Government of Western Australia
North Metropolitan Health Service

Western Australian Poisons Information Centre

Annual Report 2018

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Introduction

The Western Australian Poisons Information Centre (WAPIC) provides telephone consultation to the general public and medical professionals in cases of poisoning or suspected poisonings. The centre also provides advice on poisoning prevention, drug information, first-aid management of exposures and the identification of toxic agents. The WAPIC is located at Sir Charles Gairdner Hospital in Perth. It is closely associated with the hospital's Emergency Department and the Western Australian Clinical Toxicology Group that is based at Sir Charles Gairdner and Royal Perth Hospitals. Complex cases (approximately 3-4% of calls) are referred to the Toxicologist-on-call for the Western Australian Clinical Toxicology Group.

The WAPIC serves Western Australia, South Australia and the Northern Territory – a total population of 4.5 million. Operational hours: 08:00 to 22:00 h, seven days per week (WST). Out-of-hours Australia-wide overnight coverage is shared by the four Australian Poisons Information Centres (PICs), with the WAPIC working three overnights per fortnight.

Access to the service is via the 13 11 26 phone number, which is charged at the cost of a local call from any landline in Australia.

Training and Continued Education

Specialists in Poisons Information participated in on-going training and education through attendance of fortnightly case conferences held by the Clinical Toxicologists.

Call Recording

Call details are entered directly into a computer database, the INTOX Data Management System, which was developed by the International Programme on Chemical Safety and the World Health Organisation, Geneva, Switzerland. Vendor support was provided by the Canadian Centre for Occupational Health and Safety, Hamilton, Ontario but was withdrawn in 2014.

Preventative Activities

Our centre collaborates with Kidsafe WA, Injury Matters, Know Injury and the Australian Competition and Consumer Commission (ACCC) in poisoning prevention activities, identifying risks and contributing case details for public alerts. Printed material was supplied to community groups, including child health centres, day care centres and to interested members of the general public. Information is provided on first-aid management of poisonings and envenomings, and the safe storage and use of household chemicals.

National PIC Network

As a member of the National PIC Network, the WAPIC's Head of Department attended:

- Health Direct Australian Service Improvement and Development Committee (SIDC) quarterly meetings with Australian PIC network.
- National PIC network quarterly business meeting involving the managers and medical directors of the four PICs.

Data Provision

Public health reporting is a key function of the WAPIC. In 2018, the WAPIC provided data as follows:

- Details of cases involving accidental self-administration of adrenaline via Epipens (2010 to 2016) were provided to The Royal Children's Hospital, Melbourne, for their Australia-wide study.
- Case data involving cases of button battery ingestion (2000 to 2018) were provided to ACCC.
- Case data relating to e-cigarette exposures (2009 to 2017) were provided to Queensland PIC (QPIC).
- Case data relating to nicotine toxicity (2009 to 2018) were provided to Know Injury WA.

- Case data involving snake bites (2017 to June 2018) were provided to Know Injury WA.
- Case data involving unintentional paediatric poisonings in 2017 were provided to Know Injury WA.
- Call numbers and details for calls received from disability care providers regarding missed doses of medications (2016 to 2018) were provided to SA Health, The Australian PIC network and Health Direct Australia.
- Case details involving exposures to Lye water in 2018 were provided to SA Health.
- Case details for cases involving ingestion of lignocaine-containing mouth gels (2016 to 2018) were provided to SA Health.
- Details of all cases involving all routes of exposure to opioids (2007 to 2017) were provided to Department of Anaesthetics, Faculty of Health and Medical Sciences, The University of Western Australia (UWA).
- WAPIC case data (2016 to 2017) were provided to NSWPIC for the SNAPSHOT study.
- Details of cases involving mushroom ingestions in 2017 were provided to the NSWPIC.
- Details of cases involving fungi ingestions in SA in 2018 were provided to SA Health.
- Details of cases involving azithromycin administered intravenously (2007 to 2018) were provided to SA Health, Pharmacy Division.
- An analysis of the postcode of exposure of all WA cases in 2017 was provided to School of Public Heath, Curtin University.
- Case details of all paediatric cases of ingestion involving superabsorbent polymers toys (2012 to 2015) were provided to the Child and Adolescent Health Service, WA Health.
- Details of cases involving exposure to amyl nitrite (2009 to 2017) were provided to NSWPIC.
- Case data involving exposure to amyl nitrite in 2018 were provided to the WA Clinical Toxicology service.

Publications

- Wylie C, Heffernan A, Brown JA, Cairns R, Lynch A and Robinson J. Exposures to e-cigarettes and their refills: calls to Australian Poisons Information Centres, 2009–2016. Med J Aust, 2019;210:126-126. doi:10.5694/mja2.12032
- Huynh A, Cairns R, Brown JA, Lynch A, Robinson J, Wylie C, Buckley NA and Dawson, AH. Patterns of poisoning exposure at different ages: the 2015 annual report of the Australian Poisons Information Centres. Med J Aust. 2018;209:74-79. doi:10.5694/mja17.01063

Media

- Lynch, A-M. *ABC radio* interview: National Drive with Narelle Graham 31/12/2018. Dangers surrounding ingesting glow stick liquid: a reminder to keep NTE revelers safe this year.
- Lynch, A-M. Nitrous oxide exposures. *Perth Now* and the *Sunday Times.* December 2018.

Presentations

- Duncan, C. Cases involving *Abrus precatorius*. Sydney: TAPNA Conference, May 2018.
- Merwood, N. The role of the WA Poisons Centre: Perth Children's Hospital In-Service, November 2018
- Lynch, A-M. How to prevent medication poisonings in older adults. Know Injury, November 2018.
- Lynch, A-M. Patterns of poisoning exposure at different ages as reported to Australian Poisons Information Centres – 2015. Know Injury Leederville Regional Network Meeting, 2018.

Current Research Activities

- Caffeinated beverages: cases reported to a state poisons information centre over 10 years. Data will be provided to Food Safety, WA Department of Health.
- Cases of opioid toxicity 2007-2017. Data will be provided to Department of Anaesthetics, UWA.

Other

- Lynch, Dr A-M (expert witness). Dangers of nicotine solution used in e-cigarette. WA Parliamentary Select Committee on Personal Choice and Community Safety, 23/11/2018.
- Lynch, Dr A-M (external expert reviewer). WHO Guidelines for Poison Control. Revision and review of the handbook's chapters. WHO Geneva, 2018.
- Lynch, Dr A-M. Toxicity arising from sodium bicarbonate ingestion. Statement for the Coroners Court of Victoria, December 2018.

Personnel

Medical Director

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Medical Consultants

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Dr Ioana Vlad, MD, DCH, VGDWA, FACEM, GradDipClinTox

Dr Mohan Raghavan, MBBS, MRCS, FACEM

Dr Julia George, MBBS, FACEM

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Phone Call Numbers and Characteristics

Number of incoming phone calls by state of origin (Table 1)

Number of calls by month of the year (Figure 1)

Incoming phone calls per category of caller (Table 2)

Number of calls involving Cases, Incidents and Requests for information (Table 3)

Table 1: Number of incoming phone calls by state of origin

Incoming Phone Calls	Number	%
Western Australia	19,052	50.4
South Australia	12,345	32.7
Northern Territory	1,421	3.8
New South Wales	2,400	6.4
Victoria	905	2.4
Queensland	720	1.9
Tasmania	114	<1
Australian Capital Territory	99	<1
Overseas	7	<1
Unknown/not recorded	720	1.9
TOTAL	**37,783**	**100**

Figure 1: Number of calls by month of the year

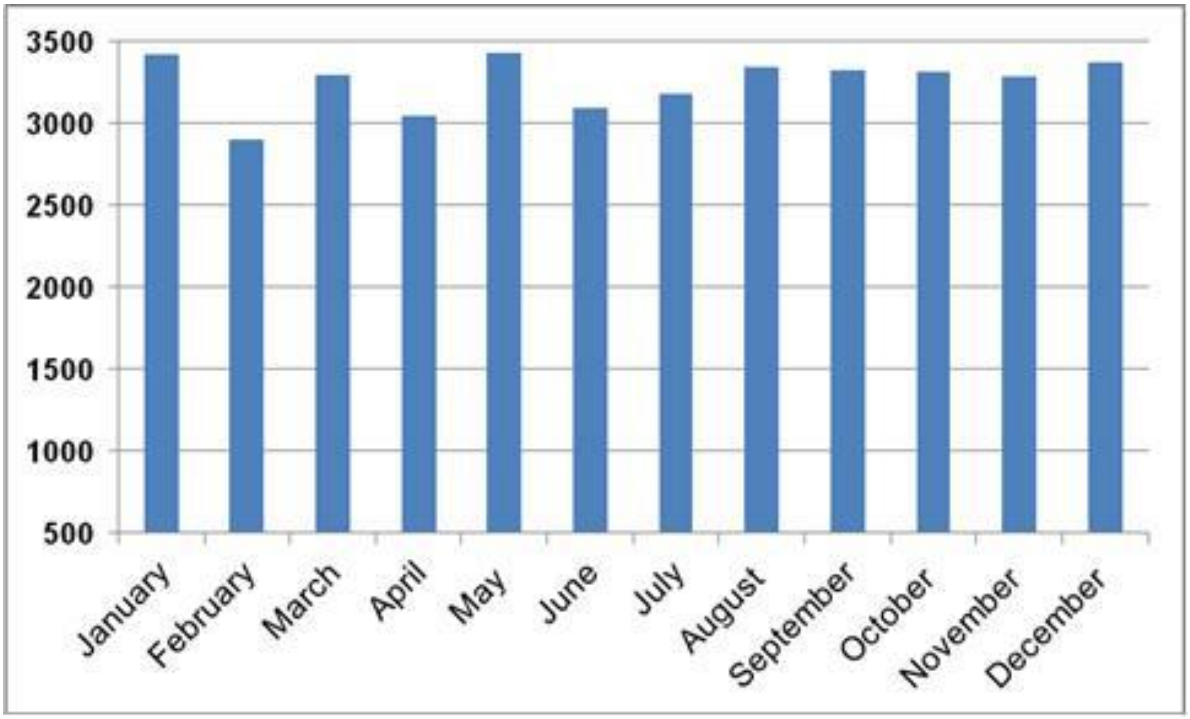


Table 2: Incoming phone calls per category of caller

Caller	Total Calls	%
Family member/victim	**23,941**	**63.4**
Parent	12,767	33.8
Grandparent	461	1.2
Partner	995	2.9
Unspecified	2,439	6.5
Victim	7,279	19.3
Health personnel	**9,396**	**24.1**
Physician	6,359	16.8
Non-physician medical	2,283	6
Ambulance officer	307	<1
Veterinary personnel	379	1
Unspecified	68	<1
Other personnel	**4,112**	**10.9**
Carer	2,626	7
Social worker/counsellor	224	<1
Education worker	228	<1
Police/other emergency services	57	<1
Military	3	<1
Unspecified	974	2.6
Unknown/not recorded	**334**	<1
TOTAL	**37,783**	**100**

Table 3: Number of calls involving Cases, Incidents and Requests for information

Call type	Number
Cases	31,837
Incidents	14
Requests	5,932
TOTAL	**37,783**

Case Statistics

Victims of poisoning by species (Table 4)

Human case numbers by gender (Table 5)

Human case numbers by age group (Figure 2)

Initial severity – human cases (Figure 3)

Circumstance of exposure – human cases (Table 6)

Location of exposure – human cases (Table 7)

Top 20 agents – human cases (Table 8)

Number of human cases by location of treatment pre-inquiry (Table 9)

Recommended treatment location of human cases where treatment pre-inquiry was the location of the poisoning (Table 10)

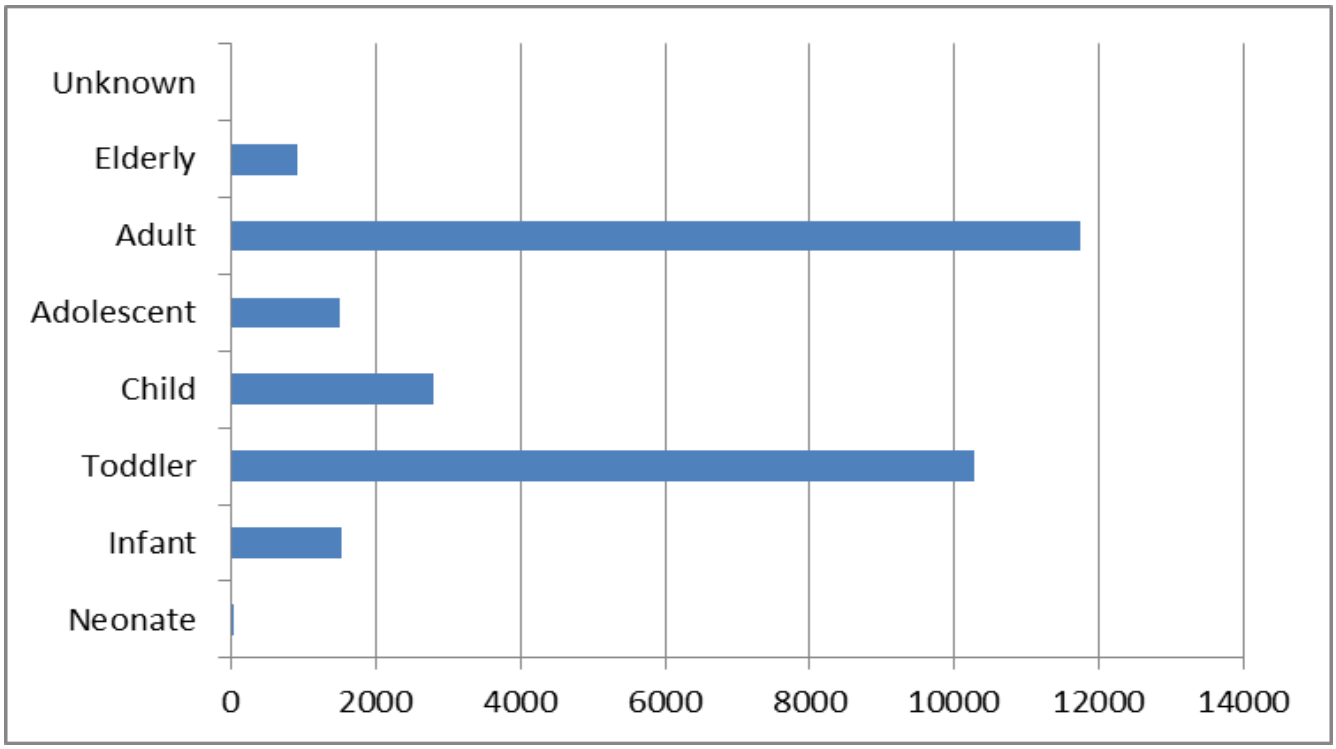
Table 4: Victims of poisoning by species

Species	Number
Human	28,816
Dog	831
Cat	76
Bird	6
Horse/pony	5
Other	9
TOTAL	**29,744**

Table 5: Human case numbers by gender

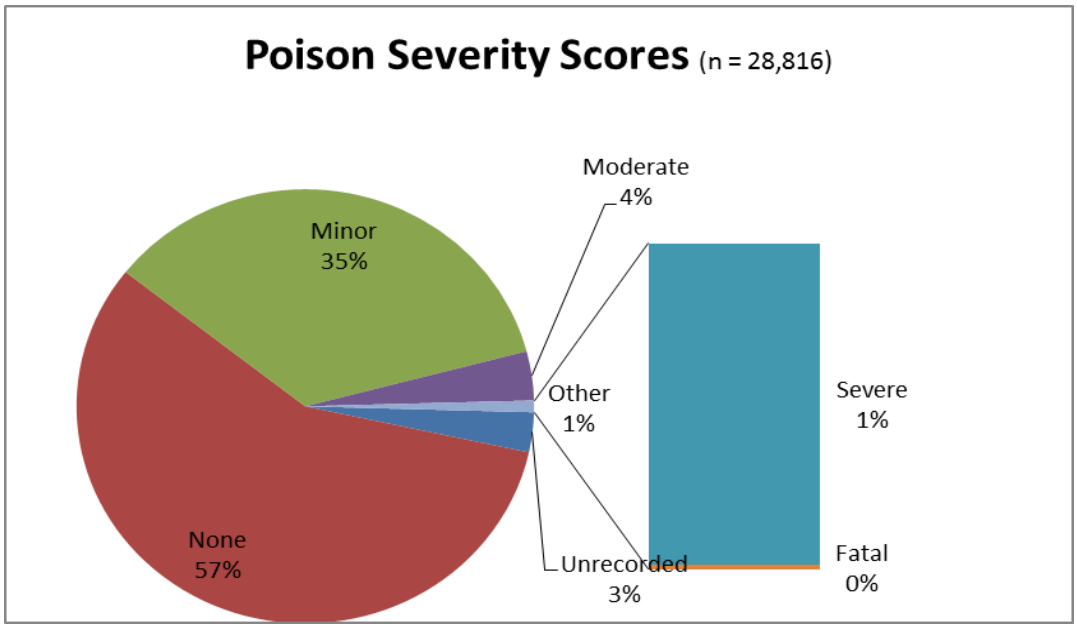
Gender	Number
Male	13,465
Female	14,892
Unknown	103
Not recorded	356
TOTAL	28,816

Figure 2: Human case numbers by age group



Neonate: birth to 4 weeks, Infant: 1 month to 12 months, Toddler: 1 to 4 years, Child: 5 to 14 years, Adolescent: 15 to 19 years, Adult: 20 to 74 years, Elderly: ≥ 75 years.

Figure 3: Initial severity – human cases



*Severity at the time of the initial call to the WAPIC is scored as per the **Poison Severity Score** – Persson HE, Sjoberg GK, Haines JA, Pronczuk de Garbino J. Poisoning severity score. Grading of acute poisoning. Clinical Toxicology. 1998;36(3):205-213.*

Table 6: Circumstance of exposure – human cases

Circumstance	Number	%
Unintentional	**23,042**	**80**
Accidental	16,591	57.6
Occupational	623	2.2
Therapeutic error	5,534	19.2
Environmental	60	<1
Misuse	86	<1
Food poisoning	37	<1
Other/unknown	111	<1
Intentional	**4,819**	**16.7**
Suicide	3,774	13.1
Misuse	250	<1
Abuse	329	1.1
Malicious/criminal	69	<1
Other/unknown	397	1.4
Adverse reaction	**742**	**2.6**
Food	47	<1
Drug	590	2
Other/unknown	105	<1
Other	**30**	**<1**
Unknown	**183**	**<1**
TOTAL	**28,816**	**100**

Table 7: Location of exposure – human cases

Location	Number	%
Home and surroundings	**26,034**	**90.3**
Workplace	**687**	**2.4**
Agricultural/horticultural	138	<1
Factory	21	<1
Mine site	48	<1
Other	480	1.7
Medical - hospital	**771**	**2.7**
Inpatient facility	250	<1
Nursing home/hospice	509	1.8
Other	12	<1
Medical – non-hospital	**95**	**<1**
Enclosed public space	**128**	**<1**
Shop	65	<1
Leisure facility	13	<1
Other	50	<1
Veterinary centre	**11**	**<1**
Prison	**35**	**<1**
Mode of transport	**66**	**<1**
Educational facility	**307**	**1.1**
Open space	**289**	**1**
Other	**28**	**<1**
Unknown/not recorded	**365**	**1.3**
TOTAL	**28,816**	**100**

Table 8: Top 20 agents – human cases

Substance	Number
Paracetamol	2,586
Detergents & soaps – anionic & non-ionic	1,668
Ibuprofen	1,147
Ethanol (non-beverage)	1,053
Quetiapine	593
Chemical - unidentified	587
Pyrethroids/pyrethrins	527
Diazepam	410
Miscellaneous low toxicity product – other	409
Essential oils – unidentified	394
Sodium hypochlorite	393
Foreign body	381
Sodium carbonate	347
Eucalyptus oil	341
Silica gel	331
Oxycodone	314
Hydrocarbon - other	309
Snake - unidentified	305
Sodium hydroxide	295
Pregabalin	274
TOTAL	**12,604**

There was a total of 36,600 substances in 28,816 human cases.

Table 9: Number of human cases by location of treatment pre-inquiry

Location of pre-inquiry treatment	Number of calls	%
Location of poisoning	**23,132**	**77.8**
During transport	**39**	**<1**
Health institution	**5,611**	**21.9**
Health centre	536	1.9
Inpatient facility	4956	19.6
Unspecified	119	<1
Other/unspecified	**34**	<1
TOTAL	**28,816**	**100**

Table 10: Recommended treatment location of human cases where treatment pre-inquiry was the location of the poisoning

Location of recommended treatment	Number of cases	%
Stay home	18,144	78.4
Health Centre (GP)	744	3.2
Inpatient facility	3866	16
Health institution unspecified	326	1.4
Unknown/not recorded	195	< 1
TOTAL	**23,132**	**100**

Comments

The WAPIC handled 37,783 phone calls in 2018, of which 28,816 involved cases of human exposures. A total of 36,600 agents (substances) were involved in these cases.

At the time of the phone call, 40% of the victims were either displaying clinical features or biochemical evidence of poisoning. Our centre does not routinely follow up calls and so final severity is not known in the majority of cases.

Children (neonates, infants, toddlers, children and adolescents) were the victims in 56% of all cases, with toddlers (1 to 4 years old) involved in 35.6% of all reported exposures (see Figure 2 for a specification of the age groups). The most common childhood exposures were accidental, occurred in the home and involved pharmaceuticals or common household products. Adults (aged over 20 years) were the victims in 44% of cases. Thirty four percent of adult exposures resulted from unintentional accidents. The consistent trend of yearly increases in the number of cases of deliberate self-poisoning prevailed, with 3,774 cases recorded in 2018 compared with 3,660 cases in 2014 and 3,513 cases in 2012. In the 20 to 74 year age group, one in five cases involved deliberate attempts of self-harm. The most common agents involved in these cases were pharmaceuticals.

At the time of the first phone call to the WAPIC, 78% of the victims were at the location of poisoning and 22% had either reached a health care facility or were in transit. It is noteworthy that 77% of the victims that were at the location of the exposure at the time of the first phone call were able to be managed at that site due to the advice of the Poisons Information Centre, thus substantially limiting unnecessary hospital attendances and conferring considerable health care savings.

This document can be made available in alternative formats on request for a person with a disability.