

Minnesota Poison Control System 2010 Annual Report



A letter from our Directors

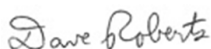
Hennepin Regional Poison Center has served the residents of Minnesota since 1972. It is one of only 57 United States Poison Centers accredited by the American Association of Poison Control Centers, which sets stringent criteria to ensure the competence and professionalism of staff. Hennepin County Medical Center has generously provided a home for the Poison Center ever since it was founded. In 2010 we answered a total of 58,165 calls from Minnesota residents and health professionals caring for poisoned patients. Calls are answered 24/7 by pharmacists certified as Specialists in Poison Information by the American Association of Poison Control Centers. We were able to offer timely medical treatment advice, and in many cases, reassurance. Ninety two percent of the poisoning cases originating in the home were managed in the home by a Specialist in Poison Information, preventing unnecessary healthcare visits. Preventing unnecessary ambulance calls and visits to emergency departments saves our state millions of dollars each year. Studies have estimated that every dollar spent on poison centers saves over \$11 in health care costs. When callers are asked what they would do if they had no poison center to call, most respondents answered that they would call for an ambulance or go to an emergency room or other health care facility.

The Poison Center staff is supported by 7 physician toxicologists or PharmD consultants, who volunteer to take call to assist physicians treating critically ill or envenomated patients. On behalf of the Associate Medical Directors, Dr. Beth Bilden and Dr. Andrew Topliff and myself, we would like to personally thank Beth Baker, MD, Carson Harris, MD, Dan Keyler, PharmD, Michael Kinnan, MD, Louis Ling, MD, Sam Stellpflug, MD, and Matthew Sztankrycer, MD and Dr. Matt Morgan, MD. We are also fortunate to have the volunteer support of subject experts such as Anna Gerenday, mycologist, who has assisted us multiple times with mushroom identification. Our collaboration has been overwhelmingly successful: thanks to timely and effective treatment, the mortality rate for poison exposures in 2010 was only 0.07%.

We also strive to prevent poison exposure through an active education program. In 2010 the Poison Center conducted 166 public events attended by 15,000 people to increase public awareness of our services and to provide poison prevention education. The Center also participated in 105 professional events attended by over 7000 health care professionals or students. 132 health care students, residents, and fellows received on-site medical toxicology training in the Poison Center. These education and prevention activities would not be possible if the Poison Center were not located in the State.

The Poison Center staff and consultants remain active in toxicology research. A record number of posters were presented at international meetings, reporting cases and case series to advance the understanding and treatment of poisoning. We collectively published multiples articles in peer-reviewed medical journals, and contributed book chapters in leading medical textbooks as well.

We are dedicated to reducing the morbidity and mortality of poisoning, whether accidental or intentional, and we look forward to serving the needs of Minnesota residents and health professionals in 2011 and beyond.



David Roberts, MD
Medical Director



Debbie Anderson, PharmD

Minnesota Poison Control System

The Hennepin Regional Poison Center (HRPC) is designated by the Minnesota Department of Health (MDH) to provide poison information and toxicology consultative services to the entire state of Minnesota as the Minnesota Poison Control System (MPCS). HRPC is located in the Hennepin County Medical Center in Minneapolis, Minnesota. The HRPC has met stringent criteria set forth by the American Association of Poison Control Centers (AAPCC), earning the designation of an Accredited Regional Poison Center.

The Minnesota Poison Control System provides various services to the citizens of the State of Minnesota Including:

- ***A Poison Help Hotline (1-800-222-1222)***

Poison emergency and information calls are answered by nationally Certified Specialists in Poison Information (CSPI). They answer poison related questions and provide first aid advice and treatment recommendations to the general public and health care professionals throughout the State. The service is provided via a national toll-free telephone number accessible by both voice and TTY. This service is available 24 hours a day, 7 days a week, 365 days a year. Interpretive services are available.

- ***Public and Professional Education***

Public education is offered on our website, www.mnpoison.org and includes: an automated poison prevention material ordering system, a video lending library, and poison prevention information in PDF format for downloading and reproduction. The MPCS also partners with various public health agencies and other community-based safety and health entities to promote awareness of the Poison Help number and the services that MPCS offers.

Professional education efforts include:

- ◇ University of Minnesota College of Pharmacy Clerkship for fourth-year students
- ◇ On-site toxicology instruction to emergency medicine, pediatric and family medicine residents, medical students, physicians assistants, nurses and paramedics
- ◇ An accredited physician toxicology fellowship program in conjunction with Regions Hospital
- ◇ Off-site offerings include: publication in various professional journals, presentation at various physician, nursing, pharmacy and EMS conferences annually

- ***Toxicosurveillance***

In partnership with the MDH, AAPCC and federal security organizations, the MPCS provides real-time surveillance looking for early warning signs of a public health event.

2010 Total Calls

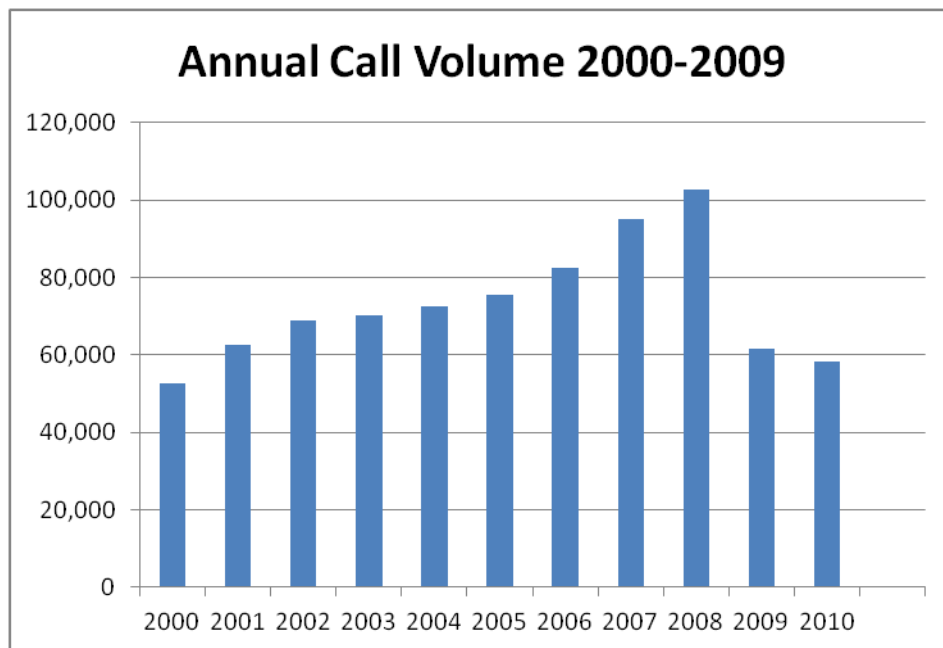
58,165 Callers Served

49,632 Poison Exposures

8,533 Poison Information Calls

236,039 Pieces of Literature Distributed

Annual Call Volume



Note: 2009 pill identification for public callers discontinued

Total Calls Per County

<i>Aitkin</i>	170	<i>Kandiyohi</i>	391	<i>Rock</i>	102
<i>Anoka</i>	3,385	<i>Kittson</i>	39	<i>Roseau</i>	143
<i>Becker</i>	354	<i>Koochiching</i>	119	<i>Saint Louis</i>	2,260
<i>Beltrami</i>	699	<i>LacQui Parle</i>	58	<i>Scott</i>	1,198
<i>Benton</i>	255	<i>Lake</i>	105	<i>Sherburne</i>	799
<i>Big Stone</i>	36	<i>Lake of the Woods</i>	35	<i>Sibley</i>	100
<i>Blue Earth</i>	647	<i>Le Sueur</i>	274	<i>Stearns</i>	1,761
<i>Brown</i>	231	<i>Lincoln</i>	42	<i>Steele</i>	373
<i>Carlton</i>	381	<i>Lyon</i>	253	<i>Stevens</i>	85
<i>Carver</i>	815	<i>Mahnomen</i>	86	<i>Swift</i>	94
<i>Cass</i>	289	<i>Marshall</i>	65	<i>Todd</i>	230
<i>Chippewa</i>	121	<i>Martin</i>	218	<i>Traverse</i>	25
<i>Chisago</i>	680	<i>McLeod</i>	375	<i>Wabasha</i>	190
<i>Clay</i>	424	<i>Meeker</i>	199	<i>Wadena</i>	214
<i>Clearwater</i>	95	<i>Mille Lacs</i>	421	<i>Waseca</i>	160
<i>Cook</i>	54	<i>Morrison</i>	346	<i>Washington</i>	2,155
<i>Cottonwood</i>	88	<i>Mower</i>	407	<i>Watonwan</i>	77
<i>Crow Wing</i>	821	<i>Murray</i>	61	<i>Wilkin</i>	80
<i>Dakota</i>	3,647	<i>Nicollet</i>	237	<i>Winona</i>	376
<i>Dodge</i>	143	<i>Nobles</i>	116	<i>Wright</i>	1,331
<i>Douglas</i>	392	<i>Norman</i>	50	<i>Yellow Medicine</i>	113
<i>Faribault</i>	98	<i>Olmsted</i>	1,611	<i>Unknown County</i>	2,903
<i>Fillmore</i>	131	<i>Otter Tail</i>	490		
<i>Freeborn</i>	319	<i>Pennington</i>	187	Total	58,165
<i>Goodhue</i>	528	<i>Pine</i>	263		
<i>Grant</i>	64	<i>Pipestone</i>	84		
<i>Hennepin</i>	14,126	<i>Polk</i>	244		
<i>Houston</i>	95	<i>Pope</i>	87		
<i>Hubbard</i>	189	<i>Ramsey</i>	5,071		
<i>Isanti</i>	459	<i>Red Lake</i>	28		
<i>Itasca</i>	559	<i>Redwood</i>	133		
<i>Jackson</i>	68	<i>Renville</i>	122		
<i>Kanabec</i>	190	<i>Rice</i>	626		

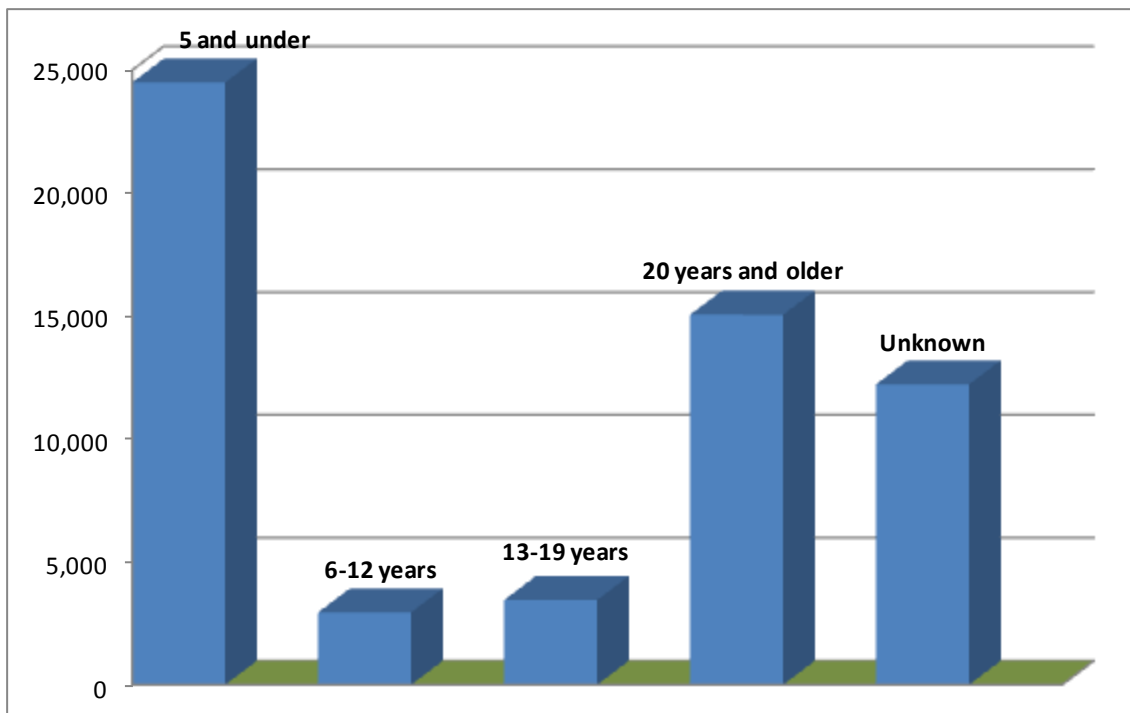
**shaded areas are
7 metro counties**

The next 4 pages describe the 49,632 poisoned patients

What Age Were Our Callers?

<u>Age</u>	<u>How Many</u>	<u>Percentage</u>
5 and Under	24,497	42%
6-12 Years	2,947	5%
13-19 Years	3,448	6%
20 Years and Older	15,052	26%
Unknown	12,221	21%

Gender?
Male 48%
Female 52%

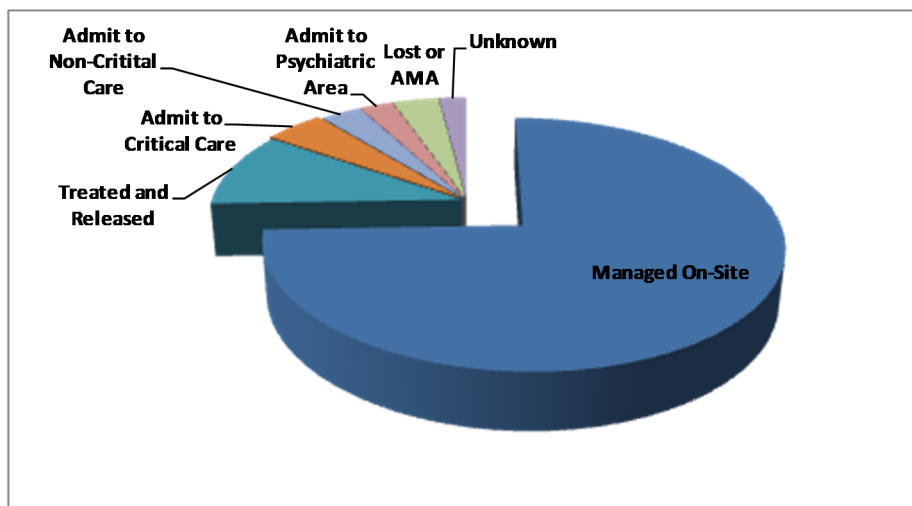


Volume By Month

Month	Exposure Calls	Information & Prevention Calls	Total Calls
January	4,138	899	5,037
February	3,831	661	4,492
March	4,047	728	4,775
April	3,818	721	4,539
May	4,352	777	5,129
June	4,511	662	5,173
July	4,465	751	5,216
August	4,332	697	5,029
September	4,096	700	4,796
October	4,094	687	4,781
November	3,954	622	4,576
December	3,994	628	4,622

Management site

<u>EXPOSURE SITE</u>	<u>2010</u>	<u>Percent</u>
<u>Managed On-Site/Non Health Care Facility</u>	36,989	74%
<u>Health Care Facility</u>		
<i>Already in route or referred by the Poison Center</i>		
Treated/Evaluated and Released	5,024	10%
Admitted to Critical Care Unit	2,244	5%
Admitted to Non-Critical Care Unit	1,513	3%
Admitted to Psychiatric Facility	1,225	2%
Lost to Follow-Up or Left AMA	1,683	4%
Unknown	1,003	2%



How Did it Happen?

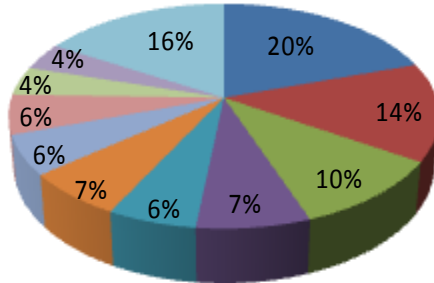
<u>UNINTENTIONAL EXPOSURES</u>		<u>PERCENT</u>
Accidental	26,754	54%
Environmental	1,957	4%
Occupational	792	2%
Therapeutic Error	5,965	12%
Misuse	3,210	6%
Bite/Sting	322	1%
Food Poisoning	804	2%
 <u>INTENTIONAL EXPOSURES</u>		
Suspected Suicide	4,255	9%
Misuse	1,481	3%
Abuse	1,245	3%
 <u>OTHER EXPOSURES</u>		
Contamination/Tampering	176	<1%
Malicious	202	<1%
Withdrawal	58	<1%
 <u>ADVERSE REACTIONS</u>		
Food	95	<1%
Drug	1,263	3%
Other	134	<1%
 <u>UNKNOWN</u>		
Unknown	919	<1%
 TOTAL	 49,632	 100%

Where Did the Exposure Occur?

<u>SITE</u>	<u>NUMBER</u>	<u>PERCENT</u>
Own Residence	44,405	89%
Other Residence	1,763	4%
Workplace	1,061	2%
Health Care Facility	398	1%
School	660	1%
Restaurant/Food Service	103	<1%
Public Area	581	1%
Other	471	1%
Unknown	190	<1%
TOTAL	49,632	100%

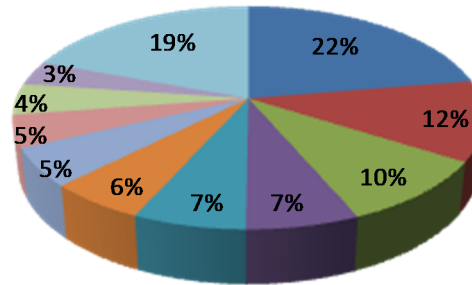
Most Common Substances

Non-Drug Substances



- Cosmetic/Personal Care Products
- Household Cleaning Products
- Foreign Bodies/Miscellaneous
- Alcohols
- Plants/Mushrooms
- Pesticides
- Food Products/Food Poisoning
- Chemicals/Industrial Cleaners

Drug Substances



- Analgesics
- Sedative/Hypnotics/Antipsychotics
- Antidepressants
- Topical Preparations
- Cardiovascular Drugs
- Antihistamines
- Vitamins
- Cold and Cough Preparations
- Antimicrobials
- Anticonvulsants

Non-Drug Substances

Cosmetic/Personal Care Products	5,104
Household Cleaning Products	3,628
Foreign Bodies/Miscellaneous	2,669
Alcohols	1,884
Plants/Mushrooms	1,481
Pesticides	1,675
Food Products/Food Poisoning	1,459
Chemicals/Industrial Cleaners	1,458
Fumes/Gases/Vapors	1,065
Hydrocarbons	1,013
Other/Unknown	4,221
Total Non-Drug Substances	25,657

Drug Substance

Analgesics	7,015
Sedative/Hypnotics/Antipsychotics	3,637
Antidepressants	2,997
Topical Preparations	2,075
Cardiovascular Drugs	2,063
Antihistamines	1,798
Vitamins	1,737
Cold and Cough Preparations	1,454
Antimicrobials	1,418
Anticonvulsants	1,104
Other/Unknown	6055
Total Drug Substances	31,353

Meet our Staff

Director

Deborah Anderson, PharmD

Medical Director

David Roberts, MD, ABMT, ABMS

Senior Associate Medical Director

Louis Ling, MD, FACMT, ABMT, ABMS

Associate Medical Directors

Elisabeth Bilden, MD, ABMS

Andrew Topliff, MD, ABMS

Clinical Coordinator

Stacey Bangh, PharmD, DABAT

Educator

Kirk Hughes, RN, EMT, CSPI

Administrative Staff

Mary Maas

Specialists in Poison Information

Rachel Brandt, PharmD, CSPI

Alisha Floan, PharmD, CSPI

Gregory Grande, RPh, CSPI

Ted Gray, RPh, CSPI

Matt Jacobs, RPh, CSPI

Shin Kwon, PharmD, CSPI

Chris Lintner, RPh, DABAT, CSPI

Kelsey Moser, PharmD, CSPI

Kevin Sell, RPh, CSPI

Steven Setzer, RPh, CSPI

Jill Topeff, PharmD, SPI

Greg Wedin, PharmD, DABAT

Laurie Willhite, PharmD, CSPI

Poison Information Provider

Carrie Bader

Rachel Branstad

Dustin Hadley

Maria Hendriksen

Jon Malepsy

Renee Petroski

Kirsten Schirmers

David Weigman

Consultants

Beth Baker, MD, ABMS

Carson Harris, MD

Dan Keyler, PharmD

Mike Kinnan, MD, ABMS

Matt Morgan, MD, ABMS

Sam Stellpflug, MD, ABMS

Matthew Sztajnkrzyer, MD, ABMS

Jon Cole, MD, Toxicology Fellow

Heather Ellsworth, MD, Toxicology Fellow

***ABMS American Board of Medical Specialties*

***DABAT Diplomate of the American Board of Applied Toxicology*

***CSPI Certified Specialist in Poison Information*

Why is the Poison Center Valuable?

Poison Control Centers are cost efficient and effective. They play a critical role in providing medical treatment recommendations for poisoning, poison education and prevention activities. Poison Centers provide a valuable resource to both the general public and health care providers.

- Poisoning is the second leading cause of unintentional death due to injury in the United States.
- 92% of the poison exposure calls that were made from the home were managed at home, preventing unnecessary emergency department medical visits.
- For every \$1 spent to fund the MPCS, \$11 is saved in unnecessary healthcare costs. In 2010, this resulted in a savings of \$26 million for Minnesotans.
- MPCS provided 105 professional toxicology-related education opportunities to over 7000 health care professionals, fellows, residents and students.
- MPCS conducted 166 public poison prevention events attended by over 15,000 Minnesotans. This year 236,039 pieces of poison prevention materials were distributed across the state.