2023 Annual Report







About the APIC

The APIC has been a long-term commitment of Children's of Alabama to the citizenry of Alabama since 1958. The APIC was the 14th center established in the United States, during a time period when serious morbidity and mortality were attributed to poison ingestion in and adults. Since children its inception, the center has provided the most accurate and rapid poison information, initially to physicians only in the early years and then to both professionals and the general public. The APIC provides free and confidential lifesaving information 24/7/365. The specialists in poison information (SPIs) who answer the APIC hotline are nurses and pharmacists trained in toxicology and are nationally certified. The APIC is a fully accredited poison center by the American Association of Poison Control Centers and serves the entire state of Alabama as the only accredited statewide center designated by the Alabama Department of Public Health.



POISONHELP.ORG

Children's of Alabama, Blue Cross Blue Shield of Alabama Caring Foundation, the Alabama Department of Education, the U.S. Department of Health and Human Services/Health Resources and Services Administration, and the Alabama Department of Public Health provide operational and educational support for the Alabama Poison Information Center.

In 2023 the APIC handled 107,064 calls.

• 47,458 incoming calls resulting in

37,167 cases

- o 33,743 human exposures
- o 2,332 information calls
- o 1,092 animal exposures
- 59,606 follow-up calls

The APIC monitors **87%** of poison exposure calls from home on-site. In children <6

years old, >92% are monitored at home rather than being referred to a healthcare facility. The APIC is available to patients of all ages. In 2023, the Center managed calls on patients that ranged from <24 hours to

102 years old!

"Thank you guys so much! It had been over 16 yrs since I had to call Poison control, and y'all are still such a blessing. I cannot thank you enough for your services, calling to check multiple times to ensure safety and allow questions to be asked helps take away some of the anxiety of worrying \bigcirc Thank y'all so much again."

"The specialist was amazing! I was on the verge of a panic attack and she calmed me down, talked to me about everything and continued to check up on me and my daughter. I feel like she really cared about us and what was happening, and I really needed that. She is a blessing!"

"Everyone that handled my issue today did an amazing job with getting back with me and helped me put my mind at ease & making sure my child stayed well. They all seemed very concerned and helpful. Thank you all amazing job." "The Nurse was comforting without mawkishness, and very professional and reassuring. She went so far as to call me back to check on my condition, and was courteous and kind, as well. What a wonderful help when one is distressed! She should get a medal—and she shall certainly receive my prayers, now and always. Thank you most kindly, Poison Control."

According to 996 responses to the 2023 APIC Patient Satisfaction Survey, if the poison center was not available 37% would have called or visited their primary care physician, 37% would have gone to the emergency department, 19% would have called 911, and 7% would have called another healthcare provider (HCP), friend, or tried to find information on the internet. "The Pharmacist was very calm and comforting. She told me what to do, with a screaming, hurting child in my arms. I applaud her efforts. And the fact she called back, right when she said she would helped my confidence in her treatment."

"I appreciate the phone monitoring I was offered. That was a scary experience for me! Poison control eased my fears and made me feel safe."

Calls per County per 1,000 Residents



73% of the calls made to the APIC came from patients at home. The remaining 27% of calls came from doctors, nurses, pharmacists, paramedics, and other health care providers.





Call Volume by Patient Age		
<6 years	15,972	
6–12 years	2,505	
13–19 years	2,636	
20–64 years	10,059	
≥65 years	2,393	
Unknown	178	











In 2023 the APIC hosted 10 PharmD candidate rotators, 4 PGY2 Pharmacy Residents, and 2 MPH Interns. The rotation involves researching and presenting information about toxic substances, trips to the Birmingham Zoo to see venomous and nonvenomous snakes native to Alabama, and taking calls in the Poison Center. Two PharmD students completed the Current Topics in Toxicology elective at the McWhorter School of Pharmacy and visited Birmingham Botanical Gardens to see nonpoisonous and poisonous plants.





Five months a year there is a medical toxicology elective offered to senior medical and pharmacy students and medical and pharmacy residents. The course focuses on care of the poisoned patient through direct bedside consultations at UAB and COA, daily review of APIC cases, didactics focusing on critical care toxicity, simulations in managing the intoxicated patient, and regional field trips to identify poisonous plants, mushrooms, and snakes of Alabama. Faculty is multidisciplinary with expertise in pharmacology, toxicology, hyperbaric medicine, wilderness medicine, and international medicine. In the current academic year, 12 EM medical residents, 4 pharmacy EM residents, 4 pulmonary physician/fellows, and 10 medical students completed the course. APIC also likes to celebrate milestones and events, such as staff anniversaries, poster presentations, and National Poison Prevention Week.









Persistent Complications Following Snake Envenomation: Results of a Specialized Snake Post Discharge Clinic













In 2023 the APIC participated in

154 hours of community health events, engaging with the public and distributing poison information to 5981 Alabamians.

Along with Healthy Child Care of Alabama (HCCA) the APIC provided **2,269** poison prevention programs reaching a total of **11,990** parents throughout all 67 counties.

HCCA nurses distributed **13,433** poison prevention items provided by the APIC.





150. Palytoxin Poisoning in an Aquarium Enthusiast Erin Ryan ¹ , Stacy Marshall ^{1,2} ¹ Alabama Poison Information Center, Birmingham, AL, USA. ² University of Alabama at Birmingham, Birmingham, AL, USA	 151. Valproic Acid Toxicity After Initiation of Inject Weight-Loss Drug: a Case Report Jessica V. Rivera^{1,2}, Stacy Marshall¹, Emma Chee-Ho ¹University of Alabama at Birmingham, Birmingham USA. ²Alabama Poison Information Center, Birming AL, USA 	$(\mathbf{F}(\mathbf{ab}')2)$ Antiverson in Agkistrodon Species: a Case \mathbf{v}^1 AL_r Erin Ryan ¹ , Jessica Rivera ^{1,2} , Brian Whitworth ¹ , Stacy
Background: Palytoxin is a highly potent toxin originally isolated from the coral Palythoa toxica and subsequently identified in a variety of marine organisms. Bv converting Na+/K+-ATPase	Background: Tirzepatide (Mounjaro™) injection is a i slucose-dependent insulinatronic polynemtide recento sept 229. How many shots a	and
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morphone. The fo vir/ritonavir during had resolved, but h mation cases, the interactions. One cast staffed by medical S cle aches. Creatini use and another declining. Symptic Exposures to nirma analoresics. He way (8 female, 6 male)	80. Acute respiratory distress /ndrome secondary to occupational nlorine gas exposure	atter 303. Teenagers and young adults or m ingesting desiccants inside home train 318. Lye-ability irrer pregnancy tests: a concerning social hor Niki Ritchie, Amy White, Erin Ryan and William Rushtor ap/ media rumor on in Alabama Poison Information Center on in
three and dischar; therapeutic dosing of after hospital disc effects. headache with the i clinic between 6/17. Conclusion: Signi ing dizzy and weak, from poison center bi to contact with co of exposure cases, tions were correlated to solve the solve of the solv	istal Ballenger ^a and Erin Ryan ^a abama Poison Information Center; ^b University of Alabama at mingham ckground: Chlorine gas is an intermediately soluble pulmon-	 Indata Background: Lye or solum hydroxide (NaOH) is an allaline in the solution household cleaners, drain openers, hair relation of Alabama Poison Information Center, Birmingham, AL, USA; Alabama Poison Information Center, Birmingham, AL, USA; Alabama Poison Information Center, The University of Alabama 26, at Birmingham, AL, USA Background: Dangerous health-related misinformation continues to a solution household cleaners, drain openers, hair relation to an access the solution household cleaners, drain openers, hair relation openers, hair relation to an access the solution household cleaners, drain openers, hair relation openers

In 2023 APIC data was published in several scientific journals along with abstracts, posters, and presentations throughout the year across North America and Europe.

A Case of Severe Lead Encephalopathy wit Cardiac Arrest Managed During a Chelatic Shortage	
Case Report Published: 16 October 2023	lorine gi oth hype
Volume 20, pages 49 – 53, (2024) <u>Cite this article</u>	en speci rapy to likely fur as demo
Damilola Idowu 🖂 , Zachary Gray, Matthew Stanton, William Rushton & David Gummin	tant in c es of id
D 143 Accesses O 7 Altmetric Explore all metrics →	small co enario ca
Abstract	ly achiev red in s
Introduction	entry ir re-hospit
For many years, the standard of care in the USA has been to treat acute lead encephale with a combination parenteral dimercaprol (BAL) and CaNa ₂ EDTA. We present a case pediatric patient with severe lead encephalopathy, complicated by cardiac arrest, who	of a such

treated with an alternative regimen when CaNa₂EDTA was unavailable. ne gas; ac

Case Report

A 24-month-old male was brought by ambulance to an emergency department (ED) with new onset seizures and sustained a cardiac arrest. An initial blood lead concentration returned at 263 mcg/dl. The hospital was unable to obtain CaNa2EDTA due to the nationwide shortage. For this reason, the patient was chelated with BAL IM for 12 days and dimercaptosuccinic acid (DMSA) for 28 days. He received a second 5-day course of BAL due to rebounding blood lead concentrations. Eight days after cardiac arrest, he was extubated; however, despite ongoing therapy, subsequent follow-up 2 months later demonstrated istent cognitive deficits.

Discussion

The combination of DMSA and BAL was effective in rapidly decreasing whole blood lead concentrations. Drug shortages continue to have implications for the management of poisoned patients. This case highlights how shortages of chelating agents complicate patient care

J Extra Corpor Technol 2023, 55, 206-208 © The Author(s), published by EDP Sciences, 2023

Central ECMO cannulation for severe dihydropyridine calcium channel blocker overdose

Jose M. Cardenas (MD)^{1,*} , Santiago Borasino (MD)¹, Joseph Timpa (CCP)², Jeremy Hawkins (CCP)⁷, Martha McBride (CRNP)², William Rushton (MD)¹, Jordan Newman (MD)³, Erika Mendoza (MD)¹, Robert Sorabella (MD)¹, and Jonathan Byrnes (MD)¹

- Division of Pediatric Cardiology Section of Cardiac Critical Cars. University of Alabama at Birmingham School of Medicine, Bruninghum, AL, USA Department of Cardiovascular Perfusion Children's of Alabama, Birmingham, AL, USA
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- Received 14 August 2023, Accepted 5 October 2023
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lassified as: libydropyridines such as diltiazem and verapamil entially inhibit the L-type calcium channels in the cardium precipitating negative inotropiam and chrou-sism. At toxic concentrations, these drugs can induce sodilatory shock and bradycardia with poor myocar-

Key words: ECMO (a

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Dis is an Open Access article distributed under the terms of the Creative Commons Attribution License (https://creativecommons.org/i which nemtis specericical use, distribution, and serveduation is any multimy, provided the original work is remerky cited

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Taylor & Francis TORICOLOGY COMMUNICA 2023, VOL. 7, NO. 1, 22808 https://doi.org/10.1080/247 CASE REPORT 8 OPEN ACCESS

Repeat antivenom administration following crotalidae immune F(ab')2 antivenom in Agkistrodon species: a case series

Erin Ryan^a (), Sukhshant Atti^{a,b} (), Stacy Marshall^{a,b} (), Jessica Rivera^{a,b} () and William Rushton^{a,b} () *AL, Poison Information Center, Children's of Alabama, Birmingham, AL, USA; "Department of Emergency Medicine, Ur Alabama-Birmingham, Birmingham, AL, USA

ABTERNET Costabilise immune Fabity, lequinal yeas approved for the treatment of North American institusia emicromotion in 2015 and applications emisionmation in 2021 after a phase 5 and demonstrated population of phrasing statestical eventuations. Currently, here are intered data on the use of this manifestion in castrolling issues damage associated with Application of phrame population of phrasing statestical eventuations. Currently, here are intered data on the use of this man artimeters in castrolling issues damage associated with Application of phrame populations of phrasing data statestical eventuations. Currently, here are intered to an abuse of the man artimeters in the state of the phrase designs fracted costs of #Jabity, learned to evaluate to additional antennom. In three cases, control was achieved only after a such to fails for \$Jabity, their and the treaded to evaluate to addition to control state damage.	ARTICLE HISTORY Received 14 July 2023 Accepted 1 November 2023 REYWORDS Agkittodoc: antivenam; anvenomation; case series

Introduction

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Introduction After production of the older whole IgG anthream (coads, cotabile physicar immune theorem (Fib) (Corbin, NC: International Inc.) was the only andable (Corbin, NC: International Inc.) was the only andable immune (Fab), (Anaryk, Rarre Disease Therapeutics in the oracy advance in 2025, for F1D Agenetics of the a circuit trial demonstrated significantly lower rates of trial data or evaluate for control of tissue damage [1]. A lare mahysis of only 11 Aglicabole controls remeasur-ations in the trial Showed no difference in controlling atoms in the trial Showed on difference in controlling Shoppenethy in 2021 Aglicabole control (Fab), India-tions to 40 North American pit type enveronmities of [1], halke mithematics, making extensive reveom differs to primary concerning (S). There are limited atta on the ability of Fab), to control cytomicity from Aglianostis mereoremations.

We describe four cases of Agkistrodon co envenomation treated with F(ab')₁ who receive tional antivenom beyond the manufacturer's mended dose to obtain control of c tissue damage.

Case 1

C car 1 A 13-year-old male was bitten on the right middle fuger by a copperhead (Agittrodon convertic) while comping. He developed severe pina and wolling into the indi-band and received ten visis of F4k3), within . The conformation. The conformation of the second second second second is transfer to specializit tentrary care facility. A med-ical toxicologist evaluated patient upon arrival and pool remonandant. The change in artheems was pool remonandant. The change in artheems was pool remonandant of the formality of the second hospital.

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What's New

The Pitts BCBS of Alabama Clinical **Toxicology Fellowship**

APIC will offer a one-year Clinical Toxicology Fellowship for the first time in the 2024-2025 fellowship year. Five board-certified toxicologists (3 MD and 2 PharmD) will lead the fellow's training along with support from APIC's specialists in poison information (SPIs and CSPIs). The fellowship provides in-depth experiences that develop the knowledge and skills necessary to care for poisoned patients. Upon completion, the graduating fellow should be able to function in a professional, administrative, and research capacity in a certified poison center, as part of a clinical toxicology service, and/or in an academic environment. The curriculum will prepare the fellow for credentialing by the American Board of Applied Toxicology via examination.

Experiences will include bedside consultations with UAB and COA patients, coordination of journal clubs and case conferences, didactic and clinical teaching of multidisciplinary learners and professionals, scholarly activity and contributions through publishing, and poison center operations and practice coverage.



> provides in depth experiences that develop the d skills necessary to care for poisoned patients tion, the graduating fellow should be able to a professional, administrative, and research cettified poison center, as part of a clinical tice, and/or in an academic environment.

culum will prepare the fellow for credent Board of Applied Toxicology via examina Requirements

Craduates from accredited colleges of pharmacy must hold Doctor of pharmacy degree and must be eligible for Alabar licensure. Completion of an ASHP-accredited PCVI pharmac Residency is required. Craduates from accredited schools of nursing must hold an advanced degree in a field related to toxicology. Additional work experience in the field of toxicology additional information for a minimum of 3 years is required.

Experiences

- Consultang, including bedside consultations provide Consultang, including bedside consultations provide UAB Hospital and Children's of Alabama Coordination of journal clubs and case conferences learners and professional Scholarly activity and contributions through publishing poison center operations and practice coverage



Benefits



Contact

n Slattery, DrPH, RN, RPh, DABAT, FACCT







Ann Slattery DrPH, RN, RPh, DABAT, FACCT

Dr. Ann Slattery retires as Director of the Alabama Poison Information Center. Ann graduated from Samford twice, once with a nursing degree and again with a pharmacy degree. She received her Master and Doctorate in Environmental Health/Toxicology from the UAB School of Public Health. She completed a Fellowship with the CDC/ATSDR working on the Fresh Kills Landfill health assessment. Ann is a board-certified clinical toxicologist (DABAT) and a Fellow of the American Academy of Clinical Toxicology.

When Ann accepted a position at The Children's Hospital Poison Control Center in 1982, she never imagined that she would stay for 41 years. Back then, the poison center was located in a closet in the pharmacy. Micromedex (our database) was contained within over 500 microfiche, and one of the two microfiche readers in the center doubled as a Kodak printer. In 1985, the microfiche were converted to CD-ROMS. Fast forward to the '90s, our name changed to The Regional Poison Control Center. We used a computer to view Micromedex/Poisindex but still had paper charts. By 2000, everything in the poison center was computerized and online. In 2000, once a case/chart was entered into the APIC database, it arrived at the National Poison Data System (NPDS) in 10 minutes. In 2023, cases/charts now arrive at NPDS in less than 5 minutes. We have been the Alabama Poison Information Center since our final name change in March of 2020.

Ann says participating in the growth of the APIC has been one of her greatest joys. As a toxicologist, Ann was privileged to travel across the US, Canada, and Europe while serving as a member or chair of many America's Poison Centers (APC) and American Academy of Clinical Toxicology/American Board of Applied Toxicology committees, including the SPI, accreditation, QA, and CDC committees. Ann leaves an indelible mark on APIC after 41 years, and her impact will be felt for many more.



APIC in the Media

Interviews:

Caffeine overload: Doctors warning about the dangers of too much

Poison Center Educator discusses poisonings during Dothan Radiothon

Children sick from edibles on the rise in Alabama

Children eating dangerous gummy products on the rise in Alabama

Purse Dangers: Poison Awareness Week | Talk of Alabama

National Poison Prevention Week

Poison Prevention Week

Poison Centers are here for you when poisonings happen

UAB's Snakebite Clinic is making sure explorers stay vigilant

Think You Know What To Do After A Snake Bite? This ER Doctor May Disagree

Online Newsrooms:

The spring hazards parents need to know about

Comprehensive Snakebite Program offers multidisciplinary care for snakebite victims

Top 10 Substances seen in Pediatric Exposures in Alabama*

- 1. Cleaning Products
- 2. Cosmetics
- 3. Analgesics
- 4. Dietary Supplements
- 5. Foreign Bodies
- 6. Antihistamines
- 7. Pesticides
- 8. Vitamins
- 9. Topicals
- 10. GI Preparations

*Pediatric patients less than 6 years of age

Top 10 Substances seen in Pediatric

Exposures in the US*

- 1. Cleaning Products
- 2. Analgesics
- 3. Cosmetics
- 4. Foreign Bodies
- 5. Dietary Supplements
- 6. Antihistamines
- 7. Vitamins
- 8. Topicals
- 9. Pesticides
- 10. Plants

*Pediatric patients less than 6 years of age

800-222-1222





www.ChildrensAL.org/APIC