



POISONS

INFORMATION CENTRE OF IRELAND

Annual Report 2017



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EXECUTIVE SUMMARY

Functions

The National Poisons Information Centre (NPIC) provides telephone information and advice 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 healthcare 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 10435 enquiries in 2017; 10144 (97%) enquiries were about human poisoning. The remainder were non-emergency requests for information (n=203) and cases about poisoning in animals (n=60). Just over half of our enquiries (56%) were from healthcare professionals in primary care, hospitals, and community pharmacies. 40% of our enquiries were from members of the public and the remainder were from a variety of places including nursing homes, schools, and veterinary practices.

83% of human poisoning cases were accidental and 13.6% were intentional overdoses or recreational abuse. We followed up 176 serious or unusual cases to determine the outcome. 121 of these patients had a complete recovery. 8 patients died and 30 patients required an extended stay in hospital. We are very grateful for the assistance of hospital nursing and medical staff for follow-up information.

Quality & Training

All enquiry records are peer-reviewed and stored as hardcopy and electronic records. In addition, all incoming and outgoing calls are recorded to allow periodic audits by the Clinical Director, and to assist in training for staff. We continue to have close links with the UK National Poisons Information Service and we regularly contribute to and organise CPD activities with our colleagues in the UK. Our staff members also submit research work to the annual congress of the European Association of Poisons Centres and Clinical Toxicologists (EAPCCT).

INTRODUCTION

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. 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 and is operated between 8am and 10pm every day. 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, Dip Med Tox

Specialists in Poisons Information:

Manager Ms Patricia Casey BSc, DipMedTox

Ms Nicola Cassidy BSc, MMedSc, DipMedTox

Ms Elaine Donohoe MSc, DipMedTox

Ms Niamh English MSc, DipMed Tox

Mr John Herbert BSc, DipMedTox

Mr Feargal O'Connor BSc, Cert Med Tox

Clerical Officer: Ms Annette Cooke

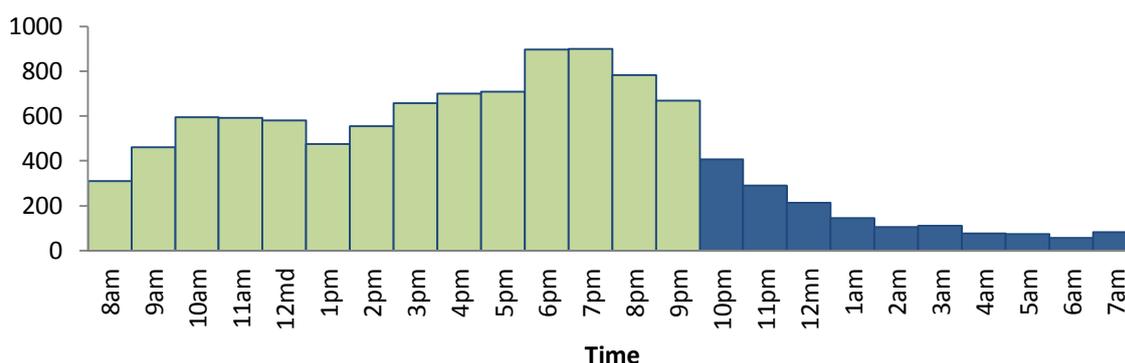
The Centre's phone lines are manned by the SPIs who are all scientists with additional training and postgraduate qualifications in Medical Toxicology. Further advice and medical information is available from the Clinical Director as required. Written records of all enquiries are maintained, and electronic copies are kept 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
	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>	Material Safety Data Sheets

NPIC Activity

The National Poisons Information Centre received 10435 enquiries in 2017. 10144 enquiries related to human poisoning. There were also non-emergency requests for information (n=203) and cases about poisoning in animals (n=60). 1548 enquiries (15%) were received between 10pm and 8am and were answered by the UK Poisons Information Service. The busiest time of the day was between the hours of 6pm - 9pm.



Toxbase® Enquiries

TOXBASE is the on-line clinical toxicology database of the UK National Poisons Information Service. It is available in Irish Emergency Departments and Intensive Care Units. In 2017 there were 11974 Toxbase user sessions by 41 different registered users. The majority of the users were in hospital Emergency Departments (71%).

➤ Type of caller

Over 50% of our calls were from healthcare professionals in hospitals or general practice. 68% of GP enquiries were from GP out-of-hours services who contacted us after 5pm. 40% of enquiries were from members of the public. This represents an increase of 8% on 2016. The peak time for enquiries from members of the public was between 4pm and 8pm.

Table 1. Type of caller

	Number of enquiries	%
Member of public	4221	40.4
GP/Primary Care	3305	31.6
Hospital	2300	22
Community pharmacist	261	2.5
Nursing Home	101	1
Other	247	2.4
Total	10435	

Table 2. Breakdown of callers from Out of Hours GP Services

CareDoc	763	ShannonDoc	190	MidDoc	167
SouthDoc	403	NowDoc	172	WestDoc	139
DDoc	200	NEDoc	145	KDoc	75

HUMAN POISONING

There were more than 10,000 enquiries about human poisoning and over 14,000 agents were involved. 59% were drugs, 18% were household products such as fabric detergent products and multipurpose cleaners, and 12% were industrial agents including alcohols, corrosive substances, essential oils and hydrocarbons.

The top 50 most common agents are listed below:

Agent Name	Aspirin	Clavulanic acid
Paracetamol	Dishwasher tablet	Sodium valproate
Ibuprofen	Petroleum distillates	Venlafaxine
Ethanol	Zopiclone	Mirtazapine
Liquid detergent capsule	Washing up liquid	Cetirizine
Codeine	Escitalopram	Zolpidem
Essential Oils	Colecalciferol	Amitriptyline
Multivitamins	Fabric detergent liquid	Oral contraceptive
Bleach	Solid Firelighters	Olanzapine
Foreign body (toy/battery)	Tramadol	Hand cleanser
Caffeine	Diclofenac	Dishwasher Rinse Aid
Alprazolam	Inhalant preparation	Nail Varnish Remover
Pregabalin	Reed diffuser (air freshener)	Sodium hydroxide
Quetiapine	Cocaine	Lamotrigine
Diazepam	Nicotine	Nappy Rash cream
Foreign body (toy/battery)	Sertraline	Descaler
Amoxicillin	Glyphosate	Amlodipine
Disinfectant	Fluoxetine	Thyroxine

➤ Symptoms and Outcome

71% of patients were asymptomatic at the time of the enquiry to the Poisons Centre.

23% of patients had minor features such as mild gastrointestinal upset, drowsiness and mild local irritation of skin, eyes or mucous membranes.

3% of patients had moderate features including repeated episodes of vomiting, CNS depression, and minor cardiac features.

Only 1% of patients had severe symptoms; these included coma, respiratory depression, severe cardiac effects, and metabolic abnormalities.

176 cases were followed up to determine the outcome for the patient. 69% of these patients recovered uneventfully. 30 patients developed short or long-term sequelae requiring a longer hospital stay, and 8 patients died.

➤ Drugs

Drugs were involved in 5310 cases of poisoning. 48% of cases involved children under the age of 10 years. Paracetamol was the most common drug followed by ibuprofen. Codeine is often involved in poisoning incidents as a compound ingredient in a number of analgesic products however the doses involved are usually small.

The most common drugs involved in poisoning incidents:

Paracetamol	Sertraline	Prednisolone
Ibuprofen	Fluoxetine	Vitamin D
Codeine	Clavulanic acid	Lithium
Multivitamin preparations	Tramadol	Ramipril
Alprazolam	Sodium valproate	Pseudoephedrine
Pregabalin	Venlafaxine	Montelukast
Quetiapine	Mirtazepine	Atorvastatin
Diazepam	Cetirizine	Flurazepam
Amoxicillin	Zolpidem	Mefenamic acid
Aspirin	Amitriptyline	Clonazepam
Diclofenac	Oral contraceptive	Bisoprolol
Zopiclone	Olanzapine	Levetiracetam
Escitalopram	Lamotrigine	Ranitidine
Vitamin D	Amlodipine	Folic acid
Tramadol	Thyroxine	Heroin
Cocaine	Esomeprazole	Citalopram

Paracetamol

1200 cases involved paracetamol products. 660 (55%) of cases involved children aged less than 10 years. 32% of these cases were therapeutic errors, often involving a double dose of a paracetamol product. 198 children required medical assessment. 492 cases involved patients over 15 years. 311 cases involved intentional overdoses. 128 cases were therapeutic errors and 78% of these patients required medical assessment

Non-steroidal anti-inflammatory drugs (NSAIDs)

613 cases involved NSAIDs. The most common of these was ibuprofen (65%). Other NSAIDs included aspirin (16%), diclofenac (9%), and mefenamic acid (6%). Naproxen, dexketoprofen, celecoxib and piroxicam were involved in a very small number of cases. 52% of cases involved children aged ≤ 10 years; 40% of paediatric cases were therapeutic errors.

Hypnotics

470 cases involved hypnotic agents. The most common drugs involved were alprazolam, diazepam and zopiclone. 325 cases were intentional overdoses or recreational abuse. 32% of these patients developed no symptoms. 45% had only minor features. 22% of patients had moderate or severe features.

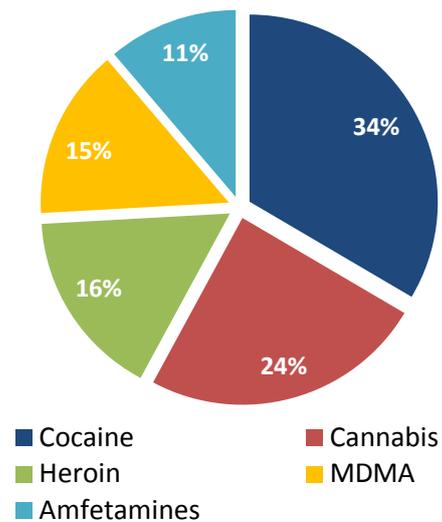
44 cases involved accidental ingestion by children under 10 years. 68% of children remained asymptomatic.

Drugs of abuse

172 cases involved drugs of abuse. 110 cases involved ingestion of more than 1 drug.

48% of patients had only minor symptoms such as mild drowsiness, agitation, and gastrointestinal upset. 10% of patients developed severe toxicity including CNS depression, and cardiac features.

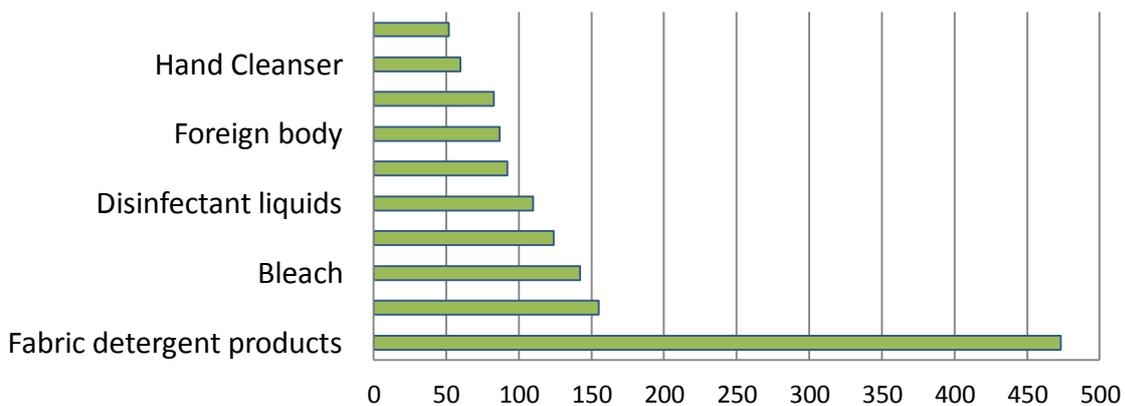
An additional 94 cases involved Pregabalin. This drug is commonly prescribed for neuropathic pain relief and anxiety disorders but it also has abuse potential and may be used as a drug of abuse by opioid addicted patients.



➤ HOUSEHOLD PRODUCTS

198 different types of household products were involved in poisoning. The most common products involved were fabric cleaning products including liquid capsules, powders and solid tablets. Bleach, dishwasher products and air freshener products were also commonly involved.

Cases involving household products:



Fabric detergent products

220 cases involved liquid laundry detergent capsules and most (94%) of these were children less than 5 years old. 47% of patients remained asymptomatic, 45% had minor symptoms such as mild vomiting and coughing and 4.5% developed moderate symptoms such as repeated episodes of vomiting.

Dishwasher products

171 cases involved exposure to dishwasher products. 112 cases involved solid dishwasher tablets and 49 cases involved liquid rinse aid. 10 cases involved powders capsules. 90% of patients were aged less than 10 years. 72% of patients remained asymptomatic. 39 patients had minor symptoms such as a single episode of vomiting or brief coughing. Two patients had more significant episodes of repeated vomiting and respiratory features.

Bleach

136 cases involved bleach products. 46% of the cases involved children. 92 cases involved accidental ingestion of a small amount of bleach liquid. 62% of patients remained asymptomatic. Minor symptoms included mild vomiting, local irritation in the mouth or throat, and nausea. 15 cases involved contact with skin or eyes but no severe adverse effects were reported.

An additional 29 cases involved inhalation of bleach fumes or chlorine gas that can be liberated when bleach liquid is mixed with an acid. Most patients reported some adverse effects including coughing, shortness of breath and irritation in the back of throat.

Air Fresheners



123 cases involved accidental exposure to air freshener products. 108 cases involved exposure to liquid products and the majority of these involved ingestion of small amounts by children under 3 years.

65% of liquid products were “Reed Diffusers”. These products can contain a range of ingredients including essential oils, hydrocarbons and alcohols. 86% of patients remained asymptomatic following exposure to reed diffusers. Nausea, vomiting and coughing were reported in a small number of cases.

➤ OTHER AGENTS

Pesticides

228 cases involved exposure to pesticides. Most cases involved ingestion (48%) but there was also inhalation, skin contact and eye contact. 90% of cases were accidental.

Over 50% of patients were asymptomatic. 39% developed only minor features such as vomiting, headache, coughing, skin irritation. 4 patients had severe toxicity and there was 1 fatality.

Type of pesticide	Number	Adults	Children	Asymptomatic
Herbicides	111	88	23	47
Rodenticides	54	16	38	45
Insecticides	53	33	20	21
Slug pellets	10	0	10	10

Petroleum distillates

There were 116 enquiries about liquid petroleum distillate products such as kerosene, petrol, and white spirits. 56 cases involved children less than 12 years old. 48% of patients were asymptomatic. 48% had minor symptoms including nausea, coughing, and vomiting. Nausea, headache, and dizziness were reported after inhalation. No patients had severe features. An additional 82 cases involved solid firelighters. 89% of these involved children under 3 years. Only 6 patients developed symptoms including coughing and mild vomiting.

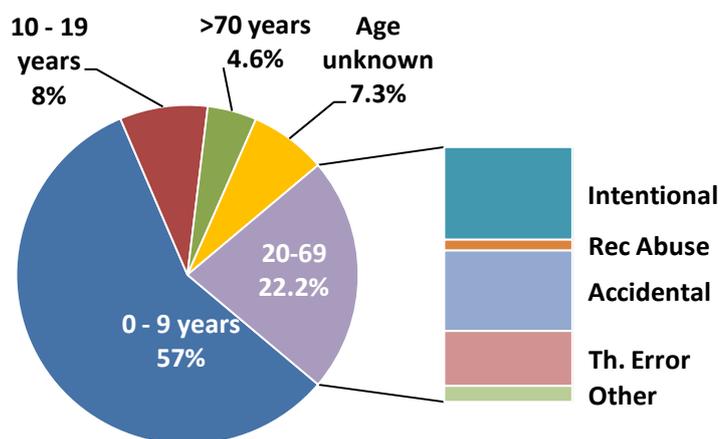
➤ Patient Demographics

10144 enquiries related to poisoning in humans. 83% of these enquiries involved accidental poisonings or therapeutic errors. 13.6% were intentional overdoses or recreational abuse. The remaining cases were adverse reactions or cases of unknown intent. Most poisonings occurred in the home or domestic setting (92%). Others occurred in occupational settings (2.6%), nursing homes/hospitals (2.3%), schools (0.6%).

2259 enquiries involved adults aged between 20-69 years.

39% of these cases were intentional or recreational abuse. 32% were accidental and 24% were therapeutic error.

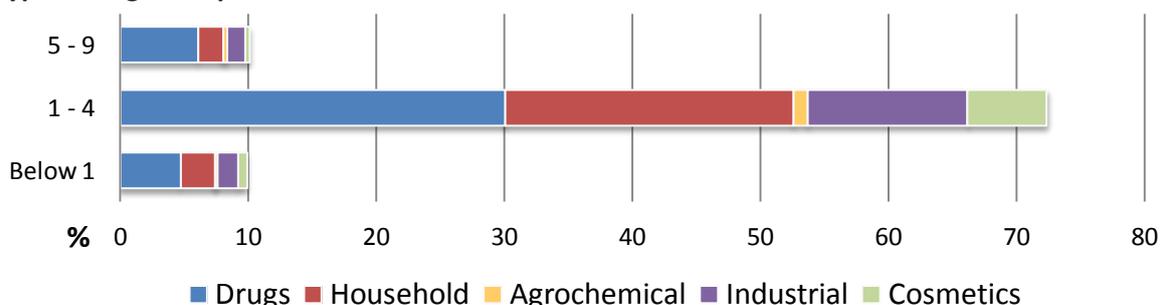
58% of cases in the >70yrs group were due to therapeutic error. 6% were intentional overdoses. The remainder were accidental overdoses or adverse reactions.



Poisoning in Children

5598 cases involved children aged 10 years or under. 4929 (88%) of these children were under 5. 86% of children were asymptomatic. 13% had minor symptoms such as mild gastrointestinal upset, drowsiness or mild local skin reaction. 2 patients had more severe symptoms and required hospital admission. There were no fatalities.

Types of Agent in paediatric cases



Staff Research and Outreach Activities

➤ Continuing Professional Development

- Patricia Casey and Niamh English attended the 37th International Congress of the European Association of Poisons Centres and Clinical Toxicologists (EAPCCT) in Basel. Niamh English gave a keynote lecture in the session on “The Virtual Toxicologist: Leveraging Social Media for Toxicology education, Outreach & Research”; “The National Poisons Information Centre experience in social media for outreach” and a presentation “Please “like” us: Facebook as an outreach tool for a poisons information centre”.
- Dr Edel Duggan, Nicola Cassidy and John Herbert attended a seminar on “Public Health Role in Managing Environmental Incidents”.
- Niamh English attended a course on social media marketing held by saoire.ie
- NPIC staff members routinely attend CPD meetings with colleagues from the UK National Poisons Information Service. These meetings are two day events and topics discussed this year covered a range of topics including chemical incidents, anticoagulant toxicity, sepsis, paracetamol toxicity and forensics.

Co-ordinator	Attendees
UK NPIS, Cardiff	John Herbert, Nicola Cassidy, Dr Edel Duggan
UK NPIS, Newcastle	Elaine Donohoe, Feargal O'Connor

➤ Outreach activities

- Patricia Casey joined Niamh Hogan, a parent who used the NPIC service, on RTE's Today Show with Sean O'Rourke to discuss poison awareness in the home
- NPIC staff attended the Front Line Emergency Services and Security Services parade in Trinity College in September. Staff distributed our Poisons Awareness information leaflets to the public and other colleagues in the emergency services.
- Nicola Cassidy was invited to speak about Poison Prevention in the Home at a Parents & Toddler group in Dublin.
- Niamh English gave a lecture to UCD student nurses describing the service that the National Poisons Information Centre supplies to both medical staff and members of the public.
- Elaine Donohoe contributed as guest lecturer on “Clinical Toxicology in Practice” for the MSc course in Toxicology & Regulatory Affairs, UCD.
- Dr Edel Duggan attended the anniversary meeting organised by the Health and Safety Authority to mark 10 years of REACH regulations
- We continue to supply Poison Prevention materials to members of the public and community workers via healthpromotion.ie. 16,402 Poison Prevention leaflets, 705 ABC of Poisoning posters, and 12,120 key fobs were distributed in 2017.

- **Committees**

- Dr Edel Duggan sits on the Clinical Standards Group with Directors from the UK National Poisons Information Service.
- Dr Edel Duggan and John Herbert are members of the Early Warning Early Trends Sub-Committee of the National Advisory Committee on Drugs.
- Dr Edel Duggan sits on the Chemical Safety subcommittee of the FSAI
- Patricia Casey is a member of the UKPID working group, and the EAPCCT working group on harmonisation of product data. She is also a Board member of EAPCCT.
- Nicola Cassidy is a member of the Medication Safety Forum.
- Elaine Donohoe sits on the UK TOXBASE editing group.
- John Herbert, Poisons Information Officer, was nominated to the Partner Expert Group (PEG) which will assess the draft guidance during 2018.

- **Facebook: www.facebook.com/NPICDublin**



The NPIC Facebook page continues to be a primary source of information and awareness about poison prevention in the home. Our target audience is parents and carers of young children. Our total Facebook likes rose to 23399 during 2017.

We explicitly state that our Facebook page should not be used in case of emergency. The message function is turned off to prevent seeing advice via this route.

- **Website: www.poisons.ie**



Our website is a primary resource to highlight our public phone number and to enable easy to access to our contact information in an emergency. In 2017 we had an average of 16,000 visitors every month. Our most popular page is the home page where our phone number is displayed.

Also popular are the Contact Us page and the Industry page.

The Industry section outlines information for companies who are required to register their products with the NPIC under European Union CLP Regulations.

- **CLP Regulation activities**



Under Article 45 of the CLP Regulation (EC) No.1272/2008, economic operators who place certain hazardous chemical mixtures onto the market must provide information about those mixtures to national appointed bodies. Beaumont Hospital is designated as the national appointed body for Ireland under The Chemicals Act 2010.

The National Poisons Information Centre collects the information and can use it to provide urgent medical advice in the case of a potentially toxic exposure to a hazardous mixture. One Clerical Officer and one Poisons Information Officer respond to enquiries about industry obligations, with assistance from the NPIC Manager if required. They also advise on the notifications procedure, and process the information received from the companies. Time spent on these activities equated to more than one full-time equivalent in 2017, however no additional resources have been provided to the NPIC to meet its new responsibilities under the Chemicals Act. Consequently, there may be delays in responding to non-urgent queries from industry because priority must be given to the operation of the telephone poisons information service.

CLP Annex VIII

In April 2017 CLP Annex VIII entered into force:

Commission Regulation (EU) 2017/542 of 22 March 2017 amending Regulation (EC) No 1272/2008 of the European parliament and of the Council on classification, labelling and packaging of substances and mixtures by adding an Annex on harmonised information relating to emergency health response.

This Annex harmonised the information on hazardous chemical mixtures that industry must provide to the national appointed bodies. The NPIC Manager, Patricia Casey, participated in the workshop on the implementation of this Regulation which was held by the European Commission in January 2017. She also participated in a Webinar on “Notifying hazardous mixtures to poison centres: what you need to know” that was held in October 2017.

Guidance on CLP Annex VIII

The NPIC Manager, Patricia Casey was a member of the working group which prepared guidance on CLP Annex VIII and was the lead author for sections 3.4 and 7.2 of the draft guidance. She participated in five WebEx meetings during 2017 and one physical meeting of the group, on 5th December, as well as providing input between meetings.

John Herbert, Poisons Information Officer, was nominated to the Partner Expert Group (PEG) which will assess the draft guidance during 2018.

Collaboration with the Health and Safety Authority

- There was regular communication during the year with the Health and Safety Authority (HSA) about issues relevant to CLP Annex VIII.
 - The NPIC provided quarterly updates on incidents involving liquid detergent sachets/capsules to the HSA during 2017, to monitor the impact of packaging and labelling changes.
 - In September 2017, the NPIC posted on its website an updated document which the HSA prepared, explaining industry obligations to notify chemical mixtures to the NPIC.
-