



# POISONS

**INFORMATION CENTRE OF IRELAND**

Beaumont Hospital, P.O. BOX 1297,  
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# Annual Report 2007



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## INTRODUCTION

The Poisons Information Centre provides a national information service to doctors and other healthcare professionals on the toxicity, features and management of poisoning. The service has never been promoted to the general public but limited advice is given to the members of the public who phone us e.g. advice on the need for immediate medical attention.

The Centre provides a 24 hour service, 365 days a year. Enquiries are answered by our own Poisons Information Officers between 8am and 10pm, while night-time calls are automatically diverted to the UK National Poisons Information Service (NPIS). The extra call charges are borne by Beaumont Hospital so there are no additional costs to callers.

The Centre keeps contemporaneous written records of all enquiries using a standard call report form. Calls are also recorded, for quality assurance and training purposes. The digital voice recording system is activated automatically when a call is answered or made.

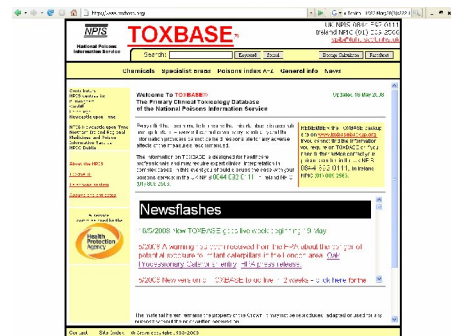
PCIF	DATE	TIME	NATIONAL POISONS INFORMATION CENTRE
<b>PATIENT DATA</b>			
Name	[ ] Home [ ] Public [ ] Other Health Care Prof [ ] Animal/Equine		
Address	[ ] Reviewed By: [ ]		
Telephone	Fax	Referral	Time
<b>PATIENT DATA</b>			
Name	Sex	Program Me	Ref No
PCIF	SEARCH NAME	GENERIC	QUANTITY
<b>EDUCATION</b>			
Domestic	Work	Subst	Nursing
Accidental	Deliberate	Adverse Reaction	Unknown
<b>SYMPTOMS/TREATMENT</b>			
None	Fuels	SWO	Single Dose AC
<b>INFORMATION SOURCES</b>			
None	Toxbase	UKPID	TOXBASE
<b>ADVICE</b>			
Multiple patients / enquiries and for more details: PTO			Signed

Enquiries are logged on a computer database (UKPID) which is used to generate reports. Selected enquiries are followed up by telephone to determine the outcome of the case. We are very grateful to the medical and nursing staff who take the time to give us this follow-up information.

All staff participate in continuing professional development by attending in-house programmes, meetings of Specialists in Poisons Information in the UK & Ireland, and conferences organised by the European Association of Poisons Centres and Clinical Toxicologists (EAPCCT). Complex or unusual cases are discussed at staff meetings and these

are a valuable source of continuing education.

The Centre uses a variety of information sources including computer databases, a paper database, textbooks, articles from the medical and scientific literature and safety data sheets provided by industry. The computer databases include TOXBASE, POISINDEX, TICTAC, UKPID, INTOX, INCHEM, the NPIS Datasheet Compendium and Poisonous Plants of Great Britain and Ireland.



## STAFF

The Centre is staffed by a medical Director, a Manager, 3.5 fte Poisons Information Officers and a Clerical Officer. The Poisons Information Officers and Manager are science graduates and all staff have a master's degree or a post-graduate diploma/certificate in medical toxicology. The Director is a consultant anaesthetist in Beaumont Hospital.

### Director:

Dr Joseph A Tracey MB, BCh, DCH, FFARCSI, DABA

### Manager:

Ms Patricia Casey BSc, DipMedTox

### Clerical Officer:

Ms Annette Cooke

### Poisons Information Officers:

Mr John Herbert BSc, DipMedTox  
Ms Nicola Cassidy BSc, MMedSc, DipMedTox

Ms Elaine Donohoe BSc, MSc, DipMedTox

Mr Feargal O'Connor BSc, Certificate in Med Tox

Ms Niamh English BSc, MSc, DipMed Tox

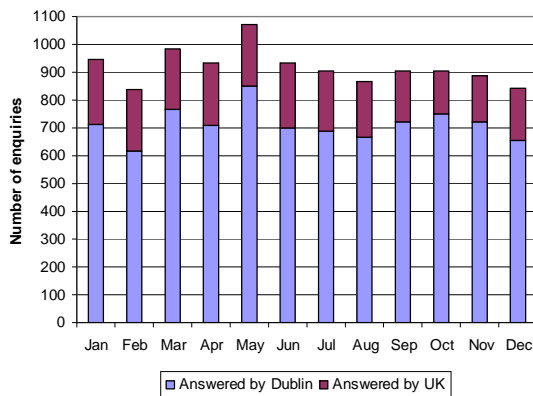
Mr Edward Baston BSc (until September 2007)

## ENQUIRIES

The Centre received a total of 11,011 enquiries in 2007, a decrease of 7.5% from 2006. Day time calls (8am-10pm) decreased by only 4.4% compared to a 16.9% reduction in night-time calls. 2459 of these calls were answered by the NPIS in the UK and are not included in the following analysis (Figure 1).

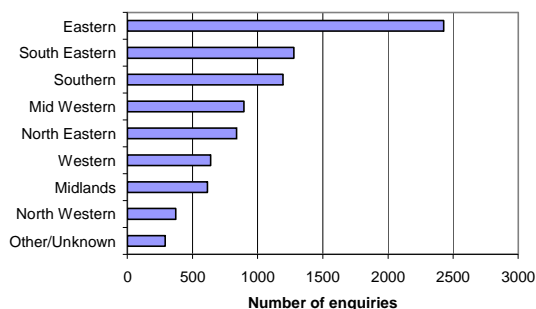
8552 enquiries were answered by our own Poisons Information Officers between 8am and 10pm. The majority of these enquiries (99.8%) were received by telephone and only a small number by letter, fax, e-mail or visit.

**Figure 1. Month of enquiry**



8277 (96.8%) enquiries concerned human cases of poisoning, 101 (1.2%) poisoning in animals and 174 (2.0%) were non-emergency requests for information.

**Figure 2. Enquiries by HSE Region**



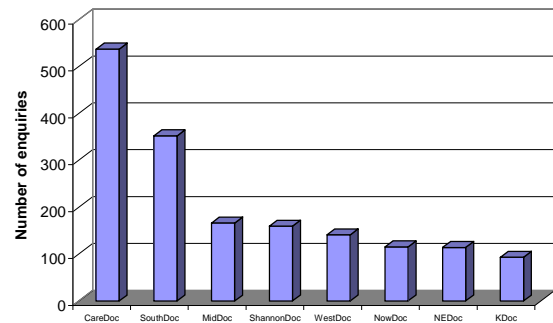
### Origin of enquiries

More than a quarter of enquiries were from the HSE Eastern Region (Figure 2) and these were predominantly from Dublin city and county (Table 1). Significant numbers of enquiries were also received from the Southern and South-Eastern areas.

Hospitals, GP's and members of the public were the most frequent callers (Table 2). The proportion of hospital calls dropped from 37.3% in 2006 to 35.1%, reflecting the increased use of TOXBASE by A&E departments.

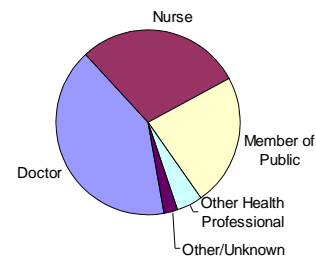
1677 (19.6%) enquiries were from GP co-ops, most frequently CareDoc and SouthDoc (Figure 3).

**Figure 3. Calls from GP co-ops**



3495 (40.9%) enquiries were from doctors, 2482 (29.0%) from nurses, 1988 (23.2%) from members of the public (Figure 4).

**Figure 4. Type of Enquirer**



### Human cases of poisoning

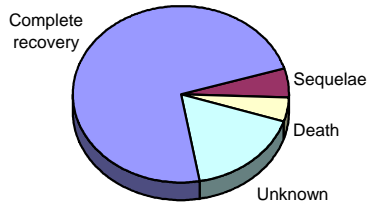
4375 (52.9%) enquiries involved children under 10 years (Table 3) and males outnumbered females in this age group. 2013 (24.3%) enquiries were about adults ( $\geq 20$  years) with a slight predominance of females in the older age groups. However, in the 15-19 year group the female:male ratio was 1.8:1.

Most cases of poisoning occurred in the home or a domestic setting (Table 4). A small proportion occurred at work, in hospitals and residential care homes.

## Outcome

394 (4.8%) cases were followed up. Most of these patients recovered completely but 21 patients suffered sequelae, 17 patients died and the outcome of 68 cases could not be determined.

Figure 5. Outcome of 394 cases



## Agents in human cases

The 8277 enquiries about human cases involved 13,538 agents. As in previous years, most involved drugs, industrial chemicals or household products (Table 5). Drugs were most frequently ingested by all age groups. However, the majority of enquiries about household products, cosmetic/personal hygiene products and plants concerned children under 10.

Figure 6. Agents and age groups

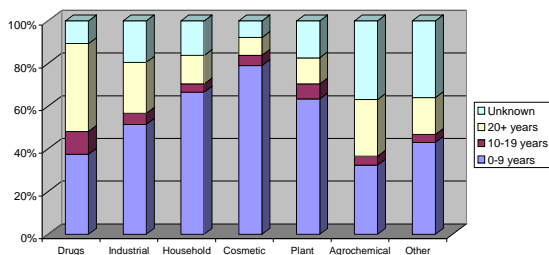


Table 6 shows the agents we were asked about most frequently in 2007. Paracetamol remains the most common agent: in 1082 cases the product ingested contained this drug. Ethanol (alcohol) was the next most common agent with 376 enquiries and, in most of these cases, alcohol was ingested with other substances. Ibuprofen was the third most common agent (363 products).

## TOXBASE

TOXBASE is the first tier database of the UK National Poisons Information Service and is available on-line to registered Irish users. It is centrally funded by the Department of Health & Children through Beaumont Hospital.

The total number of Irish users is now 74, including 38 hospital emergency departments and 6 intensive care units. TOXBASE use increased from 9018 user sessions in 2006 to 10,395 in 2007, a 15.3% increase. Increasing use of TOXBASE has been associated with a marked reduction in telephone enquiries from hospital emergency departments.

## OTHER ACTIVITIES

### Developments/innovations

The Centre was delighted to receive two grants from Beaumont Foundation in 2007. The first grant was used to design a new logo, re-design and update the Poisons Information Centre website and purchase the domain name [www.poisons.ie](http://www.poisons.ie).



The second grant enabled us to reprint 50,000 copies of the "Poisons Prevention Guidelines for Your Home" leaflets. These will now be distributed by the Health Promotion Department of the HSE. Copies of the leaflet can be ordered on-line from [www.healthinfo.ie](http://www.healthinfo.ie).

We started to record all incoming and outgoing calls in June 2007. Regular users of the service were informed of this development by letter and in our biannual newsletter. The digital voice recording system is activated automatically when a call is answered or made.

We continue to divert our calls to the UK National Poisons Information Service between 10pm and 8am. As in 2006 we noticed a greater reduction in calls at night, with 16.9% fewer calls between 10pm and 8am compared to a drop of 4.4% between 8am and 10pm. This may indicate problems with the coding of Irish calls in the UK rather than a true decrease in night-time calls. Nevertheless, we plan to survey users in 2008 to assess their satisfaction with the service.

### Peer review and Audit

The National Poisons Information Centre operates a system of peer review whereby all call forms are checked for completeness and accuracy by another Poisons Information Officer, on the same shift if possible. If data is missing the form is marked and returned to the Poisons Information Officer who originally answered the enquiry for completion.

The effectiveness of the peer review system was audited in 2007. 8908 call forms completed between 1 January and 31 December 2007 were audited. These forms contained 115,804 data items. This audit demonstrated high standards in the documentation of enquiries to the Poisons Information Centre: 99.38% of the data items were completed before peer review and 99.82% completed after review.

### Training

**February:** Dr Joseph Tracey, Ms Patricia Casey and Ms Nicola Cassidy attended the CPD day in Cardiff organised by the UK National Poisons Information Service. Ms Casey presented a case report at this meeting.

**March:** Ms Elaine Donohoe attended a TOXBASE editing group meeting. Ms P Casey attended a UKPID working group meeting. Nicola Cassidy completed the European Computer Driving Licence (ECDL) in March 2007.

**April:** Mr Edward Baston attended the UK National Poisons Information Service CPD day in Newcastle and gave a case presentation.

**May:** Ms Patricia Casey and Ms Elaine Donohoe attended the three day EAPCCT Congress in Athens (2<sup>nd</sup> - 4<sup>th</sup> May). Two posters were presented at this Congress. Ms Donohoe also attended the pre-congress symposium on 1<sup>st</sup> May.

**July:** Mr Feargal O'Connor attended the UK National Poisons Information Service CPD day in Birmingham.

**October:** Ms Niamh English attended a Poisons Study Day organised by the Newcastle Centre of the UK National Poisons Information Service.

**November:** Ms P Casey attended a UKPID working group meeting in Cardiff.

### Committees/Meetings

Dr Tracey continues as one of the Irish representatives on the EU Panel of Experts on Biological & Chemical Warfare Agents which meets in Brussels, and the UK National Poisons Information Service Directors Group. He attended meetings of these boards during the year as well as the Council of the College of Anaesthetists (Dublin).

Nicola Cassidy, Niamh English or Annette Cooke attended meetings of the Beaumont Hospital Information Management Accreditation team during the year. Elaine Donohoe remains on the TOXBASE editing group.

## Publications

### Papers

Renal and liver transplantation for toxin-induced organ failure. Tracey JA, Casey PB, Cunningham P, Counihan A, Fleming J, Hickey D, Hegarty J. *Clinical Toxicology* 2007; 45: 31-35

### Abstracts

Retrospective survey of acute poisoning admissions in an Irish general hospital. Casey PB, Tracey JA. *Clinical Toxicology* 2007; 45: 379.

Retrospective study of drug overdoses in a suburban emergency department. Marchant V, Gleeson A, Casey PB, Tracey JA. *Clinical Toxicology* 2007; 45: 379.

**Table 1. Origin of enquiries**

<i>Region</i>	<i>Number of enquiries</i>	<i>(%)</i>
<b>HSE: Eastern Region – all</b>		
Dublin (city & county)	1939	(22.7)
Kildare	376	(4.4)
Wicklow	114	(1.3)
<b>HSE: Midland Area</b>		
Offaly	276	(3.2)
Laois	205	(2.4)
Longford	26	(0.3)
Westmeath	108	(1.3)
<b>HSE: Mid-Western Area</b>		
Clare	124	(1.4)
Limerick	436	(5.1)
Tipperary (North and South Riding)	335	(3.9)
<b>HSE: North-Eastern Area</b>		
Cavan	118	(1.4)
Louth	498	(5.8)
Meath	169	(2.0)
Monaghan	55	(0.6)
<b>HSE: North-Western Area</b>		
Donegal	255	(3.0)
Leitrim	15	(0.2)
Sligo	102	(1.2)
<b>HSE: Southern Area</b>		
Cork	627	(7.3)
Kerry	568	(6.6)
<b>HSE: South-Eastern Area</b>		
Carlow	583	(6.8)
Kilkenny	171	(2.0)
Waterford	224	(2.6)
Wexford	299	(3.5)
<b>HSE: Western Area</b>		
Galway	469	(5.5)
Mayo	125	(1.5)
Roscommon	45	(0.5)
UK/EU	44	(0.5)
Other/Unknown	246	(2.9)
<b>Total</b>	<b>8552</b>	

**Table 2. Source of enquiry**

<i>Source</i>	<i>Number of enquiries</i>	<i>%</i>
Hospital	3005	35.1
GP/Primary Care	2984	34.9
Member of public	1967	23.0
Community pharmacist	226	2.6
Carers	86	1.0
Veterinary	84	1.0
Industry/Manufacturer	23	0.3
School	34	0.4
Emergency Services	16	0.2
Media	17	0.2
Governmental	14	0.2
Other/Unknown	96	1.1
<b>Total</b>	<b>8552</b>	

**Table 3. Age & sex of human cases**

<i>Age group</i>	<i>Female</i>	<i>Male</i>	<i>Unknown</i>	<i>Total</i>	<i>%</i>
<1	152	159	114	425	5.1
1-4	1588	1921	66	3575	43.2
5-9	160	208	7	375	4.5
10-14	109	80	4	193	2.3
15-19	241	136	3	380	4.6
20-49	726	706	9	1441	17.4
50-69	206	159	3	368	4.4
≥70	112	91	1	204	2.5
Unknown	499	434	383	1316	15.9
<b>Total</b>	<b>3793</b>	<b>3894</b>	<b>592</b>	<b>8277</b>	

**Table 4. Location (human cases)**

<i>Location</i>	<i>Number of enquiries</i>	<i>%</i>
Home/domestic	7328	88.5
Work	213	2.6
Hospital	83	1.0
Nursing home	75	0.9
School	55	0.7
Other	76	0.9
Unknown	447	5.4
<b>Total</b>	<b>8277</b>	

Table 5. Agents in human cases

Agent	Age (years)									Total
	<1	1-4	5-9	10-14	15-19	20-49	50-69	≥ 70	Unknown	
Drugs	288	2484	273	197	669	2501	554	286	869	8121
Industrial chemicals	103	910	67	48	61	372	90	41	408	2100
Household products	111	995	76	40	28	160	47	30	288	1775
Cosmetics & personal hygiene products	32	253	9	7	11	16	8	7	29	372
Plants	24	168	31	11	14	35	8	0	61	352
Agrochemicals	8	56	15	6	4	33	20	12	90	244
Other	0	22	6	0	0	8	1	0	16	53
Unknown	38	163	18	10	11	60	20	10	191	521
<b>Total</b>	<b>604</b>	<b>5051</b>	<b>495</b>	<b>319</b>	<b>798</b>	<b>3185</b>	<b>748</b>	<b>386</b>	<b>1952</b>	<b>13538</b>

## Poisons Prevention Guidelines

### POISONS AND CHILDREN

Today poisoning is part of everyday life and involves medicines, household products, cosmetics, gardening products, agricultural and industrial chemicals, plants and animals.



#### What is a poison?

A poison is any substance, which can cause damage if swallowed, inhaled, or absorbed through the skin or eye, or injected.

#### Poisons and children

Most cases of poisoning occur in children under the age of 5 and most occur in the child's home or the home of a grandparent, relative, child minder, or at school. The peak time for poisoning in children is during late afternoon, weekends and during school holidays.

#### Why children are at special risk of poisoning

Children are at risk due to their stages of development. From 6 months, babies start to crawl and learn hand to mouth co-ordination, which can result in things being placed in the mouth. From 2 years of age children have increased mobility, start to climb and develop a sense of curiosity about their environment.



### POISON PREVENTION IN THE HOME

#### DO...

- ✓ Do use containers with child resistant caps. Remember these caps are child-resistant not child-proof!
- ✓ Do keep chemicals and medicines out of the reach and out of the sight of children.
- ✓ Do keep all products in their original containers.
- ✓ Do secure cupboards with child proof locks.
- ✓ Do read prescription labels carefully to avoid accidental mistakes and contact your GP or pharmacy if in doubt.
- ✓ Do learn to recognise chemical symbols.
- ✓ Do read all labels carefully and follow the correct instructions.
- ✓ Do consult your garden centre when deciding on suitable plants for a garden.

#### DON'T...

- ✗ Do not leave household/cosmetic products, drugs, chemicals, or pesticides within reach or sight of children.
- ✗ Do not leave containers open when using them.
- ✗ Never transfer products into another container. Children will associate soft-drink bottles and containers with food and drink.
- ✗ Do not remove the labels from medicines or household products. The label has information with ingredients or symbols that are useful in case of emergency.
- ✗ Do not transfer tablets to another container e.g. another bottle, envelopes or papers.
- ✗ Do not refer to medicine or tablets as sweets.
- ✗ Do not take your medicine in front of children as they often imitate the actions of adults.

### POISON PROOF YOUR HOME

Your home may contain some common poisonous substances listed in the areas below. These should be checked to ensure all poisons are stored safely, and out of the reach of children.



#### Kitchen

Detergents, disinfectants, bleach, drain cleaner, oven cleaners, waxes, polish, dishwasher detergent & tablets, white spirit, tipper, glue, essential oils, herbal remedies, house plants, alcohol, batteries, coins.

#### Bathroom

Medicines, vitamins, iron tablets, aerosol sprays, shampoo, nail polish remover, mouthwash, bleach.

#### Bedroom

Medicines, vitamins and minerals, herbal medicines, perfume, aftershave lotion, essential oils, pot pourri oils, false teeth cleaners.

#### Shed/Garage

Petrol, paraffin, car products, insect spray, fertiliser, weed-killer, paint, white spirit, turpentine, lighter fluid, superglue, rat poison.

#### Garden

Flowers, berries, seeds, mushrooms, leaves.

#### Handbag/briefcase

Coins, medicines, cigarettes.

#### Farms

Weed killers, pesticides, vaccines, sheep dip, slurry tanks, manure pits.



**Table 6. Top agents of 2007 in descending order of frequency (human cases only)**

N.B. Inclusion in this list does not mean that these agents are toxic. It merely shows that the Poisons Information Centre received enquiries about these substances.

Paracetamol	Cetirizine
Ethanol	Lithium
Ibuprofen	Metallic Mercury
Codeine*	Levothyroxine/thyroxine
Amoxicillin/amoxycillin	Lamotrigine
Surfactant/detergent	Quinine
Aspirin	Prednisolone
Diazepam	Thermometer
Alprazolam	Montelukast
Caffeine*	Fuel
Sodium Hypochlorite	Firelighter
Mixed Essential Oil	Acetone
Zopiclone	Calcium Carbonate
Multivitamins	Warfarin
Venlafaxine	Sertraline
Oral Contraceptive	Descaler
Clavulanic Acid	Plug In Air Freshener
Disinfectant/antiseptic/sanitiser	Tripolidine
Reboxetine	Herbal Preparation
Diclofenac	Foreign Body
Fabric Cleaning Liquid Sachet/capsules	Sodium Chloride
Silica Gel	Aftershave/perfume Etc
Flurazepam	Cod Liver Oil/fish Oil
Zolpidem	Cyanoacrylate
Bleach	Alkali
Pseudoephedrine	Skin Cream/lotion/gel
Olanzapine	Dothiepin/dosulepin
Ecstasy	Ferrous Sulphate
White Spirit	Carbon Monoxide
Fluoxetine	Nail Varnish
Mefenamic Acid	Magnesium Carbonate
Diphenhydramine	Bottle Sterilising Liquid
Cocaine	Cannabis
Nappy Rash Cream	Cefaclor
Mirtazapine	Fabric Cleaning Powder
Petroleum Distillate	Menthol
Amitriptyline	Domperidone
Quetiapine	Heroin
Chlorpromazine	Hyoscine
Tramadol	Vitamin C
Washing Up Liquid	Adhesive
Dishwasher Tablet	Chlordiazepoxide
Temazepam	Folic Acid
Risperidone	Chloroxylenol
Carbamazepine	Potassium Compound
Glyphosate	Hydrogen Peroxide
Sodium Valproate	Lansoprazole
Nail Varnish Remover	Bendroflumethiazide/bendrofluazide
Citalopram	Clarithromycin
Multipurpose Cleaner	Stain Remover
Sodium Hydroxide	Dishwasher Rinse Aid

\* These are ingredients of common compound analgesics but do not contribute significantly to acute toxicity.