

Introduction to the  
Florida Poison Information Center Network (FPICN)  
Statewide Data System  
and its connection to the  
NPDS (National Poison Data System)

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- The Florida Poison Information Center Network was created by an act of the Florida Legislature in 1989 (FS 395.1027) in response to the overwhelming need for emergency poison information in the state.
- The Network, incorporates 3 poison centers and a statewide data center located in Jacksonville, Miami and Tampa
  - receives approximately 500 calls each day from Floridians and residents of the U.S. Virgin Islands.
  - Available 24/7, calls answered by specially trained physicians, nurses, pharmacists, physician assistants, toxicology fellows, and board-certified toxicologists



- Discussion:

- National overview of Poison Centers in the U.S. and the AAPCC National Poison Center Database (NPDS)
  - NPDS data access and tools
- Florida Poison Information Center Network (FPICN) infrastructure
  - FPICN data access and tools
    - ToxSentry, ToxSentryWeb, ToxSentryAnalytics dashboards, static data postings
    - FL- ESSENCE-PC
- Research applications
- Live demo of FPICN data access capabilities



- American Association of Poison Control Centers (AAPCC)
  - Structure and function
    - Member services
    - Certification of centers and SPI's
    - Data collection, collation, analysis
    - Quality of care and data
    - National guidelines
    - Funding



- AAPCC National Poison Data System (NPDS)
  - History of NPDS (aka, TESS)
  - Limitations of NPDS data
  - Proprietary and non-proprietary codes vs ICD9-10

# National Poison Data System (NPDS)

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## •What is it?

- Initiated in 1985
- Data warehouse offering near real-time poisoning exposure surveillance information
- Data uploaded from poison centers every 8 min allowing for both spatial and temporal case volume and case-based surveillance.
- Maintained by the American Association of Poison Control Centers (AAPCC).

## •What data does it contain?

- Case information from calls placed to all poison centers across the U.S.
- > 74 million case records and information on over 447,000 products.
  - Annually, the nation's poison centers take over four million calls. All calls are entered into NPDS. These calls include data on over 2.5 million confirmed human exposures, animal exposures, information calls, and cases that were later confirmed to be non-exposures.

## •Access?

# National Poison Data System



Poison center personnel include medical toxicologists, clinical toxicologists and specialists in poison information.

User Name:

Password:

Logon

[Forgot Username?](#)

[Reset Password](#)

User Name is Required

[Contact NPDS Support](#)



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Since 1953, poison centers have been making a positive contribution to public health in the United States.

The goal of poison centers is to reduce morbidity and mortality due to poisoning.

It is clear that poison centers accomplish this goal while simultaneously decreasing the cost of health care.

If you have a poisoning emergency, call



If the victim has collapsed or is not breathing, call 911.



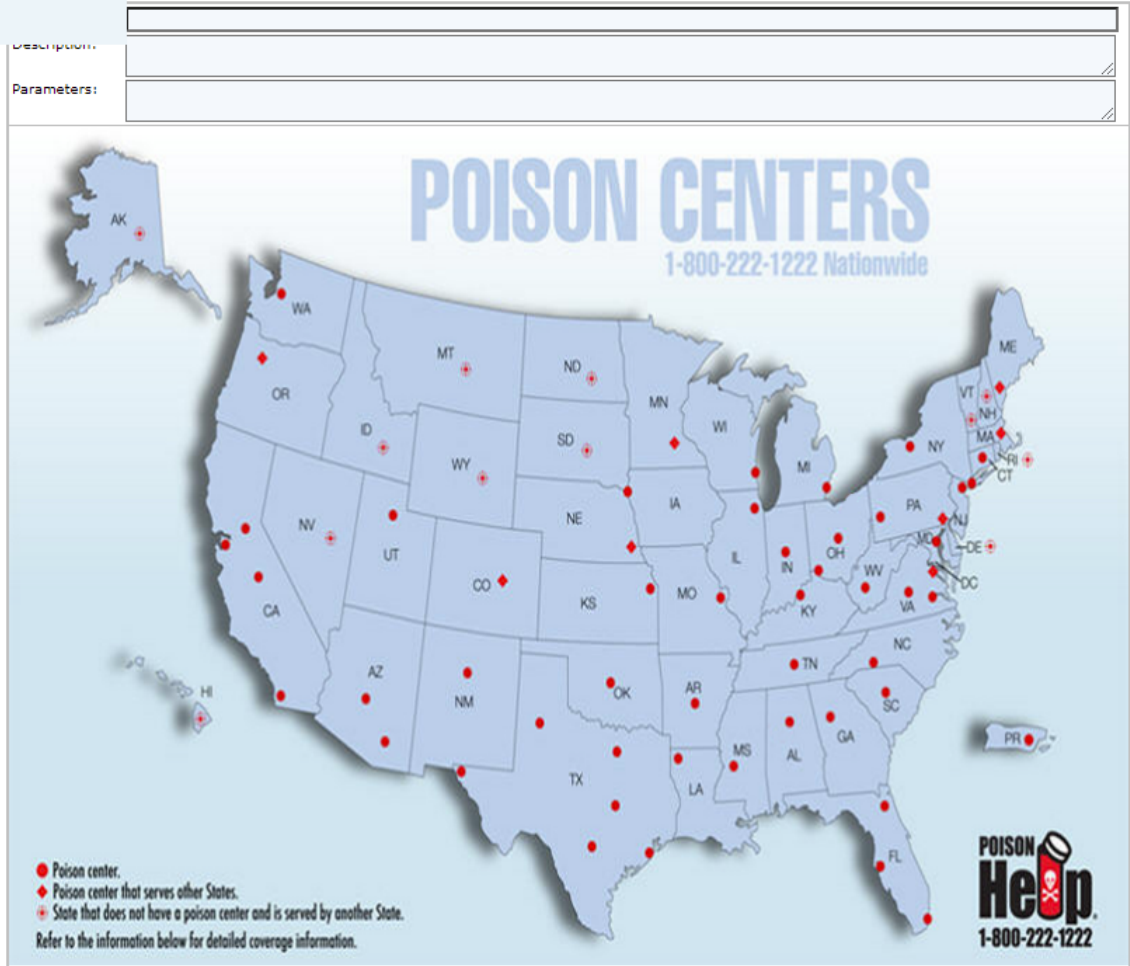
acts) (Unknown), Serotonin 5-HT 1B,1D Receptor Agonists: Sumatriptan (Unknown), Calcium and Calcium Salts (10 tabs / pills / capsules), Hydrox

Welcome: Jay Schauben   Reports   Toxicosurveillance   Anomaly Monitor   NPDS Data   Security

Reports

- Add Case Based Definition
- Add Volume Definition
- Maintain Surveillance Distribution
- Search

<b>Accreditation</b>	
<b>Administration</b>	
<b>Case Summary</b>	
<b>Report Name</b>	
Case Detail	Preview   Generate
Case Log (Generic Code)	Preview   Generate
Case Log (Generic Code/Product Code)	Preview   Generate
Case Log (Product Code)	Preview   Generate
Case Log Counts (Generic Code)	Preview   Generate
Case Log Counts (Generic Code/Product Code)	Preview   Generate
Case Log Counts (Product Code)	Preview   Generate
Case Log for Historical Generic Codes	Preview   Generate
Case Log National	Preview   Generate
Case Status	Preview   Generate
Distribution of Age and Gender	Preview   Generate
Fatality Narrative (AAPCC Internal Use Only)	Preview   Generate
Fatality Narrative (External Use)	Preview   Generate
Fatality Narrative (Pre-2006 Internal)	Preview   Generate
Fatality Case Tissue Detail	Preview   Generate
Location Code Evaluation	Preview   Generate
Submission File Log	Preview   Generate
Submission File Log By Case	Preview   Generate
<b>Contact</b>	
<b>Exposure</b>	





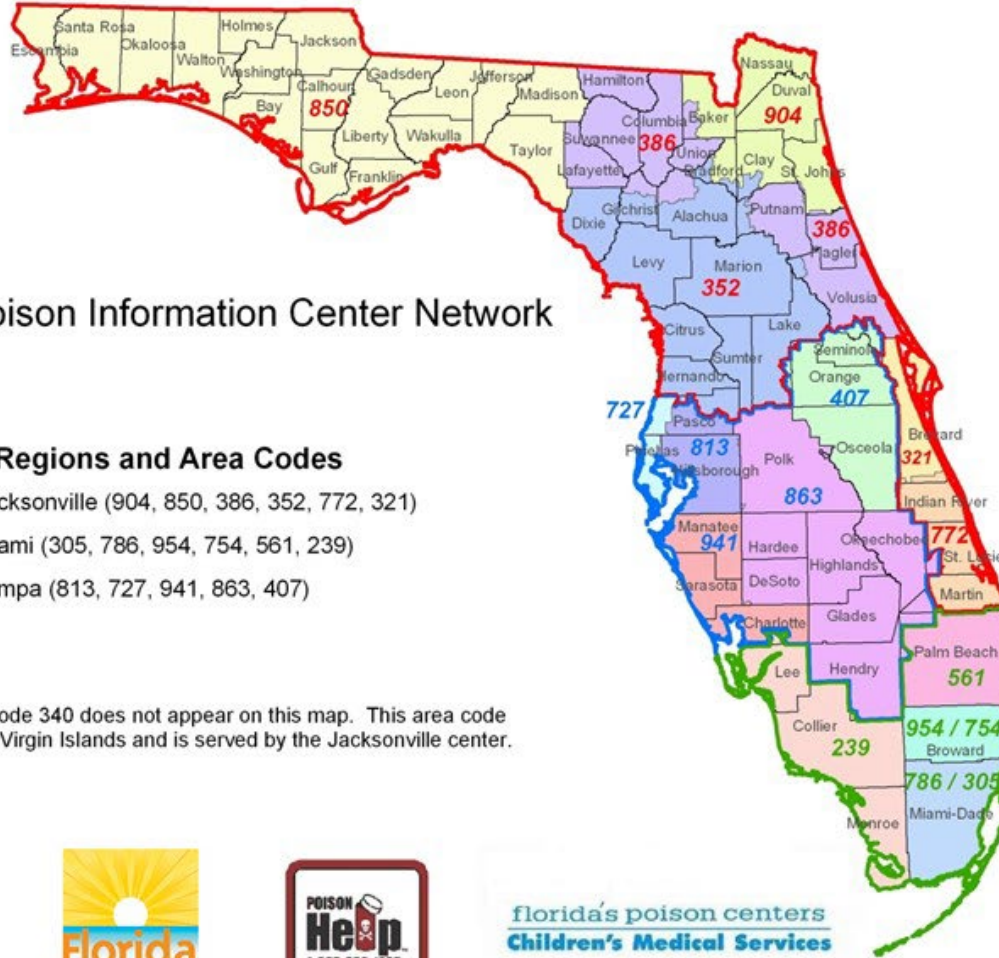
- Florida Poison Information Center Network
  - Statewide Network of three poison centers and a data analysis unit coordinated through Children's Medical Services, Department of Health
    - FPIC/Jacksonville: UF Health-Jacksonville Medical Center, University of Florida Health Science Center
    - FPIC/Miami: Jackson Memorial Hospital; University of Miami
    - FPIC/Tampa; Tampa General Health Care; University of South Florida
    - FPICN Data Center; UF Health-Jacksonville, University of Florida

## Florida Poison Information Center Network

### FPICN Regions and Area Codes

- Jacksonville (904, 850, 386, 352, 772, 321)
- Miami (305, 786, 954, 754, 561, 239)
- Tampa (813, 727, 941, 863, 407)

Note: area code 340 does not appear on this map. This area code is for the US Virgin Islands and is served by the Jacksonville center.



floridas poison centers  
Children's Medical Services



- **Poison Center Operations**

- Lay public calls

- approximately 83% of call volume
    - 89% from residence
    - 65-70% occur in children <6 years old
    - 90% accidental

- Health professional calls

- approximately 14% of call volume

- Others:

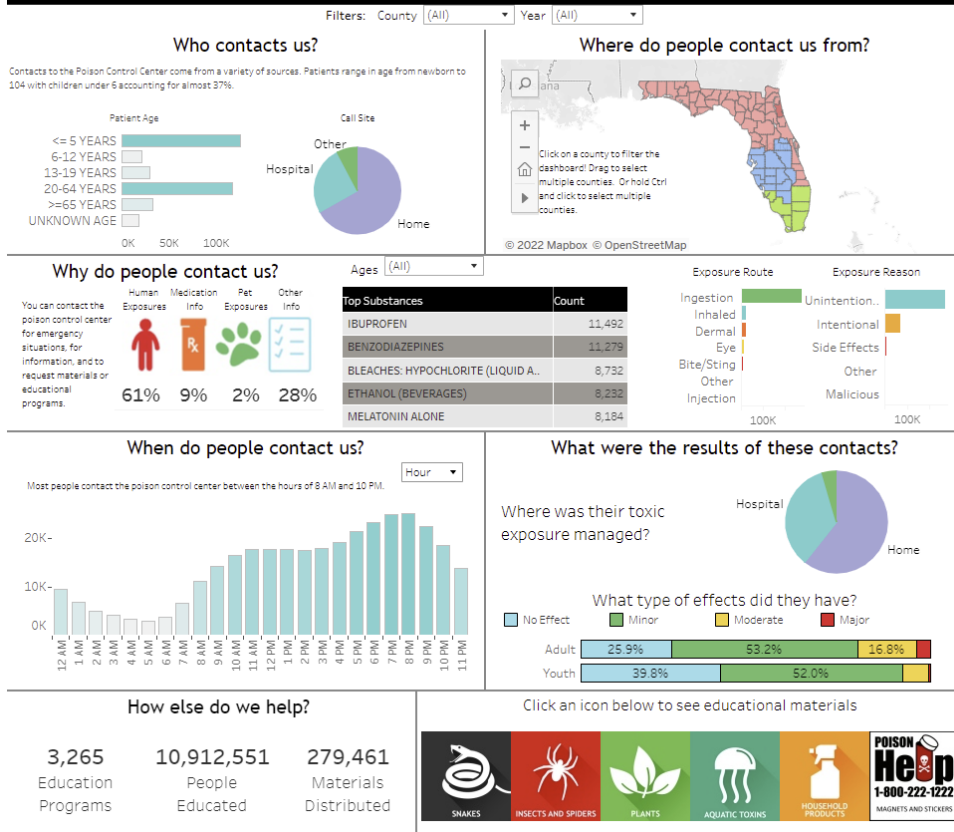
- veterinarians, law enforcement, EMS, schools/other public areas, restaurants



- Poison Center Operations

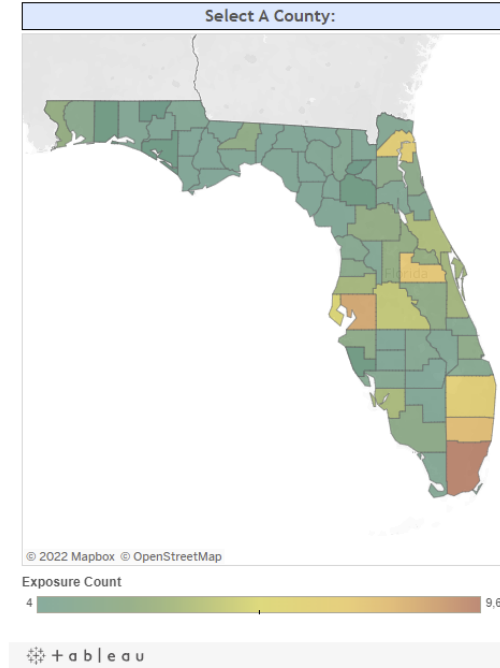
- Epidemiology/data collection
  - computerized on-line data collection
  - medical records kept on each patient
  - exposures and information requests collected
  - statewide data analyzed
  - contribute to AAPCC NPDS database
  - contribute to Florida's ESSENCE-PC system

## Florida Poison Control Center Network Statistics



## Incoming Exposures

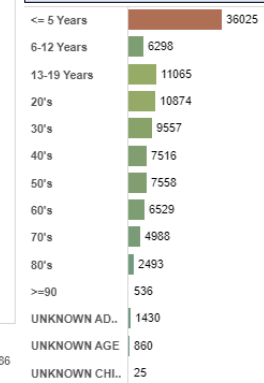
Pick Types of Exposures: All Year: 2021



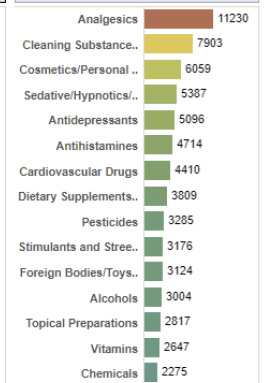
### Management Site VS Exposure Site

Exposure Site	Managed at a Medical Facility	Managed at Home	Managed at Other Location	Patient Refused Medical Atte..
Health Care Facility (code)	57.18%	36.84%	3.83%	2.15%
Other (code)	48.82%	35.26%	12.88%	3.04%
Other Residence	31.66%	62.42%	3.24%	2.68%
Own Residence	37.06%	59.43%	1.83%	1.68%
Public Area	40.86%	50.81%	5.50%	2.82%
Restaurant/Food Service	23.76%	71.28%	4.26%	0.71%
School	24.13%	53.62%	21.09%	1.16%
Unknown	77.88%	11.17%	6.38%	4.57%
Workplace	57.46%	34.96%	2.84%	4.74%

### Age Distribution



### Top 15 Exposure Categories





- FPICN real-time data tools
  - ToxSenty (EMR)
  - ToxSentryWeb (ad-hoc query tool)
  - ToxSentryAnalytics (Tableau dashboards)

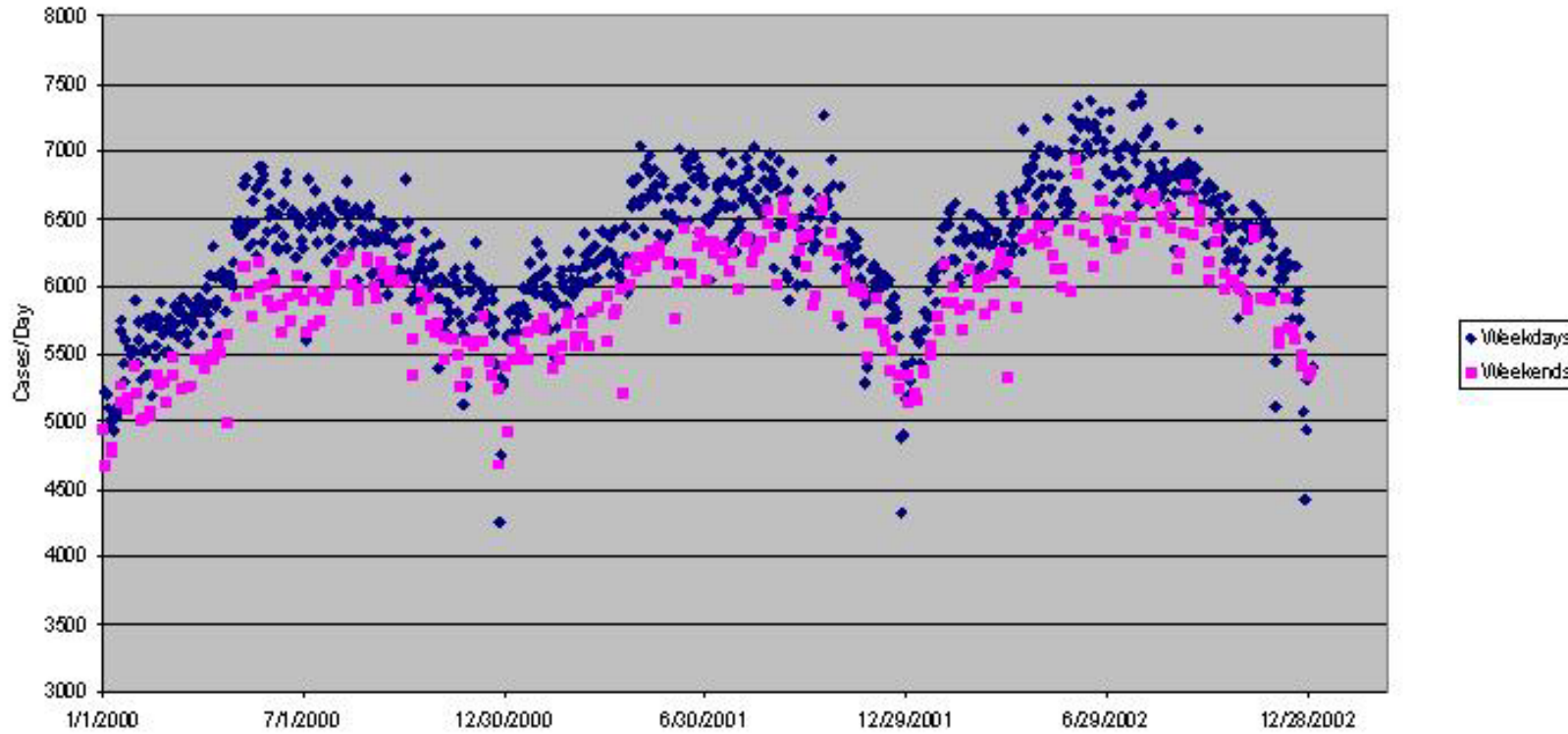


- Research applications

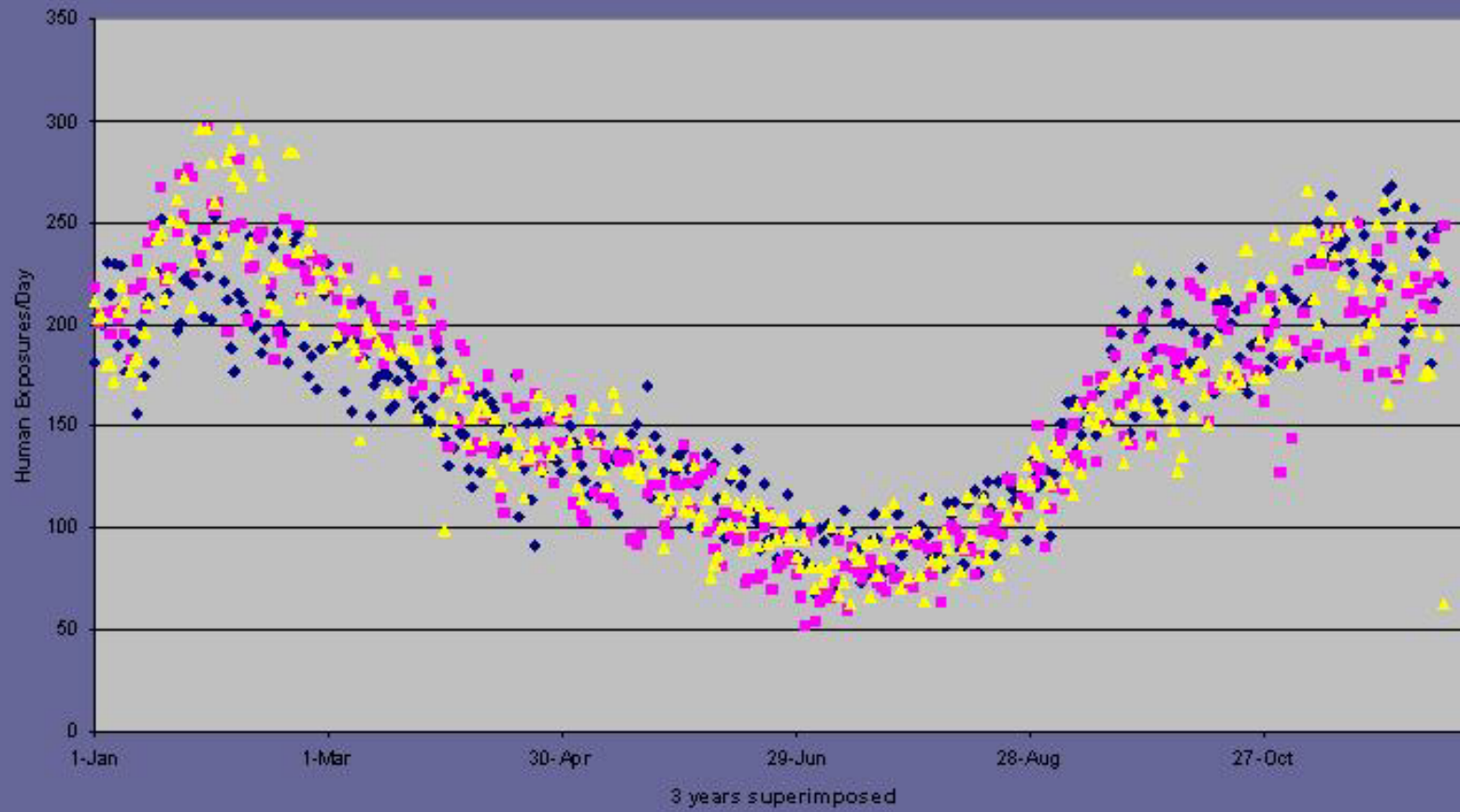
- Data can be used to support grant applications, pilot data, etc.
- Poison center data has been used in epidemiological studies, identifying and characterizing current trends related to toxicological substances/exposures; studies employing geospatial analysis and machine learning



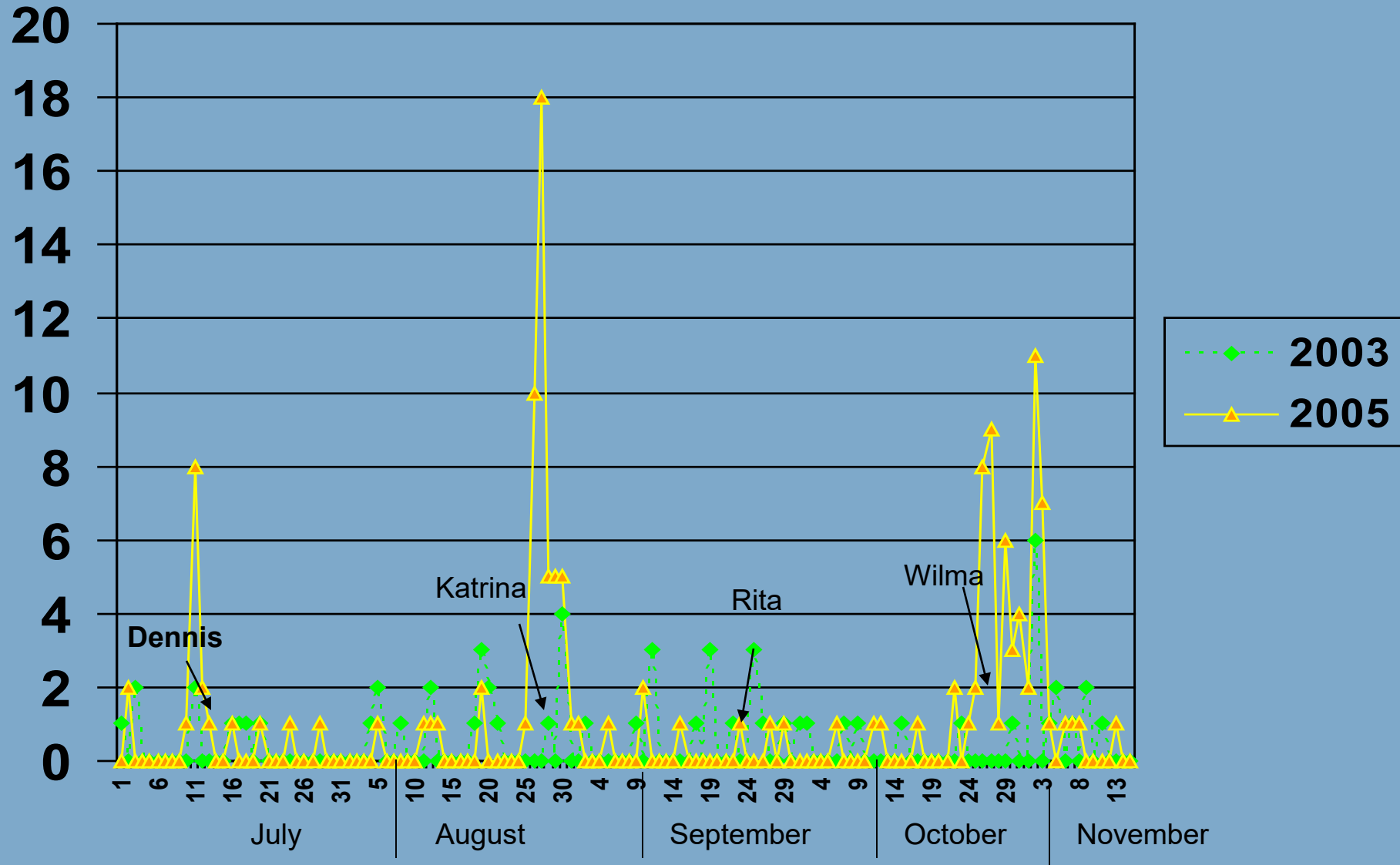
### Human Exposures



### Cough & Cold Exposure Cases, Children < 5 Years, Human Exposures



Frequency of Statewide Carbon Monoxide Exposures following hurricanes by year, 2003 and 2005.



Florida Hurricane Landfall dates for 2005 Hurricanes Dennis (July 10), Katrina (August 25), Rita (September 20), and Wilma (October 24). There were no hurricanes in 2003.  
 Source: Florida Poison Control Data

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## Monitoring Poison Control Center Data to Detect Health Hazards During Hurricane Season — Florida, 2003–2005

Eight hurricanes made landfall in Florida from August 13, 2004, through October 24, 2005.\* Each hurricane caused flooding and widespread power outages (1–4). In the fall of 2004, the Florida Department of Health (FDOH) began retrospectively reviewing data collected by the Florida Poison Information Center Network (FPICN) during the 2004 hurricane season. During the 2005 hurricane season, FDOH, in consultation with FPICN, initiated daily monitoring of FPICN records of exposures that might reflect storm-related health hazards. Analysis of these data determined that 28 carbon monoxide (CO) exposures were reported to FPICN in the 2 days after Hurricane Katrina made its August 25, 2005, landfall in Florida, en route to a second landfall on the Gulf Coast. Data on CO and other exposures were used to develop and distribute public health prevention messages to Florida communities affected by hurricanes.

FPICN, created by the Florida legislature in 1989, consists of poison control centers in Jacksonville, Miami, and Tampa and a data analysis unit in Jacksonville. Health professionals and the public can contact FPICN by calling a toll-free hotline available 24 hours a day. Specialists in poison information at each center collect exposure and substance information from callers and enter it into a local database; this information is then uploaded to a statewide database.

The statewide database includes a case narrative and patient identification information provided by the individual caller or clinician from a health-care facility. Information is coded following American Association of Poison Control Centers (AAPCC) guidelines regarding harmful substances, circumstances of exposure, clinical findings, disposition, and follow-up.<sup>†</sup> FPICN defines exposure as contact with a substance that could be harmful to health via ingestion, inhalation, injection, or mucosal membrane/dermal exposure.

FDOH selected the following hurricane-related exposures for daily monitoring in 2005 and retrospective review of data from 2004: CO; hydrocarbon fuels; batteries and fire/matches/explosives; bites/stings and snake bites; contaminated, polluted, or sewage water; and food poisoning (Table). For this analysis, exposures to smoke or exhaust gas (e.g., from motor vehicles) were not included as CO exposures. FDOH compared exposures from 30 days before and up to 1 week

\* Hurricanes Charley, Frances, Ivan, and Jeanne in 2004 and Dennis, Katrina, Rita, and Wilma in 2005. Although Rita did not make a direct landfall, the hurricane swept past the Florida Keys, causing flood damage and power outages.

<sup>†</sup> Available at <http://www.aapcc.org/poison1.htm>.



- DEMO:
  - ToxSentry
  - ToxSentryWeb
  - ToxSentryAnalytics

Home - ToxSentry® v2.4.2.8 AD + DGC

File Tools Reports Maintenance Help

My Active Exposures (2)

Expo #	Call Time	Patient Name	Substance(s)	Caller Name	Language	SPI	HCF	Age	Next F/U	Take Control SPI	Take Control Center
J2369756	2/16/2022 6:57:00 AM		CYANIDE,Tylenol (Acetaminophen)	MCRAE, DAR	English	SCHAUBEN, Jay Home		(none)			
M2224942	3/16/2021 11:04:00 PM	TEST, JAY	--- No Substances ---	TEST, JAY	English	SCHAUBEN, Jay Own Residence					

My Error Exposures (0)

Quality Review Administrator Review

My Information Requests (0)

Active Multi-Patient Events (0 Events)

Center Active Exposures (54)

Expo #	Call Time
J2371906	3/3/2022 6:15:00 AM
J2371904	3/3/2022 6:00:00 AM
J2371896	3/3/2022 1:13:00 AM
J2371886	3/2/2022 11:19:00 PM
J2371884	3/2/2022 11:03:00 PM
J2371882	3/2/2022 10:55:00 PM
J2371871	3/2/2022 9:51:00 PM
J2371861	3/2/2022 8:45:00 PM
J2371852	3/2/2022 7:31:00 PM
J2371844	3/2/2022 7:03:00 PM
J2371839	3/2/2022 6:23:00 PM
J2371837	3/2/2022 5:25:00 PM
J2371834	3/2/2022 5:12:00 PM
J2371832	3/2/2022 4:12:00 PM
T2373401	3/2/2022 12:05:00 PM
J2371785	3/2/2022 10:41:00 AM
J2371781	3/2/2022 10:30:00 AM
J2371752	3/2/2022 7:54:00 AM
J2371749	3/2/2022 6:19:00 AM
J2371720	3/1/2022 10:53:00 PM
J2371717	3/1/2022 10:17:00 PM
J2371713	3/1/2022 9:41:00 PM
J2371712	3/1/2022 9:29:00 PM
J2371679	3/1/2022 6:23:00 PM
J2371672	3/1/2022 6:04:00 PM
J2371666	3/1/2022 5:35:00 PM
J2371664	3/1/2022 5:15:00 PM
J2371656	3/1/2022 4:21:00 PM
J2371648	3/1/2022 2:37:00 PM

Messages

J2371909: [], ] - @ Home

Call Received: 3/3/2022 07:35 by SCHAUBEN, Jay

Patient: J2371909 - Open of 1 Expo Time: 03/03/2022

First: Last: Title: (none)

Address: City: State: FLORIDA

Zip Code: Phone: Species: Human

Age: 0 (none) Gender: (none)

Race: (None) Weight: lb

Expo At: Patient Address Pri Ctr: (this center)

Call, Patients, Substance | Comments, Labs | Management

Caller Site

- Own Residence  Health Care Facility (code)  Public Area
- Other Residence  School  Other (code)
- Workplace  Restaurant/Food Service  Unknown

Exposure Reason

- Unintentional  Intentional  Other
- Adverse Reaction  Unknown Reason  Withdrawal

Status

- Critical
- Reviewed
- Closed

Special Call Designation

- COVID-19 Call - Network
- 2016 Chemical FSE - Network
- Bedbug Call - Network
- BioShield 2015 Exercise-Network
- Call taken over by another CTR-Network
- Cantaloupe - Network
- Chinese Dry Wall - Network
- Employee Call - Network
- Insurance Company Referral - Network
- Meningitis Hotline Call - Network
- Tourist Call - Network
- Zika Virus - Network
- 911 Conference Call - Jax
- Baptist Health Source Hotline - Jax

Exposure Site

- Own Residence  Health Care Facility (code)  Public Area
- Other Residence  School  Other (code)
- Workplace  Restaurant/Food Service  Unknown

Patient's Current Medications

Patient's Medical History

Date of Birth: Med Rec #:

Substance Information

Description: Substance Name

Substance Generic Categories:

Expo Date: 3/3/2022 Expo Time: Unknown Adj Expo Time

SPI Notes



Patient Name	Substance(s)	Caller Name	Language	SPI	HCF
AM TAPPEG TAMMY	FENTANYL	DM GREG	English	L. BARNES, D.	OWN HOSPITAL
AM W					MAN
AM HA					
0 PM BR					EV\Pa
0 PM W					DMMU
0 PM M					ART PE
PM GI					MAN
PM RA					
PM RE					
PM VA					DO
PM OF					MEDICA
PM RE					
PM SI					
PM BR					ic
0 PM LA					MAN
0 AM CA					
0 AM BI					
AM M					ART BA
AM LC					ART PE
0 PM AD					TH LAK
0 PM M					NTER
PM TR					
PM CA					ER
PM BR					
PM BU					/dispa
PM BR					AL ME
PM LE					R JACI
PM LA					
PM ARKO MACKENZIE	Miracle-Gro Ultra Bloom Water	LINDSAY	English	NICHOLS, Joann	Own Residence

**Rule Based Coding Administration - ToxSentry®**

Rules List

Name	Case Type	Active	Start Date	End Date
Solid Dose Pill study	Exposures		02/22/2017	
Solid Dose Pill Study - Cascade Questions	Exposures			
Test Central Admin Edit	Exposures		09/18/2019	09/19/2019
test admin server 2	Exposures			11/20/2020
Specific antivenom used for patient care (old)	Exposures		02/09/2020	
Specific FAB antivenom used	Exposures	✓	02/13/2020	
David Rose Test V1.5.0.10	Exposures			11/20/2020
test	Exposures		08/03/2020	11/20/2020
COVID-Related Exposure-Analgesics	Exposures		09/09/2020	
COVID-Related Exposure-Cough/Cold	Exposures		09/09/2020	
COVID-Related Exposure-Vitamins	Exposures		09/09/2020	
COVID-Related Exposure-DietarySupplements	Exposures		09/09/2020	
COVID-Related Exposure-Bleach	Exposures		09/08/2020	
COVID-Related Exposure-HandDish	Exposures		09/09/2020	
COVID-Related Exposure-Cleansers	Exposures		09/09/2020	
COVID-Related Exposure-Disinfectants	Exposures		09/09/2020	
COVID-Related Exposure-Ammonia	Exposures		09/09/2020	
COVID-Related Exposure-HandSanitizer	Exposures		09/09/2020	
COVID-Related Exposure-Antimalarials	Exposures		09/09/2020	
COVID-Related Exposure-RubbingAlcohol	Exposures		09/28/2020	
COVID-Related Exposure-Isopropyl	Exposures		10/04/2020	
David Rose Test All Call Types	All			11/20/2020
COVID-Related Exposure-Zinc	Exposures		10/15/2020	

Add Rule Edit Close

Rule Based Coding Administration - ToxSentry®

Rule: Solid Dose Pill Study - Cascade Questions

Name:  Show Question in:  Case Type:   Active

Start Date:   End Date:   Center(s):

**Criteria**

No Criteria for this Rule. Use the Add New Criteria button below to add Criteria.

**Questions**

Question Type	Question	Required	Active	Minimum	Maximum	Order
Single Answer Only	2. Who was the medicine for?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			1
Single Answer Only	3. What type of container was the medication in when the child	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			2
Single Answer Only	4A. When the child got into the medicine, was the wrapping an closed?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			3
Single Answer Only	4B. When the child got into the medicine, was the container ful open?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			4
Single Answer Only	4C. When the child got into the medicine, what kind of contain	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			5
Single Answer Only	4D. Why was the medicine left out of the container?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			6
Single Answer Only	5A. Why was the wrapping around the pills open?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			7





# ToxSentryWeb

# ToxSentryAnalytics



Questions?