**DRAFT VITAL STATISTICS REPORT TEMPLATE**

{Country} VITAL STATISTICS REPORT

{YEARS}

{insert Picture}

{Department(s)}

This report was compiled by: {Authors name (affiliation), etc}

Published by: {Department Name}

Work for this project was supported by the Brisbane Accord Group of agencies under the Pacific Vital Statistics Action Plan and the Pacific Ten-Year Statistics Strategy.

© {Insert Department} {YEAR}

# Summary of Main Indicators {YEARS}

|  |  |  |  |
| --- | --- | --- | --- |
| **Indicator** | **Value/Total** | **Male** | **Female** |
| Population, residents only |  |  |  |
| Birth registration completeness |  |  |  |
| Death Registration completeness |  |  |  |
| Total number of births |  |  |  |
| Births attended by skilled personnel |  |  |  |
| Sex ratio at birth, M:F |  | N/A | N/A |
| Crude Birth Rate (CBR) |  | N/A | N/A |
| Total Fertility rate |  | N/A | N/A |
| Adolescent birth rate (per 1,000 females) |  | N/A | N/A |
| Total number of deaths |  |  |  |
| Crude Death Rate (CDR) |  | N/A | N/A |
| Under 5 mortality rate (per 1,000 live births) |  | N/A | N/A |
| Infant mortality rate (per 1,000 live births) |  | N/A | N/A |
| Neonatal mortality rate |  | N/A | N/A |
| Maternal deaths |  | N/A | N/A |
| Maternal mortality ratio (per 100,000 live births) |  | N/A | N/A |
| Life expectancy at birth |  |  |  |
| Life expectancy at age 40 (e/40) |  |  |  |
| Adult mortality rate, (45q15) |  |  |  |
| Proportion of ill-defined deaths |  |  |  |

# Acknowledgement

Parties that have contributed to the development of the vital statistics report should be mentioned here. This includes those who have contributed financially as well as those who have provided technical input to its development. Acknowledging the contribution of all those involved, (institutions) is an important way of improving working relations of the relevant stakeholders..

# Executive Summary

{What vital statistics are, why vital statistics are important for health policy, planning and program evaluation, plus broader application of vital statistics}

***Sample text***

*Vital statistics constitute the collection of statistics on vital events in a lifetime of a person as well as relevant characteristics of the events themselves and of the person and persons concerned (UN, 2014). There are ten vital events recognized by the United Nations[[1]](#footnote-1). This report presents statistics pertaining to two vital events namely Live births and deaths. The report also provides statistics on causes of death, which are often recorded along with the characteristics of death.*

*Vital statistics provide crucial and critical information on the population in a country. Accurate data on births, deaths, and causes-of-death by age group and sex are critical for: Accurate data on births, deaths and cause-of-death by age group and sex are critical for monitoring population health, identifying health priorities and evaluating the impact of health programs. This data is also important for providing basic population statistics, and planning and monitoring for a broad range of social and development programmes including, education, housing, social security and child protection.*

*Civil registration and vital statistics (CRVS) data are particularly important in the Pacific in the context of policy and planning and for meeting international commitments to monitor progress towards the 2030 sustainable development goals (SDGs) including tracking improvements in maternal and child health, understanding low life expectancies (which have had limited improvements over the last 20 years), and evaluating the success of programs enacted to combat non-communicable diseases (NCD’s) as a major public health emergency in the region.*

{About this report – i.e. is this the first one, what years does it cover, who was it written by (institution), why is this report important in your country etc.}

{Scope of the report – which vital events does it cover, for which years and why. Here it is important to mention that the data on births is limited to live births only and therefore doesn’t include still births and foetal deaths}

{Where does the data come from, how is it collected, and broadly how complete and accurate is it – why should you trust this data}

{Key findings of interest related to births and fertility – increase or decrease in births, age patterns of women giving birth, trends over time etc.}

{Key findings of interest related to mortality –what is the age distribution of deaths, what are the regional/geographical variations, is life expectancy increasing/ decreasing, is infant and child mortality high or low etc;

{Key findings of interest related to causes of death - what is the key group of causes of premature deaths (those younger than 60)- i.e. infectious diseases, non-communicable diseases or injury}, what are the age and sex differentials in the leading causes of death etc.;

{What are the key policy implications or recommendations from the findings}

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# List of abbreviations and acronyms

{Provide a description of the acronyms and abbreviations used in the vital statistics report. An example is provided below, based on the abbreviations and acronyms used in this document}

|  |  |
| --- | --- |
| CBR | Crude Birth Rate |
| CDR | Crude Death Rate |
| COD | Cause of Death |
| CR | Civil Registration |
| CRO | Central Registration Office |
| CRVS | Civil Registration and Vital Statistics |
| NSDS | National Strategy for Development of Statistics |
| NSO | National Statistics Office |
| TFR | Total Fertility Rate |
| UN | United Nations |
| UNICEF | United Nations Children’s fund |
| WHO | World Health Organization |

# Chapter 1: Introduction and Methodology

## Introduction

{What vital statistics are, why vital statistics are important for health policy, planning and program evaluation, the broader uses of vital statistics.}

{The practical applications of vital statistics in the country, which are the key beneficiary sectors and how does the country stand to lose if such statistics are not produced}

{About this report – i.e. is this the first one, what years does it cover, which vital events does it cover, who was it written by, why is this report important in your country etc.}

{About the country – population size/ location / key health and development concerns/ logistics issues – i.e. population distribution, which population groups does the data cover, where is the data sourced from, is data reporting complete in remote regions etc. – depending on audience}.

{What is the focus /objective of the report?}

**Sample text**

*The objective of the report is :*

*• To present statistics on live births and deaths by selected socio-demographic and geographic characteristics for the years (state the period); and trends in mortality over a (state the period); and*

*• To present the causes of death for (state the period); based mainly on the underlying causes of death.*

{Organisation and presentation of the report. A brief summary of what is contained in the following sections/ chapters of the report}

## Data and Methodology

### Data Sources

{Where does the data come from (what source) – how is it collected (see an example of how the birth and death registration processes can be plotted in Figure 1), which are the key institutions involved and what are their responsibilities, Is there legislation or policy that requires births and deaths to be reported and which law, what is the frequency of such collection. (Provide an appendix of data collection forms used for different vital events where possible}}

Figure : Diagram of the reporting and registration processes for births[[2]](#footnote-2)

Figure : Diagram of the reporting and registration processes for deaths

### Coverage and Completeness

{Coverage and Completeness are essential indicators of the quality of the data presented. Define what events were registered/recorded – i.e. residents only, all events on island, and what happens with overseas events – such as deaths of people who are referred overseas for medical treatment, Describe the levels of completeness (provide geographic differentials where possible)}.

|  |
| --- |
| ***Sample text*** |
| *Coverage and completeness levels are essential measures of how well the CRVS system is functioning.*  *Completeness is achieved when every vital event that has occurred to the members of the population of a particular country (or area), within a specified time period, has been registered in the system i.e. has a vital event registration record. Completeness is measured by the proportion of vital events that are legally registered.*  *Coverage refers to the total geographical area covered by the civil registration system. Ideally, the civil registration system should capture vital events occurring in every geographical area and in every population group of the country.*  *Coverage and completeness levels are essential in the interpretation of vital statistics and enabling their comparability, nationally as well as internationally.* |

### Birth Registration completeness

{Describe how completeness was calculated and whether any adjustments were subsequently made to future calculations

Table : Birth registration completeness (%) by period, (YEARS)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Period** | **Estimated total number of births\*** | **Number of registered births** | **Proportion of all births registered\*** | **Number of births recorded (total)\*** | **Estimated Proportion of all births recorded** |
|  |  |  |  |  |  |
|  |  |  |  |  |  |

\* Registration is used to refer to events documented by civil registry while Recorded refers to events events documented by the health department

{Include in your discussion whether there was any difference in reporting completeness by age, sex or geography}

Table : Birth registration completeness (%) by region over 3-year period, (YEARS)

|  |  |  |  |
| --- | --- | --- | --- |
| **Period** | **Region 1** | **Region 2…** | **Proportion of all births registered** |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |

### Death registration and recording completeness

{Describe how completeness was calculated and whether any adjustments were subsequently made to future calculations}.

Table : Death registration completeness (%) by 3 year period, (YEARS)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Period** | **Estimated total number of deaths\*** | **Number of registered deaths** | **Proportion of all deaths registered** | **Number of deaths recorded (total)\*** | **Estimated Proportion of all deaths recorded** |
|  |  |  |  |  |  |
|  |  |  |  |  |  |

\* {Describe this source - is it health department recording? A combined list etc?}

{Include in your discussion whether there was any difference in reporting completeness by age, sex or region. These tables should be in the appendix unless there are particular findings of interest}

## Analysis

{Briefly describe how the analysis was conducted, mention the software used or relevant methods applied}.

|  |
| --- |
| **Sample text** |
| *Birth and death data in the first two chapters (respectively) is analysed by levels, trends and cross-tabulated by selected socio-demographic variables mainly age, sex, and geography. The second section of each of the chapters presents key demographic indicators (the formulas applied for each indicator are presented in Appendix x). The section on causes of death was computed by ranking the underlying causes of death and providing the proportions of deaths due to specific causes,*  *In order to minimise instability in the figures due to the small size of the population and subsequently the risk of misleading interpretation, data has been aggregated over {INSERT 3 or 5 years} year periods for calculation of all rates and trend analysis. Rolling averages have also been presented to examine trends over time. Confidence intervals are presented to highlight the uncertainty in the data. These were calculated using Poisson distributions for all rates, except crude birth and death rates where confidence intervals were calculated using normal distributions, {confirm this based on what you did} due to the small number of events.*  *Age-standardisation for mortality was done using the most recent period {INSERT YEARS} as the standard, in order to examine changes in mortality trends separately from any changes in the population age structure.*  *Life tables were calculated from empirical data using the Chiang method [#], and were also smoothed for missing data using Modmatch [#]. Confidence intervals for life expectancy, based on the variance of probability of surviving, were also calculated using the Chiang Method [#].*  *Cause of death data was extracted from death records with medical certificates and was tabulated by {department} to the general Mortality List 1 (104 causes) of the International Classification of Diseases v10 [#] seen in Appendix 2.* |

# Chapter 2: Births and Fertility



## Birth by selected variables

### Number of Births

{ Give the average births per year, along with other interesting information such as whether there has been any significant change over time}

Table : Total Number of Births by Sex per Year, 2007-2012

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Year of birth** | **Sex** | | | **Grand total** |
| **Male** | **Female** | **Unknown** |
| 2007 | 1010 | 1003 | 201 | 2214 |
| 2008 | 1008 | 1001 | 200 | 2209 |
| 2009 | 1006 | 999 | 200 | 2205 |
| 2010 | 1004 | 997 | 199 | 2200 |
| 2011 | 1002 | 995 | 199 | 2196 |
| 2012 | 1000 | 993 | 199 | 2192 |
| **Grand total** | **6030** | **5988** | **1198** | **13216** |

Table : Average Number of births per year by 3 year period, 2007-2012

|  |  |
| --- | --- |
| **Period** | **Average number of births per year** |
|
| 2007 - 2009 | 2209 |
| 2010 - 2012 | 2196 |

The sex ratio at birth is {insert result}. This means that for every 100 live female births, there were {insert} live male births over the same time period. {Elaborate in context of country.}

{Describe trend in absolute number of births}

Figure 3: Average births per year (rolling average by 3 year period): (Years)

### Place of Birth

{Describe whether births usually occur in a health facility or elsewhere and whether mothers are frequently referred overseas to give birth. Include a table looking at number and proportion of births in country vs. overseas if not all births occur in the country). If a substantial number of births occur away from health care facilities, include a table of number and proportion of births in hospital compared to births at home/ other)

Table : Number of Births by Place of Birth and 3 Year Period, 2007-2012

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **3 year period** | **Place of birth** | | | | **Grand total** |
|
| **Home** | **Hospital** | **Other** | **Unknown** |
| 2007-2009 | 100 | 5000 | 15 | 1513 | 6628 |
| 2010-2012 | 80 | 5500 | 12 | 996 | 6588 |
| **Grand total** | **180** | **10500** | **27** | **2509** | **13216** |

{Describe the findings and relate any changes over time to changes in the health care system. Graph using a line graph if there is a story here}.

Figure 4: Percent Distribution of Births by Place of Birth and 3 Year Period, 2007-2012

### Births by Age of Mother

{Child bearing age is generally considered to be from 15 to 49 years of age. Babies born to mothers outside this age range are possible but not common. {Comment on why births at some age groups are higher risk than others}

Table : Percent Distribution of births by Age of mother, {Years}

|  |  |  |
| --- | --- | --- |
| **Mothers' Age-group (years)** | **2007-2009** | **2010-2012** |
|
|
| <15 | 0.0 | 0.0 |
| 15-19 | 5.8 | 5.3 |
| 20-24 | 29.8 | 28.8 |
| 25-29 | 32.4 | 31.8 |
| 30-34 | 19.4 | 21.2 |
| 35-39 | 9.2 | 9.5 |
| 40-44 | 3.1 | 3.0 |
| 45-49 | 0.3 | 0.2 |
| 50+ | 0.0 | 0.0 |
| **Grand Total** | 100.0 | 100.0 |

Figure 5: Percent Distribution of births by age of mother, {Years}

{use a pie chart if this is only available for one period and a histogram if comparing two or more periods to show the changes in age distribution over time}

{Comment on whether the pattern of mothers’ age group has changed over time and whether there are high levels of adolescent births}.

### Birth by birth weight

{Describe the characteristics of birth by birth weight and other relevant socio-economic variables such as place of residence of mother. The birth weight may be categorised into Low birth weight i.e. <2.5kg vs other.}

Table : Percent Distribution of births by birth weight category, {Years}

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Period**  **of Birth** | **Proportion of children (%) by Birth Weight** | | | **Grand Total** |
| **< 2.5 kg** | **2.5 kg or higher** | **Unknown** |
| 2007-2009 | 3.4 | 36.0 | 60.6 |  |
| 2010-2012 | 4.1 | 41.5 | 54.4 |  |

{Describe and graph these findings as appropriate}

Figure 6: ….

### Birth by gestational age

{Describe the characteristics of birth by gestational age and other relevant socio-economic variables such as place of residence of mother.

Table : Percent Distribution of births by length of gestation in weeks, {Years}

|  |  |  |  |
| --- | --- | --- | --- |
| **Period of Birth** | **Proportion of children (%) by Gestation in weeks** | | **Grand Total** |
| **<37** | **37 or more** |
| 2007-2009 | 10.5 | 89.5 | 100.0 |
| 2010-2012 | 9.9 | 90.1 | 100.0 |

{The period of birth can be defined by Preterm births vs other. Preterm refers to childbirth occurring at less than 37 completed weeks or 259 days of gestation. If sufficient information is known – you may wish to break this down into further categories based on risk as defined by the WHO: extremely preterm (<28 weeks), very preterm (28 to <32 weeks); moderate to late preterm (32 to <37 weeks).} {Describe and graph these findings as appropriate}

{Describe and graph these findings as appropriate}

Figure 7: ….

### Live births by place of occurrence and place of usual residence of mother

{Describe the distribution of births by the place of occurrence and place of usual residence of the mother. Which province accounts for the highest proportion of births? Are there significant variations in births by place of occurrence and usual residence of mother within the provinces. The number of births occurring abroad and to persons from abroad may also be captured here in the category of “foreign”. }.

Table : Distribution of births place of occurrence and mothers place of usual residence, {Years}

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Province (use relevant geographical boundary)** | **Province of birth occurrence** | | **Province of usual residence** of mother | |
| Number | Percentage | Number | Percentage |
| Province 1 |  |  |  |  |
| Province 2 |  |  |  |  |
| Province 3 |  |  |  |  |
| Province 4 |  |  |  |  |
| Province 5 |  |  |  |  |
| Foreign |  |  |  |  |
| Unspecified |  |  |  |  |
| TOTAL |  |  |  |  |

### Live births by population/ ethnicity group

Describe the distribution of births by the major population or ethnic groups. Which groups account for the highest proportion of deaths.

Table : Percent Distribution of births by population/ethnic group, {Years}

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Population / ethnic group** | **Number of death** | **Percentage of deaths** | **Population group size** | **Percentage of population group** |
| Group 1 |  |  |  |  |
| Group 2 |  |  |  |  |
| Group 3 |  |  |  |  |
| Group 4 |  |  |  |  |
| Group 5 |  |  |  |  |
| **Total** |  |  |  |  |

## Key fertility indicators

### Crude Birth Rate

{What is crude birth rate and why do we measure it. Discuss the trend. If CBR is increasing or decreasing is this because the number of births is changing substantially (refer to the number of births in the previous section) or is it because of changes in the population size – i.e. out-migration. You will also need to state whether the rates have been inflated due to low coverage}

|  |
| --- |
| ***Sample text***  *The crude birth rate is the number of births per 1,000 population over a given period of time. Crude birth rates are important because they tell us how much our population is growing or decreasing. They can also help us plan for the future so we can know how many children will be entering school in the coming years, or how many adults will be entering the workforce.* |

Table : Crude Birth Rate with 95% Confidence Intervals by 3 year period, 2007-2012

|  |  |
| --- | --- |
| **Period** | **Crude birth rate** |
|
| 2007-2009 | 22.1 (22.2-23.0) |
| 2010-2012 | 20.0 (19.1-20.8) |

Figure 8: Crude Birth Rate Over 3 Year Periods with 95% Confidence Intervals: 2007-2012

{Discuss the trend. If CBR is increasing or decreasing is this because the number of births is changing substantially (look at previous section) or is it because of changes in the population size – i.e. out-migration}

### Age-Specific Fertility Rates

Fertility rates by age of mothers, or age-specific fertility rates, are the number of births occurring to mothers of a certain age group per 1,000 women in that age group in a given period of time. {Comment on how fertility rates by age are calculated}

Table : Age-specific fertility rates, {Years}

|  |  |  |
| --- | --- | --- |
| **Mothers' Age-group (years)** | **Period** | |
| **2007-2009** | **2010-2012** |
|
| 15-19 | 29 | 29 |
| 20-24 | 149 | 169 |
| 25-29 | 172 | 188 |
| 30-34 | 119 | 138 |
| 35-39 | 63 | 72 |
| 40-44 | 21 | 24 |
| 45-49 | 2 | 2 |
| **Grand Total** | **555** | **621** |

{if adolescent births are high – refer findings for this age group against the MDG goals and possibly compare to neighbouring countries}

### Total Fertility Rates

The total fertility rate (TFR) is the average number of children a woman would give birth to during her lifetime if she were to pass through her childbearing years experiencing the present day age-specific fertility rates.

{How total fertility is calculated and why this measure is important – refer to working table in appendix}

Table : Total Fertility Rates (including 95% Confidence Intervals), {Years}

|  |  |  |
| --- | --- | --- |
| Period | Total Fertility Rate (TFR) | Confidence interval range |
| **2007- 2009** | **2.8** | (2.7 - 2.8) |
| **2010-2012** | **3.1** | (3.1 -3.2) |

{Comment on what the fertility rates mean in terms of population growth/ change – and therefore provision of services. Compare figure to the most recent census and/or survey and discuss plausibility}

# Chapter 3. Mortality



## Deaths by selected variables

### Number of Deaths

{Description including total deaths and most recent average. Discuss any events (such as natural disasters etc) which would have had a significant effect on the number of deaths for that year}

Table : Total Number of Deaths by Sex and Year, {Years}

|  |  |  |  |
| --- | --- | --- | --- |
| **Year** | **Male** | **Female** | **Total** |
| 2007 | 3602 | 2757 | 6359 |
| 2008 | 3520 | 2951 | 6471 |
| 2009 | 3480 | 2924 | 6404 |
| 2010 | 3289 | 2888 | 6177 |
| 2011 | 3660 | 2992 | 6652 |
| 2012 | 3757 | 3007 | 6764 |
| **Total** | **21308** | **17519** | **38827** |

Table : Average Number of Deaths per year by {number- 3 or 5} year period, {Years}

|  |  |  |  |
| --- | --- | --- | --- |
| **Time period** | **Male** | **Female** | **Total** |
| 2007-2009 | 3534 | 2877 | 6411 |
| 2010-2012 | 3430 | 2921 | 6351 |

Figure 9: Average deaths per year (rolling average by 3-5 year period): (Years)

{Describe the trend in death over time. What Is the pattern, has there been an increase or decline in the levels of mortality over the past years}

{Describe trend over time}

### Deaths by age and sex of decedent

{Description of distribution of deaths by age and sex over the past three years. Which age group has the highest and least number of deaths for each sex? Which of the two sexes has a higher number of deaths; describe differences in the pattern of death by sex in different age groups}

Table : Deaths by age and sex of the deceased {Years}

|  |  |  |  |
| --- | --- | --- | --- |
| **Age group** | **Male** | **Female** | **Total** |
| <28 days |  |  |  |
| 28 days to <1, |  |  |  |
| 1-4 |  |  |  |
| 5-9 |  |  |  |
| 10-14 |  |  |  |
| 15-19 |  |  |  |
| 20-24 |  |  |  |
| 25-29 |  |  |  |
| 30-34 |  |  |  |
| 35-39 |  |  |  |
| 40-44 |  |  |  |
| 45-49 |  |  |  |
| 50-54 |  |  |  |
| 55-59 |  |  |  |
| 60-64 |  |  |  |
| 65-69 |  |  |  |
| 70-74 |  |  |  |
| 75+ |  |  |  |

### Death by population group/ethnicity

Describe the distribution of deaths by the major population or ethnic groups. Which groups account for the highest proportion of deaths.

Table : Deaths by population/ethnic group of deceased {Years}

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Population / ethnic group** | **Number of death** | **Percentage of deaths** | **Population group size** | **Percentage of population group** |
| Group 1 |  |  |  |  |
| Group 2 |  |  |  |  |
| Group 3 |  |  |  |  |
| Group 4 |  |  |  |  |
| Group 5 |  |  |  |  |
| **Total** |  |  |  |  |

### Deaths by place of occurrence and place of usual residence of decedent

{Describe the distribution of deaths by the place of occurrence and place of usual residence of the deceased. Which province accounts for the highest proportion of deaths? Are there significant variations in deaths by place of occurrence and usual residence of deceased within the provinces. The number of deaths occurring abroad and to persons from abroad may also be captured here in the category of “foreign”. }.

Table : Deaths by place of occurrence and place of usual residence of deceased {Years}

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Province (use relevant geographical boundary)** | **Province of death occurrence** | | **Province of usual residence** of decedent | |
| Number | Percentage | Number | Percentage |
| Province 1 |  |  |  |  |
| Province 2 |  |  |  |  |
| Province 3 |  |  |  |  |
| Province 4 |  |  |  |  |
| Province 5 |  |  |  |  |
| Foreign |  |  |  |  |
| Unspecified |  |  |  |  |
| TOTAL |  |  |  |  |

### Deaths by place of usual residence and sex of decedent

{Describe the distribution of deaths by the usual place of residence of the deceased; categorised by the sex of the deceased. Describe any significant differences in the `distribution of males vs female deaths in any of the regions}.

Table : Deaths by usual residence and sex of decedent {Years}

|  |  |  |  |
| --- | --- | --- | --- |
| **Place of usual residence (use relevant geographical boundary)** | **Sex of decedent** | |  |
| **Males** | **Females** | **Total** |
| Province 1 |  |  |  |
| Province 2 |  |  |  |
| Province 3 |  |  |  |
| Province 4 |  |  |  |
| Province 5 |  |  |  |

## Summary Measures of Mortality

### Crude Death Rate (CDR) and Age Standardised Mortality Rate (ASMR)

|  |
| --- |
| **Sample text**  The following table presents both the crude death rate (deaths per 1,000 population) and the age standardised death rate. Age standardized death rates are one country’s age specific death rates applied to a standard age distribution. Age standardised rates allow the comparison of death rates over time or between two different populations without the age structure of the populations influencing the death rates. This is important as a greater proportion of older people in the population structure (as health conditions improve and people live longer) would actually result in a higher number of deaths (as everyone must eventually die). Populations with a greater proportion of older people have higher crude death rates than populations comprised of young people under identical health and social conditions.  Data has been age standardised to the most recent period shown using the WHO World Standard Population. {note also whether data was adjusted for undercount}. |

Table : Crude death rate & Age standardised mortality Rate by period, {Years}

|  |  |  |
| --- | --- | --- |
| **Period** | **Crude death rate (95% CI)** | **Age-standardized death rate (95% CI)** |
| 2007-2009 | 3534 | 2877 | 6411 |
| 2010-2012 | 3430 | 2921 | 6351 |

{Comment on findings, include any trends over time and whether they were due to age (i.e. not reflected in the standardised rates) or were a geniune shift in health status.}

### Life Expectancy at Birth

Life expectancy at birth indicates the average number of years a newborn infant would live if the current patterns of mortality at the time of its birth were to remain the same throughout its life.

Partner agencies are able to help countries with these calculations.

{This section should mention the method used – I.e. direct calculation or were the estimates smoothed. What does LE show over time and in relation to regional norms - is it plausible (see NMDI}

Table : Life Expectancy at Birth (LE0), {Years}

|  |  |  |  |
| --- | --- | --- | --- |
| **Periods** | **Male** | **Female** | **Both** |
| 2007-2009 | 3534 | 2877 | 6411 |
| 2010-2012 | 3430 | 2921 | 6351 |

## Infant and Child Mortality

### Infant Mortality

The Infant Mortality Rate shows the number of infant deaths (deaths in children under age 1) a year per 1,000 live births for a given period.

Table : Infant Mortality Rates (deaths in children under age 1 per 1000 live births, including 95% Confidence Intervals), {Years}

|  |  |
| --- | --- |
| Period | IMR |
| 2007-2009 | **36.7**  (25.8-50.5) |
| 2010-2012 | **18.0** (10.8-28.1) |



Figure 6: Infant Mortality Rates (deaths in children under age 1 per 1000 live births, including 95% Confidence Intervals), {Years}

{Comment on trends, link these to MDG goals, and compare to findings from the most recent census}

### Neonatal Mortality

The neonatal mortality rate is the number of deaths in live-born infants during the first 28 days of life per 1,000 live births over a specified time period. Mortality during the neonatal period (the first 28 days of life) accounts for a large proportion of child deaths, and is considered to be a useful indicator of maternal and newborn neonatal health and care. Generally, As IMR falls (for example through major improvements in environment, immunisation and nutrition), and fewer deaths are attributed to infectious diseases and environmental influences, a greater proportion of infant deaths would be expected to occur in the neonatal period. The neonatal mortality rate, however, should not increase as this occurs.

Table : Neonatal Mortality Rates (deaths in live-born infants during the first 28 days of life per 1,000 live births, including 95% Confidence Intervals), {Years}

|  |  |
| --- | --- |
| Period | NMR |
| 2007-2009 | **10.2** (4.5 - 19.7) |
| 2010-2012 | **12.3** (6.6 - 21.1) |

{Comment on trends, link these to what is happening with IMR as a whole, if possible – also include these in figure 10}

### Under 5 Mortality Rate (U5M)

The Under 5 Mortality Rate is measured as the number of deaths in children under age 5 per 1,000 live births in a given period.

Table : Under 5 Mortality Rates (deaths in children under age 5 per 1,000 live births, including 95% Confidence Intervals), {Years}

|  |  |
| --- | --- |
| Period | U5M |
| 2007-2009 | **38.7** (27.5-52.8) |
| 2010-2012 | **22.7** (14.6-33.8) |

Figure 7**:** Under 5 Mortality Rates (deaths in children under age 5 per 1,000 live births, including 95% Confidence Intervals), {Years}

{Comment on trends, link these to what is happening with IMR as a whole, compare to U5M from the most recent census}

### Age Specific Mortality

An age specific mortality rate is the number of deaths per 1,000 people of a given age group in a given time period. {Describe the usual pattern of age specific mortality- ie most deaths in the young and old, more deaths in males than females}

Table : Age Specific Mortality Rate (deaths per 1,000 people) by Sex and period, {Years}

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Age group** | **Male** | | **Female** | | **Both sexes** | |
| **Period 1**  **2007-2009** | **Period 2**  **2010-2012** | **Period 1**  **2007-2009** | **Period 2**  **2010-2012** | **Period 1**  **2007-2009** | **Period 2**  **2010-2012** |
| 0-4 | 8.9 | 5.9 | 5.1 | 3.4 | 7.1 | 4.7 |
| 5-9 | 0.5 | 0.6 | 0.6 | 0.0 | 0.5 | 0.3 |
| 10-14 | 0.9 | 1.2 | 0.3 | 0.6 | 0.6 | 0.9 |
| 15-19 | 1.6 | 1.4 | 0.7 | 0.8 | 1.2 | 1.1 |
| 20-24 | 1.6 | 2.7 | 1.3 | 2.7 | 1.5 | 2.7 |
| 25-29 | 3.1 | 4.8 | 3.5 | 4.0 | 3.3 | 4.4 |
| 30-34 | 5.4 | 7.1 | 2.6 | 3.4 | 4.0 | 5.3 |
| 35-39 | 8.8 | 11.5 | 2.8 | 3.2 | 6.0 | 7.3 |
| 40-44 | 10.3 | 13.5 | 11.6 | 8.2 | 11.0 | 10.9 |
| 45-49 | 18.9 | 18.2 | 10.4 | 11.8 | 14.4 | 14.9 |
| 50-54 | 34.6 | 38.0 | 23.3 | 29.1 | 28.6 | 33.2 |
| 55-59 | 29.5 | 28.6 | 28.1 | 25.4 | 28.8 | 26.9 |
| 60-64 | 60.4 | 52.5 | 14.7 | 16.5 | 36.3 | 32.0 |
| 65-69 | 89.8 | 98.0 | 53.7 | 65.5 | 69.1 | 78.5 |
| 70-74 | 70.7 | 84.8 | 36.6 | 62.9 | 51.8 | 72.2 |
| 75+ | 108.5 | 105.7 | 106.0 | 101.7 | 107.2 | 103.4 |

Figure 8: Age Specific Mortality Rates by period, {years – most recent period}

Figure 9: Age Specific Mortality Rates by sex, { most recent period}

{insert line graph of most recent period age-specific rates on a log scale for males and females.

{Comment on the plausibility of the pattern of deaths for males/ females and by age – for each time period, and what this means about data quality/ reporting completeness – including whether data is good enough to use for life tables or whether it should be smoothed out}. You should graph all periods to check plausibility and completeness of the pattern – but other periods can be included in the appendices unless there is a specific story of interest to warrant their inclusion in the main body of the report}

### Adult Mortality

Adult mortality is the probability of dying between the ages of 15 to 59 inclusive, or the probability of a 15-year-old dying before reaching the age of 60. The table below shows adult mortality by period and sex.

Table : Adult Mortality (%) by sex and period, including 95% Confidence Intervals {Years}

|  |  |  |  |
| --- | --- | --- | --- |
| Period | Male 45q15 | Female 45q15 | Both sexes 45q15 |
|  |  |  |  |
|  |  |  |  |

{Discuss trends in adult mortality – is it getting higher or lower, how do males compare to females, is data plausible – how do these figures compare to the latest census values for adult mortality. Also consider comparing to relevant countries - ie Australia or New Zealand, the US, neighbouring Pacific countries - to highlight disparities and provide context}

### Maternal Mortality

A maternal death is defined by the WHO as the death of a woman while pregnant or within 42 days of termination of pregnancy, irrespective of the duration and site of the pregnancy, from any cause related to or aggravated by the pregnancy or its management but not from accidental or incidental causes. The maternal mortality ratio (MMR) is the ratio of the number of maternal deaths during a given time period per 100,000 live births during the same time-period. A live birth is defined by the WHO as 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 - e.g. 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 live born.

Table : Number of maternal deaths, maternal mortality ratio, and maternal mortality rate by period {Years}

|  |  |  |  |
| --- | --- | --- | --- |
| **Period** | **Number of maternal deaths** | **Maternal Mortality Ratio** | **Maternal Mortality Rate** |
|  |  |  |  |
|  |  |  |  |

### Life Expectancy at 40 (LE40)

Life expectancy at 40 years of age is also an indicative measure on premature mortality. This is the number of years a person aged 40 would be expected to live, on average, if they continued to experience current mortality rates.

Table : Life Expectancy at 40 (LE40) by sex and period, including 95% Confidence Intervals {Years}

|  |  |  |  |
| --- | --- | --- | --- |
| Period | MaleLE40 | FemaleLE40 | Both SexesLE40 |
|  |  |  |  |
|  |  |  |  |

{comment on how long a 40 year old is expected to live – in comparison to other pacific island countries, Australia and NZ or the US)

# Chapter 4: Causes of Death



## Natural and non-natural causes of death

{Describe the distribution of natural and non-natural cases of death. Are there any changes in the pattern of each over the past years? Describe age differentials in distribution of the two}.

Table : Number of natural and non-natural deaths, {Years}

|  |  |  |  |
| --- | --- | --- | --- |
| **Period** | **Number of natural deaths** | **Number of non-natural deaths** | **Total** |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |

|  |
| --- |
| **Sample text**  According to the ICD-10 codebook, all causes of death from chapters 1 to 18 of ICD-10 are classified as natural causes and chapter 20 (V01-Y98) as non-natural causes. Table x shows the actual number of natural and non- natural deaths by year of death for the period (indicate period). {Proceed to describe the pattern. Have there been increases or decreases in the number of natural and/ or unnatural causes. Discuss any factors that are likely to have contributed increases or declines in number of deaths} |

Figure 10: Percentage distribution of natural and non-natural causes of death by period of death

Figure 11: Percentage distribution of natural and non-natural causes of death by age,

## Leading underlying natural causes of Death (all ages)

Although leading causes of death for all ages is not a very useful set of information, as from a public health perspective we are most interested in early deaths.

Table : Ten Leading Causes of Deaths (by ICD General Mortality List 1) by Sex, {Years}

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **List code** | **Disease** | **Male Deaths** |  | **List code** | **Disease** | **Female Deaths** | |
|  |  | |  |
|  |  |  |  |  |  | |  |
|  |  |  |  |  |  | |  |
|  |  |  |  |  |  | |  |
|  |  |  |  |  |  | |  |
|  |  |  |  |  |  | |  |
|  |  |  |  |  |  | |  |
|  |  |  |  |  |  | |  |
|  |  |  |  |  |  | |  |
|  |  |  |  |  |  | |  |
|  |  |  |  |  |  | |  |
|  | All Other Causes |  |  |  | All Other Causes | |  |
| **TOTAL** | |  |  |  |  | |  |

{Briefly discuss all-age causes of death and note that causes by age group will be discussed in the following sections in more detail. Discuss the differentials by sex if any. Also discuss whether the leading causes of death for either sex were Communicable or non-communicable diseases. Note that causes of death by all ages may be misleading as the leading causes of death differ by the ages of the deceased}.

{Discuss here the percentage of ill-defined cases. Describe what is meant by ill-defined causes of death. Discuss some of the the main reason contributing to ill-defined causes of death in your country}

## Underlying Natural causes of death by key age groups

### Mortality in Children Aged 0-4 years

{ Comment on leading causes of death, and whether this is consistent with the pattern of neonatal to other infant deaths –higher numbers of deaths from infectious diseases should result in deaths being spread out throughout the whole age groups, less will mean that deaths are more likely clustered in the neonatal age bracket. If you have 2 periods of data add to the table above – repeat the last 2 columns for the second period}

Table : Cause specific Mortality by ICD {chapter or General mortality list 1} (deaths per 100,000 population, including 95% Confidence Intervals), 0-4 year olds (both sexes combined) {Years}

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **ICD Codes** | **Disease** | **Number of deaths** | **Percent distribution of deaths by cause (95% CI)** | **Cause Specific Mortality Rate per 100,000 population (95% CI)** |
|
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  | |  |  |  |

{The ICD-10 has specific tabulation lists for infants and children (BTL 3 and 4) that may be more useful than the general deaths list here. In particular, you would expect to see most deaths in chapters XV and XVI in the lower end of this age range. The specific BTL breaks these down into more useful categories. Countries may want to consider breaking the age categories down more and applying the BTL3 and BTL 4 tabulation lists for more detailed information on causes of death in these younger age groups. Partner agencies can provide assistance to countries for this process.}

### Mortality in Children Aged 5-14 years

{Comment on the number of deaths in this age group. Note that cause of death is reported for both sexes combined due to small numbers leading causes. If you have 2 periods of data add to the table – repeat the last 2 columns for the second period}

Table : Cause specific Mortality by ICD {chapter or General mortality list 1} (deaths per 100,000 population, including 95% Confidence Intervals), 5-14 year olds (both sexes combined) {Years}

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **ICD Codes** | **Disease** | **Number of deaths** | **Percent distribution of deaths by cause**  **(95% CI)** | **Cause Specific Mortality Rate per 100,000 population**  **(95% CI)** |
|
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  | |  |  |  |
|  | |  |  |  |

### Causes of death in Adults Aged 15-59 years

{Discuss the leading causes of death. Compare causes by male and female. Try where possible to compare these to previous periods so you can see trends or other countries to provide context. If NCDs are high consider discussing these in relation to whether risk factors are also high – from sources such as the STEPS report. If you have 2 periods of data add to the tables – repeat the last 2 columns for the second period. {If possible, it may be useful for countries to break this table further down into ages 15-34 and 35-59.}

Figure 12: {Pie chart} Percent Distribution of the leading causes of death in adults aged 15-59

{5 NCDs + all other causes. If possible, it would be useful for countries to break these further down into ages 15-34 and 35-59.}

Table 35: Cause specific Mortality for adult males aged 15-59 years by ICD {chapter or General mortality list 1} (deaths per 100,000 population, including 95% Confidence Intervals); {Years}

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **ICD Codes** | **Disease** | **Number of male deaths** | **Percent distribution of deaths by cause excluding ill-defined causes (95% CI)** | **Cause Specific Mortality Rate per 100,000 population (95% CI)** |
|
| I00-I99 | Diseases of circulatory system |  |  |  |
| N00-N99 | Diseases of the genitourinary system |  |  |  |
| V01-Y89 | External causes of morbidity and mortality |  |  |  |
| E00-E88 | Endorcrine, nutritional and metabolic diseases |  |  |  |
| A00-B99 | Certain Infectious and parasitic diseases |  |  |  |
| K00-K92 | Diseases of digestive system |  |  |  |
| C00-D48 | Neoplasms |  |  |  |
| G00-G98 | Diseases of nervous system |  |  |  |
| J00-J98 | Diseases of respiratory system |  |  |  |
| P00-P96 | Certain conditions originating in the perinatal period |  |  |  |
| R00-R99 | Symptoms, and signs and abnormal clinical and laboratory findings |  |  |  |
| **TOTAL** | |  |  |  |
| **TOTAL LESS ILL-DEFINED CAUSES** | |  |  |  |

Figure 13: {Pie chart} Percent Distribution of the leading causes of death in adult Males aged 15-59

Table 36: Cause specific Mortality for adult females aged 15-59 years by ICD {chapter or General mortality list 1} (deaths per 100,000 population, including 95% Confidence Intervals); {Years}

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **ICD Codes** | **Disease** | **Number of female deaths** | **Percent distribution of deaths by cause excluding ill-defined causes (95% CI)** | **Cause Specific Mortality Rate per 100,000 population (95% CI)** |
|
| I00-I99 | Diseases of circulatory system |  |  |  |
| E00-E88 | Endorcrine, nutritional and metabolic diseases |  |  |  |
| C00-D48 | Neoplasms |  |  |  |
| N00-N99 | Diseases of the genitourinary system |  |  |  |
| A00-B99 | Certain Infectious and parasitic diseases |  |  |  |
| J00-J98 | Diseases of respiratory system |  |  |  |
| K00-K92 | Diseases of digestive system |  |  |  |
| V01-Y89 | External causes of morbidity and mortality |  |  |  |
| G00-G98 | Diseases of nervous system |  |  |  |
| M00-M99 | Diseases of the musculoskeletal system and connective tissue |  |  |  |
| R00-R99 | Symptoms, and signs and abnormal clinical and laboratory findings |  |  |  |
| **TOTAL** | |  |  |  |
| **TOTAL LESS ILL-DEFINED CAUSES** | |  |  |  |

Figure 14: {Pie chart} Percent Distribution of the leading causes of death in adult Females aged 15-59

### Mortality in Older Adults (Aged 60+ Years)

{Discuss the leading causes of death. Try where possible to compare these to previous periods so you can see trends or other countries to provide context. If NCDs are high consider discussing these in relation to whether risk factors are also high – from sources such as the STEPS report. If you have 2 periods of data add to the tables – repeat the last 2 columns for the second period. Compare causes by male and female}

Table 37: Cause specific Mortality in Adult Males Aged 60 and Older by ICD {chapter or General mortality list 1} (deaths per 100,000 population, including 95% Confidence Intervals; {Years}

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **ICD Codes** | **Disease** | **Number of male deaths aged 60+** | **Percent distribution of deaths by cause excluding ill-defined causes (95% CI)** | **Cause Specific Mortality Rate per 100,000 population (95% CI)** |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
| **TOTAL** | |  |  |  |
| **TOTAL LESS ILL-DEFINED CAUSES** | |  |  |  |

Table 38: Cause specific Mortality in Adult Females Aged 60 and Older by ICD {chapter or General mortality list 1} (deaths per 100,000 population, including 95% Confidence Intervals; {Years}

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **ICD Codes** | **Disease** | **Number of female deaths aged 60+** | **Percent distribution of deaths by cause excluding ill-defined causes (95% CI)** | **Cause Specific Mortality Rate per 100,000 population (95% CI)** |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
| **TOTAL** | |  |  |  |
| **TOTAL LESS ILL-DEFINED CAUSES** | |  |  |  |

## Underlying natural causes of death by region of occurrence (Main geographical divisions)

{Discuss the distribution of the ten leading natural causes of death by the main geographical region of occurrence. Discuss the major variations by region and possible differences between the differences).

Table 39: The ten leading underlying natural causes of death for period (Years)

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Causes of death (Based on ICD 10)** | Region 1 | | Region 2 | | Region 3 | | Region 3 | |
| Rank | No | Rank | No | Rank | No | Rank | No |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
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|  |  |  |  |  |  |  | ` |  |
|  |  |  |  |  |  |  |  |  |
| All causes |  |  |  |  |  |  |  |  |

## Adult Mortality from Non-Communicable Diseases (NCDs)

Non-communicable diseases are the leading cause of death in Pacific Islands and territories. A number of NCD-related indicators can be used to measure progress against NCD-related mortality.

### Cause-specific proportional mortality

Age-specific proportional mortality for adults aged 15-59 years from specific groups of NCDs (1-026 – Neoplasms, 1-052 – Diabetes, 1-064 Diseases of the Circulatory System, 1-076 – Chronic Lower respiratory Disease, 1-080 – Diseases of the Liver) shows the proportion of deaths due to these diseases. While proportional mortality shows the relative burden from NCDs compared to other causes of death and is easy to measure, it does not provide a measure of the overall impact of NCD related deaths and does not paint a complete picture.

Figure \_: {Pie chart} Percent Distribution of the leading causes of death in adults aged 15-59 {5 NCDs + all other causes. If possible, it would be useful for countries to break these further down into ages 15-34 and 35-59.}

### Cause-specific mortality rates from selected NCD’s

Age-specific mortality rates provide a direct measure of the overall impact of NCD-related deaths on the population. While these rates cannot be used to provide a comparison either between countries or over time as they will be affected by the age structure of the population, rates for 10 year age groups can be useful in providing more detailed information for targeting specific NCD-related interventions.

{Refer to the information from deaths in Males and Females aged 15-59.}

### Age-standardised mortality from NCD’s

For comparison over time and across countries, age standardized rates for the selected NCD’s should be used. {Where possible, countries should also consider periodically reporting mortality from these causes for 5 year age groups from 20 to 59 years of age. This would be an optional indicator but would give PICTs a much more detailed understanding of the population affected by NCDs and an improved ability both to target and monitor interventions.}

Table 40: Age-standardized cause-specific mortality rates for adults aged 15-59 years for selected NCDs by sex (deaths per 100,000 population), {Years}

|  |  |  |  |
| --- | --- | --- | --- |
| **Selected NCDs** | **Males** | **Females** | **Total** |
| **Neoplasms** |  |  |  |
| **Diabetes** |  |  |  |
| **Circulatory diseases** |  |  |  |
| **Chronic Lower respiratory Diseases** |  |  |  |
| **Diseases of the Liver** |  |  |  |

### The probability of dying among adults aged 30-69 years (inclusive) from designated NCDs – WHO Indicator

The probability of dying among adults aged 30-69 years (inclusive) from specific causes has recently been introduced by WHO as an outcome indicator for the impact of NCDs. As such, estimates of mortality from selected non-communicable diseases for this age group are reported here for comparison with international reporting. These are outlined in the following table. This indicator does not include deaths from Diseases of the Liver (1-080), which are included in the earlier indicators as most deaths in these categories will be due to chronic diseases that are occurring in the Pacific region. NCDs are the leading cause of mortality in the world and the Pacific. {Say something about NCDs as a leading cause of death in 15-59 year olds as above}

Table 41: Selected non-communicable diseases (NCDs) for reporting against international targets by ICD General Mortality List 1

|  |  |  |
| --- | --- | --- |
| **List code** | **Disease** | **ICD Codes** |
| 1-026 | Neoplasms | C00–D48 |
| 1-052 | Diabetes mellitus | E10–E14 |
| 1-064 | Diseases of the circulatory system | I00–I99 |
| 1-076 | Chronic lower respiratory diseases | J40–J47 |

Table 42: Deaths from selected NCDs in 30-69 year olds (inclusive) by sex, {Years}

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| CODE | Diseases | Males | Females | Total |
| 1-026 | Neoplasms |  |  |  |
| 1-052 | Diabetes mellitus |  |  |  |
| 1-064 | Diseases of the circulatory system |  |  |  |
| 1-076 | Chronic lower respiratory diseases |  |  |  |
| TOTAL | |  |  |  |

The probability of dying from these diseases is calculated using life table methods, and is noted below. This is the probability that a person aged 30 will die from the selected disease before their 70th birthday.

Table 43: Probability of dying (%) from selected NCDs in 30-69 year olds (inclusive) by sex, {Years}

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| CODE | Diseases | Males | Females | Total |
| 1-026 | Neoplasms |  |  |  |
| 1-052 | Diabetes mellitus |  |  |  |
| 1-064 | Diseases of the circulatory system |  |  |  |
| 1-076 | Chronic lower respiratory diseases |  |  |  |
| TOTAL | |  |  |  |

{comment on probability of dying from one of these selected NCDs}

# CONCLUSIONS (Recommendations and Policy Implications)

Provide a summary key findings of the analysis that would have policy implications. Are the levels of fertility among teenage mothers increasing or alarmingly high? Is mortality on the rise and what are possible ways to address the rise? Is there a specific age group that requires special intervention? Also comment on the quality of the country’s data and the possible need for improvement.

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# APPENDICES

## Appendix 1: Statistical Tables

### POPULATION ESTIMATES

Population Estimates by age group: {YEARS}

Population Estimates by age group, Males: {YEARS}

Population Estimates by age group, Females: {YEARS}

### BIRTHS

{5} Year period of Rolling Average of Number of Births: {YEARS}

Completeness – registered and reported births by age of mother {Years}

Total Number of Births by Age of Mothers in Age Groups: {YEARS}

Total Number of Births by Place of Birth: {YEARS}

Total Fertility Rate Calculations in 5 year age groups: {YEARS}

### DEATHS

{5} Year Rolling Average of Number of Deaths: {YEARS}

Completeness – registered and reported deaths by sex and age {Years}

Total Number of Deaths by 5 Year Age groups: {YEARS}

Total Number of Deaths of Males in Age Groups: {YEARS}

Total Number of Deaths of Females in 5 Year Age groups: {YEARS}

Total Number of Infant Deaths in Niue: {YEARS}

Total Number of Neonatal Deaths in Niue: {YEARS}

Age-specific Mortality Rate (deaths per 1,000 people) by sex and period: {YEARS}

Cause-Specific Mortality Rates for Adults Aged 15-59 Years for Selected NCDs by Sex and 5 Year Age

Group (deaths per 100,000 population), {Years}

Life tables: Total {YEARS}

Life tables: Males {YEARS}

Life tables: Females {YEARS}

### CAUSE OF DEATHS (by ICD General mortality list – 103 causes)

{If only ICD chapters used in the main body of the report – then include the more detailed tabulations here}

### POPULATION ESTIMATES

Population Estimates by age group: {YEARS}

Population Estimates by age group, Males: {YEARS}

Population Estimates by age group, Females: {YEARS}

### BIRTHS

{5} Year period of Rolling Average of Number of Births: {YEARS}

Coverage – registered and reported births by age of mother {Years}

Total Number of Births by Age of Mothers in Age Groups: {YEARS}

Total Number of Births by Place of Birth: {YEARS}

Total Fertility Rate Calculations in 5 year age groups: {YEARS}

### DEATHS

{5} Year Rolling Average of Number of Deaths: {YEARS}

Total Number of Deaths by 5 Year Age groups: {YEARS}

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **DEATHS** | | | | |
| **Broad age group** | | **Male** | **Female** | **TOTAL** |
| <5 | Neonatal deaths (under 28 days) |  |  |  |
| Deaths 28 days to <1 years |  |  |  |
| Deaths 1-4 years |  |  |  |
| **Total <5** |  |  |  |
| 5-9 | |  |  |  |
| 10-14 | |  |  |  |
| 15-19 | |  |  |  |
| 20-24 | |  |  |  |
| 25-29 | |  |  |  |
| 30-24 | |  |  |  |
| 35-39 | |  |  |  |
| 40-44 | |  |  |  |
| 45-49 | |  |  |  |
| 50-54 | |  |  |  |
| 55-59 | |  |  |  |
| 60-64 | |  |  |  |
| 65-69 | |  |  |  |
| 70-74 | |  |  |  |
| 75-79 | |  |  |  |
| 80-84 | |  |  |  |
| 85+ | |  |  |  |
| **TOTAL** | |  |  |  |
| **Number of deaths with a medical certificate or verbal autopsy** | |  |  |  |
| **Proportion of deaths with a medical certificate or verbal autopsy** | |  |  |  |

Figure: Age Specific Mortality Rates by period, {years – most recent period}

Total Number of Deaths of Males in Age Groups: {YEARS}

Total Number of Deaths of Females in 5 Year Age groups: {YEARS}

Total Number of Infant Deaths in Niue: {YEARS}

Total Number of Neonatal Deaths in Niue: {YEARS}

Age-specific Mortality Rate (deaths per 1,000 people) by sex and period: {YEARS}

Cause-Specific Mortality Rates for Adults Aged 15-59 Years for Selected NCDs by Sex and 5 Year Age

Group (deaths per 100,000 population), {Years}

Life tables: Total {YEARS}

Life tables: Males {YEARS}

Life tables: Females {YEARS}

### CAUSE OF DEATHS (by ICD General mortality list – 103 causes)

{If only ICD chapters used in the main body of the report – then include the more detailed tabulations here}





## Appendix 2: Standard Tabulations of Cause of Death from the International Statistics Classification of Diseases and Related Health Problems, 10th Revision (ICD-10, 2010 edition)

### General Mortality List 1: 103 Cause List

|  |  |  |
| --- | --- | --- |
| **List code** | **Disease** | **ICD Codes** |
| 1-001 | Certain infectious and parasitic diseases | A00–B99 |
| 1-002 | Cholera | A00 |
| 1-003 | Diarrhoea and gastroenteritis of presumed infectious origin | A09 |
| 1-004 | Other intestinal infectious diseases | A01–A08 |
| 1-005 | Respiratory tuberculosis | A15–A16 |
| 1-006 | Other tuberculosis | A17–A19 |
| 1-007 | Plague | A20 |
| 1-008 | Tetanus | A33–A35 |
| 1-009 | Diphtheria | A36 |
| 1-010 | Whooping cough | A37 |
| 1-011 | Meningococcal infection | A39 |
| 1-012 | Septicaemia | A40–A41 |
| 1-013 | Infections with a predominantly sexual mode of transmission | A50–A64 |
| 1-014 | Acute poliomyelitis | A80 |
| 1-015 | Rabies | A82 |
| 1-016 | Yellow fever | A95 |
| 1-017 | Other arthropod-borne viral fevers and viral haemorrhagic fevers | A90–A94, A96–A99 |
| 1-018 | Measles | B05 |
| 1-019 | Viral hepatitis | B15–B19 |
| 1-020 | Human immunodeficiency virus [HIV] disease | B20–B24 |
| 1-021 | Malaria | B50–B54 |
| 1-022 | Leishmaniasis | B55 |
| 1-023 | Trypanosomiasis | B56–B57 |
| 1-024 | Schistosomiasis | B65 |
| 1-025 | Remainder of certain infectious and parasitic diseases | A21–A32, A38, A42–A49, A65–A79, A81, A83–A89, B00–B04, B06–B09, B25–B49, B58–B64, B66–B94, B99 |
| 1-026 | Neoplasms | C00–D48 |
| 1-027 | Malignant neoplasm of lip, oral cavity and pharynx | C00–C14 |
| 1-028 | Malignant neoplasm of oesophagus | C15 |
| 1-029 | Malignant neoplasm of stomach | C16 |
| 1-030 | Malignant neoplasm of colon, rectum and anus | C18–C21 |
| 1-031 | Malignant neoplasm of liver and intrahepatic bile ducts | C22 |
| 1-032 | Malignant neoplasm of pancreas | C25 |
| 1-033 | Malignant neoplasm of larynx | C32 |
| 1-034 | Malignant neoplasm of trachea, bronchus and lung | C33–C34 |
| 1-035 | Malignant melanoma of skin | C43 |
| 1-036 | Malignant neoplasm of breast | C50 |
| 1-037 | Malignant neoplasm of cervix uteri | C53 |
| 1-038 | Malignant neoplasm of other and unspecified parts of uterus | C54–C55 |
| 1-039 | Malignant neoplasm of ovary | C56 |
| 1-040 | Malignant neoplasm of prostate | C61 |
| 1-041 | Malignant neoplasm of bladder | C67 |
| 1-042 | Malignant neoplasm of meninges, brain and other parts of central nervous system | C70–C72 |
| 1-043 | Non-Hodgkin's lymphoma | C82–C85 |
| 1-044 | Multiple myeloma and malignant plasma cell neoplasms | C90 |
| 1-045 | Leukaemia | C91–C95 |
| 1-046 | Remainder of malignant neoplasms | C17, C23–C24, C26–C31, C37–C41, C44–C49, C51–C52, C57–C60, C62–C66, C68–C69, C73–C81, C88, C96–C97 |
| 1-047 | Remainder of neoplasms | D00–D48 |
| 1-048 | Diseases of the blood and blood-forming organs and certain disorders involving the immune mechanism | D50–D89 |
| 1-049 | Anaemia | D50–D64 |
| 1-050 | Remainder of diseases of the blood and blood-forming organs and certain disorders involving the immune mechanism | D65–D89 |
| 1-051 | Endocrine, nutritional and metabolic diseases | E00–E88 |
| 1-052 | Diabetes mellitus | E10–E14 |
| 1-053 | Malnutrition | E40–E46 |
| 1-054 | Remainder of endocrine, nutritional and metabolic diseases | E00–E07, E15–E34, E50–E88 |
| 1-055 | Mental and behavioural disorders | F01–F99 |
| 1-056 | Mental & behavioural disorders due to psychoactive substance use | F10–F19 |
| 1-057 | Remainder of mental and behavioural disorders | F01–F09, F20–F99 |
| 1-058 | Diseases of the nervous system | G00–G98 |
| 1-059 | Meningitis | G00, G03 |
| 1-060 | Alzheimer's disease | G30 |
| 1-061 | Remainder of diseases of the nervous system | G04–G25, G31–G98 |
| 1-062 | Diseases of the eye and adnexa | H00–H59 |
| 1-063 | Diseases of the ear and mastoid process | H60–H93 |
| 1-064 | Diseases of the circulatory system | I00–I99 |
| 1-065 | Acute rheumatic fever and chronic rheumatic heart diseases | I00–I09 |
| 1-066 | Hypertensive diseases | I10–I13 |
| 1-067 | Ischaemic heart diseases | I20–I25 |
| 1-068 | Other heart diseases | I26–I51 |
| 1-069 | Cerebrovascular diseases | I60–I69 |
| 1-070 | Atherosclerosis | I70 |
| 1-071 | Remainder of diseases of the circulatory system | I71–I99 |
| 1-072 | Diseases of the respiratory system | J00–J98 |
| 1-073 | Influenza | J10–J11 |
| 1-074 | Pneumonia | J12–J18 |
| 1-075 | Other acute lower respiratory infections | J20–J22 |
| 1-076 | Chronic lower respiratory diseases | J40–J47 |
| 1-077 | Remainder of diseases of the respiratory system | J00–J06, J30–J39, J60–J98 |
| 1-078 | Diseases of the digestive system | K00–K92 |
| 1-079 | Gastric and duodenal ulcer | K25–K27 |
| 1-080 | Diseases of the liver | K70–K76 |
| 1-081 | Remainder of diseases of the digestive system | K00–K22, K28–K66, K80–K92 |
| 1-082 | Diseases of the skin and subcutaneous tissue | L00–L98 |
| 1-083 | Diseases of the musculoskeletal system and connective tissue | M00–M99 |
| 1-084 | Diseases of the genitourinary system | N00–N99 |
| 1-085 | Glomerular and renal tubulointerstitial diseases | N00–N15 |
| 1-086 | Remainder of diseases of the genitourinary system | N17–N98 |
| 1-087 | Pregnancy, childbirth and the puerperium | O00–O99 |
| 1-088 | Pregnancy with abortive outcome | O00–O07 |
| 1-089 | Other direct obstetric deaths | O10–O92 |
| 1-090 | Indirect obstetric deaths | O98–O99 |
| 1-091 | Remainder of pregnancy, childbirth and the puerperium | O95–O97 |
| 1-092 | Certain conditions originating in the perinatal period | P00–P96 |
| 1-093 | Congenital malformations, deformations and chromosomal abnormalities | Q00–Q99 |
| 1-094 | Symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified | R00–R99 |
| 1-095 | External causes of morbidity and mortality | V01–Y89 |
| 1-096 | Transport accidents | V01–V99 |
| 1-097 | Falls | W00–W19 |
| 1-098 | Accidental drowning and submersion | W65–W74 |
| 1-099 | Exposure to smoke, fire and flames | X00–X09 |
| 1-100 | Accidental poisoning by and exposure to noxious substances | X40–X49 |
| 1-101 | Intentional self-harm | X60–X84 |
| 1-102 | Assault | X85–Y09 |
| 1-103 | All other external causes | W20–W64, W75–W99, X10–X39, X50–X59, Y10–Y89 |
| 1-901 | SARS | U04 |

## Appendix 3: Key Concepts and Definitions

**Adult Mortality:** The probability of dying between the ages of 15 – 59 inclusive, that is, the probability of a 15 year old dying before reaching the age of 60, if subject to current age-specific mortality rates between those ages.

**Age-specific fertility rates:** The number of births occurring to mothers of a certain age group per 1,000 women in that age group in a given period of time.

**Age Specific Mortality Rate:** The number of deaths per 1,000 people of a given age group in a given time period.

**Age Standardised Death Rates:** The number of deaths that would occur if subject to the same age structure as the standard population and the age-specific rate; one country’s age specific death rates applied to a standard age distribution.

**Crude Birth Rate (CBR):** The annual number of births occurring per 1000 mid-year populations.

**Crude Death Rate (CDR):** The annual number of deaths occurring per 1000 mid-year population

**Infant Mortality Rate (IMR):** The number of deaths in infants under age 1 per 1000 live births in a given period.

**Life Expectancy:** The average number of additional years a person could expect to live if current morality trends were to continue for the rest of that person’s life.

**Live birth:** 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 - e.g. 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 live born.

**Maternal death:** The death of a woman while pregnant or within 42 days of termination of pregnancy, irrespective of the duration and site of the pregnancy, from any cause related to or aggravated by the pregnancy or its management but not from accidental or incidental causes.

**Maternal mortality ratio *(MMR)*:** The ratio of the number of maternal deaths during a given time period per 100,000 live births during the same time-period.

**Neonatal mortality rate:** The number of deaths in live-born infants aged less than 28 days per 1,000 live births over a specified time period.

**Rate of Natural Increase**: Rate at which a population grows (increase/decrease) during a given year, as the result of a surplus/deficit of births over deaths; expressed as a percentage of the base population.

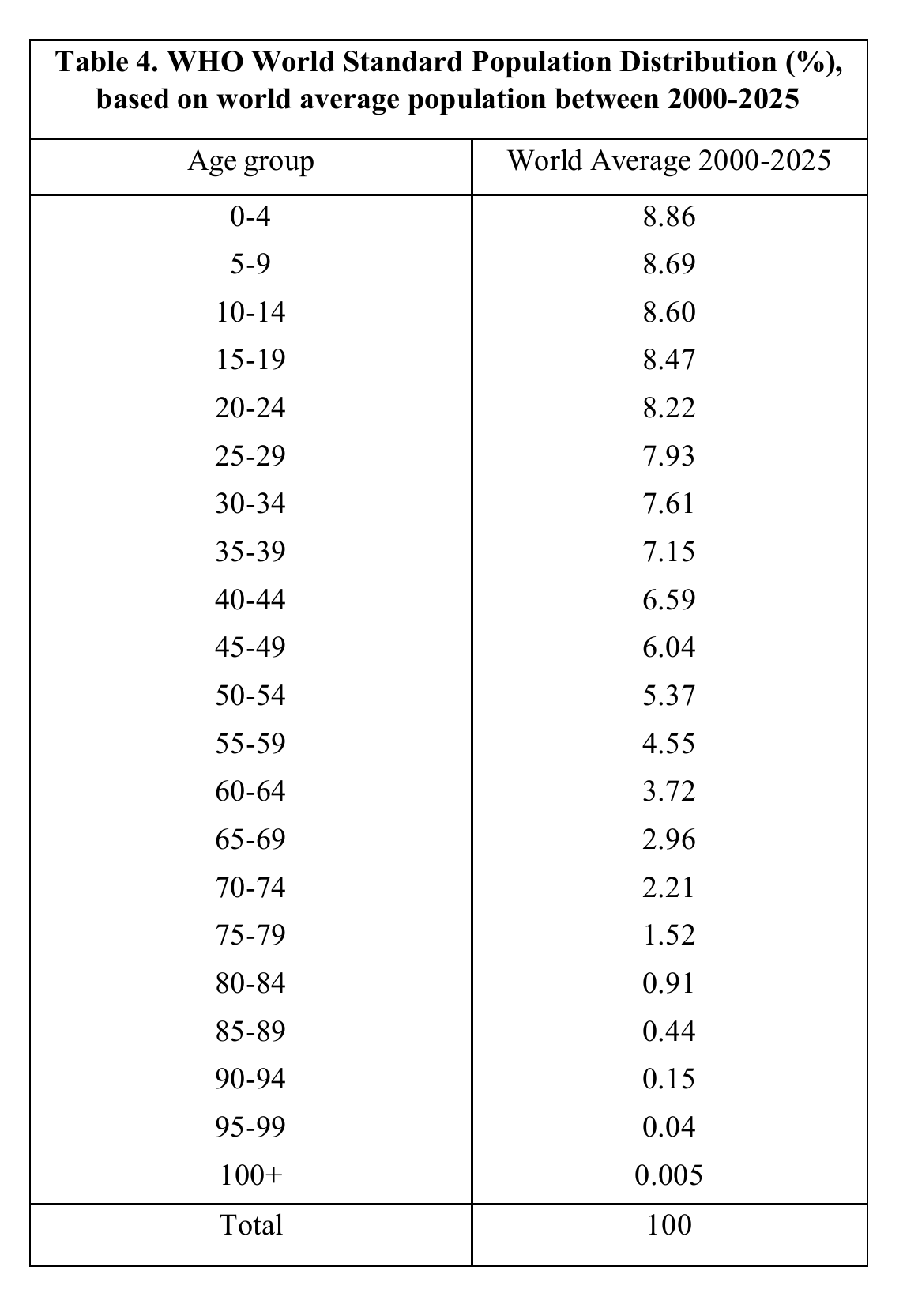
**Sex Ratio:** Number of men per 100 women. Sex ratios over 100 indicate that there are more males than females, and sex ratios under 100 indicate more females than males.

**Total Fertility Rate (TFR):** The average number of children a woman would give birth to during her lifetime if she were to pass through her childbearing years experiencing the present day age-specific fertility rates.

**Under 5 Mortality Rate:** The number of deaths in children under age 5 per 1,000 live births in a given period.

## Appendix 4: WHO World Standard Population Distribution

From: AGE STANDARDIZATION OF RATES: A NEW WHO STANDARD, GPE Discussion Paper Series: No.31, EIP/GPE/EBD, World Health Organization 2001



1. [↑](#footnote-ref-1)
2. Include reference [↑](#footnote-ref-2)