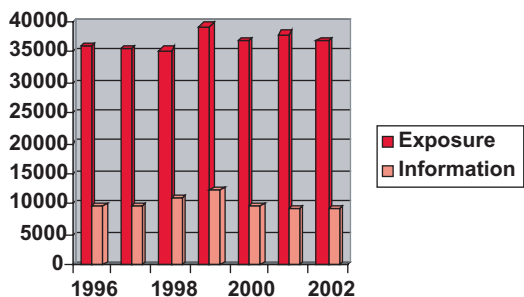




# Poison Control Center

# Annual Report

**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 1,037,000 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. The following is a breakdown of poison exposure calls and information requests for the past seven years.



**Mission:** The mission of the Utah Poison Control Center is to prevent and minimize adverse health effects from a poison exposure through education, service, and research.

The major objectives of the Utah Poison Control Center are as follows:

1. To provide 24-hour emergency telephone service to the public and health professionals of Utah for assistance during a poisoning emergency.
2. To maintain accreditation as a regional poison control center by the American Association of Poison Control Centers.
3. To be a state resource for accurate and up-to-date poison information and clinical toxicology consultation to the public, health-care professionals, emergency service personnel and public health officials.
4. To provide quality clinical toxicology and poison prevention education to health care professionals, emergency service personnel and the public.

5. To be a leader in Utah for education of health professionals and health professional students in clinical toxicology.
6. To conduct clinical toxicology, poisoning epidemiology and poison prevention research.
7. To reduce health care costs associated with poisoning exposures.
8. To participate in statewide disaster preparedness.

**Staff:** The UPCC is staffed twenty-four hours a day with registered pharmacists, nurses and physicians with additional training in clinical toxicology. These Specialists in Poison Information undergo a minimum of eight 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 (CSPI). Medical and clinical toxicologists are available to physicians and UPCC staff members for consultation at all times.

**Standards of Excellence:** The UPCC is nationally recognized as a Certified Regional Poison Control Center by the American Association of Poison Control Centers. In 1999, the UPCC received a five-year extension on its certification. The UPCC is one of 50 centers with such distinction. The American Academy of Pediatrics, the American College of Emergency Physicians and the American Medical Association endorse these standards.

**National and State Recognition:** Dr. Caravati is a member of the Board of Directors of the American Association of Poison Control Centers (AAPCC). He is the board liaison to the Council of Medical Directors and a member of the nominating committee. He is an Editor (Toxicology) for the Annals of Emergency Medicine. He is the American College of Emergency Physician's liaison to the AAPCC. Dr. Crouch is also a member of the Board of Directors of the AAPCC. She serves as co-chair of the CSPI Examination Committee. This committee is responsible for the national examination to certify specialists in poison information. She also sits on the State HRSA Bioterrorism Grant Advisory



Committee. Heather Hunter is a member of the board of directors of the Health Education Association of Utah. Heather is an active member of the Public Education Committee of the AAPCC and also serves on its nominations subcommittee.

**Advisory Board:** A UPCC Advisory Board continues to represent the interests of the public, university and state, and to provide fiscal oversight. The following individuals serve on the Advisory Board:

Chair: Jolie Coleman- Development Officer, College of Engineering, University of Utah

Vice Chair: Patrice Deane- BS Pharm, University of Utah College of Pharmacy Alumnus

- Diana I. Brixner, PhD, Chair, Department of Pharmacy Practice, University of Utah
- Bennion Buchanan, MD, MBA, FACEP, Emergency Department Director, Mountain West Medical Center, Representative, Utah Chapter of the American College of Emergency Physicians
- Tim Cosgrove, MA, Specialist, Child Advocacy, Primary Children’s Medical Center
- Larry Dew, CPA, Assistant Vice President for Health Sciences, University of Utah
- Carina Elsenboss, Program Manager, Lead Free Kids, Salt Lake Valley Health Department
- Trisha Keller, RN, MPH, Director, Bureau of Violence and Injury Prevention, Utah Department of Health
- John W. Mauger, PhD, Dean, College of Pharmacy, University of Utah
- Anthony R. Temple, MD, Vice President, Medical Affairs, McNeil Consumer Products Company
- Kim Wirthlin, BA, MPA, Assistant Vice President Legislative and Public Affairs, Health Sciences, University of Utah

**Data:** The UPCC participates in the American Association of Poison Control Center’s Toxic Exposure Surveillance System (TESS). TESS is the single largest database of 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.

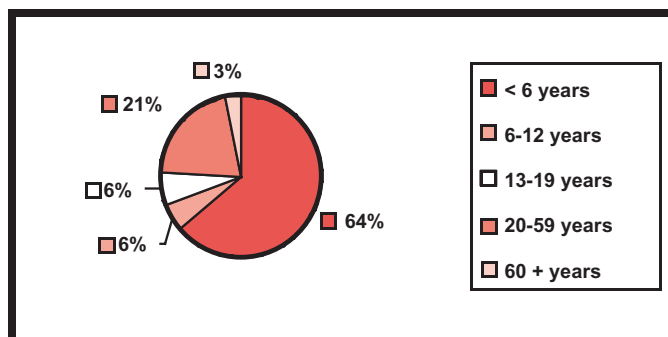
The UPCC is pleased to share with you the following highlights from 2002:

**Call Type:** The following chart breaks down the total number of calls to the UPCC during 2002. The majority of calls to the UPCC are actual poison exposures (37,976). The remaining calls are for information only. Information calls usually involve questions about proper use, storage and precautions regarding drugs and chemicals. Of the 37,976 poison exposures, 1,106 involved animals—mostly dogs and cats.

Call Type	Number	Percent
Exposure	37,976	80.6
Drug identification	4,300	9.1
Drug information	1,845	3.9
Poison information	1,312	2.8
Environmental information	685	1.5
Medical information	556	1.2
Substance Abuse	149	0.3
Prevention/safety information	96	0.2
Teratogenicity information	71	0.2
Other information	57	0.1
Confirmed Nonexposure	17	0.0
Occupational information	14	0.0
Other	62	0.1
<b>Total</b>	<b>47,140</b>	<b>100.0</b>

*The remainder of this report reflects the 36,870 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 particularly “at risk” for a poison exposure.





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 8.2 exposures per 1,000 population. The UPCC had a penetrance of 15.61 in 2002.

County	Human Exposures	Percent of Calls	Penetrance
Beaver	62	0.17	9.86
Box Elder	538	1.46	12.28
Cache	1507	4.09	15.79
Carbon	280	0.76	14.10
Daggett	18	0.05	19.65
Davis	3933	10.67	15.72
Duchesne	304	0.83	20.46
Emery	150	0.41	14.23
Garfield	62	0.17	13.48
Grand	87	0.23	10.27
Iron	553	1.50	15.57
Juab	127	0.35	14.69
Kane	60	0.16	10.07
Millard	151	0.41	12.24
Morgan	62	0.17	8.36
Piute	11	0.03	7.81
Rich	27	0.07	13.17
Salt Lake	14,757	40.02	15.91
San Juan	89	0.24	6.26
Sanpete	303	0.82	12.87
Sevier	295	0.80	15.34
Summit	340	0.92	10.55
Tooele	876	2.38	18.96
Uintah	310	0.84	11.93
Utah	7,065	19.16	17.75
Wasatch	248	0.67	14.72
Washington	1,489	4.04	14.80
Wayne	23	0.06	9.19
Weber	2,788	7.56	13.71
Out of State	355	0.96	
<b>Total</b>	<b>36,870</b>	<b>100.0</b>	<b>15.61</b>

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

Exposure Site	Number	Percent
Own Residence	33,040	89.6
Other Residence	1,589	4.3
Workplace	732	2.0
Public Area	499	1.4
Restaurant/Food Service	299	0.8
School	264	0.7
Health Care Facility	92	0.3
Other	253	0.7
Unknown	102	0.2
<b>Total</b>	<b>36,870</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 of exposures in children less than six years of age were unintentional compared to only 42.2% in the age group of 13-19 years. The majority of exposures in adults were unintentional (66.3%). 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 General	23,289	63.2
Therapeutic Error	2,908	7.9
Unintentional Misuse	1,602	4.3
Bite/Sting	1,461	4.0
Food Poisoning	1,146	3.1
Environmental	782	2.2
Occupational	552	1.5
Unintentional Unknown	7	0.0
<b>Total Unintentional</b>	<b>31,757</b>	<b>86.2</b>
Suicide	2,154	5.8
Intentional Misuse	913	2.5
Abuse	597	1.6
Intentional Unknown	13	0.1
<b>Total Intentional</b>	<b>3,677</b>	<b>10.0</b>
Tampering	260	0.7
Malicious	154	0.4
Withdrawal	6	0.0
<b>Total Other</b>	<b>420</b>	<b>1.1</b>
Drug Reaction	783	2.1
Food Reaction	88	0.2
Other Reaction	91	0.3
<b>Total Adverse Reaction</b>	<b>962</b>	<b>2.6</b>
Unknown Reason	54	0.1
<b>Total</b>	<b>36,870</b>	<b>100.0</b>

**Medical Outcome:** The majority of poison exposures are followed to a known outcome (55.9%). Less than 0.3% of poison exposures resulted in a major effect or fatal outcome. Serious adverse effects and death were more frequent in adults (80.6%) and when the reason for exposure was intentional (81.4%).



**Substance Categories:** The types of substances involved in poison exposures include 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 were cosmetics and personal care items (12.4%); in children 6-12 years of age, bites and envenomations (7.3%) were most prevalent; in 13-19 years of age, analgesics (19.3%) were most prevalent; and in adults, analgesics (11.3%) were most prevalent. Ibuprofen was the most common substance involved in a poison exposure, accounting for 1,440 (3.6%) exposures to the UPCC in 2002. The following are the most common substance categories involved in all poison exposures reported to the UPCC:

Most Common Substances	Number	Percent
Analgesics	4,143	10.2
Household Cleaning Substances	3,518	8.7
Cosmetics & Personal Care Products	3,451	8.5
Topicals	1,804	4.4
Cold and Cough Preparations	1,697	4.2
Foreign Bodies, Toys, Misc	1,648	4.1
Bites and Envenomations	1,538	3.8
Food Products and Food Poisoning	1,433	3.5
Antidepressants	1,360	3.4
Plants	1,295	3.2
<b>Total</b>	<b>21,887</b>	<b>54.0</b>

**Management Site:** The majority of poison exposures (80.5%) were managed on site with telephone follow-up. Children less than six years of age were more likely to be managed on-site (91.9%) as compared to those age 13-19 years managed on-site (46.6%). Treatment in a health care facility was provided in 16.2% and recommended in another 2.0% of patients who refused the referral.

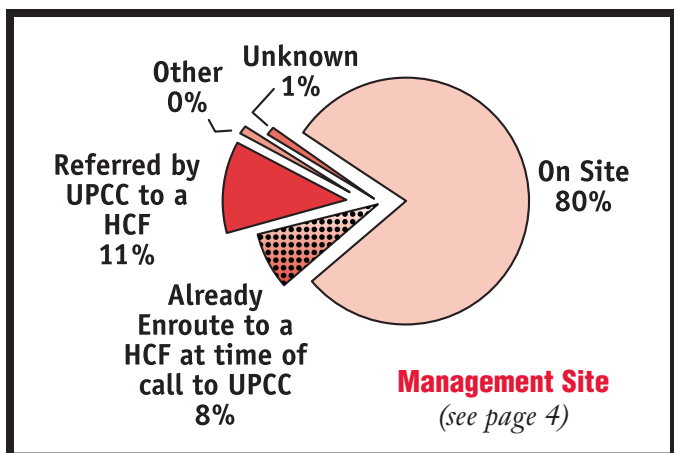
Of the 5985 poison exposures that were managed in a health care facility:

- 72.0% were treated and released from the emergency department
- 7.1% were admitted for medical care in an intensive care setting
- 5.9% were admitted for medical care in a non-intensive care setting
- 4.6% were admitted for psychiatric care
- 10.4% were lost to follow-up and/or left against medical advice

**Health Care Facilities:** The majority of patients (83.9%) who required treatment in a health care facility were treated in an acute care hospital. Other management sites included urgent care clinics (5.3%) and practitioner offices (12.1%). The following is the distribution of poison exposures reported to the UPCC and managed in acute care hospitals in Utah:

Hospital	Number	Percent in HCF
Primary Children's Medical Center	322	5.38%
Alta View Hospital	311	5.20%
Cottonwood Hospital Medical Center	302	5.05%
Pioneer Valley Hospital	288	4.81%
Jordan Valley Hospital	266	4.44%
Utah Valley Medical Center	263	4.39%
Univ. of Utah Hospitals and Clinics	260	4.34%
McKay-Dee Hospital	233	3.89%
Dixie Regional Medical Center	229	3.83%
St. Mark's Hospital	225	3.76%
American Fork Hospital	215	3.59%
Davis Hospital and Medical Center	212	3.54%
LDS Hospital	177	2.96%
Logan Regional Hospital	151	2.52%
Mountain West Medical Center	137	2.29%
Lakeview Hospital	127	2.12%
Mountain View Hospital	99	1.65%
Castleview Hospital	98	1.64%
Salt Lake Regional Medical Center	86	1.44%
Ogden Regional Medical Center	80	1.34%
Uintah Basin Medical Center	74	1.24%
Valley View Medical Center	73	1.22%
Brigham City Community Hospital	66	1.10%
Timpanogos Regional Hospital	64	1.07%
Ashley Valley Medical Center	59	0.99%
Orem Community Hospital	49	0.82%
Sevier Valley Hospital	48	0.80%
Heber Valley Medical Center	43	0.72%
Sanpete Valley Hospital	40	0.67%
Bear River Valley Hospital	35	0.58%
Veterans Administration Med. Center	29	0.48%
Delta Community Medical Center	23	0.38%
Beaver Valley Hospital	23	0.38%
Allen Memorial Hospital	20	0.33%
Kane County Hospital	20	0.33%
Central Valley Medical Center	16	0.27%
Gunnison Valley Hospital	16	0.27%
Cache Valley Specialty Hospital	15	0.25%
Fillmore Medical Center	13	0.22%
San Juan Hospital	12	0.20%
Milford Valley Memorial Hospital	11	0.18%
Garfield Memorial Hospital	10	0.17%
Hill Air Force Base	2	0.03%
Monument Valley	1	0.02%





**Public Education** Outreach activities targeted parents of children under age 6, ethnic populations, and seniors. Twenty-nine media interviews were conducted with UPCC staff. Governor Leavitt signed a proclamation encouraging increased community awareness of poison dangers during 2002 National Poison Prevention Week. The new national toll-free poison control number, 800-222-1222, was announced at a press conference in January 2002. Senator David Steele, Dr. Martin Caravati, Dr. Barbara Crouch, and Ms. Alyson O'Steen were the speakers for this statewide event. The press conference was held in conjunction with the national press conference held by the American Association of Poison Control Centers in Washington D.C.

**Poison Education Materials:** A total of 208,641 pieces of poison prevention education materials were distributed throughout Utah in 2002. These materials were distributed to individuals, state and local health departments, fire departments, hospitals, physician offices, schools, universities, church groups, scouts, businesses and county agencies throughout the state.

**Presentations:** The staff of the UPCC gave 57 presentations to Head Start classes, university and public school students, public health and health care professionals, and day care providers.

**Health and Safety Fairs:** The UPCC was represented in over 50 health and safety fairs in 2002. Nearly 100,000 people were reached through health and safety fairs and presentations. Examples of the fairs attended are:

- SAFE KIDS Fair
- Senior Expo
- The Junior League of Salt Lake's Community Assistance and Resource Fair

- Discover Financial Services Employee Health Fair
- Neighborhood House Fair, Salt Lake County
- Night Out Against Crime, Salt Lake & Utah Counties
- Heber Valley Medical Center Health Fair
- Greenbacks Single Mother Resource Fair
- Hispanic American Festival Resource Fair
- Forest Service Employee Health Fair

## Professional Education

**Publications:** The UPCC continues to distribute UTOX Update, a newsletter for health professionals throughout the state. The newsletter is published quarterly and is distributed statewide. Timely clinical toxicology related articles are included. Topics for 2002 included drug abuse in sports, marijuana, black widow spider envenomation and serotonin syndrome. Support for printing and distribution of the newsletter was provided by McNeil Consumer & Specialty Pharmaceuticals in 2002.

The following are a list of other publications involving UPCC staff in 2002:

Crouch BI. Role of poison control centers in disaster response planning. *Am J Health-Syst Pharm* 2002;59:1159-63.

Oderda GM, Crouch BI. Poisoning. In: Berardi RR, et al, (eds). *Handbook of Noprescription Drugs* 13th edition. Washington, DC. American Pharmaceutical Association, 2002.

**Presentations:** In addition, the following presentations were made to health professionals by the UPCC staff in 2002:

"Back to Basics: A guidebook for Discussing use of Complimentary Medicine in Children and Adolescents", Critical Issues Facing Children and Adolescents Conference, Salt Lake City, Utah, November 7, 2002. (B. Crouch)

"Clinical Toxicology Update for the Prehospital Provider", Prehospital Emergency Care and Crisis Intervention, Salt Lake City, Utah, November 16, 2002. (B. Crouch)

"Club Drugs", 2002 Utah Public Health Conference, Park City, Utah, April 26, 2002. (B. Crouch)

"Drugs of Abuse Update", Department of Emergency Medical Services, University of Utah Health Science Center, Salt Lake City, Utah, September 10, 2002. (EM. Caravati)

"Drugs of Abuse Update", Social Work and Crisis Program, University of Utah Health Science Center, Salt Lake City, Utah, November 13, 2002. (EM. Caravati)

"GI Decontamination and Toxidromes", University of Utah Emergency Department, Salt Lake City, Utah, Monthly 2002. (EM. Caravati)

"Inhalant Abuse, Hydroxychloroquine Toxicity Case Presentation", Department of Pediatrics Resident Conference, Primary Children's Medical Center, Salt Lake City, Utah, November 11, 2002. (EM. Caravati)



“Medical Emergencies: The Poisoned Patient”, Internal Medicine Residents Lecture Series, University of Utah Medical Center, Salt Lake City, Utah, July 2002. (EM. Caravati)

“Medical Emergencies: The Poisoned Patient”, Internal Medicine Residents Lecture Series, LDS Hospital, Salt Lake City, Utah, July 2002. (EM. Caravati)

“Medical Emergencies: The Poisoned Patient”, Internal Medicine Residents Lecture Series, Veteran’s Administration Hospital, Salt Lake City, Utah, July 2002. (EM. Caravati)

“Poison Center Update”, Springville Ambulance Services, Springville, Utah, October 2002. (B. Garrett)

“Poison Prevention”, Chemistry Department, University of Utah, June 2002. (B. Dahl)

“Serotonin Syndrome”, University of Utah Department of Psychiatry, Salt Lake City, Utah, March 6, 2002. (EM. Caravati)

“Train the Trainer Program”, Prevention and Emergency Nurses Association, Park City, Utah, April 26, 2002. (H. Hunter)

“UPCC Services”, University of Utah Health Sciences Day, Salt Lake City, Utah, October 2002. (B. Dahl)

“UPCC Services”, Jordan Valley Hospital Emergency Department, South Jordan, Utah, December 2002. (B. Garrett)

“UPCC Services”, University of Utah Hospital Emergency Department, Salt Lake City, Utah, December 2002. (B. Garrett)

“Update on Club Drugs”, Injury Prevention and Emergency Nurses Association, Park City, Utah, April 26, 2002. (B. Crouch)

“Update on Club Drugs”, Prehospital Emergency Care and Crisis Intervention, Salt Lake City, Utah, November 16, 2002. (B. Crouch)

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. In addition, the staff of the UPCC teach a didactic class in Clinical Toxicology which is required for the pharmacy students in their third professional year.

The UPCC gratefully acknowledges the following for their generosity in 2002:  
**MCNEIL CONSUMER & SPECIALTY  
 PHARMACEUTICALS**

And, for their support, the UPCC would also like to acknowledge:

UTAH DEPARTMENT OF HEALTH  
 UNIVERSITY OF UTAH HEALTH SCIENCES  
 UNIVERSITY OF UTAH COLLEGE OF PHARMACY  
 UNIVERSITY OF UTAH  
 Ford Motor Company  
 AFAB, LLC  
 PERS, Inc.

## **UTAH POISON CONTROL CENTER STAFF\*\***

### **Specialists in Poison Information**

Kathleen Anderson, PharmD

Brian Beck, PharmD

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Scott Marshall, PharmD

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Deborah Moss, RN, BSN, CSPI\*

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\*CSPI denotes AAPCC Certified Specialist in Poison Information.

### **Director**

Barbara Insley Crouch, PharmD, MSPH, ABAT

### **Medical Director**

E. Martin Caravati, MD, MPH, ACMT

### **Assistant Director**

Heather Bennett, MPA

### **Associate Medical Director**

Douglas E. Rollins, MD, PhD

### **Outreach Education Provider**

Heather Hunter, MS, CHES

Jason Gillman, Outreach Education Intern

### **Office Support**

Renate Hulen

\*\*Staff list includes current staff as well as staff that contributed to the Poison Center in 2002.