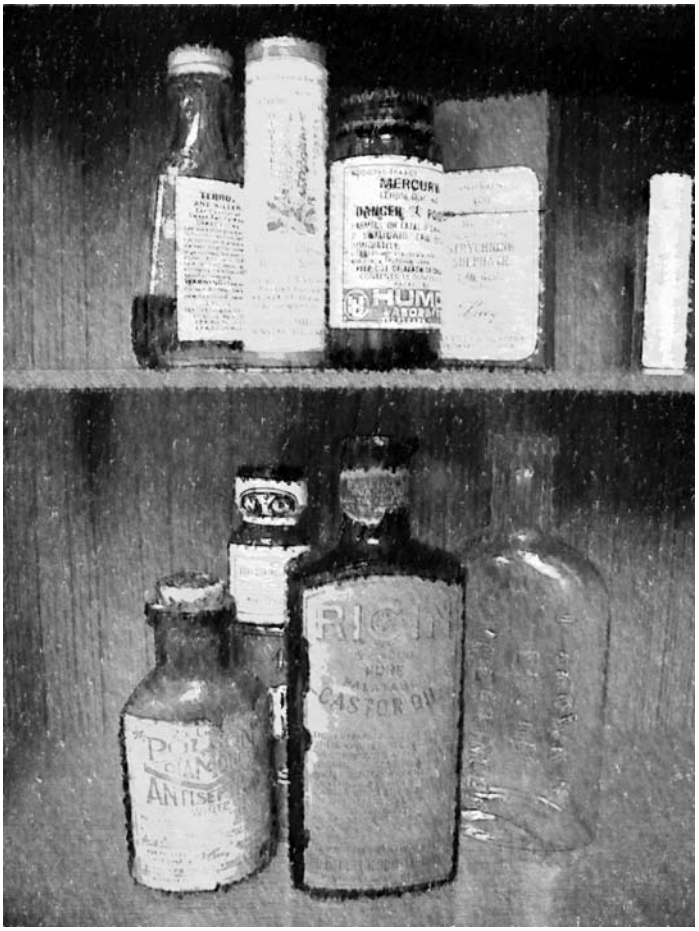
INDIANA POISON CENTER

2013 Annual Statistical Summary

Designated as the Regional Poison Information Center for Indiana by the Indiana State Department of Health and Certified by the American Association of Poison Control Centers



Indiana State Department of Health

A state-wide community health initiative of the Indiana State Department of Health and Indiana University Health.

Indiana University Health

During 2013, the Indiana Poison Center received almost 60,000 calls for help and made an additional 77,000 follow up calls to users of our service. Human exposure calls decreased 3.2% compared to 2012. This continues a trend that started in 2008. Since 2007 total calls have decreased 30%, human exposures by 19%, and information calls by 64%. Animal poisoning cases decreased this year by 4% to 2,088 cases. We suspect that increased Internet use and alternative messaging systems may be the cause. While children remain our most commonly exposed age group, usually with benign effects, intentional poisonings continue to contribute a more severe case mix. Cases with less serious outcomes are decreasing by 4% per year, fueling most of the drop in case volume, while cases with more serious outcomes are increasing by almost 7% per year. So we are seeing fewer cases but of increased severity.

Contacts in the health care community remain strong. Your input is always welcome to help develop our programs to better serve the needs of health care providers throughout the state. This includes the state's only medical toxicology consult service and our ACGME accredited Medical Toxicology Fellowship program, one of only 27 in the US. Response to these services remains brisk.

The strength of our personnel continues to be the backbone of the Center. Nationally, many poison centers remain in shaky financial condition as host institutions and government agencies attempt to reduce medical care costs. The Indiana Poison Center is not immune to this, having taken a 4% yearly reduction in state funding since 2007 and 28% and 11% cuts in federal funding in the last 2 years. As a consequence, our Member Hospital Network has become an increasingly important element for the continuation of the Indiana Poison Center. Poison centers, such as the Indiana Poison Center, have been at the forefront of managed care and medical care cost containment since their inception and their cost effectiveness is well documented.[1,2,3] Poison centers have been shown to reduce the number of emergency department visits, decrease hospital admissions and decrease hospital length of stay for poisonings.[4,5,6] The CDC and HRSA Poison Control Center Advisory Work Group urged Federal ongoing "fair share" support of poison centers and recommended six projects to improve poison center function, including the national toll-free number activated in Indiana early in 2001.[3] We are now in the 12th full year of federal funding through the HRSA Poison Control Program. These funds have been used to update technology in our center, and now support staff salaries and greatly enhanced public education and awareness activities. Funding is available through FFY 2014 from these acts, although they continue to require considerable work each year to secure the yearly congressional appropriation which was disproportionately cut this year. In 2004, the Institute of Medicine published a comprehensive, in-depth analysis of poison centers in the United States. They made 12 specific recommendations including increasing collaboration and integration with public health agencies, developing an all-hazards emergency preparedness infrastructure, increasing funding by the Federal Government 5-fold to $100 million/year for core activities, enhancing toxicosurveillance and research on poisoning epidemiology, treatment, prevention, access, delivery and cost-effectivenss.[7] Development of stable, adequate, ongoing, and dedicated sources of funding for the Indiana Poison Center still remains crucial for it's survival in this era of medical care cost cutting. Toward that end, we continue to attempt to develop stable sources for primary funding of this critical public health service. We look forward to the coming year as an opportunity for our services to you to further evolve, in order to meet the toxicologic needs of Indiana.

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1. Harrison DL et al. Cost-effectiveness of regional poison control centers. Arch Intern Med 1996; 156:2601.
2. Miller TR. Cost of poisoning in the United States and savings from poison control centers: a benefit cost analysis. Ann Emerg Med 1998; 29:239.
3. The Poison Control Center Advisory Work Group. Final Report. Centers for Disease Control and Health Resources and Services Administration, December 1996.
4. Lovecchio F et al. Poison control centers decrease emergency healthcare utilization costs. J Med Toxicol 2008;4:221.
5. Bunn et al. The effect of poison control center consultation on accidental poisoning inpatient hospitalizations with preexisting medical conditions. J Toxicol Enivron Health 2008; 71:283.
6. Vassilev ZP et al. The impact of a poison control center on the length of hospital stay for patients with poisoning. J Toxicol Enivron Health 2007; 70:107.
7. Committee on Poison Prevention and Control. Forging a Poison Prevention and Control System. Institute of Medicine – National Academies of Science, 2004. (http://books.nap.edu/catalog/10971.html)

INTRODUCTION

The Indiana Poison Center (IPC) was established to provide toll-free access to emergency poison exposure information for all Hoosiers. In its thirty-fourth year of operation, the center is a round-the-clock information and treatment resource for all citizens of Indiana.

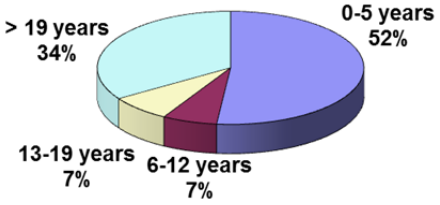
The IPC is a collaborative effort of the Indiana State Department of Health, Indiana University Health, the Poison Control Program in the Federal Healthcare Services Bureau within HRSA and health care providers throughout the state. It is designated as the official poison information center for the state by the Indiana State Department of Health and is certified as a regional poison information center by the American Association of Poison Control Centers, one of only 54 in the nation and the only one in Indiana.

In 2013, the IPC received 59,899 requests for assistance (averaging 164 calls per day). Of these calls 52,076 concerned exposures to poisons and 7,823 were callers seeking information without an exposure. The 52,076 poison exposure calls resulted from 49,988 human and 2,088 animal poisoning cases. The 49,988 human poison exposure cases managed represent a 3.2% decrease from 2012. In addition, the staff of the Poison Center placed 77,565 calls to patients and health care professionals for follow-up (averaging 213 calls per day).

This report presents an overview of IPC poisoning data and other activities for 2013. Additional information is available upon request. Data was available to evaluate 49,859 confirmed human cases.

AGE

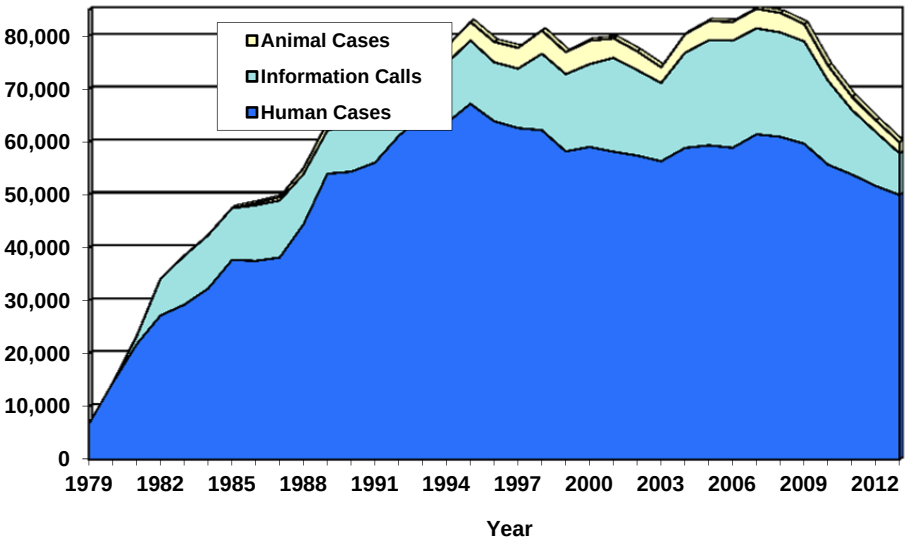
Poisonings remain a major health hazard among young children. Children under six years of age account for the majority (52%) of the poisonings managed by the IPC during 2013, slightly decreased from 2012. Although the incidence of poisoning is still greater in children, most severe poisonings and poisoning deaths occur in adolescents and adults (96% of cases) due to their exposures being intentional in nature. The trend for increasing age as compared to historical averages was maintained this year.



Age (Years)	Number Males	Females	Total	%
<1	1,234	1,232	2,468	5.0
1	4,114	3,728	7,861	15.8
2	4,468	4,165	8,645	17.3
3	2,068	1,668	3,745	7.5
4	1,039	818	1,865	3.7
5	600	444	1,049	2.1
6 – 12	1,918	1,367	3,302	6.6
13 – 19	1,566	2,155	3,728	7.5
20 – 29	1,992	2,181	4,175	8.4
30 – 39	1,463	1,953	3,420	6.9
40 – 49	1,183	1,575	2,762	5.5
50 – 59	894	1,436	2,330	4.7
60 – 69	563	994	1,558	3.1
70 – 79	344	572	916	1.8
80 – 89	167	360	528	1.1
> 90	37	75	112	0.2
Unk Adult	495	707	1,222	2.5
Unk Infant	17	13	37	0.1
Unk Child	26	16	54	0.1
Unknown	22	38	82	0.2
Total	24,210	25,497	49,859	100%

GENDER

Examination of calls where the gender was documented shows an almost even split between males and females. Males predominate slightly in childhood (53%) while females predominate in adolescence (58%) and adults (58%).



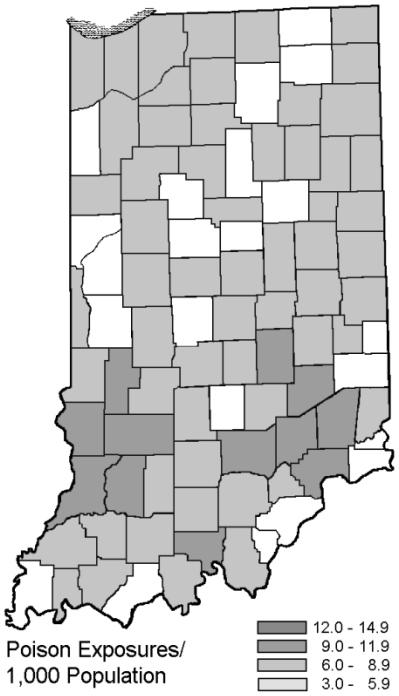
GEOGRAPHIC DISTRIBUTION

Overall, 96% of exposure calls originated in Indiana. In addition, the IPC received calls from 52 other states and foreign countries, with Kentucky, Illinois, Michigan, and Ohio accounting for 45% of these out-of-state calls. One out of every 110 Hoosiers utilized the Indiana Poison Center's services in 2013.

CALLER

In 2013, 44,810 calls (75%) were received from the general public. Calls were also received from 10,798 health caregivers (physicians, nurses, EMT's, paramedics, and pharmacists), with 9,803 of these coming from hospitals throughout the state. Daily contacts were made consisting of IPC referral of patients to emergency departments for treatment or hospital initiated requests for information and/or consultation on cases managed either in-house or by telephone. Police from throughout the state accounted for an additional 2,997 calls.

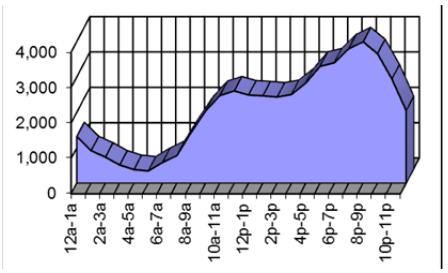
City	Hospital	Patients Referred to ED	Request or Consult
Anderson	Community	21	57
	St. Vincent Anderson	29	10
Angola	Cameron Memorial	11	70
Auburn	DeKalb Memorial	22	41
Avon	IU Health West	34	142
Batesville	Margaret Mary	15	55
Bedford	IU Health Bedford	19	45
	St. Vincent Dunn	10	21
Bloomington	IU Health Bloomington	99	204
	Monroe	7	15
Bluffton	Bluffton Regional	8	43
Booneville	St. Mary's Warrick	7	13
Brazil	St. Vincent Clay	13	43
Bremen	Community of Bremen	7	12
Carmel	IU Health North	45	38
Carmel	St. Vincent Carmel	23	55
Charlestown	Saint Catherine	6	11
Chesterton	Franciscan St. Anthony Health	4	17
Clinton	Union Clinton	6	24
Columbus	Columbus Regional	55	140
Connersville	Fayette Memorial	17	39
Corydon	Harrison County	21	72
Crawfordsville	Franciscan St. Elizabeth Health	17	54
Crown Point	Franciscan St. Anthony Health	24	154
Danville	Hendricks Regional	44	37
Decatur	Adams Memorial	11	29
Dyer	Franciscan St. Margaret Health	13	193
East Chicago	St. Catherine	19	103
Elkhart	Elkhart General	66	286
Elwood	St. Vincent Mercy	5	17
Evansville	Deaconess	46	168
	St. Mary's	71	96
Fishers	IU Health Saxony	10	20
	St. Vincents Northeast	21	33
Fort Wayne	Dupont	14	24
	Lutheran of Indiana	53	54



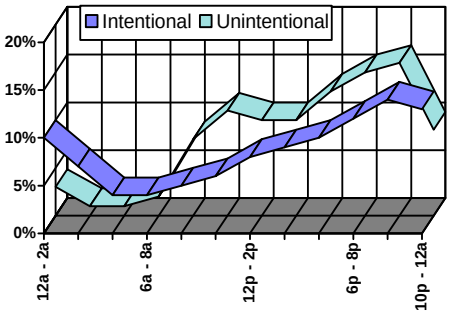
City	Hospital	Patients Referred to ED	Request or Consult
	Parkview Randallia	45	268
	Parkview Regional	119	74
	St. Joseph	24	31
	VA Medical Center	0	3
Frankfort	St. Vincent Frankfort	8	22
Franklin	Johnson Memorial	25	39
Gary	Methodist (Northlake)	34	82
Goshen	IU Health Goshen	40	143
Greencastle	Putnam County	15	28
Greenfield	Hancock Regional	30	80
Greensburg	Decatur County	17	61
Hammond	Franciscan St. Margaret Health	10	211
Hartford City	IU Health Blackford	12	19
Hobart	St. Mary	25	126
Huntingburg	St. Joseph's	0	0
Huntington	Parkview Huntington	13	53
Indianapolis	Community East	39	206
	Community North	106	261
	Community South	59	214
	Eskenazi Health	51	253
	Franciscan St. Francis Health	87	212
	Indiana Heart Hospital	1	1
	IU Health Methodist	169	417
	IU Health University	29	40
	Riley @ IU Health	187	159
	St. Vincent	159	272
	St. Vincent Women's	1	1
	VA Medical Center	5	25
	Westview	2	7
Jasper	Memorial	27	97
Jeffersonville	Clark Memorial	37	124
Kendallville	Parkview Noble	18	69
Knox	IU Health Starke	8	35
Kokomo	Community Howard	31	83
	St. Joseph	16	27
Lafayette	Franciscan St. Elizabeth - Central	43	192
	Franciscan St. Elizabeth - East	43	118
	IU Health Arnett	32	88
LaGrange	Parkview LaGrange	6	28
LaPorte	IU Health La Porte	41	150
Lawrenceburg	Dearborn County	27	115
Lebanon	Witham Health	18	70
Linton	Greene County	18	63
Logansport	Memorial	18	58
Madison	King's Daughters'	20	108
Marion	Marion General	31	75
Marion	VA Medical Center	0	0
Martinsville	IU Health Morgan	22	42
Merrillville	Methodist (Southlake)	15	80
Michigan City	Franciscan St. Anthony Health	31	142
Mishawaka	St. Joseph Regional	68	108
Monticello	IU Health White	10	45
Mooresville	Franciscan St. Francis Health	32	81
Muncie	IU Health Ball	84	122
Munster	Community	28	189
New Albany	Floyd Memorial	40	28
New Castle	Henry County	17	78
Newburgh	Deaconess Gateway	54	115
Newburgh	Deaconess Women's	0	0
Noblesville	Riverview	32	52
North Vernon	St. Vincent Jennings	13	47
Paoli	IU Health Paoli	6	44
Peru	Dukes Memorial	9	6
Plymouth	St. Joseph's	19	36
Portage	Portage Community	11	83
Portland	Jay County	8	20
Princeton	Gibson General	10	41
Rensselaer	Jasper County	11	51
Richmond	Reid Health	28	138
Rochester	Woodlawn	12	33
Rushville	Rush Memorial	9	27
Salem	St. Vincent Salem	8	27
Scottsburg	Scott County	10	37
Seymour	Schneck	26	114
Shelbyville	Major	22	145
South Bend	Memorial	151	356
Sullivan	Sullivan County	12	59
Tell City	Perry County	7	34
Terre Haute	Regional	45	33
	Union	38	141
Tipton	IU Health Tipton	4	20
Valparaiso	Porter Regional	72	218
Vincennes	Good Samaritan	41	136
Wabash	Wabash County	6	30
Warsaw	Kosciusko	32	14
Washington	Daviess	16	100
West Lafayette	Purdue University Student	0	3
Williamsport	St. Vincent Williamsport	2	23
Winamac	Pulaski Memorial	6	11
Winchester	St. Vincent Randolph	7	27
Zionsville	Witham at Anson	4	2

TIME OF CALLS

The total call volume to IPC shows an initial increase between 10 am and noon with a peak occurring between 8 pm and 10 pm. This is primarily accounted for by the distribution of unintentional poisonings peaking around mealtimes.



Intentional poisonings, on the other hand, show a higher incidence than unintentional poisonings from midnight to 6 am and then steadily increase throughout the day, finally peaking at between 8 pm and midnight.



CIRCUMSTANCE

Acute exposures account for 96.7% of the total calls, while 2.3% are chronic in nature. Occupational exposure calls have remained essentially constant from 1989 through 2013, while therapeutic errors and misuse have increased substantially. Malicious cases have remained at our background incidence after the anthrax scares of 2001. The specific reasons for exposures are:

Reason	Number	Percent
Unintentional		
General	25,489	51.1%
Environmental	933	1.9%
Occupational	689	1.4%
Therapeutic error	5,759	11.6%
Misuse	4,932	9.9%
Bite / sting	470	0.9%
Food poisoning	509	1.0%
Unknown	57	0.1%
Total Unintentional	38,838	77.9%
Intentional		
Suspected suicide	5,503	11.0%
Misuse	1,666	3.3%
Abuse	1,313	2.6%
Unknown	451	0.9%
Total Intentional	8,933	17.9%
Other		
Contamination / tampering	133	0.3%
Malicious	210	0.4%
Withdrawal	37	0.1%
Total Other	380	0.8%
Adverse reaction		
Drug	807	1.6%
Food	118	0.2%
Other	248	0.5%
Total Adverse reaction	1,173	2.4%
Unknown	535	1.1%

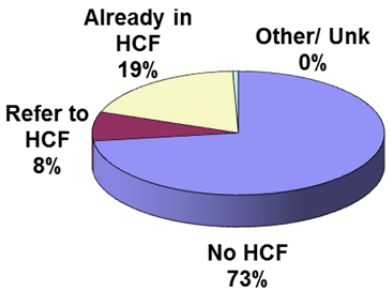
SITE OF EXPOSURE

The most frequent site of exposure is a residence, while calls for exposures in the workplace account for 1.7% of our calls, slightly increased over last year.

Site of Exposure	Number	Percent
Own residence	45,650	91.6%
Other residence	1,366	2.7%
Workplace	857	1.7%
Health care facility	113	0.2%
School	633	1.3%
Restaurant / food service	130	0.3%
Public area	402	0.8%
Other	419	0.8%
Unknown	289	0.6%

TREATMENT LOCATION

The majority of poison exposures either require no treatment or can be treated at the exposure site. The most common treatments at the exposure site include observation and dilution for oral exposures and flushing or irrigating the skin or eyes for dermal or ocular exposures.



Location	Number	Percent
NonHealth Care Facility (HCF)	35,049	70.3%
Referred to HCF by IPC		
Treated and released	1,469	2.9%
Admit to critical care	262	0.5%
Admit to noncritical care	211	0.4%
Admit to psychiatry	134	0.3%
Lost to follow-up/left AMA	437	0.9%
Refused referral	1,163	2.3%
Total Referred	3,676	7.4%
Patient Already in HCF		
Treated and released	4,873	9.8%
Admit to critical care	3,565	7.2%
Admit to noncritical care	974	2.0%
Admit to psychiatry	1,110	2.2%
Lost to follow-up/left AMA	232	0.5%
Total Already in HCF	10,754	21.6%
Other	298	0.6%
Unknown	82	0.2%

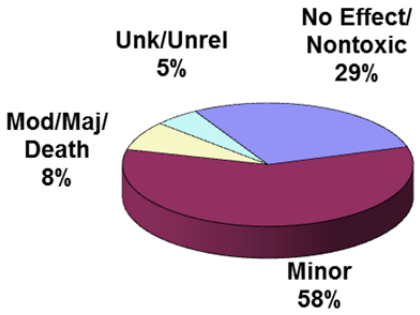
Overall, the IPC referred 3,676 (7.4%) patients for medical care and was consulted on another 10,754 cases that were already in a health care facility (HCF).

FOLLOW-UP CALLS

The IPC attempts to make follow-up calls on all cases with the potential for toxicity to the patient to ensure patient compliance with treatment recommendations, direct the management of the case and verify the medical outcome. In 2013, follow-up was made 76,812 times on 23,714 human cases (3.2 calls/case). An additional 35,412 cases or information calls did not require or refused follow-up.

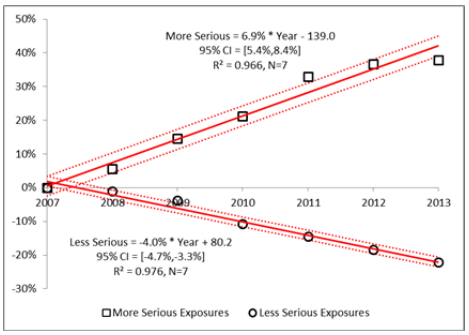
MEDICAL OUTCOME

The medical outcome is assessed based upon the inherent toxicity of the agent, and the severity of the clinical effects noted during case management. The increased severity in case mix seen since 1990 has been continued in 2013 with moderate and major outcomes, including death up 2% compared to 2012.



Medical Outcome	Number	Percent
No effect	10,131	20.3%
Minor effect	8,624	17.3%
Moderate effect	3,298	6.6%
Major effect	477	1.0%
Death	57	0.1%
Death, indirect report	6	0.0%
No follow-up		
Judged nontoxic	4,153	8.3%
Judged Minimal Effects	20,609	41.3%
Potentially Toxic	1,454	2.9%
Unrelated effect	1,050	2.1%

Since 2007, a change in the pattern of medical outcomes has been seen. A 4% decrease each year in less serious exposures (no effect, minor effect, not followed (non-toxic), not followed (minimal toxicity possible), unable to follow (potentially toxic), and unrelated effect) is seen, compared to a 6.9% increase in more severe exposures (Major, Moderate and Death) using 2007 as the baseline. Thus, the IPC is responding to fewer, but more severe cases. The following graph shows the changes along with the regression line, 95% CI, and goodness of fit.



AGENTS INVOLVED

During 2013, the IPC staff managed 49,859 human poison exposures. Prescription and nonprescription drugs accounted for 58% of these exposures, while an additional 29% were to household products. Plants, animals, industrial and agricultural products were also commonly reported. A single substance was involved in 88.6% of the cases and two substances in 6.9% of cases, but exposures to over nine substances were seen in other cases.

Agent Involved	Number
Analgesics	7,149
Anesthetics	176
Anticholinergic drugs	270
Anticoagulants	201
Anticonvulsants	1,260
Antidepressants	2,865
Antihistamines	2,255
Antimicrobials	1,315
Antineoplastics	42
Asthma therapies	422
Cardiovascular drugs	2,305
Cold and cough preparations	1,594
Diagnostic agents	9
Dietary supplements/herbals/ homeopathic	1,046
Diuretics	223
Electrolytes and minerals	724
Eye/ear/nose/throat preparations	420
Gastrointestinal preparations	1,126
Hormones and hormone antagonists	1,289
Miscellaneous drugs	515
Muscle relaxants	647
Narcotic antagonists	10
Radiopharmaceuticals	0
Sedative/hypnotics/antipsychotics	3,645
Serums, toxoids, vaccines	44
Stimulants and street drugs	1,477
Topical preparations	2,176
Veterinary drugs	60
Vitamins	1,512
Unknown drug	322
Total Drugs	**35,099**

Agent Involved	Number
Adhesives/glues	292
Alcohols	1,572
Arts/crafts/office supplies	630
Automotive/aircraft/boat products	303
Batteries	200

Agent Involved	Number
Bites and envenomations	557
Building and construction products	176
Chemicals	868
Cleaning substances (household)	4,415
Industrial cleaners	265
Cosmetics/personal care products	4,696
Deodorizers	599
Dyes	54
Essential oils	252
Fertilizers	135
Fire extinguishers	73
Food products/food poisoning	678
Foreign bodies/toys/miscellaneous	2,286
Fumes/gases/vapors	843
Heavy metals	213
Hydrocarbons	766
Infectious and Toxin-Mediated Diseases	280
Lacrimators	80
Matches/fireworks/explosives	23
Mushrooms	171
Paints and stripping agents	286
Pesticides - Fumigants	0
Pesticides - Fungicides	16
Pesticides - Herbicides	179
Pesticides - Insecticides	1,191
Pesticides - Repellants	206
Pesticides - Rodenticides	382
Photographic products	5
Plants	1,016
Polishes and waxes	95
Radiation	10
Sporting equipment	12
Swimming pool/aquarium	204
Tobacco products	322
Waterproofers/sealants	8
Weapons of mass destruction	11
Other/unknown nondrug substances	565
Total Non-Drugs	**29,935**
Total Agents	**60,034**

Additional information that is useful to note are the most common poisonings in the pediatric age group and intentional exposures.

Pediatric Top Ten	Number
Cosmetics/personal care products	3,716
Cleaning substances (household)	2,879
Analgesics	2,595
Topical preparations	1,711
Foreign bodies/toys/miscellaneous	1,693
Vitamins	1,108
Antihistamines	1,066
Plants	687
Antimicrobials	679
Gastrointestinal preparations	677

The pediatric top ten replaced cough and cold preparations with antimicrobials and pushed cough and cold preparations off the list. All substances on the intentional top ten remained the same with anticonvulsants and cardiovascular drugs switching in order compared to 2012.

Intentional Top Ten	Number
Analgesics	3,135
Sedative/hypnotics/antipsychotics	2,603
Antidepressants	1,884
Alcohols	1,122
Stimulants and street drugs	824
Antihistamines	685
Anticonvulsants	598
Cardiovascular drugs	565
Cold and cough preparations	499
Muscle relaxants	451

The following table represents the substances seen in the most serious poisonings resulting in major symptoms or death. Analgesics remained the most frequent cause of severe toxicity. Cough and cold preparations bumped unknown drugs off the list. All categories increased this year.

Most Serious Intoxications	Number
Analgesics	241
Sedative/hypnotics/antipsychotics	214
Antidepressants	179
Stimulants and street drugs	97
Cardiovascular drugs	84
Alcohols	82
Anticonvulsants	58
Muscle relaxants	58
Antihistamines	41
Cough and cold preparations	20

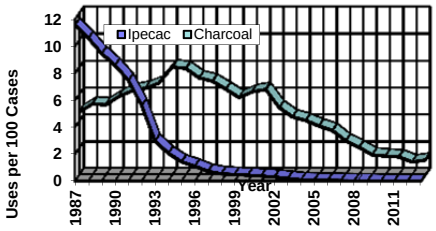
THERAPY

Supportive care is the single most critical component in the care of the poisoned patient. In 4,149 (8.3%) patients no therapy was needed and observation alone was used in an additional 6,198 (12.4%). IPC advice was refused in 853 cases (1.7%). Specific therapeutic methods utilized in poisonings included decontamination, antidotal therapy, and enhancing elimination. Decontamination alone was utilized in 26,863 (53.9%) cases, other therapies alone in 5,880 cases (11.8%) and a combination of the two in 1,356 (2.7%). The most common antidotal treatments were oxygen, acetylcysteine, benzodiazepines, naloxone, alkalinization and antihistamines. Intravenous acetylcysteine continues to be the preferred route of administration. The following table summarizes some specific therapies used:

Decontamination	Number
Ipecac*	5
Charcoal, single dose	549
Charcoal, multiple doses	19
Lavage	17
Cathartic	41
Whole bowel irrigation	11
Other emetic	255
Dilute/irrigate/wash	29,779
Fresh air	1,599
Food/snack	2,348
Total Decontamination	34,623
No Decontamination	21,640

Antidotal / Other Therapy	
Fluids, IV	4,754
Oxygen	1,139
Benzodiazepines	834
Acetylcysteine (PO – 22, IV – 521)	543
Intubation	542
Ventilator	530
Sedation (other)	464
Antiemetics	461
Naloxone	451
Antibiotics	386
Alkalinization	313
Antihistamines	264
Total Antidotal / Other Therapy	13,894

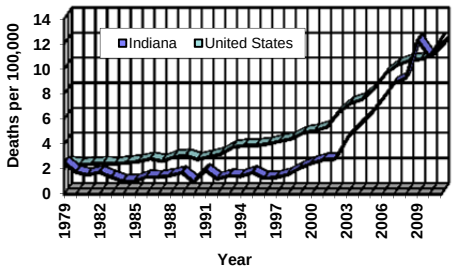
Enhancement of Elimination	
Hemodialysis	88
Hemoperfusion	4
Other	11
Total Enhancement	103



Use of activated charcoal again greatly exceeded that of syrup of ipecac. Syrup of ipecac use has now been essentially abandoned over the last twenty years, while the use of activated charcoal which initially increased by 73% now shows a continual decrease reflecting changes in usage in the hospital setting. **In **no** instances in which ipecac was used in 2013, did the IPC recommend its use.*

MORTALITY

Data from the National Center for Injury Prevention and Control showed 808 unintentional poison deaths in Indiana for 2011, an increase of 13%. The average number since the inception of the Poison Center has now increased to 218 per year from an average of 116 per year prior to 1979. Indiana's unintentional death rate (12.4/100,000) is now 7% above the national figure for 2011 (11.64/100,000) as it is increasing more rapidly compared to the national rate after years of lagging behind. National data suggests that the majority of this increase in is due to unintentional overdoses with prescription drugs in the 30-49 year old age range.



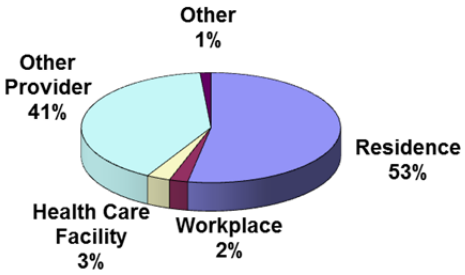
The Indiana Poison Center was consulted on 63 patients who died during 2013. Most of the deaths (34) were intentional in nature (22 suspected suicide, 6 abuse, 2 misuse, 1 malicious and 14 unknown). In some cases, the cause of death was eventually determined not to be related to the exposure.

Age	Sex	Agent (Reason)
2m	F	ethanol (unknown)
11m	M	unknown drug (unknown)
8y	M	carbon monoxide (environmental)
9y	F	carbon monoxide (environmental)
20y	F	bupropion; diazepam; amitriptyline; citalopram (suicide)
21y	M	heroin (abuse)
22y	M	methadone; alprazolam (unknown)
25y	F	oxycodone; morphine (abuse)
26y	M	propranolol; acetaminophen (Intentional Unknown)
26y	F	acetaminophen (suicide)
26y	M	carbon monoxide; ethanol; marijuana (unknown)
26y	F	acetaminophen; hydroxyzine; simethicone (suicide)
26y	M	unknown substances; lubricating oils and/or motor oils (unknown)
29y	F	amlodipine; metoprolol (suicide)
30y	M	anionic or nonionic cleaning agent (suicide)
32y	M	acetaminophen; hydrocodone; butalbital; caffeine; tizanidine; trazodone; zolpidem; nabumetone (suicide)
33y	F	gabapentin; tramadol; venlafaxine (suicide)
33y	M	citalopram (suicide)
34y	F	ibuprofen; acetaminophen; dextromethorphan; phenylephrine ; diphenhydramine; asenapine (suicide)
34y	F	heroin; nortriptyline; cyclobenzaprine (unknown)
34y	F	hallucinogenic amphetamine; ethanol; heroin (abuse)
35Y	M	Wicky stick; acetaminophen; aspirin; ethanol (abuse)
36y	M	unknown substances (unknown)
37y	F	amphetamine; alprazolam; unknown opioid (suicide)
37y	F	acetaminophen; oxycodone; ibuprofen; hydrocodone; morphine (suicide)
39y	F	oxycodone; zolpidem (unknown)
42y	M	unknown opioid; ethanol (abuse)
43y	M	amlodipine; carvedilol; lisinopril; paroxetine; simvastatin (suicide)
44y	F	gabapentin; clonazepam (suicide)
44y	F	acetaminophen; oxycodone; pregabalin; tizanidine; ondansetron; sertraline; metaxalone; ethanol (unknown)
45y	F	acetaminophen; antihistamine; decongestant (adverse reaction)
45y	M	alprazolam (unknown)
45Y	F	alprazolam, coumadin (suicide)
46y	M	acetaminophen (intentional misuse)
46y	F	imipramine; quetiapine; risperidone (unknown)
47y	F	aspirin (unintentional general)
47y	M	buprenorphine; alprazolam; amitriptyline; ethanol (suicide)
48y	M	methimazole; acetaminophen (adverse reaction)
48y	F	acetaminophen; hydrocodone; metformin (intentional misuse)
48y	F	acetaminophen; hydrocodone; amitriptyline (suicide)
49y	M	heroin; methamphetamine (suicide)
50y	F	unknown drug (malicious)
53y	F	acetaminophen (suicide)
53y	M	methanol (intentional unknown)
54y	F	acetaminophen; hydrocodone; hydromorphone; alprazolam ; dexlansoprazole (suicide)
54y	M	levofloxacin; acetaminophen; oxycodone; ethanol (abuse)
54y	F	metoprolol (suicide)
56y	M	non-drug substance; other type building/construction product (unknown)
56y	F	fentanyl; acetaminophen; hydrocodone; clonazepam; quetiapine; tizanidine; promethazine; esomeprazole; atorvastatin (adverse reaction)
57y	F	quetiapine; lamotrigine (unknown)
60y	F	acetaminophen; diphenhydramine (unknown)
62y	F	morphine; cyclobenzaprine (suicide)
63y	F	acetaminophen; hydrocodone (intentional unknown)
63y	M	bleach (therapeutic error)
64y	F	acetaminophen (therapeutic error)
64y	M	capecitabine (therapeutic error)
69y	F	galantamine; succinylcholine; amiodarone; metoprolol; oxybutynin; doxepin; memantine; fluoxetine; lisinopril; furosemide (adverse reaction)
71y	F	quetiapine (therapeutic error)
71y	M	methadone; citalopram; bupropion; acetaminophen; hydrocodone (suicide)
75y	F	digoxin; acetaminophen; diphenhydramine (therapeutic error)
80y	F	digoxin (therapeutic error)
81y	F	digoxin (therapeutic error)
82y	F	methotrexate (therapeutic error)

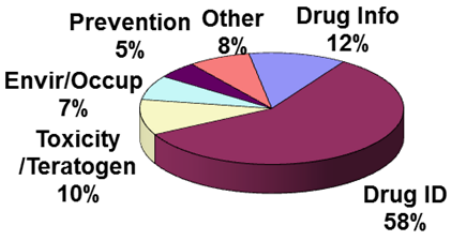
The most common substance classes involved in deaths reported to the IPC were opioids (29 cases including 8 hydrocodone, 5 oxycodone, 4 heroin, 3 morphine, 2 methadone, and 1 each of buprenorphine, dextromethorphan, fentanyl and tramadol) methadone), sedative/hypnotics (17 cases including 11 benzodiazepine and 6 atypical antipsychotics), analgesics (27 cases including 22 cases of acetaminophen alone or in combination, 3 NSAIDs, and 2 aspirin), antidepressants (16 cases including 10 SSRIs and 6 tricyclics), cardiac drugs (13 cases including 5 beta-blockers, 3 cardiac glycosides and 2 calcium antagnoists), antihistamines (6 cases including 3 diphenydgramine), stimulants/street drugs (7 cases including 2 amphetamine cocaine and one synthetic cathinone), and carbon monoxide (3cases).

INFORMATION CALLS

In 2013, the IPC staff responded to 7,823 inquiries from health professionals and the general public when no poison exposure had occurred. Fifty-four percent of the calls were received from the general public, 53% in a residence and 2% in the workplace. Of the other providers, 92% were from law enforcement agencies for drug identification.

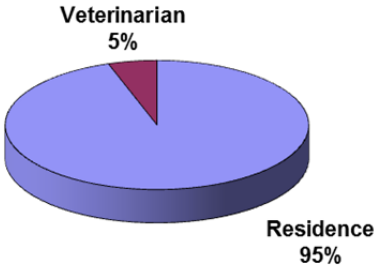


Information calls can be divided into several categories: 1) drug identification / information, 2) environmental, 3) medical, 4) occupational, 5) toxicity / symptoms, 6) prevention and safety, 7) teratogenicity and 8) other. Drug identifications now account for 58% of our information calls, trending down from the peak of 72 % toward the 54% of 11 years ago.



ANIMAL POISONINGS

In 2013, the IPC managed 2,087 poisonings to domestic animals, down 16% from 2012. Calls were received primarily from the pet's owners although veterinarians generated a significant proportion of calls.



Six out of the top ten animal exposures were also seen in children. A significant difference includes a very large percentage of insecticide / rodenticide exposures as compared to children.

Animal Top Ten	Number
Pesticides	549
Cleaning substances (household)	168
Analgesics	100
Foreign bodies/toys/miscellaneous	92
Plants	79
Cardiovascular drugs	76
Cosmetics/personal care products	70
Other nondrug substances	68
Antimicrobials	67
Topical preparations	65

EDUCATION PROGRAMS

Personnel from the IPC teach health care professionals basic and advanced techniques in the management of poison emergencies and provide assistance, consultation, and programs in teaching poison prevention to private citizens.

Professional Education

Professional education activities include a periodic Regional Toxicology Symposium and numerous inservices and lectures. The "School Nurses' Prescription", an electronic newsletter designed and written by our Team Leader, Gwenn Christianson, RN, MSN, reaches over 800 nurses every month. The e-mail list is also used to issue alerts and credible information to school nurses about potential emerging hazards such as alcohol hand sanitizers and Magic Erasers.

Under the guidance of Louise Kao, MD the two-year Medical Toxicology Fellowship program started in 1994 continues to draw outstanding physicians in training. This fellowship program is one of only 14 accredited by the American Council for Graduate Medical Education in the United States. All our past fellows have passed their Medical Toxicology boards and are practicing in Wisconsin, Indiana, Virginia, Missouri, Michigan, Arizona and Connecticut. Our fellow completing the followship in 2011 was Dr. Laura Tormoehlen who stayed after graduation as a neurotoxicologist. Our current fellow, Jerry Snow, MD is an emergency physician with 8 years experience.

Health Professional Education

Contact Hours Supervised Experience in Poison Center/Toxicology Service	
Medical Residents (52)	8,320
Doctor of Pharmacy Students (3)	480
Doctor of Pharmacy Residents (8)	1,280
Medical Students (9)	1,440
Pharmacy Students (3)	12
Academic and Continuing Education Lectures Presented	28

The staff of IPC also contributed to the medical toxicology literature in 2013 with 13 articles in peer reviewed journals, 2 book chapters, 3 abstracts presented at the North American Congress of Clinical Toxicology, and 4 presentations at other professional meetings.

Journal Articles

- Froberg BA, King KJ, Kurera TD, et al. Negative predictive value of acetaminophen concentrations within four hours of ingestion. Acad Emerg Med. 2013;20(10):1072-5.
- House DR, Ngetich E, Vreeman RC, Rusyniak DE. Estimating the weight of children in Kenya: do the Broselow tape and age-based formulas measure up? Ann Emerg Med. 2013;61(1):1-8.
- Levine M, Froberg B, Ruha AM, et al. Assessing the toxicity and associated costs among pediatric patients admitted with unintentional poisonings of attention-deficit/hyperactivity disorder drugs in the United States. Clin Toxicol (Phila). 2013;51(3):147-50.
- Michel MD, Kao LW, Sloan BK. Primary meningococcal arthritis leading to Neisseria meningitidies purpura fulminans. West J Emerg Med. 2013;14(2):165-7.
- Mowry JB, Spyker DA, Cantilena LR Jr, Bailey JE, Ford M. 2012 Annual Report of the American Association of Poison Control Centers' National Poison Data System (NPDS): 30th Annual Report. Clin Toxicol 2013; 51:949-1229.
- Nañagas K, Tormoehlen L. Extremely high urine arsenic levels after remote seafood ingestion. American Journal of Therapeutics. 2013;21:e75-77.
- Rusyniak DE, Dobbs MR. Neurotoxicology: the ties that bind us. Psychiatr Clin North Am. 2013;36(2):ix-x.
- Rusyniak DE, Durant PJ, Mowry JB, Johnson JA, Sanftleben JA, Smith JM. Life-threatening hyperkalemia from cream of tartar ingestion. J Med Toxicol. 2013;9(1):79-81.
- Rusyniak DE. Neurologic manifestations of chronic methamphetamine abuse. Psychiatr Clin North Am. 2013;36(2):261-75.
- Rusyniak DR, Dobbs M. Neurotoxicology: The Ties that Bind Us. Psychiatr Clin North Am 36(2):ix-x, 2013.
- Tormoehlen LM. Toxic leukoencephalopathies. Psychiatr Clin North Am. 2013;36(2):277-92.
- Warrick BJ, Hill M, Hekman K, Christensen R, Goetz R, Casavant MJ, Wahl M, Mowry JB, Spiller H, Anderson D, Aleguas A, Gummin D, Thomas R, Nezlek C. Smolinske S. A 9-state analysis of designer stimulant, "bath salt," hospital visits reported to poison control centers. Ann Emerg Med 2013; 62(3):244-51.
- Zaretsky DV, Zaretskaia MV, Dimicco JA, Durant PJ, Ross CT, Rusyniak DE. Neurons in the PVH mediate ACTH responses from MDMA independent of 5-HT1A receptors. Neurosci Lett. 2013;555:42-6.

Book Chapters

- Froberg BA. Toxic Exposures. In: Rauch DA, editor. Caring for the Hospitalized Child: A Handbook of Inpatient Pediatrics: American Academy of Pediatrics; 2013. p. 317-25
- Psychiatric Clinics of North America (Vol 36, Issue 2) "Psychiatric manifestations of neurotoxins" Guest Editors: Michael Dobbs, MD and Daniel E. Rusyniak, MD, June 2013.

Abstracts/Posters

- Arroyo-Plasencia AM, Schwarz ES, Velez LI, Hail SJ, Kao LW, Kleinschmidt KC, Young A. Physostigmine. North Amercian Congress of Clinical Toxicology, Atlanta, GA, September 2013.
- Handa V, Froberg B, Mowry JB , Kao L, Severe ethanol intoxication in twin toddlers. North Amercian Congress of Clinical Toxicology, Atlanta, GA, September 2013.
- Louise Kao , Cheryl Moses , Omar Rahman. Advanced hemodynamic monitoring in doxazosin and propranolol induced cardiovascular collapse North Amercian Congress of Clinical Toxicology, Atlanta, GA, September 2013.

Presentations

- Rusyniak DE. Emerging Drug Emergencies, Midwest Pediatric Hospital Medicine, Indianapolis, IN May 2013
- 4. Toxins and Disorders of Neuromuscular Transmission: Session 3HC.009, American Academy of Neurology Annual Meeting, San Diego, CA; March 18, 2013
- Welch J, Rusyniak D, Kao L, Walthall J, Palmer M. Foundations in Mentoring workshop. Oral Presentation at SAEM Mid-Atlantic Regional Research Forum, Washington D.C., Feb 2, 2013.
- Welch J, Rusyniak D, Kao L, Walthall J, Palmer M. Foundations in Mentoring workshop. Oral Presentation at AAMC Group on Faculty Affairs Professional Development Conference. Minneapolis, MN, August 2013.

Public Education

IPC designed and launched a new website (www.indianapoison.org). For ease of use, there are four major subheadings on the home page:

- **For Families** provides information based on age range and includes information for pet safety
- **Poison Education** provides overall information on poison safety and prevention topics
- **Health Professionals** provides information for those in the medical field.
- **Contact** provides the opportunity to request Poison Center materials and literature, as well as the ability to subscribe to our three major publications - New Releases, Toxic Trivia and School Nurse's Prescription. Visitors also have the ability to subscribe to the electronic versions of those publications.

IPC has continued to network with other agencies in the state. Purdue Extension offices, Safe Kids, member hospitals and member physicians have continued to be partners with the poison center. In particular, initial contact was made and discussions were started with Sidney & Lois Eskenazi Health, in partnership with the Mexican Consulate, to bring the Poison Safety for Families program to those using their services, with the potential to train bilingual interpreters, from Eskenzai Health in all Poison Center programs.

IPC has made efforts to forge links with organizations providing services for seniors. The partnership with Purdue Extension offices has led to an increase of educators statewide, being trained in "Medicine Safety for Seniors", which in turn has led to more community presentations for seniors. IPC continues to look for potential poison prevention instructors as well as partnerships with other agencies that have an interest in injury prevention.

Public Education Activities	
Pieces of Poison Prevention Material Distributed	289,096
TV & Radio appearances	8
News Releases Distributed	12
Public Education Presentations	80+
Estimated Audience	7,000+
TOXIC TRIVIAs Published	
Spring Safety (Spring)	
Summer Safety (Summer)	
Fall Safety (Fall)	
Winter Safety (Winter)	

National Poison Prevention Week (NPPW) activities included distributing press packets electronically and by mail to all print and broadcast news organizations in the state. Resource packets, including ideas to promote the week and promotional items, were sent to a wide variety of organizations throughout the state. A medicine collection day was coordinated with all Marsh Pharmacies during NPPW. The public was able to drop off unused and expired medication at 42 separate sites in Central Indiana.

The news release distribution program in conjunction with the Indianapolis FDA Office continued to reach all print and broadcast media in the State as well as county health organizations.

The quarterly newsletter, "Toxic Trivia" was published four times in 2013. The list of people subscribing to this free newsletter continues to grow with the addition of newly trained instructors and other community members who are interested in receiving useful news from the world of poison prevention.

IPC look-a-like boxes remained available for loan to enhance local events. IPC has also assisted partner organizations with creating their own look-a-like boxes, so they may display the cases year round.

Cooperative long-term efforts such as these maintain a coordinated statewide poison prevention education program and bolster the efforts of the IPC to increase awareness of poison safety measures and reduce death and injury from poisoning.

FINANCIAL REVIEW

Cost Savings

Older studies showed that ***every dollar*** spent on poison centers returned ***$6.50*** in medical care cost savings through the prevention of unnecessary hospital visits for poison exposures. Factoring in medical inflation rates, over the past 33 years, this represented savings of over **$407 million** in Indiana.

More recent data indicate that the Indiana Poison Center conservatively saves over **$41 million dollars a year** in health care costs, or over $17 for every dollar spent on providing poison center services to Indiana.

How is that figure reached? It's based on what the IPC does every day and what the cost would be if IPC funding was cut and the center closed leaving Indiana with no poison center services.

Reduction in ER visits: Lovecchio et al showed in "Poison Control Centers decrease Emergency Healthcare Utilization Costs" that 70% of home callers would seek emergency care if no poison center services were available.[4] Additionally, they showed the emergency charge would be about $1,150 per ER visit for a poisoning that could be treated at home. The IPC treated over 35,000 people in 2013 with simple first aid instructions over the phone without referral to a hospital or doctor's office. If 70% of those individuals sought emergency care, the resulting emergency charges would be over $37 million in 2013 alone.

Decreasing Hospital Admissions: Congressional testimony in 1994 indicated that the number of people admitted to the hospital increased 16% when poison center consultation was denied to health care providers.[3] This occurred as the result of the closing of a regional poison center in Michigan where Blue Cross Blue Shield insurance claims for admissions increased 16%. There are 6,566 admissions for poisoning according to Indiana State Department of Health data, an extra 1,051 admissions would add an additional $22 million in charges annually at the average $20,659 per admission.

Decreasing patient Length of Stay (LOS) in a hospital: Doctors and nurses consulted the Indiana Poison Center almost 11,000 times in 2013. Studies from Kentucky and New Jersey show that the LOS decreased 1.2 to 3.0 days when a poison center was consulted vs. when a poison center was not consulted.[5,6] According to ISDH hospital discharge data, the average hospital charge for a poisoning admission is $7,376 per day. The IPC was consulted on 5,012 admitted patients in 2013. If their LOS was extended 1.2 to 3 days, the additional hospital charges would range from $44 million to $110 million per year.

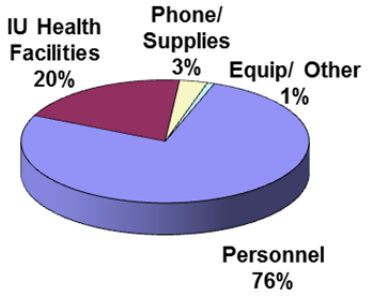
In summary, if no poison center was available, the public would seek a higher level of more labor intensive and expensive care. In addition, if health care providers were deprived of the expertise of a poison center, hospital admissions and hospital LOS would increase due to lack of a critical information resource for clinical decision makers.

When the numbers of hospital charges saved are added up, savings range from $103

million to $169 million. Hospital payment however is different than hospital charges and typically payment is about 40 to 50% of charges. When converted to payments (costs) it is reasonable to conservatively estimate that the IPC saves almost $41 million every year in unnecessary health care costs.

Expenses

Total direct expenses have risen from $117,369 in 1979 to $1,758,256 in 2013 with a total cost per human poison case of $48 which is an increase of only 11% on the 2004 national average of $43 and a cost per productive call of $40. As can be seen, the vast majority of expenses for the poison center are for the personnel to run the emergency telephone service and facilities to house the center.

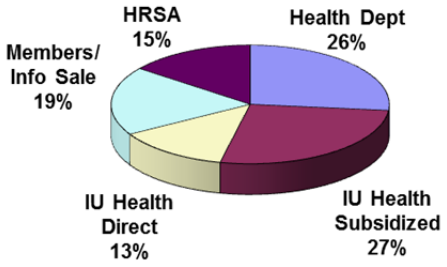


Personnel	$1,812,984
IU Health Facilities	$491,017
Telephone*	$37,895
Supplies (w/information resources)	$29,691
Equipment/Other	$21,851
Total Expenses	$2,402,437

*Includes Federal subsidy of 800 telephone line and IU Health subsidy for telephone.

Revenues

Direct state funding through the Indiana State Department of Health has decreased this year to $640,000 from the $800,00 appropriated due to an additional 5% reserve imposed by the State. The percent of direct state funding, which had increased from a low of 35% in 2002 to 44% in 2004, is now at 27% of revenue compared to the high point of 66% in 1995. Membership fees were increased in 2006 to $3,500 per year with non-member hospitals charged $200 per consultation they generate. These increases resulted in a 17% increase in revenues from that source. Yearly increases consistent with medical services inflation have been implemented for the past seven years. The twelfth full year of Federal HRSA support of the poison center through the Healthcare Services Bureau contributed about 15% of the operating budget, an 11% decrease compared to 2012 reflecting the effects of cuts to Federal discretionay funding that disproportionately affected HRSA funding of poison centers nationwide. IU Health provides direct support as needed and also contributes space and other subsidized expenses for the operation of the IPC. IU Health's direct support of the poison center for 2013 reflects the effects of a 11% increase in revenues from the Member Hospital Program, the significant cut in federal funding and the continued decrease in state funding coupled with increasing wage costs, the largest single expense for the center.



Indiana State Department of Health	$640,245
IU Health – Subsidized	$644,181
Federal HRSA Grant	$315,946
Members / Information Sales	$449,563
IU Health – Direct*	$352,502
Total Revenues	$2,402,437

*Includes IPC Methodist Health Foundation account support for staff education.

STAFF MEMBERS

Our Specialists in Poison Information

The backbone of the Indiana Poison Center is its highly trained and dedicated Specialists in Poison Information: registered nurses and pharmacists who handle the emergency calls 24 hours a day.

The Specialists in Poison Information provide precise, immediate information in situations where seconds could make the difference between life and death. The Center's poison information staff are required to be certified by the American Association of Poison Control Centers. Currently, all staff that are eligible have either fulfilled the requirements or are currently working toward certification.

Our Administrative Team

James B. Mowry, Pharm.D., Director of the IPC since August 1981, is a Diplomat of the American Board of Applied Toxicology, a Fellow of the American Academy of Clinical Toxicology, a Distinguished Pharmacy Practioner of the National Academies of Practice and has more than 35 years of experience in pharmacology and clinical toxicology. Dr. Mowry holds academic clinical appointments in pharmacy (Purdue University and Butler University) and emergency medicine (Indiana University School of Medicine) He is currently Chair of the National Poison Data Steering Committee and an editorial board member of the journal Clinical Toxicology. He was awarded the American Academy of Clinical Toxicology Distinguished Service Award in 2007.

Serving as the Center's Medical Director is Brent Furbee, M.D. Dr. Furbee is board certified in medical toxicology and emergency medicine with more than 33 years of experience in emergency medicine and medical toxicology. He is a full clinical professor of Emergency Medicine with the Indiana University School of Medicine.

Indiana Poison Center Staff

Director
James B. Mowry, PharmD

Medical Director
R. Brent Furbee, MD

Associate Medical Directors
Blake Froberg, MD
Louise Kao, MD
Kristine Nanagas, MD
Mary Wermuth, MD
Jennifer Acciani, MD
Laura Tormoehlen, MD

Toxicology Fellow
Jerry Snow, MD, 1st Year

Administrative Assistant
Jennifer Sanders

Coordinator – Poison Prevention
Deirdre George-Davis, MPH

Medical Toxicology Fellowship
Louise Kao, MD, Director

Team Leader
Gwenn Christianson, RN, MSN, CSPI*

Specialists in Poison Information
Lynn Ballentine, BSN, CSPI*
Jo Beckerich, BSN, MS, CSPI*
David Burns, BSN, CSPI*
Gwenn Christianson, RN, MSN, CSPI*
Susan Jackson, RN, CSPI*
Jo Johnson, RN, CSPI*
Tricia Loy, BSN, CSPI*
Tonya Mains, BSN, MS, CSPI*
Susie McKnight, RN, CSPI*
Laura Miller, Pharm.D., CSPI*
Janis Parker, BSN, CSPI*
Warren Patitz, BA, RN, CSPI*
Jayne Santfleben, BSN, CSPI*
Joanne Smith, BA, RN, CSPI*
Laura Smith, BSN, CSPI*
Amy Wallace, RN, CSPI*
Krista Williams, BSN

* AAPCC Certified Specialist in Poison Information

Mary Wermuth, MD, Louise Kao, MD, Kristine Nanagas, MD, Daniel Rusyniak, MD, Blake Froberg, MD, Jennifer Acciani, MD, and Laura Tormoehlen, MD, all graduates of our medical toxicology fellowship, act as Associate Medical Directors with primary emergency medicine practices at IU Health Methodist Hospital (MW, LK, KN) and Wishard Memorial Hospitals (DR, JA), pediatric hospitalist and toxicologist at Riley Hospital @ IU Health (BF), and neurologist at IU Health Methodist Hospital (LT) respectively. Dr. Kao has been director of the medical toxicology fellowship program since July 2007. Our toxicology fellow starting in July 2013, was Jerry Snow, MD, a graduate of the IU School of Medicine Emergency Medicine program who had bee practicing Emertency Medicine in Central Indiana for 8 years before coming back to the Fellowship.

Gwenn Christianson, RN, MSN, CSPI, through funding provided by the Federal HRSA grant, began a position as Team Leader for the Indiana Poison Center in 2002. Gwenn's responsibilities include special projects, quality assurance and additional administrative support for the center. Gwenn has been a Specialist in Poison Information since 1988 and is actively involved a number of committees on the national level in the American Association of Poison Control Centers including AAPCC Board of Directors.

Deirdre George-Davis, MPH joined the Indiana Poison Center in 2012 as Coordinator – Poison Prevention. Mrs. George-Davis brings a vast experience in public health education to the poison center and is responsible for coordinating our state wide poison prevention program including evaluation, re-assessment, design and production.

Jennifer Sanders joined us as Administrative Assistant for the Indiana Poison Center and Medical Toxicology of Indiana in 2013. In addition to her other administrative duties she acts as liaison with Member Hospitals, coordinates patient appointments for the occupation toxicology clinic and coordinates medical toxicology rotations for the medical residents from Indiana University School of Medicine and administrative aspects of the medical toxicology fellowship.

CONSULTANTS

The IPC maintains a relationship with a number of expert consultants in many areas related to toxicology should a question be found that our usual and customary resources cannot handle. We would like to acknowledge their contributions to the program.

Robert J. Alonso, M.D.
Robert T. Anger, M.S.
Rita E. Banes
Waqar Bhatti, Ph.D.
James A. Brenneman, Ph.D.
Michael Buran, M.D.
Mark A. Carfagra, Ph.D.
Charles B. Carter, M.D.
R. Lyle Christensen, PhD
Lola Cook MS
Peg Davee, MS
Peter A. Dillman
Quentin B. Emerson, M.D.
Michael Evans, Ph.D.
William E. Fields, Ph.D.
Charlene Graves, M.D.
Alan R. Hanks, Ph.D.
Steven Hooser, DVM. Ph.D.
Daniel McCoy, Ph.D.
John W. Mead
John Pless, M.D.
James E. Robbers, Ph.D.
Charles Sinclair, DVM, MSPH
Sam S. Slosman
Kenneth Sun, Ph.D.
Walter Sundberg, Ph.D.
Michael R. Tansey, Ph.D.
David Weaver, M.D.

MEMBER HOSPITALS FOR 2013

It is with great appreciation that we recognize the support and contributions made by the following people and institutions to the Indiana Poison Center. The Indiana Poison Center Member Hospital Network was significantly revised in 1996 in response to decreasing state funding. The membership fee, which had been $1,000 for many years, was increased to $3,000 per year. In addition, hospitals that chose not to join the network, were charged $150 per poison consultation generated by their hospital. Starting January 2006, fees associated with the member hospital program increased to $3,500 and $200 respectively, and starting in April 2009 increase annually consistent with medical care inflation rates. Full or partial year membership in the network has increased from 42 in 1995 to 93 members in 2013.

Adams Memorial Hospital, Decatur
Bluffton Regional Medical Center, Bluffton
Cameron Memorial Community Hospital, Angola
Columbus Regional Hospital, Columbus
Community Hospital, Munster
Community Hospital Anderson, Anderson
Community Hospital East, Indianapolis
Community Hospital North, Indianapolis
Community Hospital South, Indianapolis
Community Howard Regional Health, Kokomo
Daviess Community Hospital, Washington
Deaconess Gateway Hospital, Newburgh
Deaconess Hospital, Evansville
Dearborn County Hospital, Lawrenceburg
Decatur County Memorial Hospital, Greensburg
DeKalb Memorial Hospital, Auburn
Elkhart General Hospital, Elkhart
Eskenazi Health, Indianapolis
Fayette Memorial Hospital, Connersville
Franciscan St. Anthony Health - Chesterton, Chesterton
Franciscan St. Anthony Health - Crown Point, Crown Point
Franciscan St. Anthony Health - Michigan City, Michigan City
Franciscan St. Elizabeth - Lafayette Central, Lafayette
Franciscan St. Elizabeth Health - Crawfordsville, Crawfordsville
Franciscan St. Elizabeth Health - Lafayette East, Lafayette
Franciscan St. Francis Health - Indianapolis, Indianapolis
Franciscan St. Francis Health - Mooresville, Mooresville
Franciscan St. Margaret Health - Dyer, Dyer
Franciscan St. Margaret Health - Hammond, Hammond
Gibson General Hospital, Princeton
Good Samaritan Hospital, Vincennes
Greene County General Hospital, Linton
Hancock Regional Hospital, Greenfield
Hendricks Regional Health, Danville
Henry County Memorial Hospital, New Castle
IU Health Arnett Hospital, Lafayette
IU Health Ball Memorial Hospital, Muncie
IU Health Bedford Hospital, Bedford
IU Health Blackford Hospital, Hartford City
IU Health Bloomington Hospital, Bloomington
IU Health Goshen Hospital, Goshen
IU Health La Porte Hospital, La Porte
IU Health Methodist Hospital, Indianapolis
IU Health Morgan Hospital, Martinsville
IU Health Paoli Hospital, Paoli
IU Health Starke Hospital, Knox

IU Health Tipton Hospital, Tipton
IU Health University Hospital, Indianapolis
IU Health West Hospital, Avon
IU Health White Memorial Hospital, Monticello
Jasper County Hospital, Rensselaer
Johnson Memorial Hospital, Franklin
Lutheran Hospital of Indiana, Fort Wayne
Major Hospital, Shelbyville
Margaret Mary Community Hospital, Batesville
Marion General Hospital, Marion
Memorial Hospital, Jasper
Memorial Hospital, Logansport
Memorial Hospital of South Bend, South Bend
Methodist Hospital (Northlake), Gary
Methodist Hospital (Southlake), Merrillville
Parkview Hospital Randallia, Fort Wayne
Parkview Huntington Hospital, Huntington
Parkview LaGrange Hospital, LaGrange
Parkview Noble Hospital, Kendallville
Parkview Regional Medical Center, Fort Wayne
Perry County Memorial Hospital, Tell City
Portage Community Hospital, Portage
Porter Regional Hospital, Valparaiso
Putnam County Hospital, Greencastle
Reid Hospital & Health Care Services, Richmond
Riley Hospital @ IU Health, Indianapolis
Riverview Hospital, Noblesville
Schneck Medical Center, Seymour
St. Catherine Hospital, East Chicago
St. Joseph's Hospital of Marshall Co., Plymouth
St. Mary Medical Center, Hobart
St. Mary's Medical Center, Evansville
St. Vincent Carmel Hospital, Carmel
St. Vincent Clay Hospital, Brazil
St. Vincent Dunn Hospital, Bedford
St. Vincent Fishers Hospital, Fishers
St. Vincent Frankfort Hospital, Frankfort
St. Vincent Hospital, Indianapolis
St. Vincent Jennings Hospital, North Vernon
St. Vincent Williamsport Hospital, Williamsport
Sullivan County Community Hospital, Sullivan
Terre Haute Regional Hospital, Terre Haute
Union Hospital, Terre Haute
Union Hospital Clinton, Clinton
Wabash County Hospital, Wabash
Witham Health Services, Lebanon
Woodlawn Hospital, Rochester

The following hospitals, while not members, supported the Indiana Poison Center through use of the poison center on the fee per call basis.

Community Hospital of Bremen, Bremen
Deaconess Women's Hospital, Newburgh
Dukes Memorial Hospital, Peru
Dupont Hospital, Fort Wayne
Jay County Hospital, Portland
Kentuckiana Medical Center, Clarksville
Kosciusko Community Hospital, Warsaw
Monroe Hospital, Bloomington
Pulaski Memorial Hospital, Winamac
Rush Memorial Hospital, Rushville
Saint Catherine Regional Hospital, Charlestown
St. Joseph Hospital, Kokomo
St. Mary's Warrick Hospital, Booneville
St. Vincent Anderson Regional Hospital, Anderson
St. Vincent Mercy Hospital, Elwood
St. Vincent Randolph Hospital, Winchester
Veterans Administration Hospital, Indianapolis
Veterans Administration Hospital, Fort Wayne
Westview Hospital, Indianapolis
Witham Health Services at Anson, Zionsville

OTHER INDIANA POISON CENTER DATA SETS

The annual Indiana Poison Center statistical data also includes other frequency distributions and cross-tabulations of selected data items. These reports can be run upon request.

Rpt #	Report Title	Database
3	Month by Call Type	All Calls
4	Patient Type by Multiple Exposures	Exposures
5	Months by Patient Type	Exposures
6	Acute/Chronic	Human
8	Callsite Codes by Call Type	All Calls
10	Exposure to Multiple Substances	Human
11	Route of Exposure	Human
12	Frequency of Clinical Effects	Human
13	Distribution of Clinical Effects	Human
15	Management Site by Referral Pattern	Human
16	Initial HCF by Referral Pattern	Human
17	Final HCF	Human
18	Initial HCF by Disposition	Human
19	Decontamination and Therapeutic Intervention	Human
23	Duration of Effects by Medical Outcome	Human
24 A	Day of Week by Hour	Human
24 B	Day of Week by Hour	All Calls
25	Call Site by Call Type	All Calls
26	Age by Gender	Human
27	Age (Year/Month/Day by Gender)	Human
28	Age by Trimester of Pregnancy	Human
29	Pregnancy Duration	Human
30	Initial HCF by Age	Human
31	Reason by Age (Adults lumped)	Human
32	Reason by Age (Adults in decades)	Human
33	Reason by Gender	Human
34	Reason by Term of Pregnancy	Human
35	Route by Management Site	Human
36	Clinical Effects by Age	Human
37	Clinical Effects by Reason	Human
38 A	Medical Outcome by Reason Group	Human
38 B	Medical Outcome by Reasons	Human
39	Medical Outcome by Mgmt Site	Human

Rpt #	Report Title	Database
40	Ipecac by Age by Management Site	Human
41	Charcoal by Age/Mgmt Site	Human
42	Reason by Exposure Chronicity	Human
43	Route of Exposure by Age	Human
44	Route of Exposure by Reason	Human
45	Management Site by Age	Human
46	Treatment by Management Site	Human
47	Decontamination by Management Site	Human
48	Other Therapy by Management Site	Human
51 A	Medical Outcome by Age/ Lumped	Human
51 B	Medical Outcome by Age/ Decades	Human
52	Log by Generic Categories	Human
53	Log by Specific Products	Human
54	Generic Codes by Category by Call	All Calls
55	Generic Codes by Category by Age	Human
56	Generic Codes by Category by Reason	Human
57	Generic Codes by Category by Outcome	Human
58	Generic Codes by Category by Mgmt Site	Human
59 A	Caller State, County by Call Type	All Calls
59 B	Caller State, City by Call Type	All Calls
60	Caller State by Call Type	Human
65	Patient Species	Exposures
72	Medical Outcome by Exposure Route	Human
73	Age, Reason, HCF, Outcome Summary by Generic Code	Human
77	Number of Patients Involved in Poisoning Incidents	Human
79	Scenario by Age	Human
80	Scenario by Reason	Human
81	Scenario by Outcome	Human
82	Scenario County by Age	Human
00	State, County by Age in Years (Adults in Decades)	Human