AUSTRALIAN BUREAU OF STATISTICS
SUBMISSION TO THE SENATE COMMUNITY AFFAIRS REFERENCES COMMITTEE
INQUIRY INTO SUICIDE IN AUSTRALIA

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OVERVIEW

1 The Australian Bureau of Statistics (ABS) is Australia's official national statistical agency. It provides statistics on a wide range of economic, social and environmental matters. The role of the ABS is to assist and encourage informed decision-making, research and discussion within governments and the community by leading a high quality, objective and responsive national statistical service.

2 The purpose of this submission is to

- provide contextual information regarding the mortality statistics system in Australia, including the process used by the ABS to produce statistics on suicide mortality;
- outline quality issues related to ABS suicide data; and
- discuss initiatives both current, and planned, to improve ABS suicide data.

3 This submission is provided in respect of the Inquiry Terms of Reference, (b):

The accuracy of suicide reporting in Australia, factors that may impede accurate identification and recording of possible suicides, (and the consequences of any under-reporting on understanding risk factors and providing services to those at risk)

4 Australian suicide data is reported in ABS Causes of Death (cat. No. 3303.0). Suicide data from this publication can be found in Attachment 1.

5 The factors that may impede accurate identification and recording of ABS suicide data are:

- the quality and completeness of the source data;
- timeliness of receipt of source data by the ABS;
- ABS processes for coding a death as suicide; and
- the framework and rules used for classifying a death as a suicide.

6 ABS activities which have been undertaken in order to improve the quality of suicide data include:

- publication of additional explanatory material to accompany cause of death data to inform users of the data quality issues and how to interpret the data;
- implementation of more robust statistical processing systems and suicide coding practices;
- active engagement with providers and users of suicide data in order to ensure that issues are understood and addressed by the ABS ; and
- all coroner certified deaths registered after 1 January 2007 will be subject to a revision process. The revision process will enable the use of additional information relating to coroner certified deaths as it becomes available over time, resulting in increased ability to identify suicide deaths. This will increase the number of deaths that are identified as "suicides" for a given reference period compared to statistics previously released for that period.

7 It is highly desirable that there is a consistent and accepted view of suicide mortality in Australia to assist in the development of policy regarding suicide prevention. The ABS will continue to review internal processes in order to ensure that suicide data is of a high quality and the information produced by the ABS fulfils the needs of the user community. However, these initiatives will not alone overcome the quality issues identified by the ABS and users of the data. Continued work needs to be undertaken by all

stakeholders in order to improve the quality and timeliness of source data. Areas in which further work will need to be undertaken include:

- addressing the legislative, administrative and procedural barriers to coroners determining a death as having suicidal intent;
- ensuring that information from coronial offices is transferred to the National Coroners Information System (NCIS) as a priority; and
- influencing the development of the International Classification of Diseases (ICD) in order to make classification of a death as a suicide more accurate.

AUSTRALIAN MORTALITY STATISTICS SYSTEM

8 Statistics on causes of death, and hence suicides, are a by-product of the administrative process by which Registrars of Births, Deaths and Marriages (RBDMs) register all life events. The quality of suicide statistics depends on each of the many steps involved in the collection and processing of the data, and these steps may be subject to change over time.

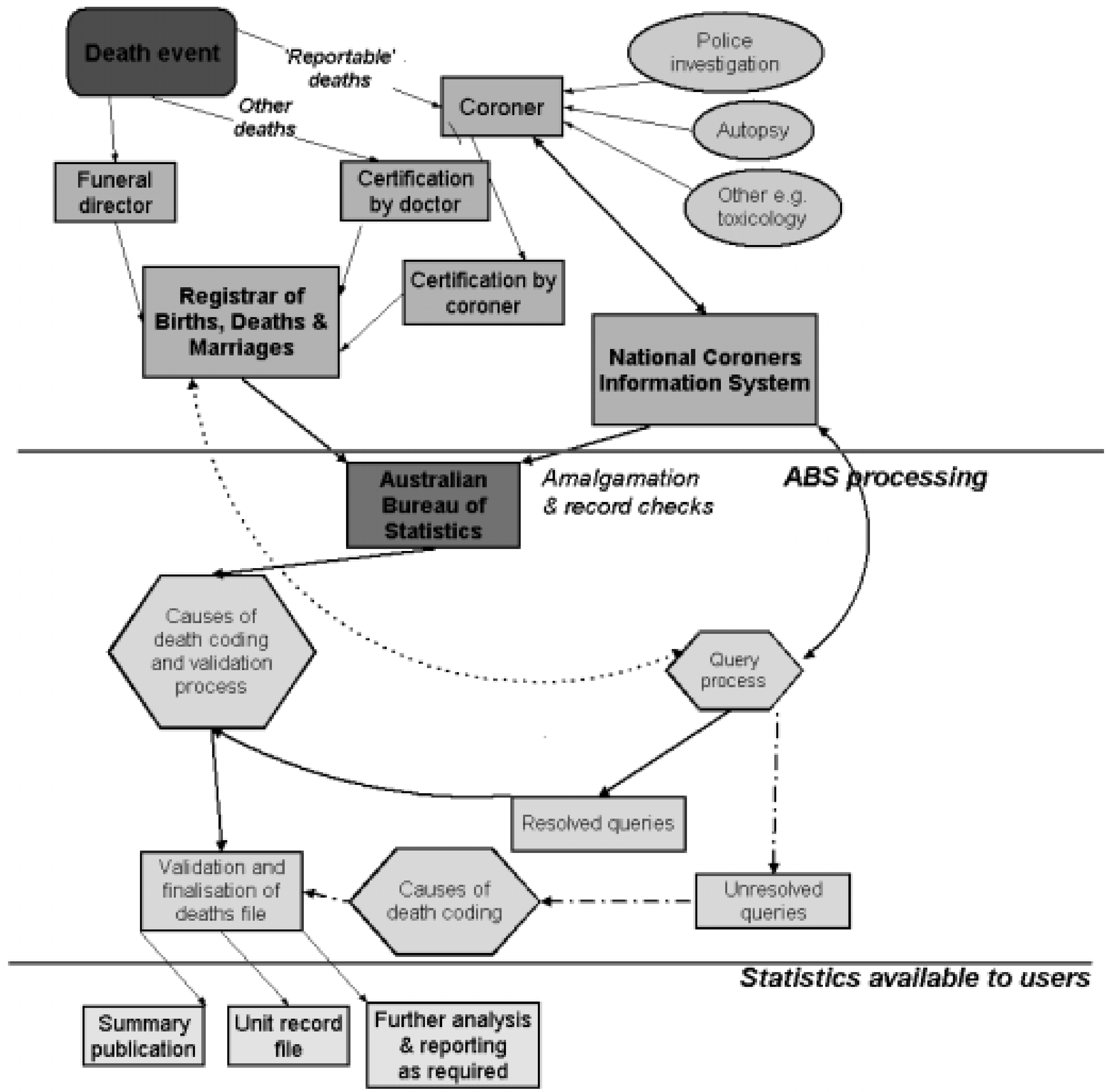
9 The collection, processing, compilation and dissemination of death statistics in Australia are the joint responsibility of various stakeholders. Registration of deaths in Australia is a state/territory responsibility rather than a Commonwealth responsibility. Each state and territory has its own legislation covering the death registration process, as well as the role and responsibilities of the RBDMs. Additionally, each jurisdiction has its own coronial legislation covering the role and responsibilities of Coroners and the manner in which deaths which are referred to the Coroner are investigated and findings made.

10 The accuracy and timeliness of ABS Cause of Death statistics depends on the goodwill and resources available in other organisations. The ABS receives substantial assistance in this regard from all RBDMs and the NCIS. The ABS continues to work with these organisations to improve relevant processes and the quality of the original source data.

11 The diagram below summarises the statistical process in Australia used to produce cause of death statistics.

12 Detailed information on the concepts, sources and methods used to compile cause of death data and general data quality issues can be found in the ABS publication ABS Causes of Death Statistics: Concepts, Sources and Methods (cat. no. 3317.0.55.002).

Figure 1



FACTORS THAT MAY IMPEDE PRODUCTION OF ACCURATE ABS SUICIDE DATA

13 The ABS makes every effort to achieve a high level of quality within the constraints of the resources available. Data quality depends on the procedures being followed at each stage of the collection and processing of the data.

14 An important quality issue is the identification of deaths by suicide of Indigenous Australians. Whilst the number of suicide deaths is potentially under-reported, when this issue is combined with the under-reporting of Indigenous status in deaths registrations, the problem is particularly acute for data quality in this area. This has a subsequent impact on the quality of information for development and monitoring of policy in this area.

Data Sources

15 The registration of deaths is the responsibility of the individual state and territory RBDMs. As part of the registration process, information about the causes of death is supplied by the medical practitioner certifying the death or by a coroner. Other information about the deceased is supplied by a relative or other person acquainted with the deceased, or by an official of the institution where the death occurred. This information is provided to the ABS by individual Registrars on a monthly basis for coding and compilation into aggregate statistics. In addition, the ABS supplements this data with information from the NCIS.

16 Coronial processes to determine the intent of a death (whether intentional self harm, accidental, homicide, undetermined intent) are especially important for statistics on suicide deaths because information on intent is necessary to complete the coding under ICD-10 coding rules. However, coroners' practices to determine the intent of a death may vary across the states and territories. In general, coroners may be reluctant to determine suicidal intent (particularly in children and young people). In some cases, no statement of intent will be made by a coroner. The reasons may include legislative or regulatory barriers, sympathy with the feelings of the family, or sensitivity to the cultural practices and religious beliefs of the family. For some mechanisms of death where it may be very difficult to determine suicidal intent (e.g. single vehicle accidents, drowning), the burden of proof required for the coroner to establish that the death was suicide may make a finding of suicide less likely.

17 There is currently a lack of standardisation in the way that coronial deaths are reported across Australia because different reporting formats, structures and forms are used in different coronial offices, states and territories. For example, coronial statements about the intent of a death are worded in different ways, there may be no statement regarding intent and if there is a statement of intent, it can be located anywhere in the coronial finding.

18 In order to classify a death as suicide the ICD-10 requires that specific documentation from a medical or legal authority be available regarding both the self-inflicted nature and suicidal intent of the incident. If this information is not available then the death must be classified as accidental. The case generally needs to be closed by the coroner to code a suicide as such, unless there is conclusive information in the police report or the autopsy report to show that the death was self inflicted and intentional. For example, if the NCIS contains evidence of a suicide note, the death would be coded as a suicide. In general, the ICD-10 coding index defaults external causes to 'accidental intent' unless there is information to the contrary. An exception is for stabbing deaths for which the default is homicide.

Timeliness of receipt of data by the ABS

19 Causes of death statistics are released by the ABS on a calendar year basis and the current aim is to have the initial release of the data within 15 months of the end of the relevant calendar year. The timing of the compilation (including coding) and release of data is necessarily a compromise between two important aspects of quality - timeliness and accuracy.

20 Causes of death coding does not rely on all deaths registered in the reference year which were referred to the coroner, being investigated and the cases closed. The coronial process can take several years if an inquest is being held or complex investigations are being undertaken. However, any general increase in the length of coronial investigations, workload of coroners or delays in uploading details on finalised cases to the NCIS has the potential to affect data quality, by increasing the amount of time taken to deliver the findings. The fact that a case is still open limits the amount of information available to code causes of death, and may result in a less specific code being allocated consistent with ICD-10 coding rules.

21 Of those deaths which were certified by a Coroner in 2007, 70% had a status of "closed" on the NCIS and had full information available to the ABS in order to undertake cause of death coding at the time that ABS processing ceased (30 January 2009). The proportion of cases which had a status of "open" on the NCIS varied significantly between jurisdictions. At an Australian level 30% of cases had a status of open at the time the 2007 publication was compiled, with a low of 11% in the ACT to a high of 72% in Queensland (Table 1).

Table 1 Available Case Status for ABS Use on National Coronial Information System

	2006 cases as at 30 January 2008					2007 cases as at 30 January 2009				
	Closed		Open		Total	Closed		Open		Total
	no.	%	no.	%		no.	%	no.	%	
NSW	3 541	68.6	1 619	31.4	5 160	3 595	71.7	1 420	28.3	5 015
Vic.	4 061	90.0	452	10.0	4 513	3 388	81.2	783	18.8	4 171
Qld	1 014	34.8	1 901	65.2	2 915	825	27.7	2 150	72.3	2 975
SA	1 661	88.6	215	11.5	1 876	1 593	85.3	274	14.7	1 867
WA	1 200	78.8	323	21.2	1 523	1 416	81.7	318	18.3	1 734
Tas.	407	88.5	53	11.5	460	384	85.9	63	14.1	447
NT	253	85.2	44	14.8	297	228	72.8	85	27.2	313
ACT	269	87.1	40	12.9	309	294	89.4	35	10.6	329
Australia	12 406	72.7	4 647	27.3	17 053	11 723	69.6	5 128	30.4	16 851

Source *Causes of Death, Australia 2007 (cat. no 3303.0)*

22 Nearly half of all open cases (2,194 or 43%) related to external causes. Of the 7,893 deaths attributed to external causes (of which suicides are one type) in 2007, 28% were open cases on the NCIS as at 30 January 2009.

23 It should be noted that the number of "open" cases on NCIS referred to throughout this submission refers to the status of the case on the NCIS database and its consequent availability for use by the ABS. The ABS understands that significantly more cases have been finalised, however there are delays in loading the information onto the NCIS database from each jurisdiction's coronial office.

24 The ABS commenced using the NCIS to code coroner certified deaths for the 2003 reference year. Since 2006, the ABS has relied totally on information available on the NCIS to code deaths certified by a Coroner. Prior to 2006, the ABS had sought additional information on coroner certified deaths where information was not available on the NCIS by undertaking personal visits to Coroner offices to extract information from paper records. From 2006 onwards, where a case remains open on the NCIS at the time the ABS ceases processing, only information available on the NCIS is used by the ABS to code the cause of death.

25 The ABS is currently processing 2008 cause of death data and revising 2007 data. Table 2 below shows that as at 19 November 2009 only 60% of 2008 coronial cases were closed on the NCIS. As at the same date, 77% of 2007 cases are closed, which is an increase from 70% as at January 2009

Table 2 Available Case Status for ABS Use on National Coronial Information System as at 19 November 2009

	2007 cases as at 19 November 2009			2008 cases as at 30 January 2009		
	Open		Total	Open		Total
	no.	%		no.	%	
NSW	1 652	29.8	5 536	2 721	47.6	5 718
Vic.	521	10.5	4 946	1 668	30.4	5 492
Qld	1 984	40.1	4 314	2 451	74.1	3 308
SA	93	4.9	1 897	274	14.7	1 867
WA	166	10.9	1 523	518	28.8	1 799
Tas.	27	5.6	483	58	11.9	486
NT	22	7.0	314	107	30.2	354
ACT	18	5.4	331	37	10.9	338
Australia	4 483	22.9	19 601	7 876	40.5	19 448

Source *National Coroners Information System*

ABS processes and ICD-10 Coding rules for Intentional Self Harm (Suicide)

26 International coding rules are used to assign codes from the International Classification of Diseases and Health Related Problems, 10th Revision (ICD-10). The coronial determination of intent is especially important for statistics on suicide deaths because information on intent is necessary to complete the coding under ICD-10 coding rules.

27 The coding rules for ICD-10 give no additional notes or definitions at the beginning of the Intentional self-harm categories (X60-X84, Y87.0) that provide the coder with an indication of when an intentional self-harm code should be assigned. The only guidance is an inclusion note for suicide. Additionally, no reference is made in Volume 2 of ICD-10 of the assignment of intentional self-harm codes. The coding index defaults external causes to "accidental" unless qualified with further description.

28 In order to classify a death as suicide (intentional self-harm) the ICD-10 interpretation used by the ABS requires that specific documentation from a medical or legal authority be available regarding both the self-inflicted nature and suicidal intent of the incident. If this information is not available then the death must be classified as accidental (with the exception of stabbings which default to homicide). The interpretation of what constituted a "medical or legal authority" has been inconsistently applied by the ABS over a number of years.

29 For processing of deaths registered from 1 January 2007, revised instructions for ABS coders were developed in order to ensure consistency in the coding of suicide deaths and compliance with the altered coding instructions for coding to the undetermined intent categories. Detailed information on the coding of suicide deaths can be found in Attachment 2.

ABS ACTIVITIES IN RELATION TO QUALITY IMPROVEMENTS OF SUICIDE DATA

Implemented ABS activities

30 Users of suicide data have raised concerns regarding the number of deaths identified as suicides in ABS causes of death data for a number of years. As a response to these concerns, the ABS has undertaken a number of investigations and made a number of changes to coding, quality assurance and dissemination practices. A summary of the changes introduced are listed below:

- since the 2005 reference year, the ABS has published a caution in relation to suicide data " *Care should be taken in using and interpreting suicide data due to issues affecting data quality. It is important to note that the number of suicide deaths may be affected by the number of open coronial cases with insufficient information available for coding at the time of ABS processing"* (ABS Cause of Death, Australia 2007, cat. no. 3303.0);
- a new statistical processing system for cause of death data was implemented for the processing of 2006 data. The new processing system contains more rigorous processes for quality assurance of data at all stages of the statistical process;
- publication of Information Paper: External Cause of Death Data Quality (cat. no. 3317.0.55.001) in April 2007 in order to assist users in interpreting ABS external causes data;
- publication of Information Paper: ABS Causes of Death Statistics: Concepts, Sources and Methods (cat. no. 3317.0.55.002) in March 2008 which provides information to users on how cause of death data is sourced and compiled and detailed information on quality issues with regard to cause of death data to aid users in interpreting the data;
- publication of "Technical Notes" relating to coroner certified deaths and ABS Suicide Coding practices which specifically provide additional information to users on issues relating to suicide data;
- improved quality assurance processes particularly aimed at assessing and improving the quality of suicide coding;
- revised coding instructions for ABS coders in coding suicides to ensure greater consistency in coding outcomes between individual coders. The revised coding rules deviate somewhat from a strict interpretation of the ICD10 coding rules with regard to suicide. The ABS sought, and gained, approval from the Mortality Reference Group (a sub committee of the World Health Organisation - Family of International Classifications) to implement this change;
- implementation from 2007 of the revised ICD-10 coding rules for "undetermined intent". This has had the effect of removing a number of potential suicides from "accidental" codes thereby making potential suicides easier for users to identify; and
- In 2007, the ABS formed the ABS Mortality Statistics Advisory Group (MSAG). The role of MSAG is:
    - to provide direct advice to the ABS on its program of mortality statistics, particularly cause of death statistics;

- assist the ABS to determine priorities for the development of and delivery of cause of death statistics;
- to raise awareness of issues affecting the quality of cause of death statistics, and provide a forum for discussion of strategies to improve it where possible;
- to ensure effective coordination of cause of death statistical activities, with a view to maximum visibility, accessibility and use of statistical information; and
- promote use of sound statistical and data management practices, including use of common statistical concepts, standards and frameworks.

The membership of MSAG includes senior people from key user agencies and key data providers, and other people with expertise in the field of cause of death statistics. MSAG has so far met twice, and at both meetings the issue of ABS suicide data and proposed changes to improve quality were discussed.

Future ABS activities

31 The single biggest change which will impact on the quality of suicide data is the implementation of a revisions process into the ABS Cause of Death collection. All coroner certified deaths registered after 1 January 2007 will be subject to a revision process. This is a change from previous years where all ABS processing of causes of death data for a particular reference period was finalised approximately 13 months after the end of the reference period. Where insufficient information was available to code a cause of death (e.g. a coroner certified death was yet to be finalised by the Coroner), less specific ICD codes were assigned as required by the ICD coding rules. The revision process will enable the use of additional information relating to coroner certified deaths as it becomes available over time resulting in increased specificity of the assigned ICD-10 codes. This will specifically assist in more accurately identifying suicide deaths correctly, as coronial processes where there is potential for the death to be a suicide can take a longer time period to be finalised. It is expected that the number of deaths identified as suicide will increase with each publication of revised data.

32 Paragraph 30 describes actions taken by the ABS to improve the quality of suicide data. With the implementation of revised cause of death data, the potential for further improvements in suicide data, in the sphere of ABS activity, are limited.

33 In order to further improve the quality of suicide data, the ABS will continue to work with other stakeholders in the Australian mortality statistics system. The ABS is actively involved in a number of inter-jurisdictional and multi-sectoral committees which work to improve the quality of suicide data, and mortality statistics in general. Areas in which the ABS will continue to work to advise the activities of others are:

(i) Improvements in the quality and timeliness of source data. These include (however are not limited to):

- Standardised legislation and processes across all jurisdictions with regard to coronial practices for making a finding of "intent". This could involve :
  - legislative changes which mandate that coroners provide "intent" findings;
  - education regarding the importance of accurate identification of suicide; and
  - implementation of a "Coronial Medical Certificate of Cause of Death". This would enable standardised recording of the medical causes of death (which would improve all causes of death data) as well as provide a standard method of recording intent.

- Implementation of a national standard for collection of data to be used by police when reporting/investigating deaths. This would need to be accompanied by concurrent education for police in how to investigate and report suspected suicides. The police report is a vital piece of information used by the Coroner in the investigation of a reported death. Improvements in the quality of the police report will lead to Coroners having access to better quality information on which to base their findings.

- To improve the quality of identification of Indigenous suicides, education for police officers and coroners on the importance of the accurate identification of Indigenous people. This would not only improve data for suicide, but also improve the quality of data for all Indigenous deaths.

- Priority given by individual coronial offices across all jurisdictions to the timely loading of coronial information onto the NCIS. This may require additional resources for coronial offices.

(ii) The ICD classification is currently undergoing a major international revision process. As discussed previously, the current ICD-10 coding rules that apply to suicide deaths are not necessarily appropriate in an Australian context. The ABS has been, and will continue to be, active in influencing the development of the new revision of ICD (ICD-11) to enable better and more appropriate reporting of suicide in Australia.

(iii) The ABS is an active member of the National Committee for Standardised Reporting on Suicide (NCSRS) which is convened by Suicide Prevention Australia. This committee provides an effective mechanism for identification of issues, sharing of information and ideas, and development and implementation of action plans across multiple stakeholders which will result in system wide improvements in suicide data.

REVISIONS PROCESS FOR ABS SUICIDE DATA

34 All coroner certified deaths registered after 1 January 2007 will be subject to a revision process. The revision process will enable the use of additional information relating to coroner certified deaths as it becomes available over time, resulting in increased specificity of the assigned ICD-10 codes. This will increase the number of deaths that are identified as "suicides" for a given reference period compared to statistics previously released for the same reference period.

35 The Australian Institute of Health and Welfare (AIHW) report "A review of suicide statistics in Australia" (AIHW, 2009) investigated deaths occurring in 2004, mainly using cases extracted from the NCIS as at early 2008. Comparisons were made using additional ABS data, including underlying causes of death codes and also with aggregate data from the ABS mortality data file. The AIHW postulated that the number of ABS suicide deaths could be underestimated between 3 and 16%. However this estimation is based on a study of the comparison between ABS data and current NCIS data, which contained information not available to the ABS at the time of processing. The implementation of revisions of cause of death data will address this issue as death records will be revised as additional information becomes available on the NCIS.

36 Another area of potential underestimation is due to the issues raised previously with regard to coronial processes relating to intent (paragraph 16). That is, a death could be regarded as a potential suicide, however, if a coroner makes an intent finding other than suicide, these cases have the potential to never be identified as a suicide in official data.

37 Table 3 below describes the number of death records which were classified as "open", that is, the coronial process had not been finalised, which relate to external causes, on the NCIS at the end of initial ABS processing of 2007 data(at 30 January 2009). Of the 2,194 cases, 875 had an initial intent finding of "undetermined". A number of these cases will more than likely have a final intent of "suicide" at the completion of the coronial process. A number of records where the initial intent finding was "accident" may also be finalised with an intent of "suicide".

Table 3 Deaths, Open Cases on NCIS which relate to External causes, by intent - 2007 as at 30 January 2009(a)(b)

	Accident	Suicide	Assault	Undetermined	Other	Total
NSW	195	55	8	252	5	515
VIC	126	85	24	203	12	450
QLD	226	161	19	377	7	790
SA	61	39	13	15	2	130
WA	136	29	15	20	2	202
TAS	23	5	3	3	1	35
NT	42	10	6	4	-	62
ACT	7	-	2	1	-	10
Australia	**816**	**384**	**90**	**875**	**29**	**2 194**

- nil or rounded to zero (including null cells)

(a) Causes of death data for 2007 is subject to revision. See Explanatory Notes 3-4 for further information.

(b) Data cells with small values have been randomly assigned to protect the confidentiality of individuals. As a result, some totals will not equal the sum of their components. It is important to note that cells with a zero value have not been affected by confidentialisation.

Source: Causes of Death: Australia, 2007 (cat. no. 3303.0)

38 Table 4 describes the 1,089 deaths for 2007 which have been coded to "undetermined intent". Of these, 875 cases are "open" cases on the NCIS. It is likely that a number of these 875 deaths that are currently coded with the mechanism of death of: poisoning and exposure to gases and vapours, hanging, drowning, firearms, contact with a sharp object, falling/lying/running before or into a moving object and unknown events, will be reclassified as suicides at the completion of the coronial process.

Table 4 Causes of Death, Undetermined Intent - 2007(a)(b)

	Total
Y1 Event of undetermined intent (Y10-Y34)	**1089**
Y10 Poisoning by and exposure to nonopioid analgesics, antipyretics and antirheumatics, undetermined intent	7
Y11 Poisoning by and exposure to antiepileptic, sedative-hypnotic, antiparkinsonism and psychotropic drugs, not elsewhere classified,	30
Y12 Poisoning by and exposure to narcotics and psychodysleptics [hallucinogens], not elsewhere classified, undetermined intent	45
Y13 Poisoning by and exposure to other drugs acting on the autonomic nervous system, undetermined intent	0
Y14 Poisoning by and exposure to other and unspecified drugs, medicaments and biological substances, undetermined intent	158
Y15 Poisoning by and exposure to alcohol, undetermined intent	6
Y16 Poisoning by and exposure to organic solvents and halogenated hydrocarbons and their vapours, undetermined intent	3
Y17 Poisoning by and exposure to other gases and vapours, undetermined intent	44
Y18 Poisoning by and exposure to pesticides, undetermined intent	3
Y19 Poisoning by and exposure to other and unspecified chemicals and noxious substances, undetermined intent	3
Y20 Hanging, strangulation and suffocation, undetermined intent	165
Y21 Drowning and submersion, undetermined intent	38
Y22 Handgun discharge, undetermined intent	0
Y23 Rifle, shotgun and larger firearm discharge, undetermined intent	3
Y24 Other and unspecified firearm discharge, undetermined intent	27
Y25 Contact with explosive material, undetermined intent	0
Y26 Exposure to smoke, fire and flames, undetermined intent	22
Y27 Contact with steam, hot vapours and hot objects, undetermined intent	4
Y28 Contact with sharp object, undetermined intent	19
Y29 Contact with blunt object, undetermined intent	7
Y30 Falling, jumping or pushed from a high place, undetermined intent	17
Y31 Falling, lying or running before or into moving object, undetermined intent	35
Y32 Crashing of motor vehicle, undetermined intent	110
Y33 Other specified events, undetermined intent	92
Y34 Unspecified event, undetermined intent	256

- nil or rounded to zero (including null cells)

(a) Causes of death data for 2007 is subject to revision. See Explanatory Notes 3-4 for further information.

(b) Data cells with small values have been randomly assigned to protect the confidentiality of individuals. As a result, some totals will not equal the sum of their components. It is important to note that cells with a zero value have not been affected by confidentialisation.

39 In the period prior to publication of the the first round of revised 2007 data (March 2010), the ABS will consider how to best present the revised suicide numbers. It will be important for the ABS to be able to fully explain that any apparent increase in suicide numbers relates to an improvement in the quality of the data, that is, improved identification of deaths as suicide, rather than an actual increase in the number of suicides.

40 The ABS will commence the revision of cause of death data for deaths registered in 2007. It may be possible to undertake revisions for the period 2003 to 2006 at a later date.

CONCLUSION

41 It is highly desirable that there is a consistent and accepted view of the actual suicide mortality in Australia to assist in the development of policy regarding suicide prevention. The ABS has implemented a number of initiatives which will work towards improving the quality of Australian suicide data. However, these initiatives will not alone overcome the quality issues identified by the ABS and users of the data. Continued work needs to be undertaken by all stakeholders in order to improve the quality and timeliness of source data.

42 Tara Pritchard, Director Health and Vital Statistics (phone 07 3222 6312 or email tara.pritchard@abs.gov.au) is the ABS contact for these issues. Ms Pritchard would be happy to discuss these matters further with the Senate Committee.

Australian Bureau of Statistics
November 2009

ATTACHMENT 1

AUSTRALIAN SUICIDE DATA - sourced from ABS Causes of Death cat. no. 3303.0

Detailed data can be found in the attached Excel file

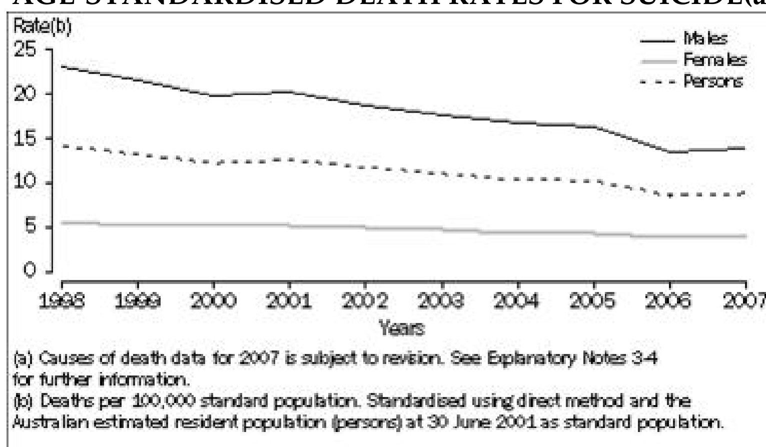
Suicide.xls

Age Standardised Rates

Age standardisation is used to compare death rates over time, as it accounts for any changes in the age-structure of a population over time. The age-standardised suicide rate (for persons) in 2007 was 8.9 per 100,000 standard population. This compares with 14.3 per 100,000 standard population in 1998.

The age-standardised suicide rate in 2007 for males was 13.9 per 100,000 standard population while the corresponding rate for females was 4.0 per 100,000 standard population. Throughout the period 1998 to 2007 the male age-standardised suicide death rate was approximately four times higher than the corresponding female rate, as can be seen in the following graph.

AGE-STANDARDISED DEATH RATES FOR SUICIDE(a)



(a) Causes of death data for 2007 is subject to revision. See Explanatory Notes 3-4 for further information.
(b) Deaths per 100,000 standard population. Standardised using direct method and the Australian estimated resident population (persons) at 30 June 2001 as standard population.

Table 1 Intentional Self-Harm by State/Territory of Usual Residence, age standardised rate(a) (b) (c) (d)

	NSW	Vic	Qld	SA	WA	Tas	NT	ACT	Aust(e)
					Males				
2000-04	16.7	16.7	22.1	20.4	19.5	24.1	38.8	15.9	18.7
2001-05	15.6	16.5	20.9	20.8	18.4	25.0	39.0	15.8	18.0
2002-06	14.3	15.6	19.0	19.5	17.0	24.9	36.0	14.2	16.7
2003-07(f)	13.4	15.0	16.5	20.1	16.9	24.0	38.5	14.2	15.7
					Females				
	NSW	Vic	Qld	SA	WA	Tas	NT	ACT	Aust(e)
2000-04	4.2	5.3	5.3	4.7	5.4	6.0	6.3	3.9	4.9
2001-05	4.0	5.1	5.0	4.9	4.9	6.9	6.7	4.6	4.7
2002-06	3.5	4.8	4.5	4.9	4.7	7.2	6.6	4.5	4.4
2003-07(f)	3.5	4.5	3.9	5.0	4.7	7.5	6.1	5.1	4.2
					Persons				
	NSW	Vic	Qld	SA	WA	Tas	NT	ACT	Aust(e)
2000-04	10.3	10.8	13.5	12.4	12.4	14.7	23.6	9.7	11.6
2001-05	9.7	10.6	12.8	12.8	11.6	15.6	24.0	10.1	11.2
2002-06	8.8	10.1	11.6	12.1	10.8	15.8	22.1	9.2	10.4
2003-07(f)	8.3	9.6	10.1	12.4	10.7	15.4	22.8	9.4	9.8

(a) Age standardised death rates enable the comparison of death rates between populations with different age structures by relating them to a standard population. The ABS standard populations relate to the years ending in 1 (e.g. 2001). The current standard population is all persons in the Australian population at 30 June 2001. SDRs are expressed per 1,000 or 100,000 persons. Age standardised rates in this table have been calculated using the indirect method and are not comparable to rates calculated using the direct method.

(b) Data are presented in five-year groupings due to the volatility of small numbers each year.

(c) Data based on reference year. See data quality statements for a more detailed explanation.

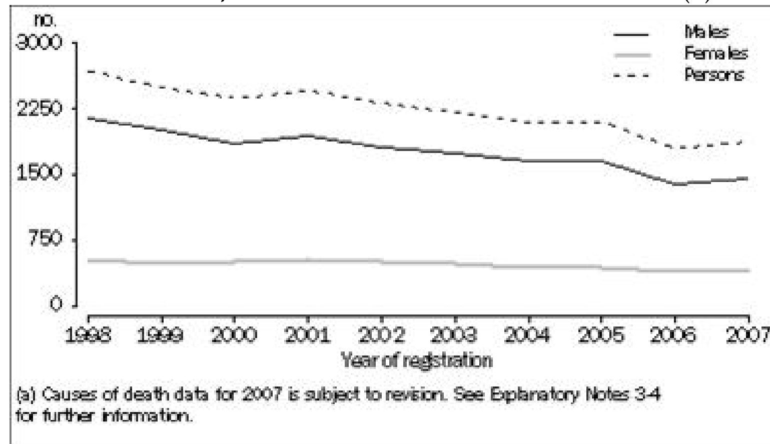
(d) Care needs to be taken in interpreting figures relating to suicide due to limitations in the data. See Causes of Death, 2007, 3303.0 Explanatory Notes 77 & 78 for further information.

(e) Includes data for other territories.

(f) 2007 data is preliminary and will be subject to a revision process. See Causes of Death, 2007, 3303.0 Explanatory Note 4 for further information.

Total Number of Deaths

SUICIDES, NUMBER OF DEATHS **-** 1998-2007(a)

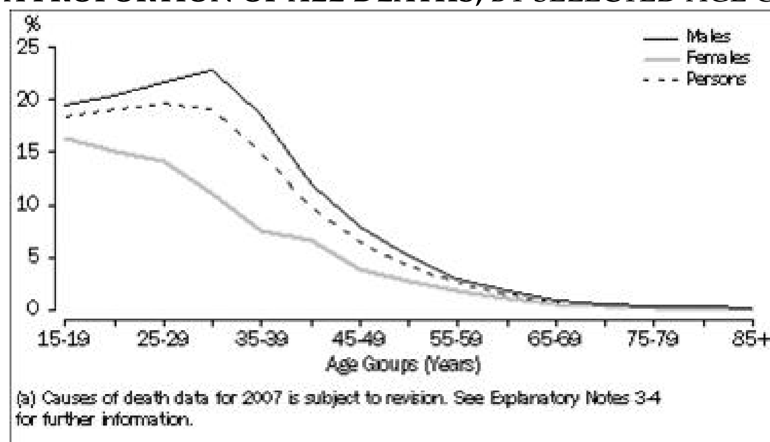


There were 1,881 deaths from suicide registered in 2007 which is a decrease from the 2,683 suicide deaths recorded in 1998. Over three-quarters (77%) of suicides were males.

Suicide as proportion of total deaths

While suicide accounts for only a relatively small proportion (1.4%) of all deaths in Australia, it does account for a much greater proportion of deaths from all causes within specific age groups (see graph below). For example, in 2007, 21% of all male deaths under 35 years were due to suicide. Similarly for females, suicide deaths comprise a much higher proportion of total deaths in younger age groups compared with older age groups.

SUICIDES AS A PROPORTION OF ALL DEATHS, BY SELECTED AGE GROUPS **-** 2007(a)



Age

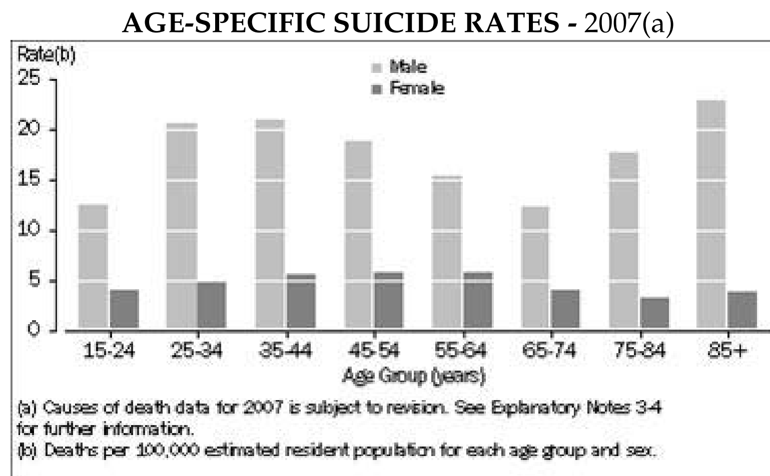
Median age

The median age at death for suicide in 2007 was 41.7 years for males and 44.5 years for females and 42.5 years for persons. In comparison, the median age for deaths from all causes in 2007 was 77.5 years for males and 83.5 years for females.

Age-specific rates

Age-specific death rates are the number of deaths during the calendar year at a specified age per 100,000 of the estimated resident population of the same age (see Glossary for further information). The pattern of age-specific rates in 2007 for suicide in males and females is shown in the graph below.

AGE-SPECIFIC SUICIDE RATES - 2007(a)



The highest age-specific suicide death rate for males in 2007 was observed in the 85 years and over age group (23 per 100,000). However, this number is inflated by the small population, and the relatively high number of deaths in this age group. As a proportion of total deaths in this age group, suicide deaths were relatively low (0.2%). The age-specific death rates for the 45-54 years age group were 18.7 per 100,000 males, and 20.8 per 100,000 males in the 35-44 year age group. Suicides as a proportion of total deaths for these age groups were 6.3% and 15% respectively. The age-specific suicide rate for males was lowest in the 15-24 years age group (12.5 per 100,000), however, this cause represented 20.2% of all deaths in this age group.

For females the highest age-specific suicide death rate in 2007 was observed in the 45-54 years age group and the 55-64 years age group both with 5.7 deaths per 100,000. The lowest age-specific death rate for female deaths was in the 75-84 years age group (3.3 per 100,000).

Method of Suicide

In 2007 the most frequent method of suicide was Hanging (X70), which was used in half (54%) of all suicide deaths. Poisoning by drugs was used in 12% and poisoning by other methods (including by motor vehicle exhaust) was also used in 12% of suicide deaths. Methods using firearms accounted for 8.9% of suicide

deaths. The remaining suicide deaths included deaths from drowning, jumping from a high place, and other methods.

Mechanism By Intent - Selected Causes

External causes of death are required to be examined by a Coroner, who investigates both the mechanism by which a person died, and the intention of the injury (whether accidental, intentional or assault). See Technical Note - ABS Coding of suicide deaths for information on how the ABS Codes deaths as suicide.

For deaths registered in 2007, 1,027 deaths were the subject of ongoing coronial investigations at the time ABS data was finalised, and had insufficient information recorded on NCIS in order to be able to determine any cause of death. These records will have been coded to R99 Other ill-defined and unspecified causes of mortality. Some of these deaths may be determined a suicide after further investigation.

Further, coronial processes to determine the intent of a death (whether intentional self harm, accidental, homicide, undetermined intent) are especially important for statistics on suicide deaths because information on intent is required to complete the coding under ICD-10 coding rules. Coroners' practices to determine the intent of a death may vary across the states and territories. In general, coroners may be reluctant to determine suicidal intent (particularly in children and young people). In some cases, no statement of intent will be made by a coroner. The reasons may include legislative or regulatory barriers, sympathy with the feelings of the family, or sensitivity to the cultural practices and religious beliefs of the family. For some mechanisms of death where it may be very difficult to determine suicidal intent (e.g. single vehicle accidents, drowning), the burden of proof required for the coroner to establish that the death was suicide may make a finding of suicide less likely.

The table below presents selected external causes of death by mechanism and intent. It is possible that additional suicide deaths are contained within the Intent categories of Accidental and Undetermined Intent, particularly for the mechanisms of poisoning and hanging.

5.5 Selected external causes of death, Mechanism by intent - 2007(a)

	Accidental death	Intentional self-harm	Assault	Undetermined intent	Other intent	Total
	no.	no.	no.	no.	no.	no.
Poisonings (X40-X49, X60-X69, X85-X90, Y10-Y19)	1 190	448	-	298	-	1 936
Hanging and other threats to breathing (W75-Y84,X70, X91, Y20)	8	1 010	10	165	-	1 193
Drowning and submersion (W65-W74,X71, X92, Y21)	4	37	1	38	-	80
Firearms (W32-W34, X72-X74, X93-X95,Y22-Y24)	183	167	25	29	-	404
Contact with sharp object (W25-W29, X78,X99,Y28)	220	40	74	19	-	353
Falls (W00-W19, X80, Y01, Y30)	575	75	-	17	-	667
Other	2 301	104	55	527	273	3 260
Total	4 481	1 881	165	1 093	273	7 893

- nil or rounded to zero (including null cells)

(a) Causes of death data for 2007 is subject to revision. See Explanatory Notes 3-4 for further information.

[1] **Butterworths Concise Australian Legal Dictionary, 1997, Butterworths Sydney.**

ATTACHMENT 2

TECHNICAL NOTE 1 ABS CODING OF SUICIDE DEATHS

As published on 18 March 2009 as Technical Note 1 in Causes of Death: Australia, 2007 (ABS cat.no.3303.0)

BACKGROUND

1 Users of suicide data have raised concerns regarding the number of deaths identified as suicides in ABS causes of death data for a number of years. As a response to these concerns, the ABS has undertaken a number of investigations and made a number of changes to coding, quality assurance and dissemination practices. A summary of the changes introduced is listed below:

- publication of Information Paper: External Cause of Death Data Quality (cat. no. 3317.0.55.001) in April 2007 in order to assist users in interpreting ABS external causes data.
- publication of Information Paper: ABS Causes of Death Statistics: Concepts, Sources and Methods (cat. no. 3317.0.55.002) in March 2008
- all coroner certified deaths registered after 1 January 2007 will be subject to a revision process. This is a change from previous years where all ABS processing of causes of death data for a particular reference period was finalised approximately 13 months after the end of the reference period. Where insufficient information was available to code a cause of death (e.g. a coroner certified death was yet to be finalised by the Coroner), less specific ICD codes were assigned as required by the ICD coding rules. The revision process will enable the use of additional information relating to coroner certified deaths as it becomes available over time resulting in increased specificity of the assigned ICD-10 codes.
- improved quality assurance processes particularly aimed at assessing and improving the quality of suicide coding
- revised coding instructions for ABS coders in coding suicides to ensure greater consistency in coding outcomes between individual coders

ICD-10 CODING RULES FOR INTENTIONAL SELF HARM

2 International coding rules are used to assign codes from the International Classification of Diseases and Health Related Problems, 10th Revision (ICD-10). The coronial determination of intent is especially important for statistics on suicide deaths because information on intent is necessary to complete the coding under ICD-10 coding rules.

3 The coding rules for ICD-10 give no additional notes or definitions at the beginning of the Intentional self-harm categories (X60-X84, Y87.0)) that provide the coder with an indication of when an intentional self-harm code should be assigned. The only guidance is an inclusion note for suicide. Additionally, no reference is made in Volume 2 of ICD-10 of the assignment of intentional self-harm codes. The coding index defaults external causes to "accidental" unless qualified with further description.

4 Previous versions of ICD-10 clearly provided an indication for coders in the use of the undetermined intent categories via a Note at the beginning of the Y10-Y34 categories. The note indicates that these codes can only be assigned "*where available information is insufficient for the medical or legal authority to make a distinction between accident, self harm and assault* ". The 2007 version of ICD-10 has altered the instructions for

undetermined intent categories to : "*This section covers events where available information is insufficient to enable a medical or legal authority to make a distinction between accident, self-harm and assault. It includes self-inflicted injuries, but not poisoning, when not specified whether accidental or with intent to harm (X40-X49). Follow legal rulings when available*."

HISTORICAL ABS PRACTICE

5 In order to classify a death as suicide (intentional self-harm) the ICD-10 interpretation used by the ABS requires that specific documentation from a medical or legal authority be available regarding both the self-inflicted nature and suicidal intent of the incident. If this information is not available then the death must be classified as accidental (with the exception of stabbings which default to homicide). The interpretation of what constituted a "medical or legal authority" has been inconsistently applied by the ABS over a number of years.

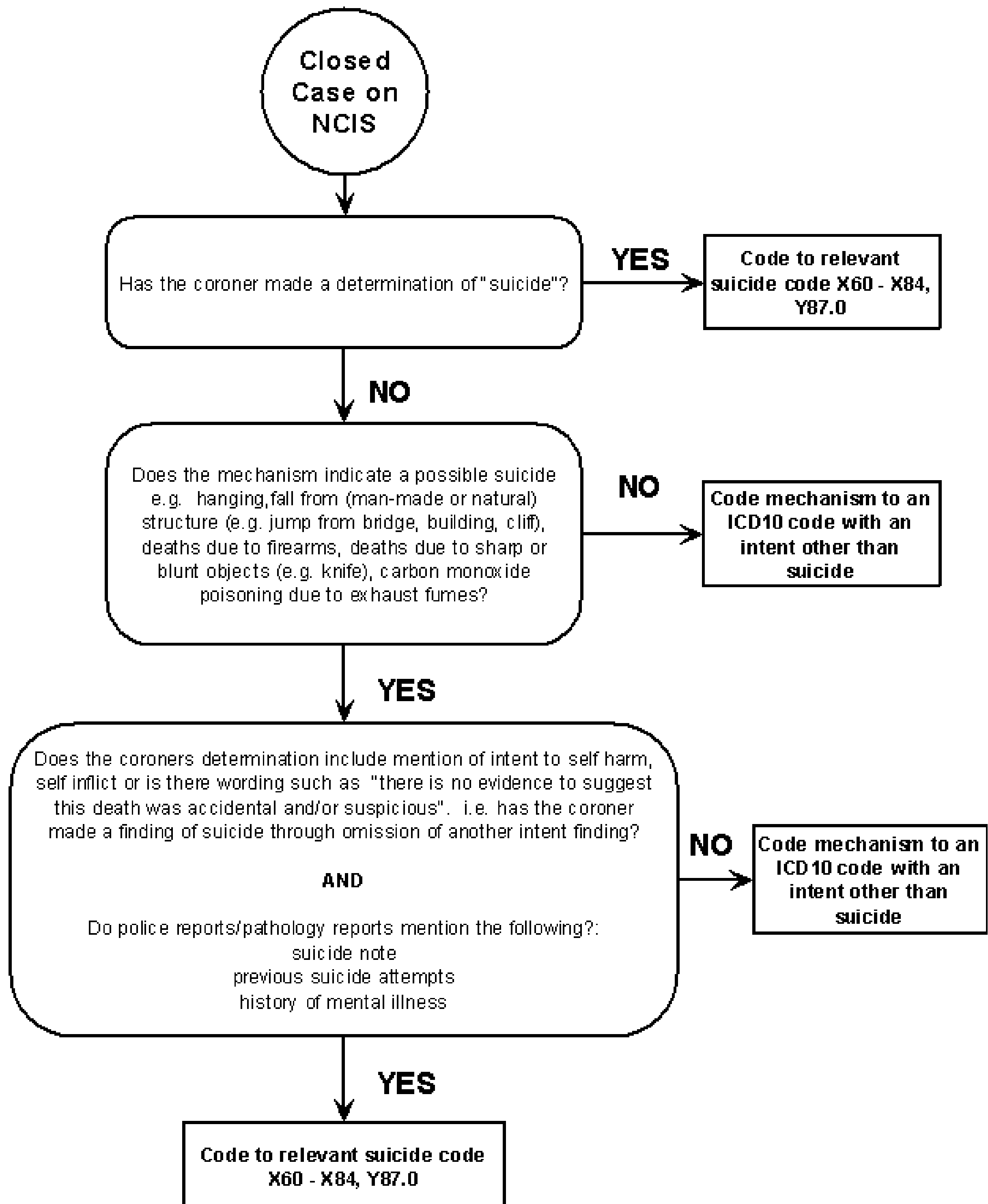
6 The first interpretation used by ABS coders was that only a coronial determination of "suicide" met the criteria for coding of a particular death as suicide. This interpretation then meant that a case needed to be closed by the coroner and that the coroner had made a formal determination of suicide in order to code a suicide as such. However, the interpretation used by the ABS resulted in some suicide deaths being "missed" due to the fact that coroners may be reluctant to determine suicidal intent (particularly in children and young people). In some cases, no statement of intent will be made by a coroner. The reasons may include legislative or regulatory barriers, sympathy with the feelings of the family, or sensitivity to the cultural practices and religious beliefs of the family. For some mechanisms of death where it may be very difficult to determine suicidal intent (e.g. single vehicle accidents, drowning), the burden of proof required for the coroner to establish that the death was suicide may make a finding of suicide less likely. In addition, if the coronial case had not been finalised by definition there is no coronial determination. In this case ABS coders would determine what information was available on the National Coronial Information System (i.e. police, autopsy or toxicology reports) and would determine an intent from the available information.

7 The second interpretation used by ABS coders was that a "medical or legal authority" included not only a coroners determination but also police, autopsy and pathology reports. This resulted in the coder using a wider range of information in which to code the death record. This interpretation resulted in less deaths being "missed" as suicide deaths, however as there was no further guidance given to coders, this resulted in inconsistent coding due to differing interpretations of what is acceptable evidence of a suicide in police, autopsy and pathology reports..

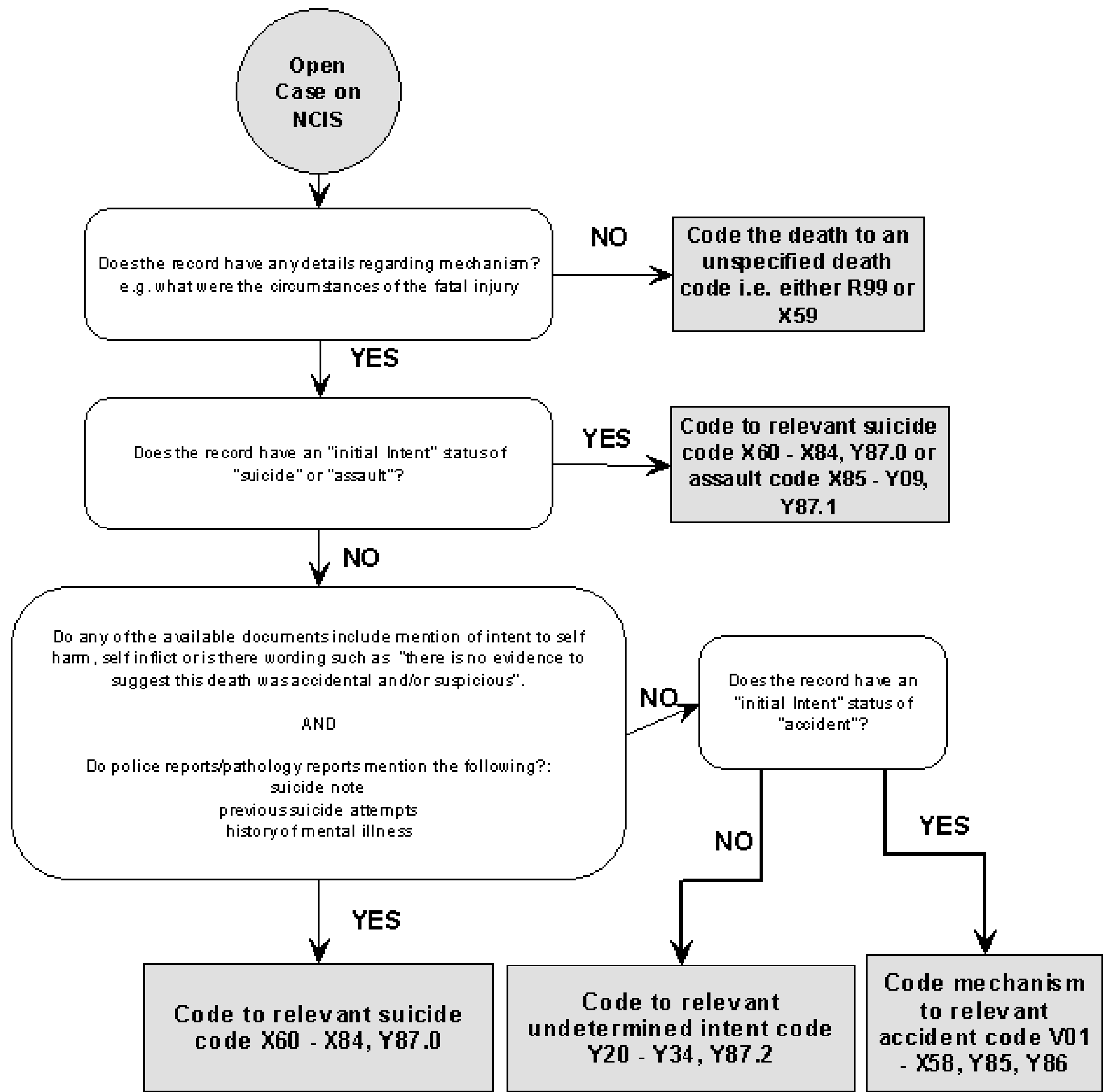
ABS SUICIDE CODING PRACTICE FOR 2007

8 For processing of deaths registered from 1 January 2007, revised instructions for ABS coders were developed in order to ensure consistency in the coding of suicide deaths and compliance with the revised notes for coding to the undetermined intent categories. At the time that the ABS ceases processing, each coroners record on the NCIS will have a status of "open" or "closed" (See Technical Note: Coroner Certified Deaths, for further information on coroner certified deaths). The NCIS case status impacts on how deaths are coded with regard to suicides. With the introduction of a revisions process for all deaths registered from 1 January 2007, records with a case status of "open" will be recoded when the coronial process is finalised and the status changes to "closed". Below is a summary of the suicide coding process used by the ABS.

SUICIDE CODING OF CLOSED CASES ON NCIS



SUICIDE CODING OF OPEN CASES ON NCIS



Australian Bureau of Statistics

3303.0 Causes of Death, Australia, 2007

Released at 11.30am (Canberra time) 18 March 2009

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More information available from the ABS website

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Inquiries

Further information about these and related statistics are available from the ABS website www.abs.gov.au, or contact the National Information and Referral Service on 1300 135 070.

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