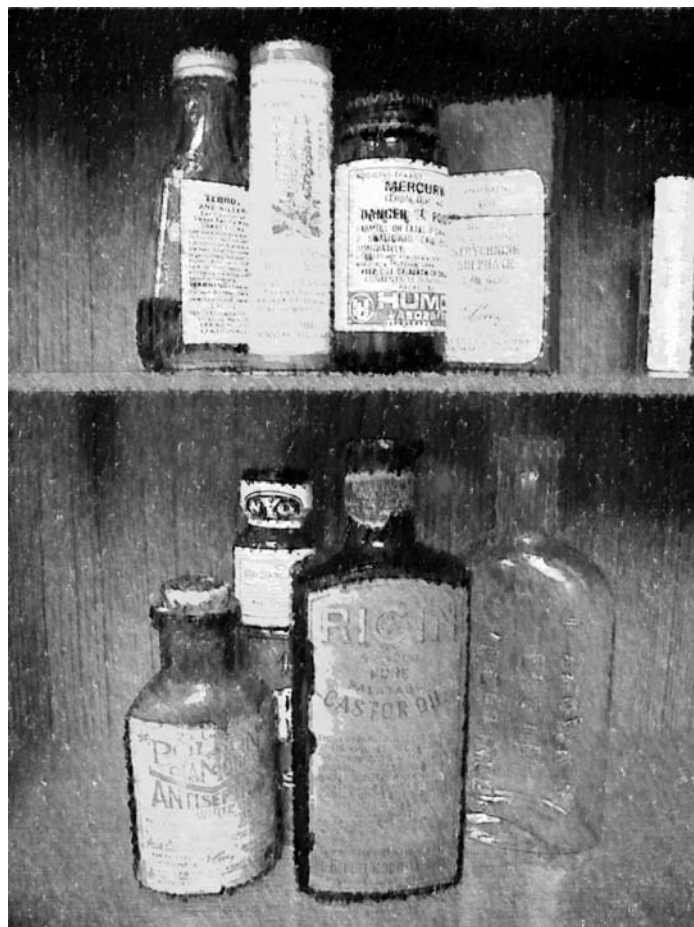


INDIANA **POISON** CENTER

2012 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.*

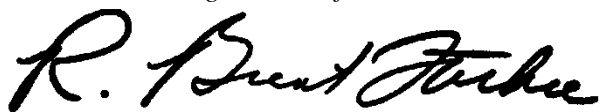


Indiana University Health

During 2012, the Indiana Poison Center received over 64,000 calls for help and made an additional 75,000 follow up calls to users of our service. Human exposure calls decreased 4.0% compared to 2011. This continues a trend that started in 2008. Since 2007 total calls have decreased 25%, human exposures by 16%, and information calls by 51%. Animal poisoning cases decreased this year by 13% to 2,172 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 8% 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 15% yearly reduction in state funding since 2010 and a 28% cut in federal funding in the last year. As a consequence, our Member Hospital Network remains an 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 11th 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 FY 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-effectiveness.⁷ Development of stable, adequate, ongoing, and dedicated sources of funding for the Indiana Poison Center still remains crucial for its 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.



R. Brent Furbee, M.D., FACEP, ABMT
Medical Director
Indiana Poison Center



James B. Mowry, Pharm.D., DABAT, FAACCT
Program Director
Indiana Poison Center

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 Environ 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 Environ 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-third year of operation, the center is a round-the-clock information and treatment resource for all citizens of Indiana.

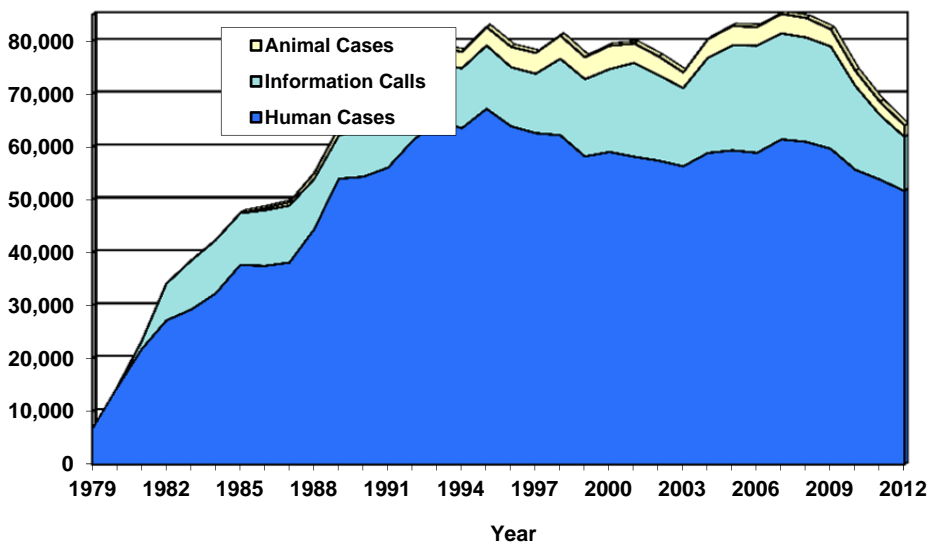
The IPC is a collaborative effort of the Indiana State Department of Health, Indiana University Health, the Poison Control Program in the Federal Healthcare Services Bureau within HRSA and health care providers throughout the state. It is designated as the official poison information center for the state 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 55 in the nation and the only one in Indiana.

In 2012, the IPC received 64,041 requests for assistance (averaging 175 calls per day). Of these calls 53,850 concerned exposures to poisons and 10,191 were callers seeking information without an exposure. The 53,850 poison exposure calls resulted from 51,678 human and 2,172 animal poisoning cases. The 51,678 human poison exposure cases managed represent a 4% decrease from 2011. In addition, the staff of the Poison Center placed 75,038 calls to patients and health care professionals for follow-up (averaging 206 calls per day).

This report presents an overview of IPC poisoning data and other activities for 2012. Additional information is available upon request. Data was available to evaluate 51,559 confirmed human cases.

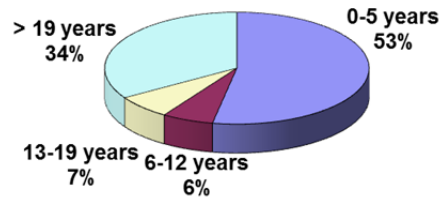
AGE

Poisonings remain a major health hazard among young children. Children under six years of age account for the majority (53%)



of the poisonings managed by the IPC during 2012, slightly increased from 2011.

Although the incidence of poisoning is still greater in children, most severe poisonings and poisoning deaths occur in adolescents and adults (97% 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		Total	%
	Males	Females		
<1	1,404	1,281	2,700	5.2
1	4,054	3,803	7,869	15.3
2	4,726	4,599	9,327	18.1
3	2,214	1,827	4,049	7.9
4	1,169	922	2,094	4.1
5	640	468	1,110	2.2
6-12	1,882	1,332	3,240	6.3
13-19	1,598	1,924	3,528	6.8
20-29	2,149	2,253	4,405	8.5
30-39	1,469	1,850	3,321	6.4
40-49	1,183	1,732	2,916	5.7
50-59	964	1,437	2,401	4.7
60-69	562	948	1,510	2.9
70-79	322	623	945	1.8
80-89	172	333	505	1.0
> 90	26	67	93	0.2
Unk Adult	538	773	1,350	2.6
Unk Infant	20	11	37	0.1
Unk Child	33	27	68	0.1
Unknown	26	31	91	0.2
Total	25,151	26,241	51,559	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 (55%) and adults (57%).

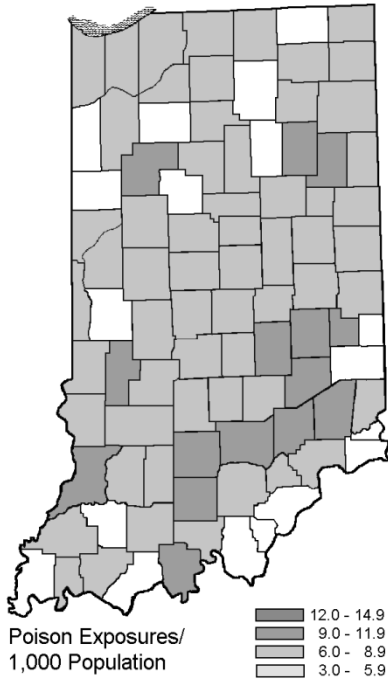
GEOGRAPHIC DISTRIBUTION

Overall, 96.5% of exposure calls originated in Indiana. In addition, the IPC received calls from 51 other states and foreign countries, with Kentucky, Illinois, Michigan, and Ohio accounting for 45% of these out-of-state calls. One out of every 98 Hoosiers utilized the Indiana Poison Center's services in 2012.

CALLER

In 2012, 48,492 calls (76%) were received from the general public. Calls were also received from 11,035 health caregivers (physicians, nurses, EMT's, paramedics, and pharmacists), with 9,407 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 3,713 calls.

City	Hospital	Patients Referred to ED	Request or Consult
Anderson	Community	29	83
	St. Vincent Anderson	23	11
Angola	Cameron Memorial	16	67
Auburn	DeKalb Memorial	19	42
Avon	IU Health West	51	112
Batesville	Margaret Mary	20	49
Bedford	IU Health Bedford	16	32
	St. Vincent Dunn	10	17
Beech Grove	Franciscan St. Francis	10	23
Bloomington	IU Health Bloomington	91	166
	Monroe	9	19
Booneville	St. Mary's Warrick	7	13
Brazil	St. Vincent Clay	13	46
Bremen	Community	7	12
Carmel	IU Health North	33	57
	St. Vincent Carmel	22	54
Charlestown	Saint Catherine	6	2
Chesterton	Franciscan St. Anthony Health	4	9
Clinton	Union Clinton	15	28
Columbus	Columbus Regional	62	122
Connersville	Fayette Memorial	15	39
Corydon	Harrison County	14	3
Crawfordsville	Franciscan St. Elizabeth - Crawfordsville	16	55
Crown Point	Franciscan St. Anthony Health	35	109
Danville	Hendricks Regional	29	52
Decatur	Adams Memorial	19	24
Dyer	Franciscan St. Margaret Health	12	218
East Chicago	St. Catherine	18	58
Elkhart	Elkhart General	59	237
Elwood	St. Vincent Mercy	4	13
Evansville	Deaconess	73	244
	St. Mary's	66	86
Fishers	IU Health Saxony	8	17

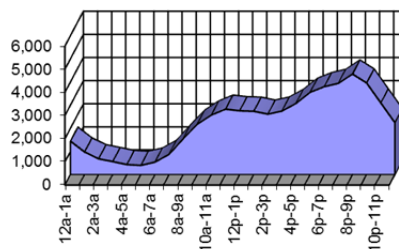


City	Hospital	Patients Referred to ED	Request or Consult
Fishers	St. Vincents	14	36
Fort Wayne	Northeast		
	Bluffton Regional	30	50
	Dupont	28	31
	Lutheran of Indiana	71	65
	Parkview Randallia	50	191
	Parkview Regional	89	66
	St. Joseph	16	38
	VA Medical Center	1	2
Frankfort	St. Vincent Frankfort	14	55
Franklin	Johnson Memorial	21	29
Gary	Methodist (Northlake)	11	93
Goshen	IU Health Goshen	41	172
Greencastle	Putnam County	15	50
Greenfield	Hancock Regional	29	93
Greensburg	Decatur County	10	82
Hammond	Franciscan St. Margaret Health	10	198
Hartford City	IU Health Blackford	7	18
Hobart	St. Mary	16	113
Huntington	Parkview Huntington	19	47
Indianapolis	Community East	44	198
	Community North	102	231
	Community South	45	182
	Franciscan St. Francis Health	86	217
	Indiana Heart Hospital	1	0
	IU Health Methodist	176	455
	IU Health University	26	26
	Riley @ IU Health	140	147
	St. Vincent	181	286
	VA Medical Center	8	27
	Westview	1	7
	Wishard Memorial	56	260
Jasper	Memorial	33	94
Jeffersonville	Clark Memorial	28	14
Kendallville	Parkview Noble	12	77
Knox	IU Health Starke	5	34
Kokomo	Community Howard	19	56
	St. Joseph	33	32
Lafayette	Franciscan St. Elizabeth - Central	55	143
	Franciscan St. Elizabeth - East	46	129
	IU Health Arnett	43	98

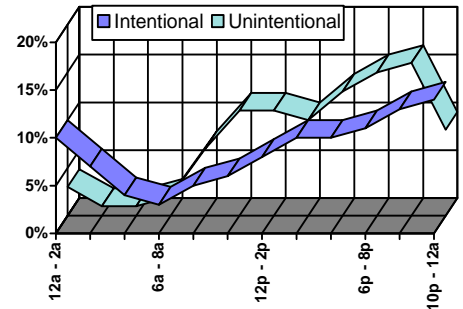
City	Hospital	Patients Referred to ED	Request or Consult
LaGrange	Parkview LaGrange	15	38
LaPorte	IU Health La Porte	19	117
Lawrenceburg	Dearborn County	35	131
Lebanon	Witham Health	21	65
Linton	Greene County	17	54
Logansport	Memorial	16	65
Madison	King's Daughters'	24	11
Marion	Marion General	41	92
	VA Medical Center	1	2
Martinsville	IU Health Morgan	18	62
Merrillville	Methodist (Southlake)	19	91
Michigan City	Franciscan St. Anthony Health	17	177
Mishawaka	St. Joseph	71	110
Monticello	IU Health White	14	66
Mooresville	Franciscan St. Francis Health	27	59
Muncie	IU Health Ball	61	89
Munster	Community	37	193
New Albany	Floyd Memorial	29	7
New Castle	Henry County	19	65
Newburgh	Deaconess Gateway	69	106
Noblesville	Riverview	26	73
North Vernon	St. Vincent Jennings	17	50
Paoli	IU Health Paoli	15	55
Peru	Dukes Memorial	14	7
Plymouth	St. Joseph's	23	31
Portage	Portage Community	14	90
Portland	Jay County	7	28
Princeton	Gibson General	21	57
Rensselaer	Jasper County	10	54
Richmond	Reid Hospital	47	131
Rochester	Woodlawn	10	29
Rushville	Rush Memorial	8	31
Salem	St. Vincent Salem	12	4
Scottsburg	Scott County	10	5
Seymour	Schneck	31	96
Shelbyville	Major	18	127
South Bend	Memorial	121	357
Sullivan	Sullivan County	14	60
Tell City	Perry County	10	49
Terre Haute	Regional	37	41
	Union	59	107
Tipton	IU Health Tipton	6	17
Valparaiso	Porter Regional	90	240
Vincennes	Good Samaritan	30	150
Wabash	Wabash County	9	20
Warsaw	Kosciusko	30	9
Washington	Daviess	22	94
West Lafayette	Purdue University	0	2
Williamsport	Student Hospital		
	St. Vincent	16	26
	Williamsport		
Winamac	Pulaski Memorial	3	7
Winchester	St. Vincent Randolph	5	31
Zionsville	Witham at Anson	4	8

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 97.2% of the total calls, while 2.0% are chronic in nature. Occupational exposure calls have remained essentially constant from 1989 through 2012, 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	29,044	53.9%
Environmental	1,085	2.0%
Occupational	663	1.2%
Therapeutic error	5,861	10.9%
Misuse	5,236	9.7%
Bite / sting	470	0.9%
Food poisoning	579	1.1%
Unknown	41	0.1%
Total Unintentional	42,979	79.8%
Intentional		
Suspected suicide	5,296	9.8%
Misuse	1,677	3.1%
Abuse	1,473	2.7%
Unknown	370	0.7%
Total Intentional	8,816	16.4%
Other		
Contamination / tampering	65	0.1%
Malicious	215	0.4%
Withdrawal	37	0.1%
Total Other	317	0.6%
Adverse reaction		
Drug	881	1.6%
Food	121	0.2%
Other	255	0.5%
Total Adverse reaction	1,257	2.3%
Unknown	485	0.9%

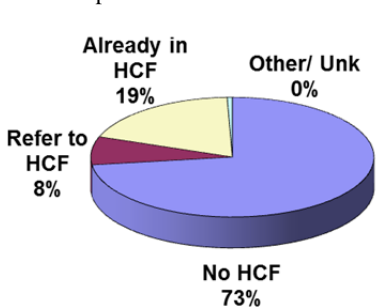
SITE OF EXPOSURE

The most frequent site of exposure is a residence, while calls for exposures in the workplace account for 1.6% of our calls, slightly increased over last year.

Site of Exposure	Number	Percent
Own residence	49,496	91.9%
Other residence	1,460	2.7%
Workplace	869	1.6%
Health care facility	153	0.3%
School	628	1.2%
Restaurant / food service	162	0.3%
Public area	515	1.0%
Other	410	0.8%
Unknown	161	0.3%

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)	38,689	71.8%
Referred to HCF by IPC		
Treated and released	1,526	2.8%
Admit to critical care	273	0.5%
Admit to noncritical care	175	0.3%
Admit to psychiatry	102	0.2%
Lost to follow-up/left AMA	533	1.0%
Refused referral	1,370	2.5%
Total Referred	3,979	7.4%
Patient Already in HCF		
Treated and released	4,890	9.1%
Admit to critical care	3,345	6.2%
Admit to noncritical care	875	1.6%
Admit to psychiatry	1,024	1.9%
Lost to follow-up/left AMA	325	0.6%
Total Already in HCF	10,459	19.4%
Other	613	1.1%
Unknown	114	0.2%

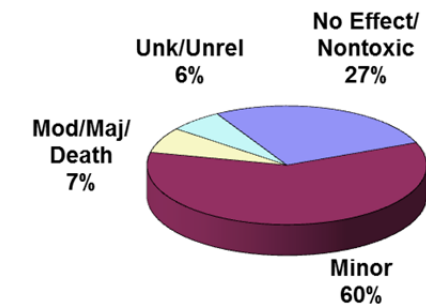
Overall, the IPC referred 3,979 (7.4%) patients for medical care and was consulted on another 10,459 cases that were already in a health care facility (HCF).

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 2012, follow-up was made 73,849 times on 23,366 human cases (3.2 calls/case). An additional 39,888 cases or information calls did not require or refused follow-up.

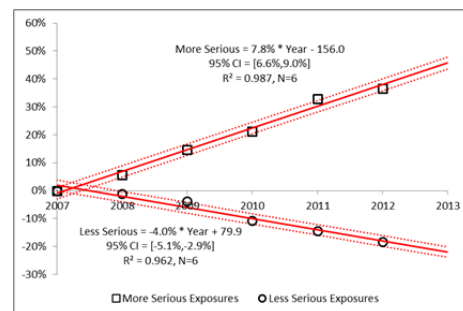
MEDICAL OUTCOME

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 2012 with moderate and major outcomes, including death up 11% compared to 2011.



Medical Outcome	Number	Percent
No effect	10,021	18.7%
Minor effect	8,667	16.1%
Moderate effect	3,238	6.0%
Major effect	467	0.9%
Death	50	0.1%
Death, indirect report	8	0.0%
No follow-up		
Judged nontoxic	4,559	8.5%
Judged Minimal Effects	23,388	43.5%
Potentially Toxic	2,109	3.9%
Unrelated effect	1,223	2.3%

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 (nontoxic), not followed (minimal toxicity possible), unable to follow (potentially toxic), and unrelated effect) is seen, compared to a 7.8% 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 2012, the IPC staff managed 51,678 human poison exposures. Prescription and nonprescription drugs accounted for 58% of these exposures, while an additional 26% were to household products. Plants, animals, industrial and agricultural products were also commonly reported. A single substance was involved in 89.2% of the cases and two substances in 6.8% of cases, but exposures to over nine substances were seen in other cases.

Agent Involved	Number
Analgesics	7,386
Anesthetics	199
Anticholinergic drugs	257
Anticoagulants	189
Anticonvulsants	1,125
Antidepressants	2,600
Antihistamines	2,119
Antimicrobials	1,329
Antineoplastics	42
Asthma therapies	406
Cardiovascular drugs	2,364
Cold and cough preparations	1,654
Diagnostic agents	11
Dietary supplements/herbals/homeopathic	937
Diuretics	220
Electrolytes and minerals	744
Eye/ear/nose/throat preparations	436
Gastrointestinal preparations	1,157
Hormones and hormone antagonists	1,273
Miscellaneous drugs	517
Muscle relaxants	642
Narcotic antagonists	10
Radiopharmaceuticals	2
Sedative/hypnotics/antipsychotics	3,745
Serums, toxoids, vaccines	42
Stimulants and street drugs	1,627
Topical preparations	2,409
Veterinary drugs	59
Vitamins	1,520
Unknown drug	353

Total Drugs 35,374

Agent Involved	Number
Adhesives/glues	336
Alcohols	1,438
Arts/crafts/office supplies	681
Automotive/aircraft/boat products	309
Batteries	236

<u>Agent Involved</u>	<u>Number</u>
Bites and envenomations	549
Building and construction products	196
Chemicals	854
Cleaning substances (household)	4,259
Industrial cleaners	232
Cosmetics/personal care products	5,049
Deodorizers	583
Dyes	53
Essential oils	252
Fertilizers	124
Fire extinguishers	53
Food products/food poisoning	752
Foreign bodies/toys/miscellaneous	2,549
Fumes/gases/vapors	935
Heavy metals	212
Hydrocarbons	943
Infectious and Toxin-Mediated Diseases	374
Information calls	0
Lacrimators	84
Matches/fireworks/explosives	40
Mushrooms	124
Paints and stripping agents	301
Pesticides - Fumigants	3
Pesticides - Fungicides	19
Pesticides - Herbicides	167
Pesticides - Insecticides	1,190
Pesticides - Repellants	167
Pesticides - Rodenticides	363
Photographic products	8
Plants	1,128
Polishes and waxes	90
Radioisotopes	2
Sporting equipment	20
Swimming pool/aquarium	252
Tobacco products	268
Waterproofers/sealants	6
Weapons of mass destruction	18
Other/unknown nondrug substances	659

Total Non-Drugs 25,878

Total Agents 61,252

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

<u>Pediatric Top Ten</u>	<u>Number</u>
Cosmetics/personal care products	4,075
Analgesics	2,751
Cleaning substances (household)	2,695
Topical preparations	1,934
Foreign bodies/toys/miscellaneous	1,877
Vitamins	1,162
Antihistamines	1,023
Plants	781
Cold and cough preparations	736
Gastrointestinal preparations	727

The pediatric top ten replaced antimicrobials with plants and pushed both cough and cold and gastrointestinal preparations down on the list. All substances on the intentional top ten remained the same with stimulants/street

drugs and alcohols, anticonvulsants and antihistamines, and cough / cold preparations and muscle relaxants switching in relative order compared to 2011.

<u>Intentional Top Ten</u>	<u>Number</u>
Analgesics	3,107
Sedative/hypnotics/antipsychotics	2,652
Antidepressants	1,653
Alcohols	1,034
Stimulants and street drugs	1,007
Antihistamines	559
Cardiovascular drugs	552
Anticonvulsants	548
Cold and cough preparations	461
Muscle relaxants	457

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. Unknown drugs bumped hormones and hormon antagonists off the list. Stimulants/street drugs, alcohols and cardiovascular drugs increased this year,

<u>Most Serious Intoxications</u>	<u>Number</u>
Analgesics	238
Sedative/hypnotics/antipsychotics	181
Antidepressants	126
Stimulants and street drugs	93
Alcohols	79
Cardiovascular drugs	66
Anticonvulsants	42
Muscle relaxants	37
Antihistamines	29
Unknown drug	22

THERAPY

Supportive care is the single most critical component in the care of the poisoned patient. In 3,903 (7.6%) patients no therapy was needed and observation alone was used in an additional 6,087 (11.8%). IPC advice was refused in 1,049 cases (2.0%). Specific therapeutic methods utilized in poisonings included decontamination, antidotal therapy, and enhancing elimination. Decontamination alone was utilized in 28,360 (55.0%) cases, other therapies alone in 5,500 cases (10.8%) and a combination of the two in 1,753 (3.4%). The most common antidotal treatments were oxygen, acetylcysteine, benzodiazepines, naloxone, alkalization and antihistamines. Intravenous acetylcysteine continues to be the preferred route of administration. The following table summarizes some specific therapies used:

<u>Decontamination</u>	<u>Number</u>
Ipecac*	3
Charcoal, single dose	467
Charcoal, multiple doses	21
Lavage	20
Cathartic	22
Whole bowel irrigation	7

Other emetic	216
Dilute/irrigate/wash	27,988
Fresh air	1641
Food/snack	1880
Total Decontamination	32,265

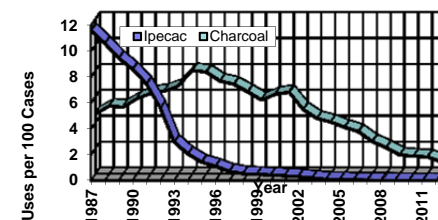
No Decontamination 21,446

Antidotal / Other Therapy

Fluids, IV	4,312
Oxygen	1,111
Benzodiazepines	767
Acetylcysteine	611
(PO – 55, IV – 556)	
Intubation	529
Ventilator	506
Sedation (other)	448
Naloxone	408
Antiemetics	361
Antibiotics	315
Alkalinization	271
Antihistamines	242
Total Antidotal / Other Therapy	13,371

Enhancement of Elimination

Hemodialysis	60
Hemoperfusion	0
Other	10
Total Enhancement	70

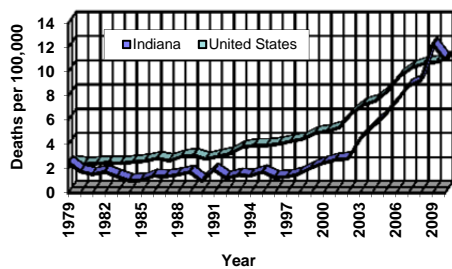


Use of activated charcoal again greatly exceeded that of syrup of ipecac. Syrup of ipecac use has now been essentially abandoned over the last twenty years, while the use of activated charcoal which initially increased by 73% now shows a continual decrease reflecting changes in usage in the hospital setting. *In no instances in which ipecac was used in 2012, did the IPC recommend its use.

MORTALITY

Data from the National Center for Injury Prevention and Control showed 713 unintentional poison deaths in Indiana for 2010, a decrease of 10%. The average number since the inception of the Poison Center has now increased to 199 per year from an average of 116 per year prior to 1979. Indiana's unintentional death rate (11.0/100,000) is now 3% above the national figure for 2010 (10.7/100,000) 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 55 patients who died during 2012. Most of the deaths (36) were intentional in nature (21 suspected suicide, 9 abuse, 1 misuse, 1 malicious and 4 unknown). In some cases, the cause of death was eventually determined not to be related to the exposure.

Age Sex Agent (Reason)

3m	F	acetaminophen, dextromethorphan, phenylephrine (malicious)
2y	F	diphenoxylate, atropine (unintentional general)
4y	M	morphine (unknown)
10y	M	unknown herbicide (environmental)
16y	M	acetaminophen, hydrocodone, alprazolam (suicide)
18y	M	methamphetamine (intentional misuse)
19y	M	ethanol (unknown)
20y	F	glimepiride, lisinopril, hydrochlorothiazide (suicide)
21y	M	methadone, alprazolam (abuse)
22y	F	alprazolam, carbamazepine, acetaminophen, hydrocodone, diazepam, tramadol (suicide)
27y	M	alprazolam, diazepam, ethanol (intentional unknown)
28y	M	heroin (suicide)
30y	M	ziprasidone, bupropion, mirtazapine, bupropion (suicide)
30y	M	methamphetamine (abuse)
31y	M	diphenhydramine (intentional unknown)
31y	M	beer, acetaminophen (suicide)
32y	M	fluorinated hydrocarbon (abuse)
33y	M	succinylcholine, aspirin, methamphetamine (suicide)
33y	M	acetaminophen, tizanidine, benzodiazepine (unknown)
33y	M	fluorinated hydrocarbons (abuse)
34y	M	metformin (suicide)
34y	M	bath salts (abuse)
37y	M	cocaine (abuse)
38y	M	hydrocodone, phenyltoloxamine, marijuana, heroin (abuse)
38y	M	aspirin (suicide)
39y	M	memantine, promethazine, methadone, morphine (unknown)

Age Sex Agent (Reason)

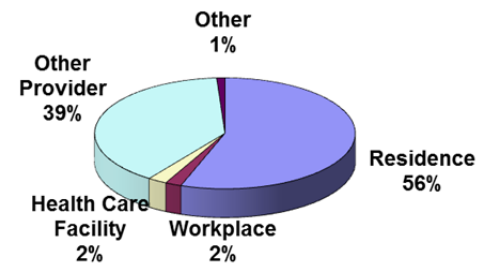
41y	F	hydroxyzine, ethanol (suicide)
42y	M	hydrogen sulfide (suicide)
42y	M	unknown drug (suicide)
46y	M	smoke inhalation, ethanol, carbon monoxide (environmental)
46y	F	hydroxyzine, duloxetine, bupropion, diphenhydramine (suicide)
49y	F	acetaminophen, hydrocodone (unknown)
49y	M	acetaminophen, hydrocodone, clonazepam (suicide)
50y	F	metoprolol, hydrochlorothiazide (suicide)
51y	M	ethanol (suicide)
53y	F	acetaminophen, hydrocodone, clonazepam (suicide)
54y	M	benzodiazepines, aspirin (intentional unknown)
55y	F	acetaminophen, NAC (therapeutic error)
56y	F	oxycodone, hydralazine (unknown)
57y	F	aspirin (suicide)
58y	M	cyanide (unknown)
58y	F	ibuprofen, lisinopril, hydrochlorothiazide (unknown)
60y	F	metformin, atenolol, digoxin, lisinopril, hydrochlorothiazide, ondansetron, pravastatin, zolpidem (suicide)
64y	M	amlodipine, hydrochloric acid (suicide)
65y	F	baclofen (suicide)
65y	F	zolpidem (unknown)
65y	F	acetaminophen, hydrocodone (intentional unknown)
67y	F	haloperidol, phenelzine, albuterol (adverse reaction)
69y	F	amiodarone (adverse reaction)
77y	F	dabigatran (unknown)
80y	M	local/topical anesthetic (adverse reaction)
85y	M	hydrogen peroxide (unknown)
adult	F	alprazolam (unknown)
adult	M	cocaine, heroin (abuse)
unk	M	fluorinated hydrocarbon (abuse)

The most common substance classes involved in deaths reported to the IPC were opioids (18 cases including 7 hydrocodone and 3 heroin, 2 each of methadone and morphine and 1 oxycodone), sedative/hypnotics (15 cases including 11 benzodiazepine and 2 atypical antipsychotics), acetaminophen (10 cases alone or in combination), cardiac drugs (9 cases), stimulants/street drugs (6 cases including 4 cocaine and one synthetic cathinone), antidepressants (4 cases), aspirin (4 cases) and carbon monoxide (2 cases).

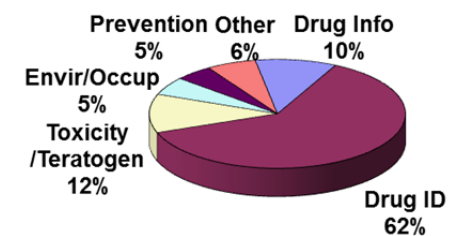
INFORMATION CALLS

In 2012, the IPC staff responded to 10,191 inquiries from health professionals and the

general public when no poison exposure had occurred. Fifty-eight percent of the calls were received from the general public, 56% in a residence and 2% in the workplace. Of the other providers, 92% were from law enforcement agencies for drug identification.

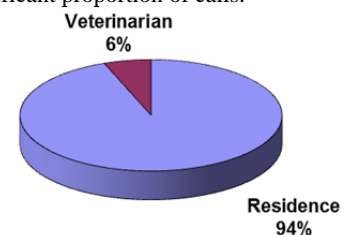


The information calls can be divided into several categories: 1) drug identification / information, 2) environmental, 3) medical, 4) occupational, 5) toxicity / symptoms, 6) prevention and safety, 7) teratogenicity and 8) other. Drug identifications now account for 62% of our information calls, up from 54% 10 years ago, but down from the peak of 72%.



ANIMAL POISONINGS

In 2012, the IPC managed 2,479 poisonings to domestic animals, down 13% from 2011. 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	488
Cleaning substances (household)	146
Analgesics	122
Foreign bodies/toys/miscellaneous	122
Cosmetics/personal care products	93
Topical preparations	81
Antimicrobials	75
Plants	73
Cardiovascular drugs	69
Hormones and hormone antagonists	57

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 fellowship in 2011 was Dr. Laura Tormoehlen who stayed after graduation as a neurotoxicologist.

Health Professional Education

Contact Hours Supervised Experience in Poison Center/Toxicology Service

Medical Residents (50)	8,000
Doctor of Pharmacy Students (1)	160
Doctor of Pharmacy Residents (7)	1,120
Medical Students (4)	640
Pharmacy Students (8)	32

Academic and Continuing

Education Lectures Presented 18

The staff of IPC also contributed to the medical toxicology literature in 2012 with 9 articles in peer reviewed journals, 3 book chapters, 3 abstracts presented at the North American Congress of Clinical Toxicology, 2 abstracts at the Society for Neuroscience meeting and 5 presentations at other professional meetings. In addition IPC staff organized the American College of Medical Toxicology Scientific Symposium at the North American Congress of Clinical Toxicology and moderated three poster and research sessions on poisoning at the ACMT Spring Meeting and the Society of Academic Emergency Medicine Annual Meeting.

Journal Articles

- Ghannoum M, Nolin TD, Goldfarb DS, Roberts DM, Mactier R, Mowry JB, et al; Extracorporeal Treatments in Poisoning Workgroup. Extracorporeal treatment for thallium poisoning: recommendations from the EXTRIP Workgroup. *Clin J Am Soc Nephrol*. 2012; 7:1682-90.
- Lavergne V, Nolin TD, Hoffman RS et al. The EXTRIP (Extracorporeal Treatments In Poisoning) workgroup: Guideline methodology. *Clin Toxicol* 2012; 50:403-13.
- Mugele J, Nanagas KA, Tormoehlen LM. Serotonin Syndrome Associated with MDPV Use. *Annals of Emergency Medicine* 2012;60:100-2.
- Nangas KA, Tormoehlen LM. Extremely High Urine Arsenic Level after Remote Seafood Ingestion. *American Journal of Therapeutics* 2012 Mar 8.
- Plasencia AA, Ballentine LM, Mowry JB, Kao LW. Benzodiazepine-associated atrioventricular block. *Am J Therap* 2012; 19:e48-e52.
- Rusyniak DE, Zaretsky DV, Zaretskaia MV, Durant PJ, DiMiccio JA. The orexin-1 receptor antagonist SB-334867 decreases sympathetic responses to a moderate dose of methamphetamine and stress. *Physiology & Behavior* 2012; 107:743-50.
- Rusyniak DE, Durant PJ, Mowry JB, Johnson JA, Sanftleben JA, Smith JM. Life-threatening hyperkalemia from cream of tartar ingestion. *Journal of Medical Toxicology*. 9:79-81, 2012
- Sullivan R, Hodgman MJ, Kao L, Tormoehlen LM. Baclofen overdose mimicking brain death. *Clinical Toxicol* 2012;50:141-4.
- Tormoehlen LM, Kumar N. Five New Things in Neurotoxicology. *Neurology Clinical Practice* 2012; 2:301-10

Book Chapters

- Mowry JB, Furbee RB. Chapter 137. Isoniazid Poisoning. In: Irwin RS, Rippe JM, eds. *Irwin and Rippe's Intensive Care Medicine*, 7th edition. Lippincott Williams & Wilkins: Philadelphia. 2012:1478-1481.
- Tormoehlen LM, Rusyniak DE. Neurotoxicology. In Biller J, ed. *Practical Neurology*, 4th edition, Lippincott Williams & Wilkins: Philadelphia. 2012:636-51.
- Tormoehlen LM. Emergencies in Neurotoxicology. In: Roos K, ed. *Emergency Neurology*, Springer: New York. 2012:351-74.

Abstracts

- Froberg BA, Bauer BD. Pneumothorax, pneumomediastinum, and subcutaneous emphysema after synthetic cannabinoid use. [abstract] *Clinical Toxicology* 2012; 50(7): 705. Presented at: North

American Congress of Clinical Toxicology, Las Vegas, NV: 2012.

- Froberg BA, Levine M, Engebretsen KM, McKeown NJ, Kostic M, Rosenbaum CD, Rusyniak DE. Clinical presentations and medical complications after exposures to substances labeled as "bath salts": A ToxIC preliminary report. [abstract] *Clinical Toxicology* 2012; 50(7): 704-5. Presented at: North American Congress of Clinical Toxicology, Las Vegas, NV: 2012.
- Turner J, Tormoehlen L, Kao K. Successful treatment of severe diethylene glycol poisoning with fomepizole and hemodialysis. [abstract] *Clinical Toxicology* 2012; 50(7): 580. Presented at: North American Congress of Clinical Toxicology, Las Vegas, NV: 2012.
- Zaretsky DV, Zaretskaia MV, Durant PJ, Rusyniak DE. The use of microinfusion pumps to perform intrahypothalamic injections in conscious rats. Society for Neuroscience, New Orleans, LA October 2012.
- Molkov YI, Zaretsky DV, Zaretskaia MV, Durant PJ, Rusyniak DE. Meth Math: Modeling temperature responses to methamphetamine. Society for Neuroscience, New Orleans, LA October 2012.

Presentations

- Mowry JB. Articles You May Have Missed: Fatty-acid oxidation and calcium homeostasis are involved in the rescue of bupivacaine-induced cardiotoxicity by lipid emulsion in rats, North American Congress of Clinical Toxicology, October 2-6, 2011
- Mowry JB. Novel Antidotes: A Current Trend in Poison Centers, IPA Annual Conference, September 21-22, 2012, French Lick Springs, IN
- Mowry JB. Everything You Think You Know About Acetylcysteine, But Don't, SCCM 41st Critical Care Congress, February 4-8, 2012, Houston, TX.
- Rusyniak D. Neurons In The Dorsomedial And Paraventricular Hypothalamus Mediate Locomotor And Neuroendocrine Responses To MDMA In Conscious Rats. SAEM Annual Meeting, May 9-12, 2012, Chicago, IL.
- Tormoehlen L. Toxins and Disorders of Neuromuscular Transmission: Session 1AC.004, American Academy of Neurology Annual Meeting, April 21, 2012 New Orleans, LA.

Public Education

Our long time public educator, Barbara Cole, left the poison center for an exciting new opportunity in 2012. Deirdre George-Davis, MPH has taken over the oversight of the public education programs of the Indiana Poison Center.

The quarterly newsletter, "Toxic Trivia" was published four times in 2012. 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 improved the effectiveness of the "look-alike-boxes" visual aid in 2012. Three new boxes were made using a lighter weight material. In addition to the customary products illustrating the similarity between household cleaners and drinks, and medicine and candy, test tubes were added. These tubes containing pairs such as pine cleaner and apple juice are a valuable tool to teach awareness of the dangers of lookalike products. The boxes are available for loan to enhance local events.

IPC has continued to network with other agencies in the state. Safe Kids, member hospitals and member physicians have continued to be partners with the poison center. In particular, IPC has made efforts to forge links with organizations providing services for seniors. A connection has been made with the Division of Aging, FSSA, and with assistance from the Division, IPC is reaching out to Agencies on Aging. This collaboration has led to an increase in Agencies on Aging staff attending the "Medicine Safety for Seniors" training program, 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	82,030
TV & Radio appearances	18
Newspaper / Magazine interviews	16
News Releases Distributed	13
Public Education Presentations	63
Estimated Audience	7,000+
<u>TOXIC TRIVIAS Published</u>	
Spring Safety (Spring)	
Summer Safety (Summer)	
Fall Safety (Fall)	
Winter Safety (Winter)	

National Poison Prevention Week (NPPW) activities included distributing press packets by mail and electronically 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 at the start of 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.

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 **\$39 million dollars a year** in health care costs, or over \$16 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 almost 37,000 people in 2012 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 2012 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 6,844 admissions for poisoning according to Indiana State Department of Health data, an extra 1,095 admissions would add an additional \$21 million in charges annually at the average \$19,336 per admission.

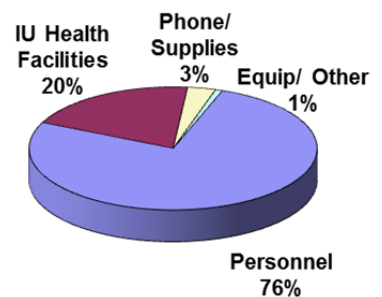
Decreasing patient Length of Stay (LOS) in a hospital: Doctors and nurses consulted the Indiana Poison Center over 11,000 times in 2012. Studies from Kentucky and New Jersey show that the LOS decreased 1.2 to 3.0 days when a poison center was consulted vs. when a poison center was not consulted.^{5,6} According to ISDH hospital discharge data, the average hospital charge for a poisoning admission is \$6,920 per day. The IPC was consulted on 4,668 admitted patients in 2012. If their LOS was extended 1.2 to 3 days, the additional hospital charges would range from \$39 million to \$97 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 \$97 million to \$155 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 \$39 million every year in unnecessary health care costs.

Expenses

Total direct expenses have risen from \$117,369 in 1979 to \$1,758,661 in 2012 with a total cost per human poison case of \$46 which is an increase of only 7% on the 2004 national average of \$43 and a cost per productive call of \$37. 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.

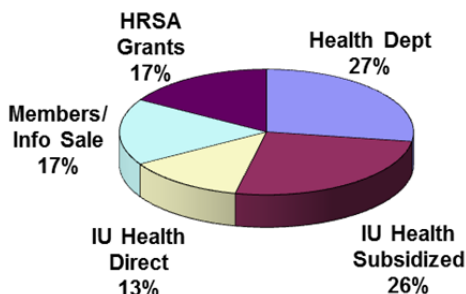


Personnel	\$1,812,342
IU Health Facilities	\$467,635
Telephone*	\$38,262
Supplies (w/information resources)	\$36,723
Equipment/Other	\$18,845
Total Expenses	\$2,373,807

*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 \$650,000 from the \$800,00 appropriated due to an additional 10% 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 six years. The eleventh full year of Federal HRSA support of the poison center through the Healthcare Services Bureau contributed about 17% of the operating budget, a 28% decrease compared to 2011 reflecting the effects of cuts to Federal discretionary 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 2012 reflects the effects of a 29% 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	\$650,000
IU Health – Subsidized	\$615,146
Federal HRSA Grant	\$393,806
Members / Information Sales	\$405,555
<u>IU Health – Direct</u>	<u>\$389,523</u>
Total Revenues	\$2,373,807

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 Practitioner of the National Academies of Practice and has more than 34 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 on the American Association of Poison Control Centers Board of Directors, Chair of the AAPCC 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 32 years of experience in emergency medicine and medical toxicology. He is also full clinical professor of Emergency Medicine with the Indiana University School of Medicine.

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.

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.

Maggie Showalter serves as Administrative Secretary for the Indiana Poison Center and

Indiana Poison Center Staff	
Director James B. Mowry, PharmD	Team Leader Gwenn Christianson, RN, MSN, CSPI*
Medical Director R. Brent Furbee, MD	Specialists in Poison Information Lynn Ballentine, BSN, CSPI* Jo Beckerich, BSN, MS, CSPI* David Burns, BSN, CSPI* Gwenn Christianson, RN, MSN, CSPI* Marietta Herod, BSN, CSPI* Susan Jackson, RN, CSPI* Jo Johnson, RN, CSPI* Tricia Loy, BSN, CSPI* Karen Lytle-Bickers, BSN 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*
Associate Medical Directors Blake Froberg, MD Louise Kao, MD Kristine Nanagas, MD Daniel Rusyniak, MD Mary Wermuth, MD Jennifer Acciani, MD, Fellow Laura Tormoehlen, MD	* AAPCC Certified Specialist in Poison Information
Administrative Assistant Maggie Showalter	
Coordinator – Poison Prevention Deirdre George-Davis, MPH	
Medical Toxicology Fellowship Louise Kao, MD, Director	

Medical Toxicology of Indiana. In addition to her secretarial 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 the 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. Breneman, Ph.D.
Michael Buran, M.D.
Mark A. Carfagna, 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 2012

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 87 members in 2012.

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
Davie 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
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 Health - Crawfordsville,
Crawfordsville
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
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, LaPorte
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
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 Whitley Hospital, Columbia City
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. 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 Frankfort Hospital, Frankfort
 St. Vincent Hospital, Indianapolis
 St. Vincent Jennings Hospital, North Vernon
 St. Vincents Medical Center Northeast, Fishers
 Sullivan County Community Hospital, Sullivan
 Terre Haute Regional Hospital, Terre Haute

Union Hospital, Terre Haute
 Union Hospital Clinton, Clinton
 Wabash County Hospital, Wabash
 Wishard Memorial Hospital, Indianapolis
 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
 Dukes Memorial Hospital, Peru
 Dupont Hospital, Fort Wayne
 Floyd Memorial Hospital, New Albany
 Jay County Hospital, Portland
 Kosciusko Community Hospital, Warsaw
 Monroe Hospital, Bloomington
 Pulaski Memorial Hospital, Winamac
 Rush Memorial Hospital, Rushville
 St. Joseph Hospital, Kokomo

St. Joseph Hospital, Fort Wayne
 St. Mary's Warrick Hospital, Booneville
 St. Vincent Anderson Regional Hospital, Anderson
 St. Vincent Heart Center of Indiana, Indianapolis
 St. Vincent Mercy Hospital, Elwood
 St. Vincent Randolph Hospital, Winchester
 St. Vincent Salem Hospital, Salem
 Veterans Administration Hospital, Indianapolis
 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.

<u>Rpt #</u>	<u>Report Title</u>	<u>Database</u>	<u>Rpt #</u>	<u>Report Title</u>	<u>Database</u>
3	Month by Call Type	All Calls	40	Ipecac by Age by Management Site	Human
4	Patient Type by Multiple	Exposures	41	Charcoal by Age/Mgmt Site	Human
5	Months by Patient Type	Exposures	42	Reason by Exposure Chronicity	Human
6	Acute/Chronic	Human	43	Route of Exposure by Age	Human
8	Callsite Codes by Call Type	All Calls	44	Route of Exposure by Reason	Human
10	Exposure to Multiple Substances	Human	45	Management Site by Age	Human
11	Route of Exposure	Human	46	Treatment by Management Site	Human
12	Frequency of Clinical Effects	Human	47	Decontamination by Management Site	Human
13	Distribution of Clinical Effects	Human	48	Other Therapy by Management Site	Human
15	Management Site by Referral Pattern	Human	51 A	Medical Outcome by Age/ Lumped	Human
16	Initial HCF by Referral Pattern	Human	51 B	Medical Outcome by Age/ Decades	Human
17	Final HCF	Human	52	Log by Generic Categories	Human
18	Initial HCF by Disposition	Human	53	Log by Specific Products	Human
19	Decontamination and Therapeutic Intervention	Human	54	Generic Codes by Category by Call	All Calls
23	Duration of Effects by Medical Outcome	Human	55	Generic Codes by Category by Age	Human
24 A	Day of Week by Hour	Human	56	Generic Codes by Category by Reason	Human
24 B	Day of Week by Hour	All Calls	57	Generic Codes by Category by Outcome	Human
25	Call Site by Call Type	All Calls	58	Generic Codes by Category by Mgmt Site	Human
26	Age by Gender	Human	59 A	Caller State, County by Call Type	All Calls
27	Age (Year/Month/Day by Gender)	Human	59 B	Caller State, City by Call Type	All Calls
28	Age by Trimester of Pregnancy	Human	60	Caller State by Call Type	Human
29	Pregnancy Duration	Human	65	Patient Species	Exposures
30	Initial HCF by Age	Human	72	Medical Outcome by Exposure Route	Human
31	Reason by Age (Adults lumped)	Human	73	Age, Reason, HCF, Outcome Summary by Generic Code	Human
32	Reason by Age (Adults in decades)	Human	77	Number of Patients Involved in Poisoning Incidents	Human
33	Reason by Gender	Human	79	Scenario by Age	Human
34	Reason by Term of Pregnancy	Human	80	Scenario by Reason	Human
35	Route by Management Site	Human	81	Scenario by Outcome	Human
36	Clinical Effects by Age	Human	82	Scenario by County by Age	Human
37	Clinical Effects by Reason	Human	00	State, County by Age in Years (Adults in Decades)	Human
38 A	Medical Outcome by Reason Group	Human			
38 B	Medical Outcome by Reasons	Human			
39	Medical Outcome by Mgmt Site	Human			