

Mortality and causes of death in South Africa, 2009

Metadata (Public version)

The metadata file contains the following information for each variable:

- **Descriptive name of variables:**
A brief description of the variable name
- **Variable name:**
The name of the variable (provided in brackets) and as heading for the value labels
- **Type and position of the variable:**
The type and position of a variable within a record is recorded in the format *type (@xxx L)*. The *type* specifies if the variable is a numeric or a character (string / alphanumeric) variables). *@xxx* indicates the position (column) at which the variable starts. *L* indicates the length of the field.
- **Note to users:**
The note is provided for each variable to provide additional information for further clarity on questions and definition of concepts.

Other relevant information available on the Statistics South Africa website (www.statssa.gov.za) or from User Information Services:

- Statistical release on Mortality and causes of death in South Africa, 2009: Findings from death notification

Methodology

1. System design

The registration of deaths is governed by the Births and Deaths Registration Act, 1992 (Act No. 51 of 1992), as amended, and is administered by the Department of Home Affairs using Form BI-1663 (Notification/Register of death/stillbirth). After a death is registered, the Department of Home Affairs issues a death certificate and, where applicable, updates the population register. The forms are then collected by Statistics South Africa (Stats SA) for processing.

The processing of death notification forms includes sorting, pasting, precoding, coding and capturing. The process of sorting involves sorting the forms by year of death, month, day and finally by surname of the deceased in alphabetical order. The main purpose of sorting is to identify and remove duplicates. During data processing, unique identifiers (serial numbers) are developed for each form for the purpose of tracking the forms through the different processing phases. Because of the complexity of the coding of diseases, Stats SA decided that all demographic and socio-economic variables on the forms, except the actual causes of death, should be precoded, to expedite the process. Thereafter, the causes of death are manually coded.

Coding the information on causes of death followed a two-step process entailing initial coding and verification by more experienced coders. The causes of death data presented were coded by procedures described in the *Stats SA manual guidelines for coders using ICD-10*. The ICD-10 (10th revision of the International Classification of Disease and related health problems) coding provides the basic guidance used in virtually all countries to code and classify causes of death data. It provides information on coding in terms of disease, injury and poisoning categories. It also provides the rules for selecting the underlying cause of death from the several diagnoses that may be reported on the death certificate, as well as definitions, tabulation lists, guidelines for the death notification form, and regulations on the use of the classification.

After all processes have been undertaken, the data are captured and duplicates verified to ensure that all the death notification forms removed as duplicates during sorting were indeed duplicates, and to identify any that were mistakenly taken out as duplicates. The data are then edited and inconsistent cases manually verified.

The underlying cause of death is then derived automatically using a software programme called Automated Classification of Medical Entities (ACME 2000.05) developed by the United States National Center for Health Statistics (NCHS). The ACME program applies World Health Organization rules on the selection of underlying causes of death. The ACME program is used as the international standard in the automated coding of causes of death.

The Stats SA coding manual prescribes the use of three-character codes while the ACME program requires four-character codes in deriving the underlying cause of death. A conversion program was therefore applied to the codes for the ACME system to recognise the data as valid input. In most of the cases, the fourth character was '9' or '8', indicating that the detail of the coded disease was not specified.

The preparation of the ACME 2000 input file involved the following:

- a) Conversion of the captured ICD-10 codes into the required ACME format.
- b) Comparison of coded value sets for the up to five causes of death (Cause A, B, C, D and other causes of death, with the associated injury when necessary) with the valid value sets in the ACME instruction manual, and editing where necessary.

2. Coverage

The target population is all deaths that occurred in 2009 and registered at the Department of Home Affairs. It therefore excludes the 2009 deaths that might not be registered, possible late registrations; and deaths that have been registered, but had not reached Stats SA during the current processing phase.

3. Confidentiality

The information remains confidential to Stats SA. The Statistics Act, 1999 (Act No.6 of 1999) prohibits the disclosure of information regarding individuals to any person concerned or his lawful representative. Therefore, the information on mortality and causes of death published does not include personal information about the deceased or informants and is released in such a way that no individual can be identified.

4. Contents of the CD

The data file provided contains 69 variables.

Users are cautioned that the following variables had a high percentage of cases where information was unspecified or unknown:

- (a) Place of death, e.g. hospital, home, nursing home, etc. (14,3%)
- (b) Was the deceased a smoker? (56,1%)
- (c) Was the deceased pregnant 42 days prior to death? (74,0%)
- (d) Province of birth (26,2%)
- (e) Province of residence (10,0%)
- (f) Marital status of deceased (18,8%)
- (g) Education of deceased (54,7%)
- (h) Occupation (76,0 were classified as occupations unspecified and occupations not elsewhere classified)
- (i) Industry (84,8%)

Note: Unknown: Refers to cases where more than one option was marked or the response was not legible.

Unspecified: Refers to cases where no response was given.

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A. DEMOGRAPHIC CHARACTERISTICS

Unique sequence number (Serial_No)

Numeric: (@1 11)

1.	Serial_No
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Note to user

This variable is derived from pasted label automatically created to provide a unique identifier for each death notification form.

Type of death (DeathType)

Numeric: (@12 1)

2.	DeathType 1 = Individual death 2 = Stillbirth
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Note to user

Individual death is a death that occurred any time after a live birth had taken place. Stillbirth is the intra-uterine death of a foetus of at least 26 weeks of gestation that showed no sign of life after complete birth.

Year of death (DeathYear)

Numeric: (@13 4)

4.	DeathYear
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Note to user

This variable refers to the year in which the death occurred.

Month of death (DeathMonth)

Numeric: (@17 2)

5.	DeathMonth 1 = January 2 = February 3 = March 4 = April 5 = May 6 = June 7 = July 8 = August 9 = September 10 = October 11 = November 12 = December
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Note to user

This variable provides information on the month in which the death occurred.

Day of death (DeathDay)

Numeric: (@19 2)

6.	DeathDay
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Note to users

This variable provides information on the day in which the death occurred.
Valid range: 1-31

Year of birth (BirthYear)

Numeric: (@21 4)

8.	Birth Year
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Note to user

This variable refers to the year in which the deceased was born.
Unspecified: 9999

Month of birth (BirthMonth)

Numeric: (@25 2)

9.	BirthMonth 01 = January 02 = February 03 = March 04 = April 05 = May 06 = June 07 = July 08 = August 09 = September 10 = October 11 = November 12 = December 99 = Unspecified
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Note to user

This variable provides information on the month in which the deceased was born.

Day of birth (BirthDay)

Numeric: (@27 2)

10.	BirthDay
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Note to users

This variable provides information on the day in which the deceased was born.
Valid range: 1-31
Unspecified: 99

Age in completed years (AgeYear)

Numeric: (@29 3)

11.	AgeYear
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Note to user

This variable refers to the age of the deceased in completed years at the time of death.
Valid range: 0-120
Unspecified: 999

Year of death registration (RegistrationYear)

Numeric: (@32 4)

17.	RegistrationYear
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Note to user

This variable refers to the year in which a death was registered.

Month of death registration (RegistrationMonth)

Numeric: (@36 2)

18.	RegistrationMonth 1 = January 2 = February 3 = March 4 = April 5 = May 6 = June 7 = July 8 = August 9 = September 10 = October 11 = November 12 = December
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Note to user

This variable refers to the month in which the death was registered.

Day of death registration (RegistrationDay)

Numeric: (@38 2)

19.	RegistrationDay
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Note to users

This variable provides information on the day in which the deceased was born.
Valid range: 1-31

Sex of deceased (Sex)

Numeric: (@40 1)

20.	Sex 1 = Male 2 = Female 8 = Unknown 9 = Unspecified
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Note to users

This variable provides information on the sex of the deceased.

Marital status of deceased (MStatus)

Numeric: (@41 1)

21.	MStatus 1 = Single 2 = Civil marriage 3 = Living as married 4 = Widowed 5 = Religious law marriage 6 = Divorced 7 = Customary marriage 8 = Unknown 9 = Unspecified
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Note to users

This variable provides information on the marital status of the deceased.

Relationship of informant to deceased (Relationship)

Numeric: (@42 1)

22.	Relationship 1 = Parent 2 = Spouse 3 = Child 4 = Other kin 5 = Other 8 = Unknown 9 = Unspecified
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Note to users

This variable provides information on the relationship of the informant to the deceased.

Next of kin a smoker (NextKinSmoker)

Numeric: (@43 1)

23.	NextKinSmoker 1 = Smoking 2 = Not smoking 3 = Refused to answer 8 = Unknown 9 = Unspecified
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Note to users

This variable provides information on the smoking status of next of kin of deceased.

Education of deceased (EduCode)

Numeric: (@44 2)

24.	EduCode
	00 = None
	01 = Sub A Gr1
	02 = Sub B Gr2
	03 = Std 1 Gr3
	04 = Std 2 Gr4
	05 = Std 3 Gr5
	06 = Std 4 Gr6
	07 = Std 5 Gr7
	08 = Std 6 Gr8
	09 = Std 7 Gr9
	10 = Std 8 Gr10 Form3 NTC1
	11 = Std 9 Gr11 Form4 NTC2
	12 = Std 10 Gr12 Form5 NTC3
	13 = University / Tech.
	97 = Unknown
	98 = Not applicable
	99 = Unspecified

Note to user

This variable provides information on the highest level of education that the deceased completed or achieved.

Occupation of deceased (SubOccupation)

Numeric: (@46 2)

25.	SubOccupation
	1 = Armed forces
	8 = Occupations unspecified or not elsewhere classified
	9 = Not economically active
	11 = Legislators and senior officers
	12 = Corporate managers
	13 = General managers
	21 = Physical maths and eng science professionals
	22 = Life science & health professionals
	23 = Teaching professionals
	24 = Other professionals
	31 = Natural & eng science professionals
	32 = Life science & health science & associate professionals
	33 = Teaching associate professionals
	34 = Other associate professionals
	41 = Office clerks
	42 = Customer services clerk
	51 = Personal & protective services
	52 = Models salespersons and demos
	61 = Market oriented skilled agric & fishery workers
	62 = Subsistence agric & fishery workers
	71 = Extraction & building trades workers
	72 = Metal machinery & related trades workers
	73 = Precision handicraft printing & related trades workers
	74 = Other craft & related trades workers
	81 = Stationary plant & related operators
	82 = Machinery operators & assemblers
	83 = Drivers & mobile plant operators
	91 = Elementary sales & service occupations
	92 = Agric fishery & related labourers

	93 = labourers in mining construction manufacturing & transport 99 = Not applicable
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Note to user

This variable provides information on the sub groups of the usual occupation of the deceased. Usual occupation refers to the type of work done by the deceased most of his or her working life.

Groups of occupation of deceased (*OccupationGrp*)

Numeric: (@48 2)

26.	OccupationGrp 0 = Armed forces, occupations unspecified and not elsewhere classified, and not economically active persons. 1 = Legislators, senior officials and managers 2 = Professionals 3 = Technicians and Associate professionals 4 = Clerks 5 = Service workers, shop and market sales workers 6 = Skilled agricultural and fishery workers 7 = Craft and related trade workers. 8 = Plant and machine operators and assemblers 9 = Elementary occupations 99 = Not applicable
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Note to user

This variable provides information on the usual occupation of the deceased. Usual occupation refers to the type of work done by the deceased most of his or her working life.

Industry of deceased (*Industry*)

Numeric: (@50 2)

27.	Industry 0 = Private households, extraterritorial organisations, representatives of foreign governments and other activities not adequately defined 1 = Agriculture, hunting, forestry and fishing 2 = Mining and quarrying 3 = Manufacturing 4 = Electricity, gas and water supply 5 = Construction 6 = Wholesale and retail trade; repair of motor vehicles, motor cycles and personal and household goods; hotels and restaurants 7 = Transport, storage and communication 8 = Financial intermediation, insurance, real estate and business services 9 = Community, social and personal services 97 = Unknown 98 = Not applicable 99 = Unspecified and other activities not adequately defined
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Note to user

This variable provides information on the type of business or industry where the deceased worked most of his or her working life.

Smoking status of deceased (Smoker)

Numeric: (@52 1)

28.	Smoker 1 = Yes 2 = No 3 = Do not know 4 = Not applicable 8 = Unknown 9 = Unspecified
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Note to user

This variable provides information on the smoking status of the deceased five years before death. A smoker is defined as someone who smoked any form of tobacco on most days (an average of more than six months a year, or four or more days a week), five years ago. If smoking started less than five years before death, the answer is No. If smoking started more than five years before death, but for less than six months, then the answer is No.

Pregnancy status of deceased (Pregnancy)

Numeric: (@53 1)

29.	Pregnancy 1 = Yes 2 = No 3 = Not applicable 8 = Unknown 9 = Unspecified
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Note to user

This variable provides information on whether or not females of reproductive age (12-50) were pregnant 42 days prior to death.

Citizenship of deceased (Citizenship)

Numeric: (@54 2)

31.	Citizenship 1 = South Africa 2 = Zimbabwe 3 = Swaziland 4 = Botswana 5 = Lesotho 6 = Mozambique 7 = Namibia 8 = Mauritius 9 = Angola 10 = Zambia 11 = Malawi 12 = Tanzania 13 = Madagascar 14 = DRC 15 = Other 97 = Unknown 99 = Unspecified
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Note to user

This variable provides information on the place citizenship of the deceased.

B. PLACE NAMES

Province of birth of the deceased (BirthProv)

Numeric: (@56 2)

35.	BirthProv 01 = Western Cape 02 = Eastern Cape 03 = Northern Cape 04 = Free State 05 = KwaZulu-Natal 06 = North West 07 = Gauteng 08 = Mpumalanga 09 = Limpopo 97 = Unknown 98 = Outside South Africa 99 = Unspecified
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Note to user

This variable provides information on the province of birth of the deceased based on the 2011 municipal boundaries. It was derived from the place code of birth.

Province of death occurrence (DeathProv)

Numeric: (@58 2)

39.	DeathProv 01 = Western Cape 02 = Eastern Cape 03 = Northern Cape 04 = Free State 05 = KwaZulu-Natal 06 = North West 07 = Gauteng 08 = Mpumalanga 09 = Limpopo 97 = Unknown 98 = Outside South Africa 99 = Unspecified
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Note to user

This variable provides information on the province of birth of the deceased based on the 2011 municipal boundaries. It was derived from the place code of birth.

Province of usual residence of the deceased (ResProv)

Numeric: (@60 2)

43.	ResProv
	01 = Western Cape
	02 = Eastern Cape
	03 = Northern Cape
	04 = Free State
	05 = KwaZulu-Natal
	06 = North West
	07 = Gauteng
	08 = Mpumalanga
	09 = Limpopo
	97 = Unknown
	98 = Outside South Africa
	99 = Unspecified

Note to user

This variable provides information on the province of usual residence of the deceased based on the 2011 municipal boundaries. It was derived from the place code of usual residence.

Country of usual residence of deceased (ResCountry)

Numeric: (@62 2)

44.	ResCountry
	1 = South Africa
	2 = Zimbabwe
	3 = Swaziland
	4 = Botswana
	5 = Lesotho
	6 = Mozambique
	7 = Namibia
	8 = Mauritius
	9 = Angola
	10 = Zambia
	11 = Malawi
	12 = Tanzania
	13 = Madagascar
	14 = DRC
	15 = Other
	97 = Unknown
	99 = Unspecified

Note to user

This variable provides information on the country of usual residence of the deceased.

C. CAUSES OF DEATH

Ascertainment of the cause of death (Ascertainment)

Numeric: (@64 1)

45.	Ascertainment 1 = Autopsy 2 = Opinion of attending medical practitioner 3 = Opinion of attending medical practitioner on duty 4 = Opinion of registered professional nurse 5 = Interview of family member 6 = Other 8 = Unknown 9 = Unspecified
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Note to user

This variable provides information on the method used to ascertain the cause of death

Place of death (DeathInst)

Numeric: (@65 1)

46.	DeathInst 1 = Hospital 2 = Emergency room / Out patient 3 = Dead on arrival 4 = Nursing home 5 = Home 6 = Other 8 = Unknown 9 = Unspecified
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Note to user

This variable provides information on the place or institution at which the person died.

Immediate cause of death (CauseA)

Character: (@66 3)

47.	CauseA (see attached ICD-10 code list)
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Note to user

This variable provides information on the immediate cause of death.

Injury codes for the immediate cause of death (InjuryA)

Character: (@69 3)

48.	InjuryA (see attached Injury code list)
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Note to user

This variable provides information on the injury codes for non-natural causes of death.

111 = Natural cause (no injury code)

Second condition leading to death (CauseB)

Character: (@72 3)

49.	CauseB (see attached ICD-10 code list)
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Note to user

This variable provides information on the second condition leading to death.
888 = Second condition leading to death not mentioned.

Injury codes for the second condition leading to death (InjuryB)

Character: (@75 3)

50.	InjuryB (see attached Injury code list)
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Note to user

This variable provides information on the injury codes for non-natural causes of death.
111 = Natural cause (no injury code)
888 = Second condition leading to death not mentioned.

Third condition leading to death (CauseC)

Character: (@78 3)

51.	CauseC (see attached ICD-10 code list)
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Note to user

This variable provides information on the third condition leading to death.
888 = Third condition leading to death not mentioned.

Injury codes for the third condition leading to death (InjuryC)

Character: (@81 3)

52.	InjuryC (see attached Injury code list)
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Note to user

This variable provides information on the injury codes for non-natural causes of death.
111 = Natural cause (no injury code)
888 = Third condition leading to death not mentioned.

Fourth condition leading to death (CauseD)

Character: (@84 3)

53.	CauseD (see attached ICD-10 code list)
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Note to user

This variable provides information on the fourth condition leading to death.
888 = Fourth condition leading to death not mentioned.

Injury codes for the fourth condition leading to death (InjuryD)

Character: (@87 3)

54.	InjuryD (see attached Injury code list)
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Note to user

This variable provides information on the injury codes for non-natural causes of death.

111 = Natural cause (no injury code)

888 = Fourth condition leading to death not mentioned.

Other conditions leading to death (OtherCause)

Character: (@90 3)

55.	OtherCause (see attached ICD-10 code list)
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Note to user

This variable provides information on other conditions leading to death.

888 = Other conditions leading to death not mentioned.

Injury codes for other conditions leading to death (OtherInjury)

Character: (@93 3)

56.	OtherInjury (see attached Injury code list)
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Note to user

This variable provides information on the injury codes for non-natural causes of death.

111 = Natural cause (no injury code)

888 = Other conditions leading to death not mentioned.

First cause provided on part 2 of the death notification form (Part2_CauseA) Character: (@96 3)

57.	Part2_CauseA (see attached ICD-10 code list)
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Note to user

This variable provides information on conditions leading to death provided on the first line of Part 2 of the death notification form.

888 = First cause of death on part 2 not mentioned.

Injury codes for first cause on part 2 (Part2_InjuryA)

Character: (@99 3)

58.	Part2_InjuryA (see attached Injury code list)
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Note to user

This variable provides information on the injury codes for non-natural causes of death provided on the first line on part 2 of the death notification form.

111 = Natural cause (no injury code)

888 = First cause of death on part 2 not mentioned.

Second cause provided on part 2 of the death notification form (Part2_CauseB)Character: (@102 3)

59.	Part2_CauseB (see attached ICD-10 code list)
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Note to user

This variable provides information on conditions leading to death provided on the second line of Part 2 of the death notification form.

888 = Second cause of death on part 2 not mentioned.

Injury codes for second cause on part 2 (Part2_InjuryB)

Character: (@105 3)

60.	Part2_InjuryB (see attached Injury code list)
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Note to user

This variable provides information on the injury codes for non-natural causes of death provided on the second line on part 2 of the death notification form.

111 = Natural cause (no injury code)

888 = Second cause of death on part 2 not mentioned.

Underlying cause of death (Underlyingcause)

Character: (@108 3)

61.	Underlyingcause (see attached ICD-10 code list)
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Note to user

This variable provides information on the underlying cause of death. An underlying cause of death is defined as the disease or injury which initiated the train of morbid events leading directly to death, or the circumstances of the accident or violence which produced the fatal injury.

888 = Stillbirth

Injury codes for the underlying cause of death (UnderlyingInjury)

Character: (@111 3)

62.	UnderlyingInjury (see attached Injury code list)
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Note to user

This variable provides information on the injury codes for non-natural causes of death.

888 = Stillbirth

Broad groups of the underlying causes of death (Underlying_Broad_Grp)

Character: (@114 7)

63.	Underlying_Broad_Grp (See attached list of ICD10 categories list)
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Note to user

This variable groups the underlying causes of death into broad groups of death. It is derived from underlying cause of death.

8888888 = Stillbirth

**Main groups of the underlying causes of death
(Underlying_Main_Grp)**

Character: (@121 7)

64.	Underlying_Main_Grp
	A00-B99 = Certain infectious and parasitic diseases (A00-B99)
	C00-D48 = Neoplasms (C00-D48)
	D50-D89 = Diseases of the blood and immune mechanism (D50-D89)
	E00-E90 = Endocrine, nutritional and metabolic diseases (E00-E90)
	F00-F99 = Mental and behavioural disorders (F00-F99)
	G00-G99 = Diseases of the nervous system (G00-G99)
	H00-H59 = Diseases of the eye and adnexa (H00-H59)
	H60-H95 = Diseases of the ear and mastoid process (H60-H95)
	I00-I99 = Diseases of the circulatory system (I00-I99)
	J00-J99 = Diseases of the respiratory system (J00-J99)
	K00-K93 = Diseases of the digestive system (K00-K93)
	L00-L99 = Diseases of the skin and subcutaneous tissue (L00-L99)
	M00-M99 = Diseases of the musculoskeletal system etc. (M00-M99)
	N00-N99 = Diseases of the genitourinary system (N00-N99)
	O00-O99 = Pregnancy, childbirth and puerperium (O00-O99)
	P00-P96 = Perinatal conditions (P00-P96)
	Q00-Q99 = Congenital malformations (Q00-Q99)
	R00-R99 = Symptoms and signs not elsewhere classified (R00-R99)
	U51-U52 = Drug-resistant tuberculosis
	V01-Y98 = External causes of morbidity and mortality (V01-Y98)

Note to user

This variable groups the underlying causes of death into main groups. It is derived from underlying cause of death.

8888888 = Stillbirth

Natural/non-natural underlying causes of death (NaturalUnnatural)

Numeric: (@128 1)

65.	NaturalUnnatural
	1 = Natural underlying cause
	2 = Non-natural underlying cause

Note to user

This variable groups the underlying causes of death into natural and non-natural causes. It is derived from underlying cause of death.

8 = Stillbirth