



Poison Control Center

Annual Report

Funding: In 1998, the Utah Legislature passed Senate Bill 221, Emergency Services Telephone Charge, sponsored by Senator David H. Steele. Senate Bill 221 stabilized the funding of the Utah Poison Control Center (UPCC) by including the UPCC in the 911 telephone surcharge. In addition to Senator Steele, House Speaker Melvin Brown and Senate Minority Leader Scott Howell were also instrumental in the successful passage of Senate Bill 221.

The Utah Poison Control Center and its staff are very grateful for the community's support and the successful passage of Senate Bill 221. Thank you!

Service: The 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 840,000 calls for assistance. 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.

Mission: The primary mission of the UPCC is to provide a 24-hour emergency telephone service to the public and health professionals of Utah for assistance during a poisoning emergency. In addition, the UPCC's mission is to decrease the morbidity and mortality from 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. The UPCC is one of 53 centers with such distinction. The American Academy of Pediatrics, the

American College of Emergency Physicians and the American Medical Association endorse these standards.

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 exposure 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. In 1998, the UPCC's Associate Medical Director became board certified in Medical Toxicology. Medical and clinical toxicologists are available to physicians and UPCC staff members for consultation at all times.

Oversight Board: Following the passage of Senate Bill 221, the UPCC established a formal oversight board. The purpose of this board is to represent the interests of the public, university and state, and to provide fiscal oversight. The following individuals serve on the oversight board:

- Patrice Dean, BS Pharm, University of Utah College of Pharmacy Alumnus, Junior League of Salt Lake City, Inc.
- Larry Dew, CPA, Assistant Vice President for Health Sciences, University of Utah
- Trisha Keller, RN, MPH, Director, Bureau of Violence and Injury Prevention, Utah Department of Health
- John Mauger, PhD, Dean, College of Pharmacy, University of Utah
- Douglas Rollins, MD, PhD, Interim Chair, Department of Pharmacy Practice, University of Utah
- Anthony Temple, MD, Executive Director, Medical Affairs, McNeil Consumer Products Company
- Kim Wirthlin, BA, Director, Health Sciences Government and Institutional Relations, University of Utah
- Jolie Coleman, BS, Junior League of Salt Lake City, Inc.



Data: The UPCC participates in the American Association of Poison Control Center'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.

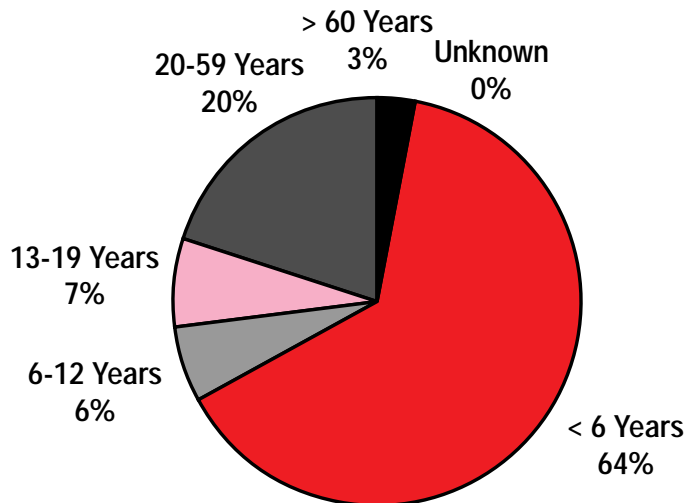
The UPCC is pleased to share with you the following highlights from 1998:

Call Type: The following chart breaks down the total number of calls to the UPCC during 1998. The majority of calls to the UPCC are actual poison exposures (36,269). The remainder of calls are for information only. Information calls usually involve questions about proper use, storage and precautions regarding drugs and chemicals. Of the 36,269 poison exposures, 804 involved animals—mostly dogs and cats. In 46 calls initially classified as exposures, it was later determined that a poison exposure had not occurred.

Call Type	Number	Percent
Exposure	36,269	77.0
Drug Information	2,405	5.1
Drug Identification	5,294	11.2
Environmental	100	0.2
Medical	210	0.5
Occupational	23	0.1
Poison Information	2,370	5.0
Prevention/Safety	63	0.1
Teratogenicity	72	0.2
Other	279	0.6
Total	47,085	100.0

The remainder of this report reflects the 35,419 actual human poison exposures reported to the UPCC.

Age Distribution: Children are naturally curious and orally explore their environment. Therefore, children less than six years of age (especially 12 months through two years) are especially "at risk" for a poison exposure.



Exposure Site: The majority of poison exposures occur in the home, whether it is the patient's residence or another residence such as the grandparents or other caretaker. Use of child-resistant closures, keeping medicine and household products in locked cabinets, and other measures can help reduce the incidence of poisoning. However, even in the best poison-proofed home, poison exposures still occur because the majority of poison exposures occur when the product is in use.

Exposure Site	Number	Percent
Own Residence	30,772	86.9
Other Residence	2,107	6.0
Workplace	957	2.7
Health Care Facility	63	0.2
School	323	0.9
Restaurant/Food Service	218	0.6
Public Area	511	1.4
Other	322	0.9
Unknown	146	0.4
Total	35,419	100.0



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 (penetrance) of reporting based on the population of each county. The average penetrance reported by poison centers nationwide is 8.8 exposures per 1,000 population. The UPCC had a penetrance of 17.1 in 1998.

County	Human Exposures	Percent of Calls	Penetrance
Beaver	79	0.2	13.6
Box Elder	667	1.9	16.4
Cache	1,317	3.8	15.7
Carbon	364	1.1	17.5
Daggett	10	0.1	13.4
Davis	3,923	11.1	17.5
Duchesne	217	0.6	15.2
Emery	197	0.6	18.3
Garfield	66	0.2	15.8
Grand	95	0.3	11.8
Iron	499	1.4	18.1
Juab	133	0.2	18.5
Kane	72	0.2	12.5
Millard	165	0.5	13.5
Morgan	69	0.2	10.1
Piute	16	0.1	11.6
Rich	21	0.1	11.7
Salt Lake	15,314	44.1	18.4
San Juan	99	0.3	7.3
Sanpete	247	0.7	11.9
Sevier	294	0.8	16.4
Summit	313	0.9	12.3
Tooele	451	1.3	14.5
Uintah	253	0.7	10.0
Utah	6,244	17.9	19.2
Wasatch	210	0.6	16.6
Washington	1,252	3.6	16.1
Wayne	24	0.1	10.2
Weber	2,213	6.4	12.3
Unknown, Utah	295		
Out of State	300		
Total	35,419		17.1

Reason for Exposure: The majority of poison exposures reported to the UPCC were unintentional and involved children orally exploring their environment. Ninety-nine percent (99.5%) of exposures in children less than six years of age were unintentional compared to only 50% in the age group of 13-19 years. The majority of exposures in adults were unintentional (70.8%). Adult unintentional exposures involved therapeutic errors (taking the wrong dose or wrong medication) as well as ocular and dermal exposures to household chemicals, pesticides and automotive products.

Reason for Exposure	Number	Percent
Unintentional:		
Unintentional General	23,174	65.4
Environmental	1,038	2.9
Occupational	691	2.0
Therapeutic Error	2,744	7.8
Unintentional Misuse	1,448	4.1
Bite/Sting	1,299	3.6
Food Poisoning	1,106	3.1
Unintentional Unknown	13	0.1
Total Unintentional	31,513	89.0
Intentional:		
Suicide	1,631	4.6
Intentional Misuse	671	1.9
Abuse	458	1.3
Intentional Unknown	24	0.1
Total Intentional	2,784	7.9
Other:		
Tampering	265	0.8
Malicious	120	0.3
Total Other	385	1.1
Adverse Reaction:		
Drug Reaction	590	1.6
Food Reaction	63	0.2
Other Reaction	64	0.2
Total Adverse Reaction	717	2.0
Unknown Reason	20	0.1
Total	35,419	100.0

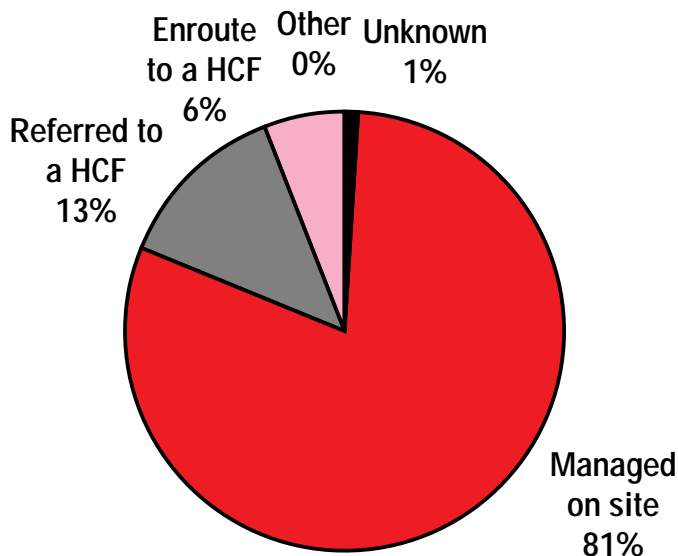


Medical Outcome: The majority of poison exposures are followed to a known outcome (74.2%). Less than 0.5% of poison exposures resulted in a major effect or fatal outcome. Serious adverse effects and death were more frequent in adults (71.7%) and when the reason for exposure was intentional (75%).

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 substance category involved in exposures in children less than six years of age was cosmetics and personal care items (12.5%); in children 6-12 years of age, it was foreign bodies, toys and miscellaneous non-drug items (8.2%); in 13-19 years of age, it was analgesics (17.3%); and in adults, it was bites and envenomations (9.9%). The following are the most common substance categories involved in all poison exposures reported to the UPCC:

Most Common Substances	Number	Percent
Analgesics	3,592	10.1
Household Cleaning Substances	3,534	10.0
Cosmetics & Personal Care Products	3,372	9.5
Plants	1,835	5.2
Cold and Cough Preparations	1,722	4.9
Food Products and Food Poisoning	1,455	4.1
Bites and Envenomations	1,449	4.1
Topicals	1,409	4.0
Foreign Bodies, Toys, Misc	1,379	3.9
Hydrocarbons	1,098	3.1

Management Site: The majority of poison exposures (81%) were managed on-site with telephone follow-up. Children less than six years of age were more likely to be managed on-site (90%) as compared to those age 13-19 years managed on-site (53%). Treatment in a health care facility was provided in 15.8% and recommended in another 2.2% of patients who refused the referral.



Of the 5,605 poison exposures that were managed in a health care facility:

- 79.0% were treated and released from the emergency department in an intensive care setting
- 4.7% were admitted for medical care in a non-intensive care setting
- 4.1% were admitted for psychiatric care
- 6.9% were lost to follow-up and/or left against medical advice





Health Care Facilities: The majority of patients (78%) who required treatment in a health care facility were treated in an acute care hospital. Other management sites included urgent care clinics (7.5%) and practitioner offices (14.6%). The following is the distribution of poison exposures managed in acute care hospitals in Utah:

Hospital	Number	Percent	Hospital	Number	Percent
Primary Children's Medical Center	323	7.5	Columbia Timpanogos Reg. Hospital	48	1.1
Cottonwood Hospital Medical Center	304	7.0	Bear River Valley Hospital	47	1.1
Utah Valley Medical Center	295	6.8	Tooele Valley Regional Medical Center	45	1.0
Alta View Hospital	277	6.4	Sevier Valley Hospital	44	1.0
Pioneer Valley Hospital	241	5.6	Columbia Ashley Valley Med. Center	42	1.0
Columbia St. Marks Hospital	218	5.0	Wasatch County Hospital	31	0.7
Jordan Valley Hospital	210	4.9	Sanpete Valley Hospital	30	0.7
McKay-Dee Hospital	199	4.6	Central Valley Medical Center	29	0.7
Univ. of Utah Hospitals and Clinics	197	4.6	Uintah Basin Medical Center	28	0.7
Dixie Regional Medical Center	192	4.4	Allen Memorial Hospital	27	0.6
Davis Hospital and Medical Center	165	3.8	Gunnison Valley Hospital	23	0.5
American Fork Hospital	161	3.7	Veterans Administration Med. Center	19	0.4
Columbia Lakeview Hospital	136	3.1	Beaver Valley Hospital	18	0.4
Logan Regional Hospital	134	3.1	San Juan Hospital	16	0.4
Columbia Castleview Hospital	116	2.7	Delta Community Medical Center	14	0.3
LDS Hospital	112	2.6	Fillmore Medical Center	12	0.3
Mountain View Hospital	101	2.3	Garfield Memorial Hospital	8	0.2
Columbia Brigham City Comm Hospital	80	1.9	Kane County Hospital	6	0.1
Valley View Medical Center	74	1.7	Milford Valley Memorial Hospital	5	0.1
Orem Community Hospital	67	1.6	Hill Air Force Base Hospital	4	0.1
Columbia Ogden Regional Med Center	66	1.5	Hospital, other state	81	1.9
Salt Lake Regional Medical Center	60	1.4	Unknown Utah Hospital	23	0.5

Education: As a result of the stable funding provided by the telephone surcharge, the UPCC hired a part-time Public Educator in July 1998. In 1998, UPCC staff members participated in 23 health and safety fairs at schools, community centers and local organizations. The UPCC also participated in the Injury Prevention Conference, Utah Issues Conference, Governor's Worksite Health Conference, Primary Children's Medical Center Issues in Pediatric Care Conference and in the Community Assistance and Resource Event Fair. Five presentations were given to local organizations. Poison prevention brochures, Emergency Action Cards and telephone stickers were distributed at these events as well as throughout the state. In addition to providing monthly poison prevention tips on KUTV (Channel 2), the UPCC's Director, Medical Director and Associate Medical

Director have participated in more than 25 interviews with the local media.

Governor Leavitt joined the staff of the UPCC in recognizing 1998 National Poison Prevention Week (NPPW) by signing a proclamation that encouraged communities to raise awareness of the dangers of unintentional poisonings and to take such preventive measures as the dangers warrant. Members of the Utah Pharmaceutical Association joined the UPCC in participating in NPPW by supporting a poison prevention display and distributing poison prevention public education materials at a local mall on March 21, 1998. Also during NPPW, every household in University of Utah family housing received a flyer reminding them that "Children Act Fast...So Do Poisons!"



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 students and clinical pharmacy residents rotate through the UPCC to further their education and experience in clinical toxicology.

As a visiting professor for the University of Texas at Southwestern Medical School, the UPCC's Medical Director Dr. Douglas Rollins presented a lecture on clinical toxicology to second year medical students. Dr. Rollins also lectured about poison control center operations at Gifu University in Japan. In addition, Dr. Rollins has been selected as the Medical Director of Doping Control for the 2002 Winter Olympics.

The UPCC gratefully acknowledges the following for their generosity in 1998:

**KATHERINE W. AND EZEKIEL R.
DUMKE FOUNDATION**

**Brenda and Darrell Brown
Martha Redeker and Robert Carter
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Kathleen and Steven Gift
Manfred and S. Karin Hechtle
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UNIVERSITY OF UTAH COLLEGE OF PHARMACY

UNIVERSITY OF UTAH

**Ford Motor Company
XECO, Inc.
PERS, Inc.**

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*CSPI denotes AAPCC Certified Specialist in Poison Information.