

Implementation and evaluation of the Victorian Suicide Register

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The need for improved and expanded surveillance of suicide to strengthen the evidence base for prevention is well recognised. Internationally, there are a number of suicide information systems; the most well-known being the UK's National Confidential Inquiry into Suicide and Homicide¹ and the National Violent Death Reporting System in the US.² Other countries have also developed systems-based approaches for gathering and disseminating population-based information on suicide, including Scotland,³ Wales,⁴ Ireland⁵ and Malaysia.⁶ Until recently, only one state in Australia, Queensland, has systematically captured a wide range of contextual data on suicides. The Queensland Suicide Register (QSR) holds information on all suicides by Queensland residents since 1990.⁷

There are a number of published papers that describe the development, operations and case-ascertainment strategies of these suicide information systems.^{3,4,6,7} Analysis of registers' data has contributed to an enhanced global epidemiological understanding of suicide.^{1,8-10} In Australia, the QSR has been particularly useful for identifying a number of important issues relevant to state-based prevention policy.^{11,12} In 2007, identified discrepancies in suicide data between the QSR and the Australia Bureau of Statistics (ABS) were the impetus for improvements in the way the ABS now codes and records suicide deaths.¹³ Corresponding evaluations of these information systems, however, are lacking.

Abstract

Objective: The Victorian Suicide Register (VSR) is a state-based suicide surveillance system that contains detailed information on people who die by suicide and the circumstances surrounding their death. In this paper, we provide an overview of the VSR and then describe the evaluation, which used the Centres for Disease Control and Prevention guidelines for surveillance system evaluation as a framework.

Methods: The evaluation drew on three data sources to assess whether the VSR: i) embodies the attributes of a good public health surveillance system; and ii) can be used to inform community-based suicide prevention efforts.

Results: There was a high level of acceptability and enthusiasm for having an accessible data collection that can stimulate local action on suicide prevention planning. One of the key challenges identified was data quality, particularly around those data collected in the course of death investigations that are not designed for surveillance purposes.

Conclusion: The VSR fills an important gap in the sustained and systematic collection of comprehensive information on suicide, with some key challenges identified.

Implications for public health: Findings from the evaluation provide important strategic information for national and international jurisdictions seeking to establish their own suicide registers.

Key words: suicide, data, surveillance, evaluation

The Centers for Disease Control and Prevention (CDC) guidelines for evaluating public health surveillance systems set out a number of agreed-upon central questions that such evaluations should seek to answer.¹⁴ For example: Is the system meeting its stated aims and objectives? Is the system useful? Should the system be continued? These types of questions can be addressed by examining key system components including timeliness, acceptability, flexibility or simplicity. To our knowledge, no suicide information system has been evaluated according to these criteria to ensure it is providing the essential

elements to inform decision making and appropriate public health action on suicide prevention.

In 2009, the Coroners Prevention Unit (CPU), a specialist investigative service of the Coroners Court of Victoria, developed and implemented the Victorian Suicide Register (VSR). Its overarching aim is to store detailed and up-to-date information on all people who die by suicide in Victoria, Australia. The VSR is uniquely placed within a coroner's court: a legal jurisdiction that is recognised as playing a vital role in suicide prevention both in terms of scrutiny of deaths and through making

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recommendations so that future deaths can be prevented.¹⁵ The VSR was primarily developed to assist Victorian coroners to formulate evidence-based recommendations to prevent suicide. Over time, other purposes have evolved and include: to understand trends over time; to raise awareness of suicide as a preventable public health problem; and to provide data for planning appropriate and targeted suicide prevention strategies and evaluating their impact. Development, implementation and evaluation of the VSR was supported by the Coroners Court and funded through two competitive research grants, one from beyondblue and one from the National Health and Medical Research Council.

The purpose of this paper is to describe the VSR and our approach to its evaluation. We provide an overview of the system, including how cases are selected for inclusion, sources of data and coding. We then describe the evaluation, which assessed whether the VSR: i) embodies the attributes of a good public health surveillance system; and ii) can be used to inform community-based suicide prevention efforts. Applying the principles of public health disease surveillance to this suicide register allowed us to identify strengths and weaknesses of the system.

Victorian Suicide Register

System architecture

The VSR is a surveillance system of all suicides occurring in Victoria and contains detailed information on those who die by suicide and the circumstances surrounding their deaths. In Victoria – a state that is typical of other Australian jurisdictions – all deaths that appear to have been unexpected, unnatural or violent, including where suicide is suspected, are legally required to be investigated by the coroner.¹⁶ Evidence gathered in the course of these investigations represents the richest available source of information on Victorian suicides. At present, the VSR contains complete information on all suicides that occurred between 1 January 2009 and 31 December 2014; coding has been completed for approximately half of all suspected suicides that occurred in 2015. Where a special project or need arises, cases may be prioritised and coded ‘out of order’ so that complete datasets are available for analyses. As the custodians of the data, access is contingent on approval from the Coroners Court of Victoria.

Data sources and coding

In coding information, trained personnel review all available material gathered for the coroner’s investigation, including the police report of death to the coroner, post-mortem forensic medical and scientific reports (autopsy and toxicology) and the coronial brief prepared by the coroner’s investigator (usually a member of Victoria Police). The coronial brief may include: records from treating health professionals; statements from family, friends, witnesses and employers; scene photography and maps). The coroner’s written case finding, which is handed down at the completion of all coronial investigations, is reviewed and relevant information is recorded in the VSR. Depending on the complexity of an investigation, including whether it was desk-based or by public hearing (known as an inquest), the coroner’s written case findings can vary significantly in length from a single page to multiple volumes.

For each case, there are more than 150 coded and free text data fields that are abstracted and recorded in the VSR. These include: details of the incident, such as the cause, manner, location and time of death; the decedent’s physical and mental health history; health, legal, social service and welfare contacts prior to death; and interpersonal and situational stressors present and reported to the coroner, including family and domestic violence, financial concerns or substance use. Basic socio-demographic and location information is auto-populated from other coronial data sources. Most information, however, is directly coded from a review of the paper-based coronial records. A core or minimum dataset, including cause of death, location of death, usual place of residence, age, sex and occupational information are entered within 24–48 hours of notification of a suspected suicide and prospectively updated during and at the conclusion of the coronial investigation.

All data are recorded in Microsoft Access in a structured format, either auto-populated, selected from drop-down lists or entered directly. Coders record the presence or absence of a particular event or circumstance; for example, evidence of: Aboriginal or Torres Strait Islander descent, cultural and linguistic diversity, physical and/or mental illness, relationship breakdown and financial strain. Additional information available in the coronial files in relation to each data field is entered as free text. A data dictionary guides

data entry and is available to support data users.

Case identification

The VSR includes all deaths where the coroner determined that the intent of the deceased was suicide. A coroner-determined suicide is a death investigated by a coroner and where the coroner explicitly concludes that the death resulted from suicide. However, previous research has established that including only coroner-determined suicides may underestimate the ‘true’ suicide rate in the community.^{17,18} This underestimate is largely because coroners, both in Australia and overseas, may not make a finding on suicidal intent due to various legislative or regulatory barriers.¹⁹ As such, the VSR also includes those deaths where the coroner did not make an explicit determination of intent, but where the cause and circumstance surrounding the death are consistent with suicide. In the VSR, cases are classified by trained investigators as being consistent with suicide in accordance with pre-defined criteria that may include, for example, witness accounts that are consistent with the deceased undertaking a deliberate action causing death and/or a mechanism or method that is strongly indicative of suicide. This approach aligns with other national and international suicide information systems.⁷

Suspected suicides where the coronial investigation is underway are also reviewed and classified according to whether the cause and circumstance of death are consistent with suicide. They are subject to further review when the coroner’s investigation is completed.

Methods

Evaluation design

Our approach to evaluating the VSR was based on the framework defined in the CDC’s *Updated Guidelines for Evaluating Public Health Surveillance Systems*.¹⁴ We focused on the performance attributes of usefulness, simplicity, sensitivity, timeliness, data quality and acceptability, as these characteristics were considered to be the most relevant to the VSR’s key objectives. To gather information for the evaluation we drew on three sources of data: i) an audit of the first two years in which data were available in the VSR; ii) semi-structured interviews with national and international stakeholders; and iii) an empirical case study. Taken together,

these three sources of data allowed us to assess the VSR against the attributes of a good public health surveillance system. The case study allowed us to explore, through a real-world example, the utility of the VSR for informing the development of locally based suicide prevention planning. Further details about each data source are described below.

Data audit

Data for the audit included deaths that were reported to the coroner over a two-year period from 1 January 2009 to 31 December 2010. These two years represent the first two years in which the VSR was populated and allowed sufficient cases to assess the key criteria against. We used these data to gather evidence on key system attributes. We assessed simplicity by observing the flow of data into and out of the VSR, including data collection, collation, analysis and reporting. This also provided information on timeliness. We assessed sensitivity by examining the ability of the VSR to detect and classify suicide cases using Australian Bureau of Statistics (ABS) data on suicide as the comparative data source. The ABS provides rudimentary data on suicide (e.g., age, sex, suicide method) drawing information from coronial case files nationally. These data are external to the VSR, so provide an appropriate benchmark against which to assess sensitivity.¹⁴ Data quality reflecting the completeness and validity of data recorded was examined by analysing key variables in the years 2009 and 2010.

Semi-structured interviews

The selection of participants for interview was purposive with the intent of interviewing experts in suicide information systems in other states of Australia and overseas, as well as experts working in policy and practice in the areas of suicide prevention and mental health. Ten national and international experts agreed to participate, including representatives from research, government and advocacy sectors; their collective expertise in suicide prevention spanned many decades. All were interviewed face-to-face, over the phone or via Skype. The interviews were semi-structured and facilitated by the use of an interview guide, and were recorded. Prior to completing the interview, participants were sent a brief summary document outlining the VSR – its development, design and implementation. The interviews focussed on their views of the VSR and the model that sees it housed

within a coroner's court, particularly in regard to whether it aligned with 'best practice' for collating and disseminating information on suicide. Participants were asked to consider the strengths, weaknesses and opportunities associated with the system. One researcher conducted all interviews in the three months from January to March 2015. Detailed notes were developed from notes taken during the interviews and from the supporting audio. These were then used to identify key themes. Analysis proceeded concurrently with data collection.

Case study

To evaluate the utility of the VSR for informing community-based suicide prevention action, we undertook an in-depth case study. The case involved one of Lifeline's six regional areas in Victoria. Lifeline is Australia's largest national charitable organisation offering 24-hour support via a telephone crisis line and chat service, as well as community-based suicide prevention services through Lifeline Centres in 41 regions around Australia. In partnership with one of these Lifeline regions, we engaged in an iterative consultation process with a suicide prevention network to generate key questions, the answers to

which would shape that region's local suicide prevention action plan. The case study region encompasses five local government areas in Victoria with a mix of coastal, rural and semi-rural communities.

Key areas of inquiry included the demographic, health and social characteristics of those who had died by suicide. Of particular interest to the local suicide prevention network was the extent to which young people and farmers were over-represented in suicide statistics in the region, and whether family and domestic violence was a potential contributing factor. These issues reflected community interest about which target groups should be given priority in outreach and prevention programs. Information was obtained by conducting descriptive analyses of key variables of interest using six years of VSR data, from 2009 to 2014 (cases from the region were prioritised for coding, allowing us to analyse six years of complete data).

Results

Table 1 summarises the key attribute definitions, strengths and weakness of the VSR for monitoring suicide in Victoria.

Table 1: Key attributes, strengths and weaknesses of the VSR.

Attribute	Definition	Data source	Strengths	Weaknesses
Usefulness	Contributes to the detection and prevention of suicide	Interviews	The VSR fills an important gap in data collection to inform action; rich data affords opportunities to explore new avenues for prevention	Are all data fields necessary for the VSR to meet its objectives?
Simplicity	Structure and ease of operation	Audit and Interviews	System well-integrated with routinely-collected electronic data from other sources; sources of information are multiple and complex; clear data entry mechanisms	Sources of information are multiple and complex; time taken to enter the large number of data fields a potential threat to sustainability
Timeliness	Speed between steps from event to reporting	Audit	Using data from coronial investigation a necessary prerequisite for high quality, comprehensive data; open cases are included and reviewed	Rapidity of information a lesser priority given VSR objectives; delays impede 'real time' monitoring of trends
Sensitivity	Ability to detect 'true' suicide rates	Audit	Most cases in VSR determined by coroner to be suicide; high sensitivity for capturing all suicides in comparison to national data	Unable to undertake case-by-case comparison
Data Quality	Completeness of data	Audit	Data quality high; few missing observations	Completeness depends on quality of original reports/records (not fit for purpose)
Acceptability	The information collected serves the purpose for which it is collected	Interviews	Reliant on the quality of data it contains; fidelity processes are key	Possible negative impact of variability in informant or source information
Accessibility	Availability for understanding suicide and its prevention	Interviews	High level of support for an accessible suicide surveillance and monitoring system; accessibility improves usefulness	Pitfalls of misinterpretation of cross sectional data
Utility	Usefulness for communities to plan suicide prevention strategies	Case study	Informs local suicide prevention planning; dispels or confirms community concerns around vulnerability	

Usefulness

We gathered evidence on usefulness from our stakeholder interviews. Interview participants were overwhelmingly positive about the usefulness of sustained and systematic collection, analysis and dissemination of comprehensive information on suicide, and felt the VSR filled this important gap. Most participants acknowledged that the rich data recorded in the VSR was a major strength and afforded opportunities to explore new avenues for prevention. However, some participants wondered whether due consideration had been given to delineating between data that are 'useful' and data that would actually be 'used' in the context of understanding suicide and its prevention. Queries were raised about the large number of data fields (more than 150) and whether some data may actually be regarded as 'nice to know' but not essential for the VSR to meet its objectives. One participant noted:

The VSR, having the depth of the information, is great. But how will you use that qualitatively rich information? And I suppose it's the balance between having really thorough information and useful information, usable. While it's nice to have, setting up a system that sometime in the future a researcher might be interested in is not a good public health information system.

Nonetheless, some of these same participants who queried the usefulness of the rich qualitative data also spoke to the disadvantages of only recording basic information without sufficient context. For example, while it may be useful to code the presence of financial stress prior to suicide, understanding the context – the circumstances that lead to financial stress, such as unemployment or gambling – is more likely to inform suicide prevention initiatives.

As one participant remarked:

Coding [alone] makes the basic information a bit blunt.

Participants also frequently raised issues around accessibility in terms of the usefulness of the VSR for informing suicide prevention initiatives and/or evaluating impact expressing both enthusiasm and caution for a suicide information system that is accessible to a range of stakeholders, including those external to the coroner. All participants commented on the need for appropriate governance to guide decisions about who the data would be made available to, in what format, and for what purpose.

The main concern about accessibility centred on data interpretation, noting that any analyses would require an understanding of how the data were collected – "the architecture of the data" – and what conclusions can be inferred from these data. One participant summed up such concerns in the following way:

The problems will be in interpretation, which requires a high degree of sophistication and an understanding of the context. If you are not careful, you can come to conclusions that are ill-founded and that can lead to confusion in the public domain.

Simplicity

We used the data audit to assess the structure of the VSR and ease of operation. The audit demonstrated that the VSR is a well-designed relational database with a high degree of data integrity. There are clear mechanisms, constraints and rules built into the system to ensure data are entered correctly and without duplicates. Automated capture of routinely collected electronic data from other sources, such as demographic and incident information, is a key advantage of this system, and this is made possible because it is housed within a coroner's court. The vast majority of data fields, however, are abstracted and coded from multiple and complex sources within the coronial case files, representing both a strength and a key challenge of the system. On average, cases take about two hours to enter but, depending on the amount of material available in coronial case files, the rate of entry can range from 15 minutes to eight hours.

In the stakeholder interviews, participants noted the advantages of a system that could draw on coronial court processes for reportable deaths, but also expressed concerns about the time required to abstract and code information. These concerns were mostly centred on whether such a system could be sustained over the long term without dedicated funding.

Sensitivity

We assessed sensitivity against the national data collection on suicide: ABS state-based suicide statistics. ABS data are external to the VSR and a valid comparator to assess sensitivity.¹⁴ Suicide statistics generated by the ABS are sourced from death registrations in each state and territory in Australia supplemented with data from the National Coroners Information System

(NCIS), which records information from coroners' investigations. The ABS and the VSR, therefore, draw on the same source data and employ similar methods for coding deaths as suicide (i.e. based on both coroner-determined and suspected cases. (For technical information on ABS coding of suicide deaths and revisions to their coding practices, see the ABS Technical Note 1– ABS Coding of Suicide Deaths.)²⁰

Results from the data audit showed that in two years from 2009 to 2010, the VSR recorded a total of 1,127 suicides in Victoria (n=590 in 2009; n=537 in 2010). Of these, 759 deaths (67%) were determined by the coroner to be intentional self-harm (suicide) and a further 368 deaths (33%) were determined as suicide by the VSR coders. By comparison, summary statistics from the ABS on deaths registered in Victoria in 2009 and 2010 show a total of 1,095 suicides,²¹ a 2.7% difference.

That the two data sources are reasonably well aligned suggests a high degree of sensitivity of the VSR for capturing all suicides occurring in the state. Similar to processes used in the VSR, ABS coders can also classify a death as suicide in cases where a coroner does not make an explicit determination of intent, but where the cause and circumstance surrounding the death are consistent with suicide. The ABS, however, do not differentiate in their publicly available data which deaths are coroner determined and which are 're-coded', so we have no point of comparison.

Timeliness

Timeliness refers to the speed between system steps; in this case, the time between initial case capture (a death notification to the coroner) and availability of information for monitoring and prevention planning. In the VSR, data on the manner and intent of death is available within 24–48 hours of the death notification, making it possible for basic suicide statistics to be generated in 'real time'. Previous research on all deaths reported to the coroner showed that classification on notification does not significantly change at the conclusion of a coroner's investigation.²² Results from our data audit showed that the initial case identification process for suicide is very accurate, with 96% (n=1,086) of the 1,127 suicides recorded in the VSR for the years 2009–2010 being flagged as suicide on initial notification. While the timeliness and accuracy of these data highlights their usefulness for identifying geographic clusters

or emerging methods, it represents minimal information about the person who died (e.g. age, sex) and the incident (e.g. method, location).

Like most other suicide information systems, timeliness of comprehensive information (i.e. a full VSR case record) is contingent on the length of coronial investigation processes. On average, coronial cases in Victoria remain open (under investigation) for a little over 12 months (393 days, as at 30 June 2014). For any public health surveillance system, particularly for suicide, there are necessary trade-offs between high quality, comprehensive and useful information, and rapidity of that information.

Data quality

In terms of completeness, the VSR is aided by automated capture of information and also because coders input data into every field by recording the presence or absence of a particular event or circumstance. This method of data entry means that there are almost no missing observations. Table 2 provides an overview of key socio-demographic characteristics of suicides recorded in the VSR in 2009 and 2010 and demonstrates a high level of completeness. There are a number of variables with unspecified or unknown fields, including suicide method, in which there are 15 unspecified cases (representing less than 2% of the total number). Employment status and occupation at the time of death show an 'unknown' proportion of 3% and 10%, respectively.

Despite high levels of completeness, the quality of data in the VSR relies on information from a variety of sources, each of which is not purpose-designed for generating suicide statistics. For example, in police reports and briefs of evidence, some types of information may not be recorded if the police investigation did not make those enquiries (e.g. Aboriginal or Torres Strait Islander, sexual orientation or gender identity). Variability in the way individual coroners conduct their investigations into the cause and manner of death may also affect what information is available for coding into the VSR.

Acceptability

Acceptability of a public health system is highly dependent on data quality and this issue was a recurring theme in the stakeholder interviews. Participants raised this issue in response to a number of interview

Table 2: Sociodemographic characteristics of suicides in the VSR, 2009-2010.

Demographic characteristics	n (%)
Total	1,127 (100)
Sex	
Male	852 (76)
Female	275 (24)
Age	
<24	142 (12.6)
25-34	206 (18.3)
35-44	233 (20.7)
45-54	244 (21.7)
55-64	153 (13.6)
65+	149 (13.2)
Aboriginal or Torres Strait Islander	
Yes	8 (<1)
No	1,119 (99.3)
Gay, lesbian bisexual, transsexual and intersex (GLBTI)	
Yes	32 (2.8)
No	1,095 (97.2)
Culturally and linguistically diverse (CALD)	
Yes	239 (21.2)
No	888 (78.8)
Employment status	
Employed	445 (39.5)
Unemployed	262 (23.3)
Retired	170 (15.1)
Unable to work	125 (11.1)
Other (student, prisoner, home duties)	90 (7.9)
Unknown	35 (3.1)
Relationship status	
Not in relationship	662 (58.7)
Married	240 (21.3)
In defacto/dating relationship	225 (19.9)

prompts and referred to imperatives for good quality and consistent data across all stages of the process from capture to reporting. Some participants questioned the impact of variability of informant-generated or source information and posed the question:

Are the same issues being asked of every possible suicide?

Other participants noted the importance of quality control at the coding stage and noted that robust fidelity processes were a key factor in determining the VSR's acceptance as a 'best practice' model. In this context, several participants articulated that investment in the system was vital and suggested the need to have additional and specific 'in-house' expertise, particularly in relation to data analysis, interpretation and dissemination. This issue was raised by a number of participants but expressed in different contexts: data quality and accuracy of outputs; consistency of coding; and accessibility by external parties (as described below).

Utility

The final data source we used in the evaluation was a case study, which allowed us to explore, through a real-world example, the utility of the VSR for informing suicide prevention action plans at the local level. Data from the VSR, confirmed there were 70 suicides in the case study region during the six years from 2009 to 2014. More than three-quarters were by men. Contrary to community concerns about suicide among young people, the highest proportion of suicides occurred among men between the ages of 45 and 65. These data also showed that many of those who died were men working in casual and contract work in the rural sector.

Although the perpetration of family and domestic violence was evident in around one-quarter of male suicides in the region, it was more likely that those who died were dealing with multiple and complex interpersonal and situational stressors. For example, data showed that the issues that tended to cluster together included substance use, separation from a partner, family and domestic violence, conflict with other family members, legal and financial stressors, and prior experience of abuse – either as a victim or perpetrator. This information resulted in the community suicide prevention network identifying who may have contact with males experiencing substance use problems, relationship breakdown, family and domestic violence and financial difficulties, so that suicide risk could be considered and responded to by these services. In doing so, quite different activities were identified that enhanced the conventional hospital and mental health-based responses.

Discussion

This paper describes the implementation and evaluation of a state-based suicide surveillance system. By collating comprehensive data on prior health, social circumstances, and health and welfare and justice-related contacts for individuals who die by suicide, the VSR responds to national and international calls for better population-based data on which to base suicide prevention efforts.²³ By purposively basing our evaluation on the principles of public health surveillance, we were able to explore, via different data sources, the extent to which the VSR is providing the core elements necessary to stimulate action on prevention.

Results showed that one of the key strengths of the VSR is that it is embedded within existing legislated mechanisms for reporting deaths suspected to be suicide. That the VSR is housed *within* a coronial court system makes the process of capturing comprehensive, high-quality information on all suicides as streamlined as possible, thus distinguishing the VSR from most systems in which information flows from a number of different, secondary or linked data sources.²⁻⁶ The use of coronial data to understand suicide is not unique to the VSR; most states and territories in Australia and many overseas jurisdictions use information collected by the coroner for this purpose. However, most current systems are rarely populated with detailed data such as that collected in the VSR.

That the number of suicides recorded in the VSR closely parallels the Victorian ABS data suggests the coding rules adopted by both systems are appropriately similar. This is an important finding given reliability across and within different data collections is vital to drive coordinated approaches to prevention. The importance of consistent, high-quality data was also highlighted in this evaluation as one of the key performance attributes in a system designed to monitor trends and provide data for policy, planning and prevention. Stakeholders acknowledged that the quality of data inputs and outputs were key to determining the systems usefulness and acceptability and, ultimately, its sustainability over time. There were, however, some concerns raised around data quality, including the potential for variability in information gathered from external sources. For example, data reported in the VSR on life stressors is often provided by next-of-kin and other informants. This data may be biased because of the emotional complexities associated with bereavement. There may also be a complete lack of data on other relevant risk factors due to lack of knowledge (e.g. a parent may not be aware of the deceased gender identity, relationship status or other adverse risk factors). This is likely a key consideration for all suicide information systems worldwide and suggests a concerted global effort to prioritise information that should be collected by all those personnel involved in responding to, reporting on and investigating suicide.

Differences in the way coroners conduct their death investigations may affect data available in the VSR. Previous research has noted that

coroners were less likely to hold inquests for suicides in comparison to some other deaths, including among children and deaths arising from complications of medical care.²⁴ The effect on data quality and comprehensiveness of information available in the VSR is beyond the scope of this study, but suggests possible limitations.

Issues around data quality coalesced with findings on timeliness and utility. The evaluation highlighted timeliness of information as a potential challenge – both in relation to the time required to enter information into the system, particularly in complex cases, and the timeliness of information flowing out of the system, particularly in relation to dissemination of complete records. While there may be an argument to truncate and consolidate data elements in the VSR into those that will be most useful to set priorities and inform prevention policy and strategy, the case study indicated that comprehensive information about those who die by suicide and their wider social circumstances is a necessary prerequisite for guiding local decisions on suicide prevention planning and action.

There are limitations to this evaluation that should be considered. First, evaluating the system's sensitivity was limited by not being able to identify which cases may be included in the VSR that are not 'counted' in the equivalent ABS data. Second, there may be potential bias in stakeholder interviews, given our approach was to purposively select experts in the field of suicide prevention who are likely to have a vested interest to having this type of system for surveillance. Finally, we were unable to comment on financial costs associated with the system.

Implications for public health

Outcomes of this evaluation will be particularly useful to other jurisdictions looking at the data collection model developed in Victoria. While only Queensland currently has a system analogous to the VSR, improving data on suicide is clearly on the policy agenda in other states and territories. One of the key targets in the *Tasmanian Suicide Prevention Strategy (2016-2020)* is to establish a Tasmanian Suicide Register.²⁵ Both the New South Wales and the Northern Territory's respective suicide prevention policy documents include actions to investigate the establishment of a suicide register; the Northern Territory's

policy specifically references the role of the Coroner's Office in facilitating more informed data on suicide.^{26,27} The importance of data in the global effort to reduce suicide is well-recognised.²³ Although the value of what the VSR can contribute to policy and practice is in its infancy, our evaluation suggests that it is well positioned to drive future decision making and appropriate public health action on suicide prevention.

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