



**VETERINARY POISONS
INFORMATION SERVICE**



Annual Report | 2014

The VPIS is a 24-hour telephone emergency service for veterinary professionals and those working for animal welfare organizations providing information on the management of actual and suspected acute poisoning in animals.

Advice for every consultation is tailored to the specific case in question and can include a risk assessment, information on anticipated clinical effects, a suggested treatment protocol and prognostic advice, with the aim of ensuring the animal receives appropriate and optimum treatment.

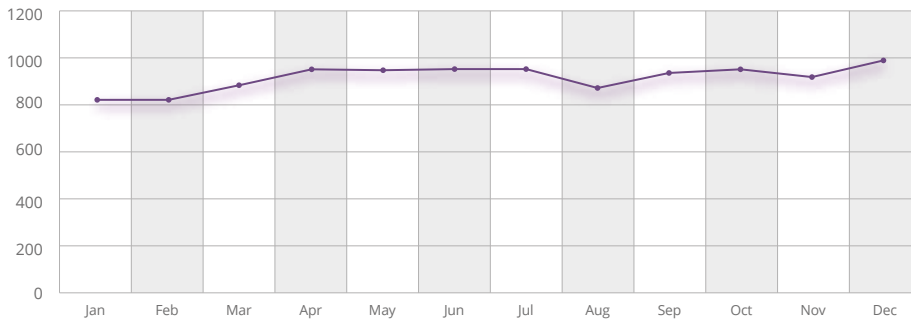
Enquiry load

In 2014 the VPIS received 10,896 enquiries (including 15 cases reported retrospectively via the online reporting tool), compared to 10,491 in 2013.

Monthly enquiry load

The number of enquiries rose from February, levelled out over the summer months with a decline in August and then rose again.

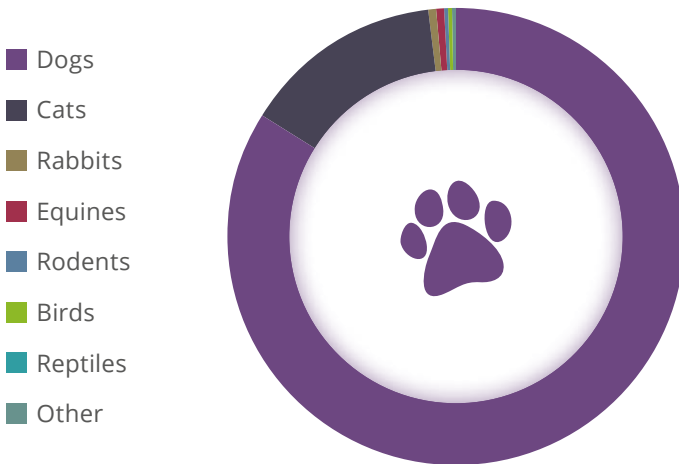
Total enquiries by month



Month	Total enquiries
January	810
February	810
March	875
April	944
May	940
June	945
July	945
August	862
September	928
October	944
November	910
December	983

Enquiries by animal type

The VPIS will answer an enquiry about any animal. In 2014 the VPIS received enquiries about 17 different animal types, but dogs predominated (83%) followed by cats (14%).



Animal	Total	Percentage
Dogs	9063	83%
Cats	1574	14%
Rabbits	85	0.8%
Equines	55	0.5%
Rodents	22	0.2%
Birds	21	0.2%
Reptiles	7	<0.1%
Goats	6	<0.1%
Sheep	6	<0.1%
Human*	5	<0.1%
Cattle	5	<0.1%
Ferrets	2	<0.1%
Primate	2	<0.1%
Pigs	1	<0.1%
Camelid	1	<0.1%
Hedgehog	1	<0.1%
Meerkat	1	<0.1%

* These generally related to accidental exposure in veterinary staff.

Enquiries by agent

The 10,896 cases involved 14,402 agents. The agents were similar to those in previous years, except that enquiries relating to electronic cigarettes has increased (64 in 2014 compared to 17 in 2013). This was also true of palm oil (57 enquiries compared to 6 in 2013). Enquiries about this agent increased as a result of severe weather in the winter of 2013-2014 washing up large quantities of palm oil on beaches around the coast.

Agent group	Total	Percentage of total enquiries
Drugs	6167	42.8%
Ibuprofen	463	
Paracetamol	385	
Meloxicam	131	
Oral contraceptives	114	
Naproxen	107	
Household products	1602	11.1%
Fertilisers	125	
Battery	116	
Benzalkonium chloride	67	
Electronic cigarette	64	
Ethylene glycol (antifreeze)	52 (23)	
Disinfectant	54	
White spirit	54	
Stain remover	45	
Fabric cleaning liquid capsules	40	
Pesticides	1705	11.8%
Bromadiolone	362	
Difenacoum	357	
Metaldehyde	114	
Imidacloprid	102	
Glyphosate	99	
Permethrin	87	
Rodenticide nk	64	
Food	1422	10.0%
Chocolate	602	
<i>Vitis vinifera</i> (grapes, sultanas, raisins, etc)	331	
Onions etc	125	
Xylitol	103	

Agent group	Total	Percentage of total enquiries
Plants (excluding food plants)	1373	9.5%
<i>Lilium</i> species	148	
<i>Narcissus</i> species/ daffodil	39	
<i>Tulipa</i> species/tulip	36	
Unidentified plant	35	
<i>Aesculus hippocastanum</i> /horse chestnut	32	
<i>Taxus baccata</i> /yew	24	
<i>Spathiphyllum</i> species/ peace lily	11	
<i>Quercus</i> species /oak	11	
Animals	194	1.4%
Adder	101	
Hymenoptera	13	
Cosmetics and toiletries	176	1.2%
Hair colourant	26	
Soap bar	24	
Nappy	16	
Nappy rash cream	10	
Fungi	187	1.3%
Fungi	130	
Tremorgenic mycotoxins	54	
Miscellaneous		
Palm oil	57	

All animals - The top 10 enquiries

The most common agents the VPIS is contacted about are non-steroidal anti-inflammatory drugs (NSAIDs), anticoagulant rodenticides and chocolate. This is unchanged from previous years.

Agent name	Total	Percentage of total enquiries
1. Ibuprofen	463	4.2%
2. Paracetamol	385	3.5%
3. Bromadiolone	362	3.3%
4. Difenacoum	357	3.3%
5. <i>Vitis vinifera</i> (sultanas, grapes, etc)	331	3.0%
6. Milk chocolate	289	2.6%
7. Unknown	260	2.4%
8. Chocolate not specified	174	1.6%
9. Dark chocolate	134	1.2%
10. <i>Lilium</i> species	131	1.2%

Dogs - The top 10 enquiries

In dogs ibuprofen was the top agent (as in 2012 and 2013), but all the chocolate enquiries in the top ten comprised 6.3% of all canine enquiries and the anticoagulant rodenticides, bromadiolone and difenacoum 7.0%.

Agent name	Total	Percentage of total enquiries
1. Ibuprofen	440	4.8%
2. Paracetamol	349	3.9%
3. Difenacoum	322	3.6%
4. Bromadiolone	313	3.5%
5. <i>Vitis vinifera</i> (sultanas, grapes, etc)	308	3.4%
6. Milk chocolate	272	3.0%
7. Agent unknown	170	1.9%
8. Chocolate	165	1.8%
9. Dark chocolate	131	1.4%
10. Food - chewing gum/ bubble gum	110	1.2%

Cats - The top 10 enquiries

Lilium species (lily) was the most common agent the VPIS was consulted about in cats (5.6%), closely followed by cases where the agent was unknown (5.0%), that is where poisoning was suspected.

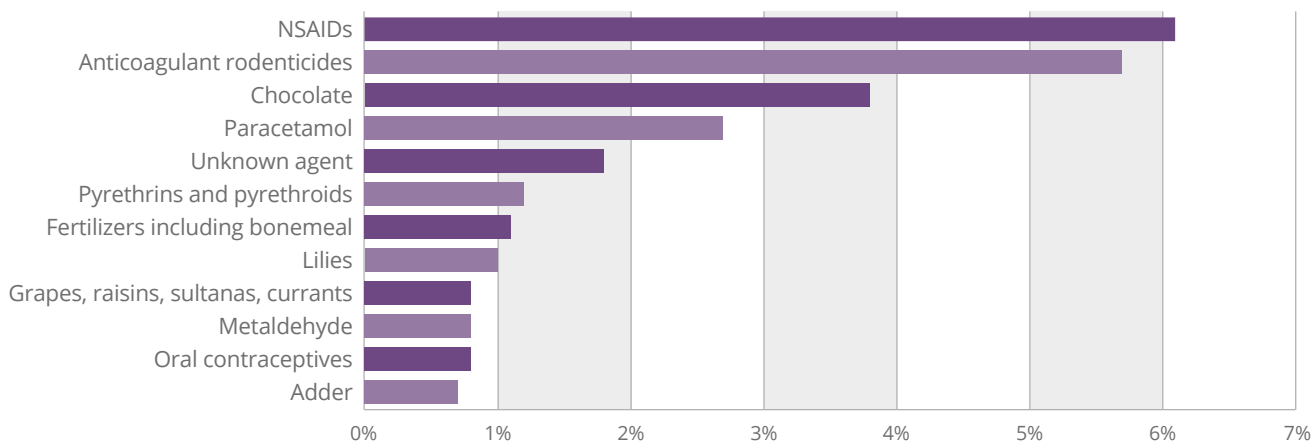
Agent name	Total	Percentage of total enquiries
1. <i>Lilium</i> species	88	5.6%
2. Agent unknown	78	5.0%
3. Permethrin	45	2.9%
4. Ethylene glycol	42	2.7%
5. Benzalkonium chloride	42	2.7%
6. Imidacloprid	37	2.4%
7. Paracetamol	34	2.2%
8. Disinfectant	32	2.0%
9. White spirit/ turpentine substitute	29	1.8%
10. Moxidectin	27	1.7%

Rabbits - The top 12 enquiries

In rabbits bromadiolone was the most common enquiry.

Agent name	Total	Percentage of total enquiries
1. Bromadiolone	13	15.3%
2. Difenacoum	4	4.7%
3. <i>Lilium</i> species	4	4.7%
4. <i>Chrysanthemum</i> species	4	4.7%
5. Meloxicam	3	3.5%
6. <i>Hedera helix</i> /ivy	3	3.5%
7. Ethanol	2	2.4%
8. Milk chocolate	2	2.4%
9. Ivermectin	2	2.4%
10. Chocolate	2	2.4%
11. <i>Digitalis</i> species/ foxglove	2	2.4%
12. <i>Spathiphyllum</i> species/peace lily	2	2.4%

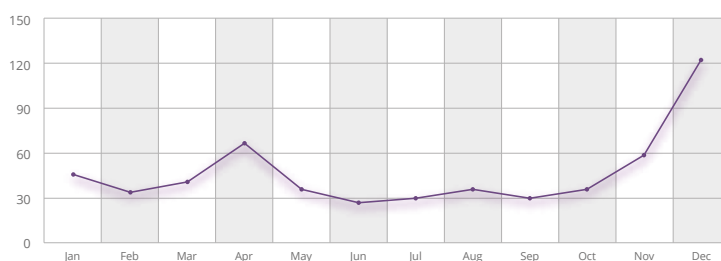
Top agents - Percentage of annual total



Seasonality of enquiries

There was a seasonal variability in some agents. This was most obvious with chocolate, with peaks in enquiry numbers occurring near Easter and Christmas. Of all chocolate enquiries over the year, 21.2% occurred in December.

Number of chocolate enquiries by month in 2014



Follow up data of enquiries

The VPIS sends out postal questionnaires to collect data on the clinical course, treatments given and outcome of a proportion of cases. In 2014, 2,830 follow ups were sent (26% of cases). Follow up and outcome data were available for 1,243 cases (44% of follow ups sent) in 2014.

In over half the cases where follow up information was received the animal made a full recovery and a quarter of the animals remained asymptomatic. A fatal outcome was recorded in 7.9% of cases (4.6% euthanized and 3.3% died). Note that euthanasia may be an outcome due to financial constraints on the owner and not directly due to toxicity, although a poor prognosis and significant adverse effects are likely to influence such a course.

Outcome	Total	Percentage
Full recovery	673	54%
Fine throughout	313	25%
Euthanized	57	4.6%
Died	41	3.3%
Full recovery (query related)	29	2.3%
Not known	26	2.1%
Unrelated to exposure	20	1.6%
Euthanized (query related)	16	1.3%
Not applicable	13	1.0%
Euthanized (unrelated)	12	1.0%
Did not present	12	1.0%
No follow up	5	<1%
Not known - referred	3	<1%
Ongoing	5	<1%
Improving but ongoing	4	<1%
Died (query related)	6	<1%
Query related	4	<1%
Died (unrelated)	3	<1%
Not specified	1	<1%
Grand Total	1243	-

Cases with known outcome

Cases with fatal outcomes – dogs

In dogs there was a fatal outcome in 48 cases (which were thought to be due to poisoning). Of these 24 dogs died and 24 were euthanized. The most common agent associated with a fatal outcome was metaldehyde, followed by 'agent unknown', that is where poisoning was suspected as the cause of the clinical signs but the specific agent could not be identified. There were 7 fatal cases attributed to anticoagulant rodenticides. There were 5 deaths due to fungi but the autumn in 2014 was particularly favourable to the growth of fungi (wet and mild). There were also 5 deaths due to fabric washing products (capsules, liquid and powder). Two dogs were euthanized after ingestion of a non-steroidal anti-inflammatory drug. In both cases the drug have been given by the owner for two (lornoxicam) or up to four days (naproxen).

Died



Euthanized



Agent	Died	Euthanized
Unknown agent	3	2
Metaldehyde	1	5
Fabric washing liquid capsule	2	1
Bromadiolone	3	2
<i>Vipera berus</i> (adder)	1	1
Brodifacoum	1	
Chocolate	1	
Difenacoum	1	
Fabric washing liquid	1	
Fabric washing powder		1
Firelighter	1	
5-Fluorouracil	1	
Fungi – muscarine (possibly <i>Clitocybe</i> species)	1	
Fungi – muscarine (<i>Inocybe</i> species)	1	
Fungi - unidentified species	1	2
Grout cleaner	1	
Mixed drug ingestion	1	
Metronidazole	1	
Nitroxylnil	1	
Tacalcitol	1	
Lornoxicam		1
<i>Allium cepa</i> and <i>Solanum tuberosum</i>		1
Amphetamine		1
Baclofen		1
Linseed oil		1
Tremorgenic mycotoxins		1
Naproxen		1
Paracetamol		1
Aflatoxin		1
Electronic cigarette*		1
Total	24	24

*No treatment and euthanized due to financial constraints

Cases with fatal outcomes – cats

In cats there was a fatal outcome in 43 cases (which were thought to be due to poisoning). Of these 14 cats died and 29 were euthanized. The most common agent involved in these cases was ethylene glycol or antifreeze which accounted for 44% of fatalities. Note that in veterinary toxicology ethylene glycol exposure is rarely confirmed with laboratory analysis. Other common agents in fatal feline cases were paracetamol and permethrin.

Died



Euthanized



Agent	Died	Euthanized
Unknown agent	2	5
Permethrin	3	1
Antifreeze	2	1
Ethylene glycol	1	12
Benzalkonium chloride disinfectant	1	
Hydrogen peroxide stain remover	1	
Paracetamol	1	3
Fungi - ibotenic acid/ muscimol (possibly <i>Amanita muscaria</i>)	1	
Difenacoum	1	
Toy*	1	
<i>Lilium</i> species		3
<i>Cannabis sativa</i>		1
Piperazine		1
Sealant containing white spirit		1
Nitenpyram		1
Total	14	29

*Death was probably due to obstruction not toxicity

Cases with fatal outcomes – other animals

Died



Euthanized



Animal	Agent	Died	Euthanized
Hamster	Mouse glue trap		1
Guinea pig	<i>Digitalis</i> species/ foxglove		1
Equine	<i>Acer pseudoplatanus</i> / sycamore and <i>Quercus</i> species/ oak		1
Donkey	<i>Taxus baccata</i> /yew	1	
Cattle	Bromoxynil	8*	1*
Rabbit	Bromadiolone	1	

*All in the same incident.

Publications from the VPIS in 2014

Bates N, Edwards N, Opdal-Seljetun K, Ruus-Lorentzen H. 2014 *Vipera berus berus* envenomation in dogs [letter]. *Journal of Veterinary Emergency and Critical Care* 24(2):133.

Ellison J. 2014 All the joys of spring. *Veterinary Practice Today* 2(1):15.

Bates N. 2014 Decontamination of cats and dogs with suspected poisoning. *Veterinary Nurse* 5(3):130-137.

Bates N, Edwards N. 2014 Exposure of dogs to single-dose detergent packs [letter]. *Journal of American Veterinary Medical Association* 245(1):40-41.

Bates N, Edwards N. 2014 Availability of adder antivenom [letter]. *Veterinary Record* 175:639.

Ellison J. 2014 Bees and barbecues: the hazards of summer. *Veterinary Practice Today* 2(2):18.

Edwards N. 2014 Lipid therapy in poisoning treatment [editorial]. *Companion Animal* 19(8):393.

Bates N, Edwards N. 2014 Emetics in the management of poisoning. *Companion Animal* 19(8):433-436.

Bates N, Edwards N, Dentinger BT, Ainsworth AM. 2014 Fungal ingestion in companion animals. *Vet Rec* 175:179-180.

Bates N, Edwards N. 2014 Benzalkonium chloride exposure in cats: a retrospective analysis of 245 cases reported to the Veterinary Poisons Information Service (VPIS). *Veterinary Record* doi: 10.1136/vr.102653

Ellison J. 2014 Season of more than mists and mellow fruitfulness. *Veterinary Practice Today* 2(3):31-32.

Ellison J. 2014 The holly and the ivy... and other festive hazards. *Veterinary Practice Today* 2(4):25-26.

Bates N. 2014 Managing exposure to cleaning products in cats and dogs. *Veterinary Nurse* 5(10):582-587.

Education, outreach and collaborations

VPIS ran nine Continuing Professional Development (CPD) events over the year in London, Brighton, Birmingham, Edinburgh, Exeter, Bristol, Cambridge and Manchester. The VPIS also took part in a joint Royal Veterinary College (RVC)/VPIS CPD day in July, and a BSAVA Regional Meeting lecture in July.

VPIS produced three editions of the newsletter Toxic Times and 12 monthly electronic newsletters.

During 2014 the VPIS revised its logo and developed and launched a new website (www.vpisglobal.com).

The VPIS exhibited at two congresses:

- The British Small Animal Veterinary Association (BSAVA) Congress in Birmingham, 3-6 April.
- The 20th Eurocongress of the Federation of European Companion Animal Veterinary Associations (FECAVA) and the 60th Congress of the German Small Animal Veterinary Association (GSAVA), Munich, Germany, 6-9 November.

We also attended the European Veterinary Emergency and Critical Care Society (EVECCS) Congress, Prague, Czech Republic, 12-15 June and the XXXIV International Congress of the European Association of Poisons Centres and Clinical Toxicologists (EAPCCT) 27-30 May 2014, Brussels, Belgium.

For more information

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