

TOXALERT

Special Issue

September 2005

2004 Statistical Report

A Newsletter of the
MARYLAND
POISON CENTER

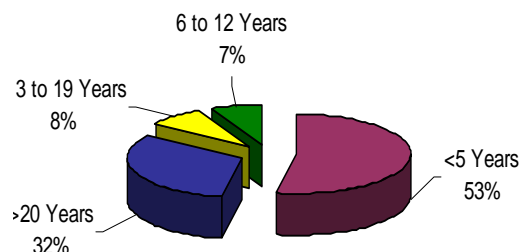
Saving lives,
saving dollars
is a simple
way of
stating some
of what the
Maryland
Poison Center
does.

This report
provides an
overview of
the Maryland
Poison Center
experience
during 2004.

The Maryland Poison Center (MPC) is a division of the University of Maryland School of Pharmacy and is certified by the American Association of Poison Control Centers as a regional poison center for Maryland. In addition, the MPC serves as a consultation center for the Maryland Institute for Emergency Medical Services Systems. This report presents an overview of MPC poisoning data for 2004. In 2004, the MPC received 66,593 calls. While 35,484 of these calls involved a human exposure, the remaining 31,109 were requests for information or animal poisonings.

Age

The majority of poison exposures involve children under the age of five as shown in the graph below.



GENDER

48% of exposures occurred in males, 52% females.

Animal Exposures

In 2004, a total of 2,261 animal exposures were reported.

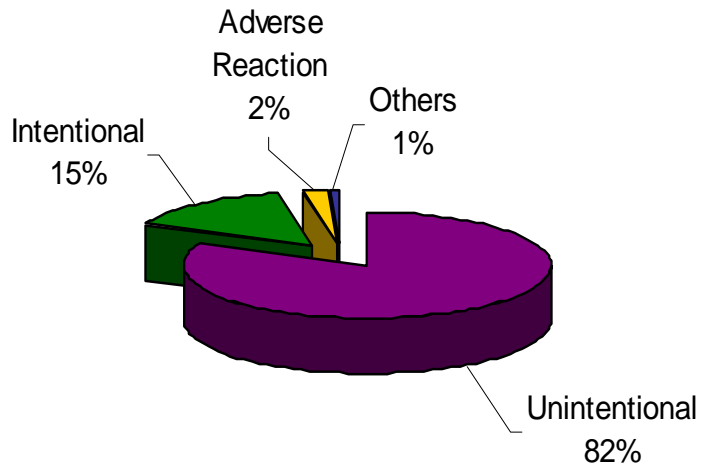
County	Human Exposures	%
ALLEGANY	499	1.4%
ANNE ARUNDEL	4,519	12.7%
BALTIMORE	6,313	17.8%
BALTIMORE (CITY)	5,348	15.1%
CALVERT	792	2.2%
CAROLINE	238	0.7%
CARROLL	1,592	4.5%
CECIL	891	2.5%
CHARLES	895	2.5%
DORCHESTER	240	0.7%
FREDERICK	1,734	4.9%
GARRETT	220	0.6%
HARFORD	2,261	6.4%
HOWARD	2,018	5.7%
KENT	200	0.6%
MONTGOMERY	1,035	2.9%
PRINCE GEORGE'S	1,333	3.8%
QUEEN ANNE'S	324	0.9%
SAINT MARY'S	940	2.6%
SOMERSET	138	0.4%
TALBOT	351	1.0%
WASHINGTON	1,127	3.2%
WICOMICO	762	2.1%
WORCESTER	364	1.0%
UNKNOWN/OTHER	1350	3.8%
TOTAL	35,484	100.0%

For additional information, send an email to banderso@rx.umaryland.edu or visit our website at www.mdpoison.com.

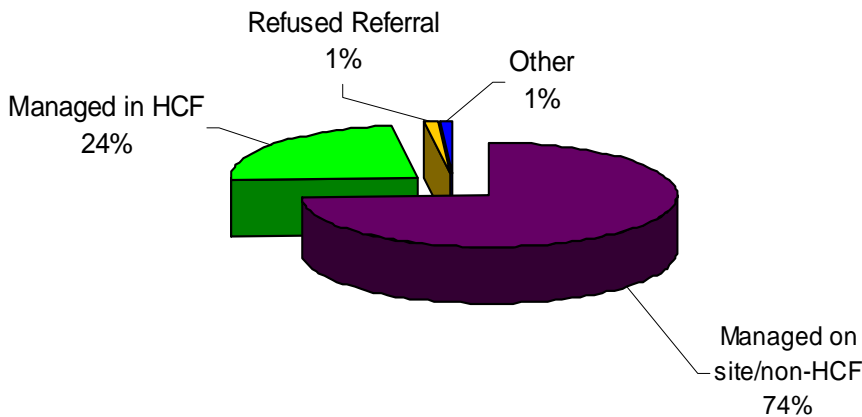
Circumstance

Acute exposures accounted for 95% of the total calls, acute-on-chronic for 4%, and chronic exposures accounted for 1% of calls.

The people who call the MPC have several different reasons for their exposures: **Unintentional** exposures include exposures by toddlers, occupational, environmental, bite/sting, or others; **Intentional** exposures which could be due to misuse or abuse or suicide attempts; **Adverse reaction** includes reactions to drugs, food and others substances; **Other** includes malicious or contaminant/tampering and unknown reasons for exposure.



MPC Safely Manages Patients at Home

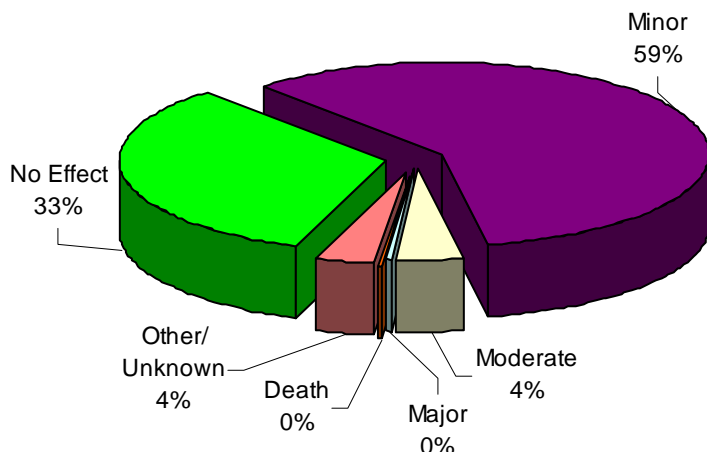


In 2004, 74% of all poisoning cases were safely managed at home (site of exposure). Safely managing patients at home **saves millions of dollars** in unnecessary health care costs compared with managing in a health care facility (HCF). It also allows **more efficient** and **effective** use of limited health care resources. Calling the Maryland Poison Center helps to save lives *and* save dollars!

Outcomes

The true measure of the effectiveness of the MPC program is in patient outcomes. Although there were 27 cases reported to MPC that resulted in death (0.1%), the impact of the MPC is obvious: few cases had poor outcomes. 91.7% of cases resulted in no or minor effects. For all exposures, prompt attention is the best way to reduce the likelihood of developing severe toxicity. Whenever you have a poisoning question, call the experts at the Maryland Poison Center.

Our mission is to decrease the cost and complexity of care while maintaining and/or improving patient outcomes. These data clearly show that we're meeting our mission.



Substances Involved in Poisonings

Drug Substances

Analgesics	4,523
Sedative/Hypnotics/Antipsychotics	2,453
Topical Preparations	1,948
Antidepressants	1,896
Cold And Cough Preparations	1,702
Cardiovascular Drugs	1,283
Antihistamines	1,199
Vitamins	902
Antimicrobials	877
Gastrointestinal Preparations	871
Anticonvulsants	817
Stimulants And Street Drugs	725
Hormones / Hormone Antagonists	715
Miscellaneous Drugs	380
Muscle Relaxants	363
Others	1,869
Total Drug Substances	22,523

Non-Drug Substances

Cosmetics/Personal Care Products	3,879
Cleaning Substances (Household)	3,084
Foreign Bodies/Toys/Miscellaneous	1,860
Alcohols	1,267
Pesticides	1,180
Plants	1,037
Arts/Crafts/Office Supplies	810
Bites And Envenomations	665
Hydrocarbons	591
Chemicals	518
Food Products/Food Poisoning	515
Unknown Nondrug Substances	363
Fumes/Gases/Vapors	362
Deodorizers	354
Paints And Stripping Agents	340
Others	1,919
Total Non-Drug Substances	18,744

The tables on the left list the substances that were most frequently responsible for poisonings in Maryland during 2004.

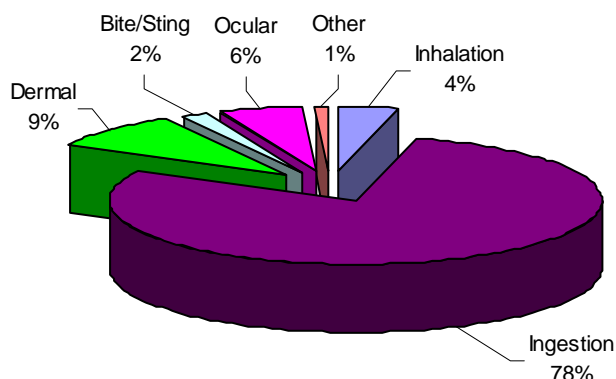
Please note: there are more substances documented here than there are poisoning patients reported. That's because patients can be exposed to more than one substance in a poisoning event.

Treatment The tables below list the top ten antidotal therapies and decontamination treatments used for poisonings in Maryland during 2004. Most patients were managed conservatively with dilution (given something to eat or drink), irrigation or washing.

Antidotal Therapies	#	%
Naloxone	352	33.2%
Oral acetylcysteine	294	27.7%
Alkalinization	159	15.0%
Fomepizole	46	4.3%
Calcium	42	4.0%
IV acetylcysteine	37	3.5%
Flumazenil	29	2.7%
Glucagon	21	2.0%
Vitamin K	15	1.4%
Other Antidotes	65	6.1%
TOTALS	1,060	100.0%

Decontamination Techniques	#	%
Dilute/Irrigate/Wash	23,487	78.4%
Single Dose Activated Charcoal	3,143	10.5%
Food/Snack	1,079	3.6%
Fresh Air	925	3.1%
Cathartic	798	2.7%
Lavage	172	0.6%
Ipecac	58	0.2%
Multi-dose Activated Charcoal	50	0.2%
Whole Bowel Irrigation	43	0.1%
Other Emetic	185	0.6%
TOTALS	29,940	100.0%

Route of Exposure



The most common way that patients in Maryland were exposed to toxins is by ingestion. This includes cases of children putting substances in their mouths, patients mistakenly ingesting someone else's medicines, people accidentally brushing their teeth with a product intended for topical use, etc. Dermal exposures were the next most common route of exposure.

For all exposures, prompt attention is the best way to reduce the likelihood of developing severe toxicity. Whenever you have a poisoning question, call the experts at the Maryland Poison Center.

The MPC led 165 education programs reaching over 7,800 people.

Public and Professional Education 2004

The Maryland Poison Center (MPC) is well known for being an emergency telephone service that helps those who have been poisoned, including unintentional poisonings in small children, exposures to household products, occupational exposures, and intentional overdoses. But did you know that the MPC also educates thousands of people each year about poisonings and overdoses?

Our public education efforts are intended to help increase the awareness of the poisons that are found in every home, business, and school, and to help prevent poisonings from occurring. The MPC strives to make sure that everyone knows that they can quickly and easily get information by contacting the Maryland Poison Center, 24/7, if a poisoning occurs. In 2004, the MPC provided speakers and/or materials for 118 programs in 16 Maryland counties and Baltimore City. Public Education Coordinator Angel Bivens led classes that were attended by over 6,200 people. Several organizations partnered with the MPC to provide education to their patients, customers, clients and students. These organizations included fire departments, hospitals, health departments, schools, police departments, childcare agencies, pharmacies, Red Cross, Head Start and Healthy Start programs. In all, over 53,000 pieces of educational materials (brochures, magnets, telephone stickers, Mr. Yuk stickers, teacher's kits and other pieces) were distributed at these programs and by these organizations. Tens of thousands of additional materials were mailed to people and groups who requested them.

Professional education is targeted towards the special needs of health professionals. Programs and materials are designed to help the clinician better manage poisoning and overdose cases that end up in a health care facility. The professional education program is coordinated by Lisa Booze. In 2004, 47 programs were conducted at hospitals, fire departments, and state and regional conferences. These programs were attended by approximately 1670 physicians, nurses, EMS providers, pharmacists and physicians assistants in 9 counties and Baltimore City. The MPC also provides professional education through publications. Articles written by Maryland Poison Center staff are often published in the Maryland Nurse, Maryland Pharmacist, EMS News and other professional journals and newsletters.

The Maryland Poison Center also provides on-site training for physicians, pharmacists and paramedics. Each year, over 100 health professionals come to the MPC to learn more about the assessment and treatment of poisoned patients.



Presentations and Publications

The faculty and staff of the MPC provided a number of presentations and publications in 2003. Below are samples of those presentations and programs.

Watson WA, Litovitz TL, Klein-Schwartz W, Rodgers GC, Youniss J, Reid N, Rouse WG, Rembert RS, Borys D. 2003 Annual Report of the American Association of Poison Control Centers Toxic Exposure Surveillance System. *American Journal of Emergency Medicine*, 2004; 22(5):335-404.

Lofton AL, Klein-Schwartz W. Evaluation of lamotrigine toxicity reported to poison centers. *Annals of Pharmacotherapy*, 2004; 38:1811-1815.

Klein-Schwartz W, Crouch BI. Poisoning. In: *Handbook of Nonprescription Drugs*, 14th edition, Washington: American Pharmaceutical Association, 2004, 493-508.

Lofton AL, Klein-Schwartz W, Spiller HA, Crouch B. Prospective Multi-Poison Center Study of Ziprasidone Exposures. University of Maryland School of Pharmacy Research Day. Baltimore, MD. April 2004. (Poster)

Lofton AL, Klein-Schwartz W. Atypical experience: Retrospective case series of aripiprazole exposures. Eastern States Residency Conference, Baltimore, MD. May 6, 2004. (Platform)

Lofton AL, Klein-Schwartz W. Retrospective Evaluation of Toxicity Following Exposures to Topiramate. EAPCCT XXIV International Congress. Strasbourg, France. June 2004. (Poster)

Lofton AL, Klein-Schwartz W. Atypical experience: A case series of pediatric aripiprazole exposures. North American Congress of Clinical Toxicology. Seattle, WA, September 11, 2004. (Poster)

Lofton AL, Klein-Schwartz W, Spiller HA, Crouch BI. Prospective multi-poison center study of ziprasidone exposures. North American Congress of Clinical Toxicology. Seattle, WA, September 11, 2004. (Poster)

Outreach
and
education
are key
elements of
the MPC
awareness
campaign.

Toxalerts and Tidbits

The Maryland Poison Center publishes two newsletters, *Toxalert* and *Toxtidbits* for health professionals. *Toxtidbits* is faxed monthly to every Maryland emergency department and emailed to over 1500 health professionals. *Toxalert*, reaches over 3,900 health care providers by email and mail.

Past and current issues of *Toxalert* and *Toxtidbits* can be found on the Maryland Poison Center's website: www.mdpoison.com.

To receive *Toxalert* and *Toxtidbits* by email, send a request to lbooze@rx.umaryland.edu.

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- ☒ Maryland Institute for Emergency Medical Services Systems (MIEMSS)
- ☒ SAFE KIDS Maryland State and Local Coalitions

Call 410/706-7604 to see how you can support the Maryland Poison Center.

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