



Government of **Western Australia**
North Metropolitan Health Service
Sir Charles Gairdner Osborne Park Health Care Group



Western Australian Poisons Information Centre

Annual Report 2019

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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, the Northern Territory and Broken Hill- 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 & Continued Education

Specialists in Poisons Information undertake an initial, intensive in-house training program to equip them for this highly specialised role. On-going training and education are offered through attendance of fortnightly case conferences held by the Clinical Toxicologists and training days.

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.

Poisoning Prevention Activities

WAPIC collaborates with Kidsafe WA, Injury Matters WA, the WA Consumer Products Advocacy Network, the TGA and the Australian Competition and Consumer Commission (ACCC) in poisoning prevention activities, identifying risks and contributing case details for public alerts.

Printed material is 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 envenoming's, and the safe storage and use of household chemicals.

National PIC Network

Currently, four Australian poison information centres (PICs) operate to provide a 24 hour per days national service. These four centres are located at Sir Charles Gairdner Hospital in Perth, the Children's Hospital at Westmead in Sydney, the Austin Hospital in Melbourne and the Queensland Children's Hospital in Brisbane. Each centre operates independently. Informal arrangements ensure a professional and co-operative Australia-wide service with access via a single Australia-wide telephone number, 131126.

Calls from those states or territories without a PIC are diverted to either Sydney (Tasmania and the ACT) or Perth (South Australia and the Northern Territory) during the day, whilst overnight calls are diverted to a single centre (NSW, Queensland, Victoria or WA) on a roster system.

Data Provisions

Australian Red Cross Blood Service. Details of all cases involving human pharmaceutical iron preparations

Fiona Stanley Hospital Emergency Department Consultant. Details of cases over the period 2015-2018 involving pregabalin, gabapentin and quetiapine.

WHO April 2019. Case data for the past 5 years involving e-cigarettes.

Kidsafe WA. Yearly case data for all exposure events involving children in WA.

ACCC On-going button battery surveillance; case details

WA Therapeutics Advisory Group. Cases involving Tapentadol 2013-2018

SA Department of Health. Cases involving ingestion of wild mushrooms in SA 2018

World Health Organisation. Pesticide Poisoning statistics. Cases handled by WAPIC 2018

Publications

Huynh, A., Cairns, R., Brown J.A., **Lynch A-M.**, Robinson J., Wylie, C., and Buckley N.A. Dawson AH (2018) Synthesis of the Network of Australian Poisons Services' Health Outcomes and Treatment (SNAPSHOT) investigators. *Medical Journal of Australia*, July 16; 209(2):74-79. Epub 2019Jul 9.

Huynh, A., Cairns, R., Jared A. Brown, JA., Jan, S., Robinson, J., **Lynch, A-M.**, Wylie, C., Nicholas A. Buckley NA., and Dawson, AH. (2019) Health care cost savings from Australian Poisons Information Centre advice for low risk exposure calls: SNAPSHOT 2, *Clinical Toxicology*, DOI: [10.1080/15563650.2019.1686513](https://doi.org/10.1080/15563650.2019.1686513)

Media

Ann-Maree Lynch 09/12/2019 Radio interview 6 PR Perth *Essential oils*

Ann-Maree Lynch 10/10/2019 Seven West Media *Drink Spiking*

Presentations

Kas Ahmadi 02/09/2019 “*Risk assessment of poisoning and envenomation in primary care*” to the medical teams at the Highland Medical Group and Madeley Health, Perth WA.

Personnel

Medical Director

Dr. Jason Armstrong, MBChB, FACEM

Manager (Head of Department)

Dr. Ann-Maree Lynch, BSc (Hons), PhD

Specialists in Poisons Information

Ann-Maree Lynch, BSc (Hons), PhD

Bridgett McKay, BPharm

Carla Payne, BSc, MPharm

Dale Beecham, BPharm

Elizabeth Lim, BPharm, PGradDipPharm, MSHP

Kasra Ahmadi, BSc, BPharm

Katie Jodrell, BPharm

Klaus Auert, BPharm

Louise Edwards, BA, BPharm (Hons)

Mechaiel Farag, BPharm, PGradDipPharm, MClinPharm, MPS, MSHP, AACPA

Michael Cao, BPharm

Nick Merwood, BSc, MPharm

Sandra Cheng, BSc, MPharm

Yumi Tan, BPharm, GradDipPharm, GCEvidBasedCompMed

Medical Consultants

Dr. Jason Armstrong, MBChB, FACEM

Dr. Ovidiu Pascu, MD, FACEM

Dr. Alan Gault, MBChB, BAO, BA, HSc, FACEM

Dr. David McCoubrie, MBBS, FACEM

Dr. Jessamine Soderstrom, MBBS, FACEM, GradCertTox

Dr. Kerry Hoggett, MBBS, FACEM, GradCertClinTox

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

Dr. Mohan Raghavan, MBBS, MRCS, FACEM

Dr. Julia George, MBBS, FACEM

Dr. Kirsty Skinner, MBChB, FACEM, GradDipClinTox

Dr. Gareth Wahl, MBBS, FACEM

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	20,339	51.48
South Australia	13,162	33.32
Northern Territory	1,387	3.51
New South Wales	2,442	6.18
Victoria	1,166	2.95
Queensland	777	1.97
Tasmania	123	<1
Australian Capital Territory	88	<1
Overseas	21	<1
TOTAL	39,505	

Figure 1: Number of calls by month of the year

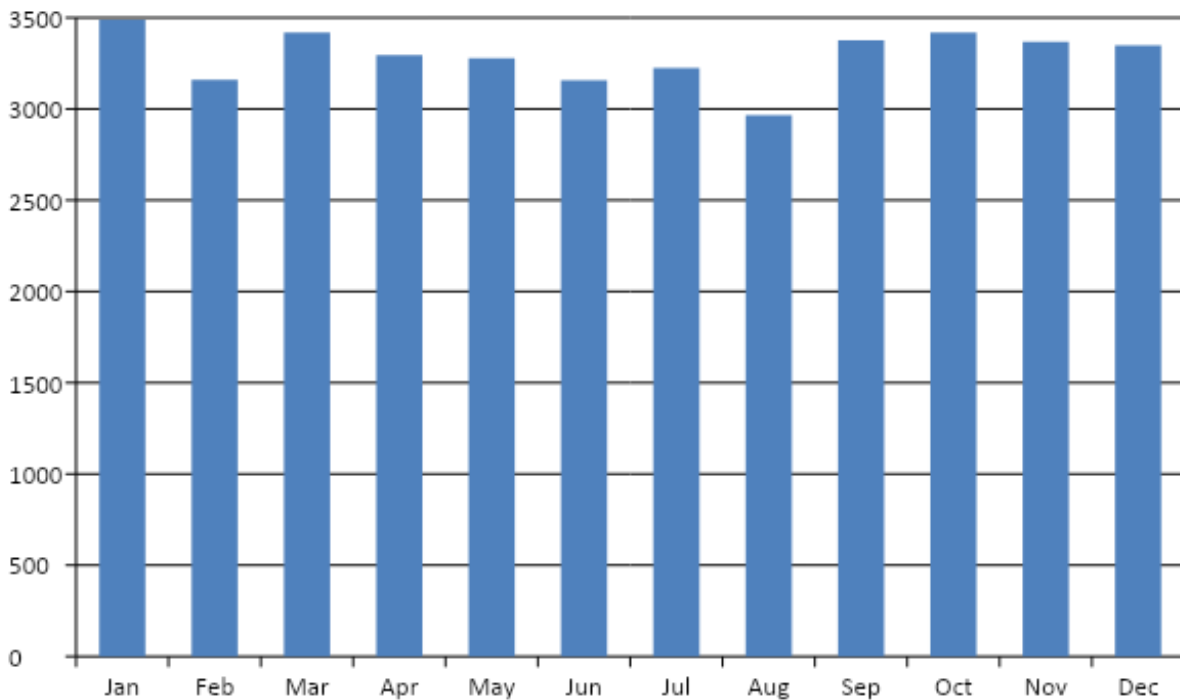


Table 2: Incoming phone calls per category of caller

Caller	Total Calls	%
Family member/victim	25,256	63.93
Parent	13,610	34.45
Grandparent	517	1.31
Other	484	1.23
Partner	1,037	2.62
Unspecified	1,594	4.03
Victim	8,014	20.29
Health personnel	9,389	23.77
Physician	6,405	16.21
Non-physician medical	2,111	5.34
Ambulance officer	422	1.07
Veterinary personnel	362	<1
Unspecified	89	<1
Other personnel	3,155	7.99
Carer	2,542	6.43
Social worker/counsellor	238	<1
Education worker	240	<1
Police/other emergency services	43	<1
Military	2	<1
Unspecified	90	<1
Other	1,140	2.89
Unknown/not recorded	565	1.43
TOTAL	39,505	

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

Call type	Number
Cases	31,238
Incidents	15
Requests	6,240
TOTAL	37,493

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)

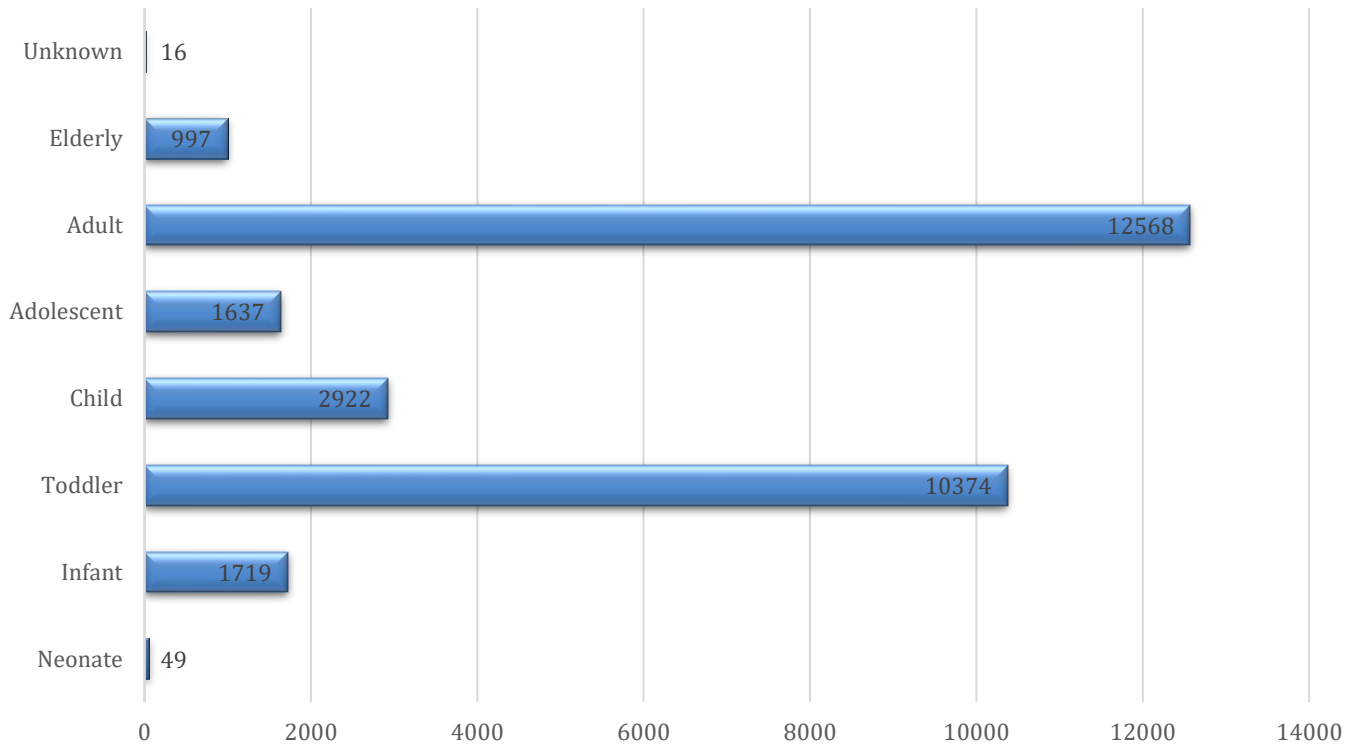
Table 4: Victims of poisoning by species

Species	Number
Human	30,282
Dog	851
Cat	83
Bird	4
Horse/pony	4
Other	14
TOTAL	31,238

Table 5: Human case numbers by gender

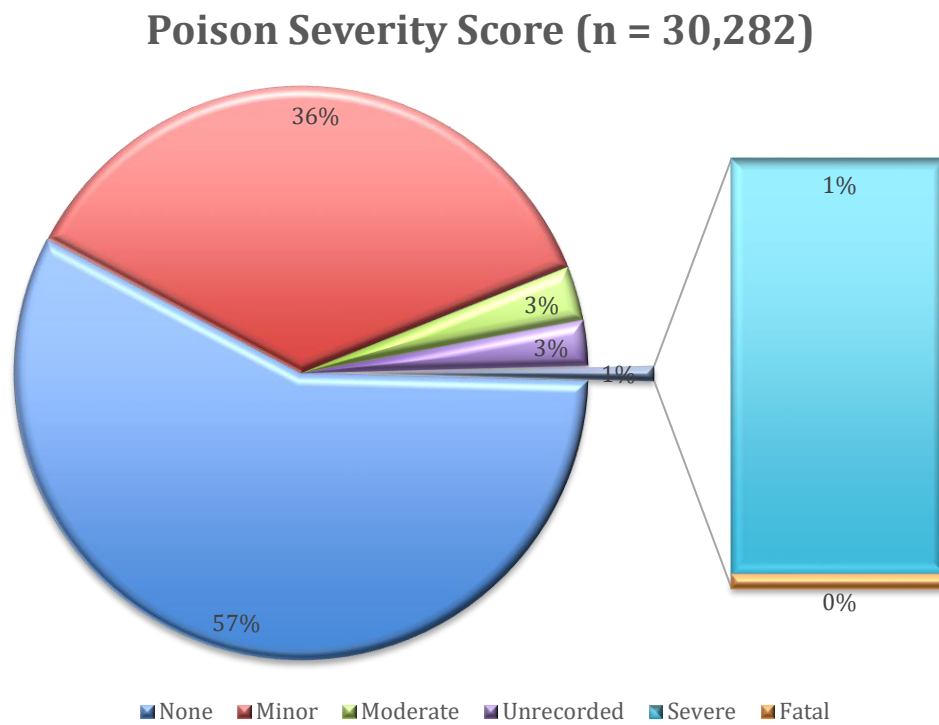
Gender	Number
Male	14,063
Female	15,827
Unknown	139
Not recorded	253
TOTAL	30,282

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: \geq 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, H.E., Sjoberg, G.K., Haines, J.A. and Pronczuk de Garbino, J. (1998) *Clinical Toxicology*, 36(3): 205-213.

Table 6: Circumstance of exposure – human cases

Circumstance	Number	%
Unintentional	24,151	79.8
Accidental	17,174	56.7
Occupational	577	1.9
Environmental	32	<1
Transport Accident	10	<1
Fire	3	<1
Therapeutic error	6,182	20.4
Misuse	57	<1
Food poisoning	53	<1
Other	32	<1
Unknown	31	<1
Intentional	5,201	17.2
Suicide	4,051	13.4
Misuse	219	<1
Abuse	437	1.4
Malicious/criminal	84	<1
Other	234	<1
Unknown	176	<1
Adverse reaction	753	2.5
Food	46	<1
Drug	625	2.1
Other/unknown	82	<1
Other	30	<1
Unknown	147	<1
TOTAL	30,282	

Table 7: Location of exposure – human cases

Location	Number	%
Home and surroundings	27,314	90.2
Workplace	721	2.4
Agricultural/horticultural	123	<1
Mine site	42	<1
Office	38	<1
Other/unknown	518	1.7
Medical - hospital	775	2.6
Inpatient facility	197	<1
Nursing home/hospice	567	1.9
Other	11	<1
Medical – non-hospital	78	<1
Enclosed public space	157	<1
Shop	97	<1
Leisure facility	19	<1
Other	41	<1
Veterinary clinic	10	<1
Prison	57	<1
Mode of transport	76	<1
Educational facility	350	1.2
Open space	301	1
Other	26	<1
Unknown/not recorded	417	1.4
TOTAL	30,282	

Table 8: Top 20 agents – human cases

Substance	Number
Paracetamol	2,860
Detergents; anionic and non-ionic	1,359
Ibuprofen	1,235
Ethanol	939
Quetiapine	594
Chemical; unidentified	513
Diazepam	482
Foreign body	449
Sodium hypochlorite	411
Pyrethrin's & pyrethroids	368
Sodium carbonate	368
Silica gel	342
Hydrocarbon; other	341
Multivitamins	330
Codeine; combinations	323
Essential oils; other or unidentified	321
Sertraline	316
Pregabalin	304
Eucalyptus oil	299
Oxycodone	296
TOTAL	12,450

There was a total of 36,453 substances in 30,282 human cases

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

Location of pre-inquiry treatment	Number of calls	%
Location of poisoning	24,265	80.1
During transport	44	<1
Health institution	5947	19.6
Health centre	585	1.9
Inpatient facility	5270	17.4
Unspecified	92	<1
Other/unspecified	26	<1
TOTAL	30,282	

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	19,265	79.4
GP	736	3
Emergency department	3,928	16.2
Other	333	1.4
Unknown/not recorded	3	<1
TOTAL	24,265	

Comments

The WAPIC handled 39,505 phone calls in 2019, of which 30,282 involved cases of human exposures. A total of 36,453 agents (substances) were involved in these cases. The most common substance involved in human exposure events was paracetamol.

At the time of the phone call, 40.1% 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 most cases.

Children (neonates, infants, toddlers, children and adolescents) were the victims in 55.2% of all cases, with toddlers (1 to 4 years old) involved in 34.3% of all reported exposures. The most common childhood exposures were accidental, occurred in the home and involved pharmaceuticals or common household products. Adults (aged 20 years and over) were the victims in 44.8% of cases. Of the adult exposure events 66% were unintentional.

A consistent trend of yearly increases in the number of cases of deliberate self-poisoning prevailed, with 4,051 cases recorded in 2019, compared with 3,774 cases in 2018, 3,660 cases in 2014 and 3,513 cases in 2012. In the 20 to 74-year age group, 22.3% of cases involved deliberate attempts of self-harm. The most common agents involved in these cases were pharmaceuticals.

At the time of the phone call to the WAPIC, 80.1% of the victims were at the location of poisoning and 19.8% had either reached a health care facility or were in transit. It is noteworthy that 79.4% 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.

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