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Connecticut Poison Control Center 2002 and 2003 Annual Report and Poison Exposures Statistics

Responsibilities and Mission

The Connecticut Poison Control Center (CPCC) at the University of Connecticut Health Center (UCHC) was established in 1957 under Connecticut General Statute 10a-132. The CPCC's main responsibility is to provide 24-hour emergency toxicology management consultations for victims of poisoning, and serve as a source for pharmacology and toxicology-related information. The center monitors the epidemiology of human poisoning and provides surveillance for environmental and occupational chemical exposures, drug abuse, and pharmaceutical interactions and adverse effects. The CPCC performs toxicological research, and provides formal toxicology instruction for allied health professionals, as well as professional and consumer poison prevention education. The CPCC is one of 63 nationwide centers certified by the American Association of Poison Control Centers (AAPCC), and the only poison center in the state of Connecticut. The AAPCC establishes standards of care for poisoning and administers the Toxic Exposure Surveillance System (TESS), a national database of poisoning statistics, to which the CPCC is a contributor.

The emergency services of the CPCC are available to all Connecticut residents, physicians, nurses, pharmacists, and other allied health professionals. Access is via a national toll-free hotline that routes callers to their regional poison center. The telephone number of the CPCC is prominently displayed inside the front cover of all Connecticut telephone directories. Hearing impaired callers may access the service via Teletype, while multi-lingual clients are served with the assistance of a language line. The CPCC serves as a primary contact center for calls originating from countries outside the United States.

Poison Exposure Management

The CPCC is staffed 24 hours per day/7 days a week/365 days a year, by AAPCC Certified Poison Information Specialists (CSPIs) who are nurses, pharmacists and physicians. Certification requires completion of specialized training, at least 2000 hours of direct poison center experience, and the telephone management of a minimum of 2000 human poison exposures. CSPI status is ultimately attained upon achievement of a passing grade on a comprehensive examination. Maintenance of certification requires mandatory reexamination every seven years. CPCC CSPIs have 96 years of combined experience in the medical sub-disciplines of clinical toxicology and poison control, in addition to their academic and professional training.

When a poisoning is reported to the CPCC, Poison Information Specialists assess its severity and use knowledge and experience, team consultations, and a variety of references to identify the poison and recommend treatment. The CPCC serves as a reference databank and continuously reviews, updates and maintains the wealth of information related to poison control. Examples of references include the POISINDEX® computerized information database, an intranet resource that provides ingredient and chemical composition for nearly one million substances as well as overviews to guide their poisoning management. This database is part of the Micromedex® system that also includes subsections on occupational and environmental toxicology, pharmacology,

pharmacotherapy and drug interactions and adverse effects. Additional resources include Medline and other online databases, a library of 200 toxicology texts, and archives containing thousands of scientific journal articles. The CPCC accesses the Lyman Maynard Stowe Library at UCHC, a Region VIII Medical Library of the National Library of Medicine.

Available to the CPCC is an information network composed of nearly two-dozen consultants in many specialties including entomology, herpetology, mycology, botany, hazardous materials, consumer food and product safety, industrial hygiene, and analytical toxicology. The CPCC may collaborate with the UCHC Drug and Pregnancy Exposure Information Services in cases involving pharmaceutical interactions or teratogenic concerns, respectively. No database or source is absolutely relied upon—toxicology management consultations typically require the synthesis and cautious interpretation of myriad scientific and medical information.

Medical Toxicology Services

The CPCC is able to manage a majority of poison exposures outside of a healthcare facility. When poisoning victims require medical intervention, the CPCC coordinates emergency transportation and notifies the receiving hospital. Patients may be referred to the emergency departments (ED) of John Dempsey Hospital at UCHC, Hartford Hospital, or the Connecticut Children's Medical Center (regional centers for poison treatment), or to the ED of their community hospital. Often, healthcare facilities initiate first contact. In either case, the CPCC will assess a patient's exposure, medical history and clinical presentation to provide case-tailored and age-specific treatment. This assessment is critical, especially when the signs and symptoms of poisoning are unknown or don't match what is believed to be the exposure substance. The exchange of information between a treating hospital and the CPCC is essential for providing precise poison management advice. The CPCC's involvement in the management of a poisoned patient does not end with an initial consultation; staff will follow-up on a patient's progress and continue to recommend treatment until they are medically cleared.

In particularly complicated or life-threatening exposures, CPCC specialists arrange consultations with board-certified physician toxicologists who serve on-call 24 hours a day. A requesting ED may see few if any exposures involving a particular substance, while CPCC toxicologists may treat many similar cases within a given time period. The CPCC received nearly 2,000 requests during 2002 and 2003, for medical toxicology backup from physicians seeking the most current treatment advice for poisoning victims.

Access to expert and expeditious care through the CPCC's medical toxicology team is not solely restricted to patients who suffer acute poisoning. Patients with non-specific or persistent effects related to acute or chronic poisoning may be referred to the Medical Toxicology Clinic of UCHC. This clinic is unique in New England, with a proven track record of treating patients with illnesses due to environmental or occupational exposures.

Confidentiality of Medical Records

As with any medical record, patient information collected by the CPCC is kept confidential and subject to HIPAA privacy laws. Information, lacking patient identifiers, is used to compile statistics on the epidemiology of poisoning and to assess the efficacy of antidotes and other treatments. Blinded data are uploaded to the national Toxic Exposure Surveillance System, administered by the AAPCC and monitored by the Center for Disease Control and Prevention (CDC) and other federal agencies for trends in drug and chemical exposures. CPCC reporting and monitoring activities comply with state and federal regulations for certified poison centers.

Public Health Services

The CPCC is actively involved with the Connecticut Department of Public Health (DPH) and the other New England regional poison centers in the areas of public and professional education. The U.S. Department of Human Resources and Health Administration (HRSA) has awarded two competitive grants to CT as part of a regional effort to increase educational opportunities for the recognition and management of poisoning. Our second grant is targeted at both poison center staff and public health officials, focusing on a scientific approach to evaluating exposure to environmental toxins. In addition, the CPCC is working with the DPH as a partner in the CDC's Environmental Public Health Tracking Grant program to identify environmental health concerns and public health and environmental databases in Connecticut. The CPCC is also a partner with the DPH in CDC and HRSA funding for biopreparedness issues. Thus, in addition to functioning as a public health sentinel for issues concerning drug abuse, adverse reactions/interactions; product contamination and tampering, and exposure-related environmental and occupational injuries, the CPCC monitors threats to homeland security.

Professional Education

The CPCC provides education to future health care providers by offering medical residents from the University of Connecticut (UConn) Medical Center, Yale University, and other colleges and universities the opportunity to conduct internships and rotations through the center. During 2002-2003, 19 emergency medical residents from UConn received training for one month in the CPCC. Additionally, 5 UConn medical students; 1 medical student from the UK; 17 PharmD candidates from UConn and 1 from the Albany College of Pharmacy; as well as 8 other university-based fellowship students, completed rotations at the CPCC as part of their formal education.

Public Poison Awareness and Prevention Education

Another important service of the CPCC is to provide professional and public education. Our community education specialist conducts "poisontations" in English and

Spanish, through live presentations, as well as creative displays at health fairs and public speaking engagements. A variety of poison prevention and education programs are offered through private and public venues including businesses, schools and community events, to groups including caregivers, the elderly, recent immigrants, and allied-health and community professionals. Topics include lead poisoning, carbon monoxide and other environmental issues, and prescription, OTC and herbal drug safety, to name a few. An “educate the educator” program trains teachers to incorporate poison prevention in their lesson plans, while distribution of brochures, videocassettes, and other learning tools further expand the CPCC’s public outreach.

Interactions with the media provide another source of information for the public. Through arrangements made with the help of the UCHC Communications Department, staff of the CPCC provided TV, radio and newspaper interviews dealing with timely toxicological issues on 55 and 37 occasions in 2002 and 2003, respectively.

Literature Distribution Totals 2002 and 2003

	2002	2003
Magnets	15,561	6,766
Stickers	87,152	73,690
AAPCC Your Poison Center Brochure	9,284	8,360
Know Your Plants	13,524	9,372
Emergency Action	22,111	22,601
Posters	194	148
Packets	318	278

Poisoning Statistics for 2002 and 2003 for the State of Connecticut

For the period January 1 2002, to December 31, 2002, the CPCC staff provided clinical management advice for 28,602 poison exposures and responded to 7,380 poison information inquiries, receiving a total of 35,982 calls. Thirteen percent of these calls originated from physicians and other health care providers. The CPCC staff also placed 23,202 follow-up calls representing a grand total of 59,184 personal contacts in 2002. During calendar year 2003, 28,373 exposures and 6,259 inquiries were received for a total of 34,632 calls. Fourteen percent of these calls originated from the health care community. The CPCC staff also placed 27,488 follow-up calls representing a grand total of 62,120 personal contacts in 2003. Information only inquiries (i.e. where no exposure had occurred) represented 21 and 18 percent of total calls for 2002 and 2003, respectively. Information calls provide the opportunity to convey advice on chemical and drug risks and precautions, an important component of the CPCC’s poison education and prevention program. Please refer to the figures included in this report for additional statistical and other summary data.

Fatalities 2002 and 2003

In partial fulfillment of the certification requirements set by the AAPCC, the CPCC provides summary reports on fatal poisoning cases of which it is aware. Often, these are patients who present late to a hospital and/or are already gravely ill, ultimately succumbing due to the medical complications of poisoning. Studies have indicated that only 10% of poisoning fatalities are reported to the nations' poison centers. Unfortunately, because of uncertain history and medico legal issues, such cases are not always reported to the CPCC. Substances initially may be suspected, and then ruled-out or confirmed by the Medical Examiner. See below for a lists of substances associated with poisoning fatalities in 2002 and 2003.

Figure 1. Call Type 2002 and 2003 (percent)

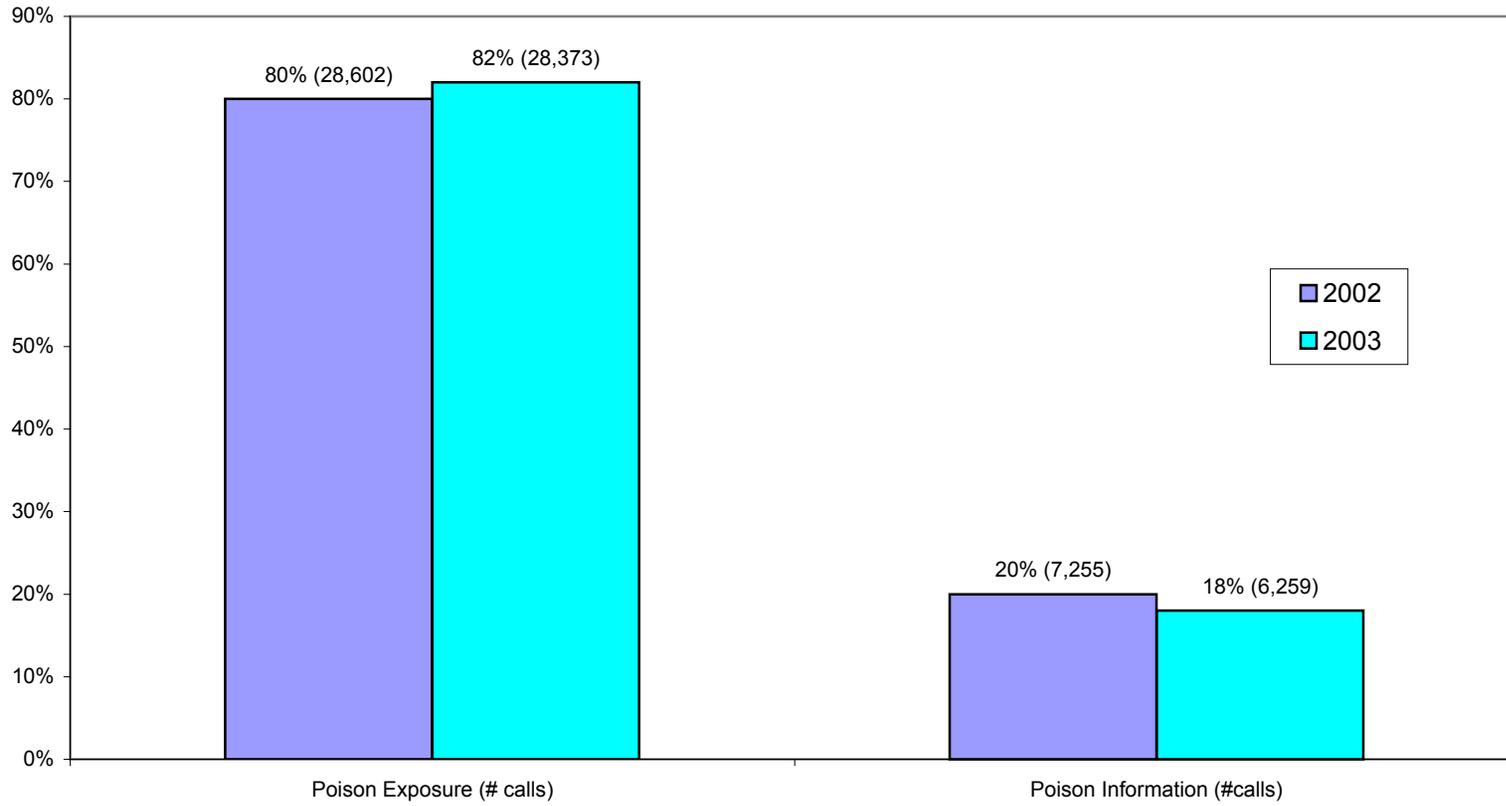
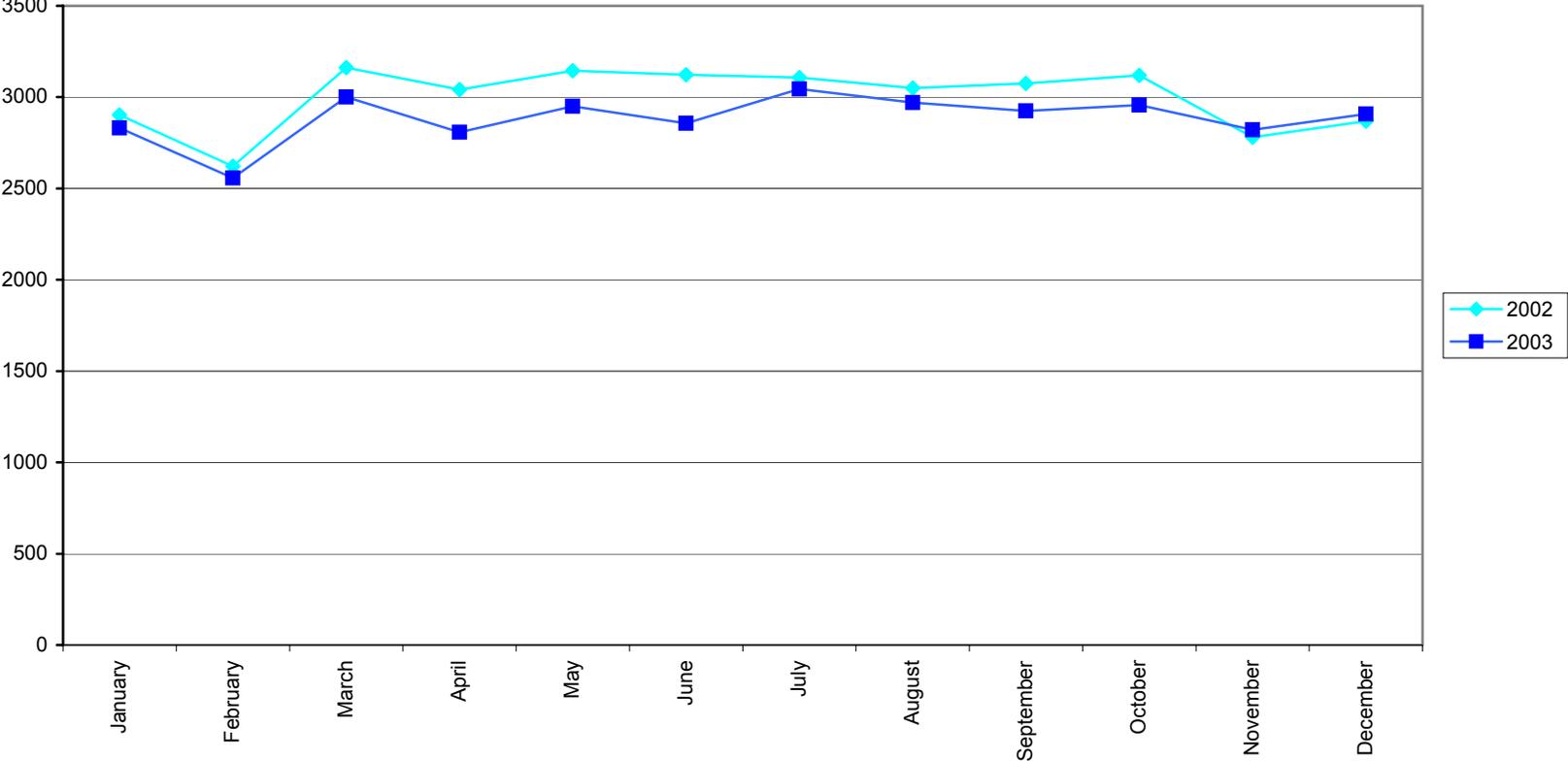


Figure 2. Monthly Distribution of Calls 2002 and 2003



Hourly Distribution of Calls 2002 and 2003 (percent)

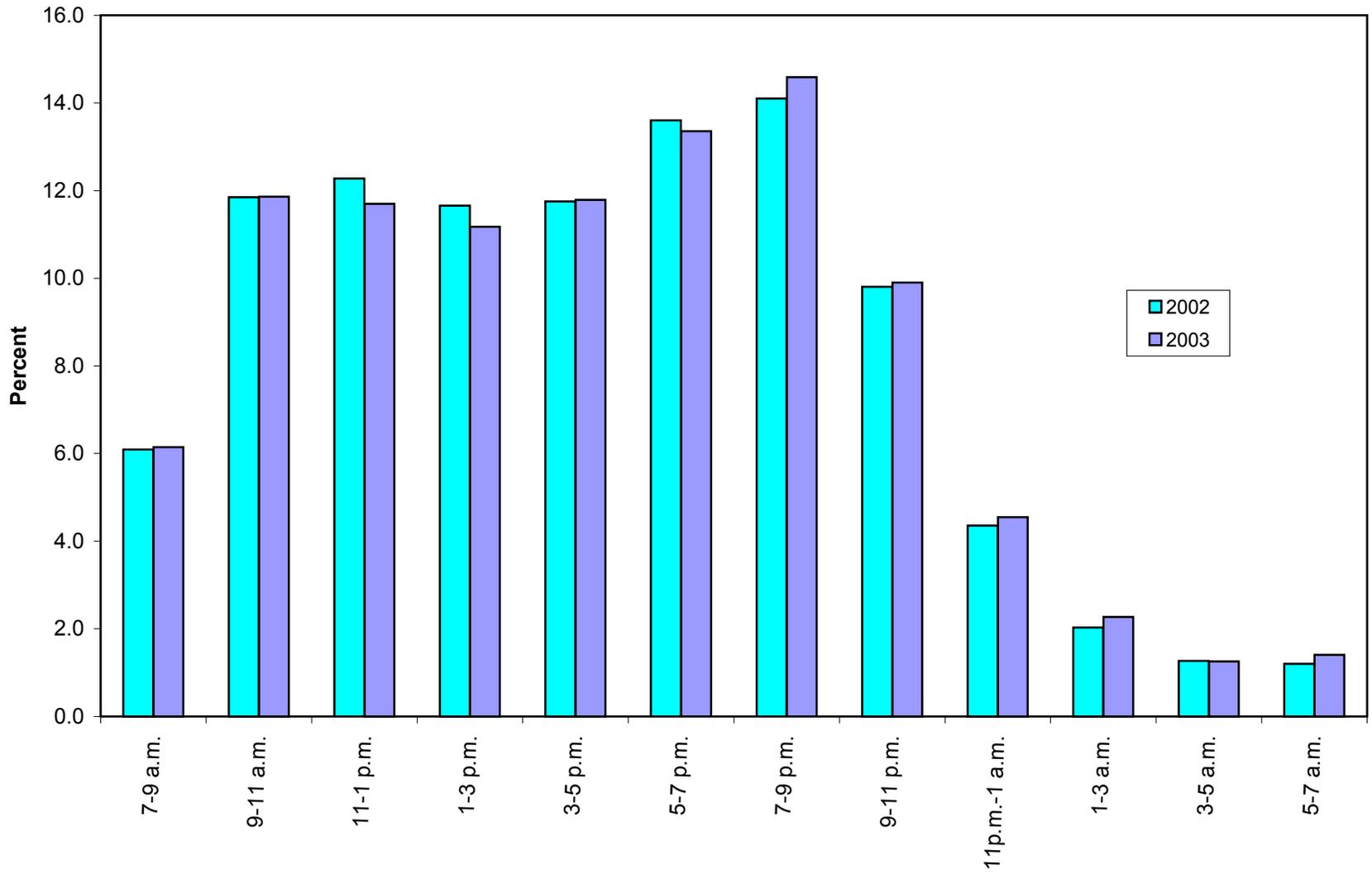


Figure 4. Predominate Substances Involved in Exposures 2002 and 2003

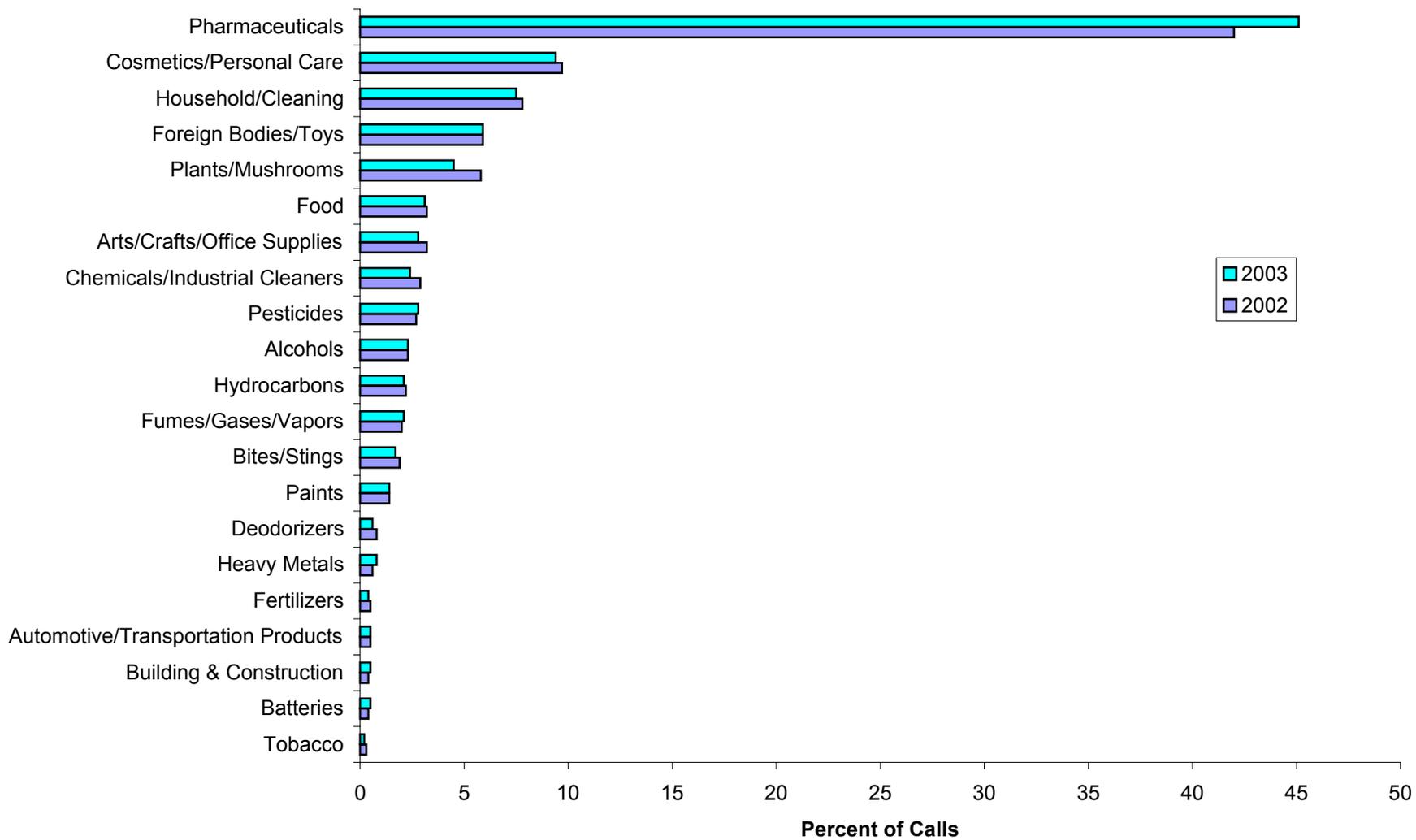


Figure 5. Top 12 Pharmaceutical Exposures 2002 and 2003

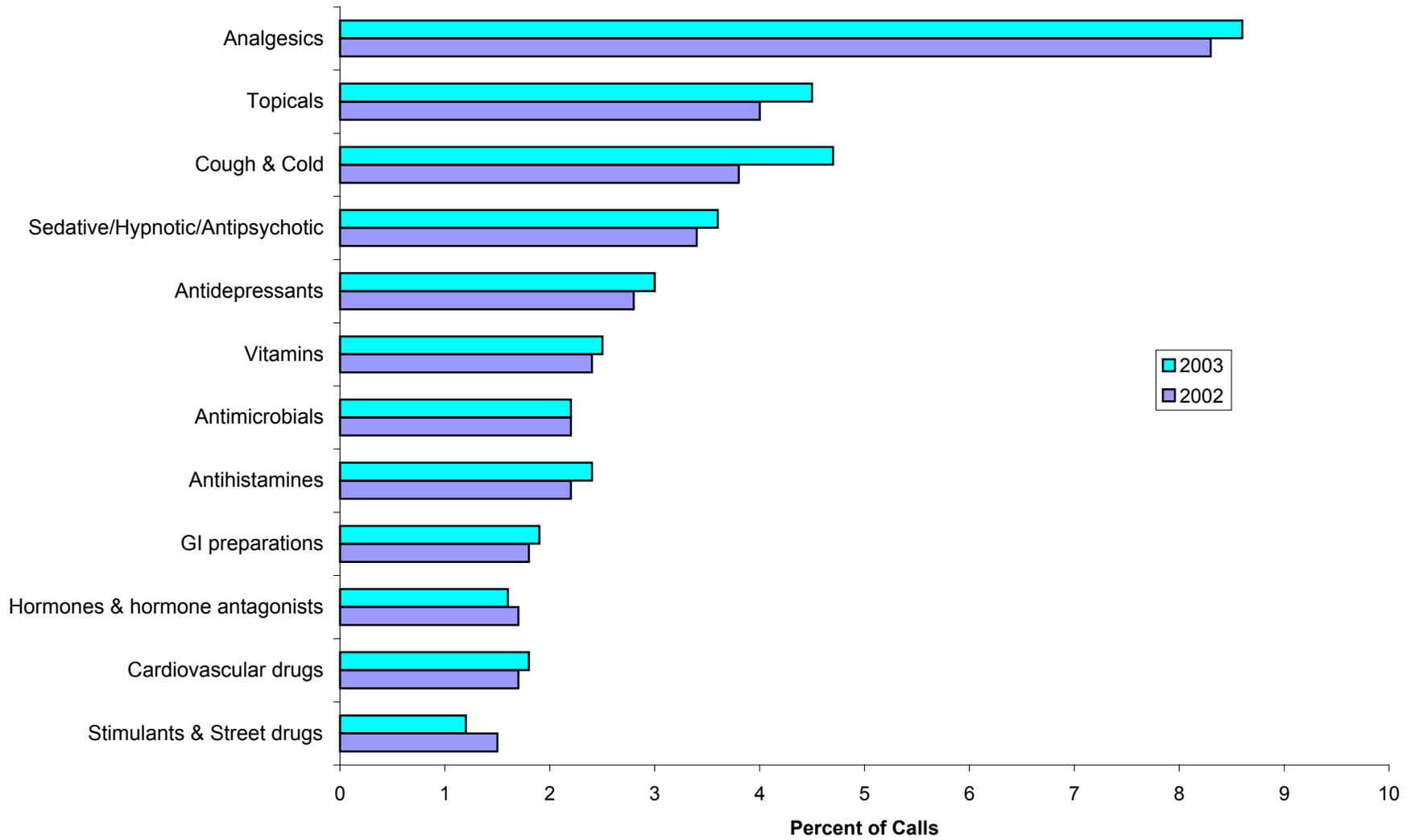


Table 1. AGE DISTRIBUTION FOR EXPOSURES

	Year	
	2002	2003
0-2 years	39.1%	39.2%
3-5 years	13.0%	13.8%
Unknown <=5 yrs	0.2%	0.2%
6-12 years	8.4%	8.6%
13-19 years	7.6%	7.2%
Unknown child	0.4%	0.2%
20-39 years	11.3%	10.6%
40-59 years	8.2%	7.9%
>=60 years	4.0%	4.0%
Unknown adult	7.4%	7.8%
Unknown Age	0.3%	0.4%
Totals	100.0%	100.0%

Table 2. EXPOSURE REASON

Category/ Classification	Year	
	2002	2003
Accidental		
General	59.7%	59.3%
Therapeutic error	9.3%	10.8%
Misuse	7.6%	7.5%
Environmental	5.1%	4.8%
Food poisoning	2.6%	2.1%
Bite / sting	1.8%	1.5%
Occupational	1.2%	1.1%
Unknown	0.1%	0.1%
Intentional		
Suspected suicide	6.0%	6.1%
Abuse	1.5%	1.3%
Misuse	1.3%	1.3%
Unknown	0.3%	0.4%
Malicious	0.4%	0.3%
Contamination / tampering	0.4%	0.3%
Adverse reaction		
Drug	1.5%	1.7%
Food	0.3%	0.3%
Other	0.4%	0.5%
Unknown reason	0.5%	0.5%
	100.0%	100.0%

Table 3. SITE OF EXPOSURE

	Year	
	2002	2003
Own residence	83.3%	82.7%
Other residence	4.5%	4.6%
School	3.5%	3.9%
Other/ Unknown	4.1%	3.8%
Workplace	2.2%	2.6%
Restaurant / Public area	2.1%	2.0%
HCF	0.4%	0.4%
Totals	100.0%	100.0%

Table 4. MANAGEMENT SITE FOR POISON EXPOSURES

	Year	
	2002	2003
On site non-health care facility	74%	75%
In healthcare facility	21%	20%
Other- Refused Tx- Unknown	5%	5%

Table 5. 2002 FATALITIES

AGE EXPOSURE SUBSTANCE(S)

53y APAP WITH CODEINE
46y AMLODIPINE, OLANZAPINE, CITALOPRAM, CLOPIDOGREL
46y DEXATRIM NATURAL, Caffeine
48y CIPROFLOXACIN
35y VALPROIC ACID, RISPERIDONE, CLONAZEPAM, ATORVASTATIN, GABAPENTIN, CLOZAPINE, NIZATIDINE, TRIHEXYPHENIDYL
18y CARISOPRODOL
22y EXCEDRIN EXTRA STRENGTH, LORAZEPAM
40y COCAINE
03y APAP/DECON/ANTIHISTAMINE/WITHOUT PPA & OPIOID
45y ACETAMINOPHEN
48y UNKNOWN DRUG
17y DINITROPHENOL
44y ADDERALL
33y COCAINE, OPIOIDS
35y 1)-ACETAMINOPHEN
17y DESIPRAMINE, DEXTROMETHORPHAN, PHENYTOIN, OLANZAPINE, PAROXETINE

Table 6. 2003 FATALITIES

AGE EXPOSURE SUBSTANCE(S)

76y DIGOXIN
63y ACETAMINOPHEN
72y TOXIC PRODUCTS OF COMBUSTION, CARBON MONOXIDE, CYANIDE
40s UNKNOWN DRUG
45y DIGOXIN
56y METHANOL
52y VENLAFAXINE
70s METFORMIN
30y ACETAMINOPHEN
37y COCAINE
33y UNKNOWN SUBSTANCE UNLIKELY TO BE A DRUG
75y ACETAMINOPHEN
59y VICODIN (IMPRINT CODE): VICODIN from ABBOTT LABORATORIES
26y ACETAMINOPHEN, CARISOPRODOL
23y MULTI-BOTANICAL, SINGLE INGREDIENT BOTANICAL, THYROID HORMONE NATURAL