



ANNUAL REPORT 2011

Victorian **P**oisons **I**nformation **C**entre

13 11 26

**Emergency Department
Austin Hospital
Heidelberg 3084**

www.austin.org.au/poisons

Victorian Poisons Information Centre

Annual Report 2011

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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 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 and stings
- 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 or exposure
- potential toxic effects from a poisoning or exposure
- treatment and management advice.

VPIC aims to prevent unnecessary visits to general practitioners and hospitals and to ensure patients who are poisoned receive the most effective 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 2011, 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, Professor Albert Frauman). A clinical toxicology fellow, Dr. Dino Druda, joined AHCTS in May 2011. In February 2011, two clinical toxicologists from Southern Health, Professor George Braitberg and Professor Andis Graudins, also joined the VPIC on-call consultant roster to support the AHCTS team. AHCTS clinicians provide a specialised management and advice service for toxicology/toxinology admissions. They provide a 24-hour on-call service for poisoned patients presenting to the Austin ED or transferred to the Austin Hospital for specialist toxicology and critical care services. AHCTS also runs an outpatient clinic for patients with chronic and occupational-related poisonings.

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 on-call AHCTS consultant. During 2011, 414 such calls were referred to the toxicology registrar, toxicology fellow or the 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.

Review of Clinical Guidelines and Position Statements

The following VPIC/AHCTS clinical guidelines and position statements were reviewed and placed on the Austin Health intranet (Hub) during 2011:

- alcohols (ethanol and isopropyl); amiodarone; amisulpride; amphetamines; angiotensin converting enzyme inhibitors; anticoagulant rodenticides; anticonvulsants (newer agents); antihistamines (sedating); arsenic
- baclofen; benzodiazepines; benzotropine; beta blockers; bupropion
- calcium channel blockers; carbamazepine; carbon monoxide; clonidine; clozapine; colchicine; cyanide antidotes position statement
- digoxin (acute); disc battery ingestions
- eucalyptus oil; *Euphorbia* eye exposures
- gammahydroxybutyrate; glyphosate
- iron
- lead (including lead foreign body ingestion); lithium (acute and chronic)
- metal-on-metal total hip joint replacements position statement; metformin; mirtazapine
- non-steroidal anti-inflammatory drugs
- olanzapine
- paracetamol; paraquat/diquat; phenothiazines and butyrophenones
- quetiapine
- redback spider bite; risperidone
- salicylates; selective serotonin reuptake inhibitors; snake bite; sulfonlureas
- tramadol; tricyclic antidepressants
- valproic acid; venlafaxine/desvenlafaxine

Poisoning Prevention Activities

- 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.

Toxicovigilance Activities

- 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 about exposure calls involving lye water, caffeinated energy drinks and alcohol-based-hand-rubs.

Research Activities and Publications

- Oakley E, Robinson J, Deasy C. Using 0.45% saline solution and a modified dosing regimen for infusing N-acetylcysteine in children with paracetamol poisoning. *Emerg Med Australas* 2011; 23(1): 63–7.
- Wong A, Greene S, Robinson J. Hydrofluoric acid poisoning: Data from the Victorian Poisons Information Centre. *Emerg Med Australas* Published Online First: 19 September 2011 doi:10.1111/j.1742-6723.2011.01485.x.
- Wong A, Greene S, Robinson J. Monday morning fever: a persisting problem. Paper presented at the ACEM Winter Conference July 2011.
- Sher LM, Taylor DM, Robinson J, Browning J, Colbridge M, MacLeod D, McCracken H, McKenzie C. The epidemiology of chemical eye exposures reported to the Victorian Poisons Information Centre. *Eur J Emerg Med* 2011; online early:doi:10.1097/MEJ.0b013e32834e912a.:

Other Activities

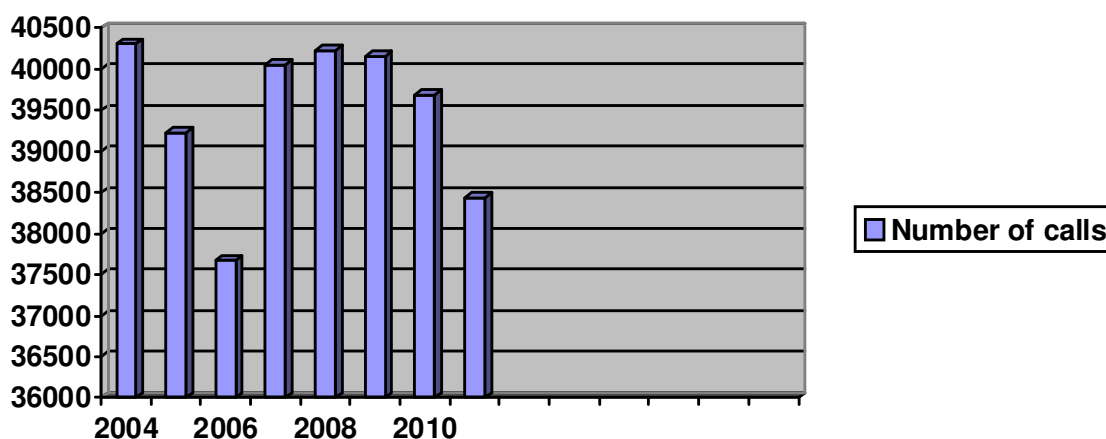
The following additional activities were undertaken during 2011:

- Shaun Greene and Dawson MacLeod joined the Emergency Medicine Expert Group to write *Therapeutic Guidelines: Emergency Medicine, Version 2*.
- In January, Jeff Robinson was interviewed by a Herald Sun journalist for an article about White-Tailed spider bites.
- In January, Jeff Robinson and Shaun Greene met with Ambulance Victoria to discuss service interaction between Ambulance Victoria and VPIC.
- In February, Jeff Robinson was interviewed by a Sunday Herald Sun journalist for an article about Red Back spider bites.
- In February, Jeff Robinson was interviewed by a Herald Sun journalist and radio 3AW about the risks of paediatric salicylate poisoning from excessive use of teething gels.
- In April, Jeff Robinson was interviewed by a Herald Sun journalist for an article about paediatric oesophageal injury from ingestion of household alkaline products.
- In April, Shaun Greene was interviewed by journalists from the Herald Sun and Channel 7 about a child suffering multiple stings from European wasps.
- In October, Jeff Robinson was interviewed by a JJJ-TV journalist about the ingestion of oxalate-containing plants for the Urban Foraging program.

- VPIC/AHCTS educational activities were consolidated to Wednesdays each week, eg teaching sessions, Toxicology Outpatient Clinic, ward round, Toxicology Journal Club.
- Dr Jonathan Karro (Emergency Physician, St. Vincent’s Public Hospital, Melbourne) undertook sabbatical leave at VPIC/AHCTS during the second half of 2011.
- In October, VPIC’s QMaster telephone software underwent a major upgrade.
- In October, Jeff Robinson presented a lecture ‘Poisons and Toxins in Children: Providing Advice About Bites, Stings and Ingestions of Potential Poisons’ at the Pharmaceutical Society of Australia annual Pharmacy Australia Conference in Melbourne.
- In October, Jeff Robinson reviewed the Poisons and Toxins continuing professional education resource produced by the Pharmaceutical Society of Australia
- In November, Jeff Robinson reviewed the fungi poisoning monograph produced by the Better Health Channel, Victorian Department of Health.
- Janet Browning and Christine McKenzie applied for a Victorian Therapeutics Advisory Group (VICTAG) Research Grant to review the content and presentation of VICTAG’s Emergency and Life Saving Drugs Register.
- Three VPIC/AHCTS Clinical Governance meetings were held during the year.
- VPIC staff attended all five of the NSW PIC Clinical Meetings. Two were held in Sydney, two were videoconferenced and one held at the Austin Hospital in November.
- Half-day Toxicology Forums were held at the Austin Hospital in April and July, and at Bendigo Base Hospital in October.
- Jeff Robinson and Shaun Greene attended the National Poisons Information Network workshops in February, July and November, and commented extensively on the National Poisons Information Network options papers to be submitted to the Health Policy Priorities Principal Committee (HPPPC) of AHMAC.
- VPIC operations were demonstrated to visitors from the USA and Vietnam.

Calls to VPIC

The centre received a total of 38,435 calls in 2011, an average of 105 calls per day. This was marginally below 2010 (39,679 calls, average 109 calls per day) and 2009 (40,155 calls, average 110 calls per day). The 2011 total includes 2,046 calls answered by VPIC during 54 overnight shifts (New South Wales 643, Victoria 442, Western Australia 316, Queensland 426, South Australia 138, Northern Territory 26, Tasmania 34, Australian Capital Territory 21). Forty seven of these overnight calls were referred to the national roster toxicologist.



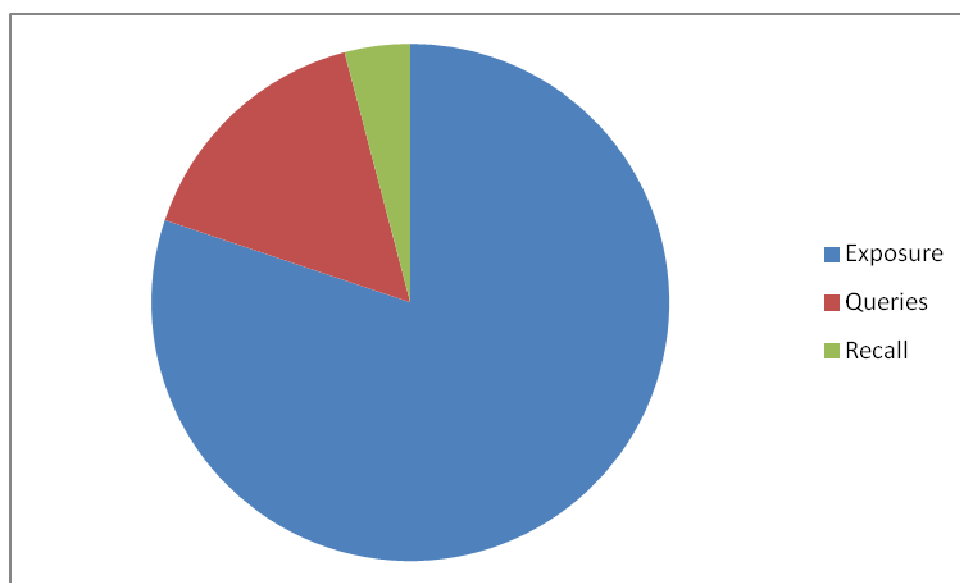
Call types (Figure 1)

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

Call type	Number of calls	%
Exposure to a poison	30,805	80
Queries	6,058	16
Recall*	1,572	4
Total	38,435	100

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

Figure 1: Breakdown of call types 2011



* 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	%
Poisons information	2,420	40
Drug information	2,379	40
Medicines and pregnancy	309	5
Prevention of poisoning/safety	266	4
Medicines and breastfeeding	256	4
Medical	228	4
Environmental	198	3
Occupational	2	<1
Total	6058	100

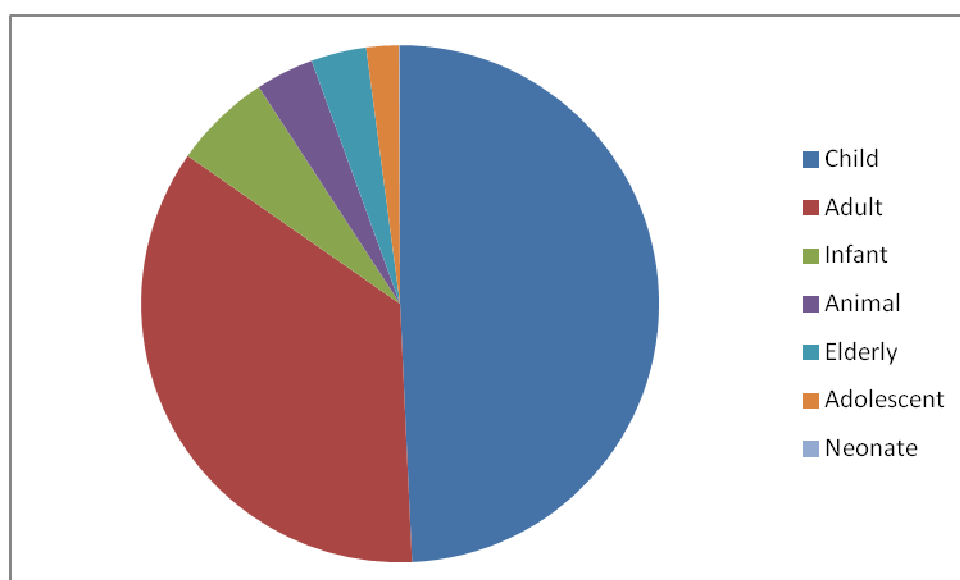
Person exposed (Figure 2)

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

Person exposed	Number of calls	%
Child (1 to <12 years)	15,177	50
Adult (16 to 65 years)	10,913	35
Infant (1 month to <1 year)	1,885	6
Animal*	1,120	4
Elderly (>65 years)	1,064	3
Adolescent (12 to <16 years)	625	2
Neonate (<1 month)	21	<1
Total	30,805	100

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

Figure 2: Breakdown of exposure calls 2011



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	17,467	59
Self	5,396	18
Doctor	2,854	10
Nurse	1,478	5
Carer	1,040	4
Friend	613	2
Ambulance	450	2
Pharmacist	155	<1
Counselling service	119	<1
Other medical professional, eg psychologist, social worker	59	<1
Other, eg police, teachers	54	<1
Total	29,685	100

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	21,379	73
Therapeutic error	4,280	14
Intentional	3,374	11
Workplace acute	613	2
Workplace chronic	30	<1
Environmental	9	<1
Total	29,685	100

Routes of exposure (animal exposures excluded)

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

Route of exposure	Number of exposures	%
Ingestion	29,050	81
Ocular	1,980	6
Dermal	1,791	5
Inhalation/nasal	1,709	5
Bite/sting	1,165	3
Parenteral	282	<1
Aural	30	<1
Vaginal	14	<1
Rectal	5	<1
Total	36,026*	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 (<1 month)

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

Handling calls - neonates	Number of calls	%
Stay at home	17	80
Hospital refer	1	5
GP refer	1	5
In hospital	1	5
At GP surgery	1	5
Total	21	100

Handling calls – infants (1 month 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	1,761	93
In hospital	54	3
Hospital refer	31	2
At GP surgery	18	1
GP refer	13	1
Other	8	<1
Total	1,885	100

Handling calls – children (1 to <12 years)

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

Handling calls - children	Number of calls	%
Stay at home	13,388	88
In hospital	750	5
Hospital refer	542	4
Other	204	1
At GP surgery	193	1
GP refer	100	1
Total	15,177	100

Handling calls – adolescents (12 to <16 years)

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

Handling calls – adolescents	Number of calls	%
Stay at home	315	50
In hospital	144	23
Hospital refer	92	15
Other	35	6
GP refer	32	5
At GP surgery	7	1
Total	625	100

Handling calls – adults (16 to 65 years)

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

Handling calls – adults	Number of calls	%
Stay at home	5,603	52
In hospital	2,563	23
Hospital refer	1,440	13
GP refer	572	5
Other	412	4
At GP surgery	323	3
Total	10,913	100

Handling calls – elderly (>65 years)

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

Handling calls - elderly	Number of calls	%
Stay at home	778	73
In hospital	115	11
Hospital refer	70	7
GP refer	54	5
Other	26	2
At GP surgery	21	2
Total	1,064	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	21,107	72
Minor	8,146	27
Moderate	370	1
Severe	60	<1
Fatal	2	<1
Total	29,685	100

* Symptom severity scoring is based on the Poisoning Severity Score. Persson HE, Sjöberg 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 2011 are shown below.*

Substance	Number of exposures
Paracetamol	1,865
Benzodiazepines	1,040
Ibuprofen	744
Topical antiseptics, hand sanitisers	672
Bleach (hypochlorite based)	626
Silica gel	625
Selective serotonin re-uptake inhibitor antidepressants	608
Paracetamol/narcotic combination analgesic	496
Detergent: hand dish/sink	489
Spider bites (other than Redback, White-tailed spiders)	450

*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
HOME PRODUCTS	
Adhesives, glues, cements, pastes	
Cyanoacrylates	186
Epoxy resins	13
Model glues, cements	18
Non-toxic glues, pastes	54
Adhesive, glue, cement, paste: other/unknown	47
Art, craft, hobby, writing products	
Chalk	28
Correction fluid	20
Crayon	27
Paint: artists' paints, non-water colour	6
Paints: artists' paints, water colours	23
Paper/cardboard	15
Pencil	14
Pens/ink (including stamp pad ink, textas)	207
Printer ink/cartridge	4
Art, craft, writing products: other/unknown	23
Batteries	
Automotive	28
Disc/button battery	78
Penlight/dry cell	92
Cleaners, bleaches, detergents etc	
Bleach (hypochlorite based)	626
Bleach: other/unknown	4
CD/DVD cleaner	3
Cleaner: all purpose/hard surface	362
Cleaner: ammonia based	9
Cleaner: baby bottle	12
Cleaner: bathroom/shower/tile	138
Cleaner: carpet	63
Cleaner: drain	60
Cleaner: floor	61
Cleaner: glass/window	103
Cleaner: industrial	139
Cleaner: leather/vinyl/upholstery	7
Cleaner: nappy	16
Cleaner: oven	151
Cleaner: other/unknown	159
Detergent: anionic/non-ionic (not hand dish type)	14

Detergent: automatic dishwasher liquids	17
Detergent: automatic dishwasher powders/tablets	227
Detergent: automatic dishwasher rinse agents	62
Detergent: cationic (not disinfectants)	5
Detergent: hand dish	489
Detergent: laundry	330
Disinfectant	329
Dry cleaning agent	1
Fabric softener	23
Ironing aid/starch	8
Laundry additive	43
Pre-wash stain remover	118
Rust remover: other/unknown	10
Sugar soap (sodium carbonate)	13
Toilet bowl cleaner/deodoriser: cage/disc type	380
Toilet bowl cleaner: powder/liquid	84
Vaporiser cleaning tablet	7
Fire extinguishers	
BCF/Halon	1
Dry powder	46
Foam	6
Food products, food poisoning	
Artificial sweeteners	1
Ciguatera	1
Food additives	163
Food allergy	18
Food poisoning	61
Food recall/scare	7
Food spoilage	207
MSG (Chinese restaurant syndrome)	2
Garden products	
Fertiliser: household plant food	26
Fertiliser: outdoor	53
Soil/potting mix	31
Miscellaneous home products	
Air fresheners	221
Blu-tack	25
Bubble blowing solution	167
Charcoal	9
Christmas decorations	4
Cigarettes and tobacco products	104

Coins	35
Cyalume light sticks/glow necklaces	227
Desiccants: other/unknown (not silica gel)	44
Dyes: fabric	9
Dyes: food	11
Dyes: other/unknown	14
Fire starters	79
Foreign body	146
Fragrant oil/pot pourri oil	99
Freezer/cold packs	77
Glass	8
Incense	8
Massage oil	23
Matches	17
Pet food	31
Plastic/polystyrene	65
Pot pourri	2
Room deodoriser	76
Silica gel	625
Thermometer: mercury	106
Thermometer: non-mercury	28
Toys	105
Household products: other/unknown	220
Photographic products	
Photographic chemicals	6
Polishes and waxes	
Polish/wax: car	2
Polish/wax: floor (including sealers)	4
Polish/wax: furniture	39
Polish/wax: metal	9
Polish/wax: shoe/boot	8
Polish/wax: other/unknown	2
Swimming pool and aquarium products	
Aquarium products	30
Pool chlorine	71
Pool test kits/solutions	6
Pool products: other/unknown	25
BUILDING/HANDYMAN PRODUCTS	
Building products	
Asbestos	4
Asphalt/bitumen	5
Caulking compounds and construction putties	15
Cement/concrete/lime	46
Clay	2

Fibreglass	4
Insulation	5
Methyl ethyl ketone peroxide	14
Soldering flux	4
Building/handyman products: other/unknown	91
Paints and paint strippers	
Copper chrome arsenate (wood preservative)	12
Creosote (wood preservative)	9
Paints: anticorrosive	1
Paints: oil-based	58
Paints: water-based house type	82
Paint strippers: methylene chloride based	9
Paint strippers: other/unknown	9
Paint thinner	38
Paints: other/unknown	80
Varnishes and lacquers	20
Wood stains	16
CAR/BOAT PRODUCTS	
Car products: antifreeze	19
Car products: brake fluid, transmission fluid etc	13
Car products: other/unknown	61
CHEMICALS	
Alcohols	
Alcohol ethanol (beverage)	357
Alcohol ethanol (non-beverage)	122
Alcohol: higher (butanol, propanol etc)	4
Alcohol: other/unknown	1
Isopropanol	11
Methanol	8
Essential oils	
Camphor	12
Clove oil	16
Eucalyptus oil	215
Tea tree oil	53
Essential oil: other/unknown	111
Fumes, gases, vapours	
Carbon dioxide	1
Carbon monoxide	52
Chlorine	15
Chlorine/chloramine gas (mixing household cleaning agents)	38
Helium	3

Hydrogen sulphide	3
Lacrimators (Mace spray, tear gas etc –not fumigants)	1
Methane and natural gas	90
Polymer fume fever	1
Propane and other simple asphyxiants	16
Smoke/toxic products of combustion	58
Fume/gas/vapour: other/unknown	35
General chemicals	
Acetone (not nail polish removers)	8
Acids: other/unknown	39
Alkalis (not cleaners)	40
Ammonia (not cleaners)	13
Benzene	2
Borates (not insecticides)	10
Copper sulphate	22
Corrosives: other/unknown	22
Cyanide	0
Ethylene glycol and other glycols	18
Formaldehyde/formalin	27
Gun bluing compounds	2
Hydrochloric acid	52
Hydrofluoric acid	16
Hydrogen peroxide (non-medical)	27
Iodine (non-medical)	5
Isothiazolones (acticide, biocide, kathon, octhilinone etc)	0
Methylene chloride (not paint strippers)	4
Phenol and other phenolics	7
Phosphorus	1
Potassium permanganate	3
Strychnine	3
Sulphur	7
Toluene diisocyanate	0
Chemicals: other/unknown	144
Heavy metals	
Aluminium	4
Cadmium	2
Chromium salts	1
Copper	6
Lead	44
Manganese	2
Mercury (not thermometers)	38
Metal fume fever	10
Selenium	2
Heavy metals: other/unknown	17

Hydrocarbons	
Hydrocarbons: aliphatic	30
Hydrocarbons: aromatic	3
Hydrocarbons: halogenated	32
Hydrocarbons: other/unknown	4
Kerosene	20
Lamp oil	24
Lighter fluid	4
Oils: lubricating/engine/machine	111
Petrol	200
Shellite	4
Toluene/xylene	25
Turpentine, mineral	139
BITES AND STINGS	
Insects	
Ant	25
Bee	66
Caterpillar	8
Centipede/millipede	18
Mosquito	2
Scorpion	44
Tick	14
Wasp/hornet	72
Insect bites: other/unknown	85
Mammals	
Animal bite: dog/cat	1
Animal bite: other/unknown	13
Marine	
Blue-ringed octopus	1
Fish stings: other/unknown	48
Jellyfish and other <i>Coelenterate</i> stings	14
Stingray	4
Marine bites/stings: other/unknown	11
Reptiles and amphibians	
Lizard	2
Snake	78
Spiders	
Redback spider	188
White-tailed spider	79
Spider bite: other/unknown	450
COSMETICS AND PERSONAL CARE PRODUCTS	
Cosmetics	
Antiperspirants	31

Baby oil	64
Baby wipes	26
Bath oil/bubble bath/bath preparations	112
Creams/lotions/make-up	182
Deodorants	73
Depilatories	43
Lipstick/lip balms	28
Perfume/cologne/aftershave	174
Soap	189
Sunscreen/suntan products	62
Talc and other external powders	81
Cosmetics: other/unknown	26
Dental/oral care products	
Denture cleaning agents	36
Mouthwash: ethanol containing	51
Mouthwash: non-ethanol containing	46
Mouthwash: other/unknown	4
Teething gels	69
Toothache drops	7
Toothpaste with fluoride	95
Toothpaste without fluoride	1
Dental care products: other/unknown	6
Hair care products	
Hair colours (not peroxide)	51
Hair colours (peroxide)	66
Hair conditioner	9
Hair gel/mousse	15
Hair rinses/perms	5
Hair spray	10
Shampoo antidandruff: selenium based	9
Shampoo antidandruff: zinc pyrithione	3
Shampoo antidandruff: other	2
Shampoo non-medicated	88
Hair care: other	39
Nail products	
Nail hardeners	4
Nail polish	147
Nail polish remover	203
Nail primer	6
Nail products: other/unknown	15
VETERINARY PRODUCTS	
Veterinary: animal vaccines	65
Veterinary: external medicines	129
Veterinary: flea collars/insecticidal washes	20

Veterinary: heart worm preparations	16
Veterinary: internal medicines	231
PESTICIDES/HERBICIDES/FUNGICIDES	
Baits	
1080/monofluoroacetate	3
Rodenticides: anticoagulant (warfarin type)	34
Rodenticides: anticoagulant (long-acting)	411
Rodenticides: other/unknown	97
Baits: other/unknown	23
Carbamates	
Carbamates	10
Carbamates in combination with other pesticides	12
Chlorinated hydrocarbons	
Chlorinated hydrocarbons (endrin, dieldrin, heptachlor etc)	2
Fumigants	
Bromides	8
Chloropicrin	4
Phosphine	21
Fungicides	
Carbamate type	8
Copper type	10
Fungicides: other/unknown (non-medical)	15
Herbicides	
Glyphosate	293
Herbicides: chlorophenoxy type (2, 4 D; MCPA etc.)	37
Herbicides: triazine type	17
Paraquat/diquat	20
Herbicides: other/unknown	116
Insecticides/pesticides	
Arsenic pesticides	0
Borates/boric acid pesticides	62
Insect coils	5
Insect repellants containing DEET	126
Insect repellants not containing DEET	58
Pyrethrins/pyrethroids	431
Rotenone	0
Snail/slug bait: iron edetate	6
Snail/slug bait: metaldehyde	58
Snail/slug bait: methiocarb	10

Pesticides: other/unknown	84
Moth repellents	
Naphthalene moth repellants	59
Paradichlorobenzene moth repellants	1
Organophosphates	
Organophosphates	61
PLANTS AND MUSHROOMS	
Mushrooms	169
Plants: amaryllidaceae	18
Plants: amygdalin/cyanogenic glycosides	35
Plants: anticholinergic	14
Plants: cactus	4
Plants: capsaicin	21
Plants: cardiac glycosides	29
Plants: daphne	3
Plants: dermatitis	29
Plants: dieffenbachia	1
Plants: euphorbiaceae	38
Plants: gastrointestinal irritants	32
Plants: grayanotoxins	1
Plants: hallucinogenic	8
Plants: lantana	1
Plants: non-toxic	72
Plants: oxalate	201
Plants: philodendron	1
Plants: solanine	45
Plants: stimulants	0
Plants: toxicodendrol	3
Plants: other/unknown	141
MISCELLANEOUS NON-MEDICINE, NON-DRUG EXPOSURES	
Blue-green algae	15
Faeces/urine	49
Radioactive materials	0
Snail/slug	40

Exposures to medicines and drugs

Medicine/drug	Number of exposures
ANAESTHETICS	
Anaesthetics: inhalation	2
Anaesthetics: topical/local	18
Anaesthetics: other/unknown	0
Nitrous oxide	1
ANALGESICS	
Aspirin/narcotic combination analgesic	4
Aspirin/salicylates	138
Codeine	26
Dextropropoxyphene	3
Fentanyl	18
Morphine	36
Oxycodone	184
Paracetamol	1,865
Paracetamol/narcotic combination	496
Tramadol	116
Analgesics: narcotic other/unknown	2
Analgesics: non-narcotic other/unknown	2
ANTICHOLINERGICS	
Atropine	3
Benztropine	22
Anticholinergic drugs: other/unknown	39
ANTICOAGULANTS and BLOOD PRODUCTS	
Heparin	2
Warfarin	96
Anticoagulants: other/unknown	13
Blood products: other/unknown	1
ANTIHISTAMINES	
Cetirizine	84
Dexchlorpheniramine	27
Fexofenadine	61
Loratadine	84
Pheniramine	4
Promethazine	96
Antihistamines: other/unknown	32
ANTIMICROBIALS	
Antibiotics	
Aminoglycosides	2
Antibiotic combinations (Augmentin, Bactrim etc.)	51
Cephalosporins	145

Macrolides	92
Penicillins	239
Quinolones	6
Sulphonamides	2
Tetracyclines	48
Antibiotics: other/unknown	27
Antifungals	
Antifungal drugs (ketoconazole, fluconazole etc)	20
Antiparasitics/Anthelmintics	
Anthelmintics	56
Antianaerobes (metronidazole, tinidazole etc)	21
Antimalarials (not quinine, chloroquine)	3
Antituberculars	
Antitubercular drugs	0
Antivirals	
Antiviral drugs	23
ANTIMIGRAINE DRUGS	
Ergot alkaloids	3
Triptans (naratriptan, sumatriptan etc)	9
Migraine preparations: other/unknown	29
ASTHMA/RESPIRATORY DRUGS	
Bronchodilators	59
Leukotriene receptor antagonists (montelukast, zafirlukast etc)	34
Preventors	78
Theophylline and other xanthines	4
Asthma drugs: other/unknown	1
Respiratory drugs: other/unknown	29
CARDIOVASCULAR DRUGS	
ACE inhibitor/diuretic combinations	25
ACE inhibitors	169
Adrenaline	34
Alpha blockers	20
Angina preparations	12
Angiotensin II antagonist/diuretic combinations	66
Angiotensin II antagonists	163
Antiarrhythmic agents	15
Antihypertensives: other (not diuretics)	43

Antiplatelet agents: other (clopidogrel, dipyridamole etc)	57
Beta blockers	255
Calcium antagonists	163
Cardiac glycosides	53
Diuretics: other	79
Diuretics: potassium sparing	20
HMG CoA reductase inhibitors (statins)	125
Lipid lowering agents: fibrates (gemfibrozil, fenofibrate etc)	6
Lipid lowering agents: other	4
Nitrates	27
Vasodilators	16
Vasopressors	1
Cardiovascular drugs: other/unknown	1
CENTRAL NERVOUS SYSTEM DRUGS	
Antidepressants	
Duloxetine	92
Mianserin	2
Mirtazapine	135
Monoamine oxidase inhibitors	14
Selective serotonin reuptake inhibitors (citalopram, escitalopram, fluoxetine etc.)	608
Tricyclic antidepressants	130
Venlafaxine/desvenlafaxine	208
Antidepressants: other/unknown	15
Antiepileptics	
Carbamazepine	131
Gabapentin	19
Phenytoin	42
Pregabalin	21
Sodium valproate	220
Antiepileptics: other/unknown	143
Antipsychotics	
Amisulpride	18
Aripiprazole	15
Clozapine	18
Olanzapine	157
Phenothiazines (chlorpromazine, trifluoperazine etc)	83
Quetiapine	393
Risperidone	92
Ziprasidone	8
Antipsychotics: other/unknown	31

CNS depressants	
Barbiturates	10
Benzodiazepines	1,040
Chloral hydrate	3
Doxylamine	61
Sleep aids over-the-counter: other	7
Zolpidem	65
Zopiclone	37
Sedative/hypnotic: other/unknown	12
CNS stimulants	
Amphetamines (for ADHD, not street drugs)	97
Caffeine	49
CNS – miscellaneous	
Antidementia agents (donepezil, galantamine, memantine, rivastigmine)	20
Antiparkinsonian agents	50
Clonidine	67
Lithium	66
COUGH/COLD PREPARATIONS	
Antitussives	32
Cough/cold preparations with paracetamol	203
Cough/cold preparations without paracetamol/ aspirin	410
Dextromethorphan	31
Pseudoephedrine	16
Throat lozenges with local anaesthetic	4
Throat lozenges without local anaesthetic	21
DRUGS USED IN ADDICTIVE DISORDERS	
Buprenorphine	28
Bupropion	4
Disulfiram	3
Methadone	41
Naltrexone	7
Antismoking products: other (nicotine gum, lozenges, patches etc)	70
EAR PREPARATIONS	
Ear drops	51
Ear ointments	1
EYE PREPARATIONS	
Contact lens preparations	13
Eye drops: imidazoline-based	3
Eye drops: other/unknown	44
Eye ointment	2

GASTROINTESTINAL PREPARATIONS	
Antacids	73
Antidiarrhoeals: diphenoxylate/atropine	5
Antidiarrhoeals: loperamide	10
Antiemetics	109
Antispasmodics (hyoscine butylbromide etc)	26
Barium, soluble salts	1
Histamine H ₂ - antagonists (cimetidine, ranitidine etc.)	37
Laxatives	116
Proton pump inhibitors (omeprazole, pantoprazole, esomeprazole etc.)	191
Gastrointestinal preparations: other/unknown	66
METABOLISM	
Electrolytes/minerals	
Calcium salts	40
Fluoride	2
Iron (not multivitamins)	122
Potassium salts	19
Electrolytes: other/unknown	1
Vitamins	
Folic acid	36
Vitamin A	3
Vitamin B group	39
Vitamin C	67
Vitamin D	121
Vitamins compound with iron	243
Vitamins compound without iron	88
Vitamins: other	66
Other metabolic	
Androgenic and anabolic agents	1
Antihormones (tamoxifen, cyproterone, flutamide etc.)	22
Antithyroid preparations	12
Bisphosphonates	8
Corticosteroids	225
Diet aids/anorectics – over-the-counter	16
Diet aids/anorectics – prescription	23
Hypoglycaemics, oral: alpha glucosidase inhibitors (acarbose etc)	3
Hypoglycaemics, oral: biguanides (metformin)	85
Hypoglycaemics, oral: combination products (metformin/glibenclamide,	9

metformin/rosiglitazone, metformin/sitagliptin etc)	
Hypoglycaemics, oral: DPP-4 inhibitors (sitagliptin, vildagliptin etc)	5
Hypoglycaemics, oral: glitazones	5
Hypoglycaemics, oral: sulphonylureas (glibenclamide, gliclazide, glipizide etc)	53
Insulin	55
Oestrogens/progestogens (not oral contraceptives)	19
Oral contraceptives: oestrogen and progestogen	340
Oral contraceptives: progestogen only	42
Thyroxine	112
Thyroid preparations: other/unknown	12
Hormones: other/unknown	12
NONSTEROIDAL ANTI-INFLAMMATORY DRUGS AND GOUT MEDICATIONS	
Allopurinol	28
Celecoxib	29
Colchicine	10
Diclofenac	153
Ibuprofen	744
Ibuprofen plus codeine	69
Indomethacin	16
Mefenamic acid	14
Naproxen	42
NSAIDs: other/unknown	49
NOSE PREPARATIONS	
Nose drops/sprays: imidazoline-based	27
Nose drops/sprays: other/unknown	16
Nasal preparations: other/unknown	10
STREET DRUGS	
Amphetamine and related drugs	69
Amyl nitrite and other volatile nitrites	5
Cocaine	7
Ecstasy and other hallucinogenic amphetamines	19
Gamma hydroxybutyrate	13
Heroin	28
Inhalant abuse (chroming)	9
LSD	8
Marijuana	47
Street drugs: other/unknown	31

TOPICAL PREPARATIONS	
Acne preparations	34
Antipruritics (calamine lotion etc)	26
Capsaicin	12
Chest rubs	94
Hydrogen peroxide	14
Lice/scabies preparations	107
Liniments	138
Lotions/creams/ointments: other/unknown	2
Nappy rash products	401
Topical antibiotics	20
Topical antifungals	143
Topical antiseptics (handsanitiser etc)	672
Topical antivirals	2
Topical corticosteroids	176
Wart/corn preparations	25
Topical preparations: other/unknown	92
MISCELLANEOUS MEDICINE/DRUG EXPOSURES	
Antineoplastics	8
Chloroquine/hydroxychloroquine	9
Diagnostic agents	2
Herbal preparations	115
Homeopathic preparations	57
Immunosuppressants	13
Methotrexate	18
Muscle relaxants (baclofen etc)	40
Quinine	7
Radiopharmaceuticals	2
Unknown tablets/capsules	64
Urinary alkalinisers/antiseptics	4
Vaccines/toxoids/antivenoms	16
Vaporiser fluids and inhalants	204
Other over-the-counter-medicines	98
Other prescription medicines	80