



Methamphetamine-related death in Australia: A national 7 year study

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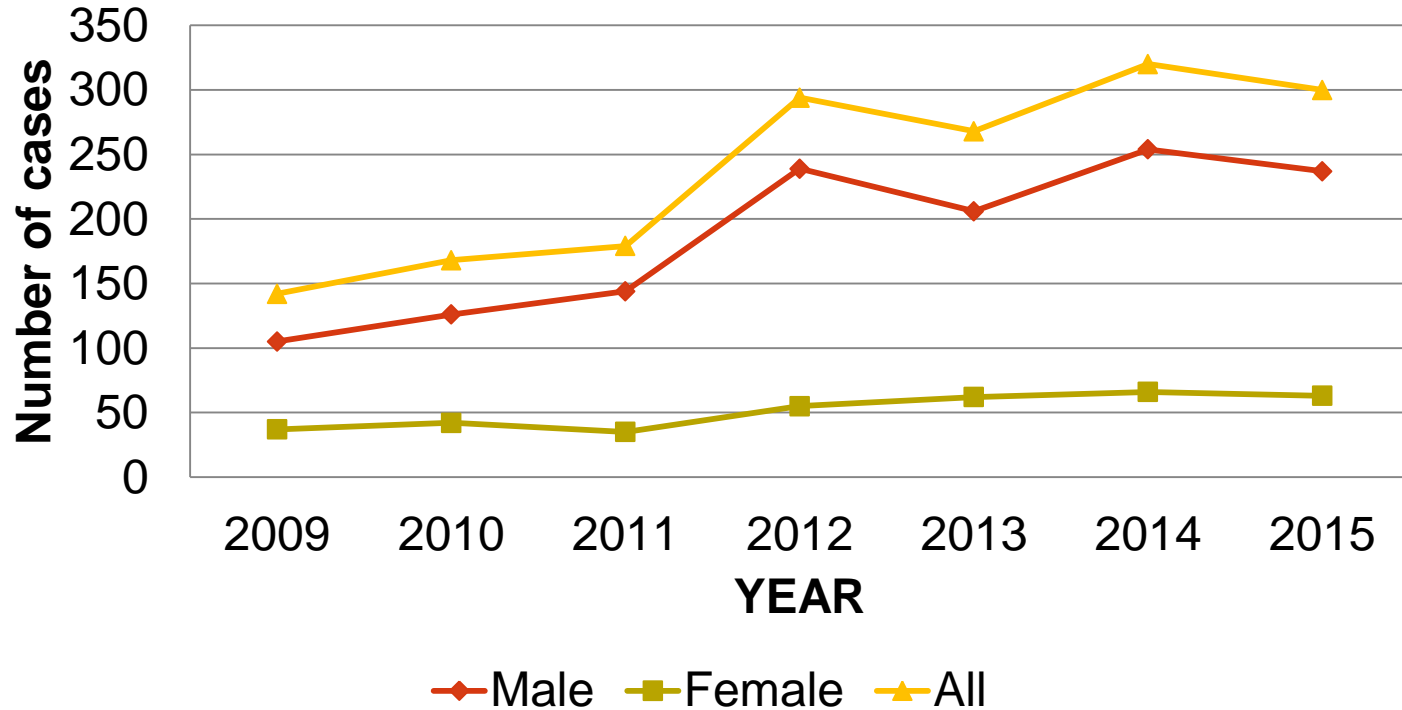
Medicine

National Drug and Alcohol Research Centre

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- All NCIS cases where methamphetamine was coded as a mechanism contributing to death, 1/1/2009-31/12/2015:
 - Toxicity, disease, suicide, traumatic accident, homicide
- Contain police reports of circumstances, blood toxicology, autopsy, coroners conclusions
- Cases restricted to where person's *own* methamphetamine use was contributory to their death

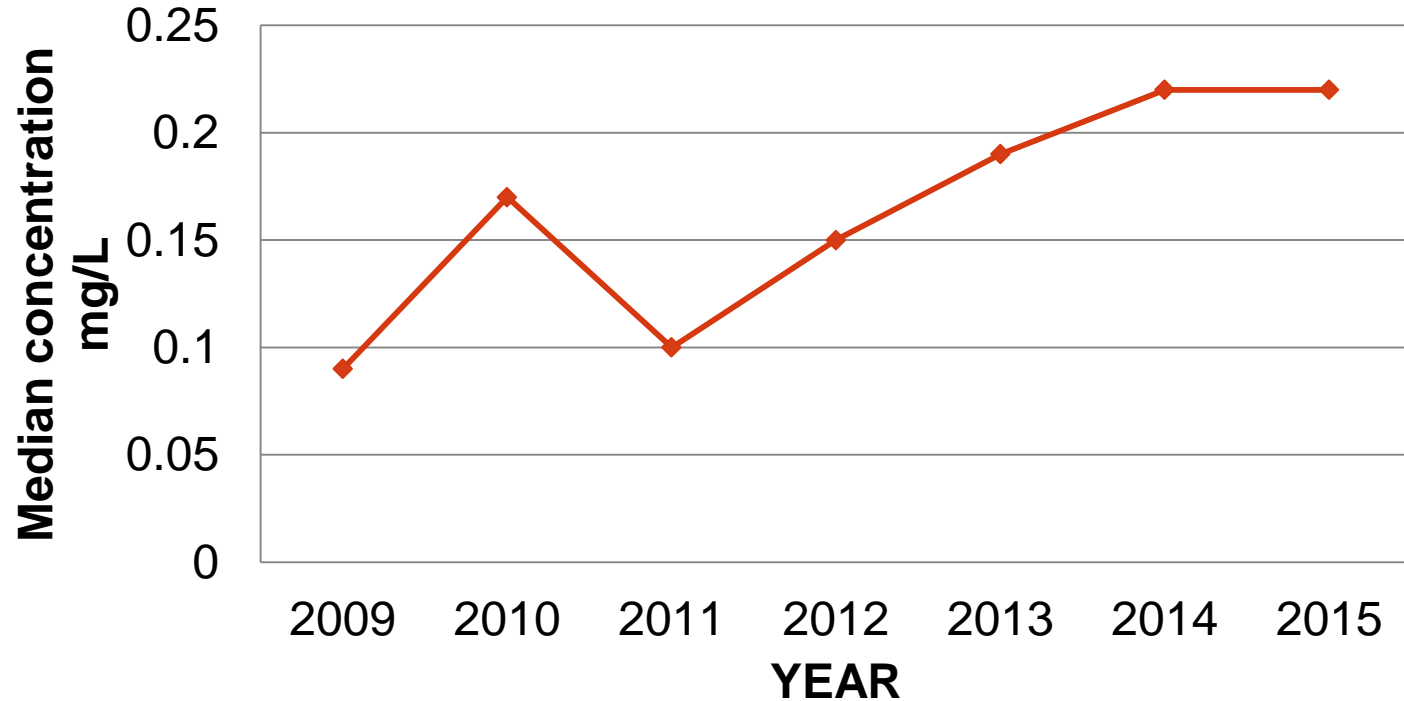
Number of methamphetamine-related deaths 2009-2015



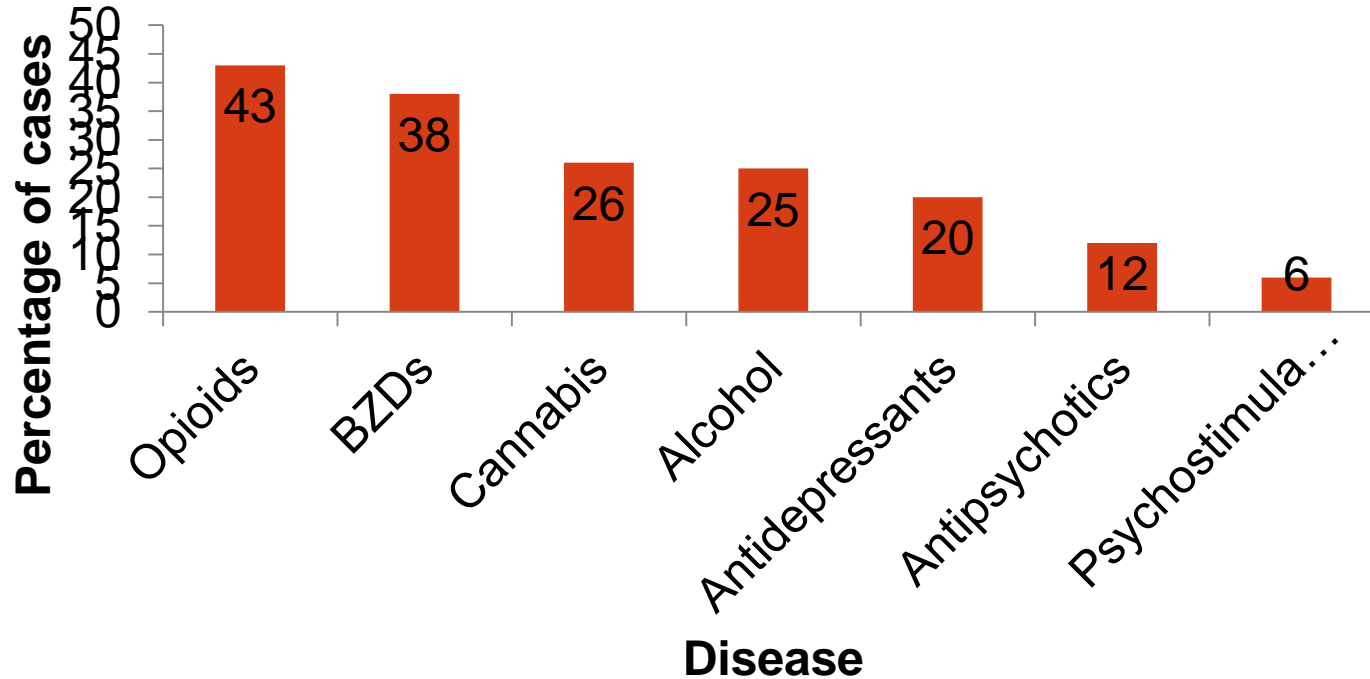
Demographics & circumstances

	N=1649
Age	36.9 yrs
Years Potential Life Lost	43.9 yrs
Male	78%
Employed	34%
In Rx	8%
History IDU	56%
<i>Location</i>	
Metropolitan	59%
Rural & regional	41%

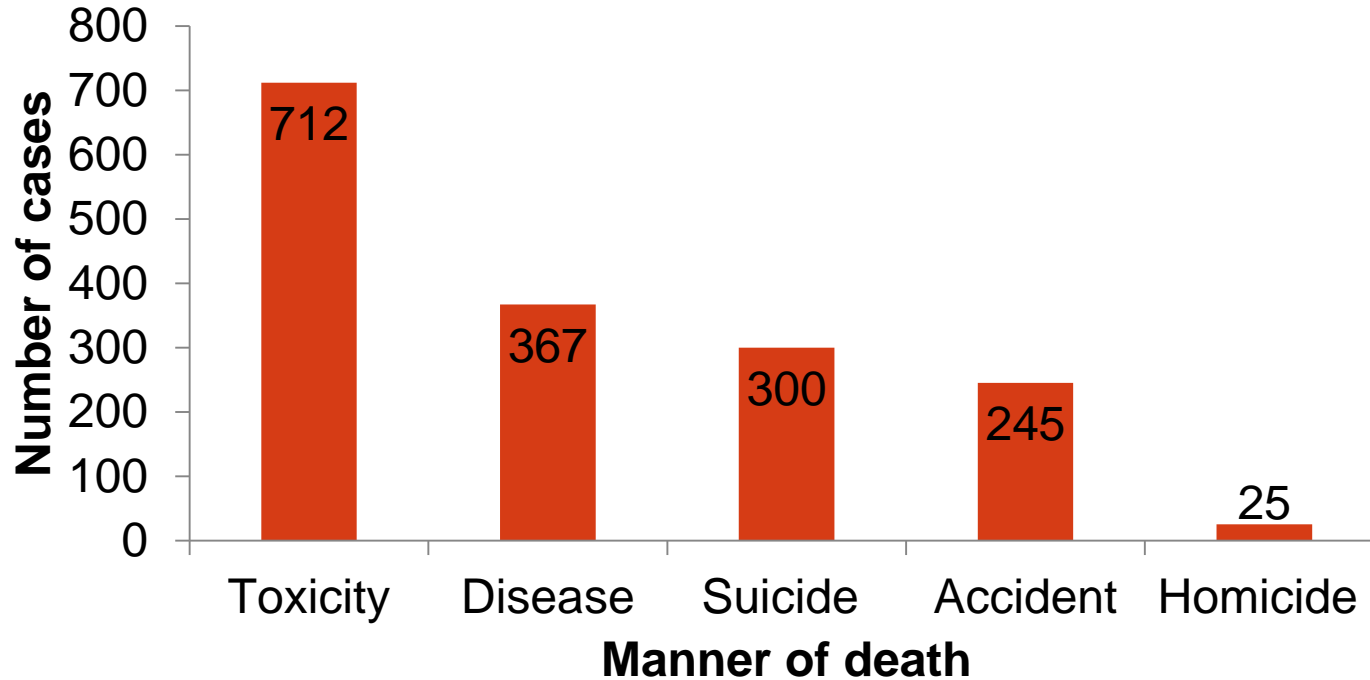
Toxicology: Methamphetamine concentrations, 2009-2015



Toxicology: polydrug use



Manner of Death



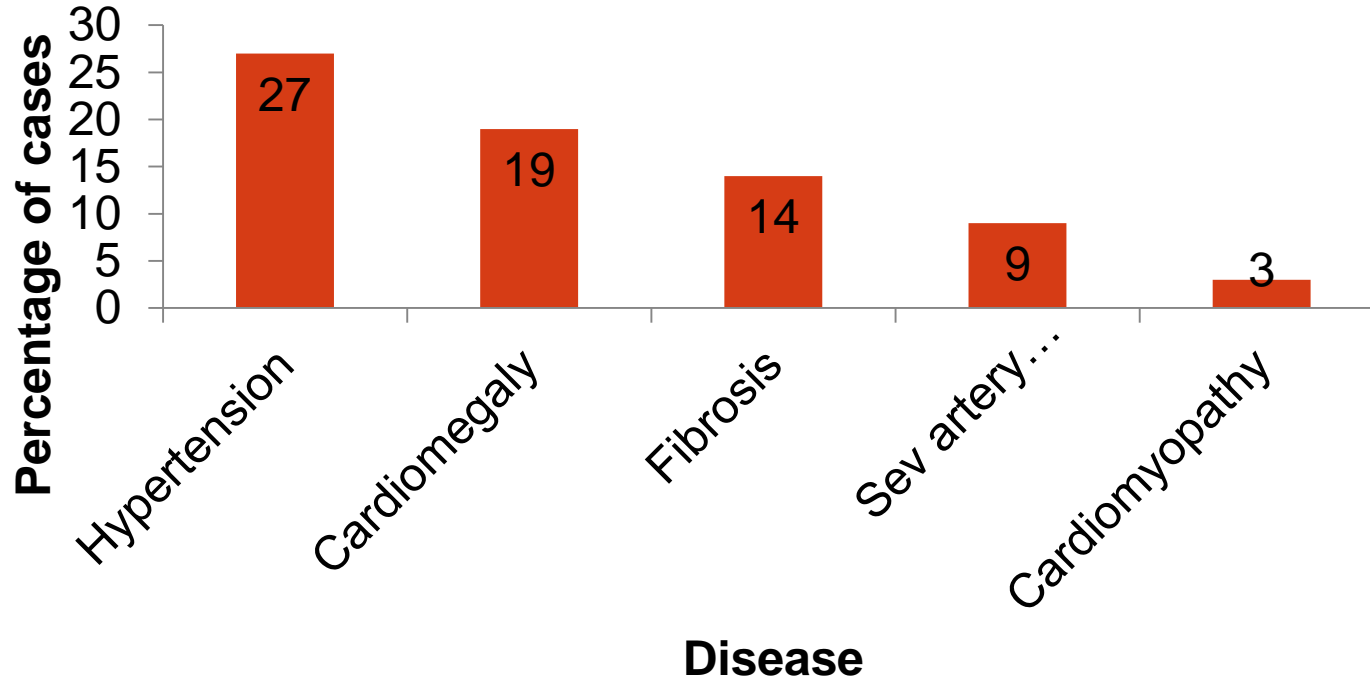
Accidental toxicity (n=712)

- Attributed
 - Solely to methamphetamine: 91 cases
 - Attributed to multiple drugs: 621cases
- *Characteristics of methamphetamine toxicity*
 - Sudden collapse
 - Hyperthermia
 - Laboured breathing
 - Delirium
 - Convulsions

Disease & methamphetamine (n=367)

- *Cause of death*
 - Coronary disease: 275 cases
 - Ischaemic heart disease
 - Cardiomegaly
 - Cardiomyopathy
 - Stroke: 38 cases
 - All but one haemorrhagic

Cardiovascular disease



- **Methods**
 - Violent: 256 cases (70% of both sexes)
 - Poisoning: 44 cases

- **Circumstances**
 - High activation
 - Agitated
 - Argumentative
 - Aggressive immediately prior to the incident

Accident (n=245)

- MVA: 166 cases
 - Single vehicle: 90 cases
 - Multiple vehicle: 66 cases
 - Pedestrian: 10 cases
- Drown: 27 cases
- Falls: 16 cases
- Pattern of high activation and risk-taking

Clinical and public health implications

- Public health problem to be taken seriously
 - Effects will be felt for decades to come
 - Rural and regional
- Need to look beyond toxicity
 - Heart disease & stroke
 - Suicide
 - Accidents
- Treatment

References

- Darke, S., Kaye, S. & Duflou, J. (2017) Rates, characteristics and circumstances of methamphetamine-related death in Australia: a national 7 year study. *Addiction*.
- Darke, S., Duflou & Kaye, S. (2017) Prevalence and nature of cardiovascular disease in methamphetamine-related death: a national study. *Drug and Alcohol Dependence*, 179, 174-179.
- Darke, S., Kaye, S., Duflou, J. & Lappin, J. (2017) Completed suicide amongst methamphetamine users: a national study. *Suicide & Life-threatening Behavior*.
- Darke, S., Lappin, J., Kaye, S. & Duflou, J. (2017) Clinical characteristics of fatal methamphetamine-related stroke: a national study. *Journal of Forensic Sciences*.