

Child and Adolescent Poisoning Prevention

March 25, 2024

1:00PM-2:00PM ET





Funding Sponsor

This project is supported by the Health Resources and Services Administration (HRSA) of the U.S. Department of Health and Human Services (HHS) under the Child and Adolescent Injury and Violence Prevention Resource Centers Cooperative Agreement (U49MC28422) for \$5,000,000 with 0 percent financed with non-governmental sources. This information or content and conclusions are those of the author and should not be construed as the official position or policy of, nor should any endorsements be inferred by HRSA, HHS or the U.S. Government.





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Resource files and links will be shared in the chat

Speakers



America's Poison Centers

Dr. Kaitlyn Brown, PharmD



Indiana Poison Center

Deirdre M. George Davis, MPH, MBA



Moderator





AMERICA'S POISON CENTERS

Treatment • Education • Prevention

Child and Adolescent Poison Exposure Trends

Kaitlyn Brown, PharmD, DABAT Clinical Managing Director, America's Poison Centers CSN Webinar -March 25, 2024

Objective

- Describe the scope of pediatric poisoning using data from:
 - National Electronic Injury Surveillance System (NEISS)
 - National Center for Health Statistics (NCHS)
 - America's Poison Centers National Poison Data System (NPDS)
- Discuss emerging trends in pediatric and adolescent poison exposures from NPDS
- Note: pediatric is defined as ≤ 19 years of age in context of this presentation





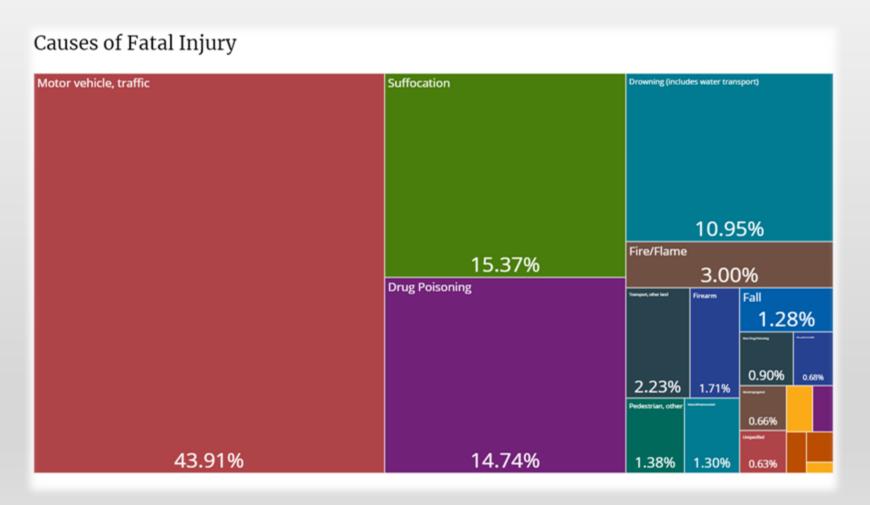
Causes of Non-Fatal Injury in Pediatrics, 2019 - 2021

- ← 10 leading causes of non-fatal injuries treated in the emergency department
 - Unintentional Poisoning
 - Self-harm Poisoning
 - Unintentional Bite: Other, Including Sting
 - Unintentional Foreign Body

Produced by: National Center for Injury Prevention and Control, CDC.

Data Source: National Electronic Injury Surveillance System-All Injury Program for WISQARS Nonfatal data,

Causes of Fatal Injury in Pediatrics, 2019 – 2021



2023 Annual Report on Pediatric Poisoning Fatalities and Injuries - Consumer Product Safety Commission

- 62,600 children treated for poisoning in the emergency department in 2021 (NEISS)
 - Increase from estimated 61,500 injuries in 2020

Table 6: 2021 ED-Treated Unintentional Pediatric Poisoning Estimates by Top 10 Products^{7*}

Product	Estimate ⁸	C.V.	95% C.I.
Blood Pressure Medications	5,800	20.29%	3,500-8,100
Acetaminophen	4,700	20.31%	2,800-6,500
Antidepressants	3,100	21.77%	1,800-4,400
Laundry Packets	3,000	21.89%	1,700-4,200
Bleach	3,000	22.16%	1,700-4,200
Dietary Supplements	2,500	23.21%	1,400-3,700
Ibuprofen	2,000	19.64%	1,300-2,800
Illegal drugs	2,000	27.88%	900-3,100
Attention Deficit Disorder	2,000	23.75%	1,100-2,900
Medications			
Unknown	1,700	16.31%	1,200-2,200

Source: National Electronic Injury Surveillance System

^{*}Adjusted to exclude adverse reactions, therapeutic errors, and exposures beyond the victim's control.

2023 Annual Report on Pediatric Poisoning Fatalities and Injuries - Consumer Product Safety Commission

- 59 fatalities involving unintentional pediatric poisoning in 2021 (NCHS)
 - Children < 1 year had largest increase in death rate (7.29 deaths/million)

Table 3: Pediatric Poisoning D	Death Counts Among	Children Under 5	5, 2019 – 2021 by
ICD-10 Code ³			

ICD-10 Code	2019	2020	2021
X40 (non-opioid analgesics, antipyretics, and antirheumatics)	0	1	1
X41 (antiepileptic, sedative- hypnotic, and psychotropic)	8	8	9
X42 (narcotics and psychodysleptics, not elsewhere classified)	17	21	33
X43 (drugs acting on the autonomic nervous system)	0	0	0
X44 (other and unspecified drugs and biological substances)	7	11	16
X45 (alcohol)	0	0	0
X46 (organic solvents and halogenated hydrocarbons)	0	0	0
X48 (pesticides)	1	2	0
X49 (other and unspecified chemicals and noxious substances)	1	0	0
Total	34	43	59

Source: National Center for Health Statistics.



National Poison Data System Near Real-Time Poison Exposure Data

America's Poison Centers

- 55 Poison Centers serving all 50 states and U.S. territories
- Providing free advice 24/7/365
 - National Poison Help line (800-222-1222)
 - Online at PoisonHelp.org
- Poison Centers are staffed by experts
 - Specialists in Poison Information (SPIs)
 - Poison Information Providers (PIPs)
 - Medical and clinical toxicologists
 - Educators and epidemiologists
- Maintaining the National Poison Data System



National Poison Data System

- Nationwide repository of exposure and information cases
 - Data from all 55 U.S. Poison Centers
 - 40 years of data collection
 - > 77 million case records
- Data automatically uploaded in near realtime (< 5 minutes)
- Standardized coded and defined data fields
- ~ 500,000 substances in NPDS product database



Pediatric Exposures Reported to U.S. Poison Centers

> 1 million exposure cases annually

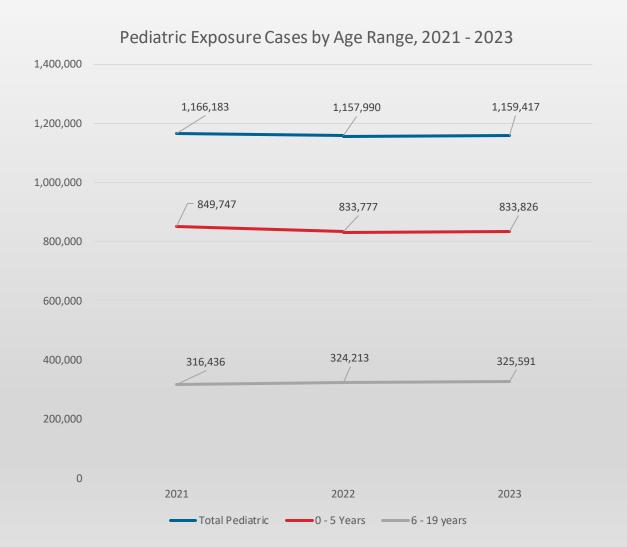
22% of cases are evaluated in a health care facility

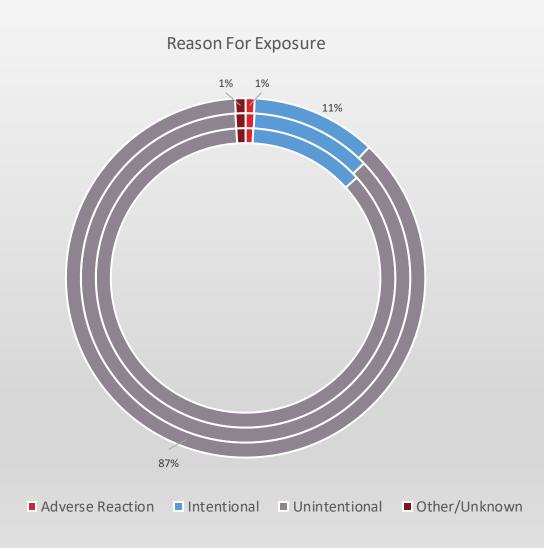
75% of cases are managed at home

< 1% of cases reported result in a major effect or death



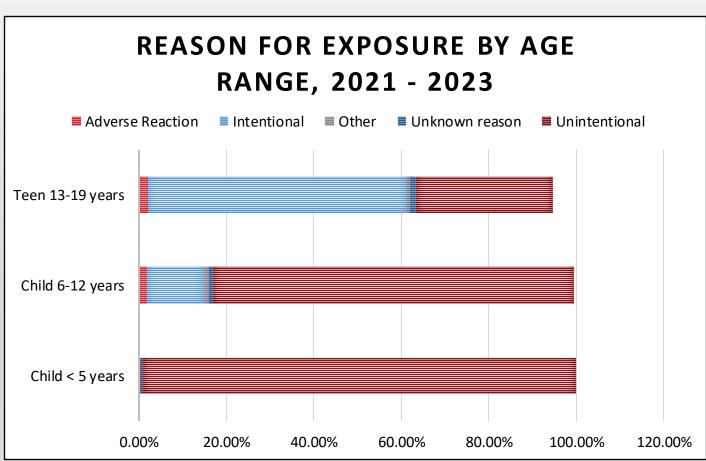
Total Pediatric Exposures Age 0 - 19 years





Substance Categories & Reason For Exposure by Age Range





Pediatric Fatalities Reported to U.S. Poison Centers

Top 5 Substance Categories Non-Prescription Fentanyl

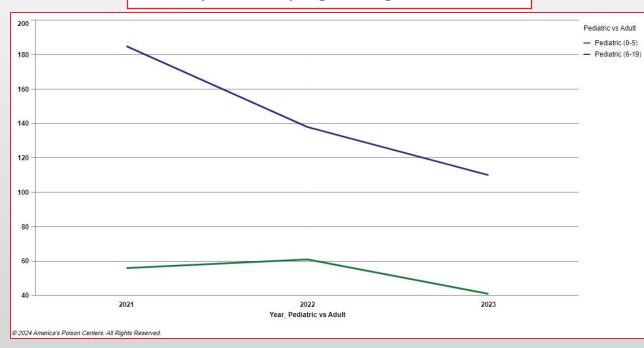
Carbon Monoxide

Bupropion

Ethanol

Acetaminophen Alone

Fatality Cases by Age Range 2021-2023



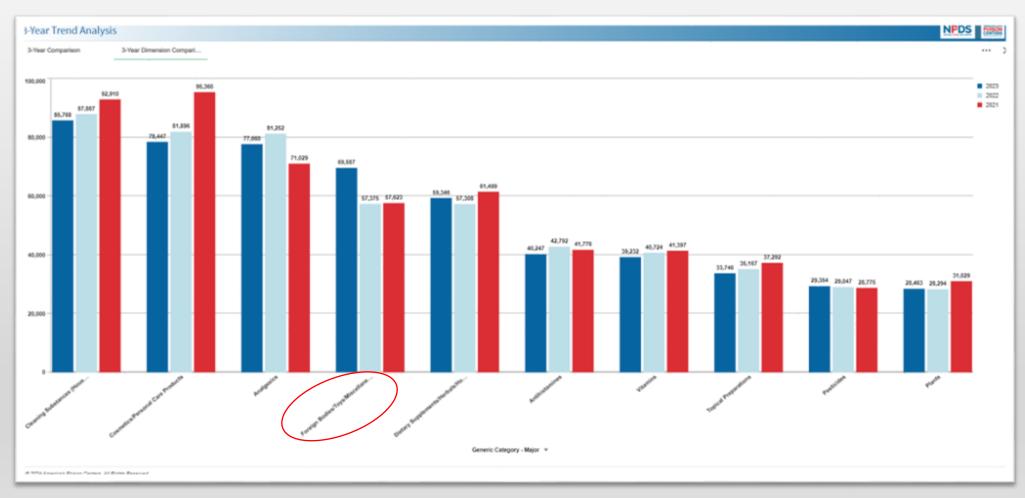
Source: America's Poison Centers National Poison Data System©

Emerging Topics



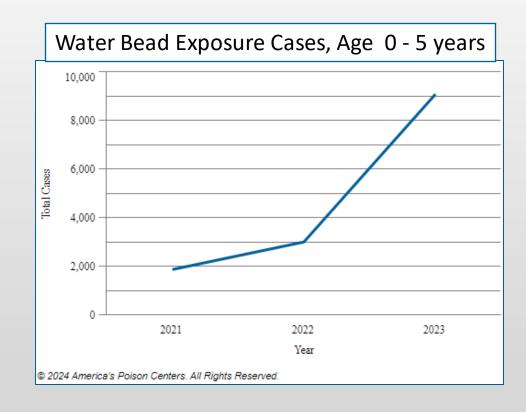


Trends in Top 10 Substance Categories Human Exposures, Age 0 – 5 years



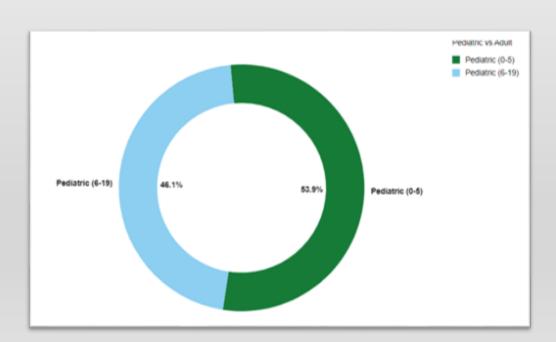
Water Bead Exposures Age 0 – 5 years

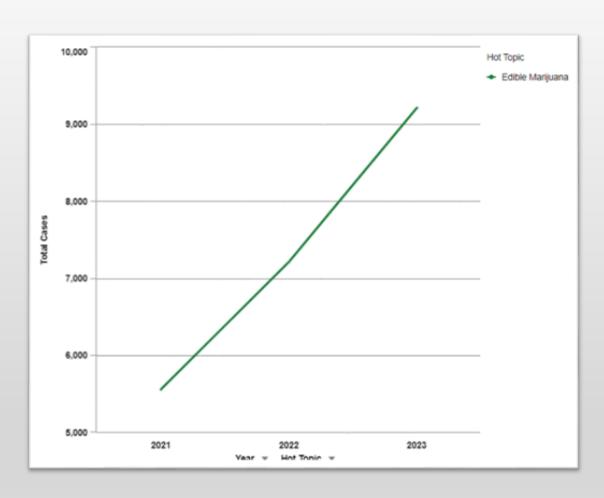
- Cases have increased 383% between 2021 and 2023
 - ~ 10% increase in cases evaluated at a health care facility
 - Severe effects of poisoning include life-threatening bowel obstructions requiring surgical intervention



Edible Cannabis Exposures Age 0 - 19

- 65% increase in cases between
 2021 and 2023
- > 80% of patients are managed in a healthcare facility

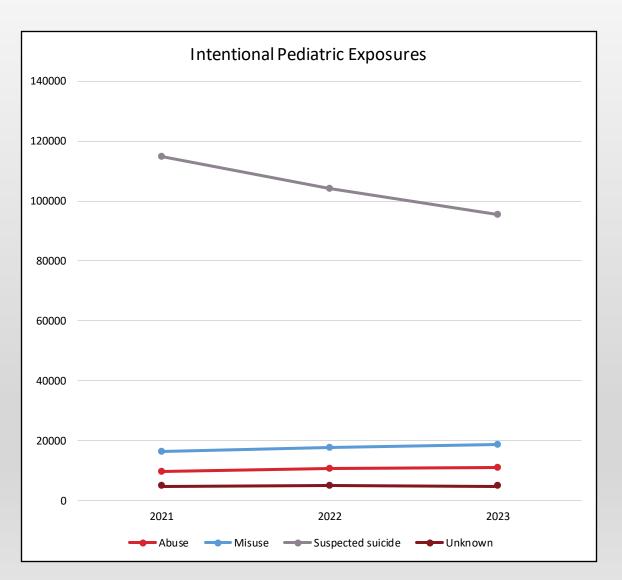




Source: America's Poison Centers National Poison Data System©

Intentional Exposure Trends

- Reports of self-harm cases decreased by nearly 20,000 cases
- Increases in both substance misuse and abuse cases



Top 10 Substances – Self-Harm

Any outcome (N = 314,735)

- Acetaminophen
- Ibuprofen
- Atypical Antipsychotics
- Sertraline
- Fluoxetine
- Diphenhydramine
- Hydroxyzine
- Escitalopram
- Trazodone
- Alcoholic Beverages

Major Effect/Death

(N = 5,559 single-substance)

- Acetaminophen
- Diphenhydramine
- Bupropion
- Unknown Drugs
- Atypical Antipsychotics
- Amitriptyline
- Fluoxetine
- Clonidine
- Ibuprofen
- Sertraline

Social Media's Influence on Poison Exposures

- Rise in "challenges"
 - Benadryl
 - Cinnamon and nutmeg
 - Tide pods
- Social media trends
 - Boric acid cure-alls
 - Nyquil chicken
- Accessibility to illicit drugs



Questions?

Brown@PoisonCenters.org





POISON PREVENTION FOR YOUTH

DEIRDRE M GEORGE DAVIS, MPH, MBA

INDIANA POISON CENTER

DISCLOSURES

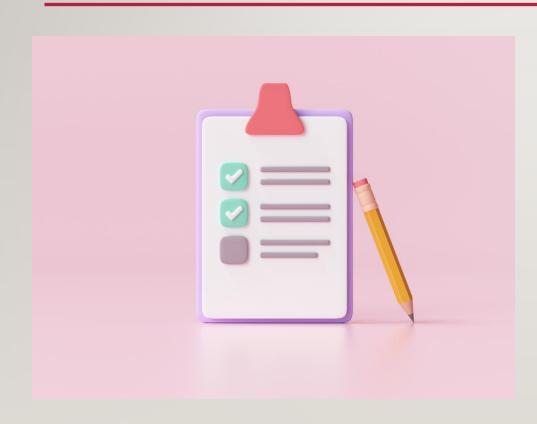


No conflicts of interest

Nothing to disclose

WHERE DO WE START?



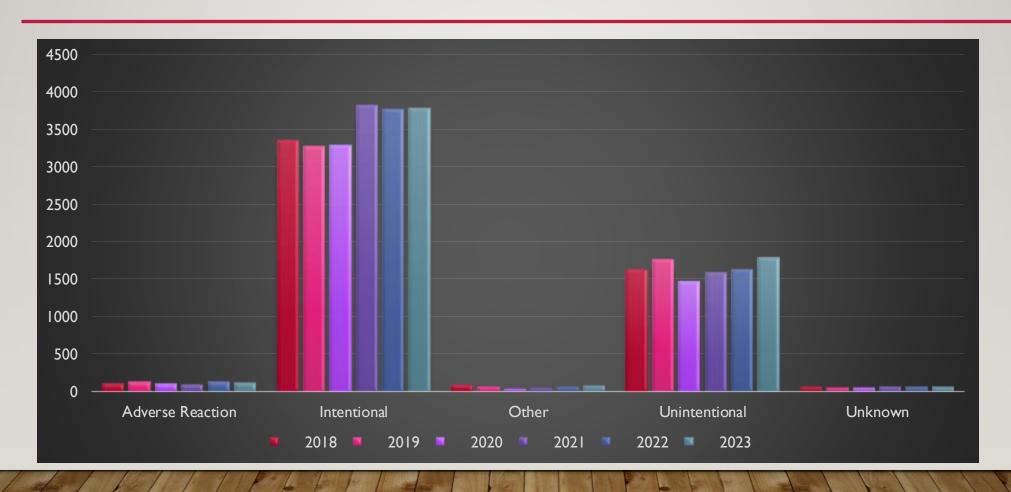


Needs Assessment

What is your data telling you?

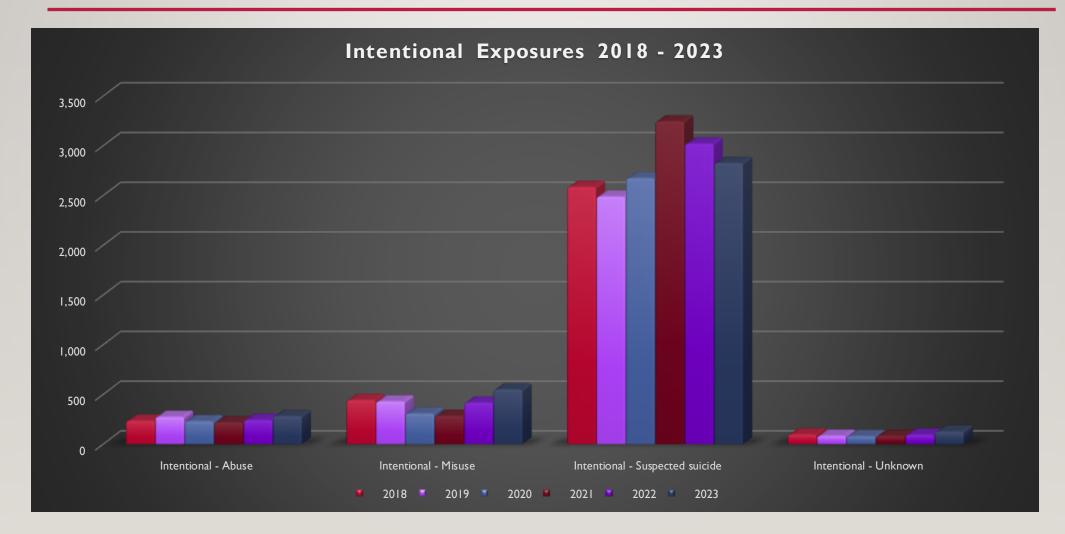
- Is it working?
- Are we doing enough?
- Where are the gaps?

ADOLESCENT EXPOSURES IN INDIANA 2018-2023







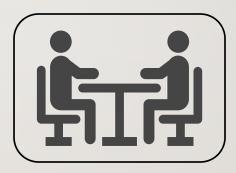


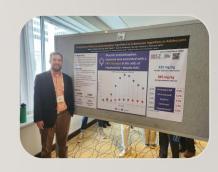
OUTREACH











Trainings

Active Web Presence

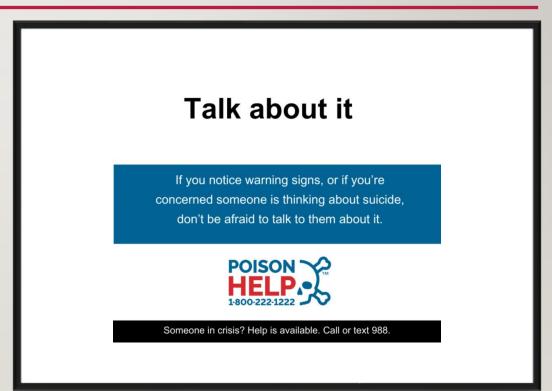
Partnerships

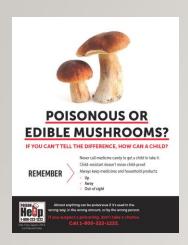
Conferences

NATIONAL INITIATIVES



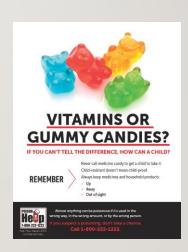
- Educator Advisory
 Committee
- Content Development
 Committee
 - Graphics
 - Partner Toolkits
- NPPW Poster/Video Contest

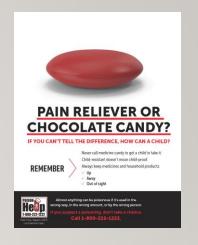












LOOK-A-LIKE CAMPAIGNS

LOOK-A-LIKES (CON'T)



WATCH OUT FOR LOOK-ALIKE PRODUCTS

Candy or CBD?



KEEP ALL POTENTIAL POISONS UP & OUT OF REACH!

QUESTIONS? CALL 1-800-222-1222



WATCH OUT FOR LOOK-ALIKE PRODUCTS

Mints or Nicotine?





KEEP ALL POTENTIAL POISONS UP & OUT OF REACH!

QUESTIONS? CALL 1-800-222-1222

"SEASONAL" CAMPAIGNS









PEDIATRIC CAMPAIGN (2023)

SUICIDE PREVENTION CAMPAIGN



NATIONAL POISON PREVENTION WEEK (THROUGH THE YEARS)











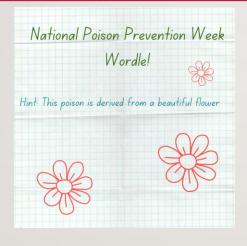




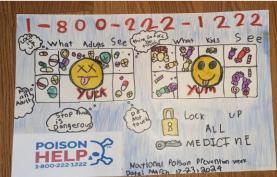
NPPW INITIATIVES & ACTIVITIES



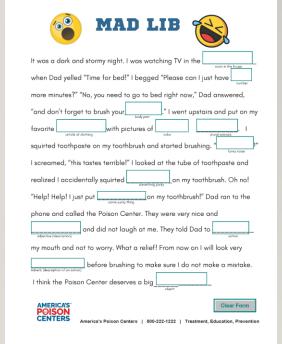








MATIONAL POISON PRE	VENTION
MARCH 21-	27, 2021
	VIRTUAL ESCAPE ROOM ACTIVITY Thurs, March 25 at 1:00 PM ET
Con The Control of th	Can you solve the poison prevention riddles?



OUTREACH & EDUCATION IN INDIANA



- Sponsorships
- Trainings
- Educational Conferences & Community Fairs
- Lunch + Learn
- ToxTalks





OUTREACH AND EDUCATION IN INDIANA



- Web Presence
 - Website <u>www.indianapoisoncenter.org</u>
 - Social Media (Twitter, Facebook, Instagram, LinkedIn, YouTube, TikTok)
- Community Presentations
 - Schools
 - Churches
 - Businesses
 - Community Based Organizations
- Targeted Mass Mailings/Materials Requests



PARTNERSHIPS IN INDIANA





- MSD Wayne Township*
- Mexican Consulate
- College Mentors for Kids*
- Indiana Household Hazardous Wastes
- Safe Kids (Marion County)
- Indiana Injury Prevention Advisory Committee

BEFORE YOU GO ...

SAVE THE POISON HELP NUMBER IN YOUR CONTACTS





QUESTIONS?



Contact Information:

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Indiana Poison Center

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Questions



Please enter your questions in the Q/A section at the bottom of your screen



Thank you!

Please fill out our brief evaluation:



Visit our website:

childrenssafetynetwork.org

