



Annual Report

2023

1.800.222.1222

www.mdpoison.com



Directors' Message



Angel Bivens, BS Pharm, MBA, CSPI
Managing Director



Joshua King, MD, FACMT
Medical Director

Another year is in the books and by all accounts, 2023 was an eventful one for the Maryland Poison Center (MPC). Our executive director of more than 30 years, Dr. Bruce Anderson, retired and started a new and exciting chapter in his life. We welcomed several new poison specialists and a new office clerk to our team, and new leadership was named to continue the MPC mission. Our national Poison Help logo got a facelift, giving it a more updated look and feel. Change is inevitable; change is good.

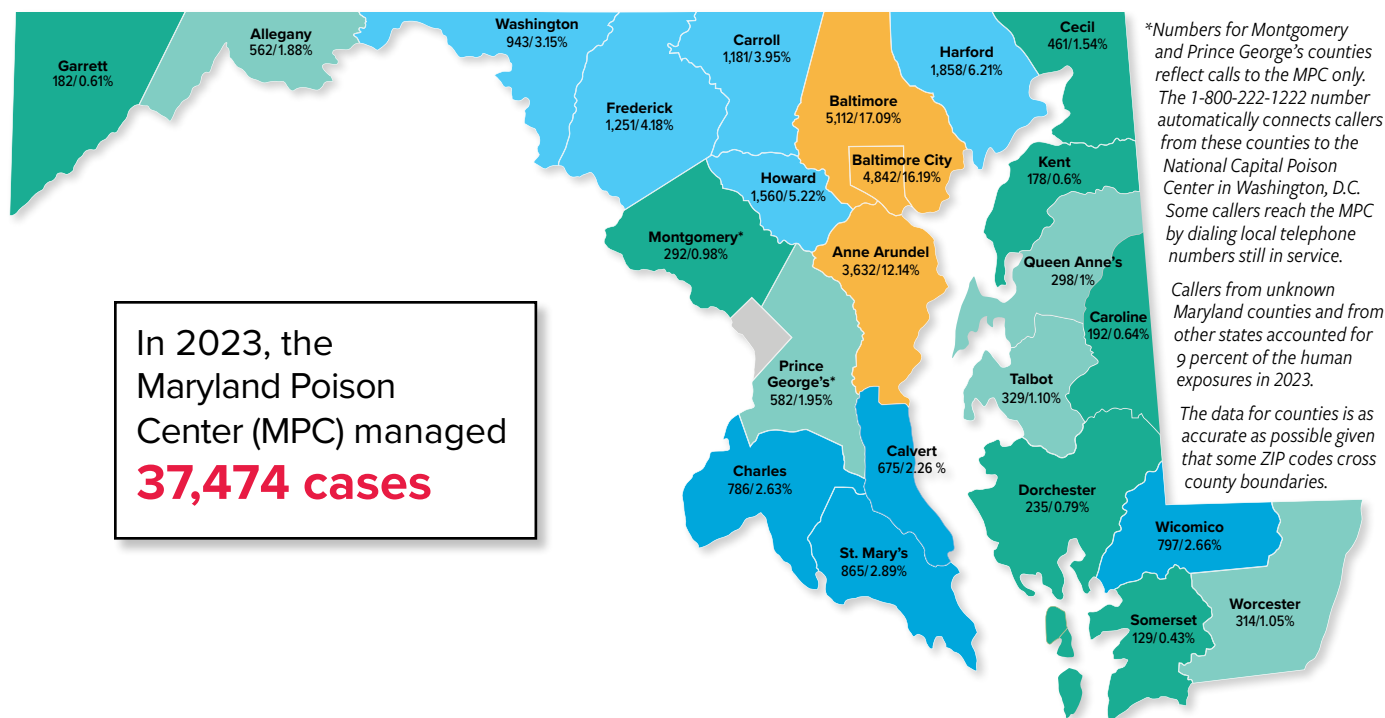
Despite these changes, the core mission of what we do is steadfast: to decrease the cost and complexity of poisoning and overdose care while improving patient outcomes. The MPC is still a service for everyone, free to the public and health care professionals alike. We manage cases in patients of all ages at all hours of the day and night, with calls from parents, grandparents, caregivers, teachers, school nurses, primary care physicians, nurses and physicians in hospitals, first responders, and many more. Our poison specialists provide information, guidance, and reassurance; and, most importantly, the care we provide leads to better patient outcomes. The MPC is built on community partnerships to increase our reach to educate Marylanders about our services, as well as providing important poison safety tips to prevent future poisonings.

In 2023, we worked through the challenges of an increased call volume regarding cannabis as adult recreational use was legalized in Maryland. Our poison center provided a judgement-free zone for callers to seek assistance when young children accidentally mistook cannabis products for candy or treats and when first-time users experienced unwanted effects. Educators at the MPC created safety messages to educate people about safe use and storage of cannabis and taught health care workers how to manage complications of cannabis use.

What does the future hold? Nobody knows for sure. But Marylanders can rest assured that the MPC and its experts are up to the challenge of learning about new poison threats and concerns, and are ready to assist all callers, providing compassionate and expert advice to all.

We hope you find the information contained in this report informative – most of all, we want to reassure you that expert assistance for poisonings and overdoses is just a phone call away.

Human Exposures



Human Exposures
29,910

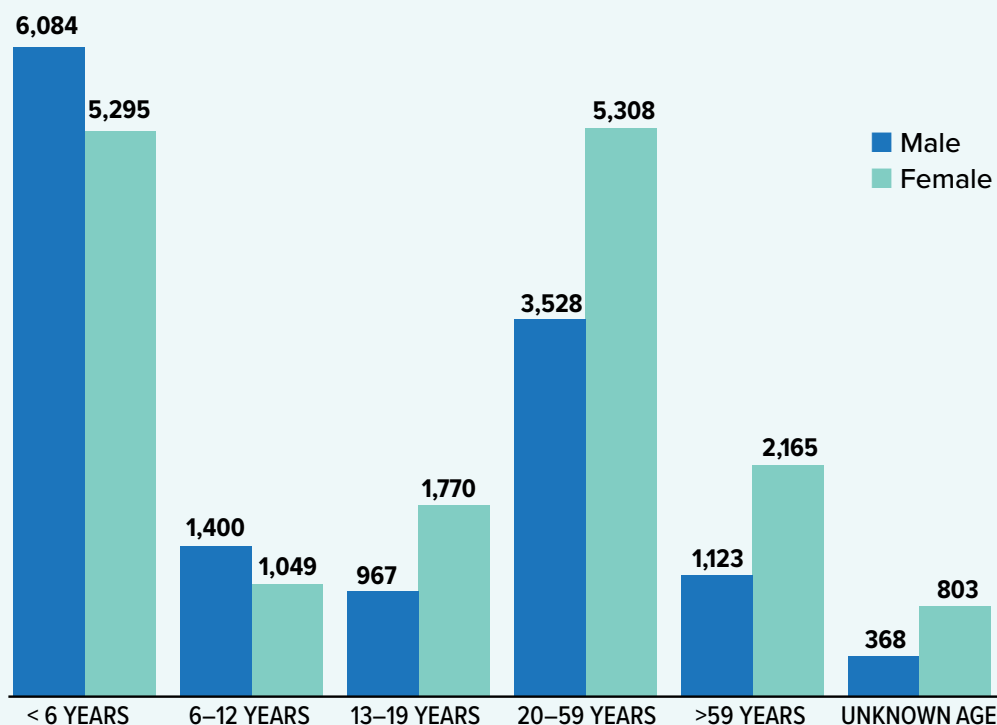


Information Requests
6,994



Animal Poisonings
570

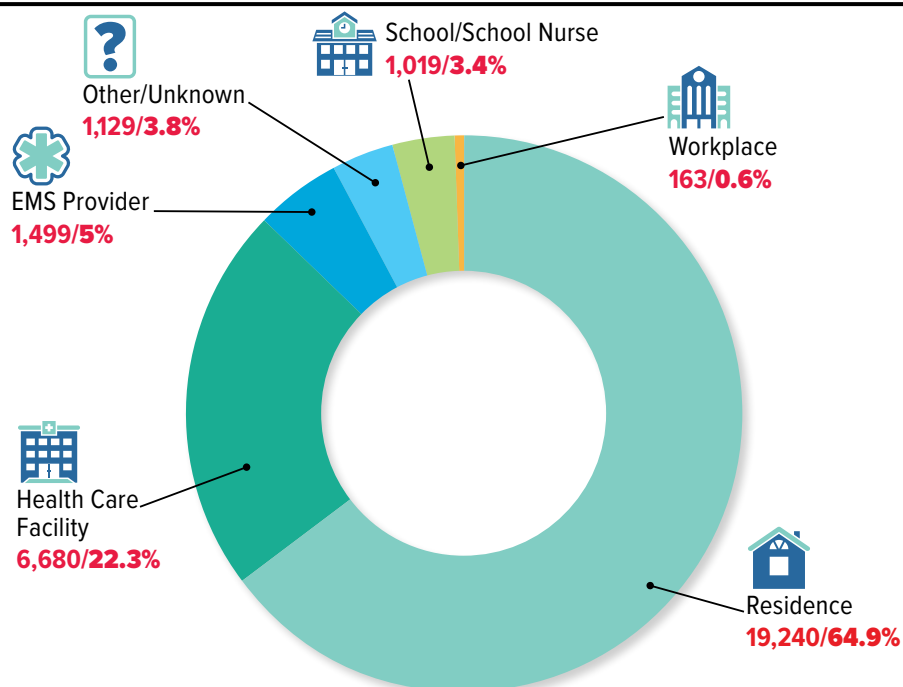
Exposures by Gender and Age



Males **45.4%**
Females..... **54.4%**
Unknown..... **0.2%**



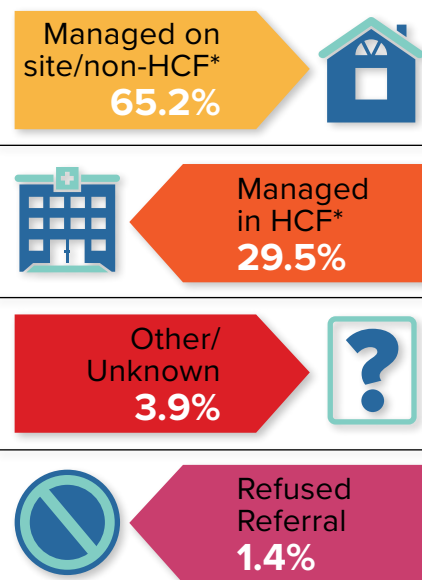
Site of Caller



Residence can be the patient's residence or another residence. Health care facilities include hospitals, physician's offices, urgent care centers, clinics, and others.

Emergency medical services providers include EMS, paramedic, first responder, and emergency medical dispatcher (911 dispatcher).

Management Site



Managing cases safely at home:

- saves millions of dollars in unnecessary health care costs compared with managing patients in a health care facility (HCF*).
- allows more efficient and effective use of limited health care resources.

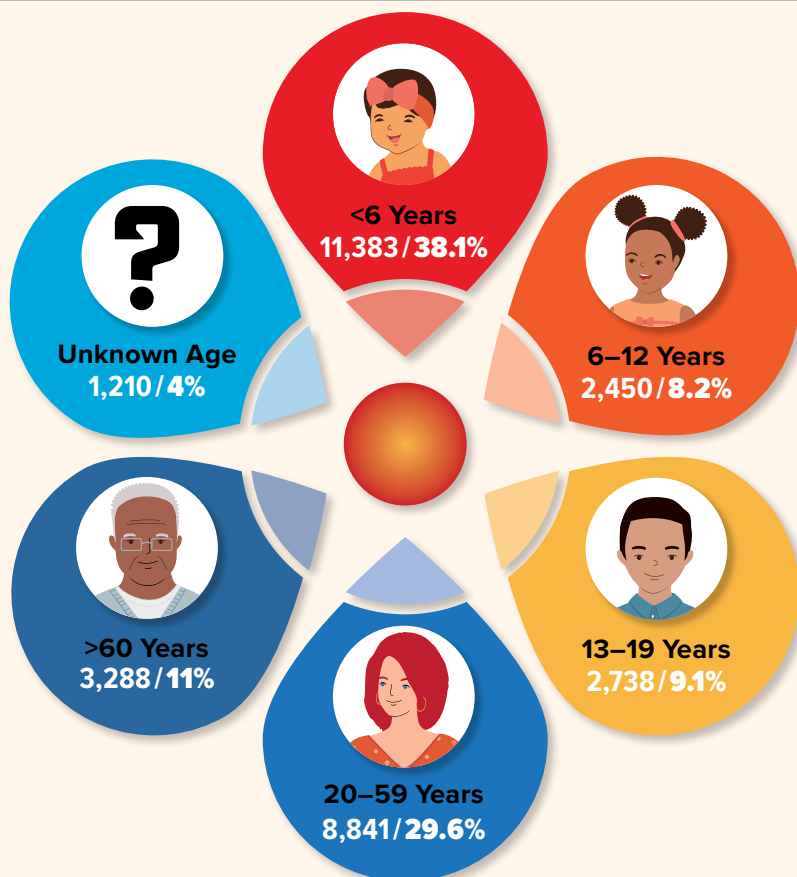
Of the cases managed in a health care facility, 61.7 percent were treated and released, 7.3 percent were admitted to a critical care unit, 9.9 percent were admitted to a non-critical care unit, 14.2 percent were admitted for psychiatric treatment, and 6.9 percent were lost to follow-up.

When EMS providers or 911 consulted with the MPC in 2023, 15 percent of those patients were managed safely at home.

92%

of cases reported by the public were managed at home.

Exposures By Age



Circumstance

People who contact the MPC have many reasons for calling.

22,736/76%

Unintentional exposures:

- General misuse of products
- Occupational (workplace)
- Environmental
- Bites/stings
- Therapeutic errors
- Food poisoning

5,699/19.1%

Intentional exposures:

- Misuse
- Abuse
- Suicide attempts

942/3.1%

Adverse reactions to:

- Medicines
- Food
- Other substances

533/1.8%

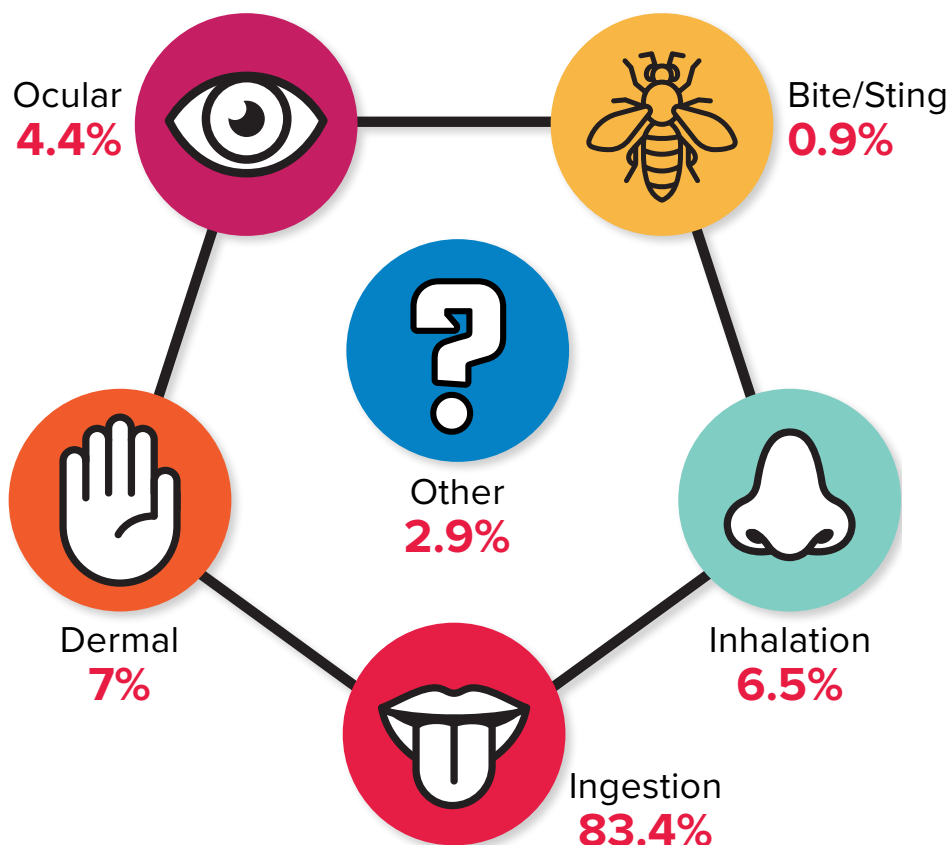
Other/unknown reasons:

- Malicious
- Contaminant/tampering

Therapeutic errors
(double-doses, wrong
medicines taken, etc.)
**accounted for 19 percent
of total exposures.**

Reasons for poison exposures differ by age. In children under the age of six, 99 percent of exposures were unintentional, while in teens (13-19 years), only 32 percent of exposures were unintentional. Exposures in adults (20-59 years) were 56 percent unintentional and 36 percent intentional. In tweens (6-12 years) and older adults (60 years and older), most exposures were unintentional (88 percent and 75 percent respectively).

Route of Exposure*



*Some cases involved multiple routes of exposure. Percentages in the chart are based on the total number of human exposures.

TOP 5 Causes of Poisoning

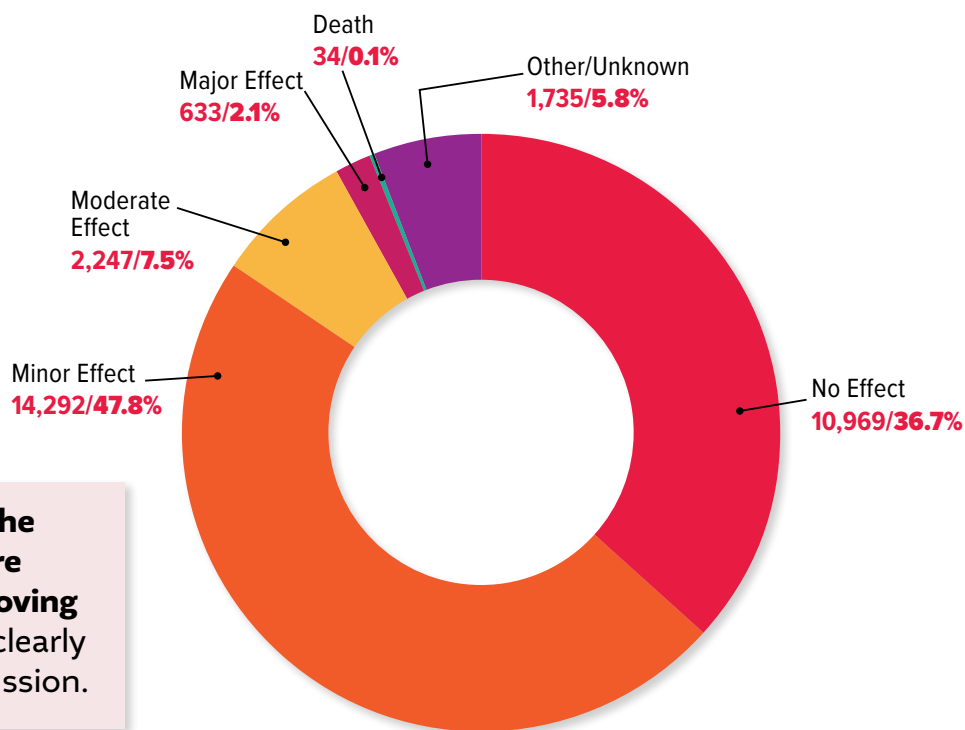
1. Pain Relievers
2. Household Cleaning Products
3. Antidepressants
4. Heart Medicines
5. Cosmetics and Personal Care Products

Medical Outcomes

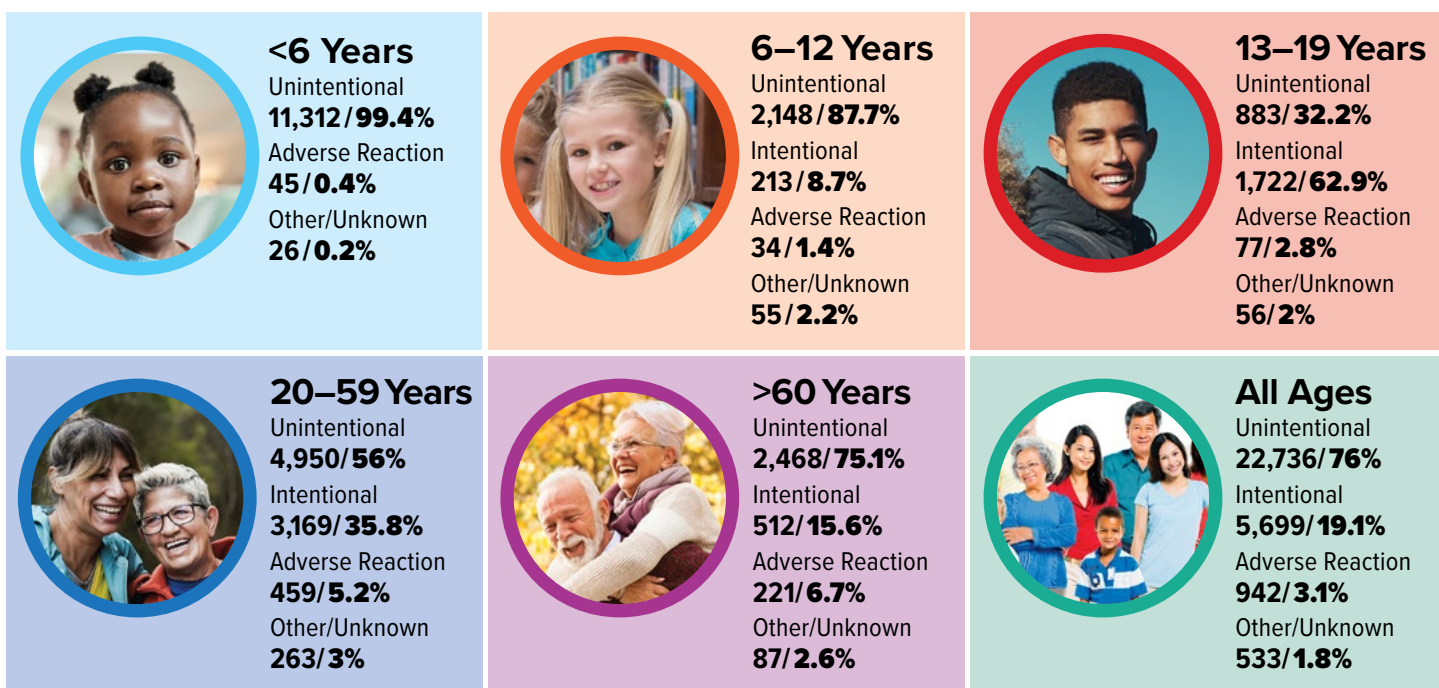
The true measure of the effectiveness of the MPC is patient outcomes. Although there were 34 cases reported to the MPC that resulted in death in 2023, the impact of the MPC is obvious: most cases had good outcomes.

Calling the MPC as soon as a poisoning or overdose is suspected is the best way to reduce the likelihood of developing severe toxicity.

Our mission is to decrease the cost and complexity of care while maintaining and/or improving patient outcomes. These data clearly show that we're fulfilling our mission.

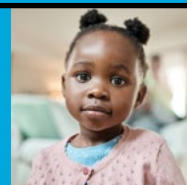


Exposure Reason By Age



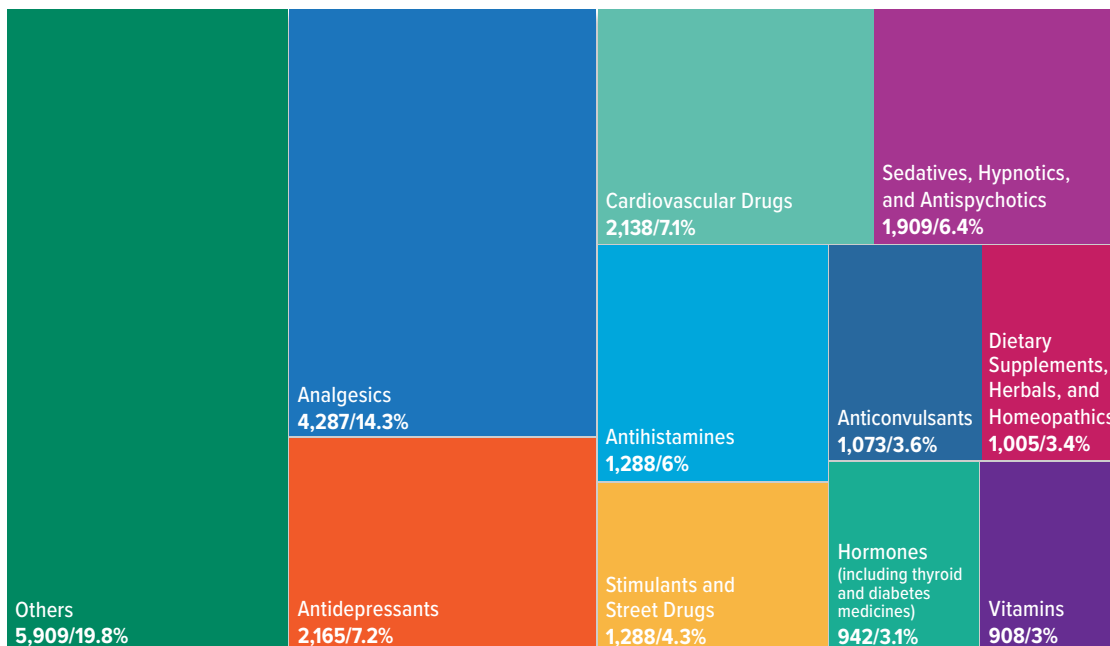
99%

of exposures in children under six years old were unintentional while only 32% of exposures in 13–19 year-olds were unintentional.



Substances Involved in Poisonings

Top 10 Drug Substances

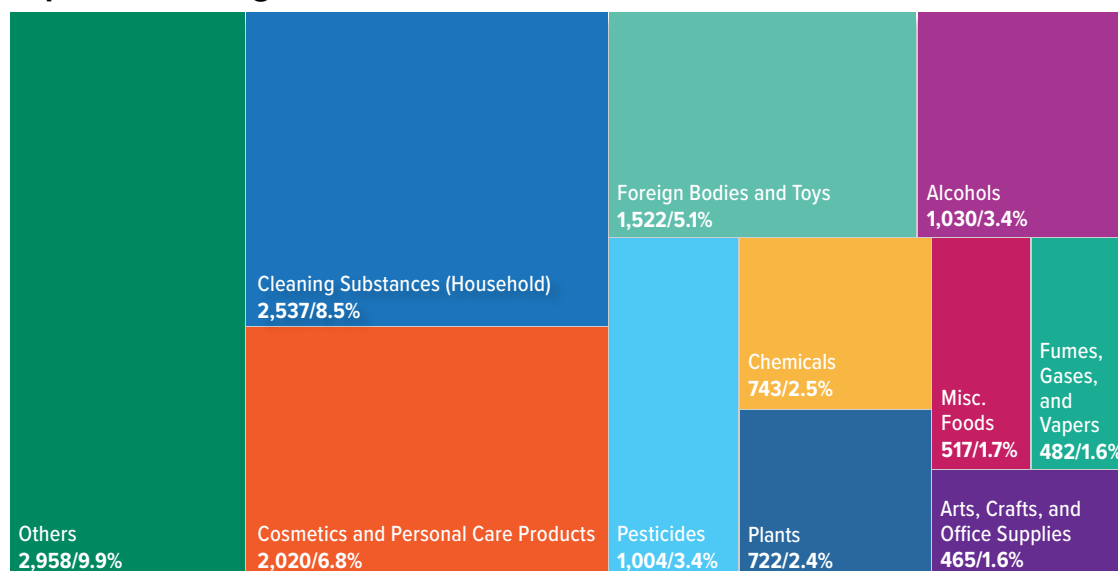


The diagrams on this page list the most common substances involved in poisonings and overdoses reported to the MPC in 2023. A patient may be exposed to more than one substance in a poisoning or overdose case.

Percentages in the diagrams are based on the total number of human exposures.

Top 10 Non-Drug Substances

57.4%
of the poisoning and overdose cases managed by the MPC involved a drug,* while 45.4 percent of cases involved a non-drug substance.



2,386 cases

involving older adults were about medicines, which accounts for 73% of the cases about older adults.

*includes medicines and substances involved in abuse



Satisfied Callers

“

In October 2023, Jetta filled out a caller satisfaction survey stating, ***“Noelle* was quick, efficient, and all around absolutely amazing. I called in a panic over my son and an incident with a battery, thank God it isn't harmful, and she was calm, precise, and very, very attentive. Beyond severely satisfied with her service, and she gave me much needed advice. She not only calmed me down, within seconds, she had all the information to give me to put my anxiety at ease. She was amazing and I'm truly blown away with her service. Thank you again Noelle. Truly.”***

**Noelle Etube, PharmD, SPI*

”

”

In November 2023, Jon emailed the MPC stating, ***“As an out-of-practice paramedic I've always appreciated the advice MPC provides to us in the field. I never thought I would need to call for help myself. Liz* picked up the phone and was quick to let me know that everything would be okay. She answered my questions and provided me with follow-up instructions. I just wanted to share my appreciation and gratitude for all that you do. Thank you!”***

**Liz Fugate, RN, BSN, SPI*

“

”

In February 2023, John F. filled out a caller satisfaction survey stating, ***“There's no way to do justice to the peace of mind Elizabeth* was able to give me! She was patient, articulate, empathetic, and sensitive to the difficulty I was having in answering her questions as I was so distraught. She was extremely clear and confident in this field of knowledge. Elizabeth's knowledge, delivery, and competence was off the charts!! The peace of mind she was able to give me was on par with her knowledge! Truly remarkable!!”***

**Elizabeth Millwee, RN, BSN, MPH, CSPI*

“

“

In April 2023, John filled out a caller satisfaction survey stating, ***“Elizabeth* was very, very professional, polite, calmed me down, and gave me the exact information I needed. She went above and beyond and really eased my nerves and I am very grateful for her. If every person I had to deal with daily on a professional level was like Elizabeth, life would be a lot easier.”***

**Elizabeth Millwee, RN, BSN, MPH, CSPI*

”

Google ★★★★★

In February 2023, James left a 5-star Google review and wrote, ***“Very helpful and kind. Had all the info needed. Total blessing.”***

“

In December 2023, an anonymous caller satisfaction survey respondent stated, ***“I accidentally ingested a medicine prescribed for my dog because it looked like Tylenol. I did not know how to handle the situation so called the MPC which was very helpful.”***

”

Google ★★★★★

In March 2023, Erica left a 5-star Google review and wrote, ***“Gave me reassurance that I would be okay and broke down the chemical process on why I will be okay.”***

Public Education

Our focus:

- Increase awareness of the poisons found in every home, business, and school.
- Help prevent poisonings from occurring by encouraging safe storage and proper use of household products and medicines.
- Highlight the expertise of the MPC staff.
- Calling will result in fast, free, confidential help.

Public Education Spotlight:

In light of recreational cannabis being legalized in Maryland on July 1, 2023, the Maryland Poison Center worked with the Maryland Cannabis Administration to create educational materials.

The double-sided flyer has information in English and Spanish and focuses on how to safely store cannabis, in addition to what to do if a child consumes cannabis, if an adult consumes too much cannabis, and if a pet consumes cannabis.

30 programs held in-person in seven counties and virtually statewide attended by 2,792 people.

Some of our public education partners:

- State and local health departments
- Healthy Start programs
- State and local Safe Kids coalitions
- Head Start programs
- Fire/Police/EMS
- Schools and childcare providers
- Physicians and hospitals
- Health insurers
- Local health improvement coalitions

More than 171,000 pieces of educational materials distributed in 2023.

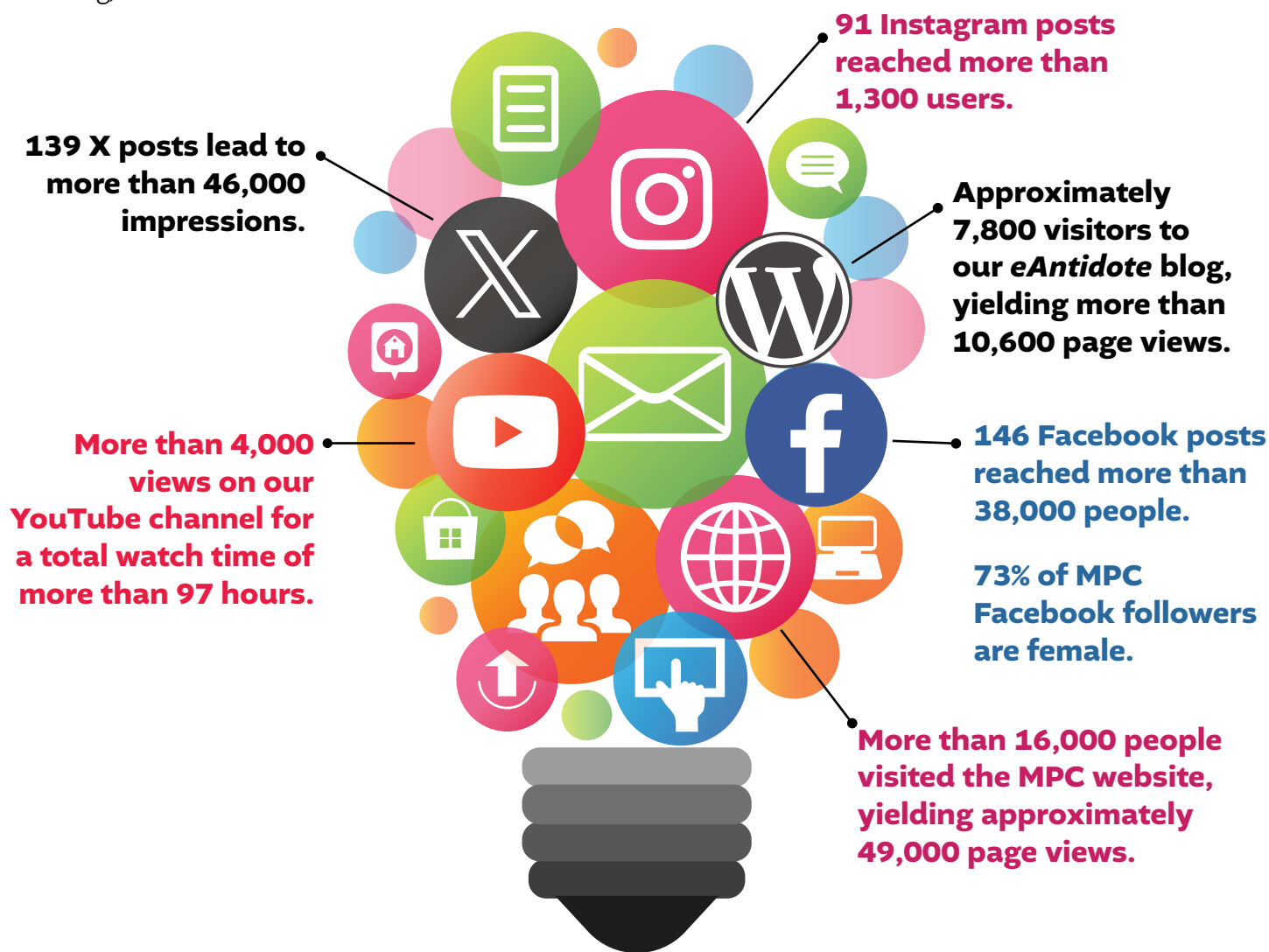
37,474

total cases managed by the Maryland Poison Center in 2023.



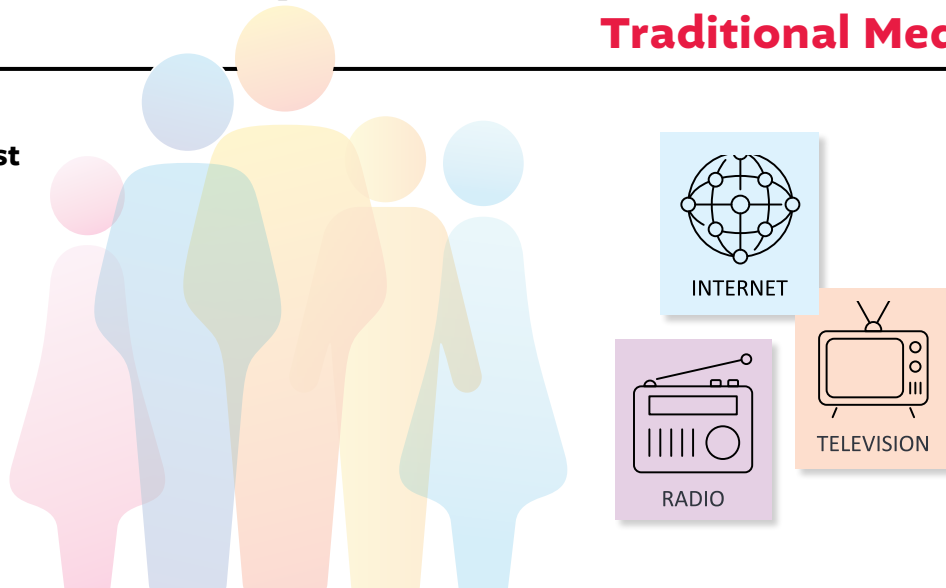
Social Media and Website

In an attempt to reach more Marylanders with our educational and awareness messages, the MPC continued to routinely update Facebook ([@MarylandPoisonCenter](#)), X ([@MDPoisonCtr](#)), and Instagram ([@MDPoisonCenter](#)) in 2023. Posts often directed followers to information on our website, blog, and YouTube channel.



Traditional Media

In 2023, the MPC and/or staff appeared in the media at least 20 times on television, the radio, and in web articles. Topics included social media trends, mushroom chocolate, cannabis, black widow spiders, yellow oleander, semaglutide/Ozempic, cat litter, and water beads.



Health Professional Education

Professional education is designed to help clinicians better manage the poisoning and overdose cases seen in health care facilities by providing on-site training for physicians, pharmacists, nurses, and EMS providers. Over the years, we have seen decreases in calls coming from homes and increases in calls coming from health care facilities and first responders. In 2023, approximately one-quarter of calls to the MPC came from physicians, physician assistants, nurse practitioners, nurses, and emergency medical personnel.

The MPC's X account for health care professionals (@MPCToxTidbits) posted clinical and medical toxicology content relevant for health care providers.



25%

of cases were reported by a physician, nurse, pharmacist, or paramedic seeking treatment advice relating to a poisoning or overdose.

16 programs and webinars reached more than 4,600 health care professionals.

148 health professionals participated in daily case conference rounds.

Seven X posts lead to more than 10,000 impressions and more than 500 engagements.

Poison Prevention Press and ToxTidbits


The MPC publishes **Poison Prevention Press**, an e-newsletter for the public, every other month. The newsletter highlights poison safety topics for all ages.

Topics presented in 2023 include:

- Babysitting Poison Safety
- Heart Medicines
- Skin Lightening Products
- The Facts About Water Beads
- Measuring Medicine Safely
- Cannabis Edibles

Poison Prevention Press is sent to e-mail subscribers, who are encouraged to post and share the newsletter with others. In 2023, the distribution list gained 66 new recipients.

Poison Prevention Press and ToxTidbits keep community members and health care providers up to date on poison-related topics.



Poison Prevention Press
January/February 2023
Volume 16, Issue 1

Poison Center Hotline
1-800-222-1222

Poison Prevention Press
January/February 2023
Volume 16, Issue 1

First Aid for Poisonings
Perform the following first aid, then call 1-800-222-1222 for more information.
Swallowed Poison:

- Gently wipe out mouth and give a small amount of water.
- Do not make the person vomit.

Poison on the Skin:

- Remove contaminated clothing and jewelry.
- Rinse skin with lukewarm water for 10 minutes.

Poison in the Eye:

- Flush the eye with lukewarm water from cup, faucet, or shower for 15 minutes.
- Do not force the eyelid open.

Inhaled Poison:

- Get the person to fresh air.
- Open doors and windows.

Babysitting Poison Safety
Poisonings are very common in children under the age of six, and 90 percent of the time they happen at home! So before you go out for a date night, here are some important things to do and talk about with your babysitter.
Our Phone Number
Everyone should program our phone number, 1-800-222-1222, in their phone! When leaving an emergency contact list for your babysitter, be sure to include the poison center phone number too. Our poison specialists are available 24/7 and calling is free and confidential.
Remind your babysitter that in case of any poison emergency, you want them to call the poison center at 1-800-222-1222 first, and then call you.
Examples of a Poison
A poison can be anything used in the wrong way, in the wrong amount, or by the wrong person. Some common poisons a babysitter may need to be aware of are:

- Cleaning products
- Personal care products
- Medicines
- Coins, toys, magnets, button batteries
- Plants, berries, mushrooms
- Bites or stings from creatures

Safe Storage of Personal Items
Although your home may be poison-proofed, when guests are visiting they may not follow the same safe storage practices. Leaving backpacks and purses on the floor may invite young children to investigate the contents. Provide babysitters with a safe place to store their personal items. Medicines, cosmetics, and art supplies can all be poison hazards. Also, coins and small toys are choking hazards.
Medicine Safety
If you plan to have your babysitter give your child medicine while you're gone, talk through what you want them to do. Write the instructions down for them so they have all the information when they are ready to give the medicine. Include when and how to give the medicine. Always remind them to secure the lid or cap and put it back in its safe storage place when finished.
If the sitter will be giving a liquid medicine, review the dosing apparatus for that specific medicine. Be sure they use the specific one for the specific medicine, because dosing apparatuses for other medicines may have different dose markings.
The Great Outdoors
If your babysitter will be spending time outside with the children, encourage your children to stop and ask first before touching a plant, berry, or mushroom. Remind your sitter to program the poison center phone number in their phone, you can call from anywhere!
Whether your babysitter is a grandparent or the teen next door, keep these tips in mind. As always, our poison experts are available 24/7/365 at 1-800-222-1222.

Did you know that...

- 45.7% of MPC cases in 2021 occurred in children under the age of 12?
- 90% of MPC cases reported by the public in 2021 were managed at home?

Follow the MPC on Facebook, Twitter, and Instagram

Subscribe to Poison Prevention Press and read past issues at www.mdpoison.com



ToxTidbits
March 2023
The Maryland Poison Center's Monthly Update: News, Advances, Information



Poison Center Hotline: 1-800-222-1222

Problematic cannabis use in adults
Cannabis use in the United States has risen over the last 20 years with changes in cannabis legalization. Most states have some form of cannabis legalization or decriminalization. Proposed medicinal uses for cannabis are widespread including pain, glaucoma, and sleep problems but studies to verify its efficacy are limited. There are three products approved by the United States Food and Drug Administration. These are cannabidiol (Epidiolex®) for rare, severe forms of epilepsy, and dronabinol and nabilone for nausea and vomiting caused by chemotherapy.
The primary psychoactive chemical of cannabis is delta 9-tetrahydrocannabinol (Δ 9-THC). Another key active chemical is the non-psychoactive cannabidiol (CBD). As decriminalization/legalization continues throughout the US, visits to the emergency department (ED) in patients that use THC containing products has also risen. Patients may present to the ED with or without a history of cannabis use. Not reporting use may be due to concerns about legal action or because the ingestion was unintentional or unsuspected. Both children and adults may unintentionally ingest cannabis containing foods and beverages. Patients develop a wide range of symptoms including anxiety, weakness, decreased level of consciousness, nausea, vomiting, tachycardia, and confusion. The differential diagnosis is wide and includes life-threatening conditions infection and ischemic stroke.
There are some chronic health concerns associated with long-term cannabis use. Identified in the literature. It may exacerbate underlying mental health conditions, lead to gastrointestinal illness, increase risk of motor vehicle collisions, and can lead to the development of cannabis use disorder.
A retrospective chart review evaluated ED visits with cannabis ICD-9 and ICD-10 codes included in the reason for visit between 2012 and 2016. These visits were then screened to determine if they could be categorized as partially attributable to cannabis and then further sorted into clinical complaint. A total of 9973 visits included the cannabis ICD-9 or ICD-10 codes, and of those 2567 (26%) were found to be at least partially attributable to cannabis. The most common complaints that led people to come to the ED included gastrointestinal upset, psychiatric concerns, and intoxication (Clin Toxicol 2020;58(6):563-9).
Cannabis intoxication may also present as a suspicious outbreak in multiple people. We are aware of cases where chocolates were maliciously shared with an entire family of adults. This resulted in all adults presenting to the emergency department with various neurological symptoms and denying cannabis use. The urine drug screen was positive for cannabis and prompted the family looking into the shared chocolates.
As with all poisonings, we recommend consulting your regional poison center at 800-222-1222 for questions or management guidance.



Did you know?
Cannabinoid hyperemesis syndrome may also lead to hospital visits.
Cannabinoid hyperemesis syndrome (CHS) can occur after prolonged, heavy cannabis use (StatPearls, NBK549915). CHS is a syndrome where patients experience cyclical nausea, vomiting, and abdominal pain after cannabis use. It generally involves several years of cannabis use prior to symptom onset, a cyclical pattern of hyperemesis while the individual is using cannabis, and resolution of symptoms after cannabis cessation. It is reported that these symptoms often are lessened by hot baths or showers. Available treatments have shown varying levels of efficacy, though capsaicin cream has been used in case reports and may offer relief. Unfortunately, randomized controlled trials are not available to help determine treatment of choice.

Sara Hall, PharmD
PGY2 EM Pharmacy Resident

 **@MPCToxTidbits**

Subscribe to ToxTidbits and read past issues at www.mdpoison.com

ToxTidbits is a monthly newsletter for health professionals containing important toxicology information, updates, and news. Some of the topics addressed in 2023 include:

- Problematic Cannabis Use in Adults
- Nitazenes - The Mu Kids on the Block
- Little to Large Problem: Danger of Water Beads
- Cardiac Glycoside Poisoning
- Magic Mushrooms
- Rivastigmine for Anticholinergic Delirium

ToxTidbits is sent to email subscribers and faxed to every emergency department in our service area. In 2023, the email distribution list gained 67 new recipients.

To receive **ToxTidbits** or **Poison Prevention Press**, visit www.mdpoison.com and **click on Receive Newsletter**. Current and previous issues of both newsletters can be read and downloaded from the MPC website.

Research Publications and Presentations

JOURNALS

Costantino RC, **Leonard JB**, Gorman EF, Ventura D, Baltz A, Gressler LE. Benzonatate Safety and Effectiveness: A Systematic Review of the Literature. *Annals of Pharmacotherapy*. 2023;57(10):1221-1236. doi:10.1177/10600280221135750

Husak N, Laudone TW, **Leonard JB**. A Descriptive Study of Aripiprazole, Brexpiprazole, and Cariprazine Exposures in Children Ages 0 to 5 Years Reported to United States Poison Centers. *Clinical Toxicology*. 2023;61(2):110-115. doi:10.1080/15563650.2022.2163901

Fouladi N, Tchangalova N, Ajayi D, **Millwee E**, Lovett C, Del Sordi A, Liggett S, De Silva M, Bonilla L, Nkwonta A, et al. COVID-19 Public Health Measures and Patient and Public Involvement in Health and Social Care Research: An Umbrella Review. *International Journal of Environmental Research and Public Health*. 2023; 20(6):4887. doi:10.3390/ijerph20064887

Daniel-McCalla SN, Parbuoni KA, **Leonard JB**, **Anderson BD**, et al. Medical Outcomes of Acute Aspirin Single Substance Poisoning in Pediatric Patients. *Annals of Pharmacotherapy*. 2023;57(11):1273-1281. doi:10.1177/10600280231159898

Leonard JB, Laudone TW. Treating an 18-month-old who Tested Positive for Cannabis Exposure. *Contemporary Pediatrics*. 2023;40(02).

Watson MA, Howle AM, Lenz O, Scaless RJ, **King JD**, Bolanos JA, Yuan CM. Adapting an Objective Structured Clinical Examination (OSCE) on Conducting Difficult Conversations Between Nephrology Fellows and Patients to a Virtual Platform: A Research Letter. *Canadian Journal of Kidney Health and Disease*. 2023;10. doi:10.1177/20543581221150553

Shah N, Khayat M, Owshalimpur D, Banda M, Munoz J, White WC, Forster BM, Petteys SK, Sullivan SB, Watson M, **King JD**. Mass Poisoning From Ethylene Glycol at a U.S. Military Base. *Military Medicine*. 2023;188(9-10):e3261-e3264. doi:10.1093/milmed/usac380

POSTERS

Fouladi N, Tchangalova N, Ajayi D, **Millwee E**, Lovett C, Del Sordi A, Liggett S, De Silva M, Bonilla L, Nkwonta A, et al. COVID-19 Public Health Measures and Patient and Public Involvement in Health and Social Care Research: An Umbrella Review. University College Dublin's International Research Conference. Dublin, Ireland. Aug. 10-11, 2023.

Couch D, **Yemets M**, **Leonard JB**. Compounded Semaglutide Products may "Compound" the Risk of Therapeutic Errors. North American Congress of Clinical Toxicology, Montreal, Canada. Sept. 29-Oct. 1, 2023.

Ali N, **Paterson E**, **Klein-Schwartz W**, **Leonard JB**. Patterns in Suicide Attempts by Self-poisoning in Adults Aged 50+ from 2000 to 2021. North American Congress of Clinical Toxicology, Montreal, Canada. Sept. 29-Oct. 1, 2023.

Harris A, **Sellman H**, **Leonard JB**. Association between Daily High Temperature and Copperhead Envenomations Reported to a Regional Poison Center. North American Congress of Clinical Toxicology, Montreal, Canada. Sept. 29-Oct. 1, 2023.

Yemets M, **Leonard JB**. Characterizing Fomepizole Use in Acetaminophen Deaths Reported to US Poison Centers. North American Congress of Clinical Toxicology, Montreal, Canada. Sept. 29-Oct. 1, 2023.

Lam A, **Yemets M**, **Couch D**, **Leonard JB**. Characterization of Nirmatrelvir-Ritonavir (Paxlovid®) Calls Managed by a Regional Poison Center. North American Congress of Clinical Toxicology, Montreal, Canada. Sept. 29-Oct. 1, 2023.

Leonard JB, **King JD**, Armahizer M, Chang W. Survival of Severe Toxicity from Intrathecal TXA Administration. North American Congress of Clinical Toxicology, Montreal, Canada. Sept. 29-Oct. 1, 2023.

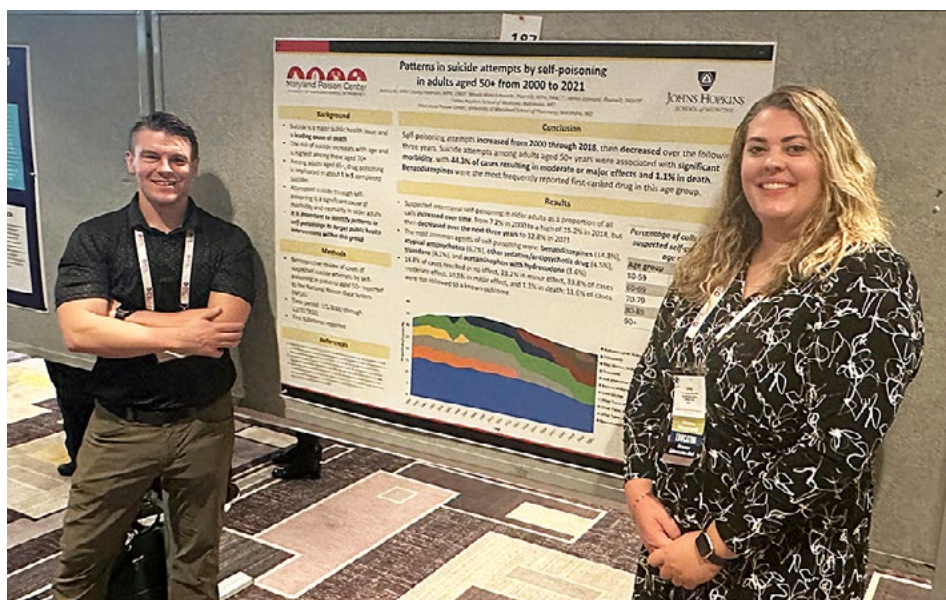
Nolan J, Osterhoudt K, Witmer C, **Leonard JB**. 20-Fold Dosing Error of Tranexamic Acid during Total Knee Replacement Surgery. North American Congress of Clinical Toxicology, Montreal, Canada. Sept. 29-Oct. 1, 2023.

Yemets M, **Leonard JB**, **King JD**, Urban S, Shannon K, Mitchell C. Oleander Seeds in Candlenut Weight Loss Product Strike Again. North American Congress of Clinical Toxicology, Montreal, Canada. Sept. 29-Oct. 1, 2023.

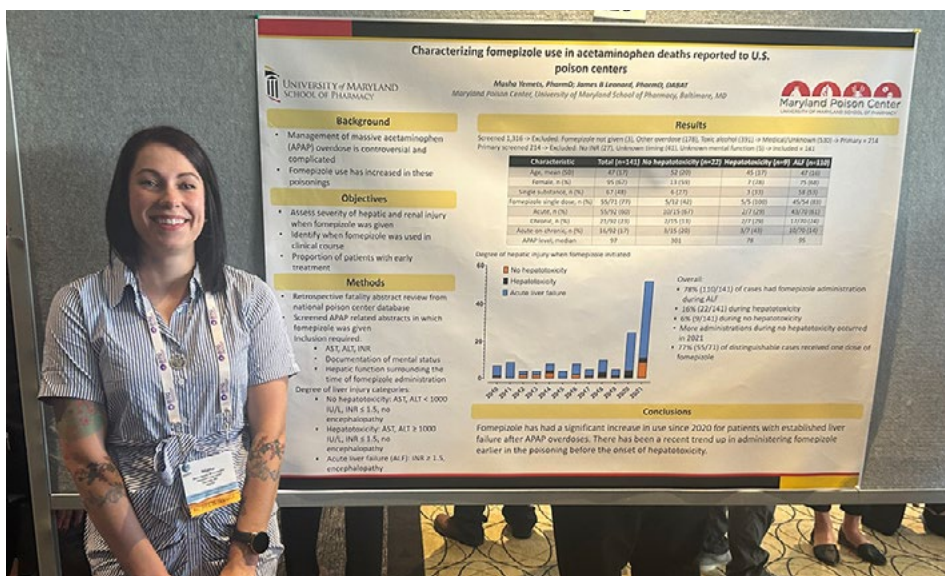
PRESENTATIONS

Yemets M. A Toxic Relationship - Palytoxin Case Presentation. American College of Medical Toxicology National Case Conference. Virtual. Feb. 14, 2023.

Leonard JB. It's Toxicokinetics, not Pharmacokinetics. Pills and Thrills that Kill! Virtual. April 6, 2023.



Research Publications and Presentations



Yemets M. Get the Skinny Before Using These for Weight Loss - Yellow Oleander Case Presentation. American College of Medical Toxicology National Case Conference. Virtual. April 20, 2023.

King JD. Wilderness Toxins. Oxford Wilderness and Expedition Medicine Society Conference Series. April 27, 2023.

King JD. A Toxicologist, Nephrologist, and Intensivist Walk Into A Room: Critical Intersections in Extracorporeal Treatment of Poisoning. Renal Grand Rounds/Toxicology Grand Rounds, Emory University. Atlanta, Ga. May 2, 2023.

King JD. The Critically Ill Poisoned Patient. University of Maryland Emergency Medicine Critical Care Symposium. Baltimore, Md. May 24, 2023.

Yemets M. Over-the-Counter Naloxone. Health Ministry/Nurses Guild of First Baptist Church of Guilford Community Health Fair. Columbia, Md. June 10, 2023.

Paterson E. Top 10 Reasons Older Adults Should Call the Poison Center. Baltimore County Department of Aging's Online Programs for Adult Learning (OPAL) Center. Virtual. June 21, 2023.

King JD. Cannabinoids, Fentanyl, and Animal Tranquilizers, Oh My: Update on Recreational Drugs in 2023. Medicine Grand Rounds, Mercy Medical Center. Baltimore, Md. Sept. 6, 2023.

King JD. Cannabinoids, Fentologs, and Animal Tranquilizers, Oh My: A Nephrology-Focused Update on Recreational Drugs in 2023. Renal Grand Rounds, University of Maryland. Baltimore, Md. Sept. 12, 2023.

King JD. Extracorporeal Treatment of Poisoning Review. University of Virginia Medical Toxicology Grand Rounds. Charlottesville, Va. Sept. 14, 2023.

King JD. Apheresis for Toxins, Venoms, and Poisons. Therapeutic Apheresis Academy. Charlottesville, Va. Sept. 14, 2023.

King JD. Bringing Deadly Sleep: A Review of Selected Pre-1900s Toxicology Literature. American Academy of Clinical Toxicology, Toxicology History Section. Virtual. Sept. 19, 2023.

Yemets M. How the Dinosaurs Died - Anabolic Androgenic Steroids Case Presentation. American College of Medical Toxicology National Case Conference. Virtual. Sept. 21, 2023.

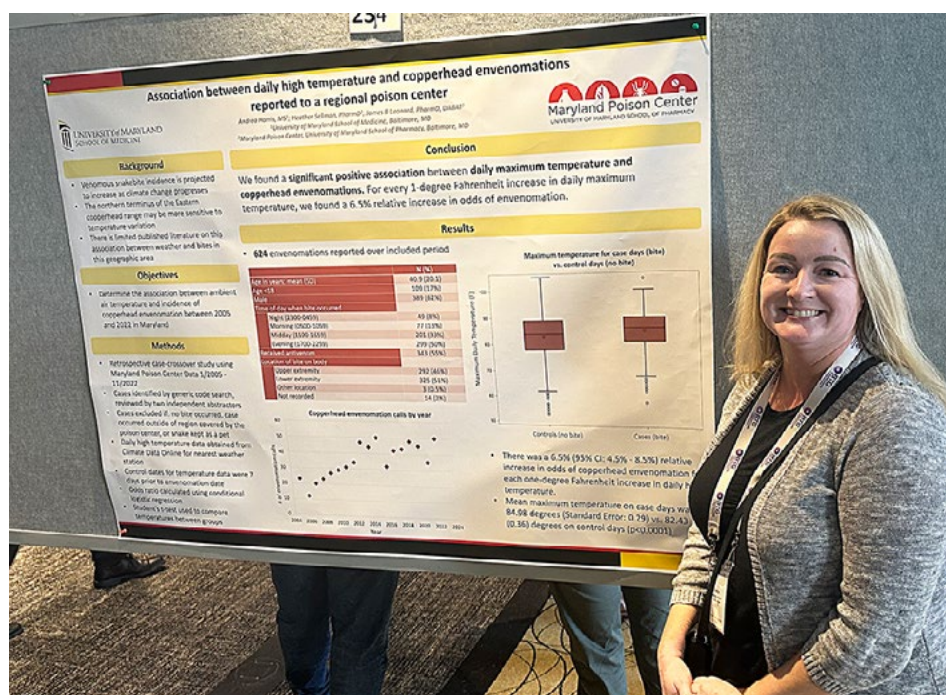
Paterson E. Newsletters from the Poison Center. North American Congress of Clinical Toxicology, Montreal, Canada. Sept. 30, 2023.

Yemets M. The Misadventures of Semaglutide. University of Maryland School of Pharmacy Pharmacotherapy Rounds, Baltimore, Md. Oct. 24, 2023.

Macdonald V. Alternatives to Physostigmine for Anticholinergic Delirium. University of Maryland School of Pharmacy Pharmacotherapy Rounds, Baltimore, Md. Oct. 24, 2023.

Yemets M. Prehospital Poison Management. Johns Hopkins Bayview Medical Center EMS. Virtual. Nov. 2, 2023.

Macdonald V. Opioids. Stevenson University - Opioid Awareness, Owings Mills, Md. Nov. 30, 2023.



STAFF

EXECUTIVE DIRECTOR*

Bruce D. Anderson, PharmD, DABAT, FAACT

CO-DIRECTOR, OPERATIONS AND PUBLIC EDUCATION**

Angel Bivens, BS Pharm, MBA, CSPI

CO-DIRECTOR, CLINICAL SERVICES**

James Leonard, PharmD, DABAT

MEDICAL DIRECTOR

Joshua D. King, MD

PROFESSOR EMERITUS

Wendy Klein-Schwartz, PharmD, MPH, FAACT

CLINICAL TOXICOLOGY FELLOWS

Angela Lam, PharmD

Masha Yemets, PharmD

Victoria Macdonald, PharmD

COORDINATOR OF HEALTH PROFESSIONAL EDUCATION

Eric Schuetz, BS Pharm, CSPI

PUBLIC EDUCATION AND COMMUNICATIONS MANAGER

Emily Paterson, MPH, CHES®

LAN ADMINISTRATOR

Pedro Gamez

SENIOR DATABASE ENGINEER

Aklilu Lemessa

QUALITY ASSURANCE SPECIALIST

Elizabeth Millwee, RN, BSN, MPH, CSPI

GENERAL ASSOCIATE SENIOR IT SPECIALIST

Larry Gonzales

SPECIALISTS IN POISON INFORMATION

Rama Arvind, PharmD

Lisa Aukland, PharmD, CSPI

Amy Batdorf, PharmD

Denise Couch, RN, BSN CSPI

Josh Dennis, PharmD, CSPI

Noelle Etube, PharmD

Amber Ferrell, PharmD, CSPI

Elizabeth Fugate, RN, BSN

Nicholas Husak, PharmD, DABAT

Stephanie Jackson, PharmD

Michael Joines, BS Pharm, CSPI

Jennifer Malloy, PharmD, MPH, CSPI

Rebecca Mestas, PharmD, CSPI

Heather Mialki, PharmD, CSPI

Elizabeth Millwee, RN, BSN, MPH, CSPI

Heather Sellman, PharmD, CSPI

Becky Warren, RN, MSN

Chris Wolff, PharmD, CSPI

Jeanne Wunderer, BS Pharm, CSPI

PROGRAM MANAGEMENT SPECIALIST

Nicole Dorsey

OFFICE ASSISTANT

Moya Alli

*Retired on June 30, 2023

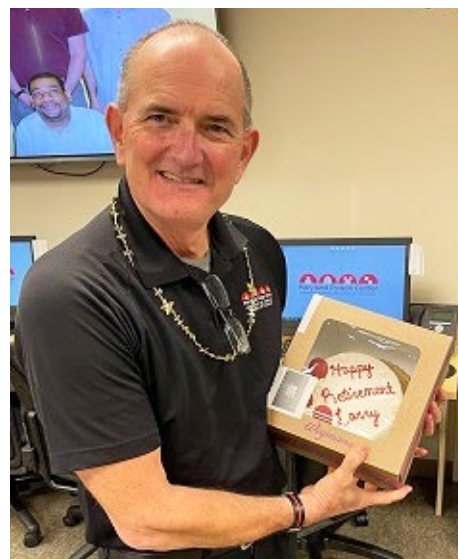
**Effective July 1, 2023

ACKNOWLEDGMENTS

The following organizations deserve special thanks for their continued support of the Maryland Poison Center:

- University of Maryland School of Pharmacy
- University System of Maryland
- Maryland Department of Health
- Maryland Cannabis Administration
- U.S. Department of Health and Human Services, Health Resources and Services Administration
- Maryland Institute for Emergency Medical Services Systems (MIEMSS)
- Priority Partners MCO
- Safe Kids Maryland State and Local Coalitions
- Baltimore County Department of Aging
- Partnership for a Safer Maryland

IN MEMORY OF LARRY GONZALES



It is with deep sorrow that we share the unexpected passing of Larry Gonzales on June 24, 2024. Larry served for 14 years as the Senior IT Specialist at the MPC, retired in November 2021, and returned soon after on contract to continue his vital IT work. Larry's absence will be profoundly felt, but his legacy of kindness, dedication, and support will continue to inspire all who knew him.



Maryland Poison Center
UNIVERSITY OF MARYLAND SCHOOL OF PHARMACY

CALL 410-706-7604
OR VISIT www.mdpoison.com
to see how you can support
the Maryland Poison Center.

SCAN QR code to...

Donate to the MPC



Save Poison Help
as a contact
in your mobile phone

