



POISONS®

INFORMATION CENTRE OF IRELAND

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Annual Report 2013



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EXECUTIVE SUMMARY

Function

The National Poisons Information Centre (NPIC) provides telephone information and advice 24 hours a day to assist in the treatment of poisoning. The centre operates 365 days a year and provides a 24-hour service to medical staff and other health care professionals. We also have a Public Poisons Information Line operating between 8am and 10pm seven days a week to provide triage advice to members of the public.

We continue to contract the UK National Poisons Information Service to answer our enquiries between 10pm and 8am every day. This is a cost effective way to provide a 24-hour service and requires good, on-going communication with the UK centres. As part of this cooperation, NPIC staff members have the opportunity to participate in ongoing CPD activities with our UK colleagues on several occasions during the year.

The secondary role of the NPIC is to collect and interpret epidemiological data on acute poisoning. This information is used to monitor trends in poisoning and to help to establish and update appropriate treatment protocols as required.

Activity

We received a total of 9816 enquiries in 2013; 9520 enquiries were about human poisoning. The remainder were non-emergency requests for general information and enquiries about animal poisoning. Most of our enquiries (71%) are from healthcare professionals in hospitals, community pharmacies and GP/GP Co-Ops. 28% of our calls were from members of the public with the remainder from other sources such as nursing homes, schools, and veterinary practices. Overall, 64% of human cases related to accidental poisonings and 17% related to intentional self-poisoning or recreational abuse.

We followed-up 276 serious or unusual cases to determine the outcome. Follow-up is usually performed by telephone and can involve multiple calls to nursing and/or medical staff. We are very grateful to everyone who takes the time to talk to us when we call to follow-up a case.

Quality & Training

All enquiry records are peer-reviewed and stored as hardcopy and electronic records. In addition, all in-coming and out-going calls are recorded to allow periodic audits by the Clinical Director, and to assist in ongoing training for staff. Our close links with the UK National Poisons Information Service allows staff to participate in and organise CPD activities with our colleagues in the UK. In addition staff also submit research work to and attend the annual congress of the European Association of Poisons Centres and Clinical Toxicologists (EAPCCT).

Surveillance & Research

Staff of the National Poisons Information Centre continue to monitor trends in poisoning and in particular incidents involving laundry detergent capsules.

INTRODUCTION

The National Poisons Information Centre (NPIC) in Ireland provides information and advice to doctors, other healthcare professionals, and members of the public about the features and management of poisoning. Our service is provided mainly by telephone and operates 24 hours a day, every day of the year. NPIC staff members answer enquiries between 8am and 10pm and outside of these hours our calls are automatically diverted to the UK National Poisons Information Service. The extra call charges are borne by Beaumont Hospital so there are no additional costs to callers. A separate Public Poisons Information Line is also available specifically for members of the public. It is operated between 8am and 10pm every day and NPIC staff members give advice to members of the public about whether they need to seek medical attention following an accidental poisoning incident. It is our policy to refer all cases of intentional self-poisoning for medical assessment.

Staff

NPIC staff comprises a Clinical Director, 6 Specialists in Poisons Information (SPI's), and a Clerical Officer:

Clinical Director: Dr Edel Duggan MB, BCh, BAO, MD, FFARCSI

Specialists in Poisons Information:

Manager Ms Patricia Casey BSc, DipMedTox

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

Clerical Officer: Ms Annette Cooke

The SPI's and Manager staff the Centre's phone lines. They are all scientists with additional training and postgraduate qualifications in Medical Toxicology. Further advice and medical information is available from the Clinical Director as required. Written records of all enquiries are maintained, as well as electronic copies on a Poisons Information Database (UKPID).

One of the main reference sources for answering enquiries is TOXBASE®, the clinical toxicology database of the UK NPIS. In addition, a variety of other information sources are frequently used to provide the most up to date and relevant advice to callers.

Information Sources	
<i>Computer Databases</i>	TOXBASE®
	Micromedex®; Poisindex
	In-house database
	Cosmetic Products Notification Portal
<i>Peer reviewed references</i>	Journal of Clinical Toxicology
	Current Awareness in clinical Toxicology (NPIS)
	Textbooks (e.g. Goldfranks Toxicologic Emergencies)
<i>Other</i>	In-house database

NPIC Activity

Material Safety Data Sheets

The NPIC received 9816 enquiries in 2013; a very slight decrease of 0.9% compared to 2012. 9520 enquiries related to human poisoning. The remainder were non-emergency requests for information (n=222) and cases about poisoning in animals (n=74).

Calls were evenly distributed over the week, with an average of 27 calls received per day. The busiest time of the day was in the evening between 6pm- 9pm. A second modest peak was seen from mid-morning to lunchtime.

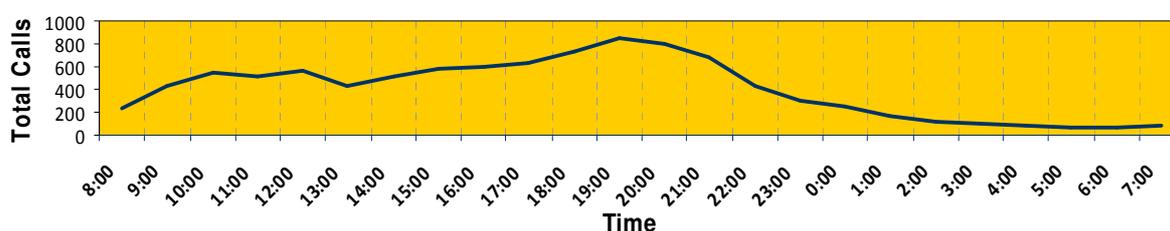


Fig. 1. Time of Enquiry

Table 1. Calls from GP Co-Ops

Care Doc	795	NEDoc	302
Ddoc	242	NowDoc	168
DLDoc	8	ShannonDoc	229
Kdoc	100	SouthDoc	464
MidDoc	180	WestDoc	195

The peak in calls seen in the evening was mainly due to enquiries received from GP out of hours Co-op's (ie local on-call GP services). Most notably, from CareDoc, SouthDoc and NEDoc who together made up 58% of these enquiries.

Type of caller

The majority of enquiries (94%) were received from GP's/Primary Care facilities, hospitals and members of the public. Other callers included community pharmacists, nursing/care homes, ambulance and emergency services, veterinary practices, and schools.

Table 2. Source of Enquiry

Source of Enquiry	Number of enquiries	%
GP/Primary Care	3895	39.7
Hospital	2659	27.0
Member of public	2727	27.8
Community pharmacist	238	2.4
Other/Unknown	297	3
Total	9816	

Calls from members of the public increased by 7% from 2545 in 2012 to 2727 in 2013. This represents a year on year rise in MOP calls since the launch of the Public Poisons Line in 2011. Calls from medical professionals fell by 3.6% from 6805 in 2012 to 6554 in 2013 largely due to a fall in enquiries from GP/Primary care workers.

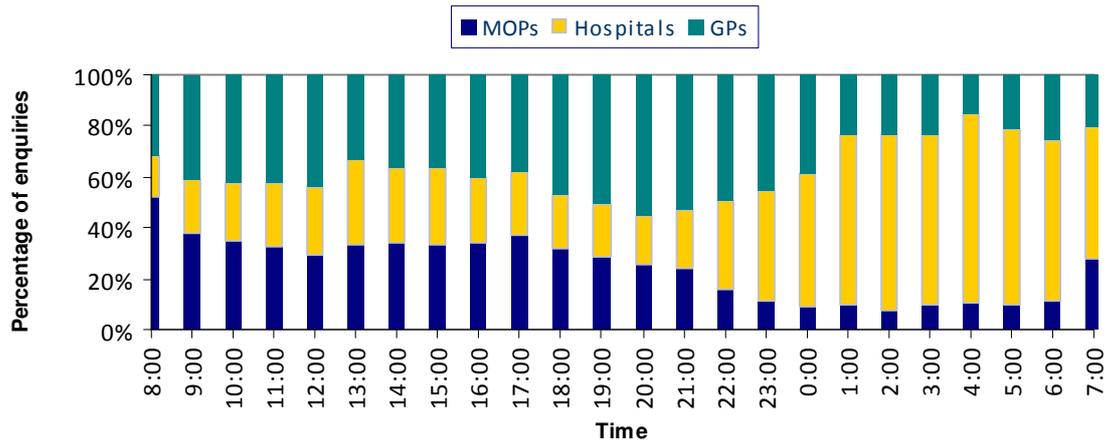


Fig 2. Breakdown of caller by time

Toxbase® Enquiries

TOXBASE is the on-line clinical toxicology database of the UK National Poisons Information Service. It has been available to Irish hospital emergency departments and intensive care units since 2001. Irish users, excluding staff in the NPIC, accessed TOXBASE on 9836 occasions in 2013, a 4.7% increase compared to 2012. Hospital emergency departments were the main users (98% of sessions).

Patient Demographics

9520 enquiries involved poisoning in humans. 79% of cases were accidental poisonings or therapeutic errors. 17% were intentional overdoses or recreational abuse. The remaining cases involved adverse reactions or cases of unknown intent.

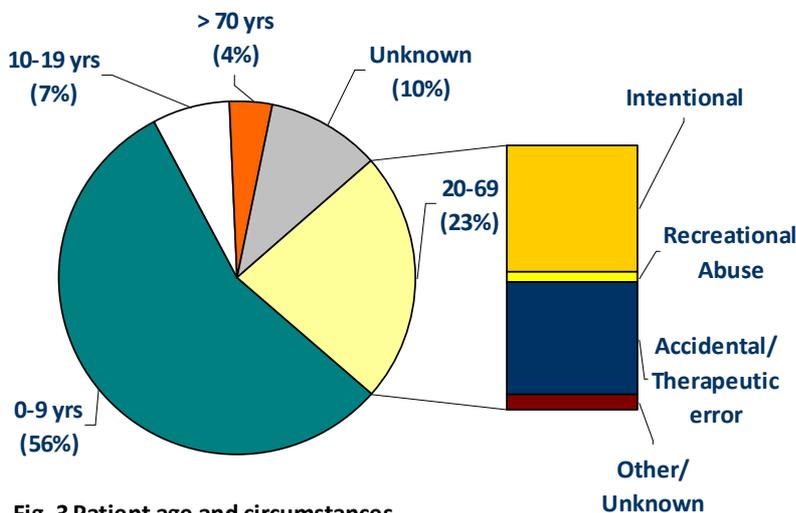


Fig. 3 Patient age and circumstances

5324 enquiries (56%) related to children aged <10 years of age. Males outnumbered females by 1.2:1. 88% of cases in this age group were accidental. The remainder were therapeutic error or unknown circumstance.

2166 enquiries (23%) involved adults aged 20-69 years. Slightly over half of these cases involved females. 52% involved intentional self-poisoning or recreational abuse.

386 enquiries (4%) involved older patients aged >70 years. More than half of these cases involved therapeutic errors. The incidence of intentional self-poisoning in this age group was low (8%).

Most poisonings occurred in the home or domestic setting (93%). A small proportion occurred in the workplace (2.3%) or in Nursing/Care homes (1.5%). Other locations included schools (0.6%), hospitals (0.5%), public places (0.5%), and other/unknown areas (1.2%).

Human Poisoning

Drugs (pharmaceuticals and drugs of abuse), industrial chemicals and household products were the most common agents involved in human cases of poisoning. Household products and Industrial products are more likely to be involved in paediatric cases than in other age groups.

Table 2. Breakdown of agents by age group

	<u>0-9 years</u>	<u>10-19 years</u>	<u>>20 years</u>	<u>Unknown</u>	<u>Total</u>
Drugs	3407	917	4475	764	9563
Industrial*	1086	133	652	329	2200
Household	1461	81	280	264	2086
PlanFungi	248	43	64	68	423
Cosmetic	336	22	39	32	429
Agrochemical	90	7	79	73	249

*Includes surfactant/detergents and some bleach products

Drugs

As seen in previous years, paracetamol was the most common agent; 1689 products (13%) involved in poisoning incidents contained paracetamol. Ibuprofen was the second most common drug; 507 products contained ibuprofen (See Table 2).

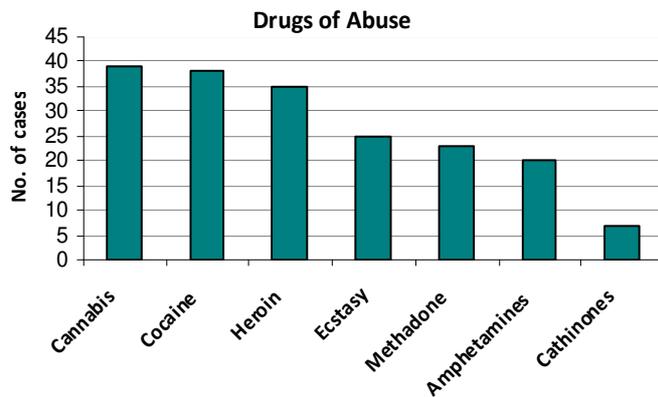
NB: Inclusion in this table does not reflect the relative toxicity of a drug. It merely indicates the number of enquiries received by the Poisons Information Centre about each drug.

Table 2. Most common drugs in descending order of frequency (human cases only)

Paracetamol	Venlafaxine	Montelukast
Ibuprofen	Oral Contraceptive	Atorvastatin
Codeine	Tramadol	Bisoprolol
Diazepam	Thyroxine	Diphenhydramine
Amoxicillin	Sodium Valproate	Prednisolone
Pregabalin	Flurazepam	Carbamazepine
Aspirin	Mefenamic Acid	Clonazepam
Multivitamins	Vitamin D	Amlodipine
Escitalopram	Mirtazepine	Cocaine
Alprazolam	Olanzapine	Domperidone
Quetiapine	Amitriptyline	Esomeprazole
Zopiclone	Pseudoephedrine	Lithium
Diclofenac	Sertraline	Warfarin
Clavulanic Acid	Cetirizine	Heroin
Zolpidem	Fluoxetine	Methylphenidate
Caffeine*	Lamotrigine	Frusemide

*Caffeine is a common ingredient in many analgesic products but does not contribute significantly to acute toxicity.

Drugs of Abuse



199 cases involved patients who had taken recreational drugs of abuse. Cannabis was the most common drug of abuse discussed with the Poisons Centre, followed closely by cocaine and heroin. Only 7 calls related to the novel synthetic cathinones.

Household Products

Fabric Cleaning Product
Bleach liquid
Multipurpose surface cleaner
Dishwasher detergent
Toy/Novelty
Washing Up Liquid
Toilet rim block
Descaler
Batteries
Foreign body (eg coin)
Paint
Dessicant/Silica Gel
Glue
Fertilizer

The most common household products were laundry products, bleach, and multipurpose cleaners.

Laundry liquid detergent capsules

191 enquiries related to liquid detergent capsules. 93% of patients in these cases were children aged <5 years. Most cases involved ingestion of the liquid. 33% of patients remained asymptomatic. No severe symptoms were reported but 87 patients had mild episodes of vomiting and 3 children developed mild CNS depression. 32 cases involved eye contact with the liquid and one patient developed corneal abrasion.

Bleach:

148 enquiries related to domestic bleach. 111 cases involved ingestion. 56% of patients were asymptomatic. 26 patients had mild to moderate vomiting. 16 cases involved inhalation of chlorine gas liberated after mixing bleach with an acid household cleaner. 11 of these patients experienced coughing but there were no serious cases.

Symptoms and Outcome

70% of all patients had no symptoms at the time of the enquiry. 22% of patients had minor symptoms and the most common features were mild vomiting, drowsiness, nausea, abdominal pain, and dizziness. 3% of patients had moderate symptoms including CNS depression, sinus tachycardia, hypotension and agitation. 7% of these patients were less than 10 years of age. Less than 1% of patients had severe symptoms and none of them were children.

271 (2.8%) cases were followed up to determine the outcome for the patient. The majority of patients recovered uneventfully. 12 patients died following the poisoning incident and 17 patients developed sequelae. Drugs were implicated in 8 of the fatal cases; 5 of these were drugs of abuse. 23 cases were lost to follow and the outcome was unknown.

Outreach and Awareness Initiatives

Website: www.poisons.ie



The NPIC website had 20,276 visitors during 2013, with an average of 2744 visits per month. This represents a 52% increase in visitors compared to 2012.

The section on low toxicity substances was the most popular. The news page, healthcare professionals sections, and the antidotes page were also popular.

Toxicovigilance

In September 2012, the NPIC met the Health and Safety Authority (HSA) to discuss the increasing number of poisoning incidents involving liquid laundry detergent capsules. Subsequently AISE, the International Association for Soaps, Detergents and Maintenance Products, introduced a new Product Stewardship Programme during 2013 with the aim of reducing the incidence of accidental poisoning from liquid laundry detergent capsules in young children. This involved changes to the packaging and labelling of liquid detergent capsule products together with consumer campaigns to raise awareness about safe use and storage.

Enquiries about these products fell by 13.2% overall during 2013. However, this reduction occurred during the first six months of 2013 only and the number of enquiries rose again during July-December 2013. The NPIC will continue to monitor cases involving these products during 2014 and will liaise with the HSA and with industry about this issue.

Facebook: www.facebook.com/NPICDublin

Total Facebook page likes increased from 301 on 1st January 2013 to 1284 by the end of the year. The mean number of daily engaged users was 20 (range 0-251) and mean daily total reach was 355 (range 22465).

We explicitly state that we do not monitor our Facebook page continuously and that it should not be used in emergencies. The Message function is turned off to prevent people seeking emergency advice via this route.



We posted on Facebook 251 times during 2013 (92 photos, 87 links and 72 status updates) and the average daily reach of page posts was 282 (0-2391). The post with the greatest reach was a Halloween post about glow sticks on 21/10/13, which reached 3004 unique users. The post with the most engaged users (255) was on 10/04/13.

Carbon Monoxide Awareness Week

The NPIC supported the Carbon Monoxide Awareness week organised by Bord Gais from September 23rd-29th. We highlighted the campaign through a number of activities and initiatives:

- Distribution of 500 brochures and flyers to staff and visitors in Beaumont Hospital.
- Daily posts on NPIC facebook page to highlight the public education message: “Remember, remember, remember”
- Banner on poisons.ie linking to the CO awareness week website www.carbonmonoxide.ie

NPIC Newsletter

The NPIC newsletter was circulated to all general hospital Emergency Departments in January and July. Topics included the new acetylcysteine protocol, toxin induced methaemoglobinaemia, mushroom poisoning, “Say No to Poisons” campaign, serotonin syndrome, and atypical antipsychotics.

Other outreach activities:

- *Just 4 Kids Show* - Dr Duggan gave two presentations on household safety and a “Say NO to poisons workshop” was organised by Nicola Cassidy and Martina Osborne
- *Bump to Baby to Toddler Show*- an interactive question and answer session was hosted by Niamh English
- *Ear to the Ground* (RTE)- Dr Duggan appeared as a guest to highlight the dangers of Slurry poisoning in farmyard accidents
- *The Mooney Show* (RTE Radio)-Dr Duggan spoke about “natural toxins”
- *The Consumer Show* (RTE)- Patricia Casey appeared as a guest to highlight safety awareness relating to liquid detergent capsules.

Committees

- Dr Duggan sits on the UK National Poisons Information Service Clinical Standards Group.
- Dr Duggan and John Herbert are members of the Early Warning Early Trends Sub-Committee of the National Advisory Committee on Drugs.
- Patricia Casey is a member of the UKPID working group, the HSE Injury Prevention Forum and the EAPCCT working group on harmonisation of product data. She was also elected Treasurer of EAPCCT in May 2013.
- Nicola Cassidy is a member of the Medication Safety Forum.
- Elaine Donohoe sits on the UK TOXBASE editing group.

Staff Training and Research

CPD meetings help to ensure that NPIC staff members are up to date with the latest developments in clinical toxicology as well as providing a useful forum where colleagues can discuss difficult or controversial clinical issues. Topics discussed in 2013 included: Chemical Hazards, Heavy Metals, Paracetamol poisoning, Iron Poisoning, Novel Drugs of Abuse, teratology and discussion on case reports.

March	CPD meeting, Cardiff	Nicola Cassidy Patricia Casey
June	CPD meeting, Birmingham Medical Toxicology Workshop	Feargal O'Connor
September	CPD Day, Edinburgh	Elaine Donohoe Niamh English
November	CPD Day Newcastle	Dr Edel Duggan Patricia Casey Annette Cooke

NPIC staff are also encouraged to submit abstracts to the annual congress of the European Association of Poisons Centres and Clinical Toxicologists (EAPCCT). John Herbert and Dr Edel Duggan attended the 2013 Congress in Copenhagen where 3 posters were presented:

“Say NO to Poisons!” The development and evaluation of poison prevention resources for childcare practitioners to teach pre-school children about poison safety.

Cassidy N, Osborne M, Casey PB, Tracey JA, Duggan E.

Clinical Toxicology 2013: 51(4); 89

Symptoms associated with accidental and intentional ingestions of acetone-containing nail polish remover.

Donohoe E, Duggan E

Clinical Toxicology 2013: 51(4); 167

Antidote availability in acute hospitals in Ireland

Herbert JX, Duggan E, Tracey JA

Clinical Toxicology 2013: 51(4); 249

Plans for 2014

- o To continue to monitor the impact of the AISE product stewardship programme on poisoning incidents involving liquid detergent capsules.
- o To assess the impact of new paracetamol guidelines on paediatric patients
- o To monitor the incidence of accidental paediatric poisonings involving Vitamin D drops
- o To monitor the impact of new sales restrictions on poisoning cases involving nicotine replacement products