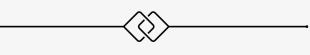






## **70 YEARS OF SERVICE**



## www.azpoison.com

## A YEAR IN REVIEW

Welcome to the 2024 Arizona Poison and Drug Information Center (AZPDIC) Annual Report. This report summarizes the activities of the AZPDIC during our 70th year of service.

The following report will summarize 2024 activities, publications, and data that support our goals of statewide poisoning prevention, public and patient education, and research.

Our phones are answered by specially trained and certified pharmacists who are supported by physicians, educators, student pharmacists, technicians, and genetic counselors who are committed to protecting Arizonans in their time of need.

AZPDIC prides itself on providing free, confidential and immediate treatment recommendations for poisonings to the public and healthcare providers 24/7/365.

## **DIRECTOR'S NOTE**

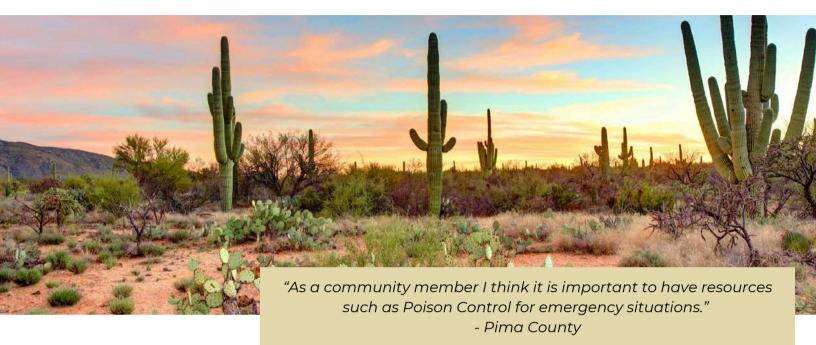
When the boom of household cleaners and other chemical products hit the market in the 1950s, a rise in pediatric poisonings came along with it. Arizona pediatricians, hospital staff, and parents, were increasingly desperate for help and turned to the University of Arizona College of Pharmacy for help. Dr. Albert Picchioni, the founder of the Arizona Poison Control program, led the charge to create a master file of poisons and their treatments. He and his team then developed a database of index cards with everything they learned to distribute to healthcare providers around the state, and with that, our poison center was born.

While life has dramatically changed since 1955, some things have stayed the same including our commitment to protect Arizonans from poisonings. We couldn't do that without our dedicated and highly trained pharmacists, physicians, and health educators whose work you will read all about in this report.

While we've accomplished so much over the last 70 years, what's important is our ability to stay open for another 70. This can't be done without proper awareness of our center's impact on Arizona's residents and healthcare system. We hope that after reading this report, you will have a better understanding of our efforts and that we earn your support for years to come.

Thank you, Steve Dudley, PharmD, DABAT

# PATIENT TESTIMONIALS



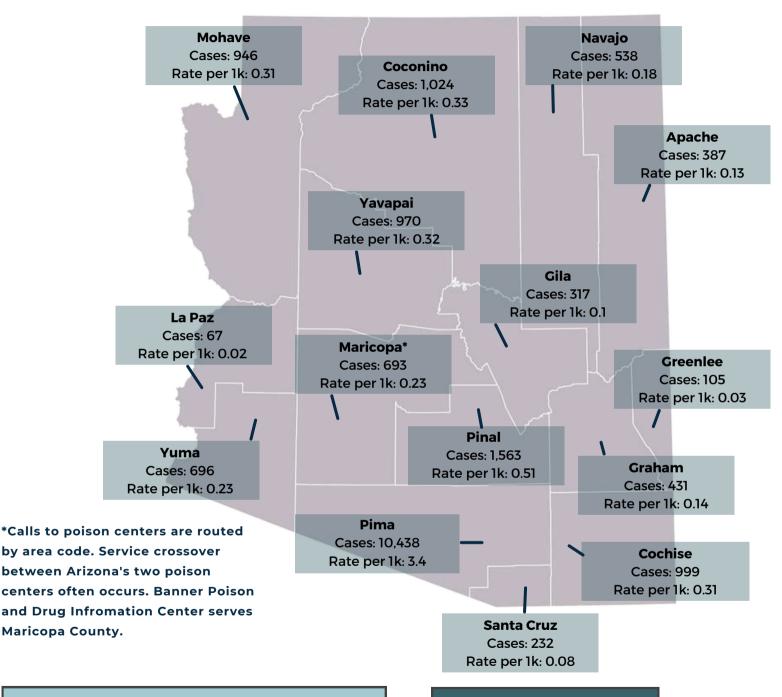
# "In an emergency type of situation or when I have been personally uncomfortable with something for myself or with a family member, it has kept me out of the hospital, kept me informed and helped me to feel comfortable with a plan of care or what to watch out for in those scary types of situations. The Poison Center has provided me with comfort, and I appreciate having the resource and knowing that it is available." **-Pinal County**

"The place where we live uses weed killer monthly on the grounds. I was outside with my toddler and she had put rocks in her mouth that were covered with the weed killer. I did not know what to do, I was freaking out. I have not had to call before. The girl who answered the phone was very, very helpful. She had me take some time to see how my daughter was going to react. She did some research and called me back with the info and checked on my daughter. She also called again later in the day to check on her. I have never called before and was nervous about it and what to expect. It was great customer service and I really appreciate you being there for me and calming me down." **-Pima County** 

"Me and my wife accidentally gave our daughter too much medication. We were panicking, googling, doing our own research and it only made things so much worse. That is when we decided to call Arizona Poison Control, the staff was super friendly and amazing. They heard my story and were able to look up other resources and other cases that were similar to what I was experiencing. They gave me tips on how to handle it and how to monitor the situation. It was very comforting, they even reached back out after a couple hours after giving me advice on how to monitor it. They really seemed interested in everything that was going on, asked more questions. Really brought peace of mind to me and my wife. It was late at night, not super late but at that time there were not a lot of people to reach out to." **-Cochise County** 

# AZ CASES BY COUNTY





The AZPDIC managed 22,420 cases in 2024, with the month of August experiencing the most cases.

Cases by county include human cases, animal cases, and information requests.

Rate per 1k provides a breakdown of cases per 1,000.

Arizona Cases

Human Cases: 17,356 Animal Cases: 719 Information Cases: 4,334 Unspecified: 1 Out of State Calls: 910

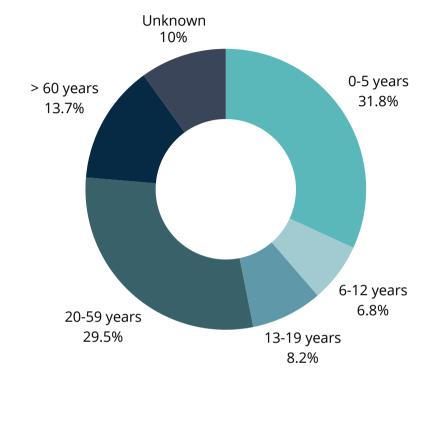
## EXPOSURES BY AGE AND GENDER

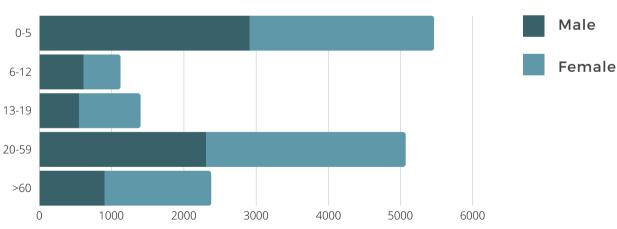
## By Age

Children remain at the highest risk for poisonings. In 2024, a majority (31.8%) of exposure cases occurred among children ages 0-5.

Closely following were adults ages 20-59 which accounted for 29.5% of exposure cases.

Children between the ages of 6 and 12 years old accounted for the least (6.8%) amount of exposures.





## By Age & Gender

When comparing exposures by age and gender, a male predominance was found among cases involving children <12 years. However, this gender distribution was reversed in teenagers and adults, with females comprising the majority of reported exposures. Suicide attempts make up 58.6% of all female teenage exposure but only 31.3% of all male teenage exposures--this contributes to the reverse in gender distribution of cases seen in teens.

### **AZPDIC**

D	: 0	<i>.</i>

Of the 17,356 human exposure cases, 62.03% of cases originated from a place of residence. Additionally, our specially trained pharmacists

In 2024, there were 17, 356 human cases reported to the Arizona Poison and Drug Information Center. Exposure cases peaked during the month of August

with 1.620 cases.

routinely manage calls from doctors and nurse to assist in the management of hospitalized patients. Calls from health care facilities (hospitals, doctor's offices, urgent care centers, clinics, etc.) were the second highest with 28.08%.

Beyond residences and health care facilities, the AZPDIC also received calls from schools (1.62%). By contacting our center, school nurses are able to ensure the safety of children with guidance from our specialists.

Exposure sites classified as "other" include, public areas, restaurants/food services locations and other/unknown sites.



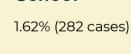
Other/Unknown

7.67% (1,330 cases)

Workplace

0.60% (105 cases)









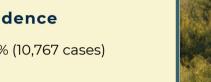
### Residence 62.03% (10,767 cases)

**Healthcare Facility** 

28.07% (4,872 cases)

**CALLER SITE** 

**STATISTICS** 







## SUBSTANCES INVOLVED IN POISONINGS

TOP 10	NUMBER/PERCENT	TOP 10 NON-DRUG	NUMBER/PERCENT
DRUG SUBSTANCES	NOMBER/PERCENT	SUBSTANCES	NOMBER/PERCENT
Analgesics	2,101 / 23.16%	<b>Bites &amp; Envenomations</b>	1,503/16.95%
Antidepressants	997 / 10.99%	Cleaning Substances	1,248 / 14.08%
Antihistamines	904 / 9.9 <b>7</b> %	(Household)	
Cardiovascular Drugs	899 / 9.91%	Cosmetics/Personal	945 / 10.66%
Sedatives/Hypnotics/	761 / 8.39%	Care Products	
Antipsychotics		Alcohols	828 / 9.34%
Anticonvulsants	569 / 6.27%	Foreign Bodies/	720 / 8.12%
Hormones &	560 / 6.17%	Toys/Misc.	
Hormone Antagonists		Pesticides	455 / 5.13%
Dietary Supplements/	556 / 6.13%	Fumes/Gases/Vapors	437 / 4.93%
Herbals/Homeopathic		Chemicals	416 / 4.69%
Stimulants & Street	488 / 5.38%	Plants	369 / 4.16%
Drugs		Misc. Foods	282 / 3.18%
Vitamins	410 / 4.52%		

The tables above list the most common drug and non-drug substances involved in human exposures reported to the AZPDIC in 2024. In these cases, a patient may be exposed to more than one substance.

The top drug substance found in human exposures was analgesics, followed by antidepressants. The top non-drug substance found in human exposures was bites & stings, followed by cleaning substances.







# SUBSTANCE EXPOSURES BY AGE

The tables below list the most common substance exposures by pediatric age group. In ages 0-5, poisonings are predominantly accidental (88% in 2024). While accidental poisonings do make up a percentage of the exposures in children aged 6-12, poison control also begins to see a trend of intentional misuse and suicide attempts within this age group.

The most common substances found in pediatric (0-5 year-old) exposures were household cleaning substances, cosmetics/personal care products, and analgesics.

The most common substances found in 6-12 year-old exposures were foreign bodies/toys/miscellaneous, bites and stings, and analgesics.

Top 10 Child Substances (0-5 yrs)	Substance Cleaning Substances (Household) Cosmetics/Personal Care Products Analgesics Foreign Bodies/Toys/Misc Dietary Supplements/Herbals/Homeopathic Vitamins Antihistamines Topical Preparations Plants Bites & Envenomations	Number / Percent 625 / 11.17% 549 / 9.81% 534 / 9.54% 461 / 8.24% 381 / 6.81% 267 / 4.77% 236 / 4.22% 206 / 3.68% 170 / 3.04% 165 / 2.95%
Top 10 Child Substances (6-12 yrs)	Substance Foreign Bodies/Toys/Misc. Bites & Envenomations Analgesics Cosmetics/Personal Care Products Antihistamines Dietary Supplements/Herbals/Homeopathic Fumes/Gases/Vapors Stimulants & Street Drugs Cleaning Substances (Household) Cardiovascular Drugs	Number / Percent 130 / 10.81% 121 / 10.06% 88 / 7.32% 66 / 5.49% 65 / 5.4% 57 / 4.74% 53 / 4.41% 50 / 4.16% 48 / 3.99% 45 / 3.74 %







## SUBSTANCE EXPOSURES BY AGE CON'T

	Substance	Number / Percent
<b>^</b>	Analgesics	351 / 24.53%
	Antidepressants	218 / 15.23%
	Antihistamines	<b>191 / 13.35%</b>
	Bites & Envenomations	87 / 6.08%
Top 10 Teen	Sedative/Hypnotics/Antipsychotics	82 / 5.73%
Substances	Alcohols	80 / 5.59%
(13-19 yrs)	Stimulants & Street Drugs	76 / 5.31%
	Cardiovascular Drugs	<b>69 / 4.82</b> %
	Anticonvulsants	65 / 4.54%
Ļ	Cold & Cough Preparations	57 / 3.98 %
	Substance	Number / Percent
Ŷ	Analgesics	1,026 / 13.67%
	Bites & Envenomations	951 / 12.67%
	Alcohols	647 / 8.62%
Top 10 Adult	Antidepressants	641 / 8.54%
Substances	Cardiovascular Drugs	614 / 8.18%
(>20 yrs)	Sedative/Hypnotics/Antipsychotics	582 / 7.75%
(>20 yrs)	Anticonvulsants	405 / 5.40%
	Cleaning Substances (Household)	402 / 5.36%
	Antihistamines	364 / 4.85%

The tables above list a continuation of the most common substance exposures by age group. These tables provide insight on the difference between teen and adult exposures.

The most common substances found in teen exposures were analgesics, antidepressants, and antihistamines.

The most common substances found in adult exposures were analgesics, bites and stings, and alcohols.







## SUBSTANCE EXPOSURES BY AGE (UNKNOWNS)

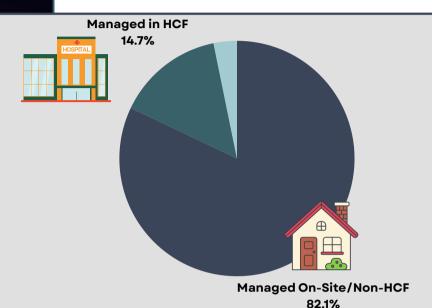
Poison Control services are always confidential. This, along with other factors, may result in unreported or unknown age. This page details the substance exposures in different unknown age groups: Unknown 19 years and below, Unknown 20 years and above, and a general Unknown Age category.

The top substances mirror some of those in the known age group categories, located on previous pages.

	Substance	Number / Percent	
Ŷ	Foreign Bodies/Toys/Misc.	11 / 13.25%	
	Pesticides	10 / 12.05%	
	Misc. Foods	<b>8 / 9.64</b> %	A CONTRACTOR
Top 10	Other/Unknown Nondrug Substances	<b>8 / 9.64</b> %	
Substances	Cleaning Substances (Household)	5 / 6.02%	
(Age Unknown,	Electrolytes & Minerals	<b>4 / 4.82</b> %	
<=19 years)	Adhesives/Glues	<b>4 / 4.82</b> %	a season that the
is years,	Bites & Envenomations	<b>4 / 4.82</b> %	
	Fumes/Gases/Vapors	<b>4 / 4.82</b> %	
ķ	Heavy Metals	3 / 3.61 %	
	Substance	Number / Percent	
Ŷ	Bites & Envenomations	168 / 11.10%	
	Cleaning Substances (Household)	109 / 7.20%	
	Analgesics	98 / 6.48%	
Top 10	Fumes/Gases/Vapors	93 / 6.15%	
Substances	Pesticides	80 / 5.29%	
(Unknown	Cardiovascular Drugs	<b>66 / 4.36</b> %	
Adult, >=20	Hormones & Hormone Antagonists	<b>58 / 3.83</b> %	
years)	Chemicals	57 / 3.77%	
Jours,	Antimicrobials	<b>49 / 3.24</b> %	
Å	Misc. Foods	47 / 3.11 %	
	Substance	Number / Percent	
Ŷ	Pesticides	118 / 15.84%	
	Misc. Foods	70 / 9.40%	
	Plants	64 / 8.59%	
Top 10	Bites & Envenomations	53 / 7.11%	Part And
Substances	Analgesics	41 / 5.50%	
Age Unknown)	Cleaning Substances (Household)	31 / 4.16%	
	Foreign Bodies/Toys/Misc.	26 / 3.49%	
	Antimicrobials	<b>20 / 2.68</b> %	
	Stimulants & Street Drugs	19 / 2.55%	
	Sedative/Hypnotics/Antipsychotics	19 / 2.55 %	

## MANAGEMENT SITE







Managing cases safely at home saves millions of dollars in unnecessary health care costs compared to managing patients in a healthcare facility (HCF). This allows for more efficient and effective use of limited health care resources.

In 2024, 82.1% of all cases originating outside of a healthcare facility were able to be safely managed onsite which was primarily at a site of residence.

Of the cases managed onsite, 55.57% were pediatric cases. Whereas adults 20+ comprised the majority (58.42%) of cases managed at a healthcare facility.

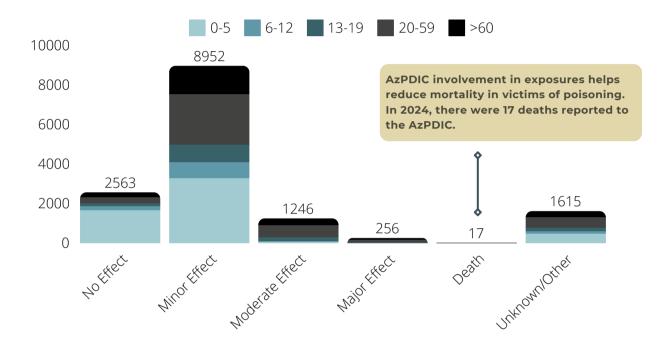
Of the cases managed in a healthcare facility:

- 36.36% were treated/evaluated and released
- 8.37% were admitted to a psychiatric facility
- 4.13% were admitted to a critical care unit

The expertise of AZPDIC specialists and toxicologists improved patient care provided by physicians, nurses, and pharmacists in Arizona hospitals.

# **MEDICAL OUTCOMES** & COST SAVINGS

## MEDICAL OUTCOMES



## COST SAVINGS

By calling poison control, Arizona residents can receive professional care from toxicologists, specialists in poison information, and more. Often times, poison center staff advise that exposures can be safely treated at home, saving Arizona residents a trip to the hospital.

In 2024, the AZPDIC kept 87% of home exposure cases at home, saving Arizona an estimated \$73.993 million\* in unnecessary medical expenditures. Managing cases safely at home saves millions of dollars in unnecessary healthcare costs and allows for more efficient and effective use of limited healthcare resources.

\*Savings were found based on the average charge of \$7,625 for a treat and release emergency room visit involving poisonings in Arizona. For more information, visit https://datatools.ahrq.gov/hcupnet/





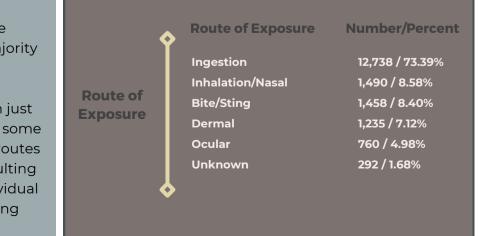
# CIRCUMSTANCE & ROUTE OF EXPOSURE

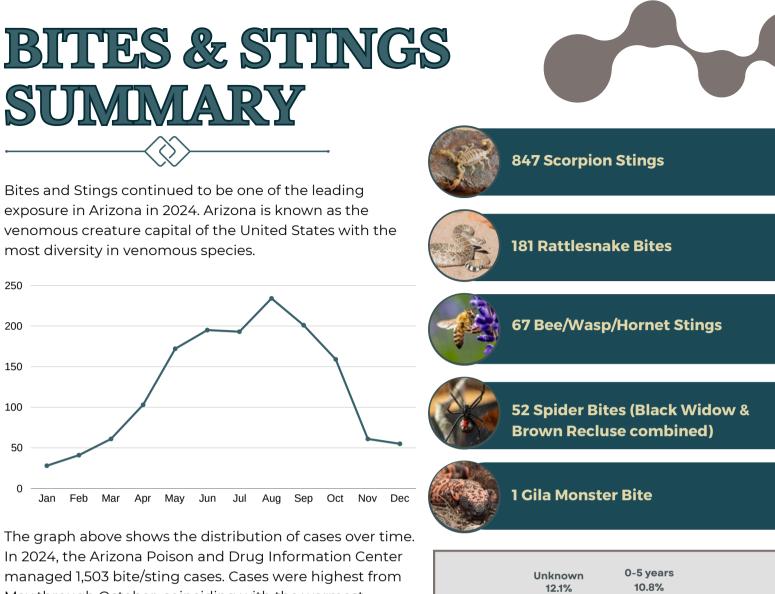
The reason category for most human exposures was unintentional (73.9%), including: unintentional general (36%), bite/sting (8%), and therapeutic error (15%). Intentional exposures accounted for 18.8% of human exposures. Suicidal intent was suspected in 13% of cases.

UNINTENTIONAL	UNINTENTIONAL EXPOSUR	RES:
73.9% (12,834)	<ul> <li>general misuse of products</li> <li>occupational (workplace)</li> <li>environmental</li> </ul>	<ul><li>bites/stings</li><li>therapeutic errors</li><li>food poisoning</li></ul>
INTENTIONAL	INTENTIONAL EXPOSURES	:
18.8% (3,268)	<ul><li>misuse</li><li>abuse</li><li>suicide attempts</li></ul>	
ADVERSE REACTION	ADVERSE REACTIONS TO: • drugs	
-		
REACTION	<ul><li> drugs</li><li> food</li></ul>	NS:

### **Route of Exposure**

In 2024, Ingestion was the route of exposure in a majority of cases managed by the AZPDIC. Inhalation and bites/stings followed with just over 8% of cases each. In some cases there are multiple routes of exposure per case, resulting in the percentage of individual routes of exposure equaling over 100%.

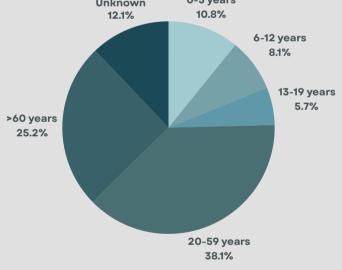




May through October, coinciding with the warmest months of the year. The months of July, August, and September were high exposure months with 193, 234, and 201 cases, respectively. The most frequently reported bite/sting exposure was scorpion stings with 847 cases.

Approximately 90% of bite/sting exposures occurred at a place of residence. Additionally, over half (58.5%) of all the bite/sting cases were able to be safely managed at home. However, all rattlesnake bites must be managed in a healthcare facility. Medical outcomes for bites and stings are typically good, with only 1.73% resulting in a major effect (symptoms that are life-threatening or resulted in significant residual disability). Exposures that resulted in major effects were those related to rattlesnakes (73%), scorpion stings (23%) and jellyfish (3%).

Bites and stings cases were most frequently reported in the following counties: Pima (53.49%), Pinal (7.72%), Cochise (6.19%), and Yavapai (4.59%).

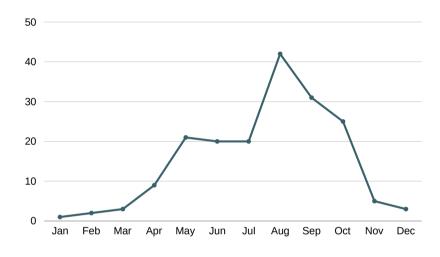


### **Cases by Age**

A majority of cases (38.1%) occurred among adults between the ages of 20 & 59. Adults over the age of 60 comprised 25.2%. When comparing cases between males and females, the majority (52.96%) occurred among females.

# RATTLESNAKE BITES

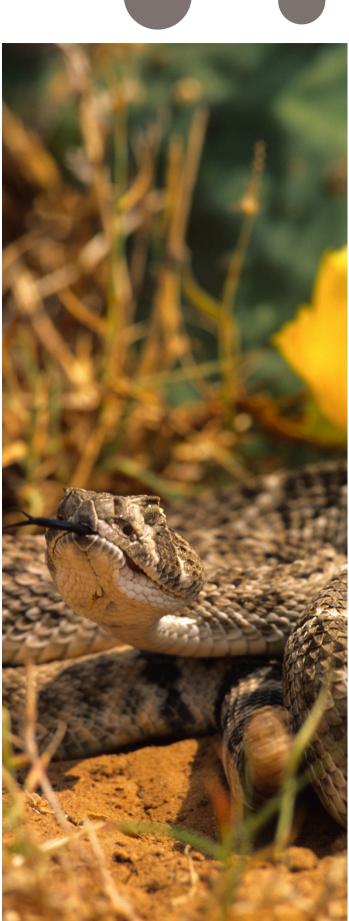
The AZPDIC specializes in treating envenomations, predominantly rattlesnake bites. Rattlesnake envenomations were the second most reported bite/sting exposure in 2024.



The graph above illustrates the number of cases over time. Rattlesnake bites increased by 4% from 175 bites in 2023 to 182 in 2024. Cases peaked during the months of August (42 cases) and September (31 cases).

There was a male predominance with men accounting for 66.48% of cases while 33.52% of cases occurred among women. In general, most rattlesnake bites occurred in adults. When comparing specific age groups, adults aged 60-69 years comprised the majority (23.08%) of cases. Children aged 6-12 years made up the majority (3.85%) of pediatric rattlesnake bite cases.

Of the 182 bites, 75.9% occurred at a site of residence. Rattlesnake bite cases occurred more frequently in the following counties: Pima (107 cases), Cochise (22 cases), and Mohave (12 cases). All rattlesnake bites require treatment at a hospital. A majority (61.54%) were admitted to a critical care unit while 18.13% were treated and released. Medical outcomes were typically moderate with pronounced symptoms and extensive treatment required.



## PUBLIC EDUCATION HIGHLIGHTS

### **OUR TARGET**

**1** Increase public knowledge of potential poisons in day-to-day life.

Decrease the number of poisonings
 happening regularly by equipping the public with poison prevention skills.

5 Spotlight the specializations of AZPDIC staff and the center's valuable services.

### **2024 OUTREACH STATISTICS**

- 35,257 materials distributed between mailed materials and public outreach events
- 66 events held in two different counties attended by over 40,000 community members
- 35 Presentations, 24 Health Fairs

### PROGRAM HIGHLIGHTS Autumn Safety Events

October is a busy time for our educators! Various Fall events, such as National Night Out and the Spooktacular Safety Fair, bring in a large number of families seeking fun Halloween activities along with safety and prevention resources.

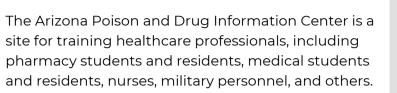




### **TWO IS BETTER THAN ONE!**

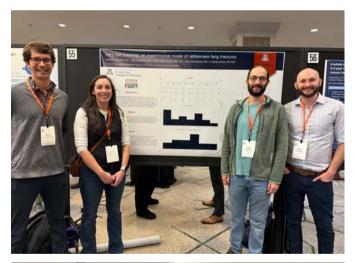
Having two educators makes it possible to be in two places at once, helping to further spread the word about how to prevent a poisoning and when to contact the poison center.

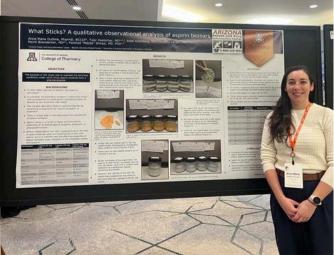
# RESEARCH HIGHLIGHTS



### Poison Center clinical education topics included, but were not limited to:

- Field management recommendations for venomous snakebites of military personnel.
- Circumstances of rattlesnake bites occurring in Sabino Canyon over the last 20 years; guidance for park rangers.
- Toxicosurveillance and clinical research represent a novel model for future poison centers, one capable of providing sustainable funding.





### **Publications/Posters:**

Nielsen VG, Stratton DL, Hoelscher TM, Nakamura HL, Cornelison MM, Rushton WF, Smelski GT. Antivenom Administration After Rattlesnake Envenoming in Arizona Does Not Directly Diminish Pain. Toxins. 2024; 16(12):521. https://doi.org/10.3390/toxins16120521

Robishaw-Denton J, Ramirez J, Bahadir A, Smelski G. Myocardial infarction during treatment of Crotalinae envenomation: A case report. Toxicon. Published online September 19, 2024. doi:10.1016/j.toxicon.2024.108105

Mitchell, C., Smelski, G., Schmid, K., Roland, M., Christenberry, M., D. Ellingson. (2024). Characterization of patients with a snakebite presenting to healthcare facilities and reported to poison and drug information centers—Arizona, 2017–2021. Clinical Toxicology, 1–8. https://doi.org/10.1080/15563650.2024.2402937

Noel Rengering, Thom Maciulewicz, William Rushton, Geoffrey Smelski. Beyond the Bite: Chronic Pain Following Crotalinae Envenomation. Poster Presented at Annual North American Congress of Clinical Toxicology 2024, September 19-23.

Smelski, G., Watkins, S. A., Wilson, B., Ramirez, J., Mazda Shirazi, F., & Walter, F. G. (2024). Evaluation of the International Society on Thrombosis and Haemostasis definition of major bleeding in Arizona rattlesnake bites. Clinical Toxicology, 1–5. https://doi.org/10.1080/15563650.2024.2385671

Stephen A Klotz, Geoffrey T Smelski, Sarah A Watkins, F Mazda Shirazi, Infections following rattlesnake envenomation and use of antibiotics, Transactions of The Royal Society of Tropical Medicine and Hygiene, 2024;, trae044, https://doi.org/10.1093/trstmh/trae044

Hannah Nakamura, Thomas Maciulewicz, Jennifer Ramirez, Bryan Hughes, David R. Axon, Farshad Shirazi & Geoffrey Smelski (2024) Twenty-five years of suspected rattlesnake encounters in Arizona, Clinical Toxicology, DOI: 10.1080/15563650.2024.2380439

Guthrie AM, Smelski G, Maciulewicz T, Shirazi FM. A case report of mis-snaken identity: when misdiagnosis really bites. Toxicon. 2024 Jul 17:108032. doi: 10.1016/j.toxicon.2024.108032. Epub ahead of print. PMID: 39029562.

Walker HL, Roland M, Dudley S, Komatsu K, Weiss J, Dillard J, Lin Hl, Rust L, Plummer T, Berg R, Everett S, Chang A, Yeh M, Daniel J, Brady S. Notes from the Field: Severe Health Outcomes Linked to Consumption of Mushroom-Based Psychoactive Microdosing Products - Arizona, June-October 2024. MMWR Morb Mortal Wkly Rep. 2025 Jan 9;74(1):14-16. doi: 10.15585/mmwr.mm7401a3. PMID: 39773926; PMCID: PMC11709130.

# MEDIA HIGHLIGHTS

- 187 Instagram posts with a 14,659 reach, a 31.5% increase from that of 2023
- Gained 122 new followers to surpass 1,000 total followers on Instagram
- 206 Facebook posts with a total reach of 10,912 and 11,269 content views
- 55 new Facebook followers
- In 2024, 31,654 users visited the AZPDIC website yielding 56,208 page views. The most visited pages include those with information on breastfeeding, when to call the poison center, and poisonous plants.

The most popular post on Facebook (right) was a post about the AZPDIC's collaborative efforts with the FDA, CDC and other poison centers to manage an outbreak of illness resulting from Diamond Shruumz chocolate bars. This post reached 1,617 people and was shared 7 times.



azpoisoncenter Original audio

too close to it.

azpoisoncenter Are rattlesnakes aggressive? The answer is NO! Dan Massey, reptile curator of the Arizona Poison and Drug Information Center, explains the difference between aggressive and defensive behavior in rattlesnakes. Rattlesnakes don't set out with the intention to bite, attack or chase people. Rather they will respond defensively if they sense danger, are startled, stepped on, or provoked in any way. Notice that while Dan walks around the snake it does not chase him and only strikes when Dan steps

...

Note Dr. Massey's mention of a three-foot bubble around the snake, if you encounter a rattlesnake take 3-5 large steps back to create a safe distance between you and the snake.

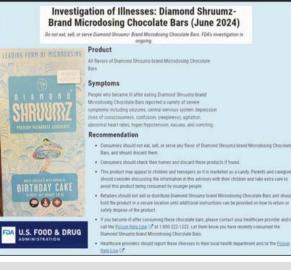
\*Dan holds the proper licensing to own and work with these snakes. This demonstration is for educational purposes only. Do not attempt to interact with wild animals.

#rattlesnake #venomoussnake #crotalusatrox #westerndiamondback #venom #snakebite #herpetology #desertwildlife #wildlife #desertlife #toxicology Edited - 20w



### Find us online:





The most popular post on Instagram was a video (left) of our reptile curator discussing rattlesnake behavior. This post reached 1,912 people, received 79 likes, and 47 shares.

### **AZPDIC**

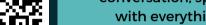
## PREVENTION **RESOURCES**

One of the main goals of the Arizona Poison Center is poisoning prevention. To reach as much of the community as possible, we have numerous prevention resources available, including: free prevention materials ready to be shipped to you, two different monthly newsletters, websites with additional resources, and a free opioid overdose prevention training program.

Subscribing to our newsletters or ordering poisoning prevention materials are great ways to keep up to date on how to best keep yourself safe from poisoning or envenomation.



News From the Pit (NFTP) aims to stimulate conversation, spread awareness, and discuss challenges with everything from avoiding snake encounters to clinically managing a life-threatening envenomation.



SUBSCRIBE TO NFTP

### THE POISON PREVENTION SCRIPT

This monthly newsletter authored, by our Community Outreach Coordinators, aims to provide you with information on preventing poisonings and envenomations.

### SUBSCRIBE TO TPPS

**Opioids and You Training:** 

A free, introductory course to equip you with knowledge on how to recognize the signs of an overdose and how to provide Naloxone.

Our cannabis-specific website with all things cannabis safety, legality, community resources,, and more.

**PAGE 18** 



shipped directly to you or your

place of business.

\*Note: we will only ship materials

to the AZ counties we serve.





azmedmj.com:





lette Subscribe



## **AZPDIC STAFF**

DIRECTOR Steven Dudley, PharmD, DABAT

MEDICAL DIRECTOR Mazda Shirazi, MS, MD, PhD, FACEP, FAAEM, FACMT

> OPERATIONS MANAGER Alex Jasensky, PharmD, CSPI

MOTHERTOBABY DIRECTOR Chris Stallman, MLS, MS, CGC

#### COMMUNITY OUTREACH COORDINATORS Cori Cantin, BSPH, CHES

Heather Doss, MPH, MS

EXECUTIVE ASSISTANT Elizabeth Johnson

RESEARCH ASSISTANT Jennifer Ramirez, PharmD

POISON INFORMATION PROVIDER Jennifer Lafferty, CPhT

### **TOXICOLOGY FELLOWS**

Adiel Aizenberg, MD Anne Marie Guthrie, PharmD BCCCP Hannah Nakamura, PharmD Jonathan Meadows, DO, MS, MPH, CPH, DTM Tyler Hoelscher, MD

TOXICOLOGISTS Steven Dudley, PharmD, DABAT Miguel Fernandez, MD Robert French, MD, MPH Diane Hindman, MD Nic Hurst, MD, MS Jaiva Larsen, MD Thomas Maciulewicz, PharmD, DABAT Mike Ori, MD Dan Quan, MD Geoffrey Smelski, PharmD, DABAT Bryan Wilson, MD Frank Walter, MD, FACEP, FACMT, FAACT

### **SPECIALISTS IN POISON INFORMATION**

Matt Andrews, PharmD, CSPI Alisia Bahadir, PharmD, CSPI Jackie Brody, PharmD, CSPI Paula Buchanan, PharmD, CSPI Andrea Clements, PharmD, CSPI Kelly Green, PharmD, CSPI Denise Holzman, PharmD, CSPI Alex Jasensky, PharmD, CSPI Jaci Karpen, PharmD, CSPI Mark Murphy, RPH, CSPI Liz Petersen, RPH, CSPI Lorri Reilly, PharmD, CSPI Chris Edmonds, PharmD, SPI Nathan Crow, PharmD, SPI Raman Kaur, PharmD, SPI Rachel Pina, PharmD, SPI





