



# **ANNUAL REPORT 2012**

## **V**ictorian **P**oisons **I**nformation **C**entre

**13 11 26**

**Emergency Department  
Austin Hospital  
Heidelberg 3084**

**[www.austin.org.au/poisons](http://www.austin.org.au/poisons)**

# Victorian Poisons Information Centre Annual Report 2012

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## **Introduction**

The Victorian Poisons Information Centre (VPIC) commenced operation in 1962. It was located at the Royal Children's Hospital, Melbourne from 1976 to 2008. In August 2008, the centre relocated to the Austin Hospital, to integrate with the Austin Hospital Clinical Toxicology Service (AHCTS). VPIC is located in the Austin Hospital Emergency Department, and is directed administratively as part of the Austin Hospital Pharmacy Department.

VPIC provides members of the Victorian public with information about:

- first aid in the event of poisoning, suspected poisoning, mistakes with medicines, bites, stings and envenomations
- the need for medical assessment
- prevention of poisoning
- referral to other information sources as necessary.

VPIC provides health professionals with information about:

- the ingredients in products involved in poisoning or exposure
- assessment of the severity of a poisoning, exposure or envenomation
- potential toxic effects from a poisoning, exposure or envenomation
- treatment and management advice.

VPIC aims to prevent unnecessary visits to general practitioners and hospitals, and to ensure patients who are poisoned or envenomed receive the most appropriate treatment promptly.

The VPIC telephone number is **13 11 26**. This number can be used Australia-wide for the cost of a local call (excluding mobile phones).

## **Hours of Operation**

VPIC operates Monday to Friday (0800 to 2130 hours), and Saturday and Sunday (0800 to 2100 hours). Outside these times, calls are diverted to the New South Wales Poisons Information Centre, which operates on a 24-hour basis. During 2012, VPIC continued to work a weekly overnight shift (12 midnight to 0600 hours), to assist the three other Australian Poisons Information Centres (PICs) taking calls from across Australia while other state PICs are closed.

## **Staffing**

### **Director of Pharmacy and the VPIC**

Kent Garrett B. Pharm., Grad. Dip. Hosp. Pharm.

### **Manager, VPIC**

Jeff Robinson B. Pharm., F.S.H.P., Grad. Dip. Hosp. Pharm.

### **Medical Director of VPIC**

Dr Shaun Greene MBChB, MSc (Medical Toxicology), F.A.C.E.M.

### **Specialists in Poisons Information**

Janet Browning B. Pharm., Dip. Hosp. Pharm.

Mark Colbridge B. Sc (Hons)

Dr Dawson MacLeod B. Pharm., Grad. Dip. Biotech., Grad. Cert. Clin. Tox., Ph.D

Hamish McCracken B. Pharm., Grad. Dip. Psych.

Christine McKenzie B. Pharm., Grad. Cert. E- Health Comm., Grad. Cert. Clin. Tox.  
Jeff Robinson B. Pharm., F.S.H.P., Grad. Dip. Hosp. Pharm.

AHCTS is comprised of a toxicology registrar (six month rotation) and five toxicology consultants (Dr. Fergus Kerr, Dr. Shaun Greene, Dr. Zeff Koutsogiannis, Dr. Chris O'Callaghan, and Professor Albert Frauman). A clinical toxicology fellow, Dr. Dino Druda, who joined AHCTS in May 2011, continued as a member of AHCTS during 2012. Two clinical toxicologists from Southern Health, Professor George Braitberg and Professor Andis Graudins, who joined the VPIC on-call consultant roster in May 2011, continued their roster participation during 2012. AHCTS and VPIC on-call consultants provide a specialised management and advice service for toxicology/toxinology admissions at Austin Health and other Victorian hospitals. AHCTS also runs a referral-based outpatient clinic for patients with chronic and occupational-related poisonings.

During 2012, additional Victorian Department of Health funding to VPIC enabled the introduction of part-time secretarial support, additional Medical Director sessions and on-call payments for the VPIC consultants.

VPIC staff enjoy a close day-to-day working relationship with the AHCTS team. In complicated and/or severe poisoning cases, they have ready access to the toxicology registrar, toxicology fellow or the VPIC on-call consultant. In addition, a range of external consultants (clinical pharmacologists, mycologists and botanists) are available to VPIC staff to provide specialist advice in these areas if needed.

### **Poisoning Prevention Activities**

The following poisoning prevention activities were undertaken during 2012:

- The Poisoning Prevention poster produced by the Safety Centre, Royal Children's Hospital, Melbourne, was reviewed.
- Printed material (pamphlets, telephone stickers, posters, information sheets) was supplied to child care centres, kindergartens, local councils, Maternal and Child Health Centres, GP surgeries etc throughout the year.
- The VPIC website [www.austin.org.au/poisons](http://www.austin.org.au/poisons) was updated. It contains poisoning prevention advice, first aid advice and information sheets for members of the public.

### **Toxicovigilance**

Toxicovigilance is the active process of identifying and evaluating toxic risks, and evaluating the measures taken to reduce or eliminate them. It involves the analysis of PIC enquiries to identify if there are specific circumstances or agents giving rise to poisoning, or certain populations suffering a higher incidence of poisoning. Toxicovigilance can also reveal whether there is an emerging toxicological problem resulting from, for example, the reformulation of a product or a change to its packaging or labelling or the availability of a new drug of abuse.

The following toxicovigilance activities were undertaken during 2012:

- VPIC call data pertaining to five prescription opioids and stimulants was provided to the Rocky Mountain Poison and Drug Centre as part of an international study investigating trends in prescription medicine exposures.

- Data was provided to various public health and other agencies such as the Therapeutic Goods Administration about exposure calls involving teeth-whitening agents, buprenorphine, ibuprofen and imidazoline-containing eye drops and nose drops.

## **Research Activities, Publications and International Conference Presentations**

The following research activities, publications and international conference presentations were undertaken during 2012:

- Wong A, Greene S, Robinson J. Metal fume fever. A case review of calls made to the Victorian Poisons Information Centre. *Aust Fam Physician* 2012; 41(3): 141–4.
- Wong A, Greene S, Robinson J. Hydrofluoric acid poisoning: data from the Victorian Poisons Information Centre. *Emerg Med Australas* 2012; 24(1): 98–101.
- Vetro J, Koutsogiannis Z, Jones DA, Canestra J. A case of methylene chloride poisoning due to ingestion of home-distilled alcohol and potential new treatment with ethanol infusion. *Crit Care Resusc* 2012; 14: 60–3.
- Dr Kashif Izhar's FACEM trainee 4.10 project, 'The accuracy of ECGs reported to VPIC', commenced in September 2012.
- McIntyre S, Taylor D, Greene S. Introduction of an N-acetylcysteine weight-based dosing chart reduces prescription errors in the treatment of paracetamol poisoning. *Emerg Med Australas* Published Online First: 2 December 2012 doi: 10.1111/1742-6723.12020.
- Australia-wide study 'Poisoning due to fungi ingestion – a retrospective study of cases reported to Australian Poisons Information Centres' commenced.
- At the EAPCCT Conference in London in May, Andis Gaudins spoke about lipid emulsion therapy in toxicology.
- At the APAMT Conference in Hong Kong in December, Shaun Greene spoke about prescription opioid analgesia harm in Australia.
- In December, an audit of VPIC calls involving intentional overdose in early adolescence was commenced.

## **Conference and Meeting Attendances**

The following conferences and meetings were attended during 2012:

- VPIC and AHCTS staff attended all three national PIC/Toxicology Clinical Meetings, held in Sydney, Brisbane and one videoconferenced.
- Jeff Robinson and Shaun Greene attended the national PIC/Toxicology Business Meetings held in April (Sydney) and October (Brisbane).
- In May, Shaun Greene and Andis Gaudins attended the EAPCCT International Congress in London.
- In October, Christine McKenzie attended the NACCT Conference in Las Vegas.
- In November, Shaun Greene and Zeff Koutsogiannis attended the APAMT Scientific Congress in Hong Kong.

## **Other Activities**

The following additional activities were undertaken during 2012:

- VPIC/AHCTS educational activities continued to be held every Wednesday, eg teaching sessions, Toxicology Outpatient Clinic, ward round, Toxicology Journal Club.
- Review of VPIC/AHCTS clinical guidelines and position statements was ongoing. Abridged versions were placed on the Austin Health intranet (Hub) and full versions in the ToxLibrary.
- Bites and Stings (information for members of the public on the VPIC website) was reviewed.

- Shaun Greene and Dawson MacLeod continued their membership of the Toxicology and Wilderness Expert Group to write Therapeutic Guidelines: Toxicology and Wilderness, Version 2.
- Christine McKenzie and Janet Browning revised the content and presentation of the Victorian Therapeutics Advisory Group's Register of Emergency and Life Savings Drugs. The revised version went 'live' in September.
- In January, the VPIC call database victim categories were revised to match those used in US PICs, Western Australian PIC and the NSW PIC.
- In January and February, Jeff Robinson was interviewed by journalists from the Herald Sun and Melbourne Weekly for articles about caffeine-containing energy drinks.
- In February, Jeff Robinson was interviewed by a Geelong Advertiser journalist for an article about blue-green algae poisoning.
- In March, Jeff Robinson revised the following website documents produced by the Raising Children Network: Household Poisons; Dangerous Plants; Medicines That Can Poison; Preventing Poisoning.
- In March, Jeff Robinson reviewed the paper 'Prospective Assessment of Patterns, Severity and Clinical Outcome of Indian Poisoning Incidents' for the Bulletins of the Pharmaceutical Society of Japan.
- In April, Jeff Robinson reviewed the paper 'Poisoning Exposures in New Zealand Schools and Preschools 1989 to 2009' for the Journal of Primary Prevention.
- In April, Jeff Robinson reviewed the 'Child Poisoning in The Home: Symptoms and Treatment' monograph produced by the Better Health Channel, Victorian Department of Health.
- In May, a priority phone line was established for Ambulance Victoria to call VPIC.
- In June, Jeff Robinson reviewed an article about poisonous plants written by a journalist from The Australian newspaper.
- In September, Jeff Robinson provided feedback to the National Coordinating Committee on Therapeutic Goods on proposed reforms to the control of Schedule 5, 6 and 7 chemicals.
- In September, shared clinical toxicology meetings with forensic physicians from the Victorian Institute of Forensic Medicine commenced.
- In September, Jeff Robinson and Shaun Greene prepared a carbon monoxide information sheet for parents of children attending Romsey Primary School.
- In November, Jeff Robinson reviewed the 'Child Poisoning in The Home: Prevention' monograph produced by the Better Health Channel, Victorian Department of Health.
- In November, Jeff Robinson was interviewed by a Diamond Valley Leader journalist for an article about first aid and general management advice for spider bites.
- In late 2012, the New South Wales and Queensland Poisons Information Centres began trialling VPIC's web-based call database.
- Throughout 2012, VPIC staff commented extensively on the National Poisons Information Network report that was being prepared for AHMAC.
- In the latter part of 2012, VPIC and AHCTS staff assisted in the review of the Australian Health Protection Committee's 'Clinical Guidelines For Acute Exposures To Chemical Agents Of Health Concern'.
- VPIC operations were demonstrated to: Austin Hospital pharmacy interns; Pharm. D. students and poisons information specialists from the USA; staff from other Australian Poisons Information Centres; other visitors from the USA and Vietnam.

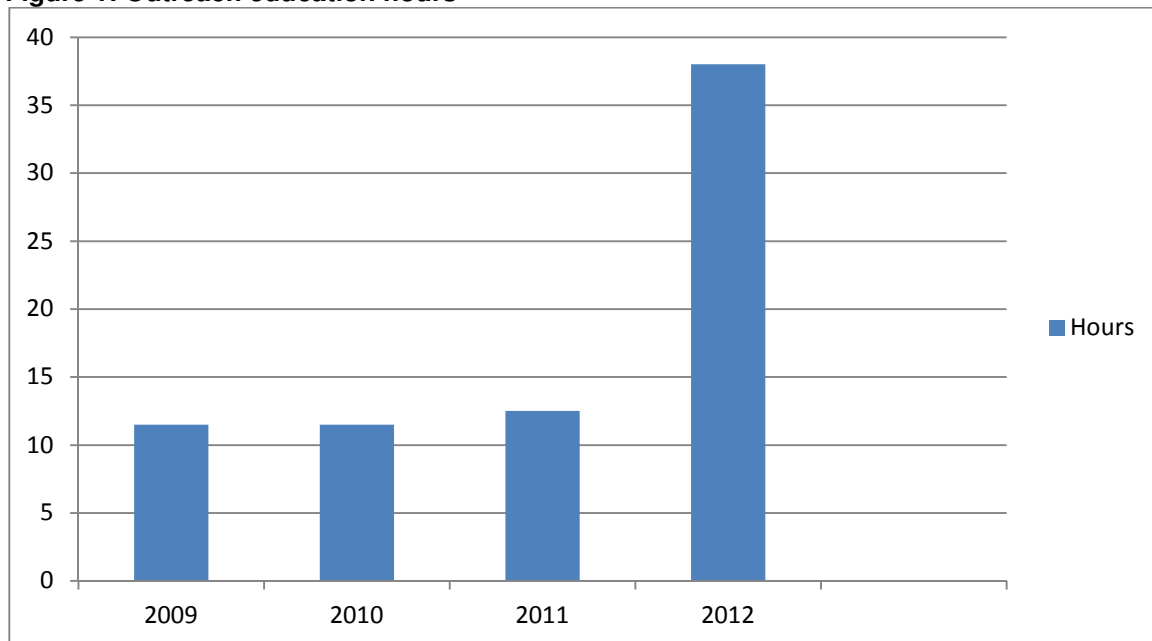
## Key Performance Indicators

### Outreach Education

A total of 38 outreach education hours were delivered during 2012, see Figure 1 below. This is a significant increase over previous years and was possible because of additional Victorian Department of Health funding to support this activity. Highlights included:

- Half-day Toxicology Forums held at the Austin Hospital in March and October.
- Grand Round presentations at the Austin and Dandenong Hospitals and Monash Medical Centre.
- Presentations to Emergency Department registrars at Box Hill, Royal Melbourne and Western Hospitals.
- Presentations to staff at Adult Retrieval Victoria and the Northern Division of General Practitioners.
- Presentations to ICU staff at Austin and Northern Hospitals.

**Figure 1: Outreach education hours**

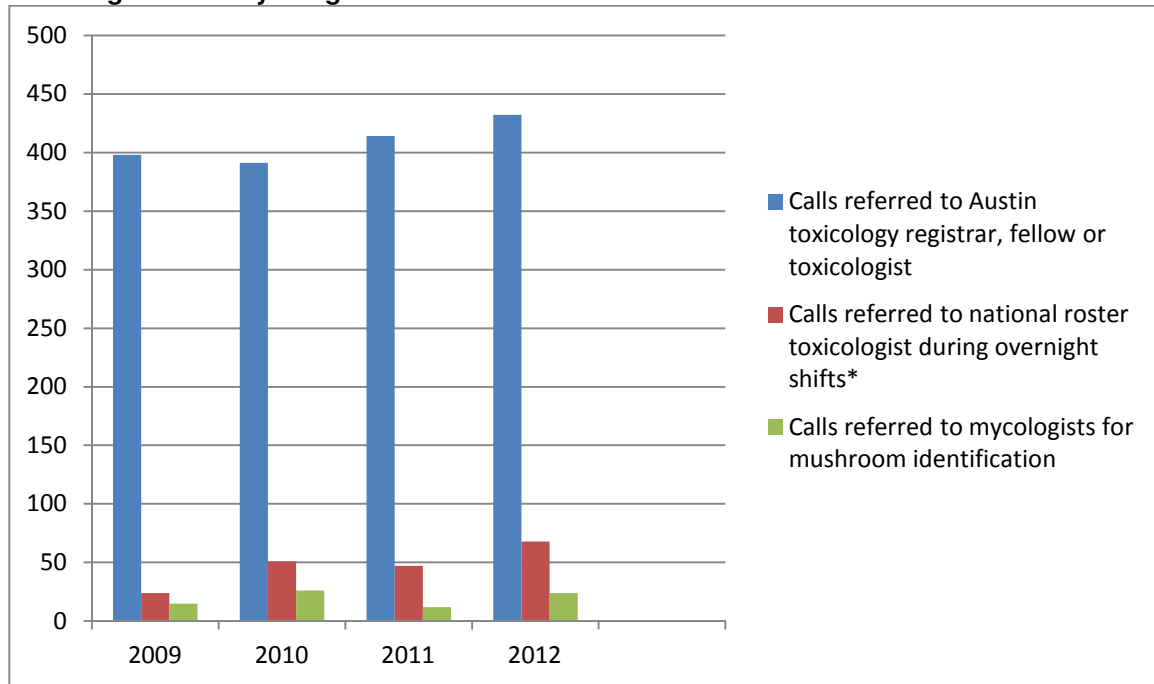


### Calls referred to the Austin toxicology registrar, fellow, toxicologists, national roster toxicologists and mycologists

VPIC staff follow escalation protocols to refer complicated and/or severe poisoning cases to the toxicology registrar, fellow or on-call toxicologist for management advice. On-call staff must be readily contactable and must respond promptly, within 10 to 15 minutes, to the health professional who contacted VPIC. When working an overnight shift, such calls are referred to the national roster clinical toxicologist. During 2012, 432 calls were referred to the Austin Hospital toxicology registrar, fellow or on-call toxicologist, and 68 overnight shift calls were referred to the national roster clinical toxicologist, see Figure 2.

VPIC and the senior mycologists at the Royal Botanic Gardens, Melbourne, have an ongoing service agreement whereby calls to VPIC that involve ingestion of a potentially toxic mushroom are referred to the on-call mycologist for identification of the mushroom/s involved (24 such cases in 2012). This may involve emailed photos or couriering specimens to the mycologists.

**Figure 2. Calls referred to Austin toxicology registrar, fellow, toxicologists, national roster toxicologists and mycologists**

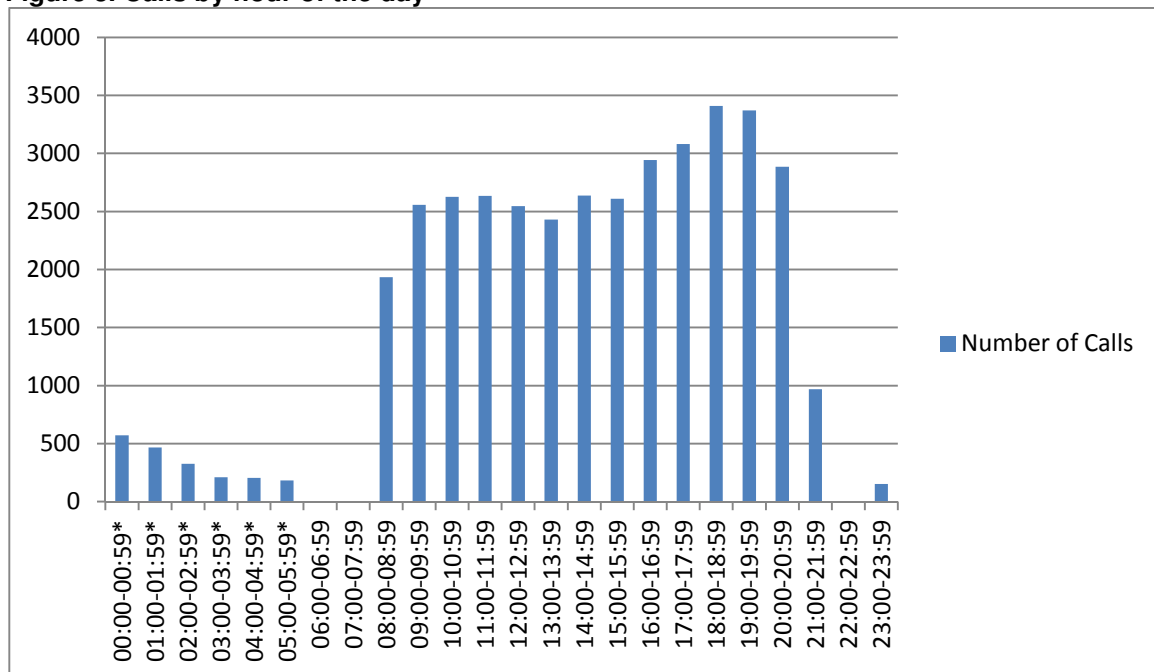


\* VPIC worked 25 overnight shifts in 2009. This increased to 52 shifts in 2010, 54 shifts in 2011 and 56 shifts in 2012.

**Calls by hour of the day**

Most calls are received between 1600 and 2100 hours, with the period between 1800 and 2000 hours being the busiest, see Figure 3 below.

**Figure 3. Calls by hour of the day**



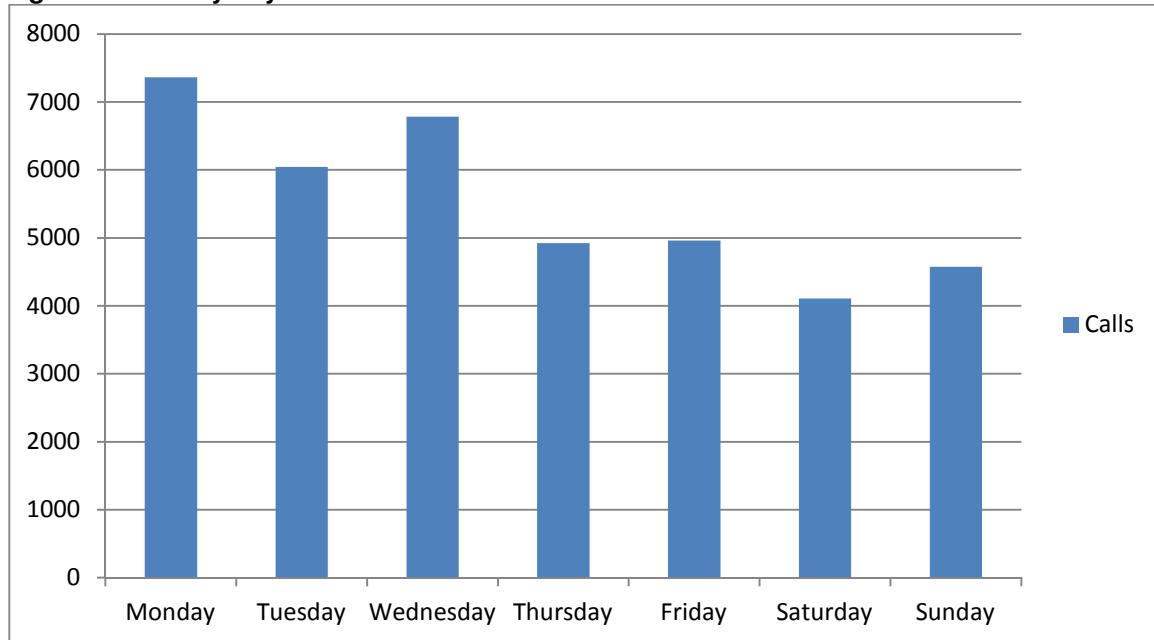
\* As VPIC works just one national overnight shift per week, the overnight call numbers (12 midnight to 0600 hours) are much lower than daytime numbers.



### Calls by day of the week

More calls were received on weekdays than weekends, see Figure 4 below. There were more calls on Mondays and Wednesdays because of the overnight shifts that VPIC worked on alternate Sundays and Tuesdays.

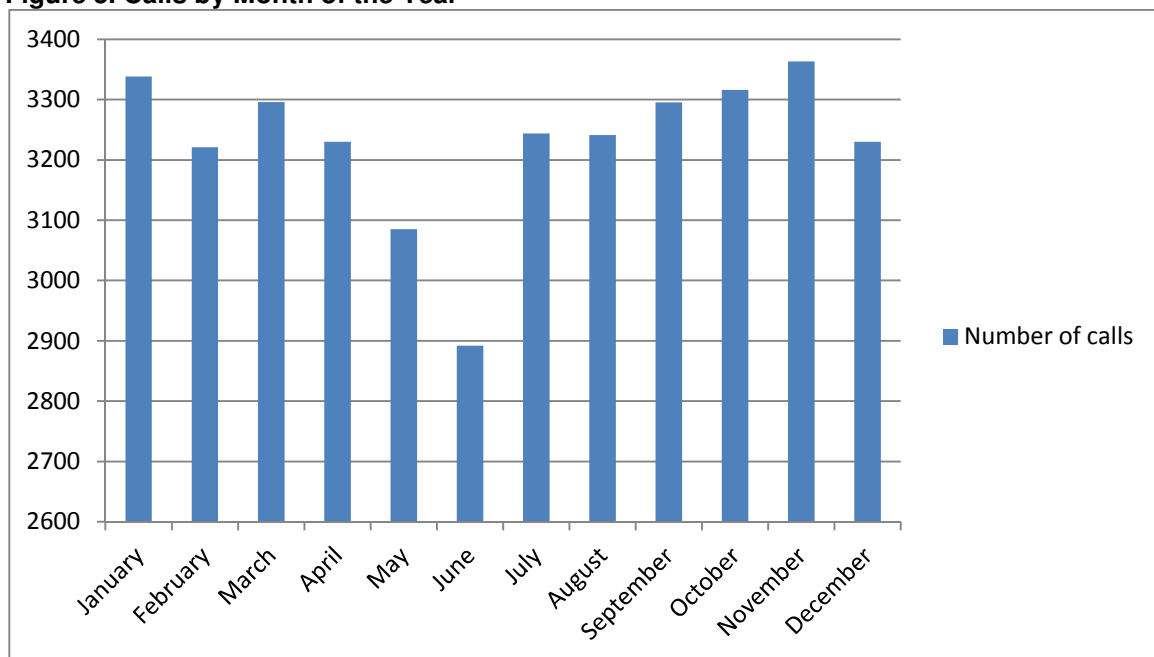
**Figure 4. Calls by day of the week**



### Calls by month of the year

VPIC call numbers always taper off over the winter months, see Figure 5 below. This is most likely due to more limited outdoor work and play during these months. Calls numbers relating to outdoor activities, eg bites, stings and envenomations, increase during the warmer months.

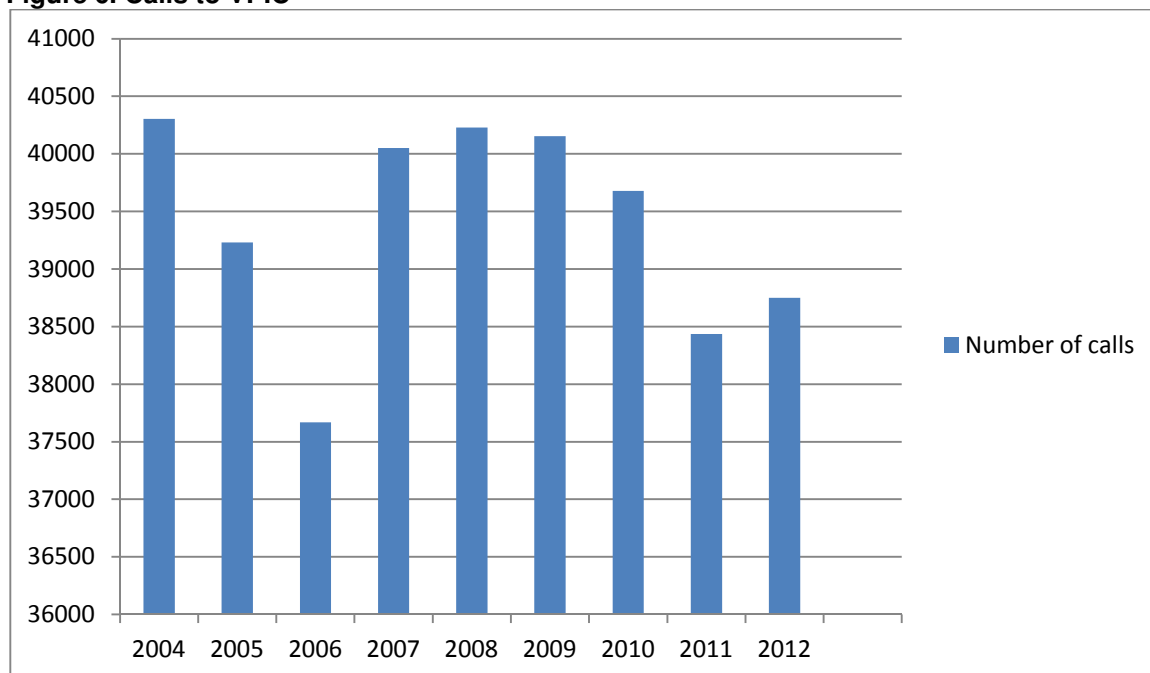
**Figure 5. Calls by Month of the Year**



## Calls to VPIC

The centre received a total of 38,751 calls in 2012, an average of 106 calls per day. This was marginally above 2011 (38,435 calls, average 105 calls per day) and slightly below 2010 (39,679 calls, average 109 calls per day) and 2009 (40,155 calls, average 110 calls per day). The 2012 total includes 2,203 calls answered by VPIC during 56 overnight shifts (New South Wales 696, Victoria 554, Western Australia 347, Queensland 395, South Australia 142, Tasmania 29, Australian Capital Territory 23, Northern Territory 17). Sixty-eight of these overnight calls were referred to the national roster toxicologist.

**Figure 6. Calls to VPIC**



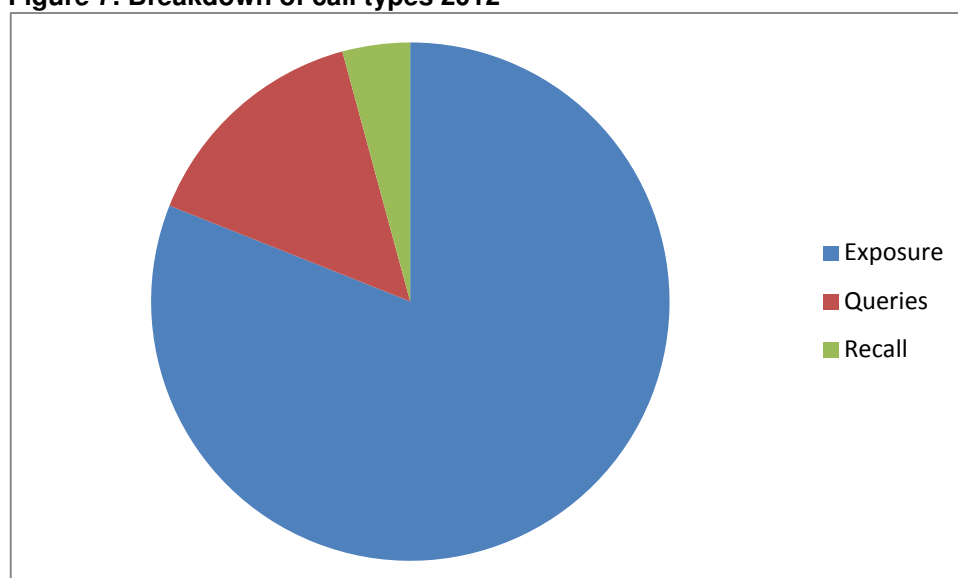
## Call types (Figure 7)

Most calls involved an exposure. Approximately one-seventh of calls were queries.

Call type	Number of calls	%
Exposure to a poison	31,397	81
Queries	5,713	15
Recall*	1,641	4
Total	38,751	100

\* A recall is a second or subsequent call about a particular exposure.

**Figure 7: Breakdown of call types 2012**



\* A recall is a second or subsequent call about a particular exposure.

### Query types

The types of queries received are shown below.

Query type	Number of calls	%
Drug information	2,315	40
Poisons information	2,250	39
Prevention of poisoning/safety	277	5
Medicines and pregnancy	271	5
Medicines and breastfeeding	236	4
Medical	202	4
Environmental	160	3
Occupational	2	<1
<b>Total</b>	<b>5,713</b>	<b>100</b>

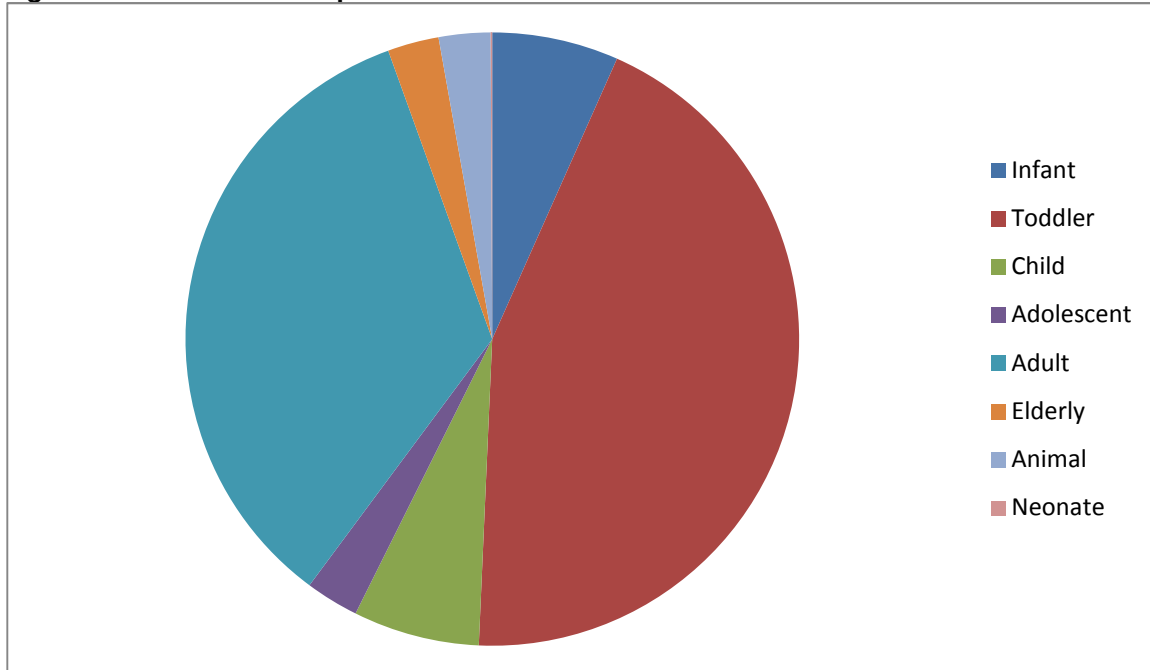
### Person exposed (Figure 8)

The majority of calls about exposure to a poison involved toddlers.

Person exposed	Number of calls	%
Neonate (0 to 4 weeks)	30	<1
Infant (4 weeks to 1 year)	2,090	6
Toddler (1 to 4 years)	13,830	45
Child (5 to 14 years)	2,091	6
Adolescent (15 to 19 years)	878	3
Adult (20 to 74 years)	10,775	34
Elderly (>75 years)	850	3
Animal*	853	3
<b>Total</b>	<b>31,397</b>	<b>100</b>

\* Callers phoning about an exposure involving an animal were referred to their vet

**Figure 8: Breakdown of exposure calls 2012**



**Person calling (animal exposures excluded)**

The majority of calls about exposure to a poison were received from members of the public.

Person calling	Number of calls	%
Family member	17,408	58
Self	5,888	19
Doctor	3,130	10
Nurse	1,511	5
Carer	1,084	4
Friend	585	2
Ambulance	500	2
Pharmacist	197	<1
Counselling service	125	<1
Other medical professional, eg psychologist, social worker	69	<1
Other, eg police, teachers	57	<1
<b>Total</b>	<b>30,554</b>	<b>100</b>

**Types of exposure (animal exposures excluded)**

The majority of calls about exposure to a poison involved accidental exposures.

Types of exposure	Number of calls	%
Accidental	21,670	71
Therapeutic error	4,576	15
Intentional	3,670	12
Workplace acute	611	2
Workplace chronic	15	<1
Environmental/other	12	<1
<b>Total</b>	<b>30,554</b>	<b>100</b>

### Routes of exposure (animal exposures excluded)

The majority of calls about exposure to a poison involved ingestion.

Route of exposure	Number of exposures	%
Ingestion	30,260	82
Ocular	1,998	5
Dermal	1,809	5
Inhalation/nasal	1,747	5
Bite/sting	895	2
Parenteral	367	1
Aural	32	<1
Vaginal	8	<1
Rectal	5	<1
Total	37,121*	100

\* The number of exposures is greater than the person exposed, person calling and types of exposure numbers because a call sometimes has more than one exposure, eg polypharmacy overdoses, household items sprayed into the mouth, face and eyes.

### Handling calls – neonates (0 to 4 weeks)

The majority of neonates exposed to a poison could be managed at home.

Handling calls - neonates	Number of calls	%
Stay at home	20	67
Hospital refer	0	0
In hospital	7	24
GP refer	1	3
At GP surgery	1	3
Other	1	3
Total	30	100

### Handling calls – infants (4 weeks to 1 year)

The majority of infants exposed to a poison could be managed at home.

Handling calls – infants	Number of calls	%
Stay at home	1,936	93
Hospital refer	27	1
In hospital	66	3
GP refer	15	1
At GP surgery	27	1
Other	19	1
Total	2,090	100

### Handling calls – toddlers (1 to 4 years)

The majority of infants exposed to a poison could be managed at home.

Handling calls – toddlers	Number of calls	%
Stay at home	12,208	89
Hospital refer	428	3
In hospital	749	5
GP refer	87	1
At GP surgery	165	1
Other	193	1
Total	13,830	100

### Handling calls – children (5 to 14 years)

The majority of children exposed to a poison could be managed at home.

Handling calls - children	Number of calls	%
Stay at home	1,616	77
Hospital refer	99	5
In hospital	214	10
GP refer	56	3
At GP surgery	36	2
Other	70	3
Total	2,091	100

### Handling calls – adolescents (15 to 19 years)

The majority of adolescents exposed to a poison could be managed at home.

Handling calls – adolescents	Number of calls	%
Stay at home	228	27
Hospital refer	177	20
In hospital	376	43
GP refer	47	5
At GP surgery	13	1
Other	37	4
Total	878	100

### Handling calls – adults (20 to 74 years)

The majority of adults exposed to a poison could be managed at home.

Handling calls – adults	Number of calls	%
Stay at home	5,474	51
Hospital refer	1,381	13
In hospital	2,439	23
GP refer	539	5
At GP surgery	374	3
Other	568	5
Total	10,775	100

### Handling calls – elderly (>75 years)

The majority of elderly people exposed to a poison could be managed at home.

Handling calls - elderly	Number of calls	%
Stay at home	619	73
Hospital refer	82	10
In hospital	75	9
GP refer	40	5
At GP surgery	12	1
Other	22	2
Total	850	100

### Symptom severity at the time of the call (animal exposures excluded)

The majority of human exposures were asymptomatic at the time of the call to VPIC.

Poisoning severity score*	Number of calls	%
None	21,774	72
Minor	8,339	27
Moderate	373	1
Severe	68	<1
Fatal	0	0
Total	30,554	100

\* Symptom severity scoring is based on the Poisoning Severity Score. Persson HE, Sjoberg GK, Haines JA, Pronczuk de Garbino J. Poisoning severity score. Clin Tox 1998; 36(3): 205-13.

### Top ten exposure substances

VPIC's top ten exposure substances during 2012 are shown below.\*

Substance	Number of exposures
Paracetamol	1,944
Benzodiazepines	1,093
Ibuprofen	886
Selective serotonin re-uptake inhibitor antidepressants	710
Topical antiseptics, handsanitiser	688
Bleach (hypochlorite based)	669
Paracetamol/narcotic combination analgesic	547
Silica gel	545
Detergent: hand dish/sink	517
Toilet bowl cleaner/deodoriser: cage/disc type	507

\*These are not necessarily the most toxic, but rather may be the most accessible.

## Exposures to non-medicine, non-drug products

Substance/product	Number of exposures
<b>HOME PRODUCTS</b>	
<b>Adhesives, glues, cements, pastes</b>	
Cyanoacrylates	173
Epoxy resins	26
Model glues, cements	12
Non-toxic glues, pastes	59
Adhesive, glue, cement, paste: other/unknown	55
<b>Art, craft, hobby, writing products</b>	
Chalk	38
Correction fluid	27
Crayon	21
Paint: artists' paints, non-water colour	12
Paints: artists' paints, water colours	25
Paper/cardboard	30
Pencil	14
Pens/ink (including stamp pad ink, textas)	187
Printer ink/cartridge	4
Art, craft, writing products: other/unknown	28
<b>Batteries</b>	
Automotive	19
Disc/button	74
Penlight/dry cell	118
<b>Cleaners, bleaches, detergents etc</b>	
Bleach (hypochlorite based)	669
Bleach: other/unknown	4
CD/DVD cleaner	6
Cleaner: all purpose/hard surface	427
Cleaner: ammonia based	20
Cleaner: baby bottle	6
Cleaner: bathroom/shower/tile	121
Cleaner: carpet	64
Cleaner: drain	76
Cleaner: floor	74
Cleaner: glass/window	85
Cleaner: industrial	104
Cleaner: leather/vinyl/upholstery	7
Cleaner: nappy	17
Cleaner: oven	143
Cleaner: other/unknown	136
Detergent: anionic/non-ionic (not hand dish type)	13



Detergent: automatic dishwasher liquids	8
Detergent: automatic dishwasher powders/tablets	280
Detergent: automatic dishwasher rinse agents	68
Detergent: cationic (not disinfectants)	5
Detergent: hand dish	517
Detergent: laundry	379
Disinfectant	297
Dry cleaning agent	1
Fabric softener	39
Ironing aid/starch	4
Laundry additive	46
Pre-wash stain remover	122
Rust remover: other/unknown	11
Sugar soap (sodium carbonate)	22
Toilet bowl cleaner/deodoriser: cage/disc type	507
Toilet bowl cleaner: powder/liquid	44
Vaporiser cleaning tablet	9
<b>Fire extinguishers</b>	
BCF/Halon	1
Dry powder	33
Foam	4
<b>Food products, food poisoning</b>	
Artificial sweeteners	1
Ciguatera	3
Food additives	137
Food allergy	15
Food poisoning	56
Food recall/scare	1
Food spoilage	234
MSG (Chinese restaurant syndrome)	4
<b>Garden products</b>	
Fertiliser: household plant food	31
Fertiliser: outdoor	72
Soil/potting mix	30
<b>Miscellaneous home products</b>	
Air fresheners	178
Blu-tack	25
Bubble blowing solution	157
Charcoal	9
Christmas decorations	3
Cigarettes and tobacco products	92

Coins	26
Cyalume light sticks/glow necklaces	223
Desiccants: other/unknown (not silica gel)	71
Dyes: fabric	9
Dyes: food	8
Dyes: other/unknown	9
Fire starters	80
Foreign body	174
Fragrant oil/pot pourri oil	73
Freezer/cold packs	74
Glass	7
Incense	6
Massage oil	18
Matches	7
Pet food	15
Plastic/polystyrene	76
Pot pourri	2
Room deodoriser	107
Silica gel	545
Thermometer: mercury	70
Thermometer: non-mercury	13
Toys	128
Household products: other/unknown	269
<b>Polishes and waxes</b>	
Polish/wax: car	11
Polish/wax: floor (including sealers)	3
Polish/wax: furniture	31
Polish/wax: metal	9
Polish/wax: shoe/boot	6
Polish/wax: other/unknown	4
<b>Swimming pool and aquarium products</b>	
Aquarium products	28
Pool chlorine	91
Pool test kits/solutions	3
Pool products: other/unknown	31
<b>BUILDING/HANDYMAN PRODUCTS</b>	
<b>Building products</b>	
Asbestos	8
Asphalt/bitumen	5
Caulking compounds and construction putties	13
Cement/concrete/lime	41
Clay	2
Fibreglass	8
Insulation	6

Methyl ethyl ketone peroxide	11
Building/handyman products: other/unknown	65
<b>Paints and paint strippers</b>	
Copper chrome arsenate (wood preservative)	10
Creosote (wood preservative)	6
Paints: anticorrosive	2
Paints: oil-based	65
Paints: water-based house type	65
Paint strippers: methylene chloride based	5
Paint strippers: other/unknown	12
Paint thinner	42
Paints: other/unknown	81
Varnishes and lacquers	20
Wood stains	10
<b>CAR/BOAT PRODUCTS</b>	
Car products: antifreeze	27
Car products: brake fluid, transmission fluid etc	32
Car products: other/unknown	53
<b>CHEMICALS</b>	
<b>Alcohols</b>	
Alcohol ethanol (beverage)	317
Alcohol ethanol (non-beverage)	110
Alcohol: higher (butanol, propanol etc)	2
Isopropanol	15
Methanol	11
<b>Essential oils</b>	
Camphor	14
Clove oil	17
Eucalyptus oil	116
Tea tree oil	83
Essential oil: other/unknown	116
<b>Fumes, gases, vapours</b>	
Carbon dioxide	5
Carbon monoxide	80
Chlorine	3
Chlorine/chloramine gas (mixing household cleaning agents)	39
Helium	2
Hydrogen sulphide	10
Lacrimators (Mace spray, tear gas etc -not fumigants)	2
Methane and natural gas	71

Propane and other simple asphyxiants	15
Smoke/toxic products of combustion	89
Fume/gas/vapour: other/unknown	38
<b>General chemicals</b>	
Acetone (not nail polish removers)	19
Acids: other/unknown	63
Alkalis (not cleaners)	42
Ammonia (not cleaners)	20
Borates (not insecticides)	13
Copper sulphate	14
Corrosives: other/unknown	14
Cyanide	2
Ethylene glycol and other glycols	25
Formaldehyde/formalin	21
Hydrochloric acid	56
Hydrofluoric acid	22
Hydrogen peroxide (non-medical)	34
Iodine (non-medical)	8
Isothiazolones (acticide, biocide, kathon, othilinone etc)	2
Phenol and other phenolics	6
Potassium permanganate	2
Strychnine	3
Sulphur	3
Toluene diisocyanate	2
Chemicals: other/unknown	221
<b>Heavy metals</b>	
Aluminium	3
Cadmium	2
Copper	4
Lead	57
Mercury (not thermometers)	38
Metal fume fever	5
Heavy metals: other/unknown	9
<b>Hydrocarbons</b>	
Hydrocarbons: aliphatic	33
Hydrocarbons: aromatic	4
Hydrocarbons: halogenated	28
Hydrocarbons: other/unknown	10
Kerosene	20
Lamp oil	19
Lighter fluid	1
Oils: lubricating/engine/machine	118
Petrol	231
Shellite	2

Toluene/xylene	11
Turpentine, mineral	147
<b>BITES AND STINGS</b>	
<b>Insects</b>	
Ant	27
Bee	62
Caterpillar	6
Centipede/millipede	15
Mosquito	2
Scorpion	33
Tick	15
Wasp/hornet	97
Insect bites: other/unknown	73
<b>Mammals</b>	
Animal bite: dog/cat	2
Animal bite: other/unknown	15
<b>Marine</b>	
Blue-ringed octopus	1
Fish stings: other/unknown	44
Jellyfish and other <i>Coelenterate</i> stings	7
Stingray	7
Marine bites/stings: other/unknown	10
<b>Reptiles and amphibians</b>	
Snake	62
<b>Spiders</b>	
Redback spider	87
White-tailed spider	84
Spider bite: other/unknown	335
<b>COSMETICS AND PERSONAL CARE PRODUCTS</b>	
<b>Cosmetics</b>	
Antiperspirants	27
Baby oil	58
Baby wipes	15
Bath oil/bubble bath/bath preparations	143
Cleanser: skin	2
Creams/lotions/make-up	191
Deodorants	77
Depilatories	47
Lipstick/lip balms	27
Perfume/cologne/aftershave	185
Soap	180
Sunscreen/suntan products	63
Talc and other external powders	53

Cosmetics: other/unknown	22
<b>Dental/oral care products</b>	
Denture cleaning agents	25
Mouthwash: ethanol containing	45
Mouthwash: non-ethanol containing	37
Mouthwash: other/unknown	2
Teething gels	93
Toothache drops	3
Toothpaste with fluoride	87
Toothpaste without fluoride	7
Dental care products: other/unknown	6
<b>Hair care products</b>	
Hair colours (not peroxide)	79
Hair colours (peroxide)	53
Hair conditioner	13
Hair gel/mousse	9
Hair spray	12
Shampoo antidandruff: selenium based	4
Shampoo antidandruff: zinc pyrithione	13
Shampoo antidandruff: other	3
Shampoo non-medicated	87
Hair care: other	40
<b>Nail products</b>	
Nail hardeners	5
Nail polish	169
Nail polish remover	230
Nail primer	1
Nail products: other/unknown	28
<b>VETERINARY PRODUCTS</b>	
Veterinary: animal vaccines	75
Veterinary: external medicines	118
Veterinary: flea collars/insecticidal washes	14
Veterinary: heart worm preparations	14
Veterinary: internal medicines	226
<b>PESTICIDES/HERBICIDES/FUNGICIDES</b>	
<b>Baits</b>	
1080/monofluoroacetate	4
Rodenticides: anticoagulant (warfarin type)	33
Rodenticides: anticoagulant (long-acting)	311
Rodenticides: other/unknown	120
Baits: other/unknown	36
<b>Carbamates</b>	
Carbamates	8

Carbamates in combination with other pesticides	11
<b>Fumigants</b>	
Chloropicrin	2
Phosphine	6
<b>Fungicides</b>	
Carbamate type	7
Copper type	8
Fungicides: phthalimide (captan, captafol etc)	3
Fungicides: other/unknown (non-medical)	9
<b>Herbicides</b>	
Glyphosate	280
Herbicides: carbamate type	1
Herbicides: chlorphenoxy type (2, 4 D; MCPA etc.)	38
Herbicides: triazine type	1
Paraquat/diquat	8
Herbicides: other/unknown	125
<b>Insecticides/pesticides</b>	
Borates/boric acid pesticides	72
Insect coils	2
Insect repellants containing DEET	72
Insect repellants not containing DEET	43
Pyrethrins/pyrethroids	365
Rotenone	4
Snail/slug bait: iron edetate	4
Snail/slug bait: metaldehyde	54
Snail/slug bait: methiocarb	8
Pesticides: other/unknown	80
<b>Moth repellents</b>	
Naphthalene moth repellants	61
<b>Organophosphates</b>	
Organophosphates	46
Organophosphates in combination with other pesticides	2
<b>PLANTS AND MUSHROOMS</b>	
Mushrooms	252
Plants: amaryllidaceae	26
Plants: amygdalin/cyanogenic glycosides	33
Plants: anticholinergic	11

Plants: cactus	8
Plants: capsaicin	20
Plants: cardiac glycosides	23
Plants: daphne	4
Plants: dermatitis	18
Plants: dieffenbachia	1
Plants: euphorbiaceae	33
Plants: gastrointestinal irritants	33
Plants: grayanotoxins	5
Plants: hallucinogenic	1
Plants: lantana	2
Plants: non-toxic	48
Plants: oxalate	200
Plants: solanine	40
Plants: toxalbumins	2
Plants: toxicodendrol	4
Plants: other/unknown	159
<b>MISCELLANEOUS NON-MEDICINE, NON-DRUG EXPOSURES</b>	
Blue-green algae	27
Faeces/urine	62
Radioactive materials	1
Snail/slug	73



## Exposures to medicines and drugs

<b>Medicine/drug</b>	<b>Number of exposures</b>
<b>ANAESTHETICS</b>	
Anaesthetics: inhalation	2
Anaesthetics: topical/local	47
Anaesthetics: other/unknown	3
Nitrous oxide	3
<b>ANALGESICS</b>	
Aspirin/narcotic combination analgesic	4
Aspirin/salicylates	182
Codeine	27
Dextropropoxyphene	1
Fentanyl	15
Morphine	44
Oxycodone	251
Paracetamol	1,944
Paracetamol/narcotic combination	547
Tramadol	148
Analgesics: narcotic other/unknown	3
Analgesics: non-narcotic other/unknown	1
<b>ANTICHOLINERGICS</b>	
Atropine	3
Benztropine	23
Anticholinergic drugs: other/unknown	21
<b>ANTICOAGULANTS and BLOOD PRODUCTS</b>	
Heparin	2
Warfarin	94
Anticoagulants: other/unknown	12
Blood products: other/unknown	1
<b>ANTI-HISTAMINES</b>	
Cetirizine	83
Dexchlorpheniramine	18
Fexofenadine	70
Loratadine	89
Pheniramine	9
Promethazine	98
Antihistamines: other/unknown	35
<b>ANTIMICROBIALS</b>	
<b>Antibiotics</b>	
Antibiotic combinations (Augmentin, Bactrim etc.)	71
Cephalosporins	133
Macrolides	71

Penicillins	254
Quinolones	7
Tetracyclines	42
Antibiotics: other/unknown	46
<b>Antifungals</b>	
Antifungal drugs (ketoconazole, fluconazole etc)	13
<b>Antiparasitics/Anthelmintics</b>	
Anthelmintics	92
Antianaerobes (metronidazole, tinidazole etc)	22
Antimalarials (not quinine, chloroquine)	1
<b>Antituberculars</b>	
Antitubercular drugs	5
<b>Antivirals</b>	
Antiviral drugs	28
<b>ANTIMIGRAINE DRUGS</b>	
Ergot alkaloids	1
Triptans (naratriptan, sumatriptan etc)	5
Migraine preparations: other/unknown	17
<b>ASTHMA/RESPIRATORY DRUGS</b>	
Bronchodilators	54
Leukotriene receptor antagonists (montelukast, zafirlukast etc)	37
Preventors	71
Theophylline and other xanthines	1
Asthma drugs: other/unknown	2
Respiratory drugs: other/unknown	27
<b>CARDIOVASCULAR DRUGS</b>	
ACE inhibitor/diuretic combinations	33
ACE inhibitors	165
Adrenaline	35
Alpha blockers	37
Angina preparations	12
Angiotensin II antagonist/diuretic combinations	79
Angiotensin II antagonists	165
Antiarrhythmic agents	28
Antihypertensives: other (not diuretics)	32
Antiplatelet agents: other (clopidogrel, dipyridamole etc)	44

Beta blockers	280
Calcium antagonists	189
Cardiac glycosides	51
Diuretics: other	84
Diuretics: potassium sparing	23
HMG CoA reductase inhibitors (statins)	136
Lipid lowering agents: fibrates (gemfibrozil, fenofibrate etc)	7
Lipid lowering agents: other	13
Nitrates	19
Vasodilators	23
Vasopressors	1
Cardiovascular drugs: other/unknown	2
<b>CENTRAL NERVOUS SYSTEM DRUGS</b>	
<b>Antidepressants</b>	
Duloxetine	86
Mianserin	4
Mirtazapine	134
Monoamine oxidase inhibitors	21
Selective serotonin reuptake inhibitors (citalopram, escitalopram, fluoxetine etc.)	710
Tricyclic antidepressants	168
Venlafaxine/desvenlafaxine	279
Antidepressants: other/unknown	24
<b>Antiepileptics</b>	
Carbamazepine	136
Gabapentin	24
Phenytoin	34
Pregabalin	31
Sodium valproate	279
Antiepileptics: other/unknown	139
<b>Antipsychotics</b>	
Amisulpride	18
Aripiprazole	25
Clozapine	28
Olanzapine	135
Phenothiazines (chlorpromazine, trifluoperazine etc)	75
Quetiapine	448
Risperidone	117
Ziprasidone	12
Antipsychotics: other/unknown	35
<b>CNS depressants</b>	
Barbiturates	10
Benzodiazepines	1,093

Doxylamine	59
Sleep aids over-the-counter: other	5
Zolpidem	47
Zopiclone	72
Sedative/hypnotic: other/unknown	23
<b>CNS stimulants</b>	
Amphetamines (for ADHD, not street drugs)	109
Caffeine	57
<b>CNS – miscellaneous</b>	
Antidementia agents (donepezil, galantamine, memantine, rivastigmine)	26
Antiparkinsonian agents	53
Clonidine	72
Lithium	82
CNS drugs: other/unknown	2
<b>COUGH/COLD PREPARATIONS</b>	
Antitussives	41
Cough/cold preparations with paracetamol	175
Cough/cold preparations without paracetamol/aspirin	342
Dextromethorphan	27
Pseudoephedrine	11
Throat lozenges with local anaesthetic	3
Throat lozenges without local anaesthetic	18
<b>DRUGS USED IN ADDICTIVE DISORDERS</b>	
Buprenorphine	19
Bupropion	9
Methadone	32
Naltrexone	11
Antismoking products: other (nicotine gum, lozenges, patches etc)	60
<b>EAR PREPARATIONS</b>	
Ear drops	62
Ear ointments	1
<b>EYE PREPARATIONS</b>	
Contact lens preparations	20
Eye drops: imidazoline-based	3
Eye drops: other/unknown	31
Eye ointment	3
<b>GASTROINTESTINAL PREPARATIONS</b>	
Antacids	55
Antidiarrhoeals: diphenoxylate/atropine	4

Antidiarrhoeals: loperamide	22
Antidiarrhoeals: other/unknown	2
Antiemetics	98
Antispasmodics (hyoscine butylbromide etc)	36
Histamine H <sub>2</sub> - antagonists (cimetidine, ranitidine etc.)	39
Laxatives	126
Proton pump inhibitors (omeprazole, pantoprazole, esomeprazole etc.)	215
Gastrointestinal preparations: other/unknown	67
<b>METABOLISM</b>	
<b>Electrolytes/minerals</b>	
Calcium salts	49
Fluoride	2
Iron (not multivitamins)	96
Potassium salts	17
Electrolytes: other/unknown	1
<b>Vitamins</b>	
Folic acid	48
Vitamin A	5
Vitamin B group	35
Vitamin C	48
Vitamin D	143
Vitamins compound with iron	223
Vitamins compound without iron	140
Vitamins: other	78
<b>Other metabolic</b>	
Androgenic and anabolic agents	5
Antihormones (tamoxifen, cyproterone, flutamide etc.)	19
Antithyroid preparations	15
Bisphosphonates	13
Corticosteroids	230
Diet aids/anorectics – over-the-counter	30
Diet aids/anorectics – prescription	36
Hypoglycaemics, oral: alpha glucosidase inhibitors (acarbose etc)	2
Hypoglycaemics, oral: biguanides (metformin)	99
Hypoglycaemics, oral: combination products (metformin/glibenclamide, metformin/rosiglitazone, metformin/sitagliptin etc)	12
Hypoglycaemics, oral: DPP-4 inhibitors (sitagliptin, vildagliptin etc)	4

Hypoglycaemics, oral: glitazones	6
Hypoglycaemics, oral: sulphonylureas (glibenclamide, gliclazide, glipizide etc)	48
Insulin	59
Oestrogens/progestogens (not oral contraceptives)	24
Oral contraceptives: oestrogen and progestogen	360
Oral contraceptives: progestogen only	47
Thyroxine	131
Thyroid preparations: other/unknown	12
Hormones: other/unknown	13
<b>NONSTEROIDAL ANTI-INFLAMMATORY DRUGS AND GOUT MEDICATIONS</b>	
Allopurinol	24
Celecoxib	29
Colchicine	22
Diclofenac	151
Ibuprofen	886
Ibuprofen plus codeine	88
Indomethacin	14
Mefenamic acid	13
Naproxen	49
NSAIDs: other/unknown	52
<b>NOSE PREPARATIONS</b>	
Nose drops/sprays: imidazoline-based	10
Nose drops/sprays: other/unknown	11
Nasal preparations: other/unknown	9
<b>STREET DRUGS</b>	
Amphetamine and related drugs	104
Amyl nitrite and other volatile nitrites	2
Cocaine	13
Ecstasy and other hallucinogenic amphetamines	16
Gamma hydroxybutyrate	17
Hallucinogenics: other/unknown	3
Heroin	21
Inhalant abuse (chroming)	9
LSD	1
Marijuana	41
Phencyclidine (PCP)	1
Street drugs: other/unknown	46
<b>TOPICAL PREPARATIONS</b>	
Acne preparations	23

Antipruritics (calamine lotion etc)	26
Capsaicin	14
Chest rubs	87
Hydrogen peroxide	11
Lice/scabies preparations	129
Liniments	123
Lotions/creams/ointments: other/unknown	1
Nappy rash products	405
Topical antibiotics	27
Topical antifungals	141
Topical antiseptics (handsanitiser etc)	688
Topical antivirals	5
Topical corticosteroids	176
Wart/corn preparations	21
Topical preparations: other/unknown	93
<b>MISCELLANEOUS MEDICINE/DRUG EXPOSURES</b>	
Antineoplastics	11
Chloroquine/hydroxychloroquine	13
Diagnostic agents	3
Herbal preparations	105
Homeopathic preparations	53
Immunosuppressants	26
Methotrexate	23
Muscle relaxants (baclofen etc)	39
Quinine	3
Unknown tablets/capsules	46
Urinary alkalinisers/antiseptics	4
Vaccines/toxoids/antivenoms	20
Vaporiser fluids and inhalants	204
Other over-the-counter-medicines	97
Other prescription medicines	86