



# UTAH POISON CONTROL CENTER

COLLEGE OF PHARMACY  
L.S. SKAGGS PHARMACY INSTITUTE

# 2020

ANNUAL REPORT



**HEALTH**  
UNIVERSITY OF UTAH



*"I am so grateful to the Utah Poison Control Center and for the advice they gave us when my family and I experienced carbon monoxide poisoning. The specialist I talked to was very calming and because of him, we got right to the hospital right away and were able to get the treatment we needed."*

—Michelle  
Utah mother and caller



*"When the COVID crisis first hit, the attitude of everyone at the poison center was, 'What can we do to help with this?' That's always our attitude. Whenever we hear there is an impending public health problem approaching us, we start learning more about it so we can answer questions."*

—Kait Brown  
Specialist in Poison Information Supervisor  
Utah Poison Control Center



*"I can't say enough awesome things about everybody at the Utah Poison Control Center. They're so fast to respond and so helpful for us in the Emergency Department to identify medications and in consulting on the symptoms of exposure patients."*

—Cheryl Yang  
Fellow, Pediatric Emergency Medicine  
Primary Children's Hospital



*"The Utah Poison Control Center is an essential resource for improving overall community knowledge for prevention, but also for providing a community response that keeps people safe, which ultimately improves public health."*

—Natalie Valentino  
Clinical Psychiatric Pharmacist and Residency Director  
VA Hospital, Salt Lake City

# MESSAGE FROM THE DIRECTOR



2020 was a year like no other for the Utah Poison Control Center (UPCC)! When COVID-19 hit our state, public health officials turned to UPCC for help. With an immediate response needed, every single member of the UPCC team stepped up and worked outside of their regular role to support this huge undertaking. The role of UPCC in the public health infrastructure of the state has always been vital, but the pandemic certainly shined a light on this over the past year.

In this 2020 report, we highlight UPCC's role in Utah's response to the COVID-19 pandemic. The Utah Coronavirus Information Line continues to be managed by UPCC in collaboration with the Utah Department of Health (UDOH) to provide the public with the most up-to-date and accurate information about COVID-19. We talk with Jenny Johnson, past-chair of UPCC Advisory Board and Public Information Officer for UDOH. Jenny has been instrumental in ensuring that UPCC has the most accurate information to answer questions about COVID-19 and COVID-19 vaccinations. We also talk with our Assistant Director,

Heather Bennett, about how she quickly set up a remote work infrastructure to keep our staff safe and with our supervisors, Kait Brown and Candice Colby, about their experiences simultaneously managing the poison control hotline and the Coronavirus Information Line.

Also highlighted in the report is how the UPCC has maintained its mission "to prevent and minimize adverse health effects from a poison exposure through education, service, and research" during the pandemic. We feature a critical call to the poison center in 2020 that reminds us of the everyday dangers lurking in our homes...in this case, carbon monoxide. We also focus on UPCC's continued commitment to both public and professional education. Our education team partnered with our stakeholders in innovative ways to provide outreach education to the public throughout the pandemic. Our clinical team has continued to provide experiential toxicology education to future healthcare professionals during the COVID-19 pandemic, and we speak with two healthcare professionals about their past experiences while on rotation at the UPCC.

And last but not least, I want to express my sincere gratitude to our staff, friends, and supporters during my first year as UPCC director. Being involved in a large public health emergency was one of my worst fears, but your support and wisdom and our exceptional staff have allowed UPCC to continue to provide exceptional service to the state of Utah during the largest public health emergency any of us have ever experienced. Thank you for your ongoing support! I hope you enjoy the 2020 annual report.



—Amber Johnson, PharmD, DABAT  
*Director, Utah Poison Control Center*

COLLEGE OF PHARMACY  
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# IN SAFE HANDS

## MISSION

Our mission is to prevent and minimize adverse health effects from a poison exposure through education, service, and research.

In a poison emergency, every second counts. Free, expert, and confidential help is only a call away.

**1-800-222-1222**

Save this number to your phone.  
One day it may save you back.

As one of the first poison centers established in the United States, the Utah Poison Control Center (UPCC) has been helping to make Utah a safer place since 1954. Staffed by toxicology experts—including pharmacists, nurses, and physicians, the center is the first, last, and best line of defense against poison exposures and remains a vital resource for public health in Utah.

**The UPCC manages an average of 222 cases per day, providing free consultations 24 hours a day, seven days a week, 365 days per year!**

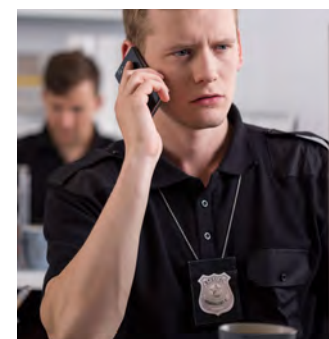
The UPCC provides Utah citizens from all 29 counties, including those who are deaf or hard of hearing and those who speak languages other than English, with instant answers about possible poison exposures, bug bites and stings, prescription drug reactions, contact with toxic plants and hazardous chemicals, and many other topics. The poison center's expert advice is faster and infinitely more reliable than internet searches. What's more, the UPCC consults with emergency department physicians, health care providers, and public health officials several times daily to help with exposure diagnoses and to provide treatment recommendations.

Over the past 66 years, the UPCC has provided more than 1.97 million consultations, reducing the burden on healthcare providers and saving countless lives in the process. And, since the majority of consultations can be managed over the phone, the poison center saves Utah families money and unnecessary visits to emergency departments.



## A HELP LINE FOR EVERYONE

The UPCC receives calls from a wide array of people on a broad spectrum of topics. From concerned parents calling about a child who has been exposed to a dangerous substance, to medical professionals seeking advice on a diagnosis, to public health officials concerned about environmental hazards, to law enforcement personnel looking to discuss potentially fatal drug combinations, the UPCC is available 24/7 to provide expert advice, fast and free of charge to people in all corners of the state.



# MAKING VALUABLE CONTRIBUTIONS TO **BENEFIT UTAH**



## HEALTH CARE PROVIDERS

Because the poison experts at the UPCC are able to manage the majority of poison cases outside of healthcare facilities, the time and resources of 911 dispatchers, emergency department staff, EMS staff, and other health care providers are freed up to focus on the critically ill. This is especially important in Utah's rural communities that have minimal health care resources.



## HOW THE UPCC PROVIDES VALUE TO UTAH HEALTHCARE FACILITIES

- Helps decrease crowding in emergency departments
- Minimizes unnecessary EMS ambulance runs
- Frees critical emergency medical staff for true emergencies
- Provides cost-effective treatment recommendations for hospitalized patients



## PUBLIC HEALTH

In addition to providing poison prevention and education services, the UPCC responds to public health emergencies and plays a critical role in disease surveillance, disaster readiness and response, and prescription drug epidemic response. Public health officials rely on the UPCC for its expertise and state-of-the-art resources when responding to public safety issues, including hazardous chemical spills, contaminated water supplies, product tampering, and of course, the COVID-19 pandemic. (See pages 8-11 for more information about the UPCC's response to COVID-19.)



## UTAH FAMILIES

The UPCC saves Utah families from  
**14,400 TO 16,800**  
unnecessary ED visits each year.



THAT NUMBER JUMPS TO  
**20,000 TO 24,200**  
when averted visits to  
physicians are included.



THIS MEANS UTAH  
CITIZENS SAVE  
**\$16.6 Million**  
TO  
**\$24.4 Million**  
each year in unneeded medical charges!

Disclaimer: This doesn't include physician charges, ambulance charges, or account for other potential health care savings, such as decreased hospital length of stay. So actual savings are likely much greater.





**Natalie Valentino**  
*Clinical Psychiatric Pharmacist and Residency Director  
VA Hospital, Salt Lake City*

## **NATALIE VALENTINO**

In 2017, when I was in the psychiatric pharmacy residency program, I did a two-week elective with the UPCC. I worked alongside students on a clinical rotation to learn how to respond to and manage toxic ingestions.

# AN EXPOSURE YOU CAN'T GET **ANYWHERE ELSE**

The Utah Poison Control Center (UPCC) is working hard to train the medical providers of today and tomorrow

**NV:** One of my primary roles during the course was to coordinate with hospitals across the state on patients the UPCC had sent to them—monitoring patient progress and providing further recommendations. It was an incredible experience to be able to learn how to access all the resources needed to assess a case, but also to be able to collaborate with the toxicologists. I remember thinking, “how do these toxicologists know so much about everything?” And beyond their experience and clinical expertise, they were able to respond so quickly and calmly to any situation, even when the caller was panicked.

**CY:** The training I received definitely provided me with more confidence when I’m in the ED and encounter a kid that’s ingested something. It’s helped me to better triage the level of severity depending on the medication or substance taken and to take a more systematic approach in thinking through the possibilities for the patient’s symptoms.

**NV:** The course was only two weeks, but I felt like I learned a year’s worth of information. It was my favorite rotation because I gained so much knowledge.

**CY:** I think having a solid knowledge base in pharmacology, knowing how chemicals may interact depending on how a person is exposed—whether it's through the skin, inhaled or swallowed—is super helpful, especially in the ED where we're seeing patients for the first time.

**NV:** I continue to have a relationship with the UPCC and encourage all of our residents at the VA to complete a rotation with them. I know the experience at the UPCC will provide them with an invaluable education and access to resources that will serve them no matter where their careers go.

**CY:** We often say in the ED that we should have the UPCC's phone number on every discharge handout because it's such a useful resource. They provide an awesome free service for everyone in the state. How often do you call a number and get straight to a person, somebody who can help you decide what to do next?

**NV:** It's quite evident that the toxicologists at the UPCC like teaching because their enthusiasm shines through. They're so effective at taking the knowledge they have and explaining it in a way that makes sense. They're always open to questions, but they're great at challenging learners to develop their own knowledge base.

**CY:** I think the UPCC is awesome and the toxicologists are great teachers. I learned so much from them on how they think through medication exposures. Honestly, as we're talking, I'm thinking I should do more rotations with the UPCC!

**NV:** Our residents consistently say the toxicology training at the UPCC is a great rotation, giving them, for lack of a better word, an exposure they can't get anywhere else.



**Cheryl Yang**  
*Fellow, Pediatric Emergency Medicine*  
*Primary Children's Hospital*

## **CHERYL YANG**

I did a one-month rotation with the UPCC and the toxicology group this past year as a fellow. During the rotation, I was able to help on a few patient calls. It was a great experiential learning exercise to get looped into actual calls because it helped me learn how to think through real life situations.

# OUTREACH EDUCATION

Due to the COVID-19 crisis, outreach education at the Utah Poison Control Center (UPCC) was anything but business as usual. (See pages 8-11 for more details on the effects of the pandemic on the UPCC.) Processes and procedures for all facets of the center had to be adjusted, including the approach to outreach education. With hundreds of events, seminars, and trainings cancelled, the UPCC and its local health department partners had to devise innovative ways to reach schools and communities across the state with poison prevention messages and materials.

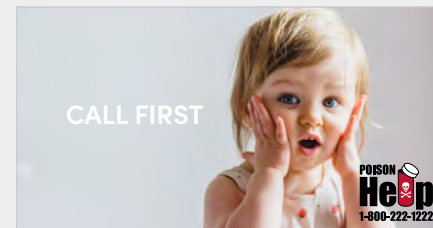
## Virtual Presentations Took Over For In-Person Events

The UPCC and local health department partners participated in a number of virtual events and health fairs throughout the state for a wide variety of audiences, including older adults, school children, employee groups, and families. Presenting the information via an online communication platform allowed the UPCC to maintain a connection with communities throughout the state and dispense valuable poison prevention information that people could access from the safety of their own homes.



## Social Media Became The Go-To Platform

Besides generating regular content and messaging for the center's Facebook, Instagram, and YouTube pages, the UPCC worked with a marketing agency to run an advertising campaign the first half of 2020 that allowed the center to spread poison prevention messages, including the phone number, to a statewide audience.



### Call the Poison Help Line:

**1-800-222-1222**

[poisoncontrol.utah.edu](https://poisoncontrol.utah.edu)

She's curious. You're cautious. So before you search online, CALL the Poison Control Help line.

Expert local medical professionals are here to help you know what to do next, 24/7.

Save 1-800-222-1222 to your favorites TODAY. Just in case.

UPCC's poison prevention messages were displayed over **5.5 million** times on social media in the seven months of the campaign, which led to **7,585 clicks**—with clicks increasing steadily each month of the campaign.



The campaign also generated an increase of more than **5,700 engaged** Facebook users, leading to a huge rise in likes, comments, and shares.





## Drive Thru Events

Drive thru events were another innovative way the UPCC was able to provide outreach education in a socially distant manner. UPCC materials were included in giveaway bags at drive thru events in Glendale, Rose Park, West Valley City, and other neighborhoods along the Wasatch Front. These events were an important way to reach out to underserved communities and were effective because they allowed people to pick up a variety of healthcare-related materials, including poison prevention information, without having to leave their vehicles.





## Material Distribution

With the normal channels for material distribution shut down due to the pandemic, the UPCC and its local health department partners had to get creative to find ways to get poison prevention materials into the hands of the community. In addition to the drive thru events, other ways materials were distributed include:

- Magnets and brochures were provided at schools when students came to pick up their homework packets or sack lunches and materials were provided to school nurses to distribute to students and their parents.
- Poison prevention materials and information were provided to hospitals, clinics, and home health workers to distribute to patients.
- Magnets and medication safety information were distributed to senior centers for clients to take home when they picked up lunch.
- Materials were provided to WIC offices to distribute to parents of young children.
- UPCC videos were given to various social service agencies to educate clients.
- Poison prevention materials were included with other health and safety information that was then distributed to the community via *Health Fair In a Bag* events.
- Poison prevention materials were distributed to state parks to have available for visitors.



UTAH POISON CONTROL CENTER  
EMERGENCY ACTION FOR POISONING  
**1-800-222-1222**

**Poison in the eye**  
Rinse the eye(s) with lukewarm (not hot) water for 15 minutes. Blink as much as possible while rinsing the eye. Do not force eyelids open. Do not use eye drops.

**Inhaled poison**  
Quickly get the person to fresh air. Avoid breathing fumes. If inside, open doors and windows to circulate air.

**Poison on the skin**  
Remove contaminated clothing. Rinse affected skin continuously with water for 15 minutes. Then wash gently with soap and water, and rinse again.

**Swallowed poison**  
Do NOT induce vomiting.  
**MEDICINE:** Do not give anything by mouth unless advised by the poison control center or doctor.  
**CHEMICAL OR HOUSEHOLD PRODUCT:** If the person is awake and is able to swallow, quickly give a glass of water (2-8 ounces). Do NOT follow first aid instructions on product label—they may be wrong.



Jenny Johnson  
Public Information Officer, UDOH



Heather Bennett  
Assistant Director, UPCC

# A YEAR LIKE **NO OTHER**

**Jenny Johnson:** In February, when the pandemic first hit, the Utah Department of Health (UDOH) was quickly inundated with thousands of phone calls. We knew our systems internally could not handle that kind of call volume. Our line couldn't even handle the volume of calls coming in from healthcare providers alone, asking, *"Should I be testing people?" "How do I test them?" "Are the test results accurate?" "Do we need quarantines?"*

Questions were coming in from all over the state, so we made a phone call to the Utah Poison Control Center (UPCC) and asked for help for what we thought would be a few weeks. None of us had any idea what we were getting into.

**Heather Bennett:** I remember it was Friday when we received a call from UDOH asking us to set up a call center to answer COVID-19 calls. We had the weekend to design a plan to get that line up and running. By the following Tuesday, March 3, 2020, the line went live.

**Kait Brown:** The attitude of everyone at the poison center was, *"What can we do to help with this?"* Whenever we hear of an impending public health problem, we start learning more about it so we can answer questions. Even if we weren't activated as a line, we still would have worked to know as much as possible about the virus so we could answer the questions coming in from the public.

**HB:** Everything felt crazier because in addition to staffing the new COVID line we were reacting to COVID ourselves and how to meet the needs of our staff who were now working during a pandemic. So much about COVID was unknown.

**KB:** It was kind of ironic, everybody else was scaling back and going away from the office, while we needed more people to come in to handle the calls.





Lieutenant Governor Deidre Henderson visits the UPCC during the COVID-19 pandemic.

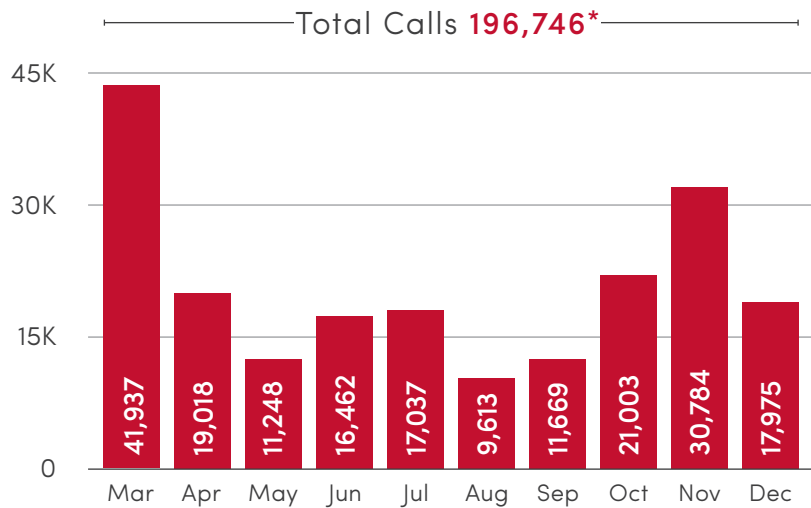
We found ourselves trying to figure out how we could get as many people in the call center and still maintain some social distance.

**Candice Colby:** The first couple of weeks, we were able to use our own staff along with rotating students, but when the shutdown happened, it included shutting down the rotations for all of the health sciences. Any student who went to a site on campus for their learning no longer could go there. We're talking nursing students, pharmacy students, medical students, physician assistants, you name it. But all these programs still needed their students to get a certain number of clinical hours to graduate, so the poison center came in and was able to fill that need. We were able to help these students and they were able to help us and the state by staffing the COVID line.

## STUDENT VOLUNTEERS FOR THE COVID RESPONSE

58	Doctor of Pharmacy (PharmD) Students
49	Doctor of Nursing Practice Students
46	Physician Assistant (PA) Students
9	Public Health Students
8	Medical (MD) Students
2	Medical Residents
2	PharmD Residents/Fellow

## COVID LINE CALLS 2020



\*These 196,746 calls to the Coronavirus Information Line were in addition to the 80,992 poison exposure/information cases handled by the UPCC in 2020.

**KB:** One of the biggest challenges was coming up with a way to get all the new people trained and answering a phone within an hour. It essentially was, *“Here’s how you use the computer. Here’s how you use the phone. Here’s where you find resources. The supervisors are here for you, now go get ‘em!”*

**HB:** And we were doing all this not knowing how long it would go on. The general thought was it would be about eight weeks.

**JJ:** It’s crazy to think back to all the things that happened early in the response, including what we call *“Jazz Night”* when Jazz all-star Rudy Gobert tested positive. Calls from all over the world started to pour in. People at the game were freaking out.

**HB:** We definitely did more than 10 times our normal call volume that night. And that’s when I think we all realized it was real. So many people called, worried that they may

have been exposed in some way. But it was good to learn that people were calling because they wanted to do the right thing. They didn’t want to get other people sick.

**CC:** That whole week the calls kept pouring in. We have what we call the queue, so that when someone calls, it rings out loud to alert us to get ready to take the call. That week, the ringing never stopped. The whole place was filled with the ringing phone and people running around trying to find answers.

**HB:** It was nonstop. People were sleeping at the center overnight, so we bought these cots and set up an emergency sleeping area. And this was also the time when there was a scare on food and other supplies. Shelves were being vacated in grocery stores, so we searched for shelf stable food items to have on hand when staff couldn’t leave work.

On March 20, we completed set up for admin staff to work at home. A week later, we started setting up poison specialists to remotely answer poison emergency calls. We had never run a fully remote call center before but we succeeded and this created more space in the office to implement social distancing. At this point, the COVID line became a second call center staffed by public health volunteers, students and staff.

**KB:** A lot of the decisions we made in sending staff home and the way we organized things was for a short term shut down. But then it kept going and going.

**JJ:** Thankfully as the weeks turned into months, the UPCC never wavered in their support answering calls 24/7 on COVID. They have been there every step of the way, truly an invisible army



behind the state's COVID response. And it's even more impressive because people don't understand how taxing it is on hotline operators emotionally, physically, and mentally day in and day out to answer all these calls—sometimes getting abused by callers—but they do it happily.

**KB:** You have to remember that we were also still taking our normal poison center calls about exposures, so we had to get creative in ways we could maintain the integrity of our regular poison center line. Heather was pivotal in coming up with different solutions, so our poison specialists could still manage their poison patients without delay, as those calls are often emergencies. Because of the pandemic, everyone was at home, so we saw a spike in calls on our “normal” line regarding disinfectants and hand sanitizer and kids getting into household items.

**JJ:** I remember one day in the fall I got a call from Amber Johnson, the Director of the UPCC, and she said, *“I actually have a real poison issue for you today.”* It was about marijuana edibles mistakenly handed out as candy at a food pantry. In that moment, it hit me that even with all the craziness of COVID, the UPCC was still doing their normal job. They were still taking poison calls on top of the thousands of COVID calls.

**CC:** One of the things that puts us in a unique position to help is how quickly we are able to identify trends. We know immediately the things the public has concerns about and are able to pass this information along to UDOH so they can plan a response. Our real-time documentation of information helps to shape public health messaging.

**JJ:** No other agency or organization does it like the UPCC. No one else can document like the UPCC. No one feeds us real time information like the UPCC. And nobody has customer service like the UPCC. They are truly remarkable. So on behalf of the Utah Department of Health, and the state of Utah, we would like to thank the UPCC. We are so grateful for what they have done during the pandemic. Honestly, there's no way we could have done this without the UPCC hotline. No way. They have been awesome.



Kait Brown  
Specialist in Poison Information  
Supervisor, UPCC



Candice Colby  
Poison Information Provider  
Supervisor, UPCC

## IN 2020, THE UTAH POISON CONTROL CENTER HANDLED **80,992 CASES\***

The Utah Poison Control Center manages an average of 222 new cases per day. The number of cases received in 2020 was higher than previous years due to the COVID-19 crisis. Many of the cases this past year were about issues related to the pandemic. The center also received numerous cases from individuals seeking information about the proper use, storage, and precautions regarding drugs and chemicals. But most of the cases are from concerned Utahns and health professionals regarding a poison exposure.

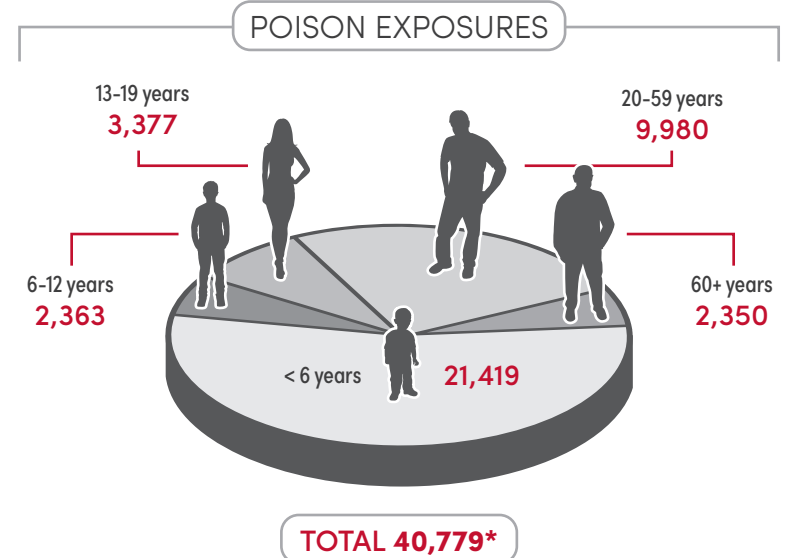
### CASE BREAKDOWN

Exposure	Number	Percent
Human Exposures	40,779	50.3
Medical Information	33,360	41.2
Animal Exposures	1,201	1.5
Drug Information	862	1.1
Poison Information	571	0.7
Environmental Information	248	0.3
Drug Identification	153	0.2
Confirmed Non Exposure	36	0.0
Other	3,782	4.7

*\*These 80,992 poison exposure/information cases were in addition to the 196,746 calls handled by the Coronavirus Information Line.*

## AGE DISTRIBUTION

The danger of poison exposure is greatest among Utah's children. Children are naturally curious and orally explore their environment. This means that children less than six (especially 12 months through two years) are particularly at risk for poison exposure.



*\*This total number includes the following human exposures:  
Unknown age: 227 | Unknown child: 123 | Unknown adult: 940*

## SUBSTANCE CATEGORIES

The types of substances involved in poison exposures include products available in the home, workplace, and the natural environment. Because children under six represent such a large proportion of poison exposures, it is important to note the substances most common in this group.

### RANKING OF TOP 10 SUBSTANCE CATEGORIES

CHILDREN UNDER AGE SIX			
	TYPE OF SUBSTANCE	#	%
1.	Household Cleaning Substances	2,848	13.3%
2.	Cosmetics and Personal Care Products	2,804	13.1%
3.	Analgesics (Pain Medications)	1,950	9.1%
4.	Vitamins and Minerals	1,639	7.7%
5.	Dietary Supplements/Herbals/Homeopathic	1,585	7.4%
6.	Foreign Bodies, Toys, Misc.	1,455	6.8%
7.	Topical Preparations	984	4.6%
8.	Antihistamines	854	4.0%
9.	Gastrointestinal Preparations	620	2.9%
10.	Plants	598	2.8%

ALL AGES*			
	TYPE OF SUBSTANCE	#	%
1.	Analgesics (Pain Medications)	5,271	12.9%
2.	Household Cleaning Substances	4,133	10.1%
3.	Cosmetics and Personal Care Products	3,611	8.9%
4.	Antidepressants	2,725	6.7%
5.	Vitamins and Minerals	2,241	5.5%
6.	Sedatives, Hypnotics, and Antipsychotics	2,095	5.1%
7.	Dietary Supplements/Herbals/Homeopathic	2,091	5.1%
8.	Foreign Bodies, Toys, Misc.	1,962	4.8%
9.	Antihistamines	1,952	4.8%
10.	Cardiovascular Drugs	1,518	3.7%

*More than one substance was involved in 11.1% of ALL human exposures.*









## REASON FOR EXPOSURE

The majority of poison exposures reported to the Utah Poison Control Center (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 31% in the age group of 13–19 years. The majority of exposures in adults were unintentional (60%). Adult unintentional exposures involved therapeutic errors (taking the wrong dose or wrong medication) as well as eye and skin exposures to household chemicals, pesticides, and automotive products.

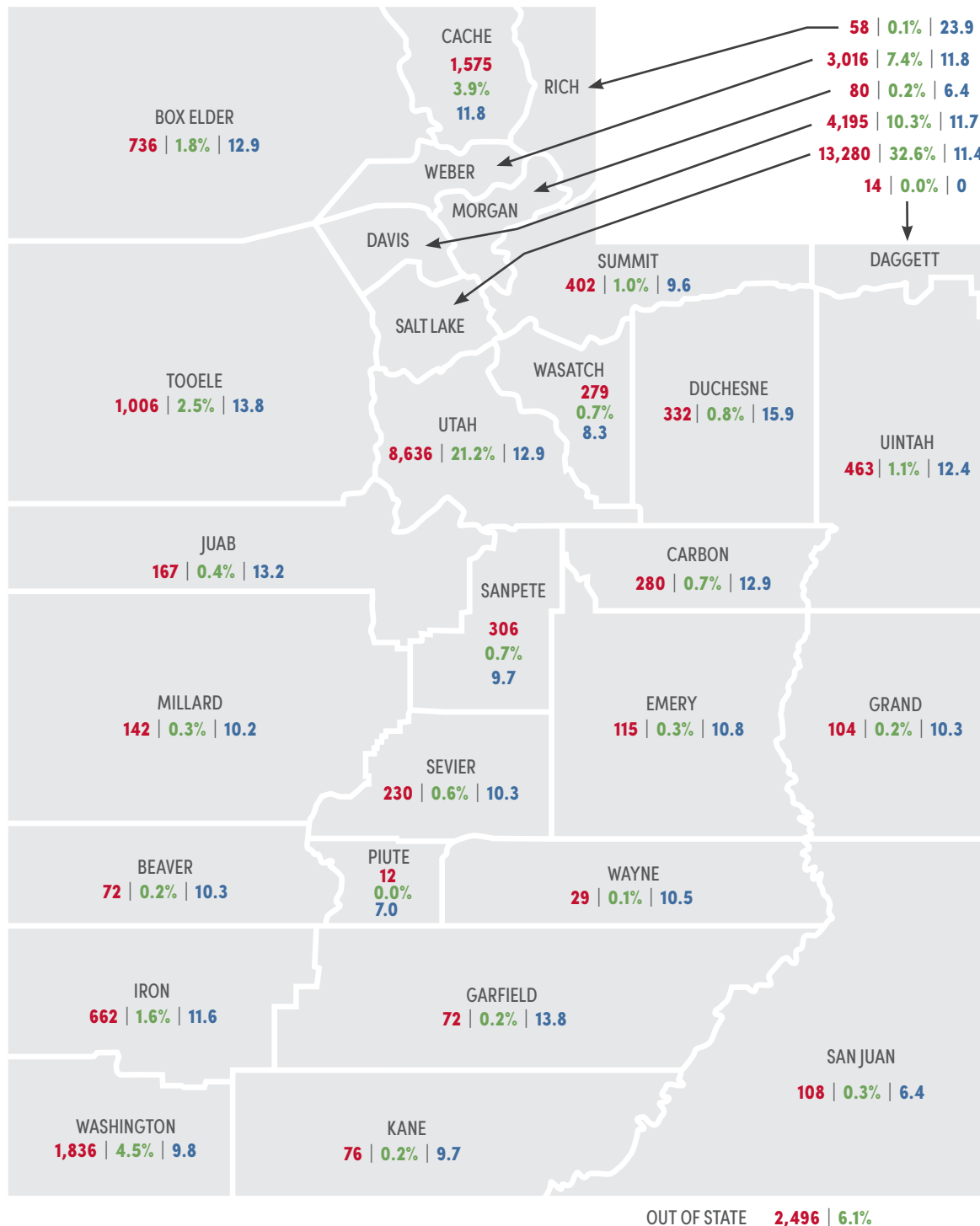
Reason for Exposure	Number	Percent
Unintentional General	20,326	49.8%
Therapeutic Error	5,217	12.8%
Unintentional Misuse	3,469	8.5%
Environmental	1,579	3.9%
Occupational	556	1.4%
Bite/Sting	510	1.2%
Food Poisoning	479	1.2%
Unintentional Unknown	36	0.1%
<b>Total Unintentional</b>	<b>32,172</b>	<b>78.9%</b>
Suicide	4,348	10.7%
Intentional Misuse	1,331	3.3%
Abuse	691	1.7%
Intentional Unknown	209	0.5%
<b>Total Intentional</b>	<b>6,579</b>	<b>16.2%</b>
Drug Reaction	793	1.9%
Food Reaction	87	0.2%
Other Reaction	152	0.4%
<b>Total Adverse Reaction</b>	<b>1,032</b>	<b>2.5%</b>
Tampering	570	1.4%
Malicious	142	0.3%
Withdrawal	73	0.2%
<b>Total Other</b>	<b>785</b>	<b>1.9%</b>
Unknown Reason	211	0.5%
<b>TOTAL</b>	<b>40,779</b>	<b>100%</b>

## EXPOSURE SITE

The UPCC reports 40,779 human poison exposures in 2020, the majority of which occurred in homes. Use of child-resistant closures and other safety precautions help, but even in homes with safety measures in place, the majority of exposures occur when the product is in use.

	Own Residence	36,367	89.2%
	Other Residence	1,268	3.1%
	Public Area	785	1.9%
	Workplace	700	1.7%
	School	168	0.4%
	Health Care Facility	122	0.3%
	Restaurant/Food Services	56	0.1%
	Unknown/Other	1,313	3.3%
<b>TOTAL</b>		<b>40,779</b>	<b>100%</b>





## COUNTY DISTRIBUTION

With **40,779** human exposure cases in 2020, poison exposures are clearly a statewide concern.

The poison center was consulted on cases that originated from all 29 counties. Penetrance is the rate of reporting based on the population of each county (rate is per 1,000 population). The Utah Poison Control Center's penetrance of 12.7 is about twice the national average. The high utilization likely translates to more cost-effective, quality care for Utah residents.

- Human Exposures
- Percentage
- Penetrance

## EXPOSURE MANAGEMENT AND TREATMENT

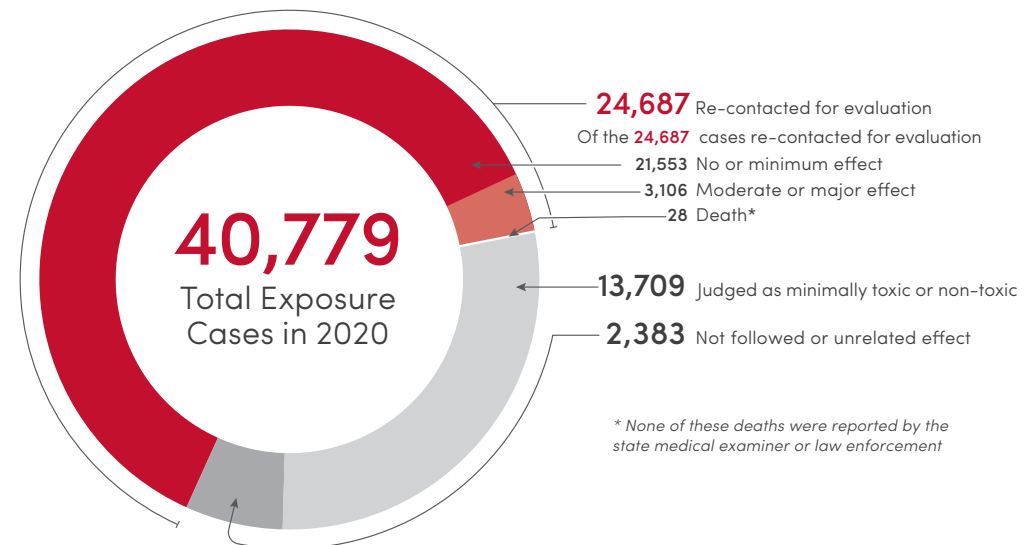
Due to the expertise and efficiency of the Utah Poison Control Center (UPCC) call center staff, the majority of poison exposures (75%) were managed on site with telephone follow-up. Children less than six years old are even more likely than older children or adults to be managed on site (93%). Treatment in a health care facility was provided in 21.8% of the exposures and recommended in another 1.4% of patients who refused the referral.

The UPCC was involved in the care of 8,888 poison exposures that were managed in a health care facility. The health care facilities included all acute care hospitals throughout the state as well as urgent care clinics and doctor's offices.

### Breakdown of 8,888 cases managed in a health care facility

Management Site	Number	% of All Exposures
Treated and released from ED	4,703	11.5%
Admitted to a non-critical care unit	1,261	3.1%
Admitted to a psychiatric facility	1,254	3.1%
Admitted to a critical care unit	961	2.4%
Lost to follow-up and/or left AMA	709	1.7%
<b>Total</b>	<b>8,888</b>	<b>21.8%</b>

## MEDICAL OUTCOME



## A NETWORK OF PARTNERSHIPS

The UPCC partners with both public and private entities and organizations across the state to reach Utah citizens where they live and work. From the **University of Utah College of Pharmacy** to the **Utah Department of Health** and **local health departments**, to city and county **law enforcement agencies**, **health care providers**, **hospitals**, and **medical personnel**, the UPCC continues to broaden its reach by partnering with those who share the goal of **keeping Utah safe**.



*"I don't think the public quite understands the expertise that exists within the poison center and why the UPCC is such an incredible resource. We rely on them all the time at the Utah Department of Health. They not only provide medical oversight, they follow up with callers. If they can't figure out an issue based on the information they've been given, they go get more information. They figure it out and call the person back. That just doesn't happen anywhere else. No one else is willing to put in that time, to sit down and talk with people and really truly help them."*

— Jenny Johnson  
Public Information Officer  
Utah Department of Health



CUSTOMER SATISFACTION  
GUARANTEED

99.3%

Rated the specialists as good or excellent  
in terms of courtesy, knowledge,  
understanding, and helpfulness.

99.4%

Rated the UPCC overall as  
good or excellent.

99.5%

Will consult the  
UPCC again







## BREATHING **EASIER**

I woke up one morning feeling lightheaded and a little off. When my oldest daughter, Cydnee, got out of bed, she mentioned that she, too, felt horrible, like she needed to throw up. I figured maybe we had all caught a bug or something, but my son, Alex, didn't feel too bad, so I took him to school. When I got home, my other daughter, Aubree, was also feeling sick. Even the dogs were barking nonstop, which added to the odd feeling of the morning.

With everyone feeling so bad, Cydnee decided to do a little research when she got to work. A short time later, she called and asked if I thought we might have carbon monoxide poisoning. I initially disregarded it, but Cydnee was insistent that I check. Our detectors weren't working, so I ran to the store to get one. When I plugged in the new detector, it started beeping immediately.

I called my husband, Ruben, but he said not to worry about it and suggested I open some windows, so the house could air out. That didn't cut it for Cydnee. She insisted I call poison control. In doing her research on carbon monoxide poisoning, she knew that calling the Utah Poison Control Center (UPCC) would be the best course of action.

So I called and the guy who answered told me to go straight to the emergency room. He was kind, but very assertive. He never put me on hold or had to look anything up. You could tell he was very educated in this situation and he made it clear I needed to follow his instructions.

He had me shut the furnace down, get the dogs out of the house, and round up my family from work and school and get to the hospital. He even called the hospital, so when we arrived at the emergency room, we were rushed back with no waiting. Within 30 seconds, a doctor was putting us on oxygen. When they took our blood, Ruben and I both had levels of 19, Cydnee had 15, Aubree 14, and Alex 12. I asked them how close we had come to not waking up and I was told that having a level over 20 is when people start to lose consciousness.

After our assessment, we were transferred in ambulances to Intermountain Healthcare for a four-hour treatment in a hyperbaric chamber. It was the weirdest thing we've ever done. It feels like getting shut inside a bank vault. The air pressure slowly goes up, kind of like when you're in an airplane, and it gets really cold.

After our time in the chamber, we all seemed okay except for Cydnee. She had to do hyperbaric treatments for ten days because she continued to have extreme headaches. We found out that if you don't treat carbon monoxide poisoning, it can cause brain damage.

I am so grateful for the UPCC and their advice. They even followed up to check in on us and to make sure we updated the furnace. Until this happened to my family, I wouldn't have thought to call the poison center for something like this, so I'm glad my daughter did the research. I'm a huge advocate for the UPCC now—and for carbon monoxide detectors.

# THANK YOU

The Utah Poison Control Center would like to offer a sincere thanks to our wonderful staff and generous supporters. We'd also like to give a huge thank you to the individuals and organization volunteers who stepped forward to answer COVID-19 information calls, including: UDOH, University of Utah College of Pharmacy, University of Utah College of Nursing, and University of Utah School of Medicine. It was an usual year to say the least and the efforts of all these amazing people will not be forgotten.

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