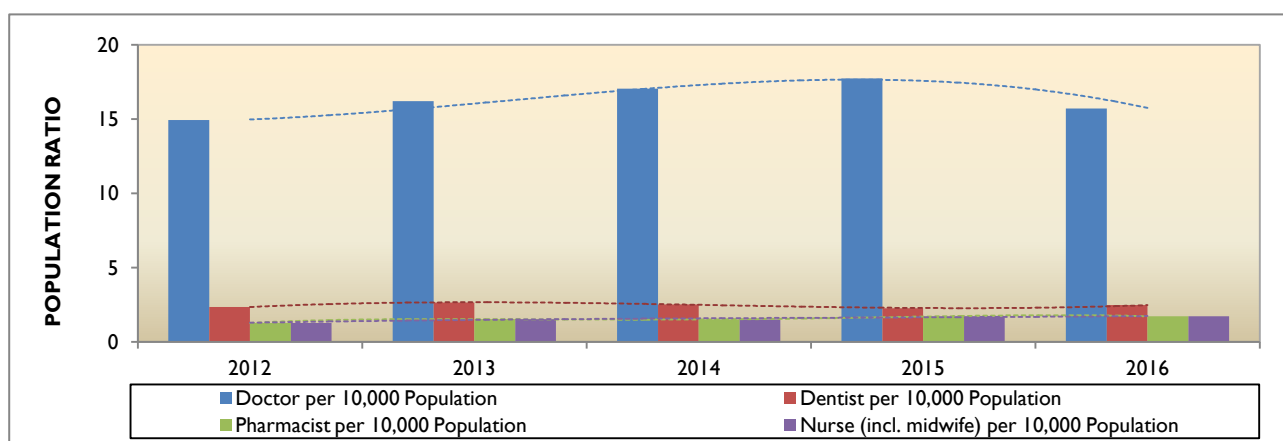
- (1) - Including The Brunei Cancer Centre (TBCC)
- (2) - Jerudong Park Medical Centre (JPMC) and Gleneagles Jerudong Park Centre (GJPMC)
- (3) - Panaga Health Centre
- (4) - Including 12 health clinic branches
- (5) - Including 1 dental clinic branch

## Human Resource in Health

Human Resources (2016)		Government	Army	Private	Total
Doctors <sup>(1)</sup>	Male	305	8	54	367
	Female	244	9	44	297
	<b>TOTAL</b>	<b>549</b>	<b>17</b>	<b>98</b>	<b>664</b>
Population per Doctor					637
Doctor per 10,000 Population					16
Dentists <sup>(2)</sup>	Male	28	5	9	42
	Female	57	3	3	63
	<b>TOTAL</b>	<b>85</b>	<b>8</b>	<b>12</b>	<b>105</b>
Population per Dentist					4026
Dentist per 10,000 Population					2
Pharmacists <sup>(3)</sup>	Male	6	0	3	9
	Female	41	0	23	64
	<b>TOTAL</b>	<b>47</b>	<b>0</b>	<b>26</b>	<b>73</b>
Population per Pharmacist					5790
Pharmacist per 10,000 Population					2
Nurses <sup>(4)</sup>	Male	477	7	85	569
	Female	1837	12	324	2173
	<b>TOTAL</b>	<b>2314</b>	<b>19</b>	<b>409</b>	<b>2742</b>
Population per Nurse					154
Nurse per 10,000 Population					65
Midwives <sup>(4)</sup>	Male	...	...	...	...
	Female	147	8	10	165
	<b>TOTAL</b>	<b>147</b>	<b>8</b>	<b>10</b>	<b>165</b>
Population per Midwife					2562
Midwife per 10,000 Population					4

Source :

- (1) - Brunei Medical Board, Ministry of Health
- (2) - Dental Services, Ministry of Health
- (3) - Pharmacy Department, Ministry of Health
- (4) - Nursing Board, Ministry of Health





## Human Resource in Health

Country	Physicians per 10 000 population	Nursing and Midwifery Personnel per 10 000 population	Dentistry Personnel per 10 000 population	Pharmaceutical Personnel per 10 000 population
<i>Latest available year</i>	<i>(2007 - 2013)</i>			
BRUNEI DARUSSALAM *	15.7	68.8	2.5	1.7
MALAYSIA	12.0	32.8	3.6	4.3
SINGAPORE	19.5	57.6	4.1	4.1
AUSTRALIA	32.7	106.5	5.4	10.2
AUSTRIA	48.3	79.1	5.7	6.9
BELGIUM	29.9	167.6	7.5	25.6
CZECH REPUBLIC	36.2	84.3	7.1	7.6
DENMARK	34.9	167.9	7.9	...
FINLAND	29.1	108.6	7.3	11.1
FRANCE	31.9	93.0	6.6	10.9
GERMANY	38.9	114.9	8.1	6.2
GREECE	...	...	...	...
ICELAND	34.8	155.9	8.2	10.9
IRELAND	26.7	...	...	11.7
ITALY	37.6	...	...	...
JAPAN	23.0	114.9	7.9	21.5
REPUBLIC OF KOREA	21.4	50.1	4.5	6.7
LUXEMBOURG	29.0	126.1	8.9	7.3
NETHERLAND	...	83.8	...	2.1
NEW ZEALAND	27.4	108.7	4.6	10.1
NORWAY	42.8	172.7	8.8	6.8
OMAN	24.3	53.8	2.8	18.8
PORTUGAL	41.0	61.1	7.6	10.2
SPAIN	49.5	56.7	8.2	14.2
SWEDEN	39.3	110.5	8.1	7.7
SWITZERLAND	40.5	173.6	5.4	5.6
UK	28.1	88.0	5.4	8.1

REFERENCE WORLD HEALTH STATISTICS 2015, WHO PUBLICATION

Note :

... - not available or not applicable

\* - latest available year (2016 data)

## Human Resource in Health

Allied Health Professionals for 2016	Male	Female	TOTAL
Audiologist	0	5	5
Biomedical Engineer	8	5	13
Cardiac Technologist / Technician	0	0	0
Clinical Psychologist	4	20	24
Dental Hygienist / Therapist	36	53	89
Dietician / Nutritionist	6	20	26
Health Education Officer	4	7	11
Health Inspector	32	36	68
Maxillofacial Prosthetist & Technologist	4	0	4
Medical Laboratory Technicians	8	20	28
Medical Record Officer	22	57	79
Medical Social Worker	1	16	17
Neurophysiology Technologist	3	10	13
Occupational Therapist	3	23	26
Optometrist	0	8	8
Orthoptist	1	1	2
Paramedic	6	9	15
Pharmacy Technician	43	91	134
Physiotherapist	9	12	21
Podiatrist	1	7	8
Prosthetist and Orthotist	3	0	3
Public Health Officer	4	13	17
Radiographer	6	27	33
Laboratory Scientific Officer	31	77	108
Speech Language Therapist	0	5	5
Teacher for the Hearing Impaired	1	1	2

Source: Department of Administration and Finance, Ministry of Health

## Government Health Expenditure

	2014/15	2015/16	2016/17
Total Health Budget (B\$ Millions)	373.21	385.12	349.60
Health Budget as % of National Budget	7.73	8.19	8.32
Per Capita Health Budget ( B\$ )	909	925	827
Health Budget as % of GDP	1.72	2.17	2.22
Total Health Expenditure (B\$ Millions)	384.31	403.27	...
Health Expenditure as % of Government Expenditure	8.04	9.16	...
Per Capita Health Expenditure (B\$)	933	968	...
Health Expenditure as % of GDP	1.77	2.27	...

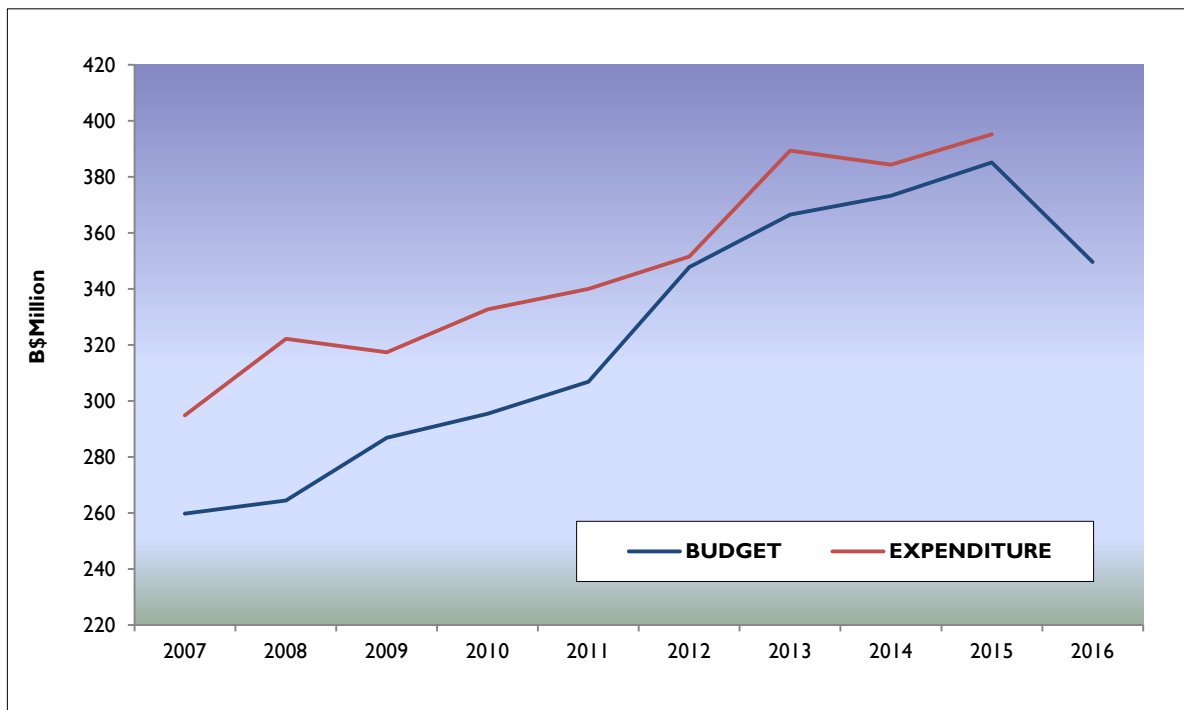
Note:

GDP - Gross Domestic Product

Source:

(Budget) - Budget Section, Ministry of Finance

(Expenditure) - Ledger Section, Treasury Department, Ministry of Finance

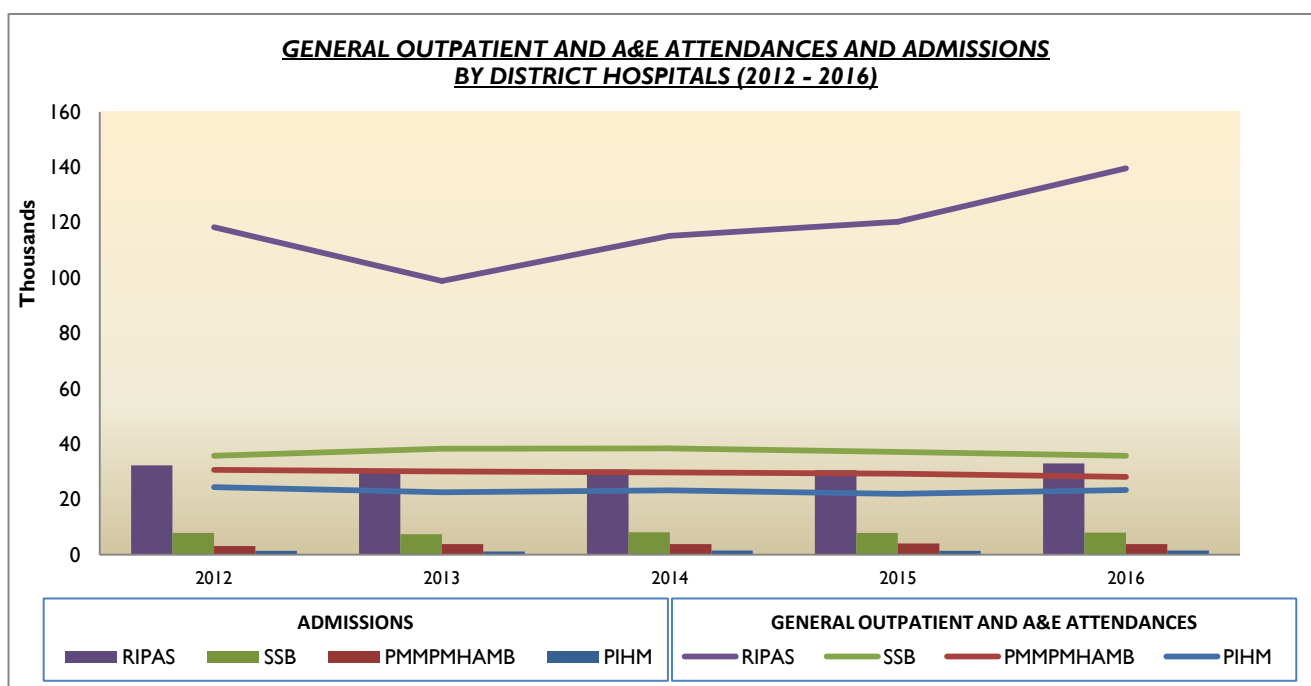


## Hospital Services

The Department of Medical Services is responsible for the delivery of hospital services in all four districts. The hospital services in the country have developed and progressed tremendously in providing secondary and tertiary care. This includes providing highly specialized care in almost all areas of specialties in line with the current disease trends and enabling patients to access medical care in the country.

The main referral government hospital in the country is Raja Isteri Pengiran Anak Saleha (RIPAS) Hospital; located at the capital city. RIPAS Hospital offers a very wide and comprehensive range of medical and surgical services covering almost 30 different specialties and subspecialties.

ACTIVITIES FOR THE YEAR 2016	RIPAS	SSB	PMMPMHAMB	PIHM	TOTAL
<b>OUTPATIENT ACTIVITIES</b>					
General Outpatient Attendances	...	...	...	16,381	16,381
Accident & Emergency (A&E) Outpatient Attendances	139,604	35,730	28,161	7,083	210,578
Specialist Outpatient Attendances	279,002	93,278	46,990	8,486	427,756
<b>TOTAL OUTPATIENT ATTENDANCES</b>	<b>418,606</b>	<b>129,008</b>	<b>75,151</b>	<b>31,950</b>	<b>654,715</b>
<b>INPATIENT ACTIVITIES</b>					
Available Beds	772	222	109	62	1,165
Admissions	32,976	8,062	3,899	1,605	46,542
Discharges & Deaths	32,985	7,995	3,921	1,445	46,346
Patient Days	173,436	44,948	23,080	4,345	245,809
Day Patients	10,482	13,605	...	3,695	27,782
<b>TOTAL (ADMISSIONS + DAY PATIENTS)</b>	<b>43,458</b>	<b>21,667</b>	<b>3,899</b>	<b>5,300</b>	<b>74,324</b>
<b>PERFORMANCE INDICES</b>					
Average Number of Inpatients per Day	474	123	63	12	672
Bed Occupancy Rate	61	55	58	19	58
Average Duration of Stay (Days)	5.3	5.6	5.9	3.0	5.3
Average Turnover of Patients per Bed	43	36	36	23	40
Average Turnover Interval (Days)	3.3	4.5	4.3	12.7	3.9

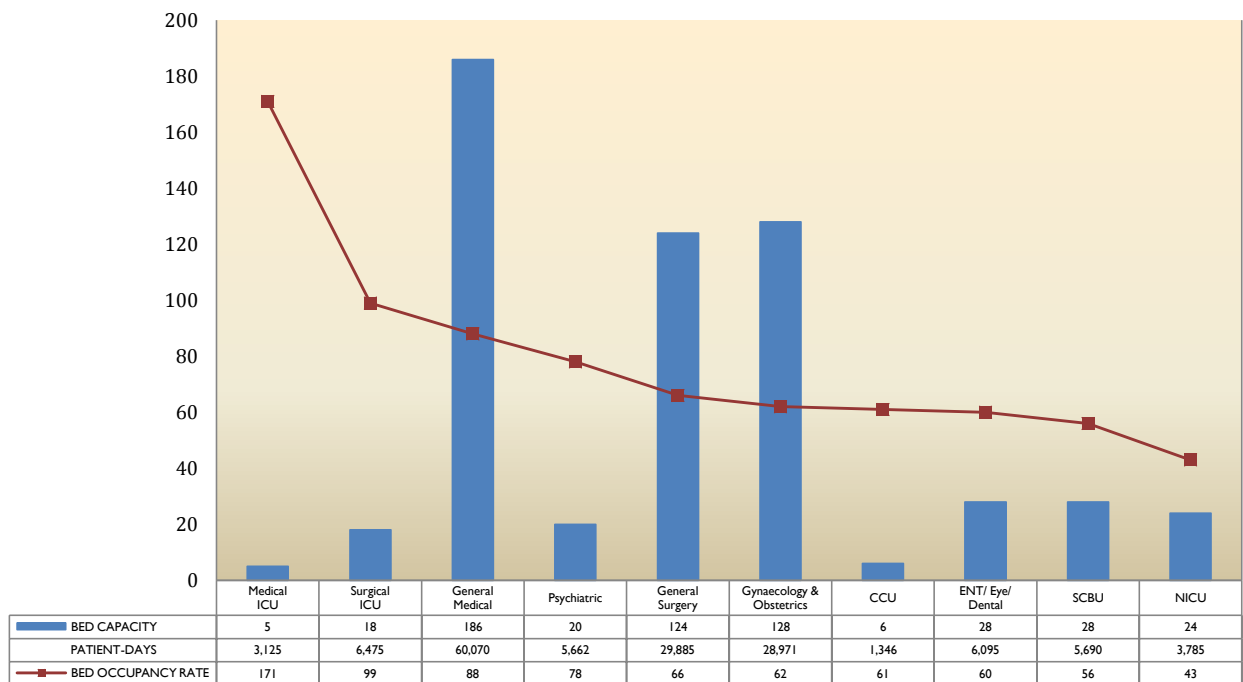


# Hospital Services

## BED CAPACITY AND OCCUPANCY RATES (2012 - 2016)

HOSPITAL	2012		2013		2014		2015		2016	
	Bed Capacity	Bed Occupancy Rate (%)	Bed Capacity	Bed Occupancy Rate (%)	Bed Capacity	Bed Occupancy Rate (%)	Bed Capacity	Bed Occupancy Rate (%)	Bed Capacity	Bed Occupancy Rate (%)
RIPAS	607	74%	619	72%	619	74%	761	59%	772	61%
SSB	222	57%	222	55%	222	56%	222	55%	222	55%
PMMPMHAMB	108	26%	103	45%	109	46%	109	51%	109	58%
PIHM	39	12%	39	21%	49	24%	51	...	62	19%
<b>TOTAL</b>	<b>976</b>	<b>62%</b>	<b>983</b>	<b>63%</b>	<b>999</b>	<b>64%</b>	<b>1143</b>	<b>55%</b>	<b>1165</b>	<b>58%</b>

**TOP 10 BED OCCUPANCY RATE BY SPECIALTY IN RIPAS HOSPITAL FOR THE YEAR 2016**



Source:

RIPAS Hospital Monitoring Services

## Hospital Services

### SPECIALIST OUTPATIENT ATTENDANCES BY CLINICAL DISCIPLINE (RAJA ISTERI PENGIRAN ANAK SALEHA HOSPITAL, BRUNEI MUARA)

CLINICAL DISCIPLINE	2012	2013	2014	2015	2016
Clinical Psychology	1,167	1,054	476	602	1,817
Dental / Dental Clinic	5,493	5,380	5,711	6,457	6,843
Diabetes & Endocrinology	9,515	8,872	6,814	7,847	9,217
Dietitian	12,273	12,763	13,186	14,566	18,492
Eye	34,982	30,662	30,324	30,982	32,006
Gastroenterology & Hepatology	16,004	14,819	14,726	11,464	12,204
Gynaecology	13,381	13,544	14,105	13,704	14,163
Haematology	11,590	11,609	12,033	12,272	11,032
Hearing Therapy	491	677	748	829	1,125
Medical	7,987	10,850	12,418	12,020	7,800
Neuro-surgical	2,806	2,879	2,986	2,978	3,104
Obstetrics	17,964	19,405	16,934	14,883	15,171
Occupational Therapy	7,944	8,243	8,161	8,770	11,753
Oral Maxillo-facial	14,623	15,822	15,821	17,574	17,985
ORL / ENT	12,025	17,367	11,141	12,068	13,961
Orthopaedic	18,445	17,901	19,732	20,394	20,982
Orthotic / Prosthetic	1,066	715	452	602	844
Paediatrics	9,567	7,770	9,206	13,212	11,932
Physiotherapy	12,633	13,040	11,612	12,313	13,818
Plaster Room	2,246	2,754	2,929	3,438	1,261
Podiatry	3,882	3,767	4,164	4,652	4,868
Psychiatric	6,292	7,217	7,706	7,679	7,471
Respiratory Medicine	5,721	5,706	6,055	6,169	6,566
Skin	17,949	17,183	17,862	18,792	19,262
Speech Therapy	2,949	3,353	3,014	414	1,527
Surgical	8,819	8,683	11,170	12,692	13,798
<b>TOTAL</b>	<b>257,814</b>	<b>262,035</b>	<b>259,486</b>	<b>267,373</b>	<b>279,002</b>

## Hospital Services

### SPECIALIST OUTPATIENT ATTENDANCES BY CLINICAL DISCIPLINE (SURI SERI BEGAWAN HOSPITAL, BELAIT)

CLINICAL DISCIPLINE	2012	2013	2014	2015	2016
Cardiology Clinic	132	667	1,026	1,941	2,851
Chest Clinic	469	559	584	516	361
Daycare ( Psychiatric)	3,012	3,448	3,579	3,757	3,461
Dental / Dental Clinic	9,324	8,906	9,469	9,548	10,685
Diabetes & Endocrinology	...	...	...	4,769	4,878
Dietition	681	623	626	666	889
Eye	9,301	7,654	8,191	8,745	8,364
Gastro	965	772	849	871	1,062
Gynaecology	4,357	3,004	2,539	2,445	3,412
Oral Maxillo-facial	666	684	638	469	520
Medical	11,236	8,432	7,176	8,237	8,645
Medical Social Worker	206	203	215	287	303
Nephropathy	373	410	270	...	...
Neurology	110	55	109	161	144
Neuro-surgical	193	222	182	174	119
Nursing Personnel (Dental)	2,495	2,080	2,035	2,056	2,088
Occupational Therapy	3,980	2,441	1,650	1,786	1,774
Oncology	322	354	369	356	158
ORL / ENT	5,312	3,834	3,733	3,704	3,925
Orthopaedic	4,730	3,233	3,066	2,962	4,643
Paediatrics	9,404	7,977	9,317	9,281	8,375
Physiotherapy	6,158	5,896	5,057	6,121	5,705
Podiatry	340	353	338	350	907
Psychiatric	2,068	1,894	2,169	2,309	2,940
Renal Unit	633	355	292	7,123	7,791
Respiratory Medicine	470	342	267	233	624
Rheumatology	...	...	...	129	129
Skin	3,164	1,927	1,588	1,469	1,169
Speech Therapy	434	475	573	642	1,430
Surgical	5,210	4,324	4,006	3,733	5,432
TB Coordination Unit	...	...	...	...	494
<b>TOTAL</b>	<b>85,745</b>	<b>71,124</b>	<b>69,913</b>	<b>84,840</b>	<b>93,278</b>

Note: ... - not available



## Hospital Services

### SPECIALIST OUTPATIENT ATTENDANCES BY CLINICAL DISCIPLINE (PENGIRAN MUDA MAHKOTA PENGIRAN MUDA HAJI AL-MUHTADEE BILLAH HOSPITAL, TUTONG)

CLINICAL DISCIPLINE	2012	2013	2014	2015	2016
Daycare ( Psychiatric)	1,133	1,343	778	325	...
Dental / Dental Clinic	14,505	10,164	10,058	10,772	11,506
Dietition	1,100	376	484	712	874
Eye	5,597	6,687	6,686	7,034	7,373
Gynaecology	4,215	2,996	2,983	2,728	2,561
Medical	8,153	7,542	7,856	6,735	7,100
Occupational Therapy	751	811	763	949	902
Oral Maxillo-facial	360	325	290	273	202
ORL / ENT	1,528	2,139	1,042	1,231	1,122
Orthopaedic	234	344	387	359	413
Paediatrics	3,097	2,744	2,688	2,602	2,258
Physiotherapy	3,105	3,587	3,905	4,484	4,016
Psychiatric	794	611	2,029	755	789
Renal Unit	...	...	...	...	6,246
Respiratory Medicine	395	384	387	344	366
Skin	1,515	754	580	499	534
Surgical	757	1,006	744	647	728
<b>TOTAL</b>	<b>47,239</b>	<b>41,813</b>	<b>41,660</b>	<b>40,449</b>	<b>46,990</b>

### SPECIALIST OUTPATIENT ATTENDANCES BY CLINICAL DISCIPLINE (PENGIRAN ISTERI HAJAH MARIAM HOSPITAL, TEMBURONG)

CLINICAL DISCIPLINE	2012	2013	2014	2015	2016
Cardiology Clinic	65	42	8	6	5
CDC	...	...	...	...	24
Daycare ( Psychiatric)	...	...	19	...	...
Dental / Dental Clinic	3,897	4,503	4,227	4,645	4,122
Diabetes & Endocrinology	1,101	805	526	282	625
Dietition	125	89	59	56	39
ENT	...	...	...	...	105
Eye	1,055	913	1,131	914	1,104
Gynaecology	1,224	1,113	948	953	800
Handicapped Playgroup	406	148	...	...	...
Medical	496	443	404	373	734
Occupational Therapy	...	...	...	...	32
Oral Maxillo-facial	152	63	46	66	83
Orthopaedic	175	151	178	175	189
Physiotherapy	214	225	198	261	221
Podiatry	21	37	21	24	47
Psychiatric	91	66	97	82	117
Psychology	...	...	...	...	12
Renal Unit	173	168	185	221	227
Skin	217	...	...	...	...
<b>TOTAL</b>	<b>9,412</b>	<b>8,766</b>	<b>8,047</b>	<b>8,058</b>	<b>8,486</b>

Note: ... - not available

## Leading Causes of Deaths for the Year 2016 (Based on ICD-10)

The four leading causes of deaths which accounted for 51.2 percent of the total deaths were comprised of Non-Communicable Diseases namely Cancer, Heart Diseases, Diabetes Mellitus and Cerebrovascular Diseases.

No.	ICD-10 CODE	TYPE OF DISEASE	MALE	FEMALE	TOTAL	%	RATE PER 100,000 POPULATION
1	C00 - C97	Cancer (Malignant Neoplasms)	177	176	353	21.6	83.5
2	I00 - I09, I20 - I52	Heart Diseases (Including Acute Rheumatic Fever)	130	81	211	12.9	49.9
3	E10 - E14	Diabetes Mellitus	88	61	149	9.1	35.3
4	I60 - I69	Cerebrovascular Diseases	73	50	123	7.5	29.1
5	J10 - J18	Influenza and Pneumonia	42	40	82	5.0	19.4
6	I10 - I15	Hypertensive Diseases	30	42	72	4.4	17.0
7	A40 - A41	Septicaemia	32	29	61	3.7	14.4
8	J40 - J46	Bronchitis, Chronic & Unspecified Emphysema & Asthma	22	16	38	2.3	9.0
9	P00 - P96	Certain Conditions Originating In The Perinatal Period	17	12	29	1.8	6.9
10	R54	Senility Without Mention of Psychosis	11	17	28	1.7	6.6
Others			268	218	486	29.8	115.0
<b>TOTAL DEATHS</b>			<b>890</b>	<b>742</b>	<b>1,632</b>	<b>100.0</b>	<b>386.1</b>

## Leading Causes of Deaths (2012 - 2016)

No.	2012	2013	2014	2015	2016
1	Cancer (Malignant Neoplasms) 280 (23.0%)	Cancer (Malignant Neoplasms) 295 (21.1%)	Cancer (Malignant Neoplasms) 298 (20.3%)	Cancer (Malignant Neoplasms) 312 (20.2%)	Cancer (Malignant Neoplasms) 353 (21.6%)
2	Heart Diseases (Including Acute Rheumatic Fever) 152 (12.5%)	Heart Diseases (Including Acute Rheumatic Fever) 183 (13.1%)	Heart Diseases (Including Acute Rheumatic Fever) 228 (15.5%)	Heart Diseases (Including Acute Rheumatic Fever) 193 (12.5%)	Heart Diseases (Including Acute Rheumatic Fever) 211 (12.9%)
3	Diabetes Mellitus 123 (10.1%)	Diabetes Mellitus 131 (9.4%)	Diabetes Mellitus 141 (9.6%)	Diabetes Mellitus 147 (9.5%)	Diabetes Mellitus 149 (9.1%)
4	Cerebrovascular Diseases 70 (5.8%)	Cerebrovascular Diseases 82 (5.9%)	Cerebrovascular Diseases 103 (7.0%)	Cerebrovascular Diseases 102 (6.6%)	Cerebrovascular Diseases 123 (7.5%)
5	Hypertensive Diseases 45 (3.7%)	Hypertensive Diseases 71 (5.1%)	Hypertensive Diseases 64 (4.4%)	Influenza and Pneumonia 75 (4.8%)	Influenza and Pneumonia 82 (5.0%)
6	Transport Accidents 45 (3.7%)	Bronchitis, Chronic and Unspecified Emphysema & Asthma 54 (3.9%)	Influenza and Pneumonia 63 (4.3%)	Hypertensive Diseases 54 (3.5%)	Hypertensive Diseases 72 (4.4%)
7	Influenza and Pneumonia 41 (3.4%)	Influenza and Pneumonia 48 (3.4%)	Bronchitis, Chronic and Unspecified Emphysema & Asthma 48 (3.3%)	Septicaemia 51 (3.3%)	Septicaemia 61 (3.7%)
8	Bronchitis, Chronic and Unspecified Emphysema & Asthma 39 (3.2%)	Septicaemia 35 (2.5%)	Septicaemia 42 (2.9%)	Bronchitis, Chronic and Unspecified Emphysema & Asthma 44 (2.8%)	Bronchitis, Chronic and Unspecified Emphysema & Asthma 38 (2.3%)
9	Certain Conditions Originating In The Perinatal Period 38 (3.1%)	Transport Accidents 30 (2.1%)	Transport Accidents 28 (1.9%)	Congenital Malformations, Deformations and Chromosomal Abnormalities 34 (2.2%)	Certain Conditions Originating In The Perinatal Period 29 (1.8%)
10	Septicaemia 27 (2.2%)	Certain Conditions Originating In The Perinatal Period 26 (1.9%)	Certain Conditions Originating In The Perinatal Period 24 (1.6%)	Transport Accidents 34 (2.2%)	Senility Without Mention of Psychosis 28 (1.7%)
OTHERS	356 (29.3%)	445 (31.8%)	431 (29.3%)	501 (32.4%)	486 (29.8%)
GRAND TOTAL	1,216 (100.0%)	1,400 (100.0%)	1,470 (100.0%)	1,547 (100.0%)	1,632 (100.0%)

## Leading Causes of Deaths for Population Below 19 years (2016)

In 2016, 5.6 percent of total deaths were for the age-group (0-18) years old.

No.	Under 1 year	1 - 4 years	5 - 9 years	10 - 14 years	15 - 18 years	TOTAL (< 19 years)
1	Certain Conditions Originating In The Perinatal Period 29 (54.7%)	Cancer (Malignant Neoplasms) 7 (50.0%)	Cancer (Malignant Neoplasms) 3 (33.3%)	Cancer (Malignant Neoplasms) 1 (12.5%)	Cancer (Malignant Neoplasms) 3 (42.9%)	Certain Conditions Originating In The Perinatal Period 29 (31.9%)
2	Congenital Malformations, Deformations and Chromosomal Abnormalities 10 (18.9%)	Congenital Malformations, Deformations and Chromosomal Abnormalities 3 (21.4%)	Diarrhoea and Gastroenteritis of Presumed Infectious Origin 1 (11.1%)	Septicaemia 1 (12.5%)	Transport Accidents 2 (28.6%)	Cancer (Malignant Neoplasms) 14 (15.4%)
3	Septicaemia 3 (5.7%)	Heart Diseases (Including Acute Rheumatic Fever) 1 (7.1%)	-	Transport Accidents 1 (12.5%)	Tuberculosis 1 (14.3%)	Congenital Malformations, Deformations and Chromosomal Abnormalities 14 (15.4%)
4	Heart Diseases (Including Acute Rheumatic Fever) 1 (1.9%)	Septicaemia 1 (7.1%)	-	Congenital Malformations, Deformations and Chromosomal Abnormalities 1 (12.5%)	Accidental Drowning and Submersion 1 (14.3%)	Septicaemia 5 (5.5%)
5	Influenza and Pneumonia 1 (1.9%)	Bronchitis, Chronic and Unspecified Emphysema & Asthma 1 (7.1%)	-	Accidental drowning and submersion 1 (12.5%)	-	Transport Accidents 4 (4.4%)
6	Transport Accidents 1 (1.9%)	Other Intestinal Infectious Diseases 1 (7.1%)	-	Glomerular and Renal Tubulo-Interstitial Diseases 1 (12.5%)	-	Heart Diseases (Including Acute Rheumatic Fever) 2 (2.2%)
7	Other Acute Lower Respiratory Infections 1 (1.9%)	-	-	-	-	Accidental drowning and submersion 2 (2.2%)
8	-	-	-	-	-	Influenza and Pneumonia 1 (1.1%)
9	-	-	-	-	-	Bronchitis, Chronic and Unspecified Emphysema & Asthma 1 (1.1%)
OTHER DISEASES	7 (13.2%)	-	5 (55.6%)	2 (25.0%)	-	17 (19.8%)
GRAND TOTAL	53 (100.0%)	14 (100.0%)	9 (100.0%)	8 (100.0%)	7 (100.0%)	91 (100.0%)

## Leading Causes of Deaths for Population Aged 60 years and above (2012 - 2016)

In 2016, about 58 percent of total deaths were for the age 60 years and above and the top five leading causes of deaths were comprised Non-Communicable Diseases: Cancer, Heart Diseases, Diabetes Mellitus, Cerebrovascular Diseases; and Hypertensive Diseases.

No.	2012	2013	2014	2015	2016
1	Cancer (Malignant Neoplasms) 147 (21.8%)	Cancer (Malignant Neoplasms) 169 (20.5%)	Cancer (Malignant Neoplasms) 182 (20.5%)	Cancer (Malignant Neoplasms) 178 (19.3%)	Cancer (Malignant Neoplasms) 190 (20.1%)
2	Diabetes Mellitus 87 (12.9%)	Heart Diseases (Including Acute Rheumatic Fever) 105 (12.7%)	Heart Diseases (Including Acute Rheumatic Fever) 133 (15.0%)	Heart Diseases (Including Acute Rheumatic Fever) 115 (12.5%)	Heart Diseases (Including Acute Rheumatic Fever) 110 (11.6%)
3	Heart Diseases (Including Acute Rheumatic Fever) 81 (12.0%)	Diabetes Mellitus 98 (11.9%)	Diabetes Mellitus 95 (10.7%)	Diabetes Mellitus 94 (10.2%)	Diabetes Mellitus 89 (9.4%)
4	Cerebrovascular Diseases 45 (6.7%)	Cerebrovascular Diseases 60 (7.3%)	Cerebrovascular Diseases 76 (8.5%)	Cerebrovascular Diseases 66 (7.1%)	Cerebrovascular Diseases 81 (8.6%)
5	Bronchitis, Chronic and Unspecified Emphysema & Asthma 35 (5.2%)	Hypertensive Diseases 57 (6.9%)	Hypertensive Diseases 50 (5.6%)	Influenza and Pneumonia 62 (6.7%)	Influenza and Pneumonia 61 (6.4%)
6	Hypertensive Diseases 34 (5.1%)	Bronchitis, Chronic and Unspecified Emphysema & Asthma 50 (6.1%)	Influenza and Pneumonia 48 (5.4%)	Bronchitis, Chronic and Unspecified Emphysema & Asthma 39 (4.2%)	Hypertensive Diseases 55 (5.8%)
7	Influenza and Pneumonia 26 (3.9%)	Influenza and Pneumonia 29 (3.5%)	Bronchitis, Chronic and Unspecified Emphysema & Asthma 38 (4.3%)	Hypertensive Diseases 35 (3.8%)	Septicaemia 40 (4.2%)
8	Septicaemia 16 (2.4%)	Senility Without Mention of Psychosis 23 (2.8%)	Septicaemia 29 (3.3%)	Septicaemia 31 (3.3%)	Bronchitis, Chronic and Unspecified Emphysema & Asthma 33 (3.5%)
9	Senility Without Mention of Psychosis 9 (1.3%)	Septicaemia 22 (2.7%)	Senility Without Mention of Psychosis 21 (2.4%)	Senility Without Mention of Psychosis 26 (2.8%)	Senility Without Mention of Psychosis 28 (3.0%)
10	Viral Hepatitis 8 (1.2%)	Diseases of Skin and Subcutaneous Tissue 11 (1.3%)	Tuberculosis 8 (0.9%)	Tuberculosis 8 (0.8%)	Diseases of Skin and Subcutaneous Tissue 11 (1.2%)
OTHERS	185 (27.5%)	201 (24.4%)	209 (23.5%)	266 (28.9%)	248 (26.2%)
GRAND TOTAL	673 (100.0%)	825 (100.0%)	889 (100.0%)	920 (100.0%)	946 (100.0%)

## Health Services

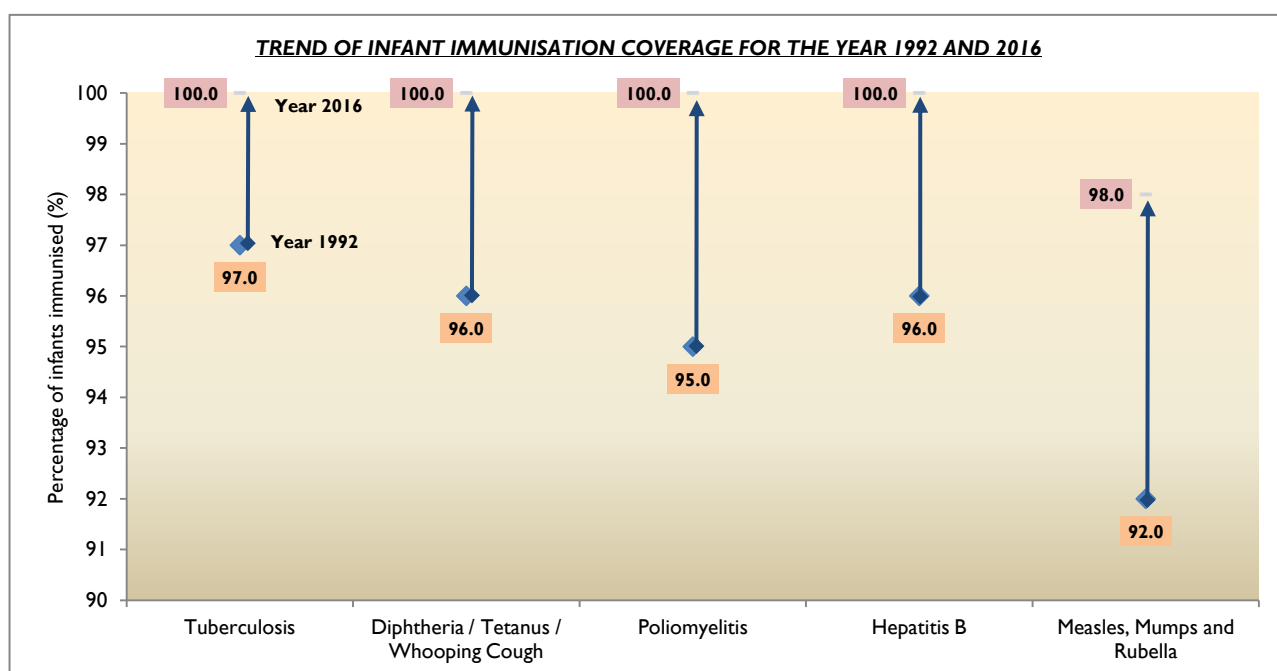
The Department of Health Services, Ministry of Health is responsible for providing public health services in the country. The mission of the department is to promote well-being and prevent ill health, through various activities and programmes that have been developed and established under three main services: Community Health Services, Environmental Health Services, and Scientific Services.

WORKLOAD INDICATORS	2012	2013	2014	2015	2016
1. Ante Natal Clinic attendances	46,007	44,418	44,812	46,471	46,147
2. Post Natal Clinic attendances	9,184	10,167	9,188	9,986	10,545
Well Women Clinic Attendances	12,909	10,342	10,964	11,525	11,795
3. Child ( <5 ) attendances	98,923	94,501	86,785	89,929	91,167
4. No. of students medically examined (Year 1, 4 & 8 )	12,616	17,728	12,515	12,911	12,572
5. No. of students screened (Year 1, 3, 4, 6 & 8)	33,228	27,270	27,088	26,242	25,686

Over the years, immunisation coverage has consistently been above 95.0 percent for all vaccinations in the programme which met the targets set by the WHO. In 2003, it was made compulsory in line with the Infectious Disease Order for all children in Brunei Darussalam to be vaccinated according to the Expanded Program of Immunisation. The success of this programme is one of the factors that contributed to the progression of Brunei Darussalam in achieving one of the health objectives under the United Nations Millennium Development Goal for reduction in child mortality.

IMMUNISATION COVERAGE	2012	2013	2014	2015	2016
% of infants immunised against					
- Tuberculosis (at birth)	100.0	100.0	100.0	100.0	100.0
- Diphtheria/Tetanus/Whooping Cough (Tetract-HIB)3	90.0	99.6	99.0	99.0	100.0
- Poliomyelitis IPV3	99.0	99.1	99.0	99.0	100.0
- Hepatitis B3	100.0	97.9	99.5	99.0	100.0
- Measles, Mumps and Rubella 1 (MMR1)	98.6	96.0	97.0	96.0	98.0

Source: *Maternal and Child Health (MCH) Clinic Data*



## Maternal and Child Health

### ANTENATAL REGISTRATION (2013-2016)

No. of Pregnant Women Registered	2013	2014	2015	2016
Maternal and Child Health (MCH) Clinic, Ministry of Health	6,153	6,404	6,301	6,178
Obstetrics and Gynaecology (O&G) Department, RIPAS (Tertiary) Hospital	272	236	315	240
MRS Clinic, Ministry of Defence	127	113	92	91
Jerudong Park Medical Centre (JPMC) *	238	408	380	344
<b>TOTAL</b>	<b>6,790</b>	<b>7,161</b>	<b>7,088</b>	<b>6,853</b>
National Live Births	6,680	6,891	6,699	6,437
<b>% COVERAGE AT LEAST ONE VISIT</b>	<b>101.6%</b>	<b>103.9%</b>	<b>105.8%</b>	<b>106.5%</b>

Note: \* - Private Hospital

### PREVALENCE OF ANAEMIA AMONG PREGNANT WOMEN AT FIRST ANTENATAL CLINIC PRESENTATION (2016)

	MATERNAL AND CHILD HEALTH (MCH) CLINIC DATA				
	BRUNEI MUARA	BELAIT	TUTONG	TEMBURONG	TOTAL
NO. OF WOMEN WITH DOCUMENTED RESULT	4,465	589	805	107	5,966
NORMAL [11 g/dl & above]	3,759	474	675	98	5,006
MILD ANAEMIA [10 to 10.9 g/dl]	459	70	87	3	619
MODERATE ANAEMIA [7 to 9.9 g/dl]	239	39	43	6	327
SEVERE ANAEMIA [6.9 g/dl or less]	8	6	0	0	14
<b>TOTAL NO. OF PREGNANT WOMEN WITH ANAEMIA</b>	<b>706</b>	<b>115</b>	<b>130</b>	<b>9</b>	<b>960</b>
<b>% ANAEMIA</b>	<b>15.8</b>	<b>19.5</b>	<b>16.1</b>	<b>8.4</b>	<b>16.1</b>

Note: - All pregnant women in Brunei Darussalam are routinely screened for anaemia at the first antenatal visit.

- In 2016, 6178 pregnant women were registered in MCH clinics throughout the country.

- Of these, 5966 (96.6%) had their full blood count (FBC) results documented.

- 16.1% of these women were found to have anaemia at the first antenatal clinic presentation.

Source: Maternal and Child Health (MCH) Clinic Data



## Maternal and Child Health

### PREVALENCE OF ANAEMIA AMONG PREGNANT WOMEN AT FIRST ANTENATAL CLINIC PRESENTATION (2015-2016)

MRS CLINIC DATA (MINISTRY OF DEFENCE)	2015			2016		
	NO. OF PREGNANT WOMEN REGISTERED	NO. OF PREGNANT WOMEN DOCUMENTED TO HAVE ANAEMIA	% ANAEMIA	NO. OF PREGNANT WOMEN REGISTERED	NO. OF PREGNANT WOMEN DOCUMENTED TO HAVE ANAEMIA	% ANAEMIA
BERAKAS	44	5	11.4	40	9	22.5
MUARA	0	0	0.0	0	0	0.0
PENANJONG	16	0	0.0	20	4	20.0
TUTONG	24	5	20.8	19	2	10.5
LUMUT	8	0	0.0	12	4	33.3
<b>TOTAL</b>	<b>92</b>	<b>10</b>	<b>10.9</b>	<b>91</b>	<b>19</b>	<b>20.9</b>

Source:

Maternal and Child Health (MCH) Clinic Data

### REGISTERED LIVEBIRTHS BY BIRTH WEIGHT (2011 - 2016)

Birth Weight	NUMBER OF LIVEBIRTHS				
	2012	2013	2014	2015	2016
At Least 2500g	6,054	5,850	6,037	5,877	5,737
Less Than 2500g (LOW BIRTH WEIGHT)	834	791	819	791	667
- Less Than 1500g (VERY LOW BIRTH WEIGHT)	124	88	100	97	84
- Less Than 1000g (EXTREMELY LOW BIRTH)	42	37	38	32	40
Not Known	21	39	35	31	33
<b>TOTAL</b>	<b>6,909</b>	<b>6,680</b>	<b>6,891</b>	<b>6,699</b>	<b>6,437</b>
<b>% Low Birth Weight (Less Than 2500g)</b>	<b>12.1</b>	<b>11.8</b>	<b>11.9</b>	<b>11.8</b>	<b>10.4</b>

Source:

Birth, Death and Adoption Section, Immigration and National Registration Department, Ministry of Home Affairs

## Maternal and Child Health

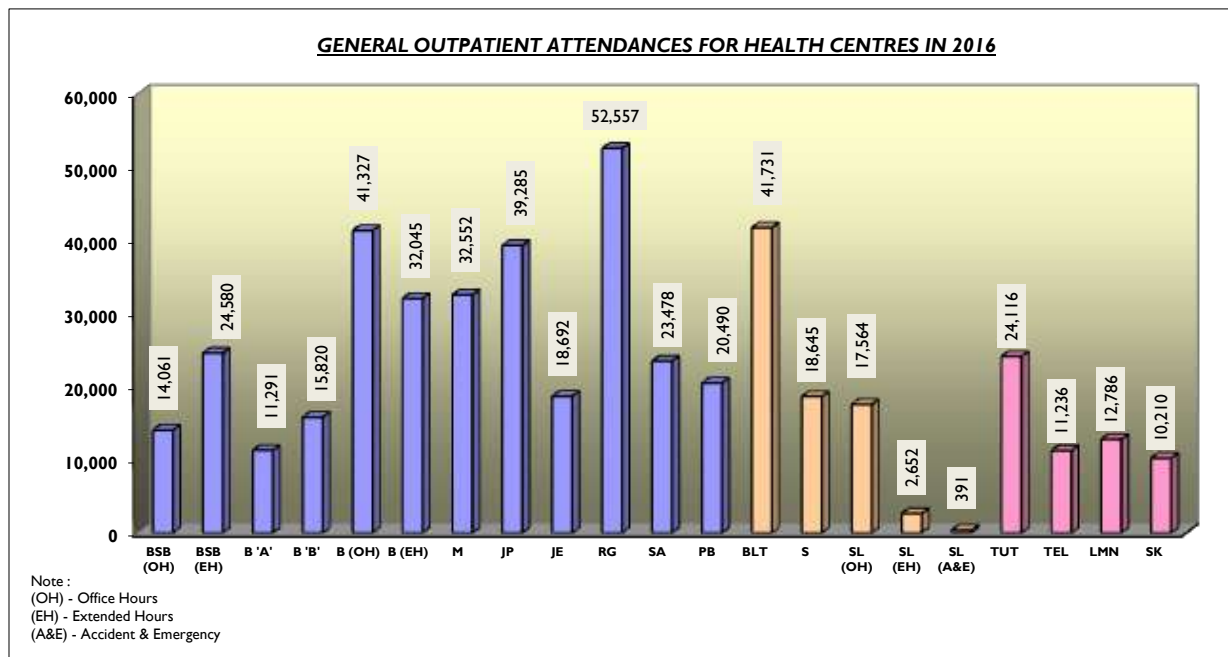
### TOTAL NUMBER OF REGISTERED LIVEBIRTHS BY AGE OF MOTHER (2012 - 2016)

Age Group of Mother	2012	2013	2014	2015	2016
Under 15	7	7	5	4	3
15 - 19	268	221	197	195	170
20 - 24	1,074	1,097	1,083	987	920
25 - 29	2,201	2,124	2,212	2,233	2,101
30 - 34	2,031	1,886	2,042	1,939	1,896
35 - 39	1,043	1,044	1,079	1,064	1,064
40 - 44	266	279	254	264	269
45 - 49	18	20	16	13	12
50 above	1	1	2	0	1
unknown	0	1	1	0	1
<b>TOTAL</b>	<b>6,909</b>	<b>6,680</b>	<b>6,891</b>	<b>6,699</b>	<b>6,437</b>
Adolescent Fertility Rate (per 1,000 female population aged (15-19))	15.6	12.8	11.3	11.0	9.6
General Fertility Rate (per 1,000 female population aged (15-49))	59.6	57.2	58.4	56.2	54.3
Total Fertility Rate (per female population aged (15-49))	1.9	1.9	1.9	1.8	1.8

Source:

Birth, Death and Adoption Section, Immigration and National Registration Department, Ministry of Home Affairs

## General Outpatient Attendances for Health Centres (2016)



### BRUNEI MUARA HEALTH CENTRES

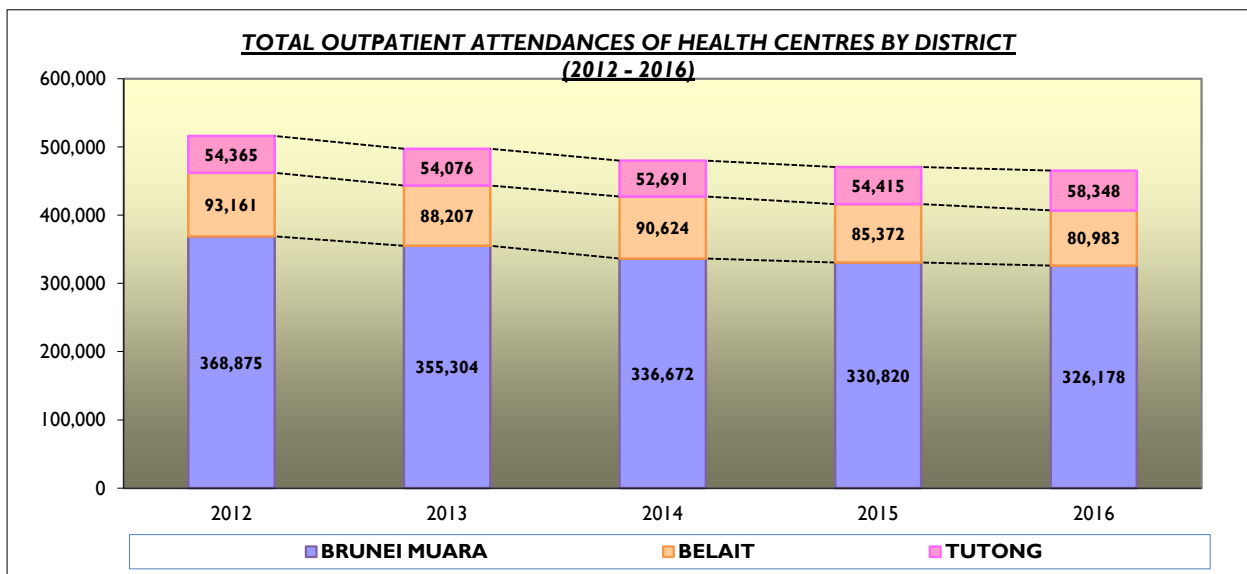
- BSB : BSB Health Centre
- B 'A' : Berakas 'A' Health Centre
- B 'B' : Berakas 'B' Health Centre
- B : Berakas Health Centre (started in May 2016)
- M : Muara Health Centre
- JP : Jubli Perak Health Centre
- JE : Jubli Emas Health Centre
- RG : PAP Hjh Muta-Wakkilah Hayatul Bolkihah Health Centre
- SA : PAP Hjh Rashidah Sa'adatull Bolkihah Health Centre
- PB : Pengkalan Batu Health Centre (started in July 2012)

### BELAIT HEALTH CENTRES

- BLT : Belait Health Centre
- S : Seria Health Centre
- SL : Sungai Liang Health Centre

### TUTONG HEALTH CENTRES

- TUT : Tutong Health Centre
- TEL : Telisai Health Centre
- LMN : Lamunin Health Centre
- SK : Sungai Kelugos Health Centre



## Notifiable Infectious Diseases (2016)

Notification of infectious diseases is required by Brunei law under the 'Infectious Diseases Act'. A total of 57 infectious diseases are listed as notifiable in the country. All notifications must be reported to the Disease Control Division at the Department of Health, Ministry of Health.

DISEASES	BM	TUT	TEM	KB	TOTAL
<b>FOOD AND WATER BORNE DISEASES</b>					
Campylobacter Upsaliensis	1	0	0	0	1
Cholera	0	0	0	0	0
Dysentery (Shigella)	6	0	0	1	7
Food Poisoning	84	11	0	13	108
Gastroenteritis	6,582	272	185	1,750	8,789
Hepatitis A	4	0	0	0	4
Para/Typhoid Fever	0	0	0	4	4
Salmonella Infection	23	0	0	2	25
<b>Total</b>	<b>6,700</b>	<b>283</b>	<b>185</b>	<b>1,770</b>	<b>8,938</b>
<b>PERSON TO PERSON TRANSMITTED DISEASES</b>					
Chicken Pox	1,478	207	25	185	1,895
Ebola Fever	0	0	0	0	0
Hand, Foot & Mouth Disease	1,968	270	57	282	2,577
Influenza A	0	0	0	0	0
Influenza B	0	0	0	0	0
Influenza Others	0	0	0	0	0
Leprosy	0	0	0	0	0
Meningitis	0	0	0	1	1
Scarlet Fever	0	0	0	2	2
Severe Acute Respiratory Syndrome	0	0	0	0	0
<b>Total</b>	<b>3,446</b>	<b>477</b>	<b>82</b>	<b>470</b>	<b>4,475</b>
<b>VACCINE PREVENTABLE DISEASES</b>					
Diphtheria	0	0	0	0	0
Hepatitis B	31	1	0	1	33
Measles	1	0	0	0	1
Mumps	2	1	0	2	5
Pertussis	0	0	0	0	0
Acute Flaccid Paralysis (AFP)	0	0	0	0	0
Rubella	0	0	0	0	0
Smallpox	0	0	0	0	0
Tetanus	0	0	0	0	0
Tetanus Neonatorum	0	0	0	0	0
Tuberculosis	164	25	5	47	241
<b>Total</b>	<b>198</b>	<b>27</b>	<b>5</b>	<b>50</b>	<b>280</b>

## Notifiable Infectious Diseases (2016) (cont'd)

DISEASES	BM	TUT	TEM	KB	TOTAL
<b>SEXUALLY TRANSMITTED DISEASES</b>					
AIDS	0	0	0	0	0
Chancroid	0	0	0	0	0
Chlamydial Infection	36	5	1	4	46
Genital Herpes	4	0	0	0	4
Gonococcal Infections	49	6	1	2	58
Hepatitis C	0	0	0	0	0
HIV * (Local only)	20	4	2	11	37
Non Gonococcal Urethritis	0	0	0	0	0
Ophthalmia Neonatorum	0	0	0	0	0
Syphilis (All forms)	103	13	11	20	147
Other STI - Genital Warts, Trichomonas Vaginalis	21	0	0	1	22
<b>Total</b>	<b>233</b>	<b>28</b>	<b>15</b>	<b>38</b>	<b>314</b>
<b>VECTOR BORNE DISEASES</b>					
Chikugunya	1	0	0	0	1
Dengue Fever	35	11	27	10	83
Dengue Haemorrhagic Fever	1	0	0	0	1
Filariasis	0	2	0	3	5
Leptospirosis	0	0	0	0	0
Malaria	3	1	3	0	7
Plague	0	0	0	0	0
Typhus	0	0	0	0	0
West Nile Fever	0	0	0	0	0
Yellow Fever	0	0	0	0	0
Zika Virus Infection	0	0	0	0	0
<b>Total</b>	<b>40</b>	<b>14</b>	<b>30</b>	<b>13</b>	<b>97</b>
<b>ZOONOTIC DISEASES</b>					
Anthrax	0	0	0	0	0
Bovine Spongiform Encephalitis	0	0	0	0	0
Nipah Virus	0	0	0	0	0
Rabies	0	0	0	0	0
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>OTHER INFECTIOUS DISEASES</b>					
Conjunctivitis (Chlamydia)	1	0	1	0	2
Encephalitis	1	0	0	1	2
Japanese Encephalitis	0	0	0	0	0
Puerperal Infection	0	0	0	0	0
Viral Encephalitis	0	0	0	1	1
Viral Hepatitis	0	0	0	0	0
<b>Total</b>	<b>2</b>	<b>0</b>	<b>1</b>	<b>2</b>	<b>5</b>
<b>GRAND TOTAL</b>	<b>10,619</b>	<b>829</b>	<b>318</b>	<b>2,343</b>	<b>14,109</b>

Note: \* Indicate incidence of AIDS/HIV cases amongst locals only.

BM - Brunei Muara District

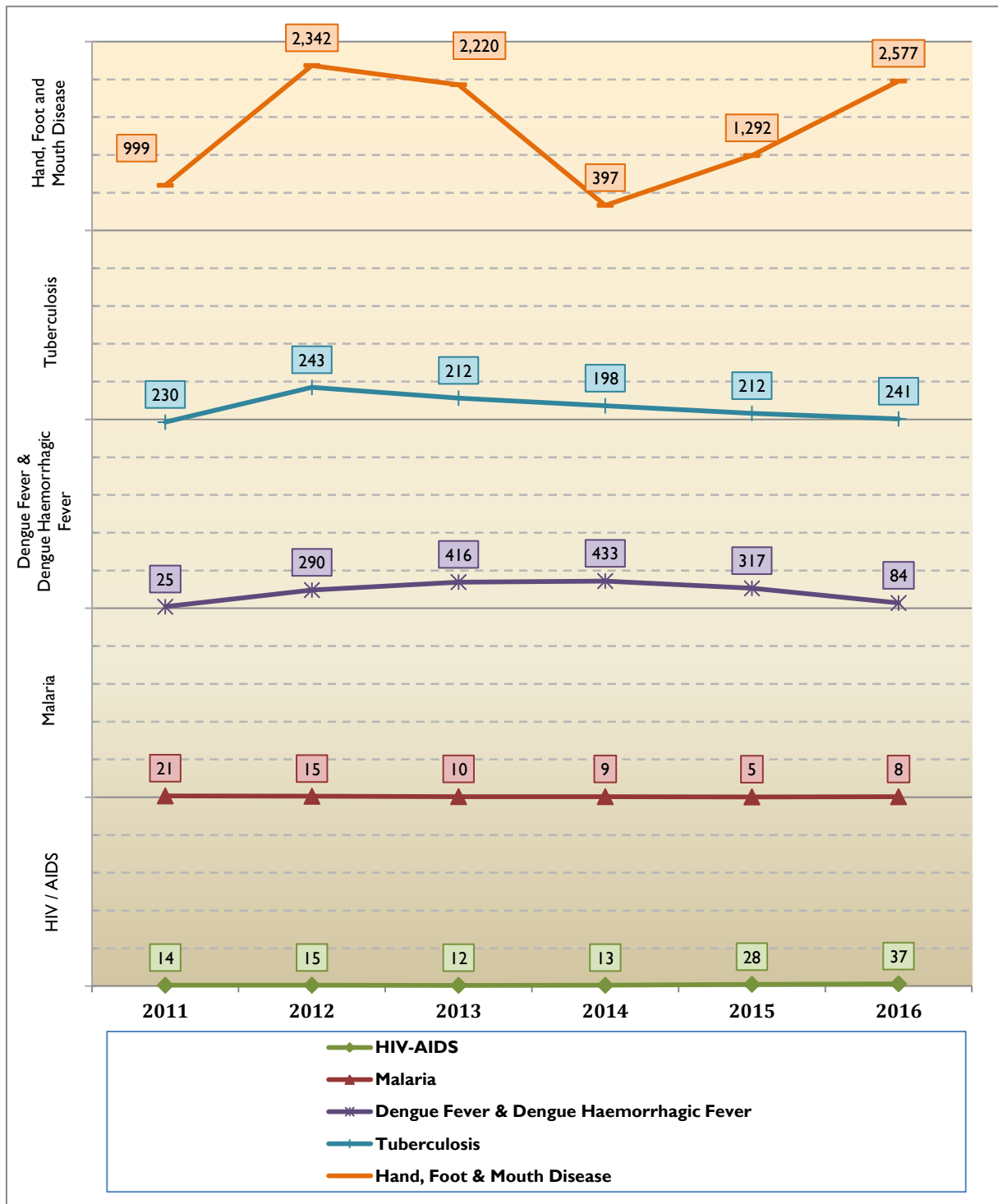
TUT - Tutong District

Source: Disease Control Division, Ministry of Health

TEMB - Temburong District

KB - Belait District

## Trend of Notifiable Infectious Diseases (2011 - 2016)



Note:



Possible causes of decrease in Dengue cases in 2011 are:

- The control measures done in 2010 especially in Kg Ayer might still be effective;
- There is a possibility of a relationship between dengue diseases with a three to five year cyclical pattern. This pattern was seen in neighbouring countries. Brunei may now be in low cycle

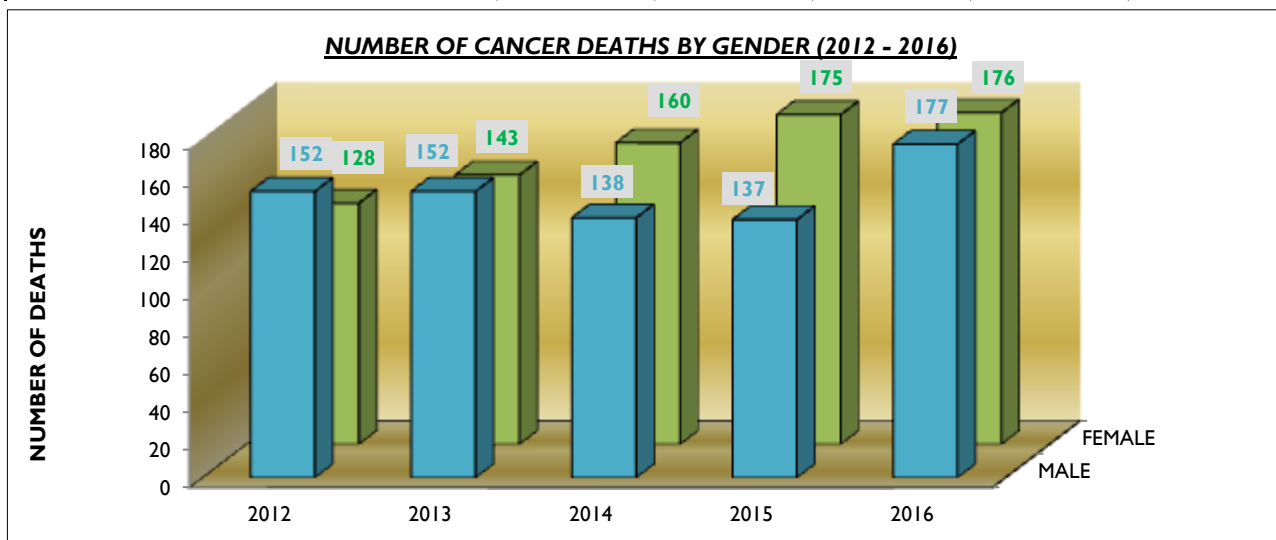
## Mortality due to Cancer for the Year 2016

The top three types of cancer deaths among male in Brunei Darussalam for 2016 were Trachea, Bronchus and Lung; Rectum and Anus; and Lip, Oral Cavity and Pharynx; and for female cancer deaths were Breast; Trachea, Bronchus and Lung; and Cervix Uteri; and Rectum and Anus.

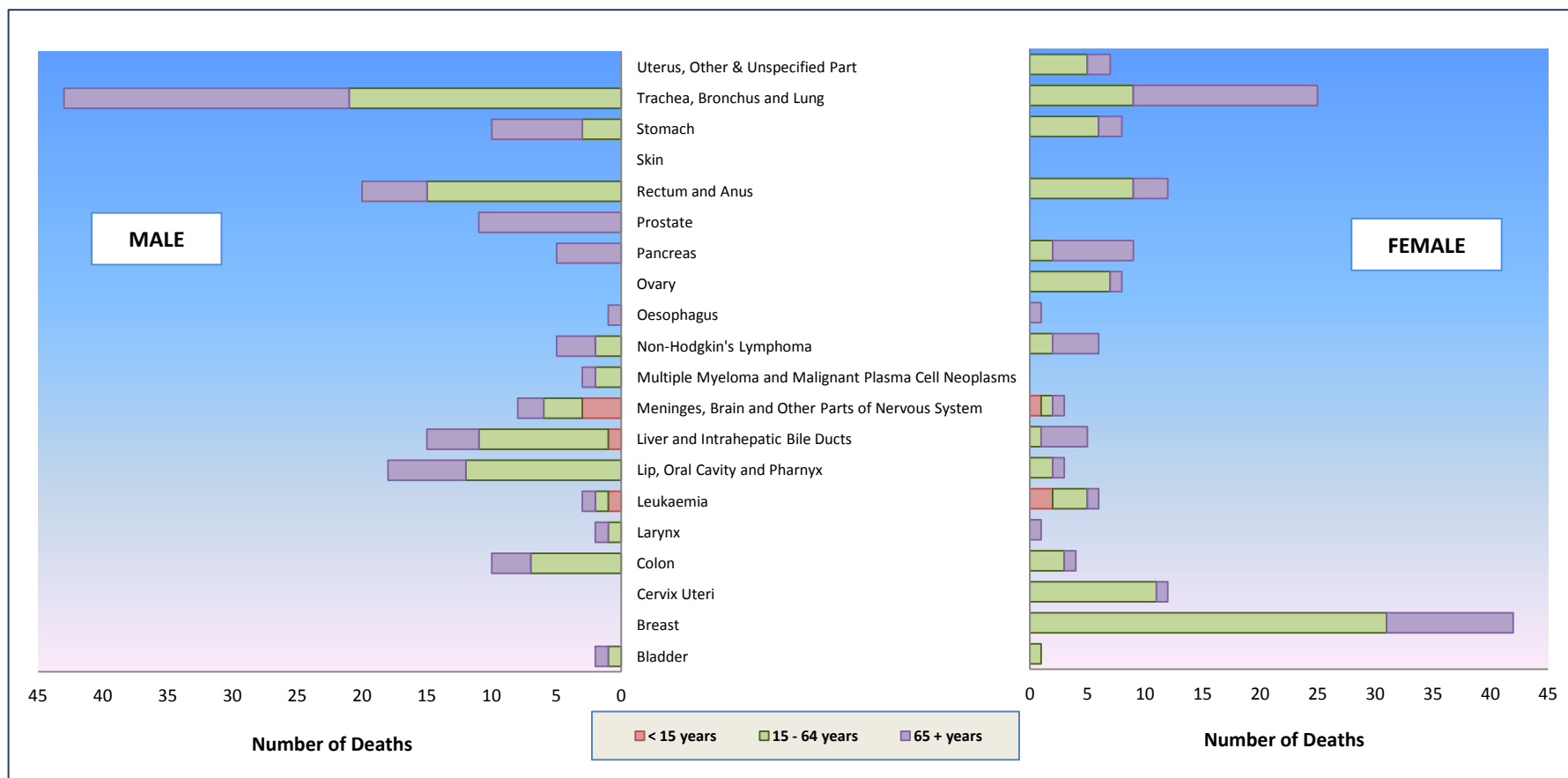
TYPE OF CANCER	MALE	FEMALE	TOTAL
Trachea, Bronchus and Lung	43	25	68
Breast	0	42	42
Rectum and Anus	20	12	32
Lip, Oral Cavity and Pharynx	18	3	21
Liver and Intrahepatic Bile Ducts	15	5	20
Stomach	10	8	18
Colon	10	4	14
Pancreas	5	9	14
Cervix Uteri		12	12
Prostate	11		11
Meninges, Brain and Other Parts of Central Nervous System	8	3	11
Non-Hodgkin's Lymphoma	5	6	11
Leukaemia	3	6	9
Ovary		8	8
Other and Unspecified Parts of Uterus		7	7
Multiple Myeloma and Malignant Plasma Cell Neoplasms	3	0	3
Larynx	2	1	3
Bladder	2	1	3
Oesophagus	1	1	2
Remainder	21	23	44
<b>TOTAL</b>	<b>177</b>	<b>176</b>	<b>353</b>

Note: Top three leading types of cancer death for male  / female 

YEAR	2012	2013	2014	2015	2016
TOTAL NUMBER OF CANCER DEATHS	280	295	298	312	312



## Cancer Deaths by Gender, Type and Age-Groups in Brunei Darussalam (2016)





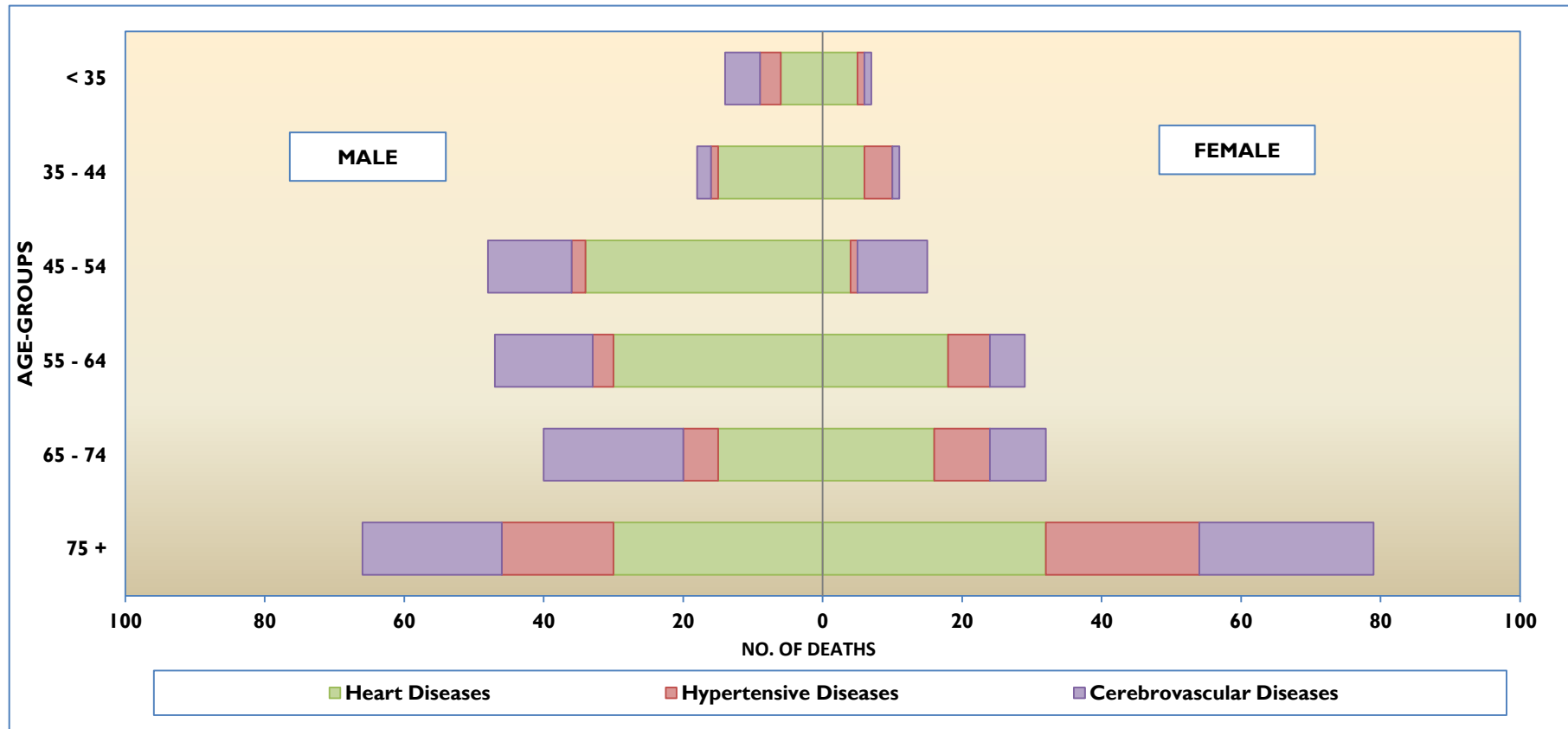
## Trend in Leading Types of Cancer Deaths in Brunei Darussalam (2012 - 2016)

No.	2012	2013	2014	2015	2016
1	Trachea, Bronchus and Lung 44 (15.7%)	Trachea, Bronchus and Lung 64 (21.7%)	Trachea, Bronchus and Lung 62 (20.8%)	Trachea, Bronchus and Lung 52 (16.7%)	Trachea, Bronchus and Lung 68 (19.3%)
2	Rectum and Anus 30 (10.7%)	Rectum and Anus 30 (10.2%)	Breast 30 (10.1%)	Breast 33 (10.6%)	Breast 42 (11.9%)
3	Liver and Intrahepatic Bile Duct 22 (7.9%)	Liver and Intrahepatic Bile Duct 21 (7.1%)	Liver and Intrahepatic Bile Duct 23 (7.7%)	Rectum and Anus 32 (10.3%)	Rectum and Anus 32 (9.1%)
4	Stomach 19 (6.8%)	Breast 20 (6.8%)	Stomach 21 (7.0%)	Liver and Intrahepatic Bile Duct 28 (9.0%)	Lip, Oral Cavity and Pharynx 21 (5.9%)
5	Breast 19 (6.8%)	Colon 17 (5.8%)	Rectum and Anus 18 (6.0%)	Non-Hodgkin's Lymphoma 16 (5.1%)	Liver and Intrahepatic Bile Duct 20 (5.7%)
6	Colon 17 (6.1%)	Lip, Oral Cavity and Pharynx 13 (4.4%)	Non-Hodgkin's Lymphoma 18 (6.0%)	Lip, Oral Cavity and Pharynx 14 (4.5%)	Stomach 18 (5.1%)
7	Pancreas 13 (4.6%)	Ovary 13 (4.4%)	Colon 17 (5.7%)	Ovary 12 (3.8%)	Colon 14 (4.0%)
8	Prostate 12 (4.3%)	Leukaemia 13 (4.4%)	Leukaemia 15 (5.0%)	Colon 11 (3.5%)	Pancreas 14 (4.0%)
9	Lip, Oral Cavity and Pharynx 11 (3.9%)	Cervix Uteri 11 (3.7%)	Prostate 12 (4.0%)	Pancreas 11 (3.5%)	Cervix Uteri 12 (3.4%)
10	Cervix Uteri 8 (2.9%)	Non-Hodgkin's Lymphoma 11 (3.7%)	Cervix Uteri 11 (3.7%)	Stomach 10 (3.2%)	Prostate 11 (3.1%)
OTHERS	85 (30.4%)	82 (27.8%)	71 (23.8%)	93 (29.8%)	101 (28.6%)
GRAND TOTAL	280 (100.0%)	295 (100.0%)	298 (100.0%)	312 (100.0%)	353 (100.0%)

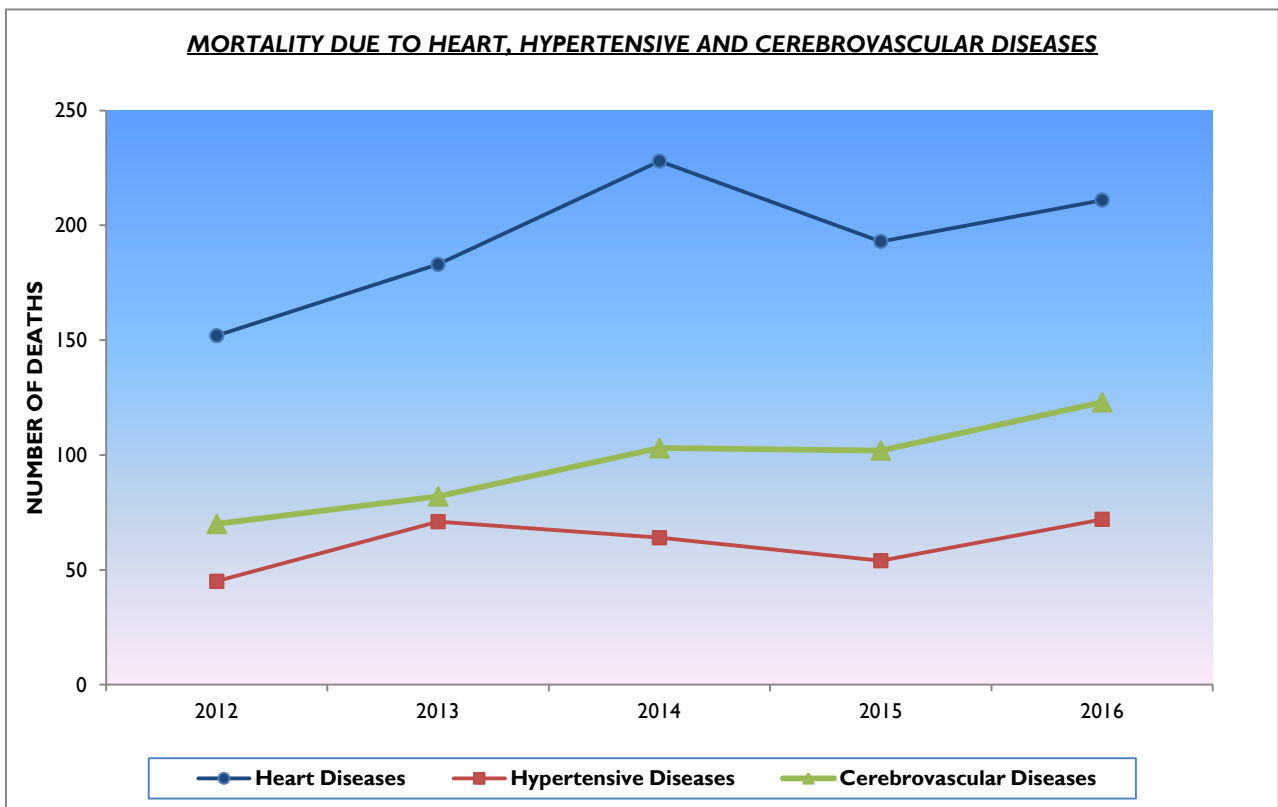
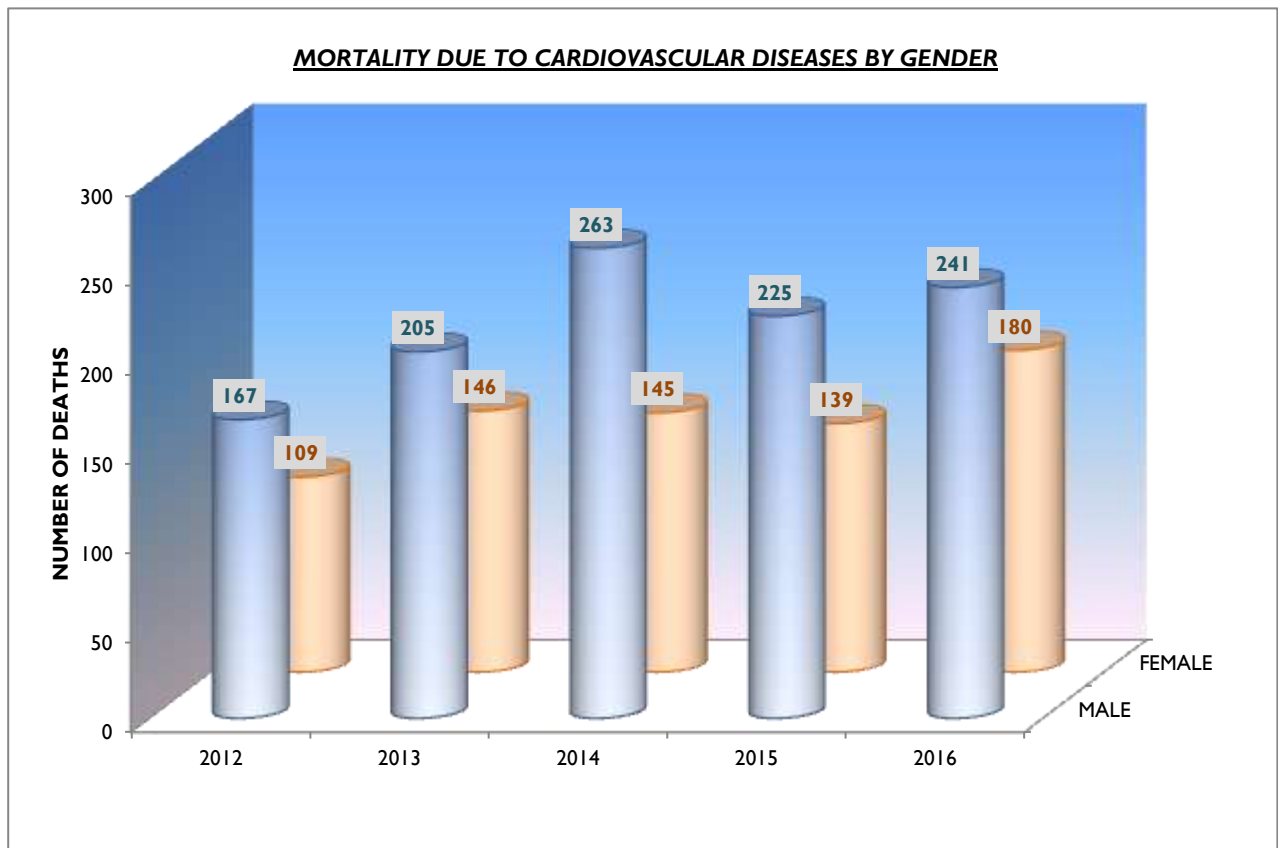
## Mortality due to Cardiovascular Diseases for the Year 2016 (Based on ICD-10)

ICD-10 CODE	TYPE OF DISEASE	AGE-GROUP IN YEARS																	
		<35		35 - 44		45 - 54		55 - 64		65 - 74		75+		TOTAL					
		M	F	M	F	M	F	M	F	M	F	M	F	M	F	T			
1	100 - 109, 120 - 152	Heart Diseases		6	5	15	6	34	4	30	18	15	16	30	32	130	81	211	
	i	100 - 109	Acute Rheumatic Fever & Chronic Rheumatic Heart Diseases		0	0	0	2	1	0	1	1	1	0	0	0	3	3	6
	ii	120 - 125	Ischaemic Heart Diseases		1	0	12	1	27	3	22	14	13	9	24	24	99	51	150
		121	Acute Myocardial Infarction		1	0	7	0	12	3	12	8	8	5	8	9	48	25	73
		120, 122 - 125	Other Ischaemic Diseases		0	0	4	2	15	0	10	6	5	4	16	15	50	27	77
	iii	126 - 152	Diseases of Pulmonary Circulation & Other Forms of Heart Diseases		5	5	3	3	6	1	7	3	1	7	6	8	28	27	55
2	110 - 115	Hypertensive Diseases		3	1	1	4	2	1	3	6	5	8	16	22	30	42	72	
3	160 - 169	Cerebrovascular Diseases		5	1	2	1	12	10	14	5	20	8	20	25	73	50	123	
4	170 - 198	Other Diseases of the Circulatory System		0	0	3	0	0	2	0	1	5	2	0	2	8	7	15	
		170	Atherosclerosis		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		171 - 198	Others		0	0	3	0	0	2	0	1	5	2	0	2	8	7	15
1 to 4	100 - 198	All Cardiovascular Diseases		14	7	21	11	48	17	47	30	45	34	66	81	241	180	421	

## Mortality due to Cardiovascular Diseases by Age-Groups and Gender in Brunei Darussalam (2016)



## Mortality Trend of Cardiovascular Diseases (2012 - 2016)



## Age Standardised Mortality Rate - Noncommunicable Diseases (NCDs) (2009-2016)

Mortality Rate by Diseases			2009	2010	2011	2012 <sup>(r)</sup>	2013 <sup>(r)</sup>	2014 <sup>(r)</sup>	2015 <sup>(r)</sup>	2016
Age-Standardized Mortality Rate per 100,000 for NCDs	Noncommunicable Diseases (NCDs) (Cancer, Cardiovascular, Diabetes Mellitus, and Chronic Respiratory Diseases)	Male	380.5	417.5	395.4	366.7	377.0	363.7	287.7	299.3
		Female	335.3	327.0	330.9	304.9	350.9	305.7	287.6	241.2
		Total	356.3	369.1	360.6	335.6	364.0	335.3	287.1	268.5
	Cancer	Male	118.2	141.0	129.6	139.4	116.5	100.0	93.7	103.4
		Female	91.0	105.0	104.3	108.3	118.4	118.0	113.2	93.7
		Total	104.2	122.2	116.0	123.2	117.4	108.4	103.2	98.1
	Cardiovascular Diseases	Male	163.6	170.3	155.9	129.3	148.6	168.1	124.6	122.5
		Female	150.8	145.2	128.7	107.0	135.3	111.2	95.7	94.5
		Total	156.2	156.5	141.0	118.6	141.8	140.8	109.8	107.9
	Diabetes Mellitus	Male	47.6	57.3	62.5	63.2	58.5	60.5	49.5	53.8
		Female	53.1	41.3	57.9	62.3	62.0	46.6	41.9	33.0
		Total	50.7	48.7	60.1	62.8	60.3	53.6	45.9	42.7
	Chronic Respiratory Disease	Male	51.1	48.9	47.4	34.7	53.3	35.0	20.0	19.6
		Female	40.4	35.5	40.0	27.3	35.2	29.8	36.8	20.0
		Total	45.3	41.6	43.4	31.1	44.6	32.5	28.2	19.7

Note: Brunei Citizens and Permanent Residents only

Data for the years 2012-2015 have been revised due to the revised population data based on 2016 census data.

## Premature Age Standardised Mortality Rate - Noncommunicable Diseases (NCDs) (2009-2016)

Mortality Rate by Diseases			2009	2010	2011	2012 <sup>(r)</sup>	2013 <sup>(r)</sup>	2014 <sup>(r)</sup>	2015 <sup>(r)</sup>	2016
Premature Age-Standardized Mortality Rate per 100,000 (for aged 30 - 69 years)	Noncommunicable Diseases (NCDs) (Cancer, Cardiovascular, Diabetes Mellitus, and Chronic Respiratory Diseases)	Male	333.5	350.9	302.3	318.1	323.0	341.1	313.4	361.4
		Female	365.4	256.9	260.9	267.0	292.7	262.1	299.3	250.0
		Total	349.3	301.7	281.3	293.5	308.4	302.9	306.7	302.2
	Cancer	Male	121.3	129.5	129.9	132.1	122.6	106.5	101.4	129.7
		Female	136.2	115.5	112.0	140.9	142.3	144.6	158.8	125.2
		Total	128.8	122.4	121.1	136.4	132.1	124.9	129.2	127.3
	Cardiovascular Diseases	Male	131.1	152.1	111.2	112.7	114.2	158.8	143.7	140.0
		Female	146.2	82.7	88.9	81.8	73.8	60.3	65.6	80.9
		Total	138.7	116.0	99.7	97.7	94.6	111.2	105.9	108.6
	Diabetes Mellitus	Male	60.9	56.7	47.3	61.9	61.1	56.9	56.0	80.2
		Female	61.5	37.3	43.7	34.7	59.4	44.6	53.9	38.7
		Total	61.0	46.2	45.4	48.8	60.2	50.9	55.0	58.1
	Chronic Respiratory Disease	Male	20.2	12.7	13.9	11.5	25.1	18.9	12.3	11.5
		Female	21.5	21.5	16.3	9.7	17.2	12.7	21.1	5.2
		Total	20.9	17.1	15.1	10.6	21.4	15.9	16.6	8.2

Note: Brunei Citizens and Permanent Residents only

Data for the years 2012-2015 have been revised due to the revised population data based on 2016 census data.

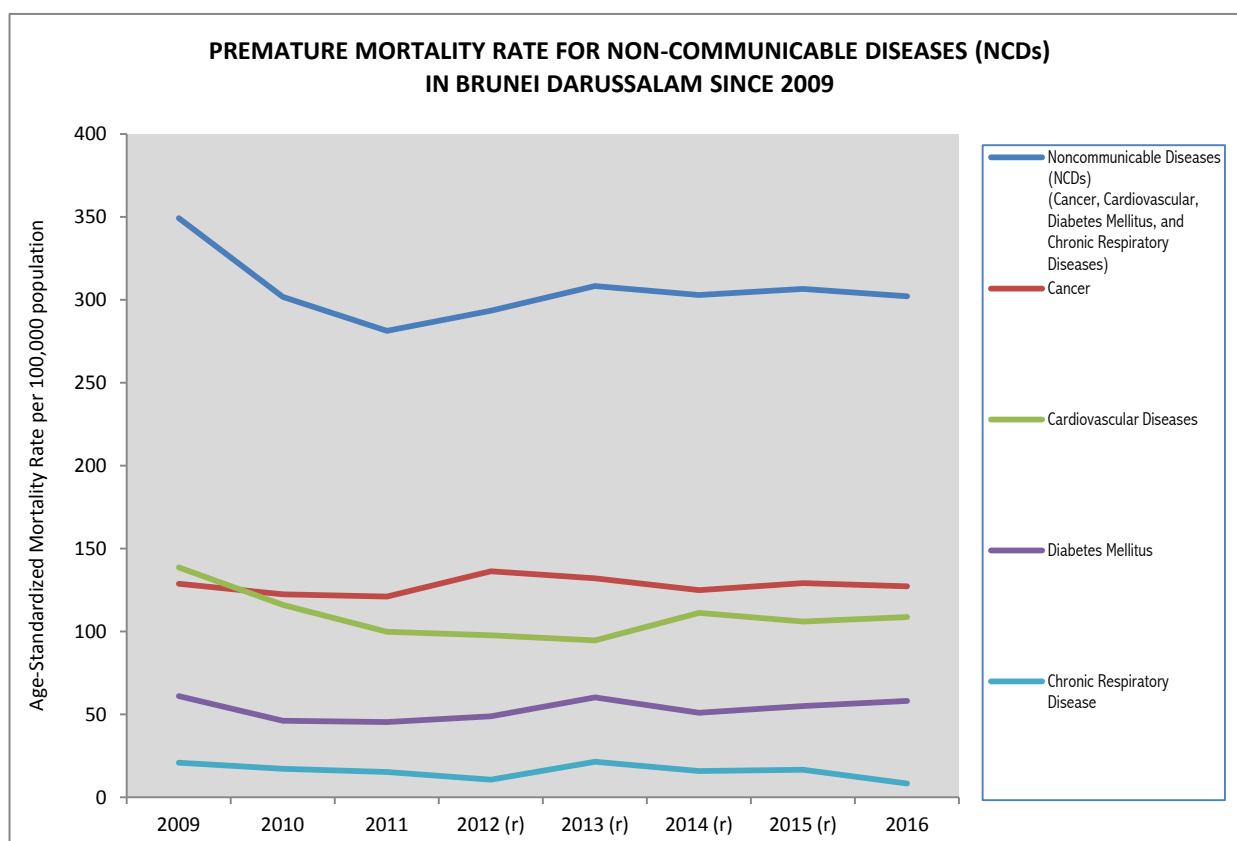
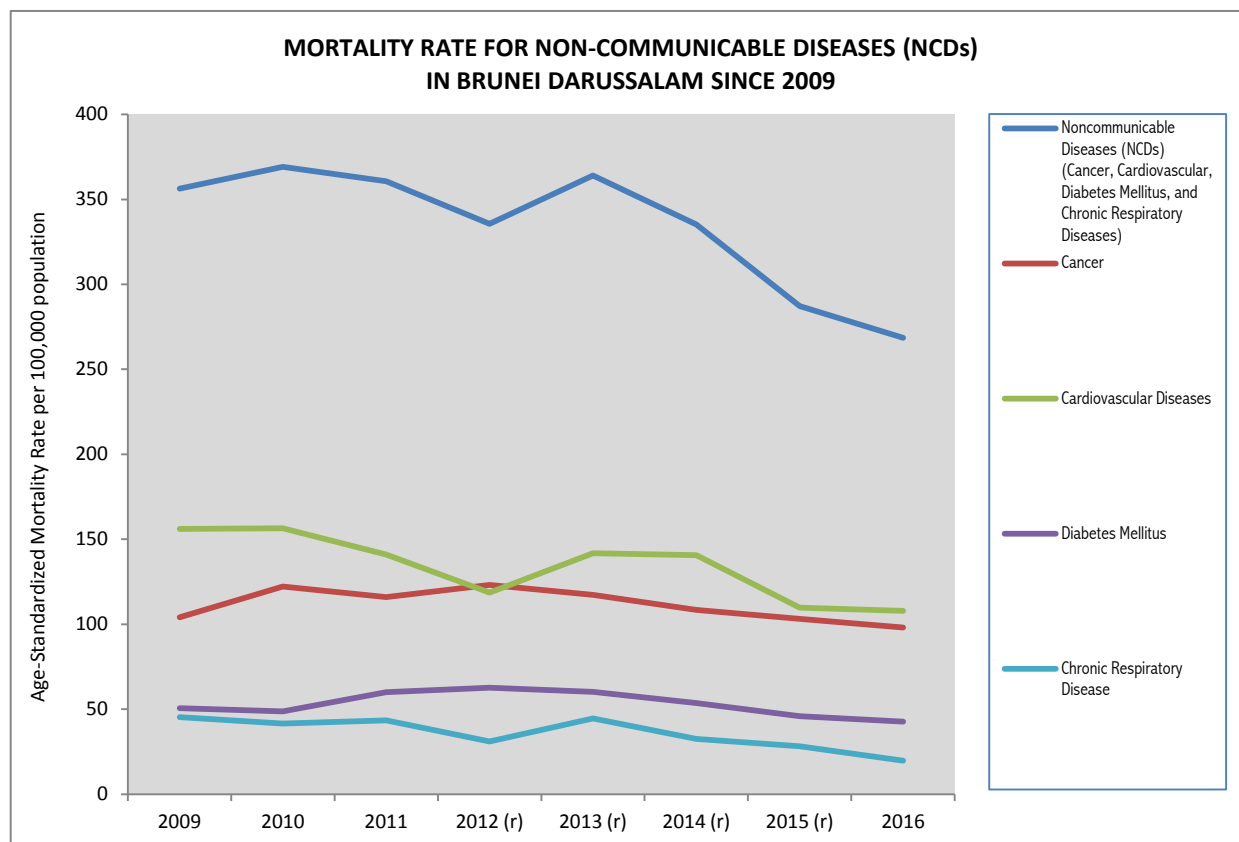
## Probability of Premature Deaths - Noncommunicable Diseases (NCDs) (2009-2016)

Mortality Rate by Diseases			2009	2010	2011	2012 <sup>(*)</sup>	2013 <sup>(*)</sup>	2014 <sup>(*)</sup>	2015 <sup>(*)</sup>	2016
Probability of Premature Deaths from NCDs (for Brunei Citizens & Permanent Residents aged 30 - 69 years)	Noncommunicable Diseases (NCDs) (Cancer, Cardiovascular, Diabetes Mellitus, and Chronic Respiratory Diseases)	Male	16.0%	17.6%	14.8%	15.8%	16.0%	16.8%	15.3%	16.4%
		Female	18.6%	13.3%	13.2%	13.3%	14.8%	13.3%	14.7%	12.1%
		Total	17.4%	15.4%	14.0%	14.6%	15.4%	15.1%	15.0%	14.1%
	Cancer	Male	6.3%	7.1%	7.2%	6.8%	6.5%	5.8%	5.3%	6.4%
		Female	7.0%	6.0%	5.6%	7.0%	7.4%	7.1%	8.0%	6.0%
		Total	6.7%	6.5%	6.4%	6.9%	6.9%	6.4%	6.6%	6.2%
	Cardiovascular Diseases	Male	6.7%	8.0%	5.2%	5.8%	5.5%	8.0%	7.2%	6.5%
		Female	8.0%	4.3%	4.8%	4.5%	3.8%	3.5%	3.5%	4.2%
		Total	7.4%	6.1%	5.0%	5.2%	4.7%	5.9%	5.4%	5.3%
	Diabetes Mellitus	Male	2.9%	2.7%	2.4%	3.4%	3.4%	3.1%	3.0%	3.8%
		Female	3.5%	2.3%	2.5%	1.8%	3.4%	2.6%	2.9%	2.1%
		Total	3.2%	2.4%	2.4%	2.6%	3.4%	2.8%	2.9%	2.9%
	Chronic Respiratory Disease	Male	1.1%	0.8%	0.7%	0.7%	1.6%	1.0%	0.6%	0.6%
		Female	1.3%	1.4%	0.9%	0.6%	1.0%	0.7%	1.1%	0.3%
		Total	1.2%	1.1%	0.8%	0.6%	1.3%	0.8%	0.9%	0.5%

Note: Brunei Citizens and Permanent Residents only

Data for the years 2012-2015 have been revised due to the revised population data based on 2016 census data.

## Trend of Age Standardised Mortality Rate - Noncommunicable Diseases (NCDs) (2009-2016)





## Mortality due to External Causes for the Year 2016 (Based on ICD-10)

ICD-10 CODE	TYPE OF DISEASE	AGE-GROUP IN YEARS														
		<35		35 - 44		45 - 54		55 - 64		65 - 74		75+		TOTAL		
		M	F	M	F	M	F	M	F	M	F	M	F	M	F	T
V01 - V99	Transport Accidents	10	5	2	2	2	1	1	0	2	0	1	1	18	9	27
W00 - W19	Falls	1	0	0	0	0	0	0	0	1	1	0	3	2	4	6
W65 - W74	Accidental Drowning and Submersion	4	0	1	0	2	0	0	0	0	0	0	0	7	0	7
X00 - X09	Exposure To Smoke, Fire and Flames	0	0	0	0	0	0	0	1	0	0	0	0	0	1	1
X40 - X49	Accidental Poisoning By and Exposure To Noxious Substance	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
X60 - X84	Intentional Self-Harm	3	0	0	0	4	0	0	0	0	0	0	0	7	0	7
X85 - Y09	Assault	1	0	1	1	1	0	2	0	0	0	0	0	5	1	6
Y40 - Y59	Drugs, Medicaments Causing Adverse Effects In Therapeutic Use	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
W20 - W64, W75 - W99, X10 - X39, X50 - X59, Y10 - Y36, Y60 - Y98	All Other External Causes	5	2	4	1	1	1	1	1	0	2	3	5	14	12	26
V01 - Y98	Total External Causes of Mortality	24	7	8	4	10	2	4	2	3	3	4	9	53	27	80

## Leading Causes of Hospital Inpatient Morbidity for the Year 2016 (Based on ICD-10)

No.	ICD-10 CODE	TYPE OF DISEASE	MALE	FEMALE	TOTAL	%	RATE PER 100,000 POPULATION
1	J10 - J22	Acute Lower Respiratory Infections	1,262	987	2,249	3.6	532.1
2	A09	Diarrhoea and Gastroenteritis of Presumed Infections Origin	850	754	1,604	2.6	379.5
3	J00 - J06	Acute Upper Respiratory Infections	767	639	1,406	2.3	332.6
4	I00 - I09, I20 - I52	Heart Diseases	775	496	1,271	2.1	300.7
5	D50 - D64	Iron Deficiency Anaemias	647	624	1,271	2.1	300.7
6	J45 - J46	Asthma	670	557	1,227	2.0	290.3
7	O00 - O08	Pregnancy With Abortive Outcome		1,062	1,062	1.7	251.3
8	N80 - N98	Non-Inflammatory Disorders of Female Genital Tract		928	928	1.5	219.6
9	S02, S12, S22, S32, S42, S52, S62, S72, S82, S92, T02, T08, T10, T12	Fracture of Specified and Multiple Body Regions	545	343	888	1.4	210.1
10	L00 - L08	Infections of Skin and Subcutaneous Tissue	512	359	871	1.4	206.1
11	N17 - N19	Renal Failure	368	503	871	1.4	206.1
12	E10 - E14	Diabetes Mellitus	410	415	825	1.3	195.2
13	N20 - N23	Urolithiasis	555	247	802	1.3	189.7
14	K80 - K81	Cholelithiasis and Cholecystitis	298	362	660	1.1	156.1
15	I10 - I15	Hypertensive Diseases	340	301	641	1.0	151.7
Others			18,792	26,475	45,267	73.2	10709.6
<b>TOTAL INPATIENT MORBIDITY</b>			<b>26,791</b>	<b>35,052</b>	<b>61,843</b>	<b>100.0</b>	<b>14631.2</b>

## Leading Causes of Hospital Inpatient Morbidity by Hospital for the Year 2016

No.	HOSPITALS				ALL DISTRICTS
	RIPAS	SSB	PMMPMHAMB	PIHM	
1	Acute Lower Respiratory Infections 1,560 (3.3%)	Acute Lower Respiratory Infections 398 (4.5%)	Iron Deficiency Anaemias 278 (6.0%)	Fever of Unknown Origin 217 (12.7%)	Acute Lower Respiratory Infections 2,249 (3.6%)
2	Diarrhoea and Gastroenteritis of Preseumed Infectious Origin 962 (2.1%)	Acute Upper Respiratory Infections 323 (3.7%)	Acute Lower Respiratory Infections 251 (5.4%)	Acute Upper Respiratory Infections 124 (17.3%)	Diarrhoea and Gastroenteritis of Preseumed Infectious Origin 1,604 (2.6%)
3	Heart Diseases 853 (1.8%)	Diarrhoea and Gastroenteritis of Preseumed Infectious Origin 289 (3.3%)	Diarrhoea and Gastroenteritis of Preseumed Infectious Origin 239 (5.2%)	Diarrhoea and Gastroenteritis of Preseumed Infectious Origin 114 (6.7%)	Acute Upper Respiratory Infections 1,406 (2.3%)
4	Acute Upper Respiratory Infections 811 (1.7%)	Asthma 287 (3.3%)	Diabetes Mellitus 228 (4.9%)	Hypertensive Diseases 107 (6.1%)	Heart Diseases 1,271 (2.1%)
5	Pregnancy With Abortive Outcome 806 (1.7%)	Heart Diseases 270 (3.1%)	Hypertensive Diseases 187 (4.0%)	Diabetes Mellitus 72 (4.2%)	Iron Deficiency Anaemias 1,271 (2.1%)
6	Iron Deficiency Anaemias 802 (1.7%)	Diabetes Mellitus 194 (2.2%)	Asthma 162 (3.5%)	Abdominal and Pelvic Pain 56 (3.3%)	Asthma 1,227 (2.0%)
7	Fractures of Specified and Multiple Body Regions 765 (1.6%)	Non-Inflammatory Disorders of Female Genital Tract 183 (2.1%)	Acute Upper Respiratory Infections 148 (3.2%)	Gastritis and Duodenitis 47 (2.8%)	Pregnancy With Abortive Outcome 1,062 (1.7%)
8	Asthma 765 (1.6%)	Pregnancy With Abortive Outcome 170 (1.9%)	Heart Diseases 132 (2.8%)	Acute Lower Respiratory Infections 40 (2.3%)	Non-Inflammatory Disorders of Female Genital Tract 928 (1.5%)
9	Urolithiasis 708 (1.5%)	Iron Deficiency Anaemias 167 (1.9%)	Respiratory TB 79 (1.7%)	Infections of Skin and Subcutaneous Tussue 28 (1.6%)	Fracture of Specified and Multiple Body Regions 888 (1.4%)
10	Non-Inflammatory Disorders of Female Genital Tract 666 (1.4%)	Renal Failure 152 (1.7%)	Pregnancy With Abortive Outcome 77 (1.7%)	Iron Deficiency Anaemias 24 (1.4%)	Infections of Skin and Subcutaneous Tissue 871 (1.4%)
OTHERS	38,005 (81.4%)	2,163 (75.4%)	2,857 (61.6%)	877 (51.5%)	49,066 (79.3%)
GRAND TOTAL	46,694 (100.0%)	8,808 (100.0%)	4,638 (100.0%)	1,703 (100.0%)	61,843 (100.0%)

## Leading Causes of Hospital Outpatient Morbidity for the Year 2016 (Based on ICD-10)

No.	ICD-10 CODE	TYPE OF DISEASE	MALE	FEMALE	TOTAL	%	RATE PER 100,000 POPULATION
1	E10 - E14	Diabetes Mellitus	9,363	12,273	21,636	4.1	5118.8
2	K00 - K01, K03 - K08	Other Disorders of Teeth and Supporting Structures	7,138	9,715	16,853	3.2	3987.2
3	I10 - I15	Hypertensive Diseases	7,281	7,768	15,049	2.8	3560.4
4	I00 - I09, I20 - I52	Heart Diseases	6,016	4,800	10,816	2.0	2558.9
5	N17 - N19	Renal Failure	5,960	4,681	10,641	2.0	2517.5
6	H52	Disorders of Refraction and Accomodation	4,652	5,697	10,349	2.0	2448.4
7	K02	Dental Caries	4,337	5,302	9,639	1.8	2280.5
8	O20 - O29, O60 - O63, O67 - O71, O73 - O75, O81 - O84	Other Complications of Pregnancy and Delivery		9,137	9,137	1.7	2161.7
9	N80 - N98	Non-Inflammatory Disorders of Female Genital Tract		9,072	9,072	1.7	2146.3
10	S02, S12, S22, S32, S42, S52, S62, S72, S82, S92, T02, T08, T10, T12	Fracture of Specified and Multiple Body Regions	4,519	2,927	7,446	1.4	1761.6
11	J40 - J46	Bronchitis, Chronic and Unspecified Emphysema and Asthma	3,119	3,066	6,185	1.2	1463.3
12	D50 - D64	Anaemias	2,215	3,690	5,905	1.1	1397.0
13	J00 - J06	Acute Upper Respiratory Infections	2,794	2,961	5,755	1.1	1361.6
14	N20 - N23	Urolithiasis	2,573	1,050	3,623	0.7	857.2
15	L00 - L08	Infections of the Skin and Subcutaneous Tissue	1,970	1,563	3,533	0.7	835.9
Others			176,058	208,389	384,447	72.5	90955.1
<b>TOTAL OUTPATIENT MORBIDITY</b>			<b>237,995</b>	<b>292,091</b>	<b>530,087 *</b>	<b>100.0</b>	<b>125411.5</b>

Note : \* - including I unknown

## Leading Causes of Hospital Outpatient Morbidity by Hospital for the Year 2016

No.	HOSPITALS				ALL DISTRICTS
	RIPAS	SSB	PMMPMHAMB	PIHM	
1	Diabetes Mellitus 10,294 (2.9%)	Other Disorders of Teeth and Supporting Structures 6,948 (7.1%)	Other Disorders of Teeth and Supporting Structures 4,812 (9.3%)	Hypertensive Diseases 4,101 (14.6%)	Diabetes Mellitus 21,636 (4.1%)
2	Heart Diseases 8,419 (2.4%)	Diabetes Mellitus 5,743 (5.8%)	Renal Failure 4,783 (9.2%)	Acute Upper Respiratory Infections 3,425 (12.2%)	Other Disorders of Teeth and Supporting Structures 16,853 (3.2%)
3	Other Complications of Pregnancy and Delivery 8,120 (2.3%)	Dental Caries 3,592 (3.7%)	Dental Caries 3,751 (7.2%)	Renal Failure 3,355 (11.9%)	Hypertensive Diseases 15,049 (2.8%)
4	Non-Inflammatory Disorders of Female 6,676 (1.9%)	Disorders of Refraction and Accomodation 3,544 (3.6%)	Diabetes Mellitus 3,499 (6.7%)	Diabetes Mellitus 2,100 (7.5%)	Heart Diseases 10,816 (2.0%)
5	Hypertensive Diseases 6,463 (1.8%)	Hypertensive Diseases 2,544 (2.6%)	Hypertensive Diseases 1,941 (3.7%)	Other Disorders of Teeth and Supporting Structures 1,110 (3.9%)	Renal Failure 10,641 (2.0%)
6	Fracture of Specified and Multiple Body Regions 6,033 (1.7%)	Non-Inflammatory Disorders of Female Genital Tract 1,775 (1.8%)	Disorders of Refraction and Accomodation 1,534 (2.9%)	Dental Caries 1,062 (3.8%)	Disorders of Refraction and Accomodation 10,349 (2.0%)
7	Iron Deficiency Anaemias 5,199 (1.5%)	Bronchitis, Chronic and Unspecified Emphysema and Asthma 1,325 (1.3%)	Heart Diseases 1,510 (2.9%)	Fever of Unknown Origin 478 (1.7%)	Dental Caries 9,639 (1.8%)
8	Disorders of Refraction and Accomodation 5,047 (1.4%)	Fracture of Specified and Multiple Body Regions 1,228 (1.2%)	Bronchitis, Chronic and Unspecified Emphysema and Asthma 954 (1.8%)	Disorders of Conjunctiva 294 (1.0%)	Other Complications of Pregnancy and Delivery 9,137 (1.7%)
9	Other Disorders of Teeth and Supporting Structures 3,983 (1.1%)	Heart Diseases 818 (0.8%)	Cataract 636 (1.2%)	Bronchitis, Chronic and Unspecified Emphysema and Asthma 259 (0.9%)	Non-Inflammatory Disorders of Female Genital Tract 9,072 (1.7%)
10	Bronchitis, Chronic and Unspecified Emphysema and Asthma 3,647 (1.0%)	Acute Upper Respiratory Infection 796 (0.8%)	Non-Inflammatory Disorders of Female Genital Tract 475 (0.9%)	Disorders of Refraction and Accomodation 224 (0.8%)	Fracture of Specified and Multiple Body Regions 7,446 (1.4%)
OTHERS	287,738 (81.8%)	69,974 (71.2%)	28,108 (54.1%)	11,770 (41.8%)	412,401 (77.2%)
GRAND TOTAL	351,619 (100.0%)	98,287 (100.0%)	52,003 (100.0%)	28,178 (100.0%)	530,087 (100.0%)

## Leading Causes of Health Centres Outpatient Morbidity for the Year 2016 (Based on ICD-10)

No.	ICD-10 CODE	TYPE OF DISEASE	MALE	FEMALE	TOTAL	%	RATE PER 100,000 POPULATION
1	J00 - J06	Acute Upper Respiratory Infections	70,813	79,040	149,853	28.3	35453.2
2	I10 - I15	Hypertensive Diseases	18,056	24,900	42,956	8.1	10162.8
3	K00 - K01, K03 - K08	Other Disorders of Teeth and Supporting Structures	12,905	17,083	29,988	5.7	7094.8
4	E10 - E14	Diabetes Mellitus	9,138	12,700	21,838	4.1	5166.6
5	K02	Dental Caries	7,858	10,992	18,850	3.6	4459.7
6	A09	Diarrhoea and Gastroenteritis of Presumed Infectious Origin	5,030	5,122	10,152	1.9	2401.8
7	H10 - H13	Disorders of Conjunctiva	4,912	5,141	10,053	1.9	2378.4
8	J40 - J46	Bronchitis, Chronic and Unspecified Emphysema and	4,357	4,450	8,807	1.7	2083.6
9	L00 - L08	Infections of the Skin and Subcutaneous Tissue	2,604	2,327	4,931	0.9	1166.6
10	S03, S13, S23, S33, S43, S53, S63, S73, S83, S93, T03	Dislocations, Sprains and Strains of Specified and Multiple Body Regions	2,698	2,169	4,867	0.9	1151.5
11	M05 - M14	Rheumatoid Arthritis and Other Inflammatory Polyarthropathies	4,097	682	4,779	0.9	1130.6
12	K29	Gastritis and Duodenitis	2,046	2,666	4,712	0.9	1114.8
13	R10	Abdominal and Pelvic Pain	1,413	2,645	4,058	0.8	960.1
14	H00 - H01	Inflammation of Eyelid	1,747	2,185	3,932	0.7	930.3
15	N80 - N98	Non-Inflammatory Disorders of Female Genital Tract		3,884	3,884	0.7	918.9
Others			210,062	337,877	547,939	103.4	129635.1
<b>TOTAL OUTPATIENT MORBIDITY</b>			<b>357,736</b>	<b>513,863</b>	<b>871,599</b>	<b>100.0</b>	<b>125419.3</b>

## Leading Causes of Health Centres Outpatient Morbidity by District for the Year 2016

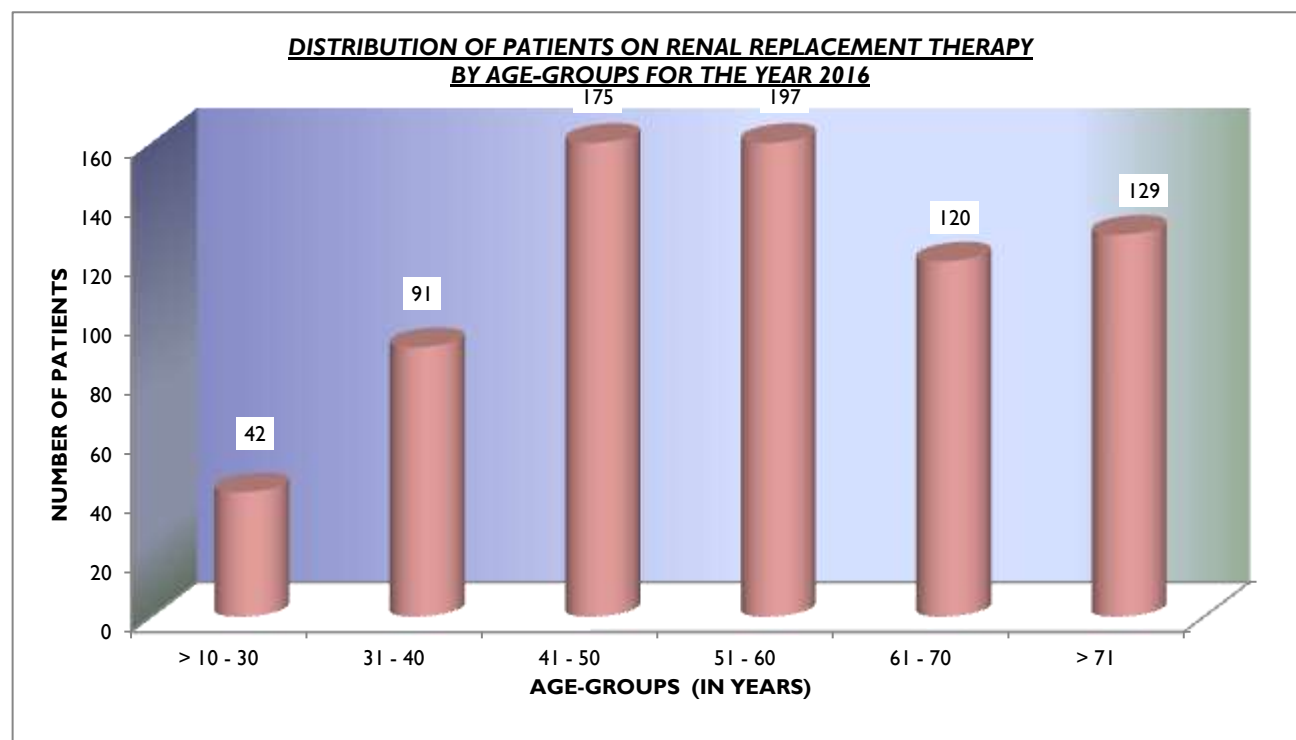
No.	DISTRICTS			ALL DISTRICTS
	BRUNEI MUARA	BELAIT	TUTONG	
1	Acute Upper Respiratory Infections 113,749 (16.6%)	Acute Upper Respiratory Infections 20,485 (22.0%)	Acute Upper Respiratory Infections 15,619 (1.9%)	Acute Upper Respiratory Infections 149,853 (17.2%)
2	Hypertensive Diseases 36,345 (5.3%)	Other Disorders of Teeth and Supporting Structures 2,587 (2.8%)	Hypertensive Diseases 5,973 (6.5%)	Hypertensive Diseases 42,956 (4.9%)
3	Other Disorders of Teeth and Supporting Structures 25,843 (3.8%)	Diarrhoea and Gastroenteritis of Presumed Infectious Origin 2,009 (2.2%)	Diabetes Mellitus 2,803 (3.0%)	Other Disorders of Teeth and Supporting Structures 29,988 (3.4%)
4	Diabetes Mellitus 18,712 (2.7%)	Disorders of Conjunctiva 1,307 (1.4%)	Other Disorders of Teeth and Supporting Structures 1,558 (1.7%)	Diabetes Mellitus 21,838 (2.5%)
5	Dental Caries 16,384 (2.4%)	Infections of the Skin and Subcutaneous Tissue 965 (1.0%)	Dental Caries 1,557 (1.7%)	Dental Caries 18,850 (2.2%)
6	Disorders of Conjunctiva 7,932 (1.2%)	Dental Caries 909 (1.0%)	Bronchitis, Chronic and Unspecified Emphysema and Asthma 879 (1.0%)	Diarrhoea and Gastroenteritis of Presumed Infectious Origin 10,152 (1.2%)
7	Diarrhoea and Gastroenteritis of Presumed Infectious Origin 7,638 (1.1%)	Abdominal and Pelvic Pain 900 (1.0%)	Disorders of Conjunctiva 814 (0.9%)	Disorders of Conjunctiva 10,053 (1.2%)
8	Bronchitis, Chronic and Unspecified Emphysema and Asthma 7,091 (1.0%)	Gastritis and Duodenitis 887 (1.0%)	Infections of the Skin and Subcutaneous Tissue 574 (0.6%)	Bronchitis, Chronic and Unspecified Emphysema and Asthma 8,807 (1.0%)
9	Rheumatoid Arthritis and Other Inflammatory Polyarthropathies 3,826 (0.6%)	Bronchitis, Chronic and Unspecified Emphysema and Asthma 837 (0.9%)	Non-Inflammatory Disorders of Female Genital Tract 574 (0.6%)	Infections of the Skin and Subcutaneous Tissue 4,931 (0.6%)
10	Dislocations, Sprains and Strains of Specified and Multiple Body Regions 3,763 (0.5%)	Dislocations, Sprains and Strains of Specified and Multiple Body Regions 641 (0.7%)	Gastritis and Duodenitis 555 (0.6%)	Dislocations, Sprains and Strains of Specified and Multiple Body Regions 4,867 (0.6%)
OTHERS	444,647 (64.8%)	61,778 (66.2%)	61,458 (66.5%)	302,295 (65.3%)
GRAND TOTAL	685,930 (100.0%)	93,305 (100.0%)	92,364 (100.0%)	871,599 (100.0%)

## Renal Services

DIALYSIS CENTRE / UNIT	NO. OF PATIENTS ATTENDING FOR RENAL REPLACEMENT THERAPY								
	2014			2015			2016		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
Rimba Dialysis Centre	129	119	248	123	121	244	129	134	263
Kiarong Dialysis Centre	28	32	60	28	32	60	30	30	60
Dialysis Centre RIPAS Hospital	69	63	132	54	58	112	61	70	131
Dialysis Centre SSB Hospital, Belait	50	35	85	50	33	83	54	39	93
Tutong Dialysis Centre	31	20	51	32	24	56	36	25	61
Continuous Ambulatory Peritoneal Dialysis	21	32	53	29	38	67	36	42	78
Transplant Unit	26	13	39	31	14	45	33	14	47
Dialysis Centre PIHM Hospital, Temburong	17	13	30	13	14	27	12	9	21
<b>TOTAL</b>	<b>371</b>	<b>327</b>	<b>698</b>	<b>360</b>	<b>334</b>	<b>694</b>	<b>391</b>	<b>363</b>	<b>754</b>

Source:

Renal Registry Unit, Department of Renal Services, Ministry of Health



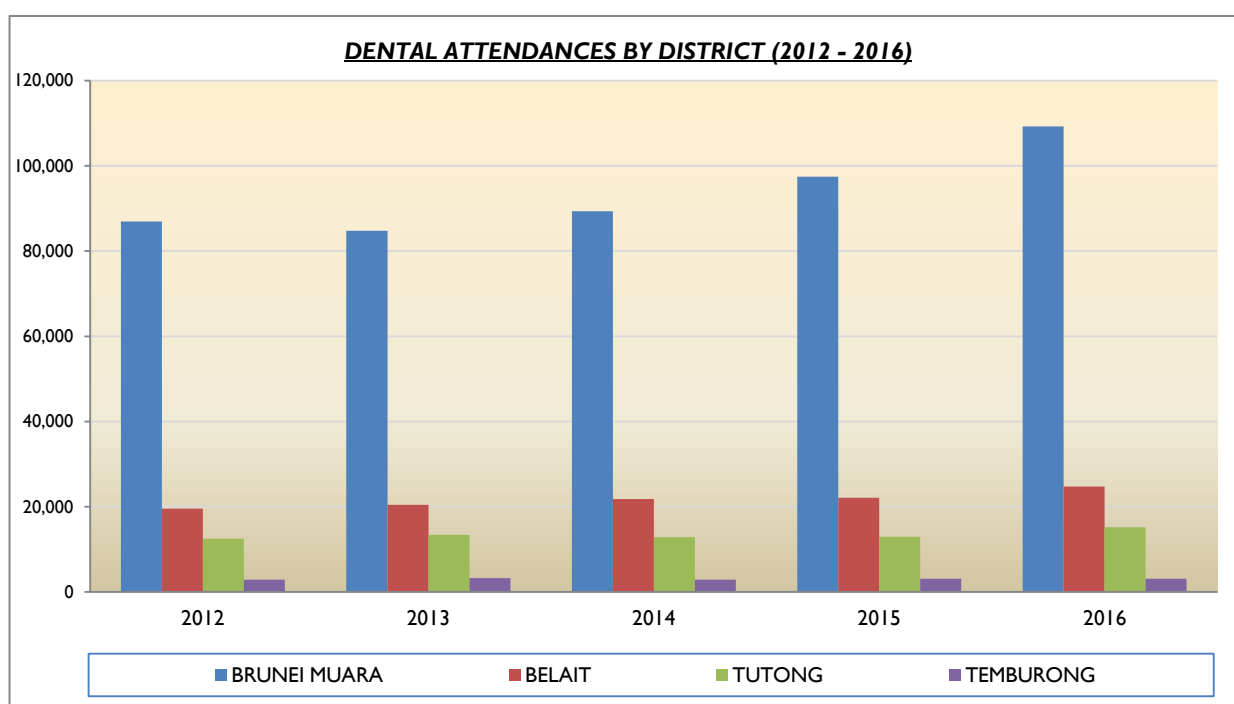


## Dental Health Services

### TOTAL ATTENDANCES BY DISTRICT FOR THE YEARS (2011 - 2016)

YEAR	BRUNEI MUARA	BELAIT	TUTONG	TEMBURONG	TOTAL
2011	90,706	22,765	10,897	3,046	127,414
2012	86,936	19,573	12,508	2,870	121,887
2013	84,715	20,477	13,439	3,271	121,902
2014	89,335	21,837	12,870	2,873	126,915
2015	97,430	22,109	12,918	3,116	135,573
2016	109,231	24,764	15,224	3,087	152,306

Source: Dental Health Services, Ministry of Health



## Nutritional Status

### PERCENTAGE OF STUDENTS SCREENED FOR WEIGHT STATUS (2012 - 2016)

SCHOOL HEALTH (YEAR 1, 4, 6 and 7 only)	2012	2013	2014	2015	2016
1. Normal weight	55.6	56.5	57.1	57.8	56.9
2. Overweight	11.7	13.3	14.4	14.8	15.2
3. Obese	16.1	16.9	17.1	18.0	19.4
4. Thinness	9.2	7.2	6.3	5.1	3.8
5. Severe Thinness	4.0	3.3	2.1	1.2	1.0

Note :

In 2016, the Total Number of School Target Population is 25,686 for Year 1, 4, 6 & 7.

Source :

School Health Services, Ministry of Health

### GLOBAL SCHOOL-BASED STUDENT HEALTH SURVEY (2014) FOR STUDENTS AGED 13 - 17 YEARS

DIETARY BEHAVIOURS	Male	Female	Total
1. Percentage of Students who were Underweight ( $< -2SD$ from median for BMI by age and sex)	3.0	3.6	2.5
2. Percentage of Students who were Overweight ( $> +1SD$ from median for BMI by age and sex)	35.2	35.9	34.5
3. Percentage of Students who were Obese ( $> +2SD$ from median for BMI by age and sex)	17.4	19.6	15.1
4. Percentage of Students who usually drank carbonated soft drinks one or more times per day during the past 30 days	46.4	52.1	40.4

PHYSICAL ACTIVITY	Male	Female	Total
1. Percentage of students who were physically active for a total of at least 60 minutes per day on all seven days during the past seven days	12.7	19.7	5.5
2. Percentage of students who went to physical education (PE) class on three or more days each week during this school year	23.5	25.2	21.7
3. Percentage of students who spent three or more hours per day during a typical or usual day doing sitting activities	56.3	54.7	58.0

Note :

A total of 2599 students participated in the Brunei Darussalam Global School-based Student Health Survey (GSHS).

## Occupational Health Services

Occupational Health Division is responsible for the monitoring of health and safety at the workplace. The activities are streamlined to include worker's health surveillance, worksite surveillance and occupational hygiene, training, information and advisory functions as well as in the areas of compensation, counselling and rehabilitation.

A total of 139 workplace accidents were reported to the Occupational Health Division in 2016. 64% percent occurred non-health care settings. Majority of these accidents occurred at the construction sites. Within the healthcare sector, most of the injuries involved needlestick injuries.

TYPE OF INDUSTRIES INSPECTED BY OCCUPATIONAL HEALTH DIVISION (OHD)	
A.	Agriculture, Hunting and Forestry
B.	Fishing
C.	Mining and Quarrying
D.	Manufacturing
E.	Electricity, Gas and Water Supply
F.	Construction
G.	Wholesale and Retail Trade, Repair of Motor Vehicles, Motorcycles and Personal and Household Goods
H.	Hotels and Restaurants
I.	Transport, Storage and Communications
J.	Financial Intermediation
K.	Real Estate, Renting and Business Activities
L.	Public Administration and Defence, Compulsory Social Security
M.	Education
N.	Health and Social Work
O.	Other Community, Social and Personal Service Activities
P.	Private Households with Employed Persons
Q.	Extra-Territorial Organisations and Bodies

Note : The classification of industries is based on the International Labour Organisation (ILO) Classification of Industries.

### WORKPLACE SURVEILLANCE BY OCCUPATIONAL HEALTH DIVISION

PURPOSE	2012		2013		2014		2015		2016	
	Non HC	HC	Non HC	HC	Non HC	HC	Non HC	HC	Non HC	HC
1. Workplace Inspection (First, Periodic & Follow-up Inspections)	39	6	51	3	48	7	77	22	110	1
2. Workplace Survey	26	0	47	0	177	0	223	0	127	0
3. Others (Accidents at Workplace Investigation, Occupational/Work-Related Disease Investigation, Requests, Complaints)	26	6	38	13	43	7	46	11	18	9
<b>TOTAL</b>	<b>91</b>	<b>12</b>	<b>136</b>	<b>16</b>	<b>268</b>	<b>14</b>	<b>346</b>	<b>33</b>	<b>255</b>	<b>10</b>
	<b>103</b>		<b>152</b>		<b>282</b>		<b>379</b>		<b>265</b>	

Note: Non HC - Non Health Care Sector; HC - Health Care Sector

Source : Occupational Health Division, Ministry of Health

# Occupational Health Services

## INCIDENCE OF WORKPLACE ACCIDENTS BY TYPE OF INDUSTRY (NON HEALTHCARE)

TYPE OF INDUSTRY	2012	2013	2014	2015	2016
A. Agriculture, Hunting and Forestry	1	3	0	0	0
B. Fishing	0	0	0	0	1
C. Mining and Quarrying	0	0	0	0	2
D. Manufacturing	14	7	12	6	6
E. Electricity, Gas and Water Supply	0	2	2	0	3
F. Construction	21	21	18	9	37
G. Wholesale and Retail trade, Repair of Motor Vehicle, Personal and Household goods	0	5	2	1	14
H. Hotel and Restaurant	0	1	0	1	2
I. Transport, Storage and Communication	0	2	1	2	3
J. Financial Intermediation	0	0	0	0	0
K. Rental Estate, Renting and Business Activities	0	0	0	0	2
L. Public Administration, Defense, Compulsory Social Security	0	0	0	0	0
M. Education	0	0	1	0	0
N. Health and Social Work	0	0	0	1	0
O. Other Community, Social, and Personal Service Activities	13	5	23	0	11
P. Private Household with Employed Persons	0	2	3	2	0
Q. Extra- Territorial Organizations and Bodies	0	0	0	0	0
Unknown	184	15	2	6	8
<b>TOTAL</b>	<b>233</b>	<b>63</b>	<b>64</b>	<b>28</b>	<b>89</b>

## INCIDENCE OF WORKPLACE ACCIDENTS BY TYPE OF INJURY (HEALTHCARE)

TYPE OF INJURY	2012	2013	2014	2015	2016
1. Needle Prick	16	20	31	26	48
2. Other Injuries *	14	3	8	11	2
<b>TOTAL</b>	<b>30</b>	<b>23</b>	<b>39</b>	<b>37</b>	<b>50</b>

Note

Other Injuries \* include Blood/Body Fluid Splash, Scalpel/Blade and Glass Cut

## OCCUPATIONAL AND WORK RELATED DISEASES

DISEASES	2012	2013	2014	2015	2016
1. Noise Induced Deafness	37	45	36	66	35
2. Occupational Dermatitis	1	2	0	0	0
3. Occupational Asthma	0	1	0	0	0
4. Occupational Lung Disease	-	1	0	0	0
<b>TOTAL</b>	<b>38</b>	<b>49</b>	<b>36</b>	<b>66</b>	<b>35</b>

Source : Occupational Health Division, Ministry of Health

## Tobacco Control

### NUMBER OF OFFENCES RECORDED (TOBACCO ORDER 2005) FOR THE YEARS (2011 - 2016)

YEAR	COMPOUND FINES ISSUED	STERN WARNING ISSUED	REQUIRED TO ATTEND SMOKING CESSATION CLINIC	CASES TRANSFERRED TO CUSTOMS AND EXCISE DEPT.	TOTAL NUMBER OF OFFENCES	NUMBER OF OFFENDERS RECORDED
2011	177	40	0	3	220	216
2012	191	0	3	-	194	192
2013	306	9	14	-	329	322
2014	243	2	32	-	277	277
2015	325	1	50	-	376	376
2016	407	2	42	-	451	448

Source: Health Enforcement Unit, Ministry of Health

### GLOBAL SCHOOL-BASED STUDENT HEALTH SURVEY (2014) FOR STUDENTS AGED 13 - 17 YEARS

TOBACCO USE	Male	Female	Total
1. Percentage of students who used any tobacco on one or more days during the past 30 days	12.3	18.9	5.5
2. Percentage of students who smoked cigarettes on one or more days during the past 30 days	11.4	17.8	4.8
3. Percentage of students who reported people smoked in their presence on one or more days during the past seven days	41.1	47.3	34.9

Note :

A total of 2599 students participated in the Brunei Darussalam Global School-based Student Health Survey (GSHS).

## Pharmacy Services

### NUMBER OF PRESCRIPTIONS AND ITEMS BY HOSPITAL FOR THE YEAR 2016

	RIPAS Hospital					SSB Hospital			PMMPMHAMB Hospital			PIHM Hospital	TOTAL
	IPP	RIMBA RU	OPP	W&C Pcy	A&E	IPP	OPP	A&E	IPP	OPP	A&E		
<b>NUMBER OF PRESCRIPTIONS</b>													
Out-Patient Prescriptions / Discharge Prescriptions	24,562	10,959	222,104	23,327	80,541	6,879	105,663	11,276	3,176	32,080	3,022	31,508	555,097
In-Patient Prescriptions	34,632	0	0	0	0	5,734	0	191	3,392	0	0	150	44,099
<i>Total Prescription</i>	<i>59,194</i>	<i>10,959</i>	<i>222,104</i>	<i>23,327</i>	<i>80,541</i>	<i>12,613</i>	<i>105,663</i>	<i>11,467</i>	<i>6,568</i>	<i>32,080</i>	<i>3,022</i>	<i>31,658</i>	<i>599,196</i>
<b>NUMBER OF ITEMS</b>													
Out-Patient Prescriptions / Discharge Prescriptions	77,284	72,595	761,350	49,241	209,554	25,236	395,113	31,829	11,521	110,335	8,701	115,283	1,868,042
In-Patient Prescriptions	52,515	0	0	0	0	10,061	0	545	5,319	0	0	296	68,736
<i>Total Items</i>	<i>129,799</i>	<i>72,595</i>	<i>761,350</i>	<i>49,241</i>	<i>209,554</i>	<i>35,297</i>	<i>395,113</i>	<i>32,374</i>	<i>16,840</i>	<i>110,335</i>	<i>8,701</i>	<i>115,579</i>	<i>1,936,778</i>
<i>Average No. of Items / OPP &amp; DC Prescription</i>	<i>3.15</i>	<i>6.62</i>	<i>3.43</i>	<i>2.11</i>	<i>2.60</i>	<i>3.67</i>	<i>3.74</i>	<i>2.82</i>	<i>3.63</i>	<i>3.44</i>	<i>2.88</i>	<i>3.66</i>	<i>3.37</i>
<i>Average No. of Items / In-Patient Prescriptions</i>	<i>1.52</i>	<i>0.00</i>	<i>0.00</i>	<i>0.00</i>	<i>0.00</i>	<i>1.75</i>	<i>0.00</i>	<i>2.85</i>	<i>1.57</i>	<i>0.00</i>	<i>0.00</i>	<i>1.97</i>	<i>1.56</i>

Source: Department of Pharmacy, Ministry of Health

Note: IPP - In Patient Prescriptions ; OPP - Out Patient Prescriptions ; Rimba RU - Rimba Renal Unit

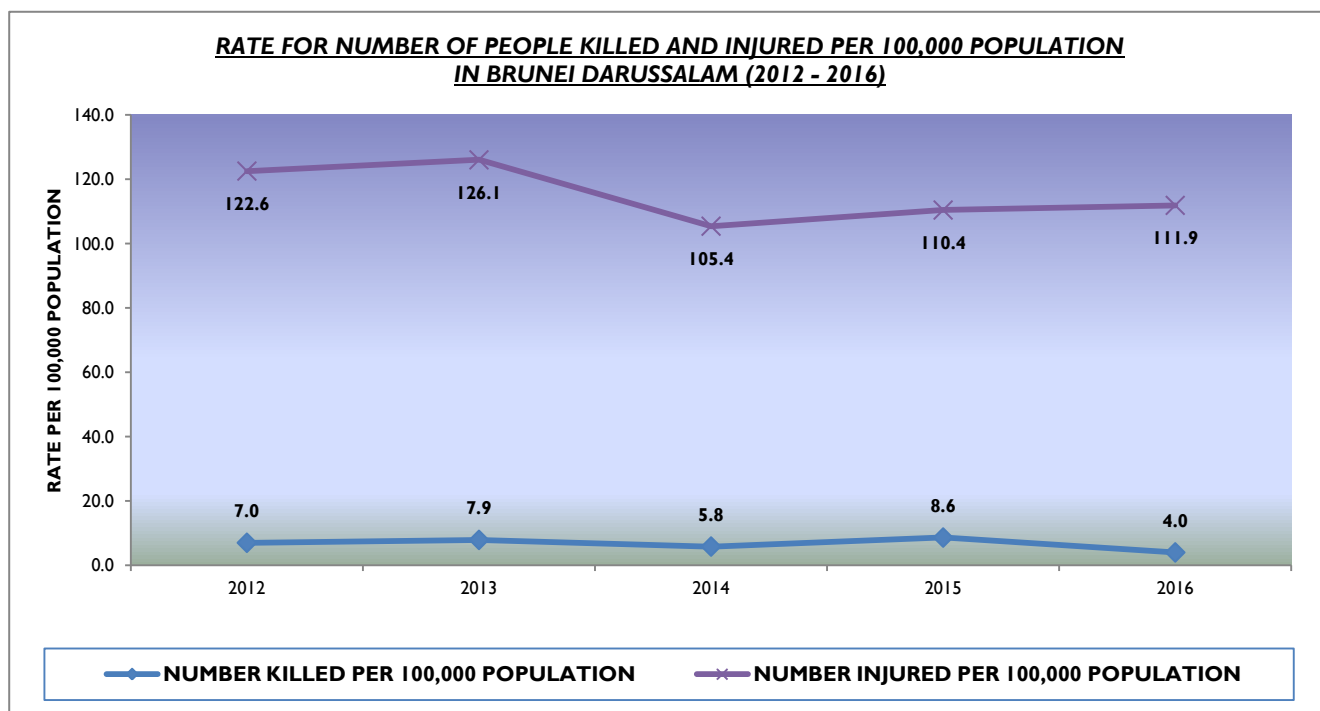
## Road Traffic Accidents

Road traffic accidents remain as one of the top ten leading causes of deaths in Brunei Darussalam. In 2016, Brunei Darussalam reported 3375 road accidents.

ROAD TRAFFIC ACCIDENTS (2011 - 2016)						
Y E A R	ACCIDENTS	KILLED	NUMBER KILLED PER 100,000 POP.	INJURED	NUMBER INJURED FOR EACH PERSON KILLED	CASE FATALITY RATE % (CFR)
2011	3,598	47	11.9	699	14.9	6.3
2012	3,310	28	7.0	489	17.5	5.4
2013	3,338	32	7.9	510	15.9	5.9
2014	3,366	24	5.8	433	18.0	5.3
2015	3,345	36	8.6	460	12.8	7.3
2016	3,375	17	4.0	473	27.8	3.5

Sources :

The Royal Brunei Police Force, Prime Minister's Office



# Definitions

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- 1 **INFANT DEATHS** : Deaths aged less than 1 year
- 2 **EARLY NEONATAL DEATHS** : Deaths aged less than 7 days
- 3 **LATE NEONATAL DEATHS** : Deaths aged 7 days to less than 28 days
- 4 **POST NEONATAL DEATHS** : Deaths aged 28 days to less than 365 days
- 5 **NEONATAL DEATHS** : Deaths aged less than 28 days
- 6 **PERINATAL DEATHS** : Stillbirths (Late Fetal Deaths) plus Early Neonatal Deaths
- 7 **MATERNAL DEATH** : Death of a woman while pregnant or within 42 days of termination of pregnancy, irrespective of the duration and the site of the pregnancy, from any cause related to or aggravated by the pregnancy or its management, but not from accidental or incidental causes (*Source: WHO ICD-10 International Statistical Classification of Diseases and Related Health Problems*)
- 8 **DIRECT OBSTETRIC DEATHS** : Those resulting from obstetric complications of the pregnancy state (pregnancy, labour and puerperium), from interventions, omissions, incorrect treatment, or from a chain of events resulting from any of the above (*Source: WHO ICD-10 International Statistical Classification of Diseases and Related Health Problems*).
- 9 **INDIRECT OBSTETRIC DEATHS** : Those resulting from previous existing disease or disease that developed during pregnancy and which was not due to direct obstetric causes, but which was aggravated by physiologic effects of pregnancy (*Source: WHO ICD-10 International Statistical Classification of Diseases and Related Health Problems*).
- 10 **LIVEBIRTH** : The complete expulsion or extraction from its mother of a product of conception, irrespective of the duration of the pregnancy, which, after such separation, breathes or shows any other evidence of life, such as beating of the heart, pulsation of the umbilical cord, or definite movement of voluntary muscles, whether or not the umbilical cord has been cut or the placenta is attached; each product of such a birth is considered liveborn (*Source: WHO ICD-10 International Statistical Classification of Diseases and Related Health Problems*).
- 11 **STILLBIRTH (ALSO KNOWN AS LATE FETAL DEATH)** : Refers to any child which has issued forth from its mother after the twenty-fourth (24th) week of pregnancy and showing NO signs of life at birth (complete expulsion from its mother).

## HOSPITAL INPATIENT ACTIVITIES

- 1 **ADMISSIONS** : Patients admitted direct to the hospitals or transferred from other institutions. These include newborn babies born outside the hospital and admitted to the hospital but excludes babies born in the hospital.
- 2 **DISCHARGES (ALIVE AND DEATHS)** : These relate to live separations from the hospital or transfers to other institutions.
- 3 **DEATHS** : These include deaths after admissions to the hospital and exclude patients brought in dead and dying before admissions.
- 4 **PATIENT DAYS** : The number of days inpatient stayed in the hospital (services received by one inpatient in one 24-hour period). Patients admitted and discharged the same day are counted as having stayed one day in the hospital. The days a patient does not use his bed because he is on leave or absence are excluded.
- 5 **DAY PATIENTS** : Patients with conditions without the need to stay in the hospital overnight.



## Formulae

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- 1 **CRUDE BIRTH RATE (per 1,000 population)** =  $(\text{LIVEBIRTHS} / \text{POP.}) \times 1000$
- 2 **GENERAL FERTILITY RATE** =  $[\text{LIVEBIRTHS} / \text{WOMEN POP. AGED (15-49)}] \times 1000$
- 3 **CRUDE DEATH RATE** =  $(\text{NO. OF DEATHS} / \text{POP.}) \times 1000$
- 4 **UNDER 5 MORTALITY RATE** =  $[(0-4) \text{ DEATHS} / \text{LIVEBIRTHS}] \times 1000$
- 5 **LATE FETAL DEATH RATIO** =  $(\text{FETAL DEATHS} / \text{LIVEBIRTHS}) \times 1000$
- 6 **PERINATAL MORTALITY RATIO** =  $(\text{PERINATAL DEATHS} / \text{LIVEBIRTHS}) \times 1000$
- 7 **EARLY NEONATAL MORTALITY RATE** =  $(\text{EARLY NEONATAL DEATHS} / \text{LIVEBIRTHS}) \times 1000$
- 8 **LATE NEONATAL MORTALITY RATE** =  $(\text{LATE NEONATAL DEATHS} / \text{LIVEBIRTHS}) \times 1000$
- 9 **NEONATAL MORTALITY RATE** =  $(\text{NEONATAL DEATHS} / \text{LIVEBIRTHS}) \times 1000$
- 10 **POST NEONATAL MORTALITY RATE** =  $(\text{POST NEONATAL DEATHS} / \text{LIVEBIRTHS}) \times 1000$
- 11 **INFANT MORTALITY RATE** =  $(\text{INFANT DEATHS} / \text{LIVEBIRTHS}) \times 1000$
- 12 **MATERNAL MORTALITY RATIO (per 100,000 live births)** =  $(\text{MATERNAL DEATHS} / \text{LIVEBIRTHS}) \times 100000$
- 13 **MATERNAL MORTALITY RATIO (per 1,000 live births)** =  $(\text{MATERNAL DEATHS} / \text{LIVEBIRTHS}) \times 1000$

### HOSPITAL PERFORMANCE INDICES

- 1 **AV. INPATIENTS / DAYS** =  $\text{PATIENTS DAYS} / \text{NO OF DAYS}$
- 2 **BED OCCUPANCY RATE** =  $[(\text{AV. INPATIENTS} / \text{DAYS}) / \text{AVAILABLE BEDS}] \times 100$
- 3 **AV. LENGTH OF STAY (days)** =  $\text{PATIENT DAYS} / \text{DISCHARGES \& DEATHS}$
- 4 **AV. TURNOVER OF PATIENTS / BED** =  $\text{DISCHARGES \& DEATHS} / \text{AVAILABLE BEDS}$
- 5 **AV. TURNOVER INTERVAL (days)** =  $[(\text{AVAILABLE BEDS} \times 365) - \text{PATIENT DAYS}] / \text{DISCHARGES \& DEATHS}$
- 6 **DAY CASE PERCENTAGES (per 100 admissions)** =  $(\text{DAY-PATIENTS} / \text{ADMISSIONS}) \times 100$
- 7 **HOSPITAL DEATH RATE (per 100 discharges & deaths)** =  $(\text{DEATHS} / \text{DISCHARGES \& DEATHS}) \times 100$

### POPULATION BASED HOSPITAL ACTIVITIES

- 1 **OP ATTENDANCE RATE / 1000 POP.** =  $(\text{GENERAL OP ATTENDANCES} / \text{POP.}) \times 1000$
- 2 **A&E OP ATTENDANCES RATE / 1000 POP.** =  $(\text{A\&E OP ATTENDANCES} / \text{POP.}) \times 1000$
- 3 **HOSPITALISATION RATE / 1000 POP.** =  $(\text{ADMISSION} / \text{POP.}) \times 1000$
- 4 **RATE OF PATIENT DAYS / 1000 POP.** =  $(\text{PATIENT DAYS} / \text{POP.}) \times 1000$

Note:

AV. = Average

OP = Outpatient

POP. = Population

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Birth, Death and Adoption Section, Immigration and National Registration Department

**Ministry of Communication**

Land Transport Department

**Ministry of Health**

Collaborative efforts from various service delivery teams

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