

TOXALERT

Special Issue

May 2006

2005 Statistical Report

A Newsletter of the
MARYLAND
POISON CENTER

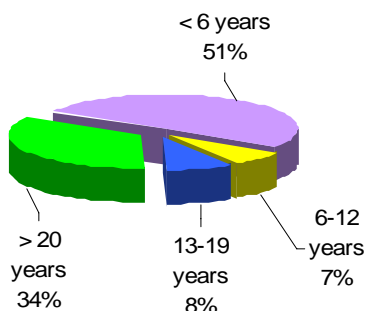
Saving lives,
saving dollars
is a simple
way of
stating some
of what the
Maryland
Poison Center
does.

This report
provides an
overview of
the Maryland
Poison Center
experience
during 2005.

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 2005. In 2005, the MPC received 68,334 calls. While 35,487 of these calls involved a human exposure, the remaining 32,847 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

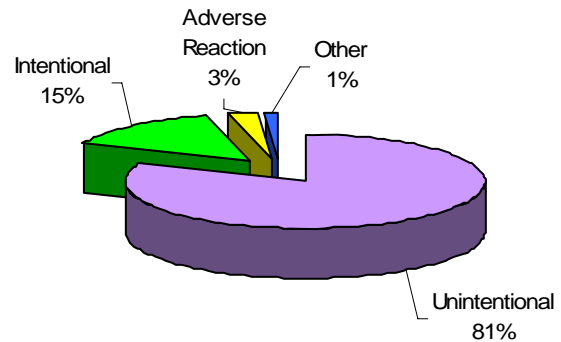
In 2005, a total of 2,079 animal exposures were reported.

County	Human Exposures	%
ALLEGANY	562	1.6%
ANNE ARUNDEL	4635	13.1%
BALTIMORE	6102	17.2%
BALTIMORE (CITY)	5363	15.1%
CALVERT	733	2.1%
CAROLINE	264	0.7%
CARROLL	1614	4.5%
CECIL	946	2.7%
CHARLES	929	2.6%
DORCHESTER	261	0.7%
FREDERICK	1845	5.2%
GARRETT	242	0.7%
HARFORD	2258	6.4%
HOWARD	1914	5.4%
KENT	216	0.6%
MONTGOMERY	968	2.7%
PRINCE GEORGE'S	1070	3.0%
QUEEN ANNE'S	321	0.9%
SAINT MARY'S	944	2.7%
SOMERSET	162	0.5%
TALBOT	400	1.1%
WASHINGTON	1082	3.0%
WICOMICO	792	2.2%
WORCESTER	383	1.1%
UNKNOWN/OTHER	1481	4.2%
TOTAL	35,487	100.0%

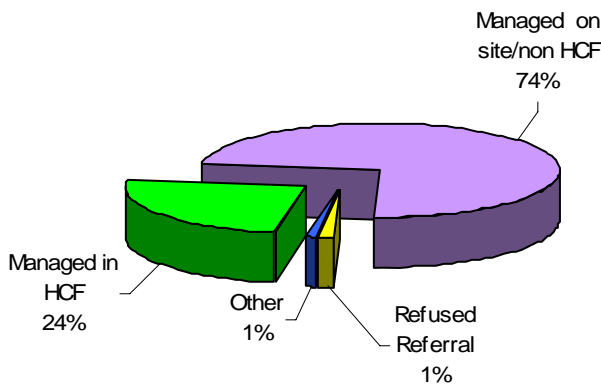
For additional information, send an email to banderso@rx.umaryland.edu or visit our website at www.mdpoison.com.

Circumstance

The people who call the MPC have several different reasons for their exposures: **unintentional**, including exposures by toddlers, occupational, environmental, bite/sting, or others; **intentional**, which could be due to misuse or abuse or suicide attempts; **adverse reaction** to drugs, food and other substances; and **other or unknown** reasons, including malicious or contaminant/tampering .



MPC Safely Manages Patients at Home

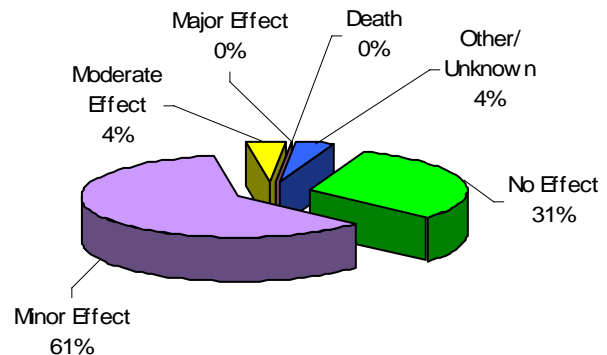


In 2005, 74% of all poisoning cases were safely managed at home (site of exposure). Safely managing patients at home **saves millions of dollars** in unnecessary health care costs compared with managing in a health care facility (HCF). It also allows **more efficient** and **effective** use of limited 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 28 cases reported to MPC that resulted in death (0.1%), the impact of the MPC is obvious: few cases had poor outcomes. 92% 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	#	Non-Drug Substances	#
Analgesics	4,635	Cosmetics/Personal Care Products	3,776
Sedative/Hypnotics/Antipsychotics	2,598	Cleaning Substances (Household)	3,076
Topical Preparations	1,840	Foreign Bodies/Toys/Miscellaneous	1,933
Antidepressants	1,792	Alcohols	1,343
Cold And Cough Preparations	1,774	Pesticides	1,116
Cardiovascular Drugs	1,331	Plants	929
Antihistamines	1,165	Arts/Crafts/Office Supplies	716
Antimicrobials	1,024	Hydrocarbons	645
Vitamins	871	Bites And Envenomations	580
Gastrointestinal Preparations	869	Food Products/Food Poisoning	529
Stimulants And Street Drugs	832	Chemicals	506
Anticonvulsants	743	Fumes/Gases/Vapors	390
Hormones / Hormone Antagonists	739	Deodorizers	352
Others	2,774	Others	2,606
Total Drug Substances	22,987	Total Non-Drug Substances	18,497

The tables on the left list the most common substances involved in poisonings in 2005.

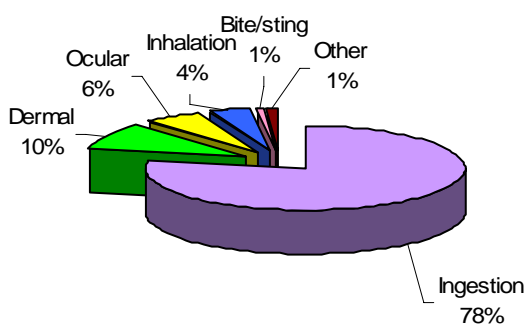
Note: there are more substances documented here than there are poisoning patients reported. That's because patients can be exposed to more than one substance in a poisoning event.

Treatment The tables below list antidotal therapies and decontamination treatments used for poisonings in Maryland during 2005. Most patients were managed conservatively with dilution (given something to eat or drink), irrigation or washing.

Antidotal Therapies	#
Naloxone	340
Oral acetylcysteine	236
Alkalinization	161
IV acetylcysteine	158
Calcium	37
Fomepizole	29
Flumazenil	29
Glucagon	14
Antivenin	12
Other Antidotes	65
TOTALS	1,081

Decontamination Techniques	#
Dilute/Irrigate/Wash	23,283
Single Dose Activated Charcoal	2,899
Food/Snack	1,045
Fresh Air	969
Cathartic	711
Lavage	132
Multi-dose Activated Charcoal	45
Whole Bowel Irrigation	43
Ipecac	31
Other Emetic	160
TOTALS	29,318

Route of Exposure



The most common way that patients in Maryland were exposed to toxins was 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.

Public and Professional Education 2005

The MPC led 168 education programs reaching over 11,300 people.

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 2005, the MPC provided speakers and/or materials for 109 programs in 18 Maryland counties and Baltimore City. Public Education Coordinator Angel Bivens led classes that were attended by over 9,300 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 69,000 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 2005, 59 programs were conducted at hospitals, fire departments, colleges and state and regional conferences. These programs were attended by over 2000 physicians, nurses, EMS providers, pharmacists, physicians assistants and others in 15 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. More than 100 health professionals came to the MPC in 2005 to learn about the assessment and treatment of poisoned patients.

Visit our website at
www.mdpoison.com

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

Presentations and Publications

Publications and presentations at national meetings by the faculty and staff of the MPC in 2005 are listed below:

Spiller HA, Klein-Schwartz W, Colvin, JM, Villalobos D, Johnson PB, Anderson DL. Toxic clonidine ingestion in children. *Journal of Pediatrics*, 2005; 146:263-266.

Lofton AL, Klein-Schwartz W. Atypical experience: A case series of pediatric aripiprazole exposures. *Journal of Toxicology Clinical Toxicology*, 2005; 43:151-153.

Shepherd G, Klein-Schwartz W. High dose insulin therapy for calcium channel blocker overdose. *Annals of Pharmacotherapy*, 2005; 39:923-930.

Smith ER, Klein-Schwartz W. Are 1-2 dangerous? Chloroquine and hydroxychloroquine exposure in toddlers. *Journal of Emergency Medicine*, 2005;28:437-443.

Watson WA, Litovitz TL, Rodgers GC, Klein-Schwartz W, Reid N, Youniss J, Flanagan A, Wruk K. 2004 Annual Report of the American Association of Poison Control Centers Toxic Exposure Surveillance System. *American Journal of Emergency Medicine*, 2005;23:589-666.

Lofton AL, Klein-Schwartz W. Evaluation of toxicity of topiramate exposures reported to poison centers. *Human & Experimental Toxicology*, 2005;24:591-595.

Doyon S, Klein-Schwartz W, Welsh C. Toxicity following buprenorphine ingestions. North American Congress of Clinical Toxicology. Orlando, FL, September 11, 2005.

Klein-Schwartz W. Overview of Using TESS and webTESS. Data Utilization Program. North American Congress of Clinical Toxicology. Orlando, FL, September 11, 2005.

Doyon S, Welsh C. Life-threatening toxicity from intravenous injection of benzonatate. North American Congress of Clinical Toxicology. Orlando, FL, September 11, 2005.



ToxAlert and ToxTidbits

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 2500 health professionals. *ToxAlert*, reaches over 4,000 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.



Maryland Poison Center

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

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



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