# Suicide in Queensland 2019 Annual Report

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## Australian Institute for Suicide Research and Prevention



Please cite as Leske, S., Crompton, D., & Kõlves, K. (2019). *Suicide in Queensland: Annual Report 2019*. Brisbane, Queensland, Australia: Australian Institute for Suicide Research and Prevention, Griffith University.

Published by Australian Institute for Suicide Research and Prevention, Griffith University



Queensland Mental Health Commission

The Queensland Mental Health Commission commissioned this report.

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#### National Library of Australia Cataloguing-in-Publication entry

- Author: Stuart Leske, David Crompton & Kairi Kõlves Australian Institute for Suicide Research and Prevention
- Title: Suicide in Queensland: Annual Report 2019
- ISBN: 978-0-646-80814-7
- Subjects: Suicide--Queensland--Statistics. Suicide--Research--Queensland. Suicidal behaviour--Queensland.

Dewey Number: 362.2809943

## Foreword

The effect of suicide is often described as like a stone thrown into a pond; the ripples reach ever-outwards, only stopping when they hit the next barrier. The impact of suicide is like the ripples, larger at the beginning, affecting those closest to the person – family, friends, and colleagues. The power of this loss while greatest at the beginning, can persist, with ongoing emotional and physical health effects. Like ripples on the pond that move ever outwards, the influence of the loss of a person by suicide reaches out to others in the community. First responders, support workers, the school community and those already affected by emotional and mental health problems are, particularly at risk.

The stigma surrounding mental health, suicidal behaviour and suicide also becomes a force in the life of family members, friends and others who experience the impact of suicide. The consequence of stigma for many, is silence, a silence that enables the ripple effect to move ever outwards with the potential to adversely impact on family, friends and the community into the future.

Just like barriers that stop the ripples, it is those who break the silence surrounding suicide that have the power to influence changes in mental health and social policy. Breaking the barrier of silence communicates to the community that the loss of someone by suicide is a problem not just for those immediately affected, but also for all of us. It is the courage to speak out that breaks the silence, reduces stigma and offers the opportunity for changes that promote prevention, early intervention and support for those affected by suicide. Never is this ability to break the silence more critical than now, with the Queensland Annual Report 2019 highlighting a 16% increase in the suicide rate in Queensland residents from 2006 to 2018. The report identifies those who are most impacted by suicide: those in regional and remote communities, males, those under 44 years of age, older adult males, the LGBTI community and Aboriginal and Torres Strait Islander peoples.

The courage to speak out can positively influence discussions and actions related to reducing the rate of suicide. The vital role played by organisations such as Roses in the Ocean, QLife, and trackSAFE emphasises the importance of speaking out, suicide prevention and early intervention. The focus on suicide prevention is further demonstrated by the Queensland Mental Health Commission's role in leading, on behalf of the State Government, the development of a Suicide Prevention Plan. The signing of the 'Tracks to Treaty' commitment underlines the Queensland Government's emphasis on reducing suicides among Aboriginal and Torres Strait Islander Queenslanders. The treaty highlights the need for government and non-government agencies to support self-determination and community-led approaches to suicide reduction.

Breaking the silence that surrounds suicide offers an opportunity to create ripples that positively reach out to the community. Engagement with the community increases our capacity to prevent suicide and the adverse impacts of a loss by suicide.

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### List of acronyms

ABS	Australian Bureau of Statistics
AEST	Australian Eastern Standard Time
AISRAP	Australian Institute for Suicide Research and Prevention
ASR	Age-standardised suicide rate
CALD	Culturally and Linguistically Diverse
CAMS	Collaborative Assessment and Management of Suicidality
CBPATSISP	Centre of Best Practice in Aboriginal and Torres Strait Islander Suicide Prevention
CBT	Cognitive-behaviour therapy
DBT	Dialectical behaviour therapy
iQSR	Interim Queensland Suicide Register (iQSR)
NCIS	National Coronial Information System
QISU	Queensland Injury Surveillance Unit
QPS	Queensland Police Service
QSR	Queensland Suicide Register
SEM	Social-ecological model

### Glossary of key terms Age-standardised rate

A rate per 100,000 people that adjusts the crude rate to consider differences in population age structures (AIHW, 2018a).

#### Age-specific rate

The crude rate in a specific age group, expressed per 100,000 persons.

#### **Crude rate**

The events in a population in a period divided by the estimated population size midway through that period (AIHW, 2018b).

## Social-ecological model of suicide prevention

A four-tier framework with individual, relationship, community and societal levels for organising a comprehensive picture of risk and protective factors associated with at least one aspect of suicide-related thoughts or behaviour or both (Cramer & Kapusta, 2017).

### Dedication

We dedicate this report to individuals with a lived experience of suicide. That is, those who have had suicidal thoughts, survived a suicide attempt, cared for someone through a suicidal crisis, or been bereaved by suicide (Roses in the Ocean, 2019).

### Acknowledgement of Country

We acknowledge the Yuggera and Turrbul Peoples as the traditional custodians of the land on which this report was prepared, pay respect to the Elders, past and present, and extend that respect to other Aboriginal and Torres Strait Islander peoples. We acknowledge that these lands have long been a place of research and learning.

### Acknowledgements

We acknowledge the Queensland Mental Health Commission for funding the Queensland Suicide Register (QSR) from July 2013 and Queensland Health for funding the register from 1990 to July 2013. We thank the Queensland Police Service and the Coroners Court of Queensland for sharing police reports with the Australian Institute for Suicide Research and Prevention (AISRAP). We acknowledge families, friends, police, forensic pathologists, registrars and coroners who have contributed to the information presented in this report. We acknowledge the many people who support these roles. We acknowledge the Victorian Department of Justice and Community Safety as the source organisation of the National Coronial Information System (NCIS) data in this report, and the NCIS as the database source of that data. We would like to thank AISRAP staff who contributed to this report: Jacinta Hawgood, Angela Sunley, Loretta Manuel, Neil Caton and Wentzel Ferreira, and extend this thanks to current and former QSR investigators and research assistants. We also gratefully acknowledge reviewers of this report at the Queensland Mental Health Commission and the Coroners Court of Queensland.

## **Support services**

The data presented in this report refers to real people, lives lived and lives lost too early to suicide. One suicide is one too many, and we work urgently to reduce the numbers of deaths by suicide in Queensland annually.

We acknowledge that this report may distress readers. If this report distresses you, please contact:

#### Key 24/7 crisis support services include:

Lifeline Phone: 13 11 14 www.lifeline.org.au

Suicide Call Back Service Phone: 1300 659 467 www.suicidecallbackservice.org.au

#### Beyond Blue

Phone: 1300 224 636 www.beyondblue.org.au

State Mental Health Crisis Line Queensland Phone: 13 43 25 84 (13 HEALTH)

#### **Specific 24/7 support services include:** *Youth and young people*

Kids Helpline Phone: 1800 55 1800 www.kidshelpline.com.au

ReachOut https://au.reachout.com/

MensLine Australia Phone: 1300 78 99 78 www.mensline.org.au

#### Bereavement support

National StandBy Response Service http://standbysupport.com.au/#Contact http://standbysupport.com.au/

## Current and ex-serving Australian Defence Force members and their families

Open Arms — Veterans and Families Counselling Phone: 1800 011 046 https://www.openarms.gov.au/

#### Specific crisis services (not 24/7) include: Carers

Carers Australia Phone: 1800 242 636 www.carersaustralia.com.au

#### Bereavement

#### GriefLine

Phone: 1300 845 745 National (from landlines only) (12pm to 3am AEST every day) Phone: (03) 9935 7400 National and metro Melbourne (10am to 4pm AEST, Monday to Friday) www.griefline.org.au

#### Bereavement in secondary schools

headspace School Support Phone: 0455 079 803 (9am to 5pm, Monday to Friday) www.headspace.org.au/what-works/school-support

#### LGBTI Australians

QLife Phone: 1800 184 527 (3pm to 12am every day) www.qlife.org.au

#### Those affected by mental health conditions

SANE Australia Phone: 1800 187 263 (9am to 5pm on weekdays) www.sane.org

#### Youth

eheadspace Phone: 1800 650 890 (9am to 1am Melbourne time every day) www.eheadspace.org.au

## **Key findings**

This section lists key findings in suspected deaths by suicide from 2016 to 2018 and deaths by suicide from 2013 to 2015. The 2016 to 2018 information comes from the interim Queensland Suicide Register (iQSR)<sup>1</sup> and the 2013 to 2015 information comes from the Queensland Suicide Register (QSR)<sup>2</sup>.

### Interim Queensland Suicide Register:

- In 2018, there were 767 suspected suicides by Queensland residents, an age-standardised suicide rate (ASR) of 15.3 suspected suicides for every 100,000 people.
- The suspected suicide rate decreased by 4.5% from 2017 to 2018 in Queensland residents, a decrease of 1 person for every 100,000 people in Queensland or 36 fewer suspected suicides in Queensland residents in 2018, compared to 2017.
- The suspected suicide rate decreased for males in Queensland by 2.6%, from 2017 to 2018, a decrease of 1.07 males for every 100,000 males in Queensland. Actual numbers of male suspected suicides decreased from 608 in 2017 to 592 in 2018, a decrease of 16.
- The suspected suicide rate for females in Queensland decreased by 10.3% from 2017 to 2018, a decrease of 0.92 females per 100,000 females. Actual numbers of suspected suicides by females decreased from 195 in 2017 to 175 in 2018, a decrease of 20 females.
- Males accounted for 77.2% of suspected suicides in 2018, an increase from 75.7% in 2017.
- Numbers and rates of male suspected suicides were highest in males aged 20–49.

- Numbers and rates of female suspected suicides were highest in females aged 45–49.
- Aboriginal and Torres Strait Islander females accounted for 10.6% of all deaths by suicide by Queensland females in 2018 and males for 6.3% of all deaths by suicide for males in 2018.
- The Aboriginal and Torres Strait Islander agestandardised suicide rate decreased by about 4 people per 100,000 people from 2017 to 2018. There were 52 Aboriginal and/or Torres Strait Islander suspected suicides in 2017 and 50 in 2018.
- There were 39 deaths by suicide in persons identified as LGBTI from 2016 to 2018.
- ASRs were highest in males living in remote locations, followed by males living in regional locations, females living in remote locations, males living in metropolitan areas, females living in metropolitan areas, and females living in regional locations.
- The regions covered by Queensland Health's Hospital and Health Services with the highest ASRs have the lowest numbers of suspected suicides (e.g. North West Queensland), while the regions with the lowest ASRs have the highest numbers of suspected suicides (e.g. Metro North and Metro South).

1 The iQSR is a public health surveillance system that was developed in 2011 in response to the need for real-time data.

iQSR information comes from police reports of suspected suicides to coroners. The iQSR contains suspected suicides for the years 2016 to 2019. 2 The QSR is a longstanding surveillance system including records on all suspected suicides by Queensland residents from 1990 to 2015.

The Australian Institute for Suicide Research and Prevention manages the QSR and the Queensland Mental Health Commission funds the register.

### Queensland Suicide Register:

There were 2,085 deaths by suicide reported in the Queensland Suicide Register between 2013 and 2015.

- The most frequent adverse life events before suicides were relationship separation (27.7% of all deaths by suicide); financial problems (17.3%); relationship conflict (16.0%); recent or pending unemployment (12.5%); pending legal matters (11.1%); and conflict with family members (10.5%).
- Police and coroners reported that mental health conditions were prominent in those who died by suicide (50.8% having a mental health condition), with 37.9% of people having depression, 11.8% having an anxiety condition, 8.2% having a substance-use condition, 5.7% having psychotic conditions, 4.7% having bipolar, and 2.5% having a personality disorder. Almost 1 in 5 people reportedly had two or more mental health conditions (18.7%).
- Almost half (49.2%) of people dying by suicide had no known mental health condition.
- There was evidence of an untreated mental health condition in 39.2% of all those dying by suicide.

- There was evidence for an untreated mental health condition in 48.4% of those with no known mental health conditions.
- Over half (51.2%) of people dying by suicide were known to have one or more physical conditions at the time of their death. Over a quarter (28%) had two or more physical conditions.
- Over half of all people dying by suicide (55.3%) had displayed suicidality (communication of intent or suicide attempt) in their lifetime. Almost half (42.2%) had communicated intent or made a suicide attempt in the past year. Nearly a third (30.0%) had attempted suicide in their lifetime, and one in six (16.1%) had attempted suicide in the past year.
- Most suicide methods are decreasing over time, except for hanging. Poisoning by drugs remains a common method for females.
- There are opportunities to prevent suicides in Queensland through implementing or upscaling evidence-based interventions discussed in this report.

## Background

The Suicide in Queensland Annual Report 2019 (Suicide in Queensland) provides recent suicide trends in Queensland to help target and inform suicide prevention activities in Queensland by understanding the circumstances in which suicides occurred. This report focuses on information from the years 2013 to 2018. The information comes from a public health surveillance system — the Queensland Suicide Register (QSR) and the interim Queensland Suicide Register (iQSR). Surveillance systems play an important role in many areas of public health. Public health surveillance is the ongoing capture, analysis and interpretation of health data (World Health Organization, 2014). This information is used to plan, implement and evaluate public health practice and share timely information with those who need to know to take prompt action to prevent further suicides (Centers for Disease Control, 1986).

As Figure 1 shows, surveillance is a key strategy in a comprehensive approach to preventing suicide (World Health Organization, 2014). Data on suicides shows the size of the problem, helps to develop health priorities, looks at differences in rates across sociodemographic groups (e.g. sex, age, ethnicity, remoteness), and finds patterns in suicide methods (Data Surveillance Task Force of the National Action Alliance for Suicide Prevention, 2014). Surveillance can identify suicide clusters in specific geographical locations like towns or physical sites. Most importantly, surveillance systems can assess the impact of suicide prevention strategies and activities. As the number, characteristics and methods of suicides vary widely between people, places and across time, real-time surveillance of suicides is critical to support tailored local, state, and national suicide prevention efforts (World Health Organization, 2014).



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## **Section 1**

## The Queensland Suicide Register

The Queensland Suicide Register (QSR) is a longstanding surveillance system including records on all suspected suicides by Queensland residents from 1990 to 2015. The Australian Institute for Suicide Research and Prevention (AISRAP) manages the QSR and the Queensland Mental Health Commission funds the register. In 2011, the interim QSR (iQSR) was developed in response to the need for real-time data. iQSR information comes from police reports of suspected suicides to coroners. The iQSR contains suspected suicides for the years 2016 to 2019.

### Understanding suicide

Suicide has a significant human toll, with far-reaching impacts. In 2017, 3,128 people died by suicide in Australia, an increase of 9.1% from 2016 (Australian Bureau of Statistics, 2018a). Queensland accounted for 804 of these deaths or 25.7% of all deaths by suicide in Australia. Queensland also had the highest age-standardised suicide rate (ASR) of all Australian states in 2017 (Australian Bureau of Statistics, 2018a). Suicide was the thirteenth leading cause of death overall in Australia in 2017 and accounted for the largest amount of years of potential life lost (11.4%), due to people dying by suicide were younger than those dying due to other conditions like cancer and heart disease.

For each suicide, it is estimated that up to 135 people may have been exposed to the death (Cerel et al., 2019). A recent overview of studies estimated that 4.3% of people had been exposed to suicide in the last year and 22% in their lifetime (Andriessen et al., 2017). These losses produce grief in immediate family members (Kõlves et al., 2019; Ross, Kõlves, & De Leo, 2019). Society-wide, suicide also has a substantial impact extending beyond immediate relatives and friends (Maple & Sanford, 2019). Suicidal behaviour is a complex problem without simple explanations or solutions. Many models and theories have been put forward to explain suicidal thoughts and behaviours, and no single model appears to have gained widespread acceptance worldwide.

The social-ecological model (SEM), developed by Urie Bronfenbrenner (1977), is a model that focuses on the environment in which a person lives, including their settings and formal and informal social contexts (Bronfenbrenner, 1977). Different levels of the environment are described as 'systems', and they include individual, relationship, community, and societal levels (Dahlberg & Krug, 2002). The SEM was applied in the early 2000s to better understand violence and the effects of potential prevention strategies (Dahlberg & Krug, 2002). The model (**Figure 2**) assumes that prevention efforts for any health or disease issue need co-occurring efforts in societies, communities, relationships and individuals. In the case of suicide, these efforts may save lives and improve quality of life beyond the current capabilities of public health and clinical mental health.

An SEM can be used to understand suicidal behaviour, risk and protective factors, and opportunities for prevention (Cramer & Kapusta, 2017). This model proposes that suicide is influenced by a variety of protective and risk factors operating at the level of societies, communities, relationships and individuals. Societal factors may include legislating access to lethal means, like firearms. Community factors may refer to social isolation or care after hospital treatment. Relationship factors may include connectedness to family and friends or conflict and separation. Individual factors might include mental health and reasons for living.

Importantly, the SEM emphasises the need for prevention and intervention efforts to occur on multiple levels, with communication between different sectors and disciplines, to consider multiple levels of influence (Cramer & Kapusta, 2017). The most well-known and influential prevention effort is the European Alliance Against Depression (Hegerl, Althaus, Schmidtke, & Niklewski, 2006; Hegerl et al., 2013). There is evidence that these multi-level interventions are more effective than their individual components alone (Hofstra et al., 2019). Modern suicide prevention frameworks recognise the importance of a social-ecological or systems-based approach to suicide prevention that involves interventions both in and beyond health services. **Figure 2** shows examples of risk and protective factors for suicide in the form of an SEM.

The SEM has been used in Queensland to provide a multilevel suicide prevention response. The model is used when planning strategies to reduce suicide. It helps to ensure that suicide prevention activities are comprehensive, coordinated, complementary and responsive to the issues identified in data on suicides by Queensland residents.

## **Figure 2** Examples of risk and protective factors for suicide deaths in a Social-ecological Model<sup>3</sup>



3 Adapted from U.S. Department of Health and Human Services Office of the Surgeon General and National Action Alliance for Suicide Prevention (2012) National Strategy for Suicide Prevention: Goals and Objectives for Action: A Report of the U.S. Surgeon General and of the National Action Alliance for Suicide Prevention. Washington (DC): US Department of Health & Human Services (US); 2012 Sep. Available from: <u>https://www.ncbi.nlm.nih.gov/books/</u><u>NBK109917/</u> and Dahlberg, LL., & Krug, EG. (2002). Violence-a global public health problem. In: EG. Krug, LL. Dahlberg, JA. Mercy, AB. Zwi, & R. Lozano (Eds.), *World Report on Violence and Health* (pp. 1–56). Geneva, Switzerland: World Health Organization; 2002:1–56.

## Queensland Suicide Register methods

The QSR contains a broad range of information on suicide deaths in Queensland from 1990 onwards, which includes demographic, psychosocial, physical, psychological, interpersonal and circumstantial information (**Figure 3**). This information is important to collect to try and understand why suicides occurred and how similar deaths might be prevented in the future.

Information is drawn from four primary sources:

- Police report: The police report of a suspected suicide to a coroner (Form 1), which includes a demographic section, sections on general and mental health, and findings from interviewing next-of-kin or friends or acquaintances. A Queensland Police Service (QPS) officer completes this form soon after death, following an interview with the deceased's next-of-kin or other available people who knew the deceased.
- Toxicology report: A report on the levels of substances that may have been consumed before death.
- **3.** Post-mortem examination: An autopsy of the person soon after their death.
- 4. Coronial reports: A narrative of the person's circumstances before their death that considers the findings from other reports. AISRAP receives police forms from the QPS and the Coroners Court of Queensland. All other reports are obtained from the National Coronial Information System (NCIS). The NCIS is a national repository of information on deaths reported to coroners.

Residential geocoding is obtained through an external geocoding provider. The Registry of Births, Deaths and Marriages is cross-checked for the deceased's country of birth and Indigenous status when the police report or coronial finding does not report this information.

Each suspected suicide is entered in two stages, resulting in the iQSR and the QSR (**Figure 3**). In the first stage, information from the police report for all suspected suicides is entered into the iQSR. The iQSR is updated weekly based on electronic information from police containing reports of suspected suicides, allowing real-time monitoring and identification of suspected suicides in Queensland. The iQSR includes administrative, demographic and circumstantial details of the death.

In the second stage, as cases close in the NCIS they move from the iQSR to the QSR. All available information from the NCIS is downloaded, entered, reviewed and added to the QSR. Each recorded death is classified into one of four probabilities of being death by suicide, based on health research criteria (see **Figure 4**):

- 1. Unlikely: The available information indicates that death by suicide was unlikely (e.g. heart attack).
- 2. Possible: The available information suggests death by suicide, but there remains a large possibility that the death may be due to other internal or external causes of death (e.g. accident, illness or homicide).
- **3. Probable**: The available information does not allow for a judgement of 'beyond reasonable doubt' but is still more consistent with a death by suicide than by any other cause.
- **4. Beyond reasonable doubt**: The available information suggests that the deceased had communicated verbally or in writing their intent to die by suicide.

The suicide classification flow chart (**Figure 4**) shows the process followed to assign the level of probability to each death. Suicides classed as 'unlikely' or 'possible' are not included in QSR analyses.

### **Section 1**



#### Figure 4 Suicide classification flow chart for the Queensland Suicide Register



## Quality of the Queensland Suicide Register data

The QSR uses information routinely collected during coronial processes. Secondary use of information is common in public health as most surveillance systems rely on data not specifically designed for research.

The police report is unique because it includes a narrative summary of the circumstances based on an officer being on the scene soon after the death occurs, talking to multiple people, and being able to include information about the person who died derived from multiple government agencies. Police officers do not have the hindsight that coroners do when they investigate, but they are among the first responders to the scene and so collect the most detailed and rich information directly from next-of-kin and other people where possible given the difficult circumstances. The availability and completeness of data in the police report depends on how well the people interviewed knew the deceased and if they can discuss or recall their knowledge at the time of the interview.

Cultural background is not reported in all deaths, so deaths by suicide in culturally and linguistically diverse (CALD) peoples may be underestimated. While country of birth and indigeneity can be obtained through crosschecking with the Registry of Births, Deaths and Marriages, more detailed data on ethnic group is hard to obtain.

## Caveats about interim Queensland Suicide Register data (2016-2018)

This statement is included to note the important limitations of interim data. This is important to keep in mind to not overstate recent findings from this data. Although the police report is comprehensive and police can access data from multiple information systems, limitations still exist in interim data.

- The iQSR uses information from a police report of death to a coroner (Form 1). AISRAP receives Form 1s of suspected suicides. There are no toxicology, post-mortem examination or coroners' reports to inform the cause of death (e.g. a drug present in the body at lethal levels) to give the complete background of a person before their death.
- 2. QPS Officers complete Form 1s immediately or soon after a death occurs, through interviews with the deceased's next-of-kin or other available people who knew the person. The main aim of a Form 1 is to inform the coroner. When investigating possible suicides, officers may not ask or record information that might be relevant for a better understanding of the likelihood of suicide.
- 3. The police cannot always be certain of the specific cause of death (e.g. when drugs, alcohol or medications appear to be involved). In these cases, the death may also be considered accidental or due to natural or non-violent causes, with the cause of death unknown. These deaths will not be classed as suspected suicides in the iQSR.

- 4. Next-of-kin and other people may not know or correctly recall prior suicidality, history of mental health illness, significant stressors or the perceived or communicated intent of the deceased. Applying the iQSR flowchart (Figure 5) to police Form 1s relies on the accuracy of informant statements at a time when they are potentially distressed.
- If there is not enough information at the time of death, the flowchart will likely lead to the death being assigned a suicide probability rating of 'possible', which is not included as a suicide in this report.
- 6. When further information becomes available from more reports, reapplying the flowchart may reclassify the death as 'probable' or 'beyond reasonable doubt'. These are classed as suicides. Therefore, the iQSR may underreport suicides slightly to ensure that reporting is responsible and most accurate by not over-reporting suspected suicides without enough evidence.
- **7.** Figure 5 is independently applied by two research team members to iQSR 2016–2018 data to classify the probability of suicide and all disagreements are resolved by a third senior team member.

#### **Figure 5** Suicide classification flow chart applied to the interim Queensland Suicide Register



### Comparison of the Queensland Suicide Register and the interim Queensland Suicide Register with Australian Bureau of Statistics suicide data

The QSR was developed for surveillance and research purposes and so differences have existed in the number of suicides that are registered in the QSR and the number reported through the Australian Bureau of Statistics (ABS). The QSR counts persons by the year in which their death occurred, while the ABS reports the year the death was registered. For ABS data, 4% to 7% of deaths from one year are not registered until the following year or later (Australian Bureau of Statistics, 2018a). **Figure 6** shows the trends of suicide rates from 1990 to 2018 as reported by the ABS, QSR and iQSR — with the QSR and iQSR including cases with a level of probability ascertained, as 'beyond reasonable doubt' and 'probable'. ABS data in the graph includes preliminary and final figures. There were large differences between ABS and QSR numbers of suicides for 2002 to 2005 due to ABS starting a revisions process in 2006 that enabled more deaths to be identified as suicides beyond initial processing of these deaths.<sup>4</sup> ABS and QSR data differed by one person in 2017 — 804 to 803 persons respectively.





4 See explanatory notes 88–96 for ABS Catalogue number: 3303.0 — Causes of Death, Australia, 2016

at https://www.abs.gov.au/AUSSTATS/abs@.nsf/Lookup/3303.0Explanatory%20Notes12016?OpenDocument

5 ABS data obtained from ABS publications. Specifically, the years and the ABS publications they were obtained from are as follows: years 2008–2017 (2018a); 2007 (2017b); 2006 (2016b); 2005 (2016a); 2004 and 1994 (2006); 2003 and 1993 (2005); 2002 and 1992 (2003a); 2001 and 1991 (2002); 1996–2002 (2003b); 1995 (2007); 1990 (2001). ABS Causes of Death statistics for the year 2018 are expected to be released at the end of September 2019.

### Completeness of the interim Queensland Suicide Register and the Queensland Suicide Register data

This report focuses on deaths by suicide between 2013 and 2015 from the QSR (**Table 1**) and 2016 to 2018 from the iQSR (**Table 2**), with a special focus on 2018 as it is the most recent year data was available. **Table 1** shows the total numbers of suicides since 2013 and details the reasons for information that was not available. For the years 2013 to 2015, information is missing due to some coronial investigations still being open; for those cases, the QSR only has information derived from police reports. While the toxicology has not been performed for 1.5% of cases for various reasons, all other information is included in the QSR. Approximately 4% to 5% of cases are considered 'possible' suicides and therefore not included in the analyses.

## Table 1Queensland Suicide Register documentation for all suspected deaths by suicide,<br/>2013-2015

	2013	2014	2015
Total cases (all probabilities)	682	720	775
Open investigations in NCIS (%)	11 (1.6)	37 (5.1)	31 (3.9)
Toxicology not performed (%)	12 (1.8)	9 (1.3)	11 (1.4)
Cases with complete data (%) $^{\dagger}$	670 (98.3)	676 (93.4)	736 (95.0)
Included in analysis [suicide probability of 'probable' or 'beyond reasonable doubt'] (%)	655 (96.0)	695 (96.5)	735 (94.8)

t cases with 'toxicology not performed' still considered to have complete documentation.

Table 2 Interim Queensland	Interim Queensland Suicide Register suspected deaths by suicide, 2016–2018			
		2016	2017	2018
Total cases (all probabilities)		715	824	818
Included in the analysis [suicide probability of 'probable' or 'beyond reasonable doubt'] (%)		678 (94.8)	803 (97.5)	767 (93.8)

## Section 2

## **Current suicide rates and trends**

### Suicide trends in Queensland

Looking at suicide rates across time helps understand trends, assess the effects of suicide prevention interventions, inform future suicide prevention strategies, target suicide prevention activities to specific people (e.g. age or sex) or places (e.g. remote areas), and predict future suicide numbers and rates. This section details current suicide rates in demographic groups in Queensland.

#### Gender

The QSR and iQSR show that the numbers and rates of suicide have slowly increased in Queensland in the last decade, among both males and females (**Figure 7**). The two highest points in the last decade have been in 2015 and 2017, and both years were followed by decreases in suicide rates. The 2018 ASR decreased by 1 person per 100,000 persons from 2017 to 2018. The rate has generally been increasing since 2006. Suicide rates were consistently higher between 1994 and 2000 and comparable to the current rate in 2001–2004. The 2018 ASR for males decreased by 1.07 males per 100,000 males compared to 2017. The rate has been showing an increasing trend since 2011. The 2018 ASR for females decreased by 0.92 females per 100,000 females from 2017. The female suicide rate does not vary as much as the rate for males.



## Current suicide numbers and rates in Queensland

• In 2018, the iQSR recorded 767 suspected suicides by Queensland residents. This decreased from 803 suspected suicides in 2017.

#### By gender

**Figure 8** shows that males represented 77.2% or 592 of these suspected suicides, while females accounted for 22.8% or 175 of them.

 In ASRs, this means 24.1 male suspected suicides for every 100,000 males in Queensland, 6.9 females for every 100,000 females and 15.3 people for every 100,000 persons<sup>6</sup> (Figure 9). As males accounted for more than 75% of suspected suicides, evidence for interventions that reduce suicides in males is crucial. There is a lack of knowledge for effective suicide prevention interventions for young (Robinson et al., 2018) and old (Okolie, Dennis, Simon Thomas, & John, 2017) males. Some psychological therapies have shown promising effects on suicidal ideation and behaviour (DeCou, Comtois, & Landes, 2019; Gøtzsche & Gøtzsche, 2017), but most studies have included predominantly females; therefore, further testing with males is needed. In the most recent major review of suicide prevention strategies for all populations (Zalsman et al., 2016), the studies of firearm restrictions (discussed in 'Means restriction' in Chapter 5 of this report) and public awareness campaigns showed some reductions in suicidal ideation, plans, and suicides in males.



6 ASRs were calculated using the June 2001 Australian standard population and the estimated resident Queensland population numbers for June 2018. Australian Bureau of Statistics (2019). Australian Demographic Statistics, December 2018. ABS Catalogue number: 3101.0. Estimated Resident Population by Single Year of Age, Queensland. Released 20 June 2019.

### Risk of suicide across the lifespan

## Suicide numbers and rates differ across age groups; therefore, analysis of different age groups helps to target resources in suicide prevention.

- Numbers of suicides were highest in young males aged 20–24.
- Males aged 85 or older have low numbers of suicide but high suicide rates.
- Figures 10 and 11 show that the Queensland suicide prevention sector should prioritise males of all age groups, particularly those aged 20–59.

Interventions need to be age-specific, targeting common factors in specific age groups. To reduce suicides in young Queensland residents, some evidence suggests that large-scale interventions in both clinical and educational settings reduce self-harm and suicidal ideation after the intervention, and to a lesser degree at follow-up (Robinson et al., 2018). Impactful programs in community settings appear to be multi-faceted, place-based approaches (Robinson et al., 2018). Evidence also suggests that schoolbased awareness programs reduce suicide attempts and suicidal ideation (Zalsman et al., 2016).



#### **Figure 10** Numbers of suicides by age group, gender, 2016–2018



### Figure 11 Age-specific suicide rates per 100,000 by age group, by gender, 2016–2018

### Analysis by remoteness

Numbers and rates of suspected suicides varied across regions of Queensland from 2016 to 2018. The following analysis includes three years of the iQSR because annual suicide numbers are low in remote areas.

- For the analysis, 'metropolitan' refers to the ABS classification 'Major Cities of Australia', 'regional' combines the ABS classifications of 'Inner Regional Australia' and 'Outer Regional Australia', and 'remote' includes the ABS classifications of 'Remote Australia' and 'Very Remote Australia'.
- From 2016 to 2018, there were 900 suspected suicides by males in metropolitan areas, 738 in regional areas and 67 in remote areas.
- There were 345 suspected suicides by females in metropolitan areas, 164 in regional areas and 15 in remote areas from 2016 to 2018.
- The estimated rate was highest in males living in remote and regional areas (Figure 10).
- Females living in remote areas had a suicide rate that may have been higher than metropolitan males but had only a few suspected suicides. These suspected suicides occurred in a broad geographical area, due to large remote areas of Queensland being sparsely populated.
- Females in metropolitan and regional areas had lower rates than metropolitan males.

Looking at remoteness helps target suicide prevention activities based on the burden of suicide in different areas. Locally and internationally, higher suicide rates are observed in rural than in metropolitan areas (Hirsch & Cukrowicz, 2014). Understanding and responding to rural and remote suicide requires a multifaceted approach addressing individual, community and societal-level characteristics, including access to services and traditional risk factors like mental health illness (Hirsch & Cukrowicz, 2014). Rural populations are also quite diverse, including farmers, Aboriginal and Torres Strait Islander peoples and CALD communities. A recent systematic review found three studies that suggested web-based cognitivebehaviour therapy (CBT) can reduce depression and anxiety in, and be acceptable to, rural participants (Vallury, Jones, & Oosterbroek, 2015). A more recent intervention study found that participation in a workshop developed for Australian farming and rural communities resulted in increased suicide literacy and confidence to assist others, which were maintained at three-month follow-up interviews (Perceval et al., 2019). Improvements in mental wellbeing also occurred.



#### Figure 12 Age-standardised suicide rates by gender, by remoteness, 2016–2018

## Aboriginal and Torres Strait Islander peoples in Queensland

Suicide rates vary substantially worldwide for First Nation Peoples. The variation is thought to be due to the different impact of colonisation in those places (Pollock et al., 2018). Conversely, cultural connectedness is considered a strength that contributes to resilience in Aboriginal and Torres Strait Islander peoples. Australian research focusing on Aboriginal and Torres Strait Islander peoples remains an imperative because research indicates that suicide rates are generally higher in Aboriginal and Torres Strait Islander peoples (Pollock et al., 2018). Evaluation of suicide mortality data by ethnicity helps to improve the quality and relevance of evidence that informs the community, clinical and public health practice in Aboriginal and Torres Strait Islander people's suicide prevention activities (Pollock et al., 2018).

- As shown in **Figure 13**, numbers of suicides by Aboriginal and Torres Strait Islander people have generally increased over time but have varied largely each year.
- In 2018, there were 33 suspected suicides by Aboriginal and Torres Strait Islander males and 17 by Aboriginal and Torres Strait Islander females.
- The total of 50 Aboriginal and Torres Strait Islander peoples dying by suspected suicide was a decrease of two people compared to 2017.



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**Figure 14** shows that, despite variations, the proportion of Aboriginal and Torres Strait Islander peoples as a proportion of all those dying by suicide in Queensland has generally increased over time. Aboriginal and Torres Strait Islander females accounted for 10.6% of all deaths by suicide by Queensland females in 2018 and males for 6.3% of all deaths by suicide for males in 2018 (**Figure 14**).

Figure 15 shows ASR per 100,000 people, as the number for Aboriginal and Torres Strait Islander females is too small (less than 20 deaths) to present annually. The rate for Aboriginal and Torres Strait Islander peoples in Queensland varies a lot more than the non-Aboriginal and Torres Strait Islander rate as the number of deaths by suicide and the population are smaller. The ASR was lower than the non-Aboriginal and Torres Strait Islander rate in 2008 and 2010. Recent trends indicate that the Aboriginal and/or Torres Strait Islander ASR decreased between 2001 and 2010 and has been relatively stable since it increased in 2011.



Three interventions assessing suicidal ideation using quantitative measures have been conducted with Aboriginal and Torres Strait Islander peoples (Rasmussen, Donoghue, & Sheehan, 2018; Skerrett et al., 2018; Tighe et al., 2017). These interventions have all found some reductions in suicidal ideation or suicide risk assessment frequency, so may contribute to the evidence for interventions with Aboriginal and Torres Strait Islander communities that focus on mobile applications (Tighe et al., 2017), community-controlled health settings (Skerrett et al., 2018), and prison settings (Rasmussen et al., 2018). Two of these three interventions (Skerrett et al., 2018; Tighe et al., 2017) focused on Aboriginal and Torres Strait Islander young people. A 2015 review concluded that community-wide approaches that focus on connectedness, belongingness and cultural heritage may benefit suicide prevention initiatives in Aboriginal communities (Ridani et al., 2015). Recently, new guidelines were introduced to improve assessments for Aboriginal and Torres Strait Islander peoples presenting to hospital with suicidal thoughts (Leckning et al., 2019). Combining the best available evidence with culturally specific individual strategies was also recommended in a review of this field in 2013 (Clifford, Doran, & Tsey, 2013). More analysis and reporting of routinely collected outcome data with suicidal Aboriginal and Torres Strait Islander peoples in Queensland (e.g. data from community-controlled health organisations) is needed to further identify effective interventions.





7 This figure uses the estimated resident population (ERP) for Aboriginal and Torres Strait Islander Queenslanders in the years 2001–2016 and the projected population for 2017 and 2018. The Non-Aboriginal and Torres Strait Islander population for the years 2017 and 2018 was obtained by subtracting the Aboriginal and Torres Strait Islander Queenslanders projected population from the total Queensland ERP.

### Lesbian, gay, bisexual, transgender and intersex (LGBTI)

Multiple reviews have found that LGBTI persons are at an increased risk of suicidal behaviours (Haas et al., 2010; Hottes et al., 2016; Plöderl et al., 2013; Skerrett, Kölves, & De Leo, 2015). A study of the QSR data identified 35 LGBTI deaths in the period from 2000 to 2009 (Skerrett, Kölves, & De Leo, 2014). This study found that depression was mentioned in the cases of LGBTI suicides more than in non-LGBTI deaths by suicide; however, psychotic disorders were present in 12.4% of the comparison group, but not present in LGBTI individuals (Skerrett, Kölves, & De Leo, 2014). Relationship problems and conflict were more frequent in LGBTI individuals than non-LGBTI deaths by suicide (Skerrett, Kölves, & De Leo, 2014). According to the most recent triennial QSR report, 20 deaths by suicide between 2013 and 2015 were by people who were identified as LGBTI: 14 male, 5 female and one person identifying as transgender (Potts, Kõlves, O'Gorman, & De Leo, 2016). QSR figures likely underrepresent the true number of LGBTI suicides, as they rely on police or coronial reports, disclosure by friends or family, or identification of same-sex relationships to identify sexual orientation or gender identity. Between 2016 and 2018, the iQSR recorded 39 suspected suicides by people identified as LGBTI by police forms or AISRAP staff members. Of these 39 people, 23 (59%) were male and 16 (41%) were female. LGBTI-specific crisis services with gender-affirming counsellors are important in LGBTI suicide prevention efforts (Goldbach et al., 2019).

### Risk of suicide across regions covered by Hospital and Health Service catchments

This section focuses on current suicide numbers and rates in catchments covered by Queensland Health's Hospital and Health Services (**Table 3**) to inform policy at the service level and allow each catchment area to take a more localised approach. The information in this section is supplemented by datasheets for each catchment area in the appendix that summarise regional trends by age, sex and circumstantial factors. This data allows for a more tailored approach that can better respond to identified needs for priority groups or specific factors.

- The ASR from 2016 to 2018 was highest in North West Queensland (24 suspected suicides per 100,000 persons each year). This rate is based on only 24 suspected suicides in three years in a small population (30,688 in 2017) so rates can change to a large degree with more or less suspected suicides.
- Additionally, suicide rates in regions covered by Central West Queensland, South West Queensland and Torres and Cape Hospital and Health Services catchments can also have large changes due to few deaths and small populations.

 Of regions with populations over 200,000, Wide Bay had the highest ASR (23.07 suspected suicides per 100,000 people), while Metro North and Metro South had the lowest (12.91 and 13.08). While metropolitan areas have low rates, larger populations account for a greater number of suicides. Metro North and Metro South have the two lowest rates but together account for 37.3% of all suspected suicides in Queensland.

This information shows that suicide numbers and rates for each region must be considered together. Regions with the most suspected suicides have lower rates, while those with the least suspected suicides generally have higher rates. Further, commonalities across regions means that some suicide prevention interventions may reach beyond one region. Some intervention mediums (e.g. web-based health professional training, mobile applications or telehealth) particularly reach beyond individual regions if they are effective and acceptable for health professionals and consumers.

## Table 3Suicides and age-standardised suicide rates per 100,000 people in regions covered<br/>by Hospital and Health Service catchment areas in Queensland, 2016–2018

Hospital and Health Service catchment area	Suspected suicides	2016-2018 ASR
Metro South	443	13.08
Metro North	385	12.91
Gold Coast	271	14.86
Sunshine Coast	173	14.45
Cairns and Hinterland	160	20.94
Wide Bay	138	23.07
Darling Downs	132	16.49
West Moreton	128	15.66
Central Queensland	121	18.85
Townsville	112	15.79
Mackay	99	19.57
North West Queensland	24	24.74
Torres and Cape	16	21.00
South West Queensland	13	18.47
Central West Queensland	7	20.83

## **Section 3**

## Contributing factors and circumstantial issues

This section highlights the demographic and health characteristics of 2,085 people who died by suicide in Queensland between 2013 and 2015. This is from the most recent information from the QSR (95.7% of the information for these years). It identifies factors that may play a role in a person's suicide and helps find target groups and factors for Queensland's suicide prevention strategy.

### **Employment status**

In total, over a quarter (27.3%) of all Queensland residents who died by suicide between 2013 and 2015 were known to be unemployed at the time of their death (**Table 4**). By contrast, the unemployment rate in Queensland was 6.3% in 2013 (Australian Bureau of Statistics, 2018b). In Queensland between 2002 and 2011, suicide rates were 9.7 times higher in unemployed males than employed males and 16.6 times higher in unemployed females than employed females (Kõlves, Potts, & De Leo, 2015). Despite these statistics, unemployed males still had a higher suicide rate (161.1 per 100,000) than unemployed females (61.6 per 100,000). Recent or pending unemployment was identified as a life event in 260 (12.5%) suicides occurring between 2013 and 2015. In total, 627 (30%) of people who died by suicide during this period were either unemployed or had experienced recent or pending unemployment at the time of death. Recent or pending unemployment was identified as a recent life event in 14.2% of males and 6.8% of females who died by suicide. Therefore, policy interventions should consider periods after job loss as a high-risk period for suicide (Milner, Page, & LaMontagne, 2014).

Table 4 Employment status at the time of death, Queensland Suicide	Register, 2013–2	2015
Status	Number	%
Unemployed	569	27.3
Full-time employment	366	17.5
Retired	288	13.8
Employed (unknown mode)	179	8.6
Other not in labour force	107	5.1
Disabled	105	5.0
Part-time or casual employment	95	4.6
Unknown	376	18.0

As people may attend or interact with state or federal departments or employment agencies, opportunities exist for gatekeeper training to identify risk and refer for suicidality and other risk factors, share help-seeking information, or deliver evidence-based psychological interventions like CBT and dialectical behaviour therapy (DBT). Staff from agencies who interact with those who are recently unemployed, particularly males, might benefit from training to screen for risk of suicidal behaviour and refer people appropriately so they can receive interventions to reduce the risk of suicide. Rehabilitation will also assist in helping them to be ready for work.

Table 5 indicates the occupations of those dying by suicide in Queensland between 2013 and 2015 and shows the frequency in the rank of these occupational categories in the 2011 Census in Queensland — clerical and administrative workers with the lowest numbers of suicides and technicians and trades workers with the highest number of suicides. These comparisons highlight the importance of industry-specific suicide prevention activities to address the reasons for increased vulnerability. The rankings in Table 5 suggest that the most emphasis might be placed on interventions with machinery operators and drivers, labourers, and technicians and trades workers.

Table 5 Occupation at time of death, Queensland Suicide Register, 2013–2015					
Status		%	Frequency in QSR (ranked)	Frequency in 2011 Census (ranked)	
Technicians	and trades workers	17.0	1	2	
Labourers		14.4	2	6	
Machinery of	operators and drivers	10.9	3	8	
Professiona	ls	10.6	4	1	
Managers		9.2	5	4	
Community	and personal service workers	8.3	6	5	
Sales worke	ers	5.5	7	7	
Students		3.8		n/a	
Clerical and	administrative workers	2.8	8	3	
Missing job	title	21.3		n/a	

n/a: not applicable.

### Marital status

A third of all people who died by suicide in Queensland were known to be married or in a de facto relationship (**Table 6**).

Table 6	Marital status at time of death, Queensland Suicide Register, 2013–2015		
Status		Number	% in QSR
Married or de facto		711	34.1
Never married or single		533	25.6
Separated		323	15.5
Divorced		133	6.4
Widowed		72	3.5
Unknown		313	15.1

Recent separation and relationship difficulties can trigger suicide attempts (Kazan, Calear, & Batterham, 2016) and suicides (Ide, Wyder, Kõlves, & De Leo, 2010). Separation and relationship difficulties and conflict were recorded as life events in 43.7% of all 2013–2015 suicides occurring in Queensland (**Table 10**). Earlier analyses of the QSR showed the risk of suicide for separated persons to be at least four times higher than any other marital status (Wyder, Ward, & De Leo, 2009). Separated males have a greater risk than separated females of becoming suicidal during the separation process (Kõlves, Ide, & De Leo, 2010). The risk of suicide is quite high for separated males aged 15–24 (Wyder, Ward, & De Leo, 2009).

This may be because males who are prone to shame are more likely to experience shame or develop mental health problems that lead to suicidality during separation (Kõlves, Ide, & De Leo, 2011). Separated males with constant or increasing suicidality over a 6-month period are more affected than non-suicidal separated males by stressful experiences like legal negotiations on obtaining a divorce, experiencing loss and loneliness, losing social networks, and financial difficulties (Kõlves, Ide, & De Leo, 2012). Separated males and females who stay suicidal are more likely to report different mental and physical illnesses (Kõlves, Ide, & De Leo, 2012).

Suicide prevention efforts might include specific strategies to help people, especially males, manage distress related to relationship breakdown. There is a need to monitor both females and males during the separation period for suicidality, mental and physical illnesses, the stressfulness of divorce proceedings, loss and loneliness, social support and financial difficulties. Responsibility for assessing and monitoring these factors could be with any institution that people might come across after separation. The Domestic and Family Violence Death Review and Advisory Board Annual Report 2016–2017 (2017) also concluded that a need exists to better understand the heightened risk of harm existing during separation or while separation is pending. QSR data from 2013-2015 shows that relationship conflict or separation is reported in all age groups, and in 10% or more of all suicides in all age groups (except those aged 10-14 and 85 and older).

## Country of birth

Country of birth is important to check to establish if people from other countries are over-represented in suicide numbers relative to the size of their population. This analysis may inform targeted suicide prevention strategies towards migrants from specific countries.

**Table 7** shows that proportions of those Queensland residents dying by suicide between 2013 and 2015 is slightly higher than the populations in 2011 and 2016 Census years for people from New Zealand, the United Kingdom and Germany. The differences are small and negligible for people born in South Africa, the United States of America, Ireland, the Netherlands and Poland. People born in India, China and South Korea are underrepresented compared to their population. It is known that Asian-, Middle Eastern – and African-born people have lower suicide rates than Australian-born individuals (Ide, Kõlves, Cassaniti, & De Leo, 2012; Kõlves & De Leo, 2015). A review published in 2018 found that some migrant populations and ethnic minorities have a higher risk of suicidal behaviour and death by suicide than native populations (Forte et al., 2018). The most recent study of immigrant suicide rates using the QSR found that overall, suicide rates in migrants have decreased in Queensland from 1991-2009 (Kõlves & De Leo, 2015). However, older overseas-born males (45+) had higher suicide rates than Australian-born males. Risk factors for suicidal behaviour in migrants and ethnic minorities include language barriers, worries about family back home, and family separation (Forte et al., 2018). Possible motives for suicidal behaviour identified in the review included a lack of information on the healthcare system, loss of status, loss of social network and lack of acculturation (Forte et al., 2018). There appears to be a lack of suicide prevention interventions conducted with immigrants in Australia. However, suicide first-aid guidelines for immigrants in Australia were launched on World Refugee Day in 2018 (Mental Health in Multicultural Australia, Mental Health First Aid Australia, & University of Melbourne, 2018).

Table 7 Country of birth, Queensland Suicide Register, 2013–2015						
Country*	Number	% in QSR	% in 2011 in Queensland**	% in 2016 in Queensland**		
Australia	1,650	79.1	79.7	78.7		
New Zealand	112	5.4	4.4	4.3		
United Kingdom	110	5.1	4.9	4.6		
Germany	18	0.9	0.5	0.4		
South Africa	18	0.9	0.8	0.9		
United States of America	11	0.5	0.4	0.4		
India	9	0.4	0.7	1.0		
Ireland	9	0.4	0.3	0.2		
China	8	0.4	0.6	1.0		
Netherlands	8	0.4	0.3	0.3		
Papua New Guinea	7	0.3	0.3	0.3		
Poland	6	0.3	0.1	0.1		
South Korea	5	0.2	0.3	0.4		
Zimbabwe	5	0.2	0.2	0.2		
Other countries (total)	109	5.5	6.5	7.2		

\*People from countries of birth with five or more deaths by suicide are reported. \*\*2011 and 2016 Australian Censuses.

## Mental health conditions

Overall, half (50.8%) of all people who died by suicide between 2013 and 2015 were known to have one or more mental health conditions. Depression was the most common conditions observed (**Table 8**) followed by anxiety and substance use disorders. Therefore, suicide risk should be considered across all mental health and substance use conditions, not only depression.

To reduce deaths by suicide, suicide prevention interventions should have elements in different healthcare settings and offered by different providers (Hofstra et al., 2019), where people with mental health conditions might present. As mentioned earlier, this is a multi-level intervention, where the individual elements work together to increase the effectiveness of suicide prevention efforts. The largest effects of suicide prevention interventions come from studies of patients admitted to mental health wards in general hospitals and community-level interventions (Hofstra et al., 2019). There are small effects for suicide prevention interventions in emergency room settings and worse outcomes than control groups for interventions in outpatient specialty mental health settings (Hofstra et al., 2019). A recent review of the effectiveness of suicide prevention interventions delivered by general practitioners did not recommend the roll-out of general practitioner suicide prevention initiatives (Milner et al., 2017).

QSR data from 2013 to 2015 showed that there was evidence of an untreated mental health condition for 817 persons, 39.2% of all those dying by suicide. Of those who had no known mental health conditions, there was evidence for an untreated mental health condition in 495 persons (48.4% of this group). Almost a third (29.9%) had seen a psychologist in the last three months for a mental health condition.

Table 8 Mental health conditions, Queensland Suicide Register, 2013–2015					
Diagnosis	Number	%*			
No known mental health condition	1,027	49.2			
Unipolar depression	791	37.9			
Anxiety conditions	246	11.8			
Substance use conditions	171	8.2			
Psychotic conditions	118	5.7			
Bipolar disorders	99	4.7			
Personality disorders	53	2.5			

\*390 people (18.7%) had multiple conditions.

### **Physical conditions**

Over half (51.2%) of people dying by suicide in Queensland between 2013 and 2015 were known to have one or more physical conditions at the time of their death (Table 9). The most common conditions were circulatory conditions and metabolic or nutrition conditions. The group with physical health conditions was on average 13 years older than the group without physical health conditions (51 versus 38). Over a guarter (28.1%) of all those who died by suicide had multiple physical health conditions. Having multiple physical health conditions greatly increases suicide risk (Ahmedani et al., 2017). Disabilities that limit activity (Fässberg et al., 2016) or result in physical pain (Stubbs, 2016) also both increase suicide risk. Thus, a need exists to think of suicide risk more broadly, outside mental health services. There is a potential benefit in assessing suicide risk and delivering interventions during physical health services to people with life-limiting, chronic or painful conditions that impair

functioning and quality of life. Of the 2,085 people who died by suicide between 2013 and 2015, 406 (19.5%) had seen a doctor in the last three months for a physical condition.

Over a quarter (593, 28.4%) had both mental health and physical conditions. It is common for people who attempt suicide one or more times to have both physical and mental health conditions (Blasco-Fontecilla et al., 2016). Risk is particularly high when mental illness develops after a significant physical illness (Qin, Hawton, Mortensen, & Webb, 2014). This highlights the need for greater collaboration between general and mental health services, as mental health treatment shortly after physical illness reduces suicide risk (Qin, Hawton, Mortensen, & Webb, 2014). Therefore, there is a need to screen and treat hopelessness, suicidality and mental health disorders during physical illness (Qin, Hawton, Mortensen, & Webb, 2014).

Table 9 Physical conditions, Queensland Suicide Register, 2013–2015		
Conditions	Number	%*
No known physical conditions	1,018	48.8
Circulatory conditions (e.g. heart condition)	325	15.6
Metabolic or nutritional conditions (e.g. obesity)	289	13.9
Musculoskeletal conditions	177	8.5
Trauma near the time of death	167	8.0
Pain or chronic pain	159	7.6
Digestive system conditions	147	7.1
Respiratory conditions	142	6.8
Cancers	123	5.9
Neurological conditions	118	5.7
Infectious diseases	63	3.0
Urinary-genital conditions	62	3.0
Sensory conditions	54	2.6
Sleep conditions	51	2.4
Pregnancy and childbirth	9	0.4

\*585 people (28%) had multiple physical conditions.

## Life events before suicides

In 2013 to 2015, 97.8% of people who died by suicide reportedly experienced at least one recent adverse life event that may have contributed to their death (**Table 10**). Over three-quarters (77.8%) had experienced two or more, and 46.8% had experienced three or more adverse life events. In terms of relationship problems or conflict, 52.4% reportedly experienced either relationship problems or relationship, family, or interpersonal conflict.

Of the life events captured, relationship separation and conflict were the most frequent. In all, 43.7% of suicides reportedly occurred during relationship difficulties (**Table 10**). Financial problems were the next most frequent life event recorded (17.3%), followed by interpersonal or familial conflict (16.5%), bereavement (12.9%), recent or pending unemployment (12.5%), pending legal matters (11.1%) and work or school problems (9.1%).

Males dying by suicide were more likely than females to reportedly experience relationship separation (29.8% vs 21%) but not conflict (15.8% vs 16.4%); pending legal matters (12.7% vs 5.8%); financial problems (19.0% vs 11.8%); recent or pending unemployment (14.2% vs 6.8%); and child custody disputes (5.9% vs 4.6%).

Females dying by suicide were more likely than males to have reportedly experienced spousal bereavement (4.2% vs 2.4%), family conflict (17.2% vs 8.4%), childhood traumas (7.2% vs 3.6%), and sexual abuse (5% vs 1.6%). There was little difference in the proportions of males and females reportedly experiencing work or school problems that were not financial (9.1% vs 9.2% respectively). The large amount of people, particularly males, who died by suicide reportedly during relationship separation or conflict, reinforces the need to place greater focus on relationshiprelated supports and services.

Table 10 Life events before deaths by suicide, Queensland Suicide Register, 2013–2015					
Life events before suicides	Number	%*			
Relationship problems — separation	577	27.7			
Financial problems	361	17.3			
Relationship problems — conflict	333	16.0			
Recent or pending unemployment	260	12.5			
Pending legal matters	231	11.1			
Conflict — familial	219	10.5			
Work or school problems (not financial)	190	9.1			
Bereavement — family (excludes spouse)	151	7.2			
Conflict — interpersonal	126	6.0			
Child custody dispute	116	5.6			
Childhood trauma	93	4.5			
Bereavement — spouse	59	2.8			
Sexual abuse	51	2.4			
Bereavement — friends or pets	46	2.2			
Bereavement — multiple**	15	0.7			

\*1,624 people (77.9%) reportedly experienced multiple life events. \*\*Family, spouse, friends or pets.

## History of suicidality

During 2013–2015, over half of people (55.3%) who died by suicide in Queensland were known to have a history of suicidality, with almost a third (30.0%) having made a previous suicide attempt in their lifetime and one in six (16.1%) having attempted suicide in the year before death (**Table 11**). Notably, 443 people (38.4%) with a history of suicidality in their lifetime had no known mental health diagnoses. Nevertheless, there was evidence of an untreated mental health condition recorded for 268 of these 443 persons (60.5%).

The research suggests opportunities to reduce suicide through aftercare and support for people experiencing suicide ideation or making suicide attempts. Importantly, interventions with at-risk people that directly discuss suicidal thoughts and behaviours, as opposed to those focusing only on depression and anxiety are more effective immediately after treatment and in the long-term (Meerwijk et al., 2016). In a systematic review, brief contact interventions were found to be a potentially promising intervention for reducing suicidality among attempters, with further trials recommended (Milner et al., 2015). With further evidence from recent studies, a new analysis found that the World Health Organization's Brief Intervention and Contact program was associated with lower odds of suicide (Riblet, Shiner, Young-Xu, & Watts, 2017). These interventions work by increasing social support and suicide prevention literacy (Milner et al., 2016). An effective but more intense intervention after suicide attempts is CBT, which can halve the risk of repeated suicide attempts (Gøtzsche & Gøtzsche, 2017). Unfortunately, the effects of gatekeeper training programs for the general public remain unclear (Yonemoto, Kawashima, Endo, & Yamada, 2019), with only some limited evidence found in studies with weaker study designs.

Stigma or geographical isolation may be a barrier for seeking face-to-face treatment; therefore, a growing number of studies test online and mobile apps for reducing suicidal behaviour (de la Torre et al., 2017; Larsen, Nicholas, & Christensen, 2016; Melia et al., 2018; Witt et al., 2017). While they can reduce suicidal ideation, it is unknown if this is clinically meaningful and they have not decreased the number of self-harm or attempted suicides (Witt et al., 2017). Further evaluation is needed before they can be recommended (Witt et al., 2017).

Table 11 Suicidal behaviour, Queensland Suicide Register, 2013–2015		
Suicidality	Number	%
Any suicidality (intent or attempt) in lifetime	1,153	55.3
Communicated suicide intent in lifetime	918	44.1
Attempted suicide in lifetime	625	30.0
Any suicidality (intent or attempt) in the past year	880	42.2
Communicated suicide intent in the past year	738	35.4
Attempted suicide in the past year	337	16.1

## **Section 4**

## Suicide methods and sites

### Suicide methods

Monitoring the circumstances of suicides can help find opportunities for prevention, including through means restriction. Table 12 shows the distribution of the main suicide methods used by sex and overall. In 2013–2015, over half of all suicides in Queensland were by hanging (Table 12). Other common methods included poisoning by drugs (16.4%); poisoning by other means (6.8%); firearms and explosives (6.0%); and jumping from heights (4.4%). As Table 12 shows, there were also differences depending on sex, with males using hanging, firearms, and cutting and piercing objects more, while females used poisoning by drugs as a method more than males. People are thought to choose suicide methods based on their availability and social and cultural acceptability (Kõlves, McDonough, Crompton, & De Leo, 2018; Large & Nielssen, 2010).

**Figure 16** shows that most suicide methods by males have relatively low ASRs, except for hanging. Most also show a gradual decline over time, which is most obvious for poisoning by other means.<sup>8</sup> In contrast, the ASR for hanging has increased over time since 1990, signalling the need for interventions that respond specifically to the circumstances in which this suicide takes place.

**Figure 17** shows suicide methods for females. The scale on the left ranges from 0 to 4 females per 100,000 persons, while in the figure for males the scale ranges from 0 to 18 males per 100,000 persons. Hanging and poisoning by drugs increase over time for females, while poisoning by other means declined over time. Firearms and explosives have declined to none in 2015. The increase in hanging as a method in recent years suggests the need to further investigate the circumstances surrounding hangings.

Table 12 Suicide methods, Queensland Suicide Register, 2013–2015						
Method	Males	%	Females	%	Persons	%
Hanging	929	58.6	215	43.1	1144	54.9
Poisoning by drugs	171	10.8	171	34.0	342	16.4
Poisoning by other means	118	7.4	23	4.6	141	6.8
Firearms and explosives	128	8.1	6	1.0	134	6.4
Jumping from height	65	4.1	26	5.2	91	4.4
Other methods	175	11.0	58	12.0	233	11.2
Totals	1,586	100.0	499	100.0	2,085	100.0

8 'Poisoning by other means' refers to the International Classification of Diseases (ICD) 10 codes and for males is mostly (83.7%) related to carbon monoxide poisoning.



<sup>\*</sup>ASRs for the years 2000–2011 come from Kõlves, McDonough, Crompton, & De Leo (2018).



Figure 17 Age-standardised suicide rates of suicide methods in Queensland females, 2000-2015\*

\*ASRs for the years 2000–2011 come from Kõlves, McDonough, Crompton, & De Leo (2018).

#### **Means restriction**

Means restriction (restricting the methods of suicide) is one of the most effective ways to prevent suicide (Yip et al., 2012; Zalsman et al., 2016). However, means restriction is only possible for some of the less common suicide methods (e.g. analgesics, barbiturates, jumping) and it is almost impossible to prevent hanging with means restriction. People in Queensland who use hanging as a method are less likely to have a mental or physical condition or leave a suicide note (Kõlves, McDonough, Crompton, & De Leo, 2018). They are more likely to reportedly have had interpersonal conflict, prior alcohol consumption, financial problems or recent unemployment, indicating that the act may be due to reactions to recent life events (Kõlves, McDonough, Crompton, & De Leo, 2018).

In total, there were 33 (1.6% of all) deaths by suicide (69.7% hanging) in hospitals and prisons in Queensland between 2013 and 2015. Means restriction for hanging can prevent suicide in institutional settings like hospitals, prisons and police custody (Gunnell et al., 2005). More efforts are needed to prevent deaths by suicide in these settings.

Drug or medicine overdose is the second most common suicide method in Queensland. Smaller analgesic packets and withdrawing toxic analgesics can both reduce suicides (Zalsman et al., 2016). Analgesics accounted for 44 (2.1%) of all deaths by suicide in Queensland between 2013 and 2015. Suicide rates and self-poisonings also decreased in Denmark after restrictions on selling and prescribing barbiturates (Nordentoft, Qin, Helweg-Larsen, & Juel, 2007). In Queensland between 2013 and 2015, 22 people (1.1%) died by suicide using barbiturates in Queensland. Both analgesics and barbiturates could be used in combination with other drugs. Multiple drug toxicity was a suicide method for 205 people, 9.8% of all people dying by suicide in this period. Further analysis of QSR data will indicate to what extent analgesics and barbiturates were involved in deaths by suicide due to multiple drug toxicity.

Motor vehicle exhaust gas, most frequent under 'poisoning by other means' accounted for 85 (4.1%) of suicides in Queensland from 2013 to 2015. This has decreased from 7.1% of deaths by suicide in Queensland between 2011 and 2013. Using catalytic converters in car exhaust systems is an effective prevention method (Mott et al., 2002). Australia introduced national laws in 1986 and 1999 to lower permissible levels of carbon monoxide (CO) emissions, and fewer older cars before these dates on the road are associated with less motor vehicle exhaust gas suicides (Studdert, Gurrin, Jatkar, & Pirkis, 2010). Although this suicide method is declining, some policies might further reduce risk by providing incentives for purchasing newer cars with lower carbon monoxide emissions.

Suicide by firearms is the fourth most common suicide method. A recent analysis of deaths by suicide in Queensland found that rates for all suicides and firearms and explosives had decreased significantly for males from 2000 to 2015 (Kõlves, McDonough, Crompton, & De Leo, 2018). Most firearm suicides occurred in regional areas (61.1%); followed by major cities (26.7%); and remote areas (12.2%). When purchasing firearms, background checks for a history of mental health problems are linked to lower suicide rates (Sen & Panjamapirom, 2012) and reduced male suicides in some age groups (Rodríguez Andrés & Hempstead, 2011). Of those dying by suicide due to firearms in Queensland between 2013 and 2015, 41% had a mental health condition. However, these mental health conditions may have emerged after obtaining firearms.

#### **Alternatives to means restriction**

The circumstances in which hangings occur suggest the need for interventions that could manage suicidal crises and help to increase problem-solving and impulse control skills (De Leo, Evans, & Neulinger, 2002). DBT is an example of a skills training intervention focusing on regulating emotions and tolerating distress. It reduces self-directed violence and frequency of mental health crisis service usage (DeCou, Comtois, & Landes, 2019). Another treatment is the Collaborative Assessment and Management of Suicidality (CAMS) (Andreasson et al., 2016). Although both are intensive treatments, virtual methods for CAMS for emergency department staff are being developed and evaluated (Dimeff et al., 2018).

## The role of alcohol intoxication before suicide

Of those with available and reliable toxicology reports for alcohol, over a third (41.4%) of people (**Table 13**) had some blood alcohol concentration. It is known that acute use of alcohol increases the risk of suicide attempts and deaths (Borges et al., 2017; Norström & Rossow, 2016). Additionally, suicidal behaviour is often accompanied by alcohol abuse and alcohol intoxication, and higher population drinking estimates are typically associated with higher suicide rates (Norström & Rossow, 2016). A recent review found that restrictive alcohol policies generally reduced suicides and decreased the level of alcohol involvement in suicides (Xuan et al., 2016). This review found no Australian studies. Possible interventions from this review, not already existing in Queensland, include reduced alcohol outlet density and further restricting alcohol availability. These policies would need tailoring to social, demographic, cultural, economic and political context in Australia (Allamani, Beccaria, & Einstein, 2017) and target the specific drinking problems linked with suicidality (Allamani, 2018).

Table 13 Blood alcohol concentration, Queensland Suicide Register, 2013–2015				
BAC	Likely effect <sup>9</sup>	Number	%	
None detected	Not applicable	1,097	53.5	
0.01-0.05g%	Mild speech, memory, attention impairments.	235	11.5	
	Sleepiness can begin			
0.06-0.15g%	Speech, memory, attention further impaired.	307	15.0	
	Increased risk of injury to self.			
0.16-0.30g%	Judgement and decision-making dangerously impaired	220	10.7	
0.31–0.45g%	Loss of consciousness, risk of alcohol poisoning, suppression of vital life functions	12	0.6	
Blood toxicology	not performed or not available.	180	8.8	
Total		2,051		

Note. This table excludes 34 unreliable blood alcohol concentration results.

Note. The total percentage is slightly over 100.0 due to rounding to one decimal place.

9 Likely effects taken from: National Institute on Alcohol Abuse and Alcoholism. (2015). Publications I Alcohol Overdose: The Dangers of Drinking Too Much. Retrieved June 6, 2018, from https://pubs.niaaa.nih.gov/publications/AlcoholOverdoseFactsheet/Overdosefact.htm

### Suicide locations

Table 14 shows the locations of deaths by suicide from 2013 to 2015. Most suicides in Queensland occurred in peoples' homes (75%). Some 25% of deaths by suicide occurred outside residences. Several interventions target locations that can reduce suicide. Interventions, with evidence of reduced rates, at frequently used locations include structural barriers, closed-circuit television, help-seeking messaging (e.g. crisis telephones and displaying crisis telephone numbers) and interventions that increase the chances of a third party intervening like police or staff presence, combined with gatekeeper training (Pirkis et al., 2015). Jumping from a height is

often a method at frequently used locations for deaths by suicide. For example, an analysis of the QSR on suicide from the Gateway Bridge in Queensland found a 53% decrease in the three years after barriers were erected on the bridge (Law, Sveticic, & De Leo, 2014). There was no immediate increase in suicide by jumping from neighbouring hotspots like the Story Bridge or other locations in Brisbane. A review of nine studies on frequently used jumping locations found an 86% reduction in jumping suicides per year at sites after structural interventions like barriers and safety nets (Pirkis et al., 2013).

Table 14 Suicide sites, Queensland, 2013–2015		
Suicide site type	Number	%
Own/other's residence	1,565	75.1
Urban space (e.g. car park, roadside)	140	6.7
Bushland/national park/reserve	94	4.5
Urban parkland/sports ground	59	2.8
Hotel/motel	43	2.1
Own/other's workplace	29	1.4
River/lake/ocean/beach	27	1.3
Bridges	31	1.5
Institutions (hospitals or prisons)	33	1.6
Non-urban space (e.g. quarry, paddock)	22	1.1
Rail-related	22	1.1
Building (not described above)	14	0.7
Mountain/cliff	6	0.3
Total	2,085	

Note. The total percentage is slightly over 100.0 due to rounding to one decimal place.

## Section 5

## Deaths by suicide of older adults

## Why is this important?

The aim of this section is to present what is known about the suicides of older adults aged 65 and over in Queensland. This is important as life expectancy is increasing and so is the number of Australians aged 65 and older (Australian Bureau of Statistics, 2017a). Suicide in old age can be considered as a rational decision (De Leo & Arnautovska, 2016). However, all people should still receive suicide prevention interventions (Mishara & Weisstub, 2018). People who die prematurely may have regained the will to live, despite their circumstances (e.g. age, bereavement), if interventions had been in place (Mishara & Weisstub, 2018). There is also a need to counter the stigma and ageism about old age that exists even in health professionals (Sao Jose et al., 2017; Schulze, 2007) and may influence end-of-life choices.

There has been strong international interest in suicides by older adults, with three reviews being published in the last decade (Fässberg et al., 2016; Lapierre et al., 2011; Okolie et al., 2017). Recently, AISRAP researchers have published several papers about suicide and its prevention in older adults (De Leo, 2018; De Leo, Draper, Snowdon, & Kõlves, 2013; De Leo & Kõlves, 2017; Koo, Kõlves, & de Leo, 2017a, 2017b, 2019). Three of the main analyses used QSR information.

## What do we know about suicides in older adults in Queensland?

The first analysis by Koo, Kõlves, and De Leo (2017a) compared 978 suicides of persons aged 65 years and over to 3,841 suicides of persons aged 35-64 in Queensland during 2000–2012. This study found that, in Queensland, the average annual ASR for older adults was 15.27 per 100,000 persons, compared to 18.77 in middle-aged adults during the study period. There were no significant changes across time (2000-2012) for older adults. Suicide methods differed by sex and age group. Older males most frequently used firearms while older females used drug poisoning. Older adults who died by suicide were more likely to be male, widowed, living alone or in a nursing home, and not in the workforce compared to middle-aged adults. Older adults were less likely to have diagnosed mental health conditions, untreated mental health conditions, and consultations with mental health professionals three months before death than middleaged adults. They also experienced more somatic illnesses and bereavement than middle-aged adults. Older adults also had more attention to suicide in the media than middle-aged adults (Koo, Kõlves, & De Leo, 2017a).

The second study (Koo et al., 2017b) further focused on older adults who died by suicide and compared differences in three specific age groups; the young-old (65-74 years), middle-old (75-84 years), and oldest-old (85 years and over). It used the same information from the QSR as the first analysis (i.e. 2000-2012). Suicide rates increased with age for males, but not for females. Hanging and firearms were the main suicide methods used in all groups. However, as age increased, suffocation and drownings increased, while firearms decreased. Mental health problems, suicidal behaviour, legal and financial stressors and relationship problems decreased significantly with age, but physical conditions and bereavement increased. Over a third of people who died by suicide in all age groups had communicated suicidal intent in the last 12 months and lifetime.

The final study (Koo, Kõlves, & de Leo, 2019) investigated characteristics of suicide methods in 1,086 older adults aged 65 years and older who died between 2000 and 2013. The main suicide methods were hanging (21.5%); firearms and explosives (20.9%); drug poisoning (18.5%); other poisonings (mainly carbon monoxide) (12.6%); suffocation (8.5%); and drowning (6%). The following comparisons look at the characteristics of people using a specific method compared to all other methods. Those who died by suicide using hanging were more likely to be males, more likely to have a mental illness, and more likely to have had a prior suicide attempt. Those who died by firearms and explosives were more likely to be males. Australian born, living in rural and remote areas. and less likely to have a mental illness or previous suicide attempts. Those who died by drug poisoning were more likely to be females, experience interpersonal conflict, and live in urban areas. Similarly, those who chose suffocation were more likely to be aged 75 years and older, leave a suicide note, experience physical illness, and pay attention to suicide in the media. They were less likely to be male, live in remote areas, and experience conflict. Females and those with past suicide attempts were more likely to die by drowning.

### What can we do?

There is limited evidence of effective interventions with older adults. A 2017 systematic review of 21 studies of older adult suicide prevention programs found that effective interventions included multifaceted primary care-based depression screening and management programs; treatment interventions (pharmacotherapy and psychotherapy); telephone counselling; and communitybased programs that included education, gatekeeper training, depression screening, group activities, and referral for treatment (Okolie et al., 2017). The review also found that some interventions reduced the risk of suicide particularly among older females (Okolie et al., 2017). Only one intervention reduced suicides in elderly males: a 10-year program that included depression screening, followed by mental health care or treatment and education on depression (Oyama, Koida, Sakashita, & Kudo, 2004). Suicidal deaths decreased by 73% in males and 76% in females aged 65 and over in the geographic area receiving the intervention.

De Leo and Arnautovska (2016), in a chapter on suicide in older adults, concluded that actively promoting adaptation to age-related conditions and changes to ensure successful ageing might best prevent suicidal behaviour in older adults. Lapierre et al., (2011) also suggested that innovative strategies were needed to improve resilience and positive ageing such as training and using family and community gatekeepers and using telecommunications with older adults who might be vulnerable. The most recent review noted that multifaceted interventions targeted towards primary care physicians and populations, and at-risk elderly individuals in the community may prevent suicidal behaviour (Okolie et al., 2017). In primary care settings, routine screening may focus on living conditions, depression and suicidal ideation (De Leo & Arnautovska, 2016).

Regarding methods, the increases in suffocation mentioned earlier might be reduced through means restriction in settings where other people care for older adults. Preventing deaths by hanging in older adults may only be possible with population-wide strategies involving early detection, early intervention and long-term followup support (Oyama & Sakashita, 2016). Health providers can be trained to screen and conduct a suicide risk assessment and assess the psychological impact of physical illnesses (Koo, Kõlves, & De Leo 2017b). Health care providers need to screen for suicidal ideation when treating physical illnesses as older adults are less likely to communicate suicidal ideation (Koo, Kõlves, & De Leo 2017a). While the youngest-old may have mental health conditions, the oldest-old may have physical conditions.

Inappropriate media practices that glamourise suicide and increase the risks of copycat suicides have stronger effects in older adults than middle-aged adults (Stack, 2000), so monitoring and feedback on media reporting of suicide is important. Publicity and circulation of information on suicide methods are linked to increased suicides using the methods described (e.g. Marzuk et al., 1993; van den Hondel, Buster, & Reijnders, 2016). This indicates the need for regulatory efforts to reduce the accessibility of this information. Increasing internet usage, from 65% in 2011 to 79% in 2015 among Australian older adults aged 65 years and older, needs to be carefully considered in suicide prevention activities (Australian Communications and Media Authority, 2016), although controlling this appears to be difficult (Koo, Kõlves, & De Leo, 2019). In Australia, the media, those in the mental health and suicide prevention sector, those at universities, in film industries, police and court staff can be continuously referred to the *Mindframe*<sup>10</sup> guidelines for the safe portrayal of deaths by suicide.

Due to bereavement, social support and companionship initiatives are critical to prevent suicides in older adults (Koo, Kõlves, & De Leo 2017b). Fortunately, suicide prevention activities for those aged 65 and older do target social isolation (Lapierre et al., 2011). Policymakers and governments can increase initiatives to further social support and reduce isolation (Lapierre et al., 2011). One example is the Brisbane City Council's *Growing Older and Living Dangerously (GOLD)*<sup>11</sup> program, which provides free or low-cost activities for senior residents. These community programs need to promote belonging, a sense of usefulness, social integration and social status (De Leo & Arnautovska, 2016).

10 Accessible at https://mindframe.org.au/industry-hubs/for-media

11 Accessible at https://www.brisbane.qld.gov.au/things-to-see-and-do/outdoor-activities/active-and-healthy-events

## **Section 6**

# Other suicide research, evaluations and reports in Queensland and Australia

The following research programs, evaluation projects and data sources have more information that may be of interest to readers seeking more information about suicide in Queensland. Links to further information are provided where available.

#### **Queensland Suicide Prevention Plan**

Queensland Mental Health Commission is developing a renewed suicide prevention plan for Queensland. Information on the plan can be found at:

<u>qmhc.qld.gov.au/strategic-planning/action-plans/suicide-</u> prevention

(last accessed on 26th August 2019)

#### Suicide Prevention in Health Services Initiative

The Suicide Prevention in Health Services Initiative is a Queensland Government initiative to help increase the capacity of health systems to respond and care for people at risk of suicide.

https://clinicalexcellence.Queensland.gov.au/priority-areas/ service-improvement/suicide-prevention-health-servicesinitiative

(last accessed on 26th August 2019)

## Australian Bureau of Statistics Causes of Death statistics

The *Causes of Death* statistics provide numbers and rates of deaths for all causes of death in Australia.

<u>abs.gov.au/Causes-of-Death</u> (last accessed on 26th August 2019)

Australian Bureau of Statistics (Australian Bureau of Statistics, 2018a), *Catalogue 3303.0* — *Causes of Death, Australia, 2017.* Released on 26 September 2018 and accessible at:

abs.gov.au/ausstats/abs@.nsf/ latestProducts/3303.0Media%20Release62017 (last accessed on 26th August 2019)

Suicide data is downloadable in a Microsoft Excel document and a high-level overview accessible at:

abs.gov.au/ausstats/abs@.nsf/Lookup/ by%20Subject/3303.0~2017~Main%20 Features~Intentional%20self-harm,%20key%20 characteristics~3 (last accessed on 26th August 2019)

#### **National Coronial Information System**

The National Coronial Information System (NCIS) is an online database that compiles coronial reports across all states and territories on deaths reported to a coroner, and the coroner's findings and recommendations.

ncis.org.au/

(last accessed on 26th August 2019)

#### Centre of Best Practice in Aboriginal and Torres Strait Islander Suicide Prevention

The Centre of Best Practice in Aboriginal and Torres Strait Islander Suicide Prevention (CBPATSISP) aims to reduce the causes, prevalence and impact of suicide on Indigenous individuals, families and communities.

<u>cbpatsisp.com.au</u> (last accessed on 26th August 2019)

The final report of the Aboriginal and Torres Strait Islander Suicide Prevention Evaluation Project: Solutions that Work, is accessible from:

atsispep.sis.uwa.edu.au/\_\_data/assets/pdf\_\_ file/0006/2947299/ATSISPEP-Report-Final-Web.pdf (last accessed on 26th August 2019)

Other CBPATSISP Resources accessible here:

atsispep.sis.uwa.edu.au/resources (last accessed on 26th August 2019)

#### **Suicide Prevention Hub**

The Suicide Prevention Hub is an online resource supporting communities to find evaluated suicide prevention programs and services. All programs and services listed on the hub have been independently assessed by expert reviewers.

https://suicidepreventionhub.org.au (last accessed on 26th August 2019)

#### **Queensland Injury Surveillance Unit**

The Queensland Injury Surveillance Unit (QISU) collects urban injury data (including incidents occurring from intentional self-harm) from 16 hospitals in Queensland across seven Hospital and Health Service regions.

<u>qisu.org.au</u> (last accessed on 26th August 2019)

#### **Queensland Child Death Register**

The Queensland Family and Child Commission runs a register of all child deaths in Queensland based on notifications from the Registrar of Births, Deaths and Marriages and details of all child deaths reported to the Coroners Court of Queensland. They also collect information from coronial reports and other sources on the risk factors and life circumstances present in young people who die by suicide.

gfcc.gld.gov.au/kids/preventing-child-injury-death/childdeath-reports-data (last accessed on 26th August 2019)

Annual report — Deaths of children and young people Queensland 2017-2018 Chapter 6 – Suicide is accessible here:

https://www.qfcc.qld.gov.au/sites/default/files/QFCC\_ Child\_Death\_Annual\_Report\_2017-18.PDF (last accessed on 26th August 2019)

#### **Domestic and Family Violence Death Review and Advisory Board**

This board reviews domestic and family violence deaths in Queensland to recommend how future similar deaths might be prevented, through changes in legislation, policies, practices, services, training, resources and communication.

courts.Queensland.gov.au/courts/coroners-court/reviewof-deaths-from-domestic-and-family-violence (last accessed on 26th August 2019)

#### **Partners in prevention: Understanding** and enhancing first responses to suicide crisis situations

This project, led by the Queensland Forensic Mental Health Service, Metro North Hospital and Health Service, is a result of the Queensland Suicide Prevention Action Plan 2015–17, with the aim of better understanding the characteristics of individuals who made suicide-related calls to emergency services, the types of responses that could best serve their needs, the capacity of the services to deliver the responses, and how to improve continuity of care following a suicide crisis that results in a call to emergency services. Its anticipated completion date is December 2019.

https://gcmhr.ug.edu.au/research-streams/forensic-mentalhealth/forensic-mental-health-staff/ (last accessed on 26th August 2019)

More information on the outcomes achieved to date are available from page 12 in this document:

https://clinicalexcellence.gld.gov.au/sites/default/files/docs/ priority-area/service-improvement/suicide-preventionhealth-services-initiative/suicide-prevention-yr-2-progressreport.pdf

(last accessed on 26th August 2019)

#### **Trends in Hospitalised Injury**

The Australian Institute of Health and Welfare (AIHW: Pointer, 2018) report Trends in hospitalised injury, Australia 1999–00 to 2014–15 includes a chapter on intentional self-harm (Chapter 11). The chapter presents information on patients who were admitted to hospital because of injury due to intentional self-harm. This includes non-suicidal self-injury, suicide attempts and deaths by suicide.

The report is available here:

aihw.gov.au/getmedia/03743fe9-1ed1-4fe8-9a66-0808405be319/aihw-injcat-190.pdf.aspx?inline=true (last accessed on 26th August 2019)

### Surveillance

#### The Queensland Suicide Register

Kölves, K., McDonough, M., Crompton, D., & De Leo, D. (2018). Choice of a suicide method: Trends and characteristics. *Psychiatry Research, 260*, 67–74. <u>https://doi.org/10.1016/j.psychres.2017.11.035</u> (last accessed on 26th August 2019)

This paper examined the most frequent suicide methods in Queensland from 2000 to 2015 and the characteristics of people by choice of suicide method for the years 2000 to 2013.

Koo, Y. W., Kõlves, K., & de Leo, D. (2017a). Suicide in older adults: a comparison with middle-aged adults using the Queensland Suicide Register. *International Psychogeriatrics*, 29(3), 419–430. <u>https://doi.org/10.1017/S1041610216001848</u> (last accessed on 26th August 2019)

Koo, Y. W., Kõlves, K., & de Leo, D. (2017b). Suicide in older adults: differences between the young-old, middle-old, and oldest old. *International Psychogeriatrics*, 29(8), 1297–1306. <u>https://doi.org/10.1017/S1041610217000618</u> (last accessed on 26th August 2019)

Koo, Y. W., Kõlves, K., & de Leo, D. (2019). Profiles by suicide methods: an analysis of older adults. *Aging & Mental Health*, 385–391. <u>https://doi.org/10.1080/13607863.2017.1411884</u> (last accessed on 26th August 2019)

#### The Victorian Suicide Register

The Victorian Suicide Register is another state-based suicide surveillance system that has detailed information on all people who died by suicide in Victoria from the year 2000 onwards.

Sutherland, G., Milner, A., Dwyer, J., Bugeja, L., Woodward, A., Robinson, J., & Pirkis, J. (2018). Implementation and evaluation of the Victorian Suicide Register. *Australian and New Zealand Journal of Public Health, 42*(3), 296–302. https://doi.org/10.1111/1753-6405.12725

(last accessed on 26th August 2019)

This open-access paper describes the implementation and evaluation of the Victorian Suicide Register.

Clapperton, A., Newstead, S., Bugeja, L., & Pirkis, J. (2018). Differences in Characteristics and Exposure to Stressors Between Persons With and Without Diagnosed Mental Illness Who Died by Suicide in Victoria, Australia. *Crisis: The Journal of Crisis Intervention and Suicide Prevention*, 40(4), 231–239. <u>https://doi.org/10.1027/0227-5910/a000553</u> (last accessed on 26th August 2019)

This paper used information from the Victorian Suicide Register about 2,839 persons who died by suicide in Victoria between 2009 and 2013. It examined differences in factors associated with suicides between people with and without mental illness.

Clapperton, A., Bugeja, L., Newstead, S., & Pirkis, J. (2018). Identifying Typologies of Persons Who Died by Suicide: Characterizing Suicide in Victoria, Australia. *Archives of Suicide Research*, 1–16. <u>https://doi.org/10.1080/13811118.2018.1507855</u> (last accessed on 26th August 2019)

This study used information from the Victorian Suicide Register on the same 2,839 persons who had died by suicide in Victoria, to see if people dying by suicide formed groups based on their demographic, psychosocial, mental and physical health factors and exposure to stressors.

Clapperton, A., Newstead, S., Bugeja, L., & Pirkis, J. (2019). Relative risk of suicide following exposure to recent stressors, Victoria, Australia. *Australian and New Zealand Journal of Public Health, 43*(3), 254–260. <u>https://doi.org/10.1111/1753-6405.12886</u> (last accessed on 26th August 2019)

This paper found that mental illness was linked to increased suicide risk in all age groups and sexes. Alcohol or other drug problems were linked to increased suicide risks for males and females of all ages, except for the oldest males and females and the youngest females. Having trouble with police was linked to increased risk in all males except the oldest, while it was linked to a higher risk in females aged 25–44 years and 65 and over.

Clapperton, A., Newstead, S., Frew, C., Bugeja, L., & Pirkis, J. (2019). Pathways to suicide among people with a diagnosed mental illness in Victoria, Australia. *Crisis: The Journal of Crisis Intervention and Suicide Prevention*, 1–9. <u>https://doi.org/10.1027/0227-5910/a000611</u> (last accessed on 26th August 2019)

This paper found that a diagnosis of mental illness could come before or after life events and stressors in 50 Victorians who died by suicide.

#### The Tasmanian Suicide Register

The 2016–2020 Tasmanian Suicide Prevention Strategy allocated funding for establishing a Tasmanian Suicide Register, which is under development.

<u>dhhs.tas.gov.au/mentalhealth/suicide\_risk\_and\_prevention</u> (last accessed on 26th August 2019)

#### South Australian Suicide Registry

The South Australian Suicide Prevention Plan 2017–2021 announced plans to establish a South Australian Suicide Registry. The State Coroner's Office and the Office of the Chief Psychiatrist in South Australia have completed a South Australian State Registry Project that will inform the development of the Registry.

https://www.sahealth.sa.gov.au/wps/wcm/ connect/Public+Content/SA+Health+Internet/ Health+services/Mental+health+services/ Suicide+Prevention+Plan+Feedback (last accessed on 26th August 2019)

### Activities

National Suicide Prevention Trial. The federal government has allocated \$46 million in funding for the National Suicide Prevention Trial, which covers 12 sites across Australia. The trial sites are led by Primary Health Networks (PHNs) with three Queensland sites involved being Central Queensland/Wide Bay/Sunshine Coast, Brisbane North and Northern Queensland. Each trial site will run for three years and receive approximately \$3 million in funding. For more details see: lifeinmindaustralia.com.au/programs-resources/regionalapproaches/phn

(last accessed on 26th August 2019)

### Journals

Details of recent research and evaluations on suicide and related behaviour can also be found in a range of national and international journals. Articles are made available for free (open-access) while others have a fee to access. The journals include:

- 1 Crisis The Journal of Crisis Intervention and Suicide Prevention: https://us.hogrefe.com/products/journals/crisis
- 2 Suicide and Life-Threatening Behaviour: https://onlinelibrary.wiley.com/journal/1943278x
- 3 Archives of Suicide Research: tandfonline.com/toc/usui20/current
- 4 Death Studies: tandfonline.com/loi/udst20
- 5 OMEGA Journal of Death and Dying: https://journals.sagepub.com/home/ome
- 6 Australian and New Zealand Journal of Psychiatry: https://journals.sagepub.com/home/anp
- 7 Medical Journal of Australia: <u>mja.com.au</u>
- 8 Australian and New Zealand Journal of Public Health: https://onlinelibrary.wiley.com/journal/17536405
- 9 The Lancet Psychiatry: thelancet.com/journals/lanpsy/onlineFirst
- 10 The American Journal of Psychiatry: https://ajp.psychiatryonline.org/
- 11 American Journal of Public Health: https://ajph.aphapublications.org/
- 12 The Journal of the American Medical Association (JAMA) Network: https://jamanetwork.com/collections/5922/suicide
- 13 British Journal of Psychiatry: cambridge.org/core/journals/the-british-journal-ofpsychiatry
- 14 Journal of Affective Disorders: journals.elsevier.com/journal-of-affective-disorders

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## Appendix **Regional downloadable datasheets**

The datasheets available online are summaries of the suicides in each region covered by a Hospital and Health Service. The rates for North West, South West, Central West and Torres and Cape regions are expressed per 10,000 persons, rather than per 100,000 persons because these regions all contain less than 100,000 persons but more than 10,000 persons.

#### The datasheets can be accessed at

https://www.griffith.edu.au/griffith-health/australian-institute-suicide-research-prevention/research/qsr/2019-annual-report



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