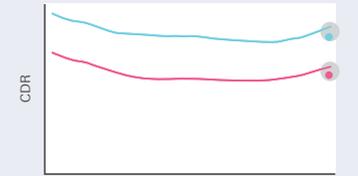
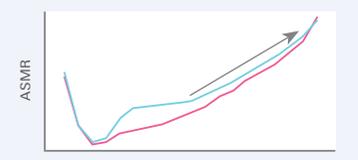
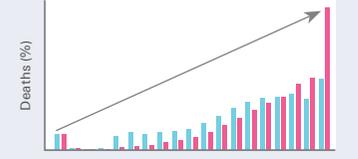
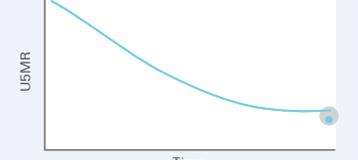
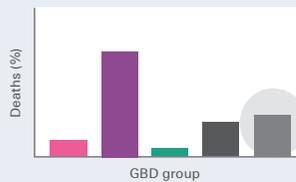


The 10 ANACONDA steps: A quick reference guide



1			<p>Data input checks</p> <p>Provides a quick overview of the composition of the population and those who died by age, sex and cause of death. Tabulates the input data by the two most used mortality tabulation lists: List 1 from the International Statistical Classification of Diseases and Related Health Problems (ICD-10), and List 2 from the 2017 Global Burden of Disease (GBD) study.</p>
2			<p>Crude death rate and completeness</p> <p>The estimated and calculated crude death rates (CDR) from the input data are used to assess the extent of potential underreporting of deaths, and the true completeness of the assessed data is calculated using a modelled approach.</p>
3			<p>Age-specific mortality rates</p> <p>The age- and sex-specific mortality rates are calculated and shown in a log-plot chart. Inconsistencies such as a non-linear line after age 35 should be investigated as they could indicate incompleteness of death reporting.</p>
4			<p>Age-sex distribution of deaths</p> <p>The age distributions of deaths of both males and females are presented showing the ages at which most deaths occur. Comparators are used to point at potential missing deaths at certain ages.</p>
5			<p>Completeness of child mortality</p> <p>This step calculates the probability of a child surviving to the age of five years (the 5Q0) and compares this with external estimates calculated from censuses and surveys by international experts for global usage. Comparing these gives an estimate the extent of under-registration of child deaths. This step also produces a life table from the input data, which includes life expectancy at any age.</p>

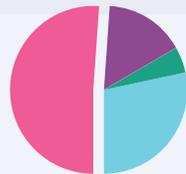
6



Mortality by broad GBD groups

To assess whether the reported causes of deaths (CODs) are consistent with expected patterns (given current mortality conditions) an important first step is to look at the distribution of CODs by three broad cause groups (communicable; non-communicable; external) and to separate the ill-defined/garbage causes into two blocks according to: causes which cannot be the underlying cause of death and causes which are insufficiently specified.

7



Quality of cause of death data

Two different typologies are used to analyse the garbage codes and to group them into types of certification errors and severity levels according to the impact they can have on misleading policy and planning. Understanding this is important for taking action to reduce them and improving the reliability of the COD statistics.

8



Age pattern of mortality by broad groups

As the risk of dying from different diseases and injuries changes with age, the age pattern of deaths within each of the three broad cause groups will also be different. Comparator data are used to assess the plausibility of the patterns shown in your data. Given that health policies often focus on specific age groups, this step also assess the proportion of garbage codes within each five-year group allowing you to know how biased the data are.

9



Rank	ICD-10	ICD-9	ICD-10	ICD-9	ICD-10	ICD-9	ICD-10	ICD-9
1	A01	041	Shigellosis	041	A01	041	Shigellosis	041
2	A02	042	Enterocolitis	042	A02	042	Enterocolitis	042
3	A03	043	Enteritis	043	A03	043	Enteritis	043
4	A04	044	Enterocolitis	044	A04	044	Enterocolitis	044
5	A05	045	Enterocolitis	045	A05	045	Enterocolitis	045
6	A06	046	Enterocolitis	046	A06	046	Enterocolitis	046
7	A07	047	Enterocolitis	047	A07	047	Enterocolitis	047
8	A08	048	Enterocolitis	048	A08	048	Enterocolitis	048
9	A09	049	Enterocolitis	049	A09	049	Enterocolitis	049
10	A10	050	Enterocolitis	050	A10	050	Enterocolitis	050
11	A11	051	Enterocolitis	051	A11	051	Enterocolitis	051
12	A12	052	Enterocolitis	052	A12	052	Enterocolitis	052
13	A13	053	Enterocolitis	053	A13	053	Enterocolitis	053
14	A14	054	Enterocolitis	054	A14	054	Enterocolitis	054
15	A15	055	Enterocolitis	055	A15	055	Enterocolitis	055
16	A16	056	Enterocolitis	056	A16	056	Enterocolitis	056
17	A17	057	Enterocolitis	057	A17	057	Enterocolitis	057
18	A18	058	Enterocolitis	058	A18	058	Enterocolitis	058
19	A19	059	Enterocolitis	059	A19	059	Enterocolitis	059
20	A20	060	Enterocolitis	060	A20	060	Enterocolitis	060

Leading causes of death

Tabulating and ranking the 20 leading CODs is a common and useful way to present COD data to policy makers for prioritisation and planning. The presence of garbage codes in this ranking is indicated by highlighting these in either red or orange according to severity. Redistribution algorithms are used to show what the 20 leading CODs would look like if all garbage codes were distributed to more correct categories.

10



Vital statistics performance index (VSPI)

ANACONDA computes a single summary score of the overall performance of the mortality system that produced the data, the vital statistics performance index or VSPI(Q). This takes into account five essential components of data quality and can be reliably used to monitor the quality of system improvements.

The program partners on this initiative include: The University of Melbourne, Australia; CDC Foundation, USA; Vital Strategies, USA; Johns Hopkins Bloomberg School of Public Health, USA; World Health Organization, Switzerland.

Civil Registration and Vital Statistics partners:



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CRICOS Provider Code: 00116K

Version: 0717-02

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