



## Poison Control Center

# Annual Report

**Service:** The Utah Poison Control Center (UPCC) is a 24-hour resource for poison information, clinical toxicology consultation and poison prevention education. Established in 1971, the UPCC has responded to more than 796,000 calls for assistance. Three new emergency telephone lines were added in 1997. There are now seven emergency telephone lines available to the center so it can better serve all Utah citizens. The UPCC is a program of the University of Utah College of Pharmacy and a cooperative public service of the Utah Department of Health and University of Utah Health Sciences. A contract with the Utah Department of Health was the primary source of funding for the UPCC in 1997.

**Mission:** The primary mission of the UPCC is to provide a 24-hour emergency hotline service to the public and health professionals of Utah for assistance during a poisoning emergency. In addition, our mission is to decrease the morbidity and mortality from poisoning through research efforts into the causes of poisoning and through professional education; reduce the overall occurrence of poisoning through public education efforts; and, finally, reduce health care costs associated with poisoning exposures by managing the majority of poisoning exposures on-site with telephone assistance and follow-up.

**Standards of Excellence:** The UPCC is nationally recognized as a Certified Regional Poison Control Center by the American Association of Poison Control Centers (AAPCC). The UPCC is one of 53 centers with such distinction. These standards are endorsed by the American Academy of Pediatrics, the American College of Emergency Physicians and the American Medical Association.

**Staff:** The UPCC is staffed around-the-clock with registered pharmacists, nurses and physicians with additional training in clinical toxicology. The Specialists in Poison Information undergo a minimum of six weeks of training prior to independently answering poison calls. After two years in the center and handling 2,000 poison exposure calls, UPCC staff members are required to sit for the Specialists in Poison Information Proficiency Examination to become a Certified Specialist in Poison Information. Medical and clinical toxicologists are available to physicians and UPCC staff members for consultation at all times.

**Data:** The UPCC participates in the AAPCC's Toxic Exposure Surveillance System (TESS). TESS is the single largest database on poison exposures in the United States. This database combines the experience of the UPCC and other poison centers in the United States. These data allow for the surveillance of trends in Utah and the United States to identify potential public health risks and to help direct education efforts aimed at decreasing adverse effects from poisoning.

The UPCC is pleased to share with you the following highlights from 1997:

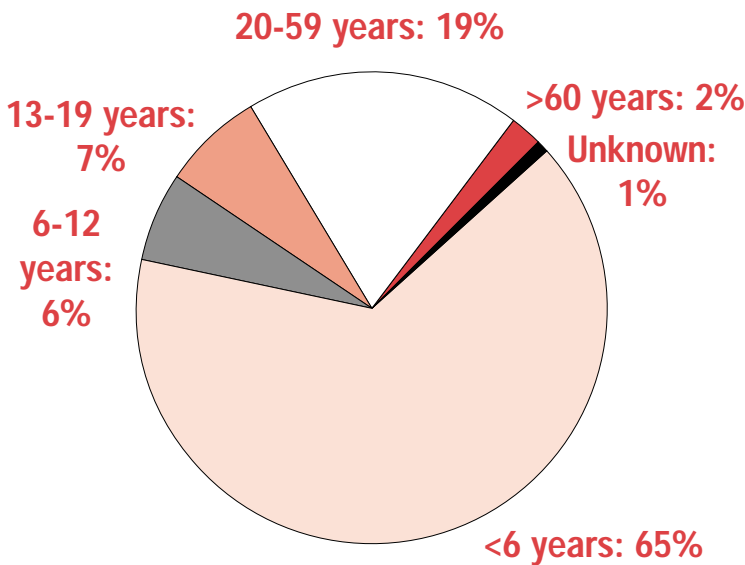
**Call Type:** The following chart breaks down the total calls to the UPCC during 1997. The majority of the calls to the UPCC are actual poison exposures (36,425). The remainder of calls are for information only and do not involve poisoning. Information calls usually involve questions about proper use, storage and precautions regarding drugs and chemicals. Of the 36,425 poison exposures, 565 involved animals — mostly dogs and cats. It was also determined later that 40 of the poison exposures had not occurred.



Call Type	Number	Percent
Exposure	36,425	80.0
Drug Identification	4,638	10.2
Drug Information	2,188	4.8
Poison Information	1,681	3.7
Environmental	198	0.4
Medical	182	0.4
Prevention/Safety	76	0.2
Teratogenicity	64	0.1
Occupational	20	0.0
Other	79	0.2
<b>Total</b>	<b>45,551</b>	<b>100.0</b>

The remainder of this report reflects the 35,820 actual human poison exposures.

**Age Distribution:** Children are naturally curious and orally explore their environment. Hence, children less than six years of age (especially 12 months through two years) are the “at risk” age for poison exposures.



Human exposure calls to the UPCC originated in all 29 Utah counties. This table provides a breakdown of the number of human poison exposures reported for each county and the rate (penetration) of reporting based on the population of each county. The average penetration reported by

all poison centers is 8.8 per 1,000 population. The UPCC had a penetration of 17 in 1997.

County	Human Exposures	Percent of Calls	Penetration
Beaver	79	0.2	13.9
Box Elder	552	1.6	13.9
Cache	1,339	3.9	16.1
Carbon	386	1.1	18.1
Daggett	7	0.0	9.4
Davis	3,750	10.9	16.9
Duchesne	243	0.7	17.1
Emery	174	0.5	16.1
Garfield	61	0.2	13.7
Grand	84	0.2	9.6
Iron	495	1.4	17.1
Juab	112	0.3	14.7
Kane	86	0.2	14.4
Millard	147	0.4	12.3
Morgan	67	0.2	9.9
Piute	12	0.0	7.9
Rich	24	0.1	13.6
Salt Lake	15,385	44.7	18.8
San Juan	89	0.3	6.7
Sanpete	235	0.7	11.6
Sevier	261	0.8	14.5
Summit	356	1.0	14.6
Tooele	449	1.3	14.2
Uintah	323	0.9	13.3
Utah	6,088	17.7	18.6
Wasatch	226	0.7	17.7
Washington	1,235	3.6	16.4
Wayne	34	0.1	14.1
Weber	2,130	6.2	11.9
Unknown	440		
Out of State	951		
<b>Total</b>	<b>35,820</b>		<b>17.0</b>

**Exposure Site:** The majority of poison exposures occur in the home, whether it be the patient’s residence or another residence such as a grandparents. The UPCC’s outreach education stresses the importance of using child-resistant



closures on medications, and keeping all medicines and household products in a locked cabinet. However, even in the best poison-proofed home, poisonings do occur. The majority of poison exposures occur when the product is in use.

Exposure Site	Number	Percent
Own Residence	30,909	86.3
Other Residence	2,117	5.9
Workplace	1,040	2.9
Health Care Facility	56	0.2
School	365	1.0
Restaurant/ Food Service	238	0.7
Public Area	603	1.7
Other	316	0.9
Unknown	176	0.5
<b>Total</b>	<b>35,820</b>	<b>100.0</b>

**Reason For Exposure:** The majority of poison exposures reported to the UPCC were unintentional and involved children orally exploring their environment. Ninety-nine percent (99.6%) of exposures in children less than six years of age were unintentional compared to only 52.2% in the age group of 13-19 years. The majority of exposures in adults were also unintentional (75.1%). Adult unintentional exposures involved therapeutic errors (taking the wrong dose or wrong medicine) as well as ocular and dermal exposures to household chemicals, pesticides and automotive products.

Reason for Exposure	Number	Percent
<b>Unintentional:</b>		
Unintentional General	24,550	68.5
Environmental	842	2.4
Occupational	809	2.3
Therapeutic Error	2,722	7.6
Unintentional Misuse	916	2.6
Bite/Sting	1,405	3.9
Food Poisoning	1,012	2.8
Unknown	12	0.0
<b>Total Unintentional</b>	<b>32,268</b>	<b>90.1</b>
<b>Intentional:</b>		
Suicide	1,796	5.0
Intentional Misuse	506	1.4
Abuse	373	1.0
Unknown	41	0.1
<b>Total Intentional</b>	<b>2,716</b>	<b>7.5</b>
<b>Other:</b>		
Tampering	99	0.3
Malicious	130	0.4
<b>Total Other</b>	<b>229</b>	<b>0.7</b>
<b>Adverse Reaction:</b>		
Drug Reaction	486	1.4
Food Reaction	48	0.1
Other Reaction	45	0.1
<b>Total Adverse Reaction</b>	<b>579</b>	<b>1.6</b>
<b>Unknown Reason</b>	<b>28</b>	<b>0.1</b>
<b>TOTAL Reason for Exposure</b>	<b>35,820</b>	<b>100.0</b>

	<6 years		6-12 years		13-19 years		>20 years	
	#	%	#	%	#	%	#	%
Unintentional	22,924	99.6	2,003	89.3	1,328	52.2	5,973	75.1
Intentional	2	0.0	152	6.8	1,046	41.1	1,490	18.7
Other	19	0.1	34	1.5	80	3.1	96	1.2
Adverse Reaction	66	0.3	48	2.1	83	3.3	381	4.8
Unknown	2	0.0	5	0.2	5	0.2	14	0.2
<b>Total</b>	<b>23,013</b>	<b>100.0</b>	<b>2,242</b>	<b>100.0</b>	<b>2,542</b>	<b>100.0</b>	<b>7,954</b>	<b>100.0</b>



managed in acute care hospitals in Utah:

Initial Hospital	Number
Primary Children's Medical Center	337
Alta View Hospital	327
Cottonwood Hospital Medical Center	325
Utah Valley Medical Center	285
Pioneer Valley Hospital	259
McKay-Dee Hospital Center	204
Jordan Valley Hospital	200
Columbia St. Mark's Hospital	198
Dixie Regional Medical Center	187
University of Utah Hospitals & Clinics	165
American Fork Hospital	151
Logan Regional Hospital	149
LDS Hospital	135
Columbia Lake View Hospital	125
Mountain View Hospital	107
Columbia Castlevue Hospital	102
Davis Hospital and Medical Center	101
Columbia Ogden Regional Med Center	100
Orem Community Hospital	82
Valley View Medical Center	81
Salt Lake Regional Medical Center	80
Columbia Brigham City Comm Hospital	77
Paracelsus Hospital	63
Tooele Valley Regional Medical Center	58
Columbia Ashley Valley Medical Center	53
Sevier Valley Hospital	45
Wasatch County Hospital	36
Uintah Basin Medical Center	35
Bear River Valley Hospital	30
Hill Air Force Base Hospital	28
Allen Memorial Hospital	28
Gunnison Valley Hospital	25
Sanpete Valley Hospital	24
Veteran's Administration Medical Center	23
Central Valley Medical Center	19
San Juan Hospital	19
Kane County Hospital	18
Milford Valley Memorial Hospital	13
Delta Community Medical Center	10
Garfield Memorial Hospital	9
Fillmore Medical Center	6
Beaver Valley Hospital	3
Monument Valley Hospital	2

**Outreach Education:** The UPCC is committed to reducing the overall occurrence of poisoning and raising awareness of the UPCC's services through outreach education. In 1997, the UPCC participated in 18 fairs at schools, hospitals, community centers and local organizations. It also participated in the Utah Poverty Issues Conference and the Governor's Health Promotion Conference, and it provided presentations to several local organizations. More than 50,000 brochures, Emergency Action Cards and telephone stickers were distributed throughout the state. The UPCC's Director and Medical Director also provide monthly poison prevention tips on KUTV.

Governor Leavitt and Mayor Corradini joined the staff of the UPCC in recognizing 1997 National Poison Prevention Week by signing proclamations that encouraged communities to raise awareness of the dangers of unintentional poisonings and to take such preventive measures as the dangers warrant. During National Poison Prevention Week, the UPCC collaborated with the University of Utah Hospitals and Clinics' Department of Pharmacy Services to provide poison prevention kits. UPCC staff members along with representatives from the Utah Pharmaceutical Association, Utah Society of Health-Systems Pharmacists and the Pharmacy Coordinating Council of Utah supported poison prevention displays and distributed poison prevention education materials at five public libraries in the Salt Lake Valley on March 22, 1997.

UPCC staff members gave several clinical toxicology presentations at local and national conferences in 1997. UPCC staff members also participate in teaching at the University of Utah College of Pharmacy and School of Medicine. Doctorate and undergraduate PharmD students, pediatric emergency medicine fellows, medical residents and clinical pharmacy residents rotate through the UPCC to further their education and experience in clinical toxicology.

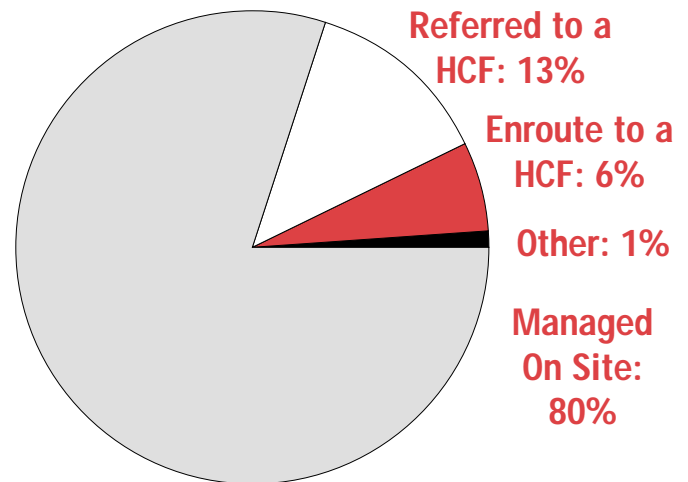


**Medical Outcome:** The majority of poison exposures resulted in little or no effect. A major effect is defined as signs or symptoms that were life-threatening or resulted in significant disability or disfigurement. Those poison exposures that resulted in a major effect or fatal outcome were more likely to be intentional exposures involving those 13 years of age or older.

Medical Outcome	Number	Percent
No Effect	12,908	36.0
Minor Effect	10,847	30.3
Not Followed, Non-Toxic	7,293	20.4
Not Followed, Minor Effect	1,837	5.1
Moderate Effect	1,215	3.4
Unrelated Effect	826	2.3
Unable to Follow, Toxic	823	2.3
Major Effect	63	0.2
Death	8	0.0
<b>Total</b>	<b>35,820</b>	<b>100.0</b>

**Substance Categories:** The type of substances involved in a poison exposure run the full gambit of products available in the home, workplace and the environment. The most common substances involved in children less than six years of age are cosmetics and personal care items (11.7%), in children 6-12 years of age bites and stings (11.4%), in those age 13-19 years analgesics (20.5%) and in adults analgesics (10.3%). The following are the most common substances involved in all poison exposures reported to the UPCC:

Most Common Substances	Number	Percent
Analgesics	3,635	10.1
Household Cleaning Products	3,526	9.8
Cosmetics & Personal Care Items	3,179	8.9
Cough and Cold Preparations	1,944	5.4
Plants	1,847	5.2



**Management Site:** The majority of poison exposures (80%) were managed on site with telephone follow-up. The UPCC's staff recommended, supervised and provided follow-up for the use of Ipecac Syrup in 1,059 poison exposures managed at home in 1997. Children less than six years of age were more likely to be managed on-site (90%) as compared to those greater than 13 years of age (55%).

Of the 5,765 poison exposures that were managed in a health care facility:

- 77.8% were treated and released from the emergency department
- 4.7% were admitted for medical care in an intensive care setting
- 4.8% were admitted for medical care in a non-intensive care setting
- 4.2% were admitted for psychiatric care
- 8.4% were lost to follow-up and/or left against medical advice.

In addition, 1,027 poison exposures that were referred to a health care facility by the UPCC never arrived at the health care facility.

**Health Care Facilities:** The majority of patients (76.8%) who required treatment in a health care facility were treated in an acute care hospital. Other management sites included acute care clinics (5.9%) and practitioner offices (14.0%). The following is the distribution of poison exposures





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**Katherine W. and Ezekiel R.  
Dumke Foundation**  
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**Judith Davis**  
**Larry and Pamela Lund**  
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\*CSPI denotes AAPCC Certified Specialist in Poison Information.