**Judge Sara Hinchey**
STATE CORONER

17 March 2017

Mr Geoff Howard MP
Chair
Law Reform, Road and Community Safety Committee
Parliament House
Spring Street
Melbourne VIC 3002

Dear Mr Howard

**Re: Inquiry into Drug Law Reform**

Thank you for your letter dated 23 January 2017 regarding the Inquiry into Drug Law Reform (**the Inquiry**).

Victoria's coroners have long been engaged in efforts to understand why drug-related harm occurs in the Victorian community and how this can be reduced.

These efforts reflect the purposes of the coroner's investigation, which include contributing to a reduction in the number of preventable deaths which occur each year, and to promote public health and safety and the administration of justice.

I am therefore very pleased to accept your invitation to make a submission to the Inquiry, in the hope that it will assist the Law Reform, Road and Community Safety Committee in its crucial work to identify opportunities for drug harm reduction.

In framing the submission, I have been mindful of the nature of the coronial jurisdiction in Victoria in particular the principle of judicial independence. Consequently, as I am sure you will understand, the Coroners Court of Victoria (**CCOV**) as an organisation does not hold an articulated position on any topic or issue relating to the Terms of Reference for the Inquiry. Instead, through their investigations, individual coroners, may make findings concerning the effectiveness of existing laws, procedures and regulations relating to drug use and misuse. They may also recommend new approaches for reducing drug-related harm.

**Coroners Court of Victoria**
65 Kavanagh Street Southbank 3006
**T** 1300 309 519 **F** 1300 546 989
www.coronerscourt.vic.gov.au

For this reason, I have determined that the most appropriate approach to making a submission on behalf of CCOV - and potentially the most helpful approach for the Committee – is to collate the text of all Victorian coroners' recommendations made under the *Coroners Act 2008* (Vic), which address topics and issues relevant to the Terms of Reference. **Attachment 1** to this submission is a thematically and chronologically ordered summary of these recommendations.

Given the broad scope described in the Terms of Reference, I have included all recommendations that might be relevant to drug harm reduction, so that the Committee can determine for itself which information they wish to consider from within the data, as the Inquiry unfolds.

In addition, I directed the Coroners Prevention Unit (**CPU**)[1] to compile a summary of Victorian drug overdose deaths for the period 2009-2016, in an effort to assist the Committee to model the way in which drug-related harm has evolved in Victoria in recent years.

Overdose death is only one measure of drug-related harm in the community. Despite this observation, there is no doubt that it is a highly useful measure to inform policy and clinical practise, particularly when combined with information from other sources such as drug-related ambulance and emergency department presentations, drug involvement in fatal and non-fatal motor vehicle collisions, drug use survey data, and Victoria Police operational information on drug-related crime.

The CPU's data summary is **Attachment 2** to my submission. This document demonstrates the following matters:

- The annual frequency of Victorian overdose deaths increased steadily between 2009 and 2016;

- While pharmaceutical drugs were consistently the most prevalent contributors to Victorian overdose deaths, illegal drugs become involved in a greater proportion of the deaths over time (particularly in 2015 and 2016);

- Most Victorian overdose deaths were caused by the combined toxic effects of multiple drugs, rather than a single drug.

In my view, this last point is particularly pertinent, given the broad focus described in the Terms of Reference for the Inquiry, and its aim to minimise harm relating to illicit and synthetic drugs and prescription medication misuse.

To date in Australia there has been a widespread tendency when examining drug-related harm, to focus only on a particular drug or group of drugs that are perceived to be 'the issue' at a given point in time. However, as the attached data summary indicates, a broad and ever-shifting range of drugs are implicated in drug-related harm, and the evidence supports a conclusion that drug misuse needs to be approached in a wholistic manner, rather than one drug at a time.

Finally, in my role as the State Coroner of Victoria, I have developed a deep appreciation of the intersection between mental ill health and drug dependence, and in particular, how each can exacerbate the other to contribute to external cause death.

[1] An internal research unit located within CCOV

At my request, the CPU has prepared a data summary (**Attachment 3**) to illustrate this intersection across three major types of external cause deaths:

- **Overdose death**. A detailed study of 838 Victorian overdose deaths occurring between 2011 and 2013 was undertaken in collaboration with researchers from Turning Point. A major finding to emerge from the study was that 49.6% of deceased had both clinically documented drug dependence and a diagnosed mental illness (other than a mental illness relating to substance misuse);

- **Suicide**. A pilot analysis of Victorian Suicide Register data for the period 2010-2011, established that 32.9% of all deceased were drug dependent proximal to their deaths. Among this drug-dependent cohort, 55.3% of deceased also had a co-occurring diagnosed mental illness (other than a mental illness relating to substance misuse);

- **Intimate partner homicide**. A pilot analysis of 64 intimate partner homicide incidents, using data drawn from the Victorian Homicide Register, showed that 46.2% of offenders had a history of substance misuse as well as a diagnosed mental illness at the time of the fatal incident. It is interesting to note that only 16.9% of the deceased had both a substance misuse history and diagnosed mental illness.

My experience, supported by this data, has led me to believe that the role of the Victorian mental health system must be considered in developing any strategy to reduce drug-related health, social and economic harm.

Thank you for the opportunity to make this submission.

If you require any further information or clarification regarding the matters set out in this submission, please contact my Executive Assistant, Margaret Row, on 8688 0720.

Yours sincerely

**Judge Sara Hinchey**
**State Coroner of Victoria**

Coroners Court of Victoria

# TABLE OF CONTENTS

Attachments to the submission of
Her Honour Judge Sara Hinchey, Victorian State Coroner

Inquiry into Drug Law Reform

Coroners Court of Victoria

# Summary of coronial recommendations on drug harm reduction

Date: 16 March 2017

To: State Coroner Judge Sara Hinchey

From: Coroners Prevention Unit

Re: Inquiry into Drug Law Reform
Law Reform, Road and Community Safety Committee
**Parliament of Victoria**

## Executive summary

(a) This summary contains the text of 128 recommendations made by Victorian coroners in 49 findings under the *Coroners Act 2008* (Vic), addressing drug harms and opportunities for drug harm reduction.

(b) The majority of recommendations were organised into three broad themes: education, opioid replacement therapy delivery (particularly methadone dosing), and real-time prescription monitoring. However a large range of other themes were also addressed.

## Explanatory notes

### 1. Background

Mr Geoff Howard MP, Chair of the Parliament of Victoria's Law Reform, Road and Community Safety Committee, invited Victorian State Coroner Judge Sara Hinchey to make a submission to the Inquiry into Drug Law Reform (the Inquiry). To inform the response, Judge Hinchey directed that the Coroners Prevention Unit at the Coroners Court of Victoria (CCOV) prepare a summary of Victorian coronial recommendations made under the Coroners Act 2008 (Vic), addressing topics relating to drug harms and drug harm reduction.

## 2. Identification of recommendations

The CCOV maintains a database of all recommendations made by Victorian coroners in findings under the Coroners Act 2008 (Vic). This database was searched on 15 March 2017 using a range of keywords including "drug", "dependence", "addict", "substance", "overdose", "methadone", "benzodiazepine", "prescription", "opioid", "medication", and "real-time". The text of each recommendation returned by each search was reviewed in the context of the coroner's finding, to establish whether it might be relevant to the Inquiry's Terms of Reference.

## 3. Compilation by theme

Potentially relevant recommendations were compiled by theme. Within each theme, recommendations were listed in the chronological order by the date they were made. Where a recommendation addressed multiple themes, a decision was made as to which theme was the most dominant in the context of the coroner's finding. Therefore, when searching for relevant recommendations on a particular topic, it is important to be aware that they might be spread across multiple themes. For example, recommendations relating to methadone risk reduction might be spread across the following themes: (1) Opioid Replacement Therapy, (2) Education in Drug and Alcohol Issues, and (3) Regulating Schedule 8 drugs.

## 4. Accessing the finding in which a recommendation appeared

For every recommendation listed in this summary, the coroner's complete finding is freely available on the CCOV website:

<http://www.coronerscourt.vic.gov.au/home/coroners+written+findings/>

The website interface can be searched by deceased first name, surname and by local case number. The website provides access not only to the finding, but also to all responses to recommendations.

## 5. Further information

For further information or clarification regarding the contents of this summary, please contact Coroners Prevention Unit Manager Mick Boyle.

# Table of contents

# Coronial recommendations on drug harm reduction

## Alcohol and other drug treatment services

| 17 August 2011 – Coroner Kim Parkinson | |
|---|---|
| Case | 20083363 Steven Daly |
| Recommendations | **Recommendation 3**. That the effectiveness of the operation of the Alcoholics and Drug Dependant Persons Act 1968, be enhanced by the provision of long term in patient involuntary and voluntary treatment beds for persons with alcohol and drug dependency.<br><br>**Recommendation 4**. That a review be undertaken of the operation of the Alcoholics and Drug Dependant Persons Act 1968, to ascertain its effectiveness in enabling the detention and enforced treatment of persons unable to function in the community as a result of alcoholism and/or drug dependency. |
| Responses | Received. |

## Benzodiazepine scheduling

| 18 May 2012 – Coroner Audrey Jamieson | |
|---|---|
| Case | 20084042 David Trengrove |
| Recommendations | **Recommendation 3**. To reduce the harms and death associated with benzodiazepine use in Victoria, within 12 months the Therapeutic Goods Administration of the Australian Government Department of Health and Ageing should move all benzodiazepines into Schedule 8 of the Standard for the Uniform Scheduling of Medicines and Poisons. |
| Responses | Received. |

| 7 April 2014 – Coroner Audrey Jamieson | |
|---|---|
| Case | 20122254 Kirk Ardern |
| Recommendations | **Recommendation 2**. While I welcome the decision to reschedule alprazolam, I recognise the ongoing risks that all other benzodiazepines pose to the community, as reflected in the continuing trend of deaths associated with benzodiazepines, particularly diazepam, and particularly in combination with methadone-related deaths. I accordingly recommend all other benzodiazepines should also be rescheduled to Schedule 8 because they present the same risks as alprazolam. |
| Responses | Received. |

| 22 April 2016 – Coroner Rosemary Carlin | |
|---|---|
| Case | 20132123 Kelly Hall |
| Recommendations | **Recommendation 2**. In light of the evidence that the rescheduling of alprazolam has not reduced benzodiazepine contribution to overdose deaths in Victoria I recommend that within 12 months the Therapeutic Goods Administration move all benzodiazepines into Schedule 8 of the standard for the Uniform Scheduling of Medicines and Poisons. |
| Responses | Received. |

## Coordination of care between treating doctors

| 17 December 2014 – Coroner Jacinta Heffey | |
|---|---|
| Case | 20120367 Paul Kanis |
| Recommendations | **Recommendation 1**. That the Victorian Department of Health seek advice from the Advisory Group for Drugs of Dependence, regarding whether guidance should be produced to assist doctors who treat ORT clients for conditions other than opioid dependence. Particular areas of guidance might include how and when to communicate with the patient's ORT provider, pharmaceutical drugs that can interact with the drugs prescribed in ORT, and warning signs that the patient might be becoming unstable in ORT (and what to do if these warning signs are identified). |
| Responses | Received. |

| 22 April 2016 – Coroner Rosemary Carlin | |
|---|---|
| Case | 20132123 Kelly Hall |
| Recommendations | **Recommendation 3**. I recommend the Royal Australian College of General Practitioners (RACGP) consider revision of their standards and guidelines to provide best practice guidance on coordination of care in general practice between general practitioners at different clinics. |
| Responses | Received. |

| 1 June 2016 – Coroner Paresa Spanos | |
|---|---|
| Case | 20104762 Benjamin Appelman |
| Recommendations | **Recommendation 2**. I recommend that the Royal Australasian College of General Practitioners [RACGP] develop guidelines or otherwise inform its members as to minimum standards for ensuring effective transfer of care between general medical practitioners or practices. In particular, the RACGP include guidance as to what should be included in a patient's medical records to ensure accurate, comprehensive and current information accompanies a patient to a subsequent general practitioner upon a transfer of care. |
| Responses | Received. |

## Dispensing and labelling of medications

| 7 March 2010 – Coroner John Olle | |
|---|---|
| Case | 20071816 Joeanne Brady |
| Recommendations | **Recommendation 1**. That the Pharmacy Board of Victoria direct pharmacists to place warnings on narcotic medication, highlighting the fatal risks associated with combining narcotic medication. |
| Responses | Received. |

| 29 October 2013 – Coroner Jacinta Heffey | |
|---|---|
| Case | 20101624 Helen Stagoll |
| Recommendations | **Recommendation 7**. That the Secretary to the Commonwealth Department of Health amend the current Poisons Standard to require that containers of methadone dispensed as takeaway doses for opioid |

| | |
|---|---|
| | pharmacotherapy are adequately labelled with the caution: "Never leave a person who has taken methadone to sleep it off. Call an ambulance immediately. Dial OOO". |
| Responses | Received. |

26 August 2016 – Coroner Rosemary Carlin

| | |
|---|---|
| Case | 20135788 Melissa May |
| Recommendations | **Recommendation 1**. The Royal Australian College of General Practitioners and the Pharmaceutical Board of Australia Collaboratively consider how they incorporate lessons of this case into future training and the design of future interventions to reduce pharmaceutical drug-related harms.<br><br>**Recommendation 2**. The Royal Australian College of General Practitioners and the Pharmaceutical Board of Australia collaboratively consider the need for the development of a joint guideline in relation to the communication between the professions to ensure the safe prescribing and dispensing of drugs of dependence, including methods of implementing daily dispensing, avoiding early dispensing and provision of prospective prescriptions. |
| Responses | Received. |

## Dual diagnosis treatment

17 August 2011 – Coroner Kim Parkinson

| | |
|---|---|
| Case | 20083363 Steven Daly |
| Recommendations | **Recommendation 1**. That public health authorities work towards the development and provision of integrated dual diagnosis services for those with mental illness (including personality disorders) and substance dependency and that those services be made available to those being treated in both the public and private mental health systems. |
| Responses | Received. |

19 April 2012 – Coroner Jane Hendtlass

| | |
|---|---|
| Case | 20064308 James Bloomfield |
| Recommendations | **Recommendation 1**. That the Minister for Mental Health extend the policy of providing triage and integrated services to patients with dual diagnosis to small regional hospitals like Bairnsdale Hospital.<br><br>**Recommendation 6**. That the Minister for Mental Health and the Minister for Police and Emergency Services cooperate to establish an inter-ministerial commission or agency with access to direct service delivery for people with a mental illness and dual diagnosis across the justice and health sectors as recommended by Dr James Ogloff. |
| Responses | Received. |

17 August 2012 – Coroner Kim Parkinson

| | |
|---|---|
| Case | 20083363 Steven Daly |
| Recommendations | **Recommendation 1**. That integrated dual diagnosis services in the public health system for those with mental illness and substance dependency be expanded by the provision of additional inpatient |

| | |
|---|---|
| | facilities.<br><br>**Recommendation 2**. That the operation of the provisions of the Mental Health Act and the SSDT Act be enhanced by the provision of additional long term inpatient voluntary and involuntary public treatment beds for persons with co-morbidity mental illness or disorder and alcohol and drug dependency.<br><br>**Recommendation 3**. That the provisions of the Mental Health Act be amended to provide for the express power for mental health practitioners to detain persons who are diagnosed with substance abuse disorder and mental illness and that the Act be amended to enable for greater flexibility to enable assessment and treatment even when initial or florid psychotic symptoms have resolved. |
| Responses | Received. |

## Education in alcohol and other drug issues

| 20 April 2011 – Coroner Heather Spooner | |
|---|---|
| Case | 20085571 Brendan Glover |
| Recommendations | **Recommendation 1**. That the Department of Health review the contents of the Responsible Sale of Solvents - A Retailer's Kit to ensure that it contains relevant, up-to-date information that supports retailers to understand their obligations under the Drugs, Poisons and Controlled Substances Act 1981 (Vic), and offers practical advice on how to meet these obligations, to reduce the sale of butane lighter refills to abusers and reduce resultant harm and death.<br><br>**Recommendation 2**. That the Department of Health develop a process for identifying butane lighter fluid retailers and distributing the Responsible Sale of Solvents - A Retailer's Kit to them proactively, to reduce the sale of butane lighter refills to abusers and reduce resultant harm and death. |
| Responses | Received. |

| 31 October 2011 – Coroner Jennifer Tregent | |
|---|---|
| Case | 20052510 Rory (name redacted) |
| Recommendations | **Recommendation 4**. That the Department of Human Services workers recieve education centred on drug and alcohol dependancy with a view to being able to readily identify issues and how best to deal with people suffering such effects.<br><br>**Recommendation 5**. That the Australian Medical Association consider making it a mandatory requirement, that part of the continuing education taken by its members who prescribe addictive medication, if for training and education as to how to identify drug dependency and drug abuse and the strategies that can be implemented to limit it. In addition, such education could include alternative means of addressing the issues that give rise for the need for such medication in the first place. |
| Responses | Received. |

| 2 March 2012 – Coroner Audrey Jamieson | |
|---|---|
| Case | 20023532 Elsa Harrington |

| | |
|---|---|
| Recommendations | **Recommendation 1**. I commend the work of Dr John Lubel and his colleagues who through there article in the MJA highlighted to the medical profession the little known risk of accidental paracetamol poisoning. Of note, he stated: "[...] in Australia, severe life-threatening liver injury from accidental paracetamol poisoning appears to be quite uncommon. Nevertheless, this is a readily preventable syndrome of which both patients and the medical profession should be made more aware. In particular, clinicians should be cautious about prescribing regular doses of paracetamol for pain control in malnourished or fasting patients, and need to appropriately counsel patients who are regular users of the drug." Having regard to the passage of time since Mrs Harrington's death, the culmination of evidence obtained in the course of the investigation and the benefits of periodic reminders on matters of public health and safety, I recommend that the Australian Medical Association (AMA Victoria), and the College of General Practitioners collaborate for the purposes of implementing a medical profession and public awareness raising program regarding the risks of accidental paracetamol poisoning as identified by Dr John Lubel.<br><br>**Recommendation 2**. I further recommend that the Therapeutic Goods Administration (TGA) update their bulletins and alerts on the risks associated with accidental paracetamol poisoning on the same grounds and that consideration be given to mandating improvements to consumer information to address the risks as identified in this investigation albeit that it is acknowledged the risk is small. |
| Responses | Received. |

18 May 2012 – Coroner Audrey Jamieson

| | |
|---|---|
| Case | 20084042 David Trengrove |
| Recommendations | **Recommendation 2**. To reduce the harms and deaths associated with benzodiazepines use in Victoria, the Royal Australian College of General Practitioners should update sits guidelines for appropriate prescribing of benzodiazepines in the context of general practise within 12 months. The updated guidelines should explicitly address the following areas: (a) general principles for benzodiazepam prescribing; (b) appropriate use of benzodiazepines to treat specific conditions such as insomnia, anxiety and panic disorder; (c) strategies for identifying and treating patients who are seeking benzodiazepines in excess of medical need; and (d) managing the risk of harm and death associated with benzodizepine use and misuse. |
| Responses | Received. |

29 October 2013 – Coroner Jacinta Heffey

| | |
|---|---|
| Case | 20101624 Helen Stagoll |
| Recommendations | **Recommendation 9**. That General Practice Victoria include in its pharmacotherapy GP Training Program a component in which prescribing doctors are trained to teach patients on the ORT programme who are eligible for takeaway doses and their families and friends how to recognise signs of opioid overdose in the event that a third person accesses the takeaway dose. (I am concerned that the "targeted methadone consumer safety education campaign" outlined in the submission of Harm Reduction Victoria, whilst laudable in its intention, nevertheless suffers from the subtle difficulty that in providing so much information publicly and generally about how to respond to a third |

| | |
|---|---|
| | person suffering effects from ingesting a takeaway dose, it may tend to suggest to ORT clients that diversion is a recognised, even if unacceptable, practice. For this reason, I limit my recommendations in this regard to doctors providing this information on a private doctor/patient basis to the patient and his/her family). |
| Responses | Received. |

2 April 2014 – Coroner Paresa Spanos

| | |
|---|---|
| Case | 20124565 AB (name redacted) |
| Recommendations | **Recommendation 1**. That the Victorian Department of Health consult with the RMH Department of Anaesthesia and Pain Management regarding their response to the death of AB, in particular the changes in place that reduce/regulate access to general anaesthetics and neuromuscular blocking agents.<br><br>**Recommendation 2**. That the Victorian Department of Health consult with Victorian hospitals regarding Victorian overdose deaths from misuse of neuromuscular blocking agents and/or general anaesthetic agents, and seek their advice on whether any further measures could be put in place to reduce misuse of these agents. |
| Responses | Received. |

27 June 2014 – Coroner Audrey Jamieson

| | |
|---|---|
| Case | 20121388 Caroline Webster |
| Recommendations | **Recommendation 1**. I recommend that the Therapeutic Goods Administration (TGA) consider issuing an alert to prescribers and advise exercising caution when prescribing Propranolol to patients at risk of self-harm, particularly self-harm by overdose. Possible countermeasures for prescribers could include: a. if clinically appropriate, a beta-blocker that is safer in overdose could be substituted for Propranolol. b. scripts could be provided for small quantities of Propranolol, to reduce the amount of Propranolol to which the patient has access at once. The reasoning behind above point b. is that at present, Propranolol packets contain 100 tablets, and up to five repeats can be included in a single script, providing patients access to up to 600 Propranolol tablets at once- that is, a sufficient quantity for an overdose. For patients who are at risk of self-harm by overdose, providing a script for 50 or 20 tablets at a time with no repeats would inhibit the patient's ability to access fatally large quantities of Propranolol at one time. |
| Responses | Received. |

11 August 2014 – Coroner John Lesser

| | |
|---|---|
| Case | 20135467 Aaron McDonald |
| Recommendations | **Recommendation 1**. The Victorian Department of Health should consider developing educational resources for recreational users of nitrous oxide, outlining the dangers of the substance in general, as well as the specific increased risks associated with practices such as using tubes and masks for ingesting the substance. Further, the Department could also distribute this information to, or develop specific educational resources for, online retailers and suppliers of equipment and apparatus that can be used for the ingestion of nitrous oxide, as well as store-based retailers to the catering industry and medical and dental professions. Additionally, sharing this information with their counterparts in other |

| | |
|---|---|
| | Australian jurisdictions should also be considered, including the benefits of a national approach to prevention and harm minimisation. |
| Responses | Received. |

**10 December 2014 – Coroner Peter White**

| | |
|---|---|
| Case | 20104605 Phoebe Handsjuk |
| Recommendations | **Recommendation 1**. I recommend to the Australian Therapeutic Goods Administration, that in accord with current United States Food and Drug Administration requirements, that the dosage of Stilnox, recommended for administration to female patients be reduced by 50% (which may be increased in accordance with individual patient requirements). I also recommend that the Royal Australian College of General Practitioners examine existing prescribing practices in this area and provide practitioners with advice concerning the dangers in over prescription of this drug. |
| Responses | Received. |

**23 June 2015 – Coroner Rosemary Carlin**

| | |
|---|---|
| Case | 20124193 Terri Anne Wooley-Peresso |
| Recommendations | **Recommendation 1**. The Royal Australian College of General Practitioners review the circumstances of Ms Woolley-Peresso's death and consider how it can better educate doctors about the benefits of contacting state based drugs and poisons regulators before prescribing potentially dangerous or addictive drugs. |
| Responses | Received. |

**18 January 2016 – Coroner Paresa Spanos**

| | |
|---|---|
| Case | 20110727 Dean Wright |
| Recommendations | **Recommendation 4**. That the Royal Australasian College of General Practitioners consider including and/or enhancing a section in its Standards for General Practices to inform and advise general practitioners about their legal obligations when prescribing medications, especially those arising from section 33 of the DPCS Act and to provide opportunities for professional development relating to the safe prescription of 'drugs of dependence' to drug-dependent and non-drug-dependent patients. |
| Responses | Received. |

**26 February 2016 – Coroner Caitlin English**

| | |
|---|---|
| Case | 20124882 Jonas Jvirblis |
| Recommendations | **Recommendation 1**. The Victorian Department of Health and Human Services review the regulation of schedule 8 and 9 poisons used and produced in a research setting and consider the development of specific guidance documents, similar in nature to the guidance document, 'Management of schedule 8 poisons in pharmacy', for use in the research context. This should include guidance regarding weighing powders and managing synthesised poisons.<br><br>**Recommendation 2**. The Victorian Department of Health and Human Services consider providing education to research facilities with permits pursuant to regulation 5 to use schedule 8 poisons, about their responsibilities to comply with the provisions of the Drugs, Poisons and |

| | |
|---|---|
| | Controlled Substances Act 1981 and Regulations, in relation to schedule 8 and 9 poisons used and created in experiments and otherwise. |
| Responses | Received. |

| 17 March 2016 – Coroner John Olle | |
|---|---|
| Case | 20132766 Sydney Hugh Kennedy |
| Recommendations | **Recommendation 1**. I recommend that the TGA issue an alert to prescribers to exercise caution when prescribing lithium over the long term for ageing patients and patients with medical co morbidities. In particular the alert should draw prescribers' attention to the increased risk of toxicity in patients who take the drug long-term, and the possibility that even when target serum concentration of lithium is within recommended parameters, clinical presentation changes (including but not limited to the recognised signs and symptoms of lithium toxicity) may indicate lithium toxicity. |
| Responses | Received. |

| 26 August 2016 – Coroner Rosemary Carlin | |
|---|---|
| Case | 20135788 Melissa May |
| Recommendations | **Recommendation 2**. The Royal Australian College of General Practitioners consider the need for further education and training or assistance to rural general practitioners dealing with complex patients suffering from chronic pain and prescription drug dependence. |
| Responses | Received. |

## Harm reduction for injecting drug users

| 20 February 2017 – Coroner Jacqui Hawkins | |
|---|---|
| Case | 20162418 Ms A (name redacted) |
| Recommendations | **Recommendation 1**. I recommend that the Honourable Martin Foley MP as Minister for Mental Health take the necessary steps to establish a safe injecting facility trial in North Richmond.<br><br>**Recommendation 2**. I recommend that Ms Kym Peake, Secretary, Department of Health and Human Services Victoria, take the necessary steps to expand the availability of naloxone to people who are in a position to intervene and reverse opioid drug overdoses in the City of Yarra.<br><br>**Recommendation 3**. I recommend that Ms Kym Peake, Secretary, Department of Health and Human Services Victoria, review current DHHS-funded services that support the health and wellbeing of injecting drug users in the City of Yarra, and consult with relevant service providers and other stakeholders, to identify opportunities to improve injecting drug users' access to and engagement with these life-saving services. |
| Responses | Awaiting (at 15 March 2017). |

## Medicare Australia Prescription Shopping Information Service

| 24 July 2015 – Coroner John Olle | |
|---|---|
| Case | 20103678 Jamie Apap and 20104459 James Dougan |
| Recommendations | **Recommendation 3**. The Australian Government Department of Human Services review how Medicare Australia responds to medical practitioners' Prescription Shopping Information Service queries, to ensure medical practitioners are not being unintentionally misled. In particular, the Department should consider whether Medicare Australia's current practices ensure that a medical practitioner who calls the Information Service understands the limitations of the Service, including that many drug seekers do not meet the Prescription Shopping Program threshold for being identified as prescription shoppers.<br><br>**Recommendation 4**. The Australian Government Department of Human Services introduce a practice whereby when a medical practitioner contacts the Medicare Australia Prescription Shopping Information Service regarding a Victorian patient, the medical practitioner is informed that if there are concerns about the patient being a drug seeker, regardless of whether or not the patient is deemed to be a prescription shopper under the Prescription Shopping Program, the medical practitioner should make a notification to Drugs and Poisons Regulation at the Victorian Department of Health as required under the Drugs Poisons and Controlled Substances Act 2006 (Vic). |
| Responses | Received. |

| 18 January 2016 – Coroner Paresa Spanos | |
|---|---|
| Case | 20110727 Dean Wright |
| Recommendations | **Recommendation 5**. Pending implementation of a real-time prescription monitoring system, I recommend that the Royal Australasian College of General Practitioners reminds its members about the Prescription Shopping Information Service and encourages them to use it whenever they have concerns that a patient may be abusing prescription medications, as it provides the most up to date information current to up to 24 hours of any enquiry they make. |
| Responses | Received. |

## Opioid replacement therapy

| 16 December 2010 – Coroner Kim Parkinson | |
|---|---|
| Case | 20095712 Melissa Irwin |
| Recommendations | **Recommendation 1**. That regulatory authorities establish a clear mechanism of supervision of the safety arrangements for storage of take away dosage of methadone.<br><br>**Recommendation 2**. That there be a prohibition upon take away methadone dosage unless a responsible regulatory authority is satisfied that safe storage arrangements are in place in the premises in which the drug is to be stored. |
| Responses | Received. |

| 17 February 2011 – Coroner Kim Parkinson | |
|---|---|
| Case | 20085241 Michael William Gledhill |
| Recommendations | **Recommendation 1**. That the responsible regulatory authorities, The Department of Human Services (Victoria) and the Department of Health (Victoria), establish a clear mechanism of supervision of the safety arrangements for take away dosage of methadone.<br><br>**Recommendation 2**. That there be a prohibition upon take away methadone dosage unless responsible regulatory authorities, the Department of Human Services (Victoria) and the Department of Health (Victoria), are satisfied that safe storage arrangements are in place in the premises in which the drug is to be stored.<br><br>**Recommendation 3**. That the responsible Minister/s give consideration to legislative amendment if necessary to enable the implementation of appropriate levels of supervision and safety arrangements.<br><br>**Recommendation 4**. That the responsible Minister/s give consideration to legislative amendment if necessary to enable the provision of health information, such as overdose events or drug related arrests, to the General Practitioner supervising a patient's pharmacotherapy program such as the methadone maintenance program. |
| Responses | Received. |

| 28 September 2013 – Coroner Kim Parkinson | |
|---|---|
| Case | 20092063 Damien Perceval |
| Recommendations | **Recommendation 1**. That the Minister for Health take steps to prohibit the supply of 'take-away' doses of the Schedule 8 drug methadone by drug addicted persons and require that methadone therapy be delivered and administered at a pharmacy premises under the supervision of a registered pharmacist. |
| Responses | Received. |

| 1 October 2013 – Coroner Kim Parkinson | |
|---|---|
| Case | 20122601 Christina Mifsud |
| Recommendations | **Recommendation 1**. That regulatory authorities establish a clear mechanism of supervision of the safety arrangements for storage of take away dosage of methadone.<br><br>**Recommendation 2**. That there be a prohibition upon take away methadone dosage unless a responsible regulatory authority is satisfied that safe storage arrangements are in place in the premises in which the drug is to be stored. |
| Responses | Received. |

| 29 October 2013 – Coroner Jacinta Heffey | |
|---|---|
| Case | 20101624 Helen Stagoll |
| Recommendations | **Recommendation 1**. That the Victorian Department of Health urgently review its policy with respect to the takeaway dosing component of the Opioid Replacement Therapy programme, taking into account the number of deaths that have occurred due to the widespread availability of methadone in the community and the lack of any real safeguards to |

protect vulnerable third parties from the risks associated therewith.

**Recommendation 2**. That the Victorian Department of Health initiate a process whereby data is required to be generated in the following areas: (a) The number of patients on takeaway dosing; (b) Period of time between initial presentation to GP and commencement on takeaway dosing; (c) The weekly number of takeaway doses allowed those patients; (d) The dosage ranges of those takeaway doses; (e) Any reductions in numbers of takeaway doses due to suspicion of diversion; (f) Any reasons provided in support of permission to take away doses. The abovementioned data relate to quantifying risks of diversion only. Other items that were listed by Dr Frei as desirable relate to the methadone programme generally (as opposed to takeaway doses) and do not fall within the scope of this inquest.

**Recommendation 5**. That the Victorian Department of Health require ambulance paramedics to record attendances on all patients presenting with methadone overdose and forward such information to the Department who can then establish and record in a data base whether the patient is or is not currently registered on the ORT programme.

**Recommendation 6**. That the Victorian Department of Health embark on an investigation to determine the extent of trading in takeaway methadone such as, for example, requesting ORT programme clients to complete an anonymous survey in which they are asked about their knowledge of the practice.

**Recommendation 8**. That the Victorian Department of Health investigate the viability and safety of doctors supplying Narcan in injectable form or, should it become available, as a nasal spray to all clients on the ORT who are eligible for takeaway doses. The idea would be that the general practitioner strongly encourage, in the event of an overdose of a third person, the calling of an ambulance as a first response but, failing that, the administration of the Narcan, with appropriate demonstration of how to administer the drug. The shelf life of Narcan is two years. Some form of alert system could be instituted to warn the patient of the need to replace the supply after that time has elapsed. Whilst it is appreciated that the half life of Narcan is short, it may save a life in time and enable transfer to hospital for further treatment.

**Recommendation 10**. That the Victorian Department of Health consider requiring patients on the ORT programme to return their bottles with labels intact when attending to obtain takeaway doses. Whilst it is appreciated that there may be health concerns in relation to the adequate cleansing of the used bottles for future use, the pros and cons of such a requirement should be part of the risk-benefit evaluation process in relation to the current takeaway programme policy.

**Recommendation 11**. That the Victorian Department of Health policy should recommend that when a patient expresses the desire to commence opioid replacement therapy that the doctor encourage the patient to commence on the buprenorphine/naloxone (Suboxone) course of therapy, which, after an initial trial period of two weeks could, if appropriate, become automatically a takeaway option gradually increasing the number of takeaway doses to 6 per week. This may represent an incentive to select this programme rather than methadone, particularly if entitlement to takeaway doses in the latter programme is restricted.

**Recommendation 12**. That the Department of Health policy

| | |
|---|---|
| | recommend that methadone therapy be offered only as dosage under supervision-unless compelling reasons (which are officially recorded) warrant a takeaway dose. Such takeaway doses should be limited to the number necessary to address the "compelling reasons" provided by the patient and be reviewed from time to time to determine whether those reasons still exist. This is in line with the general policy situation as outlined in the Victorian Policy of 2013 at Page 21: "Pharmacotherapy in Victoria is based on the principle of supervised dosing".<br><br>**Recommendation 13**. That the Department of Health policy recommend that as a condition of accepting a patient into either programme, the doctor require the patient to participate in drug counselling and such other therapy as may be appropriate to address the underlying reasons for their addiction problems. This should be monitored by the doctor from time to time and the patient encouraged to persevere with it.<br><br>**Recommendation 14**. That the Department of Health require doctors to maintain and, if necessary, furnish to the Department of Health, a ledger listing all new patients on ORT, stipulating which programme they are on and, in the case of patients assigned to the methadone programme and allowed takeaway doses, a summary of the "compelling reasons" on the basis of which such doses were allowed.<br><br>**Recommendation 15**. That the Department of Health require that if a doctor identifies that a patient is exchanging, trading and/or selling methadone to a third person, this should result in automatic ineligibility for continued takeaway doses, and patients, both new and current, should be told this at the commencement of their participation in the program and also the fact that diversion is a criminal offence under the Drugs Poisons and Controlled Substances Act. |
| Responses | Received. |

| 7 April 2014 – Coroner Audrey Jamieson | |
|---|---|
| Case | 20122254 Kirk Ardern |
| Recommendations | **Recommendation 1**. I recommend that the Victorian Department of Health amend the January 2013 Policy for Maintenance Pharmacotherapy for Opioid Dependence, to incorporate explicit advice on managing vulnerable opioid replacement patients including those recently paroled from prison, to reduce the likelihood a newly paroled client will overdose on methadone. The amended policy should indicate that a client transferred from prison to a community-based service should be treated in the same way as a new patient commencing treatment, and should not be provided takeaway doses until medical, psychological and social stability in the community is established. |
| Responses | Received. |

| 16 July 2014 – Coroner Audrey Jamieson | |
|---|---|
| Case | 20120485 Shannon James Lees (Peat) |
| Recommendations | **Recommendation 1**. That the Victorian Department of Health request the Advisory Group for Drugs of Dependence review the circumstances of Shannon Lees' death, the discussion and comments included in this finding, and the data on Victorian methadone deaths included in Appendix A to this finding, when considering whether the current takeaway dosing advice in the Victorian Policy for Maintenance Pharmacotherapy for Opioid Dependence adequately balances client |

benefits with risks to public health and safety.

**Recommendation 2**. That the Victorian Department of Health request the Advisory Group for Drugs of Dependence consider the probable impact on pharmacotherapy clients and the broader public, of revising the Policy for Maintenance Pharmacotherapy for Opioid Dependence so that an opioid replacement therapy client is eligible to receive at most two takeaway methadone doses per week and no consecutive takeaway doses. Given the current significant harms associated with methadone takeaway dose diversion, the Advisory Group for Drugs of Dependence should ideally report publicly on its conclusions, so the Victorian public is informed as to the rationale for the Advisory Group and Department of Health's stance on access to takeaway methadone.

Responses: Received.

## 20 January 2015 – Coroner Audrey Jamieson

Case: 20135488 Peter Oelfke

Recommendations: **Recommendation 1**. I [...] recommend that the Victorian Department of Health and Human Services review the circumstances of Mr Oelfke's death, in considering whether the current takeaway dosing advice in the Victorian Policy for Maintenance Pharmacotherapy for Opioid Dependence provides sufficient criteria (rather than guidance) for the ongoing nature of permits for takeaway dosing of methadone, considering the practical realities of general practice medicine, including patient volumes, consequential time allocation, and the broad clinical discretion provided to General Practitioners that ultimately permit the circumstances surrounding Mr Oelfke's (and others') death.

Responses: Received.

## 20 February 2015 – Coroner Paresa Spanos

Case: 20103699 Phillip George Black

Recommendations: **Recommendation 1**. That the Royal Australasian College of General Practitioners reminds its members who are methadone prescribers of the need to regularly review the National Clinical Guidelines and Procedures for the Use of Methadone in the Maintenance Treatment of Opioid Dependence to ensure that their practice accords with those guidelines, unless there is a sound and documented clinical basis for departure.

**Recommendation 2**. That Drugs and Poisons Regulation (Department of Health and Human Service, Victoria) and its Drugs of Dependence Advisory Committee considers amending the Victorian Policy for Maintenance Pharmacotherapy for Opioid Dependence, to include a mandatory requirement that health practitioners prescribing methadone comply with the National Clinical Guidelines and Procedures for the Use of Methadone in the Maintenance Treatment of Opioid Dependence, unless there is a sound and documented clinical basis for departure.

**Recommendation 3**. That Drugs and Poisons Regulation and its Drugs of Dependence Advisory Committee considers amending the Victorian Policy for Maintenance Pharmacotherapy for Opioid Dependence, to include a mandatory requirement that health practitioners prescribing methadone complete ongoing training in relation to the Victorian Policy for Maintenance Pharmacotherapy for Opioid Dependence, and the National Clinical Guidelines and Procedures for the Use of Methadone

| | |
|---|---|
| | in the Maintenance Treatment of Opioid Dependence, at regular intervals, and that compliance be audited. |
| Responses | Received. |

20 July 2015 – Coroner Caitlin English

| | |
|---|---|
| Case | 20130786 Brenton James Grosser |
| Recommendations | **Recommendation 1**. That the Victorian Department of Health request the Advisory Group for Drugs of Dependence review the circumstances of Brenton Grosser's death, when considering whether the current takeaway dosing advice in the Victorian Policy for Maintenance Pharmacotherapy for Opioid Dependence adequately balances client benefits with risks to public health and safety.<br><br>**Recommendation 2**. That the Victorian Department of Health request the Advisory Group for Drugs of Dependence to consider the probable impact on pharmacotherapy clients and the broader public, of revising the Policy for Maintenance Pharmacotherapy for Opioid Dependence so that an opioid replacement therapy client is eligible to receive at most two takeaway methadone doses per week and no consecutive takeaway doses. Given the current significant harms associated with methadone takeaway dose diversion, the Advisory Group for Drugs of Dependence should ideally report publicly on its conclusions, so the Victorian public is informed as to the rationale for the Advisory Group and Department of Health's stance on access to takeaway methadone. |
| Responses | Received. |

4 April 2016 – Coroner Audrey Jamieson

| | |
|---|---|
| Case | 20124080 Frank Frood |
| Recommendations | **Recommendation 1**. I have concluded that best clinical practice in methadone prescribing to drug dependent patients with severe lung disease may be an area where there are differing clinical opinions, and have determined that it might be most appropriately considered by the relevant authorities. Therefore, I recommend that the Victorian Department of Health and Human Services review the Policy for Maintenance Pharmacotherapy for Opioid Dependence (2013) to ensure it provides adequate and explicit guidance to clinicians on how to manage maintenance pharmacotherapy in patients with asthma or other respiratory conditions.<br><br>**Recommendation 2**. And I further recommend that the Commonwealth Department of Health review the National Guidelines for Medication-Assisted Treatment of Opioid Dependence (2014) to ensure they provide adequate and explicit guidance to clinicians on how to manage maintenance pharmacotherapy in patients with asthma or other respiratory conditions. |
| Responses | Received. |

31 August 2016 – Coroner Caitlin English

| | |
|---|---|
| Case | 20134969 Nathan Dimech |
| Recommendations | **Recommendation 1**. That the Department of Health and Human Services review the safe methadone storage section of its Policy for Maintenance Pharmacotherapy for Opioid Dependence, and consider whether any future action can be taken to encourage safe storage of Methadone. In particular, DHHS could consider whether distributing |

| | |
|---|---|
| | lockable boxes to methadone clients might be effective, as an appropriate response to the death of Nathan Dimech and in the context of six deaths between 2010 and 2013 of young people under the age of 18 years. |
| Responses | Received. |

## Prescribing to treat pain

18 May 2012 – Coroner Audrey Jamieson

| | |
|---|---|
| Case | 20084042 David Trengrove |
| Recommendations | **Recommendation 4**. That within three months of receiving this finding, the Chair of the RACGP Victoria Faculty advise the Coroners Court of Victoria regarding: (a) progress that the RACGP has made towards developing guidelines to assist Victorian general practitioners who prescribe opioids to treat chronic non-malignant pain; (b) the scope of areas, topics and issues that RACGP guidelines will address; (c) any hurdles that hinder the RACGP's capacity to complete the guidelines and disseminate them to all Victorian general practitioners; and (d) the RACGP's proposed timeline for implementing the guidelines in Victoria.<br><br>**Recommendation 5**. That Drugs and Poisons Regulation at the Victorian Department of Health consider introducing a requirement that where a practitioner prescribes a Schedule 8 poison to treat chronic non-malignant pain on a long-term basis, the practitioner must submit evidence that the patient has been periodically reviewed by a pain specialist to support the ongoing treatment. The purpose of this recommendation is to ensure that patients treated from chronic non-malignant pain recieve expert evidence-based care, thus reducing their inappropriate exposure to Schedule 8 poisons and the associated risk of harm and death. |
| Responses | Received. |

13 February 2014 – Coroner Heather Spooner

| | |
|---|---|
| Case | 20094088 Daniel Anderson |
| Recommendations | **Recommendation 1**. That the Victorian Department of Health consult with relevant peak medical bodies such as the Australian and New Zealand College of Anaesthetists' Faculty of Pain Medicine and the Royal Australasian College of Physicians' Australasian Chapter of Addiction Medicine to obtain expert advice on the clinical appropriateness of (1) short-term opioid prescribing to treat migraine, and (2) long-term (greater than eight weeks) continuous opioid prescribing to treat migraine.<br><br>**Recommendation 2**. That, having obtained expert advice on use of opioids to treat migraine, Drugs and Poisons Regulation review its procedures to ensure any application nominating migraine (intermittent as otherwise) as the clinical diagnosis for prescribing a Schedule 8 opioid, is evaluated consistently with the expert advice.<br><br>**Recommendation 3**. That, having obtained expert advice on use of opioids to treat migraine, Drugs and Poisons Regulation review all current valid permits nominating migraine (intermittent as otherwise) as the clinical diagnosis for prescribing a Schedule 8 opioid, and assess |

| | |
|---|---|
| | whether each permit was issued consistently with the expert advice. Drugs and Poisons Regulation should take appropriate steps to notify prescribers and if necessary cancel permits that were not issued for appropriate clinical diagnoses. |
| Responses | Received. |

15 July 2015 – Coroner Audrey Jamieson

| | |
|---|---|
| Case | 20124064 Margaret McCall |
| Recommendations | **Recommendation 1**. To increase the safety of patients who receive a low-dose ketamine infusion, the Australian and New Zealand College of Anaesthetists Faculty of Pain Medicine develop evidence based information regarding best practice in low-dose ketamine infusion for pain management. This information should specifically include the appropriate assessment, follow-up care, response to the likelihood of re-emerging pain and communication with primary practitioners. |
| Responses | Received. |

## Prison and parole

21 September 2012 – Coroner Peter White

| | |
|---|---|
| Case | 20081277 Timothy Casey |
| Recommendations | **Recommendation 12**. I recommend that Pacific Shores Pty Ltd and St Vincent's Corrections Health Service, in consultation with the Commissioner of Corrections and G4S, develop protocols, which recognize that the provision of appropriate drug substitution medication within Port Phillip Prison, is a medical rather than an administrative issue. Further, such protocols should be developed with a firm steadfastness to the ideals concerning a healer's duty to a patient, to be the driver of decision making in this area. |
| Responses | Received. |

21 September 2012 – Coroner Heather Spooner

| | |
|---|---|
| Case | 20093328 Michael Jones |
| Recommendations | **Recommendation 1**. To. enhance the ability of Community Correctional Services staff to detect drug usage among parolees subject to abstinence conditions (particularly in the absence of any other testing conditions) and put in place interventions to manage associated risks, I recommend that within 12 months, Corrections Victoria revise the Deputy Commissioner's Instruction 5.7 to establish a minimum frequency of mandatory random urine tests for an offender subject to an abstinence condition.<br><br>**Recommendation 2**. To enhance the ability of Community Correctional Services staff to detect drug usage among parolees on abstinence orders (particularly in the absence of any other testing conditions) and put in place interventions to manage associated risks, I recommend that within 12 months, Corrections Victoria revise the Deputy Commissioner's Instruction 5.7 to provide far more detailed assistance on how a case manager is to evaluate an offender's presentation and circumstances to determine whether or not a targeted urine test is required. The revised Instruction should explicitly address how the offender's history of substance use, and links between substance use and offending, should |

inform development of a testing regime.

**Recommendation 3**. To enhance the ability of Community Correctional Services staff to detect problematic drug usage among offenders on parole orders and put in place interventions to manage associated risks, I recommend that Corrections Victoria provide re-training to all Community Correctional Services case managers regarding their responsibilities under Deputy Commissioner's Instruction 5.7 on urine testing. The re-training should emphasise that the case manager must retain responsibility for implementation of urine testing requirements attached to parole orders, regardless of whether general practitioners or others involved in the offender's care are administering urine tests.

**Recommendation 4**. To ensure that Community Correctional Services staff involved in parole assessment are aware of all relevant issues that relate to the offender's mental and physical health and drug use history, and therefore can put in place adequate safeguards to manage known risks, I recommend that Justice Health provide an accurate summary of an offender's medical history to the Community Correctional Services staff member responsible for that offender's parole assessment. The summary should include any substance use and relevant treatment in prison, and any medications prescribed including the conditions they were prescribed to treat.

**Recommendation 5**. To ensure that current parolees are being managed as safely and appropriately as possible, I recommend that Community Correctional Services and Justice Health urgently collaborate and share information to identify any Current parolees who received methadone and/or buprenorphine while in prison for opioid dependence but who successfully misrepresented to Community Correctional Services staff during parole assessment that the drug was actually for pain management. This collaborative project will enable Community Correctional Services and Justice Health to gauge the extent of prisoner misrepresentation of treatment for opioid dependence, and enable Community Correctional Services to put in place targeted measures to manage risks relating to opioid use among vulnerable parolees.

Responses: Received.

29 May 2015 – Coroner Audrey Jamieson

Case: 20073964 Ignac Lecek

Recommendations

**Recommendation 3**. With a view to supporting custodial registered nurses in their role of assessing, monitoring and recommending management strategies of prisoners suffering from or believed to be suffering from withdrawal from substances and preventing like circumstances, I recommend that the current operator of Melbourne Custody Centre, G4S, provide and/or arrange for formal training/professional development for its' custodial registered nurses in the area of drug and alcohol withdrawal.

**Recommendation 4**. With a view to supporting custodial officers in their role of observing prisoners suffering from or believed to be suffering from withdrawal from substances and supporting custodial officers in making assessments about the welfare of prisoners suffering from or believed to be suffering from withdrawal from substances and preventing like circumstances, I recommend that the current operator of the Melbourne Custody Centre, G4S, provide and/or arrange for formal training/professional development for its' custodial officers in the area of drug and alcohol withdrawal.

| | |
|---|---|
| | **Recommendation 7**. With a view to improving outcomes for prisoners and supporting custodial officers in performing duties consistent with their training and preventing like circumstances, I recommend that the current operator of the Melbourne Custody Centre, G4S, if they have not already done so, implement a system whereby any prisoner assessed by the custodial nurse and/or doctor, as having an altered physical state and /or other concerns regarding their physical wellbeing, have their observations conducted and recorded by a custodial nurse instead of or in addition to, a custodial officer. |
| Responses | Received. |

## Real-time prescription monitoring

15 February 2012 – Coroner John Olle

| | |
|---|---|
| Case | 20095181 James (surname redacted) |
| Recommendations | **Recommendation 1**. The Victorian Department of Health implement a real-time prescription monitoring program within 12 months, in order to reduce deaths and harm associated with prescription shopping. The program should include the following functionality: (a) a primary focus on public health rather than law enforcement: (b) recording of all prescription medications that are prescribed and dispensed throughout Victoria without exception; (c) provision of real-time prescribing information via the internet to all prescribers and dispensers throughout Victoria without exception; (d) a focus on supporting rather than usurping prescribers' and dispensers' clinical decisions and (e) facilitating the ability of the Victorian Department of Health to monitor prescribing and dispensing to identify behaviours of concern.<br><br>**Recommendation 2**. The Victorian Department of Health convene a steering committee to oversee the implementation of the real-time prescription monitoring program in Victoria. Membership should include representatives from prescribing and dispensing peak bodies and the pain management and drug and alcohol sectors.<br><br>**Recommendation 3**. The Victorian Department of Health develop a contingency plan to implement a Victorian based real-time prescription monitoring program in the event that the anticipated Australian Government Department of Health and Ageing information technology infrastructure for electronic recording and reporting of controlled drugs is delayed more than 6 months beyond the declared July 2012 deadline.<br><br>**Recommendation 4**. The Victorian Department of Health develop a contingency plan to implement a Victorian base real-time prescription monitoring program in the event that the anticipated Australian Government Department of Health and Aging information technology infrastructure does not support the following functionality: (a) a primary focus on public health rather than law enforcement; (b) recording of all prescription medications that are prescribed and dispensed throughout Victoria without exception; (c) provision of real-time prescribing information via the internet to all prescribers and dispensers throughout Victoria without exception; (d) a focus on supporting rather that usurping prescribers' and dispensers' clinical decisions and (e) facilitating the ability of the Victorian Department of Health to monitor prescribing and dispensing to identify behaviours of concern. |
| Responses | Received. |

| 8 March 2012 – Deputy State Coroner Iain West | |
|---|---|
| Case | 20104232 Rory Denman |
| Recommendations | **Recommendation 1**. The Victorian Department of Health implement a real-time prescription monitoring program within 12 months, in order to reduce deaths and harm associated with prescription shopping. The program should include the following functionality: (a) a primary focus on public health rather than law enforcement: (b) recording of all prescription medications that are prescribed and dispensed throughout Victoria without exception; (c) provision of real-time prescribing information via the internet to all prescribers and dispensers throughout Victoria without exception; (d) a focus on supporting rather than usurping prescribers' and dispensers' clinical decisions and (e) facilitating the ability of the Victorian Department of Health to monitor prescribing and dispensing to identify behaviours of concern.<br><br>**Recommendation 2**. The Victorian Department of Health convene a steering committee to oversee the implementation of the real-time prescription monitoring program in Victoria. Membership should include representatives from prescribing and dispensing peak bodies and the pain management and drug and alcohol sectors.<br><br>**Recommendation 3**. The Victorian Department of Health develop a contingency plan to implement a Victorian based real-time prescription monitoring program in the event that the anticipated Australian Government Department of Health and Ageing information technology infrastructure for electronic recording and reporting of controlled drugs is delayed more than six months beyond the declared July 2012 deadline.<br><br>**Recommendation 4**. The Victorian Department of Health develop a contingency plan to implement a Victorian base real-time prescription monitoring program in the event that the anticipated Australian Government Department of Health and Aging information technology infrastructure does not support the following functionality: (a) a primary focus on public health rather than law enforcement; (b) recording of all prescription medications that are prescribed and dispensed throughout Victoria without exception; (c) provision of real-time prescribing information via the internet to all prescribers and dispensers throughout Victoria without exception; (d) a focus on supporting rather that usurping prescribers' and dispensers' clinical decisions and (e) facilitating the ability of the Victorian Department of Health to monitor prescribing and dispensing to identify behaviours of concern. |
| Responses | Received. |

| 8 March 2012 – Deputy State Coroner Iain West | |
|---|---|
| Case | 20104232 Rory Denman |
| Recommendations | **Recommendation 1**. The Victorian Department of Health implement a real-time prescription monitoring program within 12 months, in order to reduce deaths and harm associated with prescription shopping. The program should include the following functionality: (a) a primary focus on public health rather than law enforcement: (b) recording of all prescription medications that are prescribed and dispensed throughout Victoria without exception; (c) provision of real-time prescribing information via the internet to all prescribers and dispensers throughout Victoria without exception; (d) a focus on supporting rather than usurping prescribers' and dispensers' clinical decisions and (e) facilitating the ability of the Victorian Department of Health to monitor |

| | |
|---|---|
| | prescribing and dispensing to identify behaviours of concern. |
| Responses | Received. |

**18 May 2012 – Coroner Audrey Jamieson**

| | |
|---|---|
| Case | 20084042 David Trengrove |
| Recommendations | **Recommendation 1**. The Victorian Department of Health implement real time prescription monitoring system within 12 months in order to reduce deaths and harm associated with prescription shopping. The system should be implemented in such a way that is it readily accessible via the internet to Victorian prescribers and dispensers during consultations, so they can check patients' histories and therefore make informed prescribing and dispensing decisions 'on the spot'. |
| Responses | Received. |

**15 May 2014 – Coroner Jacqui Hawkins**

| | |
|---|---|
| Case | 20064603 Georgia Cheal |
| Recommendations | **Recommendation 1**. I recommend that the Secretary of the Victorian Department of Health commit to a timeline for implementation of real-time prescription monitoring in Victoria, to reduce the harms and deaths associated with longstanding systemic health issues including poor coordination of care and inappropriate prescribing and dispensing. This timeline should include a goal that all Victorian prescribers and dispensers have access to real time prescription monitoring capacity within 12 months from the date I publish this finding. |
| Responses | Received. |

**28 July 2014 – Coroner Jacinta Heffey**

| | |
|---|---|
| Case | 20072556 Glen David Kingsun |
| Recommendations | **Recommendation 1**. I recommend that the Victoria Faculty of the Royal Australian College of General Practitioners, the Australian Medical Association Victoria, the Victorian Branch of the Pharmaceutical Society of Australia and the Victorian Branch of the Pharmacy Guild of Australia meet to discuss the feasibility of collaborating to develop and implement a real-time prescription monitoring system to enhance their Victorian members' ability to provide appropriate care to patients and reduce the harms and deaths associated with poor coordination of care. |
| Responses | Received. |

**30 October 2014 – State Coroner Judge Ian Gray**

| | |
|---|---|
| Case | 20114797 Anne Brain |
| Recommendations | **Recommendation 1**. I recommend that the Victorian Department of Health progress the implementation of a Victorian-based real-time prescription monitoring system as a matter of urgency to prevent ongoing harms and deaths associated with pharmaceutical drug misuse and inappropriate prescribing and dispensing of pharmaceutical drugs.<br><br>**Recommendation 2**. I recommend that while the Victorian Department of Health continues with its efforts to implement a real-time prescription monitoring program for Schedule 8 drug dispensing, it also identifies the legislative and regulatory barriers that might prevent drugs listed in other schedules (particularly Schedule 4) from being monitored within |

| | |
|---|---|
| | the scope of the program. If any such barriers are identified, I recommend that the department then considers what reforms are necessary so that in due course its real-time prescription monitoring program can be expanded beyond Schedule 8 drugs. This will enhance clinicians' ability to make appropriate clinical decisions about patients.<br><br>**Recommendation 3**. I recommend that the Victorian Department of Health consider meeting with private health information technology developers and vendors to discuss and, if appropriate, address the legislative and regulatory barriers that might prevent private companies providing real-time prescription monitoring capacity through their products and services. |
| Responses | Received. |

| 17 December 2014 – Coroner Jacinta Heffey | |
|---|---|
| Case | 20120367 Paul Kanis |
| Recommendations | **Recommendation 2**. As a matter of urgency, the Victorian Department of Health must implement a real-time prescription monitoring system that records information on dispensing of all Schedule 8 drugs and all schedule 4 drugs of dependence in Victoria and makes this information available to all Victorian pharmaceutical drug prescribers and dispensers, so they can use the information to inform their clinical practice and reduce the harms and deaths associated with pharmaceutical drugs. |
| Responses | Received. |

| 24 July 2015 – Coroner John Olle | |
|---|---|
| Case | 20103678 Jamie Apap and 20104459 James Dougan |
| Recommendations | **Recommendation 1**. In line with the recent recommendation published by State Coroner Ian Gray in Finding with Inquest into the death of Anne Brain (COR 2011 4797), I recommend that the Victorian Department of Health progress the implementation of a Victorian-based real-time prescription monitoring system as a matter of urgency to prevent ongoing harms and deaths associated with pharmaceutical drug misuse and inappropriate prescribing and dispensing of pharmaceutical drugs.<br><br>**Recommendation 2**. While the Victorian Department of Health continues with its efforts to implement a real-time prescription monitoring program for Schedule 8 drug dispensing, it also identifies the legislative and regulatory barriers that might prevent drugs listed in other schedules (particularly Schedule 4) from being monitored within the scope of the program. If any such barriers are identified, I recommend that the department considers what reforms are necessary so that in due course its real-time prescription monitoring program can be expanded beyond Schedule 8 drugs. This will enhance clinicians' ability to make appropriate clinical decisions about patients. I note that the DHHS has responded to recommendations two and three as made in the Anne Brain finding, however the responses indicate that issues are under consideration and no commitment to action has yet been made, therefore I reiterate recommendations two and three. |
| Responses | Received. |

| 18 January 2016 – Coroner Paresa Spanos | |
|---|---|
| Case | 20110727 Dean Wright |
| Recommendations | **Recommendation 1**. In line with recent recommendations published by State Coroner Ian Gray in the Finding into the death of Anne Brain [COR 2011 4794], I recommend that the Victorian Department of Health progress the implementation of a Victorian-based real-time prescription monitoring system as a matter of urgency to prevent ongoing harm and deaths associated with pharmaceutical drug misuse and inappropriate prescribing and dispensing of pharmaceutical drugs.<br><br>**Recommendation 2**. While the Victorian Department of Health continues with its efforts to implement a real-time prescription monitoring program for Schedule 8 drug dispensing, I recommend that it also identifies the legislative and regulatory barriers that might prevent drugs listed in other schedules (particularly Schedule 4) from being monitored within the scope of the program. And, if any such barriers are identified, I recommend that the department considered what reforms are necessary so that in due course its real-time prescription monitoring program can be expanded beyond Schedule 8 drugs.<br><br>**Recommendation 3**. I note that the Department of Health and Human Services has responded to recommendations one and two made in the Anne Brain Finding (and one and two above), and to similar recommendations made by Coroner John Olle in his Finding into the death of James Dougan [COR 2010 4459] and Finding into the death of Jamie Apap [COR 2010 3678]. The responses indicate that issues are under consideration and in the May 2015 Budget $300,000 was allocated to evaluate and plan for the implementation of a real-time prescription monitoring system but that no commitment to action has yet been made. Therefore, I reiterate the above recommendations. |
| Responses | Received. |

| 4 April 2016 – Coroner Audrey Jamieson | |
|---|---|
| Case | 20124080 Frank Frood |
| Recommendations | **Recommendation 5**. Mr Frood's death further reinforces the immediate need for a real-time prescription monitoring system to assist doctors in their clinical decision-making around drug prescribing, which should not await the involvement of all other states and territories. With this in mind, I recommend that the Victorian Department of Health and Human Services immediately proceed with implementing a real time prescription monitoring system in Victoria to tackle the ever increasing toll of pharmaceutical drug related deaths in the state. |
| Responses | Received. |

| 22 April 2016 – Coroner Rosemary Carlin | |
|---|---|
| Case | 20132123 Kelly Hall |
| Recommendations | **Recommendation 1**. I recommend that the Victorian Department of Health and Human Services take the national lead in immediately implementing a Real Time Prescription Monitoring system in Victoria to tackle the ever increasing toll of pharmaceutical drug related deaths in the state. |
| Responses | Received. |

| 1 June 2016 – Coroner Paresa Spanos | |
|---|---|
| Case | 20104762 Benjamin Appelman |
| Recommendations | **Recommendation 1**. I recommend that the Department of Health and Human Services' Real Time Prescription Monitoring Taskforce consider the inclusion of diazepam and other Schedule 4 drugs within the RTPM scheme. |
| Responses | Received. |

| 6 June 2016 – Coroner Paresa Spanos | |
|---|---|
| Case | 20140042 Jim Zanis |
| Recommendations | **Recommendation 1**. That the department of Health and Human Services' Real-Time Prescription Monitoring Taskforce consider the inclusion of diazepam and other schedule 4 drugs within the RTPM scheme. |
| Responses | Received. |

## Regulating Schedule 8 drugs

| 31 October 2011 – Coroner Jennifer Tregent | |
|---|---|
| Case | 20052510 Rory (name redacted) |
| Recommendations | **Recommendation 6**. That the Department of Health undertake regular audits of its records to ascertain if any medical practitioner is obtaining a disproportionately high number of permits for schedule 8 drugs compared with usual practice of other practitioners and investigate why. |
| Responses | Received. |

| 11 September 2012 – Coroner Paresa Spanos | |
|---|---|
| Case | 20070549 Robert Anderson |
| Recommendations | **Recommendation 2**. That the Department of Health consider enhancement of the Schedule 8 permit scheme so as to audit permit compliance more comprehensively, ensuring at a minimum, that Schedule 8 drugs are being prescribed in strict accordance with the permit and not otherwise.<br><br>**Recommendation 3**. That the Department of Health considers enhancement of the Schedule 8 permit scheme so as to require all prescriptions to be dispensed only if accompanied by a copy of the relevant Schedule 8 permit, and only if prescribed in strict accordance with the permit as to strength of preparation, dose and dosing frequency, and route of administration.<br><br>**Recommendation 4**. That the Department of Health initiate a dialogue with its Commonwealth counterparts about the feasibility of reconciliation of information from the Schedule 8 permit scheme on the one hand and the Medicare/PBS phone approval hotline, on the other. |
| Responses | Received. |

| 4 June 2013 – Coroner Michelle Hodgson | |
|---|---|
| Case | 20122188 Nathan Skewes |
| Recommendations | **Recommendation 1**. The Victorian Department of Health consider consulting with relevant bodies whose members have contact with the family of the deceased after a death, such as Victoria Police, Ambulance Victoria and the Royal Australian College of General Practitioners, to identify any appropriate opportunities to retrieve medications (particularly Schedule 8 opioids) that had been prescribed to the deceased thus reducing harms associated with other people accessing and using those medications. |
| Responses | Received. |

| 29 October 2013 – Coroner Jacinta Heffey | |
|---|---|
| Case | 20101624 Helen Stagoll |
| Recommendations | **Recommendation 3**. That the Department of Health make ORT permit information accessible to hospital emergency departments 24 hours per day.<br><br>**Recommendation 4**. That the Victorian Department of Health require all hospital emergency departments to record all admissions of patients suffering from methadone toxicity who are not on the ORT programme as evidenced by a search of the data base referred to in [Recommendation 3] above and forward such documentation to the Department of Health. |
| Responses | Received. |

Coroners Court of Victoria

# Data summary of overdose deaths, Victoria 2009-2016

Date: 16 March 2017

To: State Coroner Judge Sara Hinchey

From: Coroners Prevention Unit

Re: Inquiry into Drug Law Reform
Law Reform, Road and Community Safety Committee
**Parliament of Victoria**

## Executive summary


(a) This data summary examines overdose deaths investigated by Victorian coroners during the period 2009-2016.

(b) The annual frequency of Victorian overdose deaths followed a general upwards trend between 2009 and 2016, with approximately 70% of deaths being caused by the acute toxic effects of multiple contributing drugs rather than a single drug.

(c) Pharmaceutical drugs contributed at a relatively consistent rate over time, playing a role in approximately 80% of Victorian overdose deaths each year. Alcohol contribution was similarly steady, at approximately 24% of deaths each year. The proportion of overdose deaths involving illegal drugs was approximately 40% annually between 2009 and 2014, then increased to 50% in 2015 and 54% in 2016.

(d) Benzodiazepines were the most frequent contributing pharmaceutical drug group to Victorian overdose deaths, followed by opioids then antidepressants.

(e) The overall five most frequent contributing individual drugs to Victorian overdose deaths between 2009 and 2016 were (in descending order) diazepam, heroin, alcohol, codeine and methadone.

(f) There was only a minor difference between the average annual rate of overdose deaths, for metropolitan Melbourne (6.9 deaths per 100,000 population per year) and regional Victoria (6.6 deaths). However there was strong variation in overdose death rate between individual local government areas.

## 1. Background

Mr Geoff Howard MP, Chair of the Parliament of Victoria's Law Reform, Road and Community Safety Committee, invited Victorian State Coroner Judge Sara Hinchey to make a submission to the Inquiry into Drug Law Reform. To inform the response, Judge Hinchey directed that the Coroners Prevention Unit at the Coroners Court of Victoria (CCOV) prepare a summary of overdose deaths investigated by Victorian coroners during the period 2009-2016.

## 2. Method

This section describes how data was sourced, extracted and analysed to prepare the summary.

### 2.1 Data source

In Victoria, all deaths from suspected non-natural causes (including suspected overdose deaths) must be reported to the CCOV for investigation. If the investigation establishes the death was an overdose, it is entered into the Victorian Overdose Deaths Register ('the Register').

The Register definition of an overdose death is consistent with the definition of "drug poisoning death" in the Substance Abuse and Mental Health Services Administration (SAMHSA) Consensus Panel recommendations: a death where the expert death investigators (the coroner, forensic pathologist and forensic toxicologist) established that the acute toxic effects of a drug or drugs played a contributory role.[1] Overdose deaths include deaths where acute toxic effects of drugs were the only cause, and deaths where acute drug toxicity contributed in combination with other non-drug causes such as cardiovascular or respiratory disease. Deaths associated with the behavioural effects of drug taking (for example a fatal motor vehicle collision while affected by drugs and alcohol) or its chronic effects (for example haemorrhage of a gastrointestinal ulcer caused by chronic ibuprofen consumption) are excluded from the Register. Likewise, deaths resulting from allergic reactions to drugs are excluded, and deaths from drug administration-related injury and disease.

The Register definition of the term 'drug' is largely consistent with the SAMHSA definition: "Any chemical compound that may be used by or administered to humans or animals as an aid in the diagnosis, treatment, or prevention of disease or injury; for the relief of pain or suffering; to control or improve any physiologic or pathologic condition; or for the feeling it causes".[2] However the Register includes alcohol as a drug whereas it is excluded under the SAMHSA definition.

Coded information is stored in the Register for each overdose death, including the deceased age, sex, reported date of death, and the location where the fatal overdose occurred. In line with the SAMHSA Consensus Panel recommendations for

1 Goldberger BA, Maxwell JC, Campbell A, Wilford BB, "Uniform Standards and Case Definitions for Classifying Opioid-Related Deaths: Recommendations by a SAMHSA Consensus Panel", *Journal of Addictive Diseases*, 32(3), 2013: 231-243.

2 Goldberger BA, Maxwell JC, Campbell A, Wilford BB, "Uniform Standards and Case Definitions for Classifying Opioid-Related Deaths: Recommendations by a SAMHSA Consensus Panel", *Journal of Addictive Diseases*, 32(3), 2013: 235.

documenting causality in drug-caused deaths, the Register records each individual drug that the expert death investigators determined was contributory in the fatal overdose. Where more than one drug was contributory, each was deemed to be equally contributory. Information regarding drugs that were detected but not determined to be contributory is not recorded.

### 2.2 Data extraction and analysis

To prepare the summary, on 8 March 2017 the Register was used to identify all Victorian overdose deaths reported to the CCOV between 2009 and 2016, and to extract data on the individual drugs that contributed to each death. This data was collated into a series of tables showing the annual frequency of Victorian overdose deaths by contributing drugs groups, drug types and individual drugs.

### 2.3 Limitations of the Register

The following limitations must be understood when reviewing and interpreting data extracted from the Register:

- The contents of the Register are regularly revised and updated as coronial investigations progress. Through the coroner's investigation, an overdose death initially characterised as involving one drug might be determined to have involved two other drugs; or a death initially thought to be unrelated to drug consumption might be found to be a fatal overdose. This means that data reported from the Register about Victorian overdose deaths occurring in any given period, can change over time.

- A death is only included in the Register when the individual drugs that played a contributory role are known. In some circumstances, overdose can be established as the medical cause of death but the drugs are not known, because suitable blood and urine samples were not able to be obtained for toxicological testing; these are excluded from the Register. Some deaths occur in circumstances strongly suggestive of a fatal overdose, but the forensic pathologist and coroner are unable to ascertain the cause of death. These deaths too are excluded from the Register. Consequently the Register data slightly under-estimates the true number of overdose deaths that occur in Victoria each year.

The first of these limitations is particularly pertinent when interpreting the 2016 Victorian overdose deaths data reported in this summary. When Registry data was extracted for this summary on 8 March 2017, there were 16 probable overdose deaths and several dozen possible overdose deaths for which the medical cause of death had not yet been confirmed. Therefore, the 2016 data reported in this summary should be regarded as preliminary only and is likely to be revised upwards in the future.

## 3. Victorian overdose deaths, 2009-2016

The 8 March 2017 data extract included 3147 overdose deaths investigated by Victorian coroners between 2009 and 2016. The following tables provide a basic overview of patterns of drug contribution over time in the deaths.

### 3.1. Annual frequency of Victorian overdose deaths

Table 1 shows the overall annual frequency of overdose deaths in Victoria for the period 2009-2016, and the frequency and proportion of overdose deaths each year which were due to the toxic effects of a single drug versus multiple drugs.

**Table 1**: Annual frequency and proportion of single-drug and multiple-drug overdose deaths, Victoria 2009-2016.

| Overdose deaths | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---|---|---|---|---|---|---|---|---|
| **Overall frequency** | **379** | **342** | **362** | **367** | **380** | **387** | **453** | **477** |
| Single drug | 127 | 122 | 133 | 114 | 118 | 101 | 130 | 132 |
| Multiple drug | 252 | 220 | 229 | 253 | 262 | 286 | 323 | 345 |
| **Overall proportion** | **100.0** | **100.0** | **100.0** | **100.0** | **100.0** | **100.0** | **100.0** | **100.0** |
| Single drug | 33.5 | 35.7 | 36.7 | 31.1 | 31.1 | 26.1 | 28.7 | 27.7 |
| Multiple drug | 66.5 | 64.3 | 63.3 | 68.9 | 68.9 | 73.9 | 71.3 | 72.3 |

The annual frequency of Victorian overdose deaths declined between 2009 and 2010, but then climbed steadily over following years to reach 477 deaths in 2016. The proportion of Victorian overdose deaths involving multiple drugs increased slightly across this period, from 66.5% of deaths (252 of 379) in 2009 to 72.3% of deaths (345 of 477) in 2016.

### 3.2. Overdose deaths by contributing drug types

Contributing drugs across all Victorian overdose deaths were classified into three main types: pharmaceutical drugs, illegal drugs, and alcohol. Table 2 shows the annual frequency of Victorian overdose deaths involving each of these three contributing drug types. Most overdose deaths were from combined drug toxicity, which is why the annual frequencies for each drug type in Table 2 sum to greater than the overall annual frequency.

**Table 2**: Annual frequency and proportion of overdose deaths by contributing drug types, Victoria 2009-2016

| Drug types | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---|---|---|---|---|---|---|---|---|
| **Overall frequency** | **379** | **342** | **362** | **367** | **380** | **387** | **453** | **477** |
| Pharmaceutical | 295 | 266 | 275 | 306 | 313 | 316 | 358 | 372 |
| Illegal | 147 | 149 | 153 | 133 | 166 | 164 | 227 | 257 |
| Alcohol | 94 | 85 | 88 | 80 | 94 | 94 | 106 | 118 |
| **Overall proportion** | **100.0** | **100.0** | **100.0** | **100.0** | **100.0** | **100.0** | **100.0** | **100.0** |
| Pharmaceutical | 77.8 | 77.8 | 76.0 | 83.4 | 82.4 | 81.7 | 79.0 | 78.0 |
| Illegal | 38.8 | 43.6 | 42.3 | 36.2 | 43.7 | 42.4 | 50.1 | 53.9 |
| Alcohol | 24.8 | 24.9 | 24.3 | 21.8 | 24.7 | 24.3 | 23.4 | 24.7 |

The proportion of annual Victorian overdose deaths involving pharmaceutical drugs was relatively steady during the period, ranging between 76.0% (2011) and 83.4% (2012); pharmaceutical drugs contributed in an average 79.5% of all overdose deaths across the period. Alcohol contribution was also relatively steady as a proportion of annual Victorian overdose deaths, ranging between 21.8% (2012) and 24.9% (2010) with an annual average 24.1%.

Greater variation occurred in illegal drug contribution. Between 2009 and 2014, the annual proportion of Victorian overdose deaths involving illegal drugs ranged from 36.2% (2012) and 43.7% (2013), but then increased to 50.1% of overdose deaths in 2015, and 53.9% of overdose deaths in 2016.

### 3.3. Overdose deaths by combinations of contributing drug types

To explore further how pharmaceutical drugs, illegal drugs and alcohol interacted with one another to result in fatal overdose, each death was classified according to the combination of drug types that contributed to the fatal overdose. The seven mutually exclusive combinations were:

- Pharmaceutical drugs only (no contributing illegal drugs or alcohol).
- Pharmaceutical and illegal drugs (no alcohol).
- Illegal drugs only (no pharmaceutical drugs or alcohol).
- Pharmaceutical drugs and alcohol (no illegal drugs).
- Pharmaceutical and illegal drugs and alcohol.
- Alcohol only (no contributing pharmaceutical or illegal drugs).
- Illegal drugs and alcohol (no contributing pharmaceutical or illegal drugs).

Table 3 shows the annual frequency and proportion of Victorian overdose deaths for each combination of contributing drugs.

**Table 3**: Annual frequency and proportion of overdose deaths by combinations of contributing drug types, Victoria 2009-2016

| Combination of drug types | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---|---|---|---|---|---|---|---|---|
| **Overall frequency** | **379** | **342** | **362** | **367** | **380** | **387** | **453** | **477** |
| Pharma only | 163 | 140 | 146 | 169 | 146 | 160 | 152 | 148 |
| Pharma + illegal | 72 | 68 | 67 | 78 | 86 | 91 | 126 | 144 |
| Illegal only | 50 | 49 | 61 | 40 | 54 | 42 | 69 | 67 |
| Pharma + alc | 45 | 32 | 44 | 46 | 56 | 45 | 52 | 45 |
| Pharma + ill + alc | 15 | 26 | 18 | 13 | 25 | 20 | 28 | 35 |
| Alcohol only | 24 | 21 | 19 | 19 | 12 | 18 | 22 | 27 |
| Illegal + alcohol | 10 | 6 | 7 | 2 | 1 | 11 | 4 | 11 |

**Table 3** continued over page

**Table 3** continued from previous page

| Combination of drug types | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---|---|---|---|---|---|---|---|---|
| **Overall proportion** | **100.0** | **100.0** | **100.0** | **100.0** | **100.0** | **100.0** | **100.0** | **100.0** |
| Pharma only | 43.0 | 40.9 | 40.3 | 46.1 | 38.4 | 41.3 | 33.5 | 31.0 |
| Pharma + illegal | 19.0 | 19.9 | 18.5 | 21.3 | 22.6 | 23.5 | 27.8 | 30.2 |
| Illegal only | 13.2 | 14.3 | 16.9 | 10.9 | 14.2 | 10.9 | 15.2 | 14.1 |
| Pharma + alc | 11.9 | 9.4 | 12.2 | 12.5 | 14.7 | 11.6 | 11.5 | 9.4 |
| Pharma + ill + alc | 4.0 | 7.6 | 5.0 | 3.5 | 6.6 | 5.2 | 6.2 | 7.3 |
| Alcohol only | 6.3 | 6.1 | 5.2 | 5.2 | 3.2 | 4.7 | 4.9 | 5.7 |
| Illegal + alcohol | 2.6 | 1.8 | 1.9 | 0.5 | 0.3 | 2.8 | 0.9 | 2.3 |

Pharmaceutical drug only overdose deaths were consistently the most frequent type of Victorian overdose death between 2009 and 2016. However, particularly in 2015 and 2016, there was a decline in the frequency and proportion of pharmaceutical drug only overdose deaths, and a shift towards overdose deaths involving pharmaceutical drugs in combination with illegal drugs.

### 3.4. Overdose deaths by contributing pharmaceutical drug groups

Pharmaceutical drugs were disaggregated into drug groups for more detailed analysis. Table 4a shows the annual frequency of Victorian overdose deaths 2009-2016 involving each of the major contributing pharmaceutical drug groups, with illegal drugs and alcohol included for context. Most overdose deaths were from combined drug toxicity, which is why the annual frequencies for each drug group in Table 4 sum to greater than the overall annual frequency.

**Table 4a**: Annual frequency and proportion of contribution to overdose deaths, among major contributing pharmaceutical drug groups plus alcohol and illegal drugs, Victoria 2009-2015. (^ Non-benzodiazepine anxiolytics; * Non-opioid analgesics.)

| Drug groups | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---|---|---|---|---|---|---|---|---|
| **Overall frequency** | **379** | **342** | **362** | **367** | **380** | **387** | **453** | **477** |
| Benzodiazepines | 160 | 169 | 180 | 199 | 212 | 215 | 238 | 258 |
| Opioids | 177 | 145 | 183 | 212 | 192 | 186 | 199 | 183 |
| Illegal drugs | 147 | 149 | 153 | 133 | 166 | 164 | 227 | 257 |
| Antidepressants | 122 | 106 | 101 | 142 | 134 | 144 | 161 | 156 |
| Alcohol | 94 | 85 | 88 | 80 | 94 | 94 | 106 | 118 |
| Antipsychotics | 63 | 64 | 65 | 78 | 75 | 81 | 91 | 104 |
| Non-benzo anx.^ | 35 | 28 | 33 | 38 | 56 | 48 | 60 | 37 |
| Non-opioid anlg.* | 26 | 25 | 30 | 52 | 41 | 49 | 46 | 35 |
| Anticonvulsants | 18 | 14 | 13 | 10 | 37 | 45 | 51 | 52 |
| **Overall proportion** | **100.0** | **100.0** | **100.0** | **100.0** | **100.0** | **100.0** | **100.0** | **100.0** |
| Benzodiazepines | 42.2 | 49.4 | 49.7 | 54.2 | 55.8 | 55.6 | 52.5 | 54.1 |
| Opioids | 46.7 | 42.4 | 50.6 | 57.8 | 50.5 | 48.1 | 43.9 | 38.4 |
| Illegal drugs | 38.8 | 43.6 | 42.3 | 36.2 | 43.7 | 42.4 | 50.1 | 53.9 |

**Table 4a** continued over page

**Table 4a** continued from previous page.

| Drug groups | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---|---|---|---|---|---|---|---|---|
| Antidepressants | 32.2 | 31.0 | 27.9 | 38.7 | 35.3 | 37.2 | 35.5 | 32.7 |
| Alcohol | 24.8 | 24.9 | 24.3 | 21.8 | 24.7 | 24.3 | 23.4 | 24.7 |
| Antipsychotics | 16.6 | 18.7 | 18.0 | 21.3 | 19.7 | 20.9 | 20.1 | 21.8 |
| Non-benzo anx.^ | 9.2 | 8.2 | 9.1 | 10.4 | 14.7 | 12.4 | 13.2 | 7.8 |
| Non-opioid anlg.* | 6.9 | 7.3 | 8.3 | 14.2 | 10.8 | 12.7 | 10.2 | 7.3 |
| Anticonvulsants | 4.7 | 4.1 | 3.6 | 2.7 | 9.7 | 11.6 | 11.3 | 10.9 |

Benzodiazepines were the most frequent contributing pharmaceutical drug group, playing a role in an average 51.8% of overdose deaths annually across the period. The next most frequent pharmaceutical drug groups were opioids (an average 46.9% of overdose deaths each year), antidepressants (annual average 33.9%) and antipsychotics (annual average 19.7%).

In Table 4b, the overall frequency of overdose deaths for each of the major contributing drug groups was analysed to establish the proportion of single versus multiple drug overdose deaths associated with each contributing drug group.

**Table 4b**: Proportion of single and multiple drug overdoses involving drugs from major contributing drug groups, Victoria 2009-2016

| Drug group | N | % single drug deaths | % multiple drug deaths |
|---|---|---|---|
| Benzodiazepines | 1631 | 1.7 | 98.3 |
| Opioids | 1477 | 9.5 | 90.5 |
| Illegal drugs | 1396 | 27.4 | 72.6 |
| Antidepressants | 1066 | 6.5 | 93.5 |
| Alcohol | 759 | 21.3 | 78.7 |
| Antipsychotics | 621 | 3.5 | 96.5 |
| Non-benzodiazepine anxiolytics | 335 | 16.1 | 83.9 |
| Non-opioid analgesics | 304 | 12.8 | 87.2 |
| Anticonvulsants | 240 | 4.6 | 95.4 |

At one end of the spectrum, 27.4% of the 1396 Victorian overdose deaths that occurred between 2009-2016 and involved illegal drugs, were single-drug deaths. At the other end of the spectrum, only 1.7% of the 1631 overdose deaths involving benzodiazepines were single-drug deaths.

### 3.5. Overdose deaths by individual contributing drugs

Table 5a shows the annual frequency of overdose deaths, Victoria 2009-2016, involving the most frequent contributing individual drugs. The individual drugs are tabulated by the major drug groups to which they belong.

**Table 5a:** Annual frequency of overdose deaths involving most frequent contributing individual drugs, Victoria 2009-2016.

| Individual drugs | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---|---|---|---|---|---|---|---|---|
| **Benzodiazepines** | **160** | **169** | **180** | **199** | **212** | **215** | **238** | **258** |
| Diazepam | 104 | 109 | 124 | 133 | 164 | 169 | 192 | 200 |
| Alprazolam | 62 | 56 | 43 | 57 | 45 | 28 | 23 | 21 |
| Temazepam | 28 | 22 | 48 | 35 | 22 | 20 | 25 | 25 |
| Oxazepam | 18 | 19 | 44 | 41 | 17 | 19 | 34 | 26 |
| Nitrazepam | 17 | 16 | 11 | 24 | 26 | 13 | 17 | 22 |
| Clonazepam | 7 | 9 | 14 | 18 | 19 | 25 | 33 | 30 |
| **Opioids** | **177** | **145** | **183** | **212** | **192** | **186** | **199** | **183** |
| Codeine | 76 | 57 | 66 | 93 | 71 | 54 | 64 | 47 |
| Methadone | 50 | 55 | 72 | 75 | 70 | 67 | 67 | 70 |
| Oxycodone | 41 | 39 | 46 | 46 | 61 | 46 | 58 | 52 |
| Tramadol | 22 | 9 | 15 | 18 | 24 | 23 | 32 | 26 |
| Morphine | 22 | 11 | 10 | 13 | 7 | 12 | 8 | 13 |
| Fentanyl | 1 | 2 | 5 | 17 | 11 | 11 | 23 | 13 |
| **Illegal drugs** | **147** | **149** | **153** | **133** | **166** | **164** | **227** | **257** |
| Heroin | 127 | 139 | 129 | 111 | 132 | 136 | 172 | 190 |
| Methamphetamine | 23 | 14 | 29 | 36 | 51 | 53 | 72 | 116 |
| Amphetamine | 4 | 4 | 19 | 11 | 10 | 8 | 9 | 1 |
| Cocaine | 7 | 1 | 2 | 4 | 5 | 7 | 15 | 10 |
| MDMA | 5 | 1 | 1 | 1 | 3 | 4 | 5 | 13 |
| **Antidepressants** | **122** | **106** | **101** | **142** | **134** | **144** | **161** | **156** |
| Mirtazapine | 23 | 21 | 23 | 26 | 30 | 29 | 50 | 24 |
| Amitriptyline | 24 | 26 | 22 | 32 | 25 | 41 | 28 | 31 |
| Citalopram | 17 | 22 | 21 | 25 | 24 | 25 | 26 | 27 |
| Venlafaxine | 25 | 12 | 16 | 15 | 20 | 19 | 10 | 21 |
| Fluoxetine | 8 | 9 | 8 | 14 | 10 | 7 | 12 | 14 |
| Duloxetine | 3 | 5 | 7 | 15 | 11 | 12 | 12 | 14 |
| Sertraline | 6 | 6 | 4 | 12 | 13 | 9 | 12 | 11 |
| Desvenlafaxine | 0 | 1 | 3 | 6 | 8 | 11 | 15 | 17 |
| **Alcohol** | **94** | **85** | **88** | **80** | **94** | **94** | **106** | **118** |
| **Antipsychotics** | **63** | **64** | **65** | **78** | **75** | **81** | **91** | **104** |
| Quetiapine | 28 | 37 | 34 | 41 | 41 | 48 | 49 | 55 |
| Olanzapine | 19 | 18 | 17 | 22 | 15 | 21 | 30 | 36 |
| Risperidone | 6 | 3 | 11 | 8 | 10 | 7 | 9 | 13 |
| Chlorpromazine | 5 | 2 | 4 | 10 | 6 | 3 | 5 | 5 |
| Zuclopenthixol | 5 | 4 | 4 | 6 | 3 | 3 | 5 | 4 |
| Clozapine | 5 | 5 | - | 4 | 6 | 2 | 4 | 5 |

**Table 5a** continued over page

**Table 5a** continued from previous page

| Individual drugs | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---|---|---|---|---|---|---|---|---|
| **Non-benzo anx.** | **35** | **28** | **33** | **38** | **56** | **48** | **60** | **37** |
| Doxylamine | 13 | 16 | 11 | 21 | 23 | 13 | 14 | 12 |
| Pentobarbitone [3] | 4 | 5 | 11 | 1 | 8 | 15 | 18 | 9 |
| Zopiclone | 6 | 3 | 6 | 13 | 14 | 11 | 17 | 11 |
| Zolpidem | 11 | 3 | 5 | 5 | 4 | 6 | 11 | 5 |
| **Non-opioid anlg.** | **26** | **25** | **30** | **52** | **41** | **49** | **46** | **35** |
| Paracetamol | 23 | 21 | 24 | 50 | 39 | 37 | 42 | 30 |
| Ibuprofen | 5 | 5 | 4 | 5 | 2 | 7 | 5 | 4 |
| **Anticonvulsants** | **18** | **14** | **13** | **10** | **37** | **45** | **51** | **52** |
| Pregabalin [4] | - | - | - | - | 17 | 27 | 34 | 32 |
| Sodium valproate | 9 | 9 | 5 | 6 | 13 | 9 | 9 | 7 |
| Carbamazepine | 7 | 3 | 6 | 1 | 3 | 3 | 2 | 8 |

For Table 5b, the 30 most frequent contributing individual drugs were collated by the proportion of single-drug and multiple-drug deaths in which each was involved across the period 2009-2016.

**Table 5b**: The 30 most frequent contributing drugs in overdose deaths, and the proportion of single and multiple drug overdoses to which each drug contributed, Victoria 2009-2016

| Drug | Group | N | % single drug | % multiple drug |
|---|---|---|---|---|
| Diazepam | Benzodiazepine | 1195 | 0.1 | 99.9 |
| Heroin | Illegal | 1136 | 27.2 | 72.8 |
| Alcohol | Alcohol | 759 | 21.3 | 78.7 |
| Codeine | Opioid | 527 | 1.7 | 98.3 |
| Methadone | Opioid | 526 | 9.1 | 90.9 |
| Methamphetamine | Illegal | 394 | 14.2 | 85.8 |
| Oxycodone | Opioid | 389 | 9.3 | 90.7 |
| Alprazolam | Benzodiazepine | 335 | 0.6 | 99.4 |
| Quetiapine | Antipsychotic | 333 | 2.7 | 97.3 |
| Paracetamol | Non-opioid analgesic | 266 | 14.7 | 85.3 |
| Amitriptyline | Antidepressant | 229 | 9.6 | 90.4 |
| Mirtazapine | Antidepressant | 226 | 1.3 | 98.7 |
| Temazepam | Benzodiazepine | 224 | 4.9 | 95.1 |
| Oxazepam | Benzodiazepine | 217 | 1.4 | 98.6 |
| Citalopram | Antidepressant | 187 | 2.7 | 97.3 |
| Olanzapine | Antipsychotic | 178 | 1.1 | 98.9 |

**Table 5b** continued over page

3 Pentobarbitone prescribing to humans is not permitted in Australia, and the drug could be alternatively classified as illegal.

4 Routine post-mortem testing for pregabalin did not commence in Victoria until 2013.

**Table 5b** continued from previous page.

| Drug | Group | N | % single drug | % multiple drug |
|---|---|---|---|---|
| Tramadol | Opioid | 169 | 1.8 | 98.2 |
| Clonazepam | Benzodiazepine | 155 | 1.3 | 98.7 |
| Nitrazepam | Benzodiazepine | 146 | 4.1 | 95.9 |
| Venlafaxine | Antidepressant | 138 | 6.5 | 93.5 |
| Doxylamine | Non-benzodiazepine anxiolytic | 123 | 0.8 | 99.2 |
| Pregabalin | Anticonvulsant | 110 | 0.0 | 100.0 |
| Morphine | Opioid | 96 | 21.9 | 78.1 |
| Fentanyl | Opioid | 83 | 20.5 | 79.5 |
| Fluoxetine | Antidepressant | 82 | 1.2 | 98.8 |
| Zopiclone | Non-benzodiazepine anxiolytic | 81 | 0.0 | 100.0 |
| Duloxetine | Antidepressant | 79 | 3.8 | 96.2 |
| Sertraline | Antidepressant | 73 | 6.8 | 93.2 |
| Promethazine | Antihistamine | 72 | 0.0 | 100.0 |
| Pentobarbitone | Non-benzodiazepine anxiolytic | 71 | 67.6 | 32.4 |

Notably, only one drug (pentobarbitone) was involved in a greater proportion of single-drug than multiple-drug overdose deaths.

### 3.6. Overdose deaths by local government area

Table 6a shows the annual frequency of Victorian overdose deaths by metropolitan local government area where the fatal drug-taking incident occurred, with local government areas ordered in descending frequency of overall overdose deaths that occurred between 2009-2016. Table 6b shows the same data for regional local government areas. Please note that there were nine Victorian overdose deaths between 2009-2016 where the local government area of fatal incident could not be confirmed; these are omitted from the below tables.

**Table 6a:** Annual frequency of overdose deaths by metropolitan local government area of fatal incident, Victoria 2009-2016.

| Local government area | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---|---|---|---|---|---|---|---|---|
| **All metropolitan** | **295** | **263** | **279** | **264** | **276** | **290** | **344** | **362** |
| Yarra | 15 | 18 | 26 | 11 | 19 | 22 | 23 | 24 |
| Port Phillip | 19 | 28 | 14 | 17 | 15 | 18 | 22 | 23 |
| Melbourne | 14 | 13 | 20 | 21 | 15 | 25 | 24 | 21 |
| Frankston | 13 | 11 | 13 | 16 | 12 | 17 | 22 | 20 |
| Brimbank | 14 | 12 | 15 | 9 | 19 | 17 | 17 | 13 |
| Dandenong | 13 | 16 | 11 | 16 | 11 | 8 | 18 | 16 |
| Darebin | 12 | 12 | 11 | 8 | 11 | 16 | 15 | 19 |
| Mornington Pen. | 11 | 6 | 12 | 11 | 21 | 5 | 14 | 16 |
| Whitehorse | 12 | 13 | 7 | 13 | 11 | 10 | 17 | 11 |
| Casey | 17 | 8 | 6 | 9 | 5 | 12 | 15 | 9 |

**Table 6a** continued over page

**Table 6a** continued from previous page

| Local government area | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---|---|---|---|---|---|---|---|---|
| Monash | 11 | 9 | 14 | 4 | 7 | 10 | 5 | 20 |
| Maribyrnong | 12 | 10 | 9 | 11 | 4 | 12 | 15 | 6 |
| Maroondah | 14 | 10 | 10 | 4 | 7 | 6 | 10 | 13 |
| Knox | 7 | 6 | 13 | 6 | 15 | 8 | 11 | 7 |
| Moreland | 7 | 5 | 11 | 12 | 3 | 10 | 9 | 16 |
| Wyndham | 8 | 8 | 4 | 9 | 11 | 8 | 10 | 10 |
| Boroondara | 9 | 6 | 8 | 8 | 11 | 4 | 16 | 6 |
| Yarra Ranges | 5 | 4 | 12 | 11 | 7 | 8 | 9 | 11 |
| Hume | 7 | 8 | 6 | 10 | 11 | 5 | 9 | 10 |
| Stonnington | 13 | 9 | 11 | 4 | 9 | 3 | 5 | 7 |
| Banyule | 5 | 5 | 8 | 6 | 6 | 9 | 9 | 13 |
| Whittlesea | 7 | 8 | 3 | 4 | 8 | 10 | 7 | 9 |
| Kingston | 9 | 8 | 6 | 7 | 5 | 6 | 6 | 5 |
| Moonee Valley | 13 | 4 | 4 | 3 | 4 | 9 | 3 | 12 |
| Glen Eira | 7 | 6 | 6 | 5 | 10 | 4 | 7 | 5 |
| Melton | 6 | 4 | - | 6 | 3 | 5 | 5 | 11 |
| Hobsons Bay | 3 | 3 | 5 | 10 | 4 | 7 | 3 | 5 |
| Bayside | 4 | 5 | 6 | 3 | 5 | 5 | 3 | 8 |
| Cardinia | 3 | 1 | 5 | 4 | 3 | 9 | 2 | 8 |
| Manningham | 3 | 6 | 3 | 3 | 4 | 1 | 8 | 4 |
| Nillumbik | 2 | 1 | - | 3 | - | 1 | 5 | 4 |

**Table 6b:** Annual frequency of overdose deaths by regional local government area of fatal incident, Victoria 2009-2016.

| Local government area | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---|---|---|---|---|---|---|---|---|
| **All regional** | 84 | 79 | 83 | 103 | 104 | 97 | 109 | 115 |
| Greater Geelong | 12 | 12 | 19 | 19 | 20 | 17 | 13 | 18 |
| Greater Bendigo | 6 | 8 | 8 | 10 | 8 | 7 | 12 | 6 |
| Latrobe | 7 | 8 | 4 | 7 | 10 | 10 | 4 | 10 |
| Shepparton | 5 | 2 | 4 | 6 | 8 | 4 | 11 | 5 |
| Ballarat | 6 | 3 | 9 | 3 | 4 | 7 | 2 | 6 |
| Mildura | 2 | 1 | 4 | 4 | 7 | 3 | 4 | 4 |
| East Gippsland | 6 | 8 | 1 | 2 | 1 | 2 | 2 | 4 |
| Baw Baw | 1 | 1 | 3 | 7 | 3 | 3 | 3 | 4 |
| Wodonga | 3 | 2 | 1 | 3 | 5 | 4 | 3 | 3 |
| Bass Coast | 4 | 2 | 2 | 1 | 3 | 2 | 3 | 5 |
| Wellington | 4 | 3 | 1 | 2 | - | 2 | 6 | 2 |

**Table 6b** continued over page

**Table 6b** continued from previous page

| Local gov. area | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---|---|---|---|---|---|---|---|---|
| Glenelg | - | - | 3 | 5 | 2 | 1 | 7 | 2 |
| Mitchell | - | 4 | 1 | 2 | 4 | 4 | 2 | 2 |
| Wangaratta | 4 | 1 | - | 2 | 2 | 2 | 1 | 5 |
| Campaspe | - | 2 | 1 | 3 | 2 | 2 | 2 | 4 |
| Warrnambool | 4 | 1 | - | 2 | 1 | 2 | 3 | 1 |
| Macedon Ranges | 1 | 2 | 1 | 1 | 3 | 3 | 1 | 2 |
| Horsham | 2 | 1 | 4 | 1 | - | - | - | 3 |
| Moorabool | 1 | 2 | - | 1 | 2 | 1 | 1 | 3 |
| Colac Otway | 1 | 2 | - | - | 1 | 4 | 1 | 2 |
| South Gippsland | - | - | 2 | 1 | 3 | 1 | 2 | 2 |
| Moira | - | - | 2 | 2 | 1 | - | 3 | 2 |
| Hepburn | 3 | - | 1 | 1 | 1 | 1 | 1 | 1 |
| North Grampians | - | 3 | 2 | - | 3 | - | 1 | - |
| Indigo | 1 | 1 | - | 1 | 1 | 1 | 1 | 2 |
| Murrindindi | 1 | - | - | 1 | 1 | - | 3 | 1 |
| Surf Coast | 1 | 1 | - | 1 | 1 | 1 | - | 2 |
| Moyne | 1 | 2 | - | 1 | - | 1 | 1 | 1 |
| Central Goldfields | - | - | 1 | 1 | - | 2 | 1 | 2 |
| Golden Plains | - | - | 1 | 1 | - | 2 | 2 | 1 |
| Benalla | 1 | 1 | 1 | - | - | 1 | 1 | 1 |
| Strathbogie | 2 | - | - | 1 | 1 | - | 2 | - |
| Mount Alexander | - | 2 | - | 1 | 1 | 1 | - | 1 |
| Swan Hill | - | 1 | - | 1 | 1 | 1 | 1 | 1 |
| Corangamite | 2 | - | 2 | - | - | - | 1 | - |
| Ararat | - | 1 | 1 | 1 | - | 1 | 1 | - |
| Pyrenees | - | 1 | - | 2 | - | 1 | - | - |
| Mansfield | - | - | 1 | 1 | 2 | - | - | - |
| Loddon | - | - | - | - | - | 1 | 2 | 1 |
| South Grampians | 2 | - | - | - | - | - | - | 1 |
| Buloke | 1 | - | - | - | - | 1 | - | 1 |
| Towong | - | - | 1 | - | 1 | - | - | 1 |
| Yarriambiack | - | 1 | - | - | - | 1 | - | - |
| Queenscliffe | - | - | 1 | 1 | - | - | - | - |
| Gannawarra | - | - | 1 | - | - | - | 1 | - |
| West Wimmera | - | - | - | - | - | - | 1 | 1 |
| Alpine | - | - | - | - | - | - | 1 | - |

The frequency data is problematic to interpret in and of itself, as it does not take into account the population of each local government area. Therefore, average annual rates of overdose death across the period 2009-2016 were also calculated for each local

government area using Australian Bureau of Statistics (ABS) population data;[5] these are presented in Tables 7(a) (metropolitan) and 7(b) (regional).

**Table 7a:** Average annual rate of overdose death per 100,000 population by metropolitan local government area of fatal incident, Victoria 2009-2016.

| Local government area | Total overdose deaths 2009-2016 | Population (ABS 2013) | Average annual rate |
|---|---|---|---|
| **All metropolitan** | **2373** | **4,279,084** | **6.9** |
| Yarra | 158 | 83,508 | 23.7 |
| Port Phillip | 156 | 102,396 | 19.0 |
| Melbourne | 153 | 116,330 | 16.4 |
| Frankston | 124 | 133,425 | 11.6 |
| Brimbank | 116 | 195,273 | 7.4 |
| Dandenong | 109 | 146,578 | 9.3 |
| Darebin | 104 | 146,650 | 8.9 |
| Mornington Pen. | 96 | 152,106 | 7.9 |
| Whitehorse | 94 | 161,560 | 7.3 |
| Casey | 81 | 274,836 | 3.7 |
| Monash | 80 | 182,300 | 5.5 |
| Maribyrnong | 79 | 79,222 | 12.5 |
| Maroondah | 74 | 109,466 | 8.5 |
| Knox | 73 | 154,760 | 5.9 |
| Moreland | 73 | 159,867 | 5.7 |
| Wyndham | 68 | 189,063 | 4.5 |
| Boroondara | 68 | 170,382 | 5.0 |
| Yarra Ranges | 67 | 149,390 | 5.6 |
| Hume | 66 | 183,077 | 4.5 |
| Stonnington | 61 | 103,085 | 7.4 |
| Banyule | 61 | 124,350 | 6.1 |
| Whittlesea | 56 | 179,080 | 3.9 |
| Kingston | 52 | 151,533 | 4.3 |
| Moonee Valley | 52 | 114,979 | 5.7 |
| Glen Eira | 50 | 141,379 | 4.4 |

**Table 7a** continued over page

5 Population data for each local government area was taken from Australian Bureau of Statistics, "Estimated Resident Population, Local Government Areas, Victoria", in *Population Estimates by Local Government Area (ASGS 2015), 2005 to 2015*, catalogue number 3218.0, released 30 March 2016. The 2013 population data for each local government area was used to calculate the average annual rate of overdose death per 100,000 population, because 2013 was the mid-point for the period 2009-2016. The formula for calculating the average annual rate was as follows:

(a) Total frequency of overdose deaths in local government area 2009-2016, -

(b) Divided by 2013 local government area population, -

(c) Multiplied by 100,000 (to produce 8-year overdose rate per 100,000 people), -

(d) Divided by 8 (to produce average annual rate per 100,000 people, 2009-2016).

**Table 7a** continued from previous page

| Local gov area | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---|---|---|---|---|---|---|---|---|
| Kingston | | 52 | | | 151,533 | | 4.3 | |
| Moonee Valley | | 52 | | | 114,979 | | 5.7 | |
| Glen Eira | | 50 | | | 141,379 | | 4.4 | |
| Melton | | 40 | | | 122,786 | | 4.1 | |
| Hobsons Bay | | 40 | | | 89,384 | | 5.6 | |
| Bayside | | 39 | | | 98,270 | | 5.0 | |
| Cardinia | | 35 | | | 83,980 | | 5.2 | |
| Manningham | | 32 | | | 117,409 | | 3.4 | |
| Nillumbik | | 16 | | | 62,660 | | 3.2 | |

**Table 7b:** Average annual rate of overdose death per 100,000 population by regional local government area of fatal incident, Victoria 2009-2016.

| Local government area | Total overdose deaths 2009-2016 | Population (ABS 2013) | Average annual rate |
|---|---|---|---|
| **All regional** | **765** | **1,448,010** | **6.6** |
| Greater Geelong | 130 | 221,290 | 7.3 |
| Greater Bendigo | 65 | 105,222 | 7.7 |
| Latrobe | 60 | 73,783 | 10.2 |
| Shepparton | 45 | 62,707 | 9.0 |
| Ballarat | 40 | 98,570 | 5.1 |
| Mildura | 29 | 52,633 | 6.9 |
| East Gippsland | 26 | 43,376 | 7.5 |
| Baw Baw | 25 | 45,158 | 6.9 |
| Wodonga | 24 | 37,307 | 8.0 |
| Bass Coast | 22 | 30,975 | 8.9 |
| Wellington | 20 | 42,272 | 5.9 |
| Glenelg | 20 | 19,500 | 12.8 |
| Mitchell | 19 | 37,325 | 6.4 |
| Wangaratta | 17 | 27,169 | 7.8 |
| Campaspe | 16 | 36,898 | 5.4 |
| Warrnambool | 14 | 33,240 | 5.3 |
| Macedon Ranges | 14 | 44,056 | 4.0 |
| Horsham | 11 | 19,666 | 7.0 |
| Moorabool | 11 | 30,313 | 4.5 |
| Colac Otway | 11 | 20,666 | 6.7 |
| South Gippsland | 11 | 27,895 | 4.9 |
| Moira | 10 | 28,645 | 4.4 |
| Hepburn | 9 | 14,807 | 7.6 |
| North Grampians | 9 | 11,775 | 9.6 |
| Indigo | 8 | 15,359 | 6.5 |

**Table 7b** continued over page

**Table 7b** continued from previous page

| Local government area | Total overdose deaths 2009-2016 | Population (ABS 2013) | Average annual rate |
|---|---|---|---|
| Murrindindi | 7 | 13,477 | 6.5 |
| Surf Coast | 7 | 28,262 | 3.1 |
| Moyne | 7 | 16,295 | 5.4 |
| Central Goldfields | 7 | 12,620 | 6.9 |
| Golden Plains | 7 | 20,131 | 4.3 |
| Benalla | 6 | 13,697 | 5.5 |
| Strathbogie | 6 | 9,702 | 7.7 |
| Mount Alexander | 6 | 17,964 | 4.2 |
| Swan Hill | 6 | 20,849 | 3.6 |
| Corangamite | 5 | 16,108 | 3.9 |
| Ararat | 5 | 11,214 | 5.6 |
| Pyrenees | 4 | 6,759 | 7.4 |
| Mansfield | 4 | 8,177 | 6.1 |
| Loddon | 4 | 7,417 | 6.7 |
| South Grampians | 3 | 16,133 | 2.3 |
| Buloke | 3 | 6,214 | 6.0 |
| Towong | 3 | 5,884 | 6.4 |
| Yarriambiack | 2 | 7,021 | 3.6 |
| Queenscliffe | 2 | 3,054 | 8.2 |
| Gannawarra | 2 | 10,311 | 2.4 |
| West Wimmera | 2 | 4,084 | 6.1 |
| Alpine | 1 | 12,030 | 1.0 |

The annual average rate of overdose death did not appear to vary systematically between metropolitan local government areas (6.9 overdose deaths per 100,000 population per year) and regional local government areas (6.6 overdose deaths per 100,000 population per year).

There was substantial variation in average annual rates of overdose death between individual local government areas in Metropolitan Melbourne. Some areas (Yarra, Port Phillip, Melbourne, Maribyrnong and Frankston) experienced particularly high rates, whereas far lower rates were observed in other areas (for example Casey, Whittlesea and Nillumbik). There was less variation in average annual overdose deaths rates between local government areas in regional Victoria. However, for many regional local government areas these rates must be interpreted with caution, because of the low absolute frequencies of overdose deaths involved, and the relatively low populations of the areas.

## 4. Further information

For further information or clarification regarding the Victorian overdose deaths summary presented here, please contact Coroners Prevention Unit Manager Mick Boyle.

Coroners Court of Victoria

# Intersection between mental illness and drug dependence in external cause death, Victoria

Date: 17 March 2017

To: State Coroner Judge Sara Hinchey

From: Coroners Prevention Unit

Re: Inquiry into Drug Law Reform
Law Reform, Road and Community Safety Committee
**Parliament of Victoria**

## Executive summary


(a) This memorandum describes recent coronial research into the presence of intersecting diagnosed mental illness and drug dependence among suicide and overdose deceased, and offenders and deceased in intimate partner homicides.

(b) A detailed study of 838 Victorian overdose deaths occurring between 2011 and 2013, was undertaken in collaboration with researchers from Turning Point. The study found that 49.6% of deceased had both clinically documented drug dependence and a diagnosed mental illness (other than a mental illness relating to substance misuse).

(c) A pilot analysis of Victorian Suicide Register data for the period 2010-2011, established that 32.9% of all deceased were drug dependent proximal to their deaths. Among this drug-dependent cohort, 55.3% of deceased had clinically documented drug dependence in combination with a diagnosed mental illness (other than a mental illness relating to substance misuse).

(d) A pilot analysis of 64 intimate partner homicide incidents, using data drawn from the Victorian Homicide Register, showed that 46.2% of offenders had a history of substance misuse as well as a diagnosed mental illness at the time of the fatal incident; whereas 16.9% of the deceased had both a substance misuse history and diagnosed mental illness.

## Background

Mr Geoff Howard MP, Chair of the Parliament of Victoria's Law Reform, Road and Community Safety Committee, invited Victorian State Coroner Judge Sara Hinchey to make a submission to the Inquiry into Drug Law Reform. To inform the response, Judge Hinchey directed that the Coroners Prevention Unit at the Coroners Court of Victoria (CCOV) prepare a brief overview of recent coronial research illuminating the intersection between diagnosed mental illness and drug dependence in three major types of external cause deaths:

- Overdose death.
- Suicide.
- Intimate partner homicide.

## Caution in interpreting the contents of this memorandum

The data reported in this memorandum pertains only to the presence of diagnosed mental illness and drug dependence in certain types of external cause death. Presence does not equate to contribution, and the memorandum should not be interpreted as suggesting that diagnosed mental illness and/or drug dependence necessarily played a role in each of the deaths.

## Overdose death

In February 2017 the Coroners Court of Victoria concluded a study in partnership with Turning Point, which examined the circumstances in which Victorian pharmaceutical drug-involved overdose deaths occur. The study involved an in-depth review of 838 Victorian overdose deaths that occurred between 2011 and 2013, where at least one pharmaceutical drug played a contributory role. Information collected and recorded in the Victorian Overdose Deaths Register for each death included whether the deceased had a diagnosed mental illness, and whether the deceased was drug dependent proximal to death.

Table 1 shows the intersection between drug dependence and diagnosed mental illness among the deceased in the study cohort. In total 416 of the 838 deceased, or 49.6% of the study cohort, had both diagnosed mental illness and clinically documented drug dependence.

**Table 1**: Intersection of drug dependence and mental illness in the study cohort.

| Current drug dependence | Diagnosed mental illness | | |
|---|---|---|---|
| | Yes | No | Total |
| Yes - clinically documented | 416 (49.6%) | 114 (13.6%) | 530 (63.2%) |
| Yes - not clinically documented | 35 (4.2%) | 30 (3.6%) | 65 (7.8%) |
| No evidence of current dependence | 161 (19.2%) | 82 (9.8%) | 243 (29.0%) |
| Total | 612 (73.0%) | 226 (27.0%) | 838 (100.0%) |

Table 2 shows the duration of mental illness referenced against the duration of drug dependence for these 416 deaths. Even including the large number of deaths for which the duration of either condition (or both) was unknown, the data clearly indicates that most of the deceased had a long history of diagnosed mental illness and clinically documented drug dependence.

**Table 2**: Duration of drug dependence and mental illness among deceased in the study cohort who had diagnosed mental illness and clinically documented drug dependence. ('U/k' indicates unknown duration.)

| Duration of drug dependence (years) | Duration of mental illness (years) | | | | | | |
|---|---|---|---|---|---|---|---|
| | <1 | 1-2 | 2-5 | 6-10 | 10+ | U/k | Total |
| <1 | - | - | - | 1 | - | - | 1 |
| 1-2 | 1 | 2 | 1 | - | - | 1 | 5 |
| 2-5 | 3 | 1 | 8 | 8 | 5 | 4 | 29 |
| 6-10 | 3 | 1 | 4 | 4 | 8 | 6 | 26 |
| 10+ | 7 | 7 | 13 | 21 | 135 | 81 | 264 |
| U/k | 3 | 3 | 5 | 7 | 16 | 57 | 91 |
| Total | 17 | 14 | 31 | 41 | 164 | 149 | 416 |

A substantial proportion of the Victorian overdose deaths involving pharmaceutical drugs that occurred between 2011 and 2013, the deceased had a long-established clinical history of mental illness and drug dependence. Put another way, these deceased were known to the health system, and had in most cases been known to the health system for extended periods of time - greater than 10 years.

## Suicide

In 2014, the Coroners Prevention Unit undertook a pilot analysis of all Victorian suicide deaths for the period 2009-2010, to establish the extent of substance misuse among suicide deceased. The data source was the CCOV's Victorian Suicide Register. Table 3 shows the results of the preliminary case identification:

**Table 3**: History and nature of substance misuse in suicide deceased, Victoria 2009-2010.

| Suicide deaths | Frequency | % |
|---|---|---|
| **All suicides 2009-2010** | **1123** | **100.0** |
| **Any evidence of substance misuse** | **514** | **45.8** |
| Current drug dependence | 369 | 32.9 |
| Non-dependent drug misuse | 82 | 7.3 |
| Former drug dependence | 41 | 3.7 |
| Insufficient information to categorise | 22 | 2.0 |
| **No evidence of substance misuse** | **609** | **54.2** |

Table 4 shows the intersection between drug dependence and diagnosed mental illness among the 369 drug-dependent deceased. For 55.3% of these deceased, the drug dependence was clinically documented and there was a co-occurring diagnosed mental illness.

**Table 4**: Presence of diagnosed mental illness among suicide deceased who were currently drug dependent, Victoria 2009-2010.

| Current drug dependence | Diagnosed mental illness | | |
|---|---|---|---|
| | Yes | No | Total |
| Clinically documented | 204 (55.3%) | 38 (10.2%) | 242 (65.5%) |
| Not clinically documented | 46 (12.5%) | 81 (22.0%) | 127 (34.5%) |
| Total | 250 (67.8%) | 119 (32.2%) | 369 (100.0%) |

## Intimate partner homicides

The Coroners Prevention Unit maintains the CCOV's Victorian Homicide Register, which holds coded information on completed coronial investigations into homicide deaths. On 16 March 2017, information was extracted on the history of substance use and mental illness among 65 deceased and 65 offenders who were involved in 64 intimate partner homicide incidents during the period 2007-2015. (One incident involved two deceased, and another incident involved two offenders.)

Table 5 shows the intersection between substance misuse and mental illness among the 65 deceased. In total 11 of the 65 deceased (16.9%) had both a history of substance misuse and a diagnosed mental illness.

**Table 5**: Intersection of substance misuse history and mental illness in 65 deceased from a sample of intimate partner homicide incidents, Victoria 2007-2015.

| Substance misuse history | Diagnosed mental illness | | |
|---|---|---|---|
| | Yes | No | Total |
| Yes | 11 (16.9%) | 27 (41.5%) | 38 (58.5%) |
| No | 3 (4.6%) | 24 (36.9%) | 27 (41.5%) |
| Total | 14 (21.5%) | 51 (78.5%) | 65 (100.0%) |

Table 6 shows the intersection between substance misuse and mental illness among the 65 offenders. In total 30 of the 65 offenders (46.2%) had both a history of substance misuse and a diagnosed mental illness.

**Table 6**: Intersection of substance misuse history and mental illness in 65 offenders from a sample of intimate partner homicide incidents, Victoria 2007-2015.

| Substance misuse history | Diagnosed mental illness | | |
|---|---|---|---|
| | Yes | No | **Total** |
| Yes | 30 (46.2%) | 17 (26.2%) | 47 (72.3%) |
| No | 9 (13.8%) | 9 (13.8%) | 18 (27.7%) |
| **Total** | 39 (60.0%) | 26 (40.0%) | 65 (100.0%) |