



Partnership between Iowa Health System and University of Iowa Hospitals & Clinics

# 2007-2008 Annual Report



CHILDREN • ADULTS • EDUCATORS • HEALTHCARE PROFESSIONALS

## Facts at a Glance

Incoming calls	52,168
Follow-up calls	36,034
Human exposures	31,888
Animal exposures	1,885
Information calls	18,395
Peak call volume	6-10 p.m.
Poisonings managed at home/on-site	74%
Poisonings involving children < 6 yrs of age	53%
Cost savings to Iowa and its residents	\$7.3 M

## From the Director ...

*"The only thing we know about the future is that it is going to be different." Peter Drucker*

While a new President has the nation speculating about what changes may occur, this much is assured: A revolution in health care. Decreasing healthcare dollars; changing demographics and aging of the "baby boomers;" advances in technologies; changes in health care delivery; increasing consumerism; and an emphasis on safety, effectiveness and efficiency; are just some of the emerging issues.

In these challenging times of identifying ways to deliver health care more cost effectively and efficiently, poison control centers play a central role in reducing health care costs. By handling 74% of cases over the phone at home, the Center helps poisoned patients avoid the cost of unnecessary emergency department visits, ambulance transports, hospital admissions and treatment delays. This results in a net savings to Iowa and its residents of over \$7.3 million annually.

Last year the ISPCC responded to a record number of 52,168 calls! This is a 125% increase in calls since 2000 when funds were first appropriated by the Iowa Legislature. As this annual report attests, ISPCC has made significant progress toward achieving the objectives it set in its ambitious strategic plan. We exceeded our financial goals and made great strides in improving patient outcomes, promoting poison prevention, and forging new partnerships to better serve all 99 counties in Iowa. These and many other achievements underscore the ISPCC mission, which focuses on saving lives and limiting injury from poisoning while simultaneously decreasing the cost of health care.

## Our Mission

To reduce illness, deaths and costs associated with poisoning through providing statewide 24-hour emergency telephone advice, poison prevention information and education.

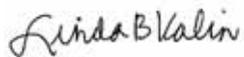
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Achieving long-term sustainable funding will continue to be a high priority in the upcoming year. Efforts will also focus on achieving the highest possible degree of operational efficiency while delivering on business strategies.

I would like to acknowledge the strong support and financial commitment of the Iowa State Legislature, Iowa Department of Public Health, U.S. Health Resources and Services Administration, and our sponsoring organizations Iowa Health System and University of Iowa Hospitals and Clinics. We value the support of our local community and wish to especially acknowledge St. Luke's Regional Medical Center, area legislators, and the local business community. I extend my sincere thanks to our Board of Directors listed in this report. Their contributions are vital to our continued success.

I am proud and grateful for the chance to be working with you and for you. Please accept my very best wishes for 2009.



Linda B. Kalin

## Top 10 Substances Involved in a Poisoning

1. Pain Medicine
2. Cosmetics/Personal Care Products
3. Household Cleaning Substances
4. Sedative/Hypnotics/Antipsychotics
5. Antidepressants
6. Topical Preparations
7. Foreign Bodies/Toys/Miscellaneous
8. Cold and Cough Medicine
9. Pesticides
10. Cardiovascular Drugs

## What We Do (ISPCC Services):

### 24/7 Emergency Hotline

Poison information and poison management advice is provided, free of charge, 24 hours a day, 7 days per week to health care providers and the general public. It is the combination of experienced RN Certified Specialists in Poison Information, with back-up board-certified medical toxicologists, which makes treatment at home possible and safe. About 74% of poisonings are managed entirely at home with telephone guidance from the Iowa Poison Center.

### Toxicology Consultation

Our physician toxicologists provide 24-hour coverage for health care providers throughout the state.

### Poison Prevention Education

ISPCC educators promote poison prevention and awareness to all ages through education programs, media contacts, poison center website, and distribution of poison prevention materials. Poison prevention brochures, telephone stickers, posters and other printed materials are available to the general public via mail, fax or internet at [www.iowapoisn.org](http://www.iowapoisn.org). We also provide a video lending library.

### Professional Education

The ISPCC offers a 5-week rotation for pharmacy students; toxicology education is provided for physicians, nurses, pharmacists, EMS personnel, police, HAZMAT teams and other health care providers.

### Research

Our staff actively engages in clinical and educational research activities involving poison-related topics.

### Health Care Cost Containment

The residents of Iowa save over \$7 million annually in unnecessary health care costs by using the ISPCC services. By managing 74% of cases over the phone at home, the ISPCC helps poisoned patients avoid the cost of unnecessary emergency department visits and ambulance runs. Studies have shown that poison control centers are at least three times more cost effective than child safety seats, smoke detectors, or bicycle helmets.

## Health and Economic Benefits

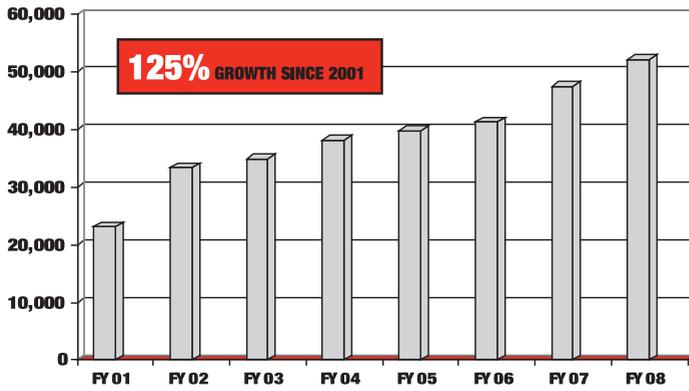
The value of poison center services to residents of the United States has been recognized by the American Academy of Pediatrics, the American College of Emergency Physicians, the American Medical Association, the Centers for Disease Control and Prevention, the Institute of Medicine, and the U.S. Consumer Product Safety Commission. Internationally, the World Health Organization and the United Nations recognize the importance of poison centers in every country.

In 2008, a cost study was conducted (Effectiveness of the Iowa Poison Center: Impact on Health Care Costs) demonstrating how the Iowa Statewide Poison Control Center is effective at controlling health care costs in Iowa.

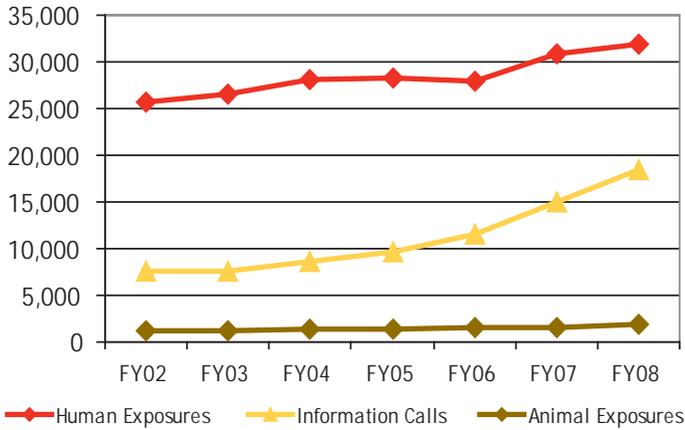
- For every dollar spent on Iowa poison control services, \$10 is saved in medical spending. This is an increase return on investment from 7:1 in 2006.
- Ready access to poison control services has been proven to reduce severity of illness, death and health care costs.
- The cost per human exposure call to the Iowa Statewide Poison Control Center last year was \$33.88. The average cost per call to a poison center in the U.S. (2007) is \$44.89.
- Substantial medical cost savings occur because treatment guidance for the majority of poison exposures can be provided over the phone, thus reducing emergency room visits, ambulance use, hospital admission and length of hospital stay.
- In FY 07-08, more than 23,000 Iowa children and adults were safely managed at home, resulting in a net savings to Iowa's health-care system of over \$7.3 million.

The Iowa Statewide Poison Control Center represents a unique public-private partnership providing our state with a cost-effective and efficient public health resource. In addition to decreasing deaths, illness and suffering, the ISPCC offers a remarkable 10:1 return on investment.

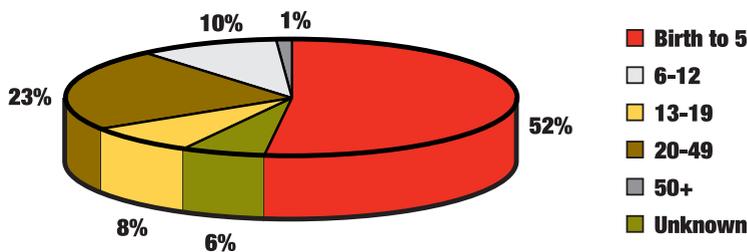
## ISPCCC Call Volume



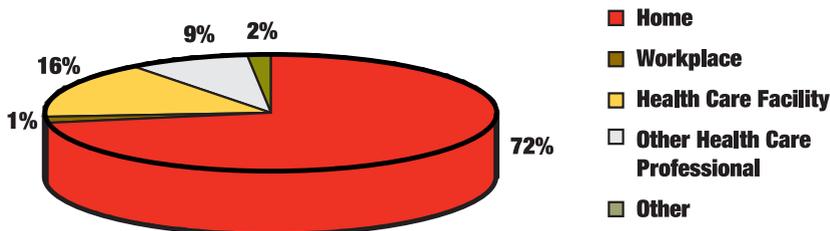
## Types of Calls



## Patient Age Distribution



## Origin of Call



## Poison Control Center Calls

Every day, specialists at the Iowa Statewide Poison Control Center ease the fears of callers and give them peace of mind by providing expert advice. Specially trained nurses offer confidential advice on poison prevention and treatment 24 hours a day, 7 days a week through the ISPCCC toll-free hotline, 1-800-222-1222. The ISPCCC also handles calls from non-English speaking populations as well as from the hearing impaired.

In FY 08, the ISPCCC staff handled 52,168 calls. Of these:

- 61% were for advice on treating someone exposed to a poison
- 39% were for poison information
- 52% of calls concerned children under the age of 6
- 25% of calls were from physicians or other health care professionals treating poisoning victims
- 74% of poison exposure calls from the general public were managed at the site of exposure by providing first aid instructions over the phone without referral to a health care facility.

In addition to answering calls, the ISPCCC staff also makes follow-up calls to check on the victim's condition and give extra advice when needed. Last year, 36,034 follow-up calls were made to worried caregivers and healthcare providers.

## FY 08 Fatalities

The deaths listed below are those cases reported by health care facilities to the ISPCC for management of a suspected poisoning where the ISPCC received confirmation of a fatal outcome. In those cases where several substances were ingested, the cause of death is ascribed exclusively to the substance that was deemed to have had the most toxic effect. The relatively small number of deaths reported to the ISPCC does not accurately represent the true extent of poisoning as a cause of acute injury and death in the state. Poisoning-related deaths continue to rise at the national level. There are several reasons that the majority of death cases may go unreported to the ISPCC. Patients that are found dead on arrival or whose history indicates treatment with a known EMS protocol may not be reported to the ISPCC by first responders, law enforcement, medical examiners or other health care providers. Overdoses of abused substances may also go unrecognized as a poisoning case.

- 53 y/o female, mepergan, fluoxetine
- 23 y/o female, effexor, sertraline, topiramate
- Unknown adult (over 20 yrs), alcohol
- 44 y/o female, ammonia
- 44 y/o female, acetaminophen
- 53 y/o female, escitalopram, cyclobenzaprine, acetaminophen, bupropion, alcohol
- 81 y/o female, liquid drain opener
- 32 y/o male, aspirin
- 72 y/o female, carbon monoxide
- 74 y/o male, carbon monoxide
- unk adult, ethylene glycol
- 80 y/o female, acetaminophen
- 18 y/o male, morphine, chlorpheniramine, dextromethorphan, nutmeg
- 48 y/o female, hydrocodone/APAP, cyclobenzaprine, paroxetine
- 40s male, oxycodone, duloxetine, bupropion, gabapentin
- 55 y/o female, aspirin
- 25 y/o female, clozapine
- 53 y/o female, doxepin, clonazepam, escitalopram
- 11 mo female, carbon monoxide
- 51 y/o male, carbon monoxide
- 2 y/o female, carbon monoxide
- 63 y/o male, carbon monoxide
- 65 y/o female, carbon monoxide
- 30 y/o female, bupropion, duloxetine
- 43 y/o male, antidandruff shampoo
- 36 y/o male, carbon monoxide
- 4 y/o male, carbon monoxide
- 19 mo female, carbon monoxide
- 3 y/o female, vitamins with iron
- 32 y/o male, methamphetamine, methadone, ethanol
- 73 y/o male, carbon monoxide
- 45 y/o male, carbon monoxide
- 30 y/o male, carbon monoxide
- 22 y/o male, unknown
- 45 y/o male, amitriptyline, alcohol, oxycodone/APAP
- 51 y/o female, trazodone
- 80 y/o female, seroquel
- 36 y/o male, acetaminophen, cocaine
- 16 y/o male, diphenhydramine, trazodone, aspirin

## Linda Kalin Slated to Lead National Committees

Linda Kalin, Director of the Iowa Statewide Poison Control Center, was recently appointed to serve as Co-Chair of the Accreditation Committee of the American Association of Poison Control Centers (AAPCC). AAPCC accreditation is a process through which a Poison Center is able to measure the quality of its services and performance against nationally recognized standards.

Although accreditation is voluntary, some funding sources (ie. state, HRSA) require AAPCC accreditation as a condition of funding. The Accreditation Committee reviews applications for accreditation from approximately 60 poison centers in the United States and determines compliance with set standards for excellence. Linda was also recently appointed to serve as Chair of the Accreditation Standards Task Force charged with reviewing and revising the current standards for Accreditation of Poison Centers and Poison Center Systems.



Linda has over 20 years of experience in poison center activities and clinical toxicology. Linda began her career as an emergency room nurse and in 1989 became Iowa's first Certified Specialist in Poison Information (CSPI). She was instrumental in the development of the statewide poison control center, established in 2000 as a partnership between Iowa Health System and University of Iowa Hospitals and Clinics. Linda serves on numerous local, state and national committees and is a frequent lecturer on topics involving poisonings and overdose management. She is currently an adjunct faculty member at the University of Iowa College of Pharmacy, Drake College of Pharmacy, and St. Luke's College of Nursing.

## Dr. Howard Burns Receives Honor



ISPCC Associate Medical Director, Howard Burns, MD, was named a Fellow of the American College of Medical Toxicology in September, 2007. Fellowship in the ACMT recognizes a physician's contribution to the world of toxicology not only through the practice of medical toxicology but also through teaching, research and public service. Dr. Burns served as the medical director of the South Dakota Poison Center from 1980 until 1998 and has been the associate medical director of the Iowa Statewide Poison Control Center since August, 2004. Dr Burns is board certified in emergency medicine and medical toxicology.

# Poison Center Utilization: Calls by County

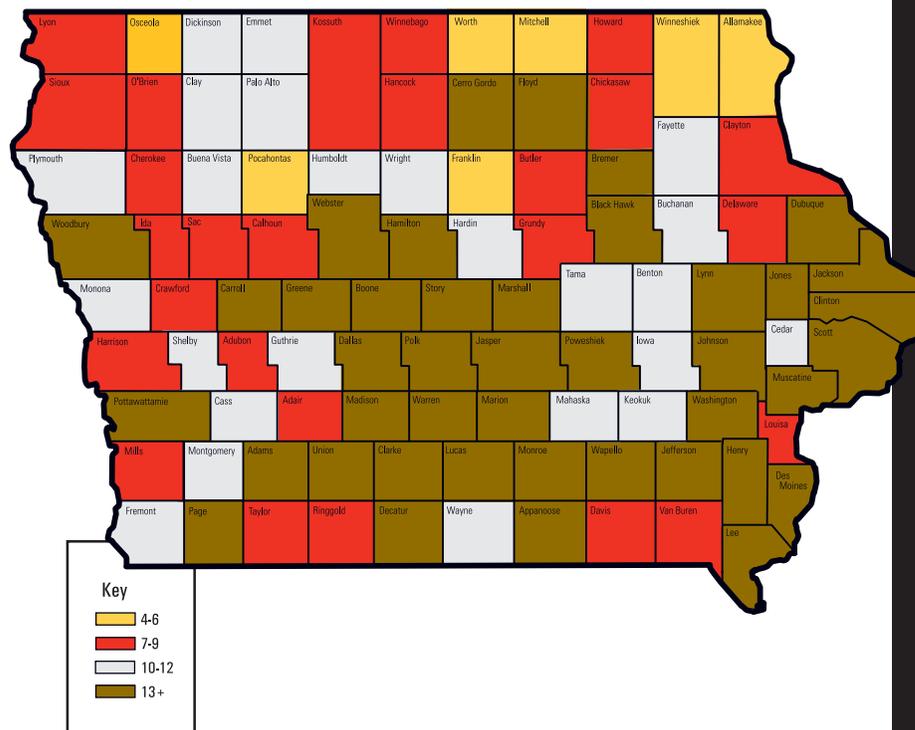
Outreach and education are key elements of the ISPCC's services.

The Iowa Statewide Poison Control Center educates thousands of people each year about poisonings and overdoses. Public education efforts are intended to help increase awareness of the poisons that are found in every home, business, and school, and to help prevent poisonings from occurring. The ISPCC also strives to make sure that all Iowans know that they can quickly and easily get information by contacting the ISPCC, 24/7, if a poisoning occurs.

In FY08, the ISPCC provided speakers and/or materials for poison prevention programs in Iowa. ISPCC Education Coordinator Tammy Noble, RN, BSN, CSPI, taught classes for preschoolers to senior citizens with a total audience of 3,632. Several organizations partnered with the ISPCC to provide education to their patients, customers, clients, and students. These organizations include hospitals, physician clinics, fire departments, police departments, childcare agencies, pharmacies, Red Cross, parish nurses, Head start and school nurses. In all, more than 115,000 pieces of educational materials (brochures, magnets, telephone stickers, teacher kits, and other pieces) were distributed.

The ISPCC is also an important resource for the media. In FY08, ISPCC staff participated in 5 television, 5 newspaper and 2 radio interviews on various poison-related topics.

Professional education is targeted toward the special needs of health care professionals. Programs and materials are designed to help the health care provider better manage poisoning and overdose cases that end up in a health care facility. In FY08, 47 programs were conducted at hospitals, colleges, regional and state conferences by ISPCC staff. These programs were attended by more than 1,629 physicians, nurses, EMS providers, pharmacists, physician assistants, and other health care providers.



## Consultants

The ISPCC 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.

Iowa Department of Public Health

Michele Catallier, MD

Rebecca Curtiss

Randal Dahlin

Ann Garvey, DVM, MPH, MA

Rita Gergely

Judy Goddard, RN

Julia Goodin, MD

Mary Jones, PS

Dennis Klein, MD

John Kraemer

Jerri McLemore, MD

Tom Newton, REHS, MPP

Patty Quinlisk, MD, MPH

Stuart Schmitz, MS, PE

Ken Sharp, REHS

Iowa Department of Natural Resources

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Iowa State University

Steve Ensley, DVM

Gary Osweiler, DVM, PhD

Lois Tiffany, PhD

Siouxland District Health Department

Michelle Clausen-Rosendahl, MPH, REHS

Fran Sadden, RN

Dan Weakley

University Hygienic Laboratory

Lee Friell, MS

Mike Pentella, PhD

Don Simmons, PhD

Mike Wichman, PhD

John Vargo, PhD

University of Iowa Hospitals & Clinics

Chris Atchison, MPA

Kenneth Goins, MD

William Haynes, MD

Jessica Moreland, MD

Marcus Nashelsky, MD

Shawn Simmons, MD

Iowa Hazardous Materials Team Leaders

Asst. Chief Jim Clark, Sioux City

Woodbury County Emergency Management

Gary Brown

REAC/TS, Oak Ridge, TN

Ronald Goans, MD, PhD

St Luke's Regional Medical Center (Sioux City)

Pathologists

Mike Kafka, MD

Julie Breiner, MD

Thomas Carroll, MD

James Quesenberry, MD

# Board of Directors

FY 07-08

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Emergency Medicine Department  
Trinity at Terrace Park  
Bettendorf, IA

Paul Berger, MD  
Emergency Medicine Department  
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UI Health Care and CFO  
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St. Luke's Regional Medical Center  
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William Hesson  
Associate Director, Legal Services  
University of Iowa Hospitals & Clinics  
Iowa City, IA

James Rasmussen  
Director of Finance  
Iowa Health System  
Des Moines, IA

Stephen Stephenson, MD  
Executive Vice President/Medical  
Director  
Blank Children's Hospital  
Des Moines, IA

\*Resigned to relocate out of area  
effective June 3, 2008

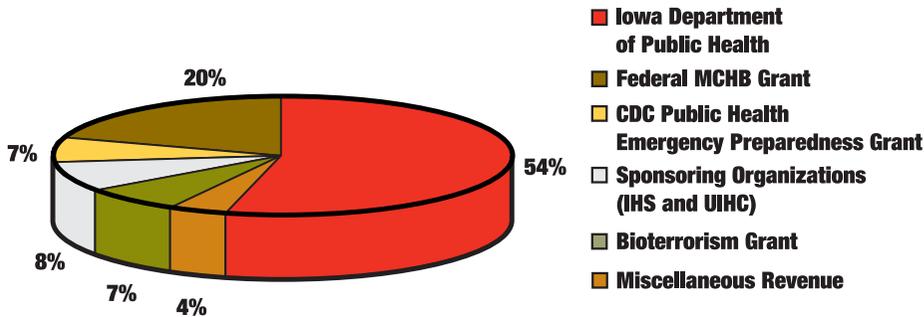
## All in a Day's work:

Dog ate 20 tramadol pills • ER nurse caring for patient that injected unknown drug of abuse

- 4 y/o given a whole promethegan suppository instead of a ½ suppository • RN caring for a drug OD • RN with poly-drug OD • Dr with drug OD • Caller admits he took drug OD • Caller having adverse reaction to medicine • 10 y/o child got a double dose of his methylphenidate • 13 mo chewed on piece of potpourri • Dog ate owner's pill • 20 mo ate sibling's vitamin • 2 yo ate parent's metformin pill • 6 y/o bit into a glowstick and splashed into eye • 19 mo ate an ondansetron pill • 4 y/o chewed on blister package of medicine and pills missing • 12 mo sucked on grandparent's diuretic pill • grandchild bit into a stick of deodorant • Adult took a swallow of liquid laundry detergent that was in a cup • 16 mo got taste of lotion • 22 mo sprayed pet stain remover in mouth • 2 y/o ate 24 tabs of acetaminophen • friend took a poly-drug overdose • 11 mo had unknown substance/foreign body in mouth • 3 y/o eating multivitamins with iron • 18 mo rubbed diaper cream on face
- 2 y/o ate 1-2 OTC headache tabs • 16 mo got insect repellent in mouth • 3 y/o swallowed a balloon • Friend took an overdose • RN with possible OD in ER • 3 y/o ate several antacids
- 15 mo sucking on nozzle of hand sanitizer • dog chewed up the ant trap • 4 y/o sprayed laundry stain remover in mouth • 4 y/o ate firework "snake" tablet • RN with drug OD • 3 y/o chewed on diaper • Dr with drug OD • 2 y/o with automatic toilet bowl cleaner sprayed on face • 2 y/o found eating naproxen tablet • 17 mo with taste of diaper rash cream • 4 y/o sprayed pepper spray on tongue and cheek • Friend took an overdose • 3 y/o sprayed bathroom cleaner in mouth • Caller with adverse reaction to niacin • 22 mo with taste of antifungal cream • 3 y/o ate one ibuprofen tablet • teen with accidental needle stick to his arm while vaccinating pigs • Caller with splash of toilet bowl cleaner in eye • Ambulance calling regarding 14 mo eating unknown pill of grandfather • 2 y/o got taste of antifungal cream • 2 y/o sprayed perfume in eye • RN with drug OD • 2 y/o playing with hand dish detergent • 10 mo ate pellet of mouse poison • 3 y/o with taste of aloe vera gel • 4 y/o licked tube of arthritis cream • RN with poly-drug OD • 8 y/o eating granules from silica gel packet
- Adult with adverse reaction after sprayed herbicide outdoors • Glow stick broke open and splashed on face of 7 y/o • Caller accidentally took her dog's heartworm tab • 16 mo drank liquid ibuprofen • Adult took evening pills too early • RN with drug OD • 3 y/o bit into a topamax pill • Adult caller accidentally took her metformin twice •

# Financial Review

In fiscal year 07-08, the annual operating budget for the ISPC was \$1,080,402. Personnel costs comprised 82% of the direct operating costs. State funding through the Iowa Department of Public Health provided 54% of funding. Grant funding continues to be needed to sustain services. A federal grant awarded by the Department of Health and Human Services, HRSA, funded 20% of total operating costs. A bioterrorism grant of \$74,250 provided funding to maintain telephone and computer systems and increase surge capacity. Funding through the Center for Disease Control Public Health Emergency Preparedness Grant supported activities to improve the surveillance, early detection and investigative capabilities of the center and to provide information to health care providers and the public about chemical, biological and radiological threats or exposures. The ISPC receives additional funding from hospital partners Iowa Health System and University of Iowa Hospitals and Clinics.



# Surveillance

The Iowa Statewide Poison Control Center has been an active and critical participant in the preparedness programs of Iowa and the nation since 2002. Today, staffed with highly trained nurses and a physician specializing in toxicology, the ISPC is part of a network of poison centers across the U.S. that forms our nation's early warning surveillance system to detect a biological or chemical attack. The FY 07-08 Center for Disease Control Public Health Emergency Preparedness Grant enabled the ISPC to improve its surveillance capabilities to detect and investigate chemical, biological and radiological threats or exposures.

\$ \$ \$ \$ \$

For every dollar invested in the Poison Center, \$10 is saved in medical spending.

Last year this saved Iowa \$7.3 million!

# Saudi Pharmacists Tour Iowa's Poison Center



Saudi Arabian pharmacists Omar Al-Burikan, left, and Mohammed Barasain listen as nurse Pat Gunia explains a call at the Iowa Poison Center.

March 2008, the Iowa Statewide Poison Control Center hosted Saudi Arabian pharmacists Omar Al-Burikan and Mohammed A Barasain. The pharmacists spent two days with ISPC staff gathering information as they proceed to establish the first Drug and Poison Information Center (DPIC) in Saudi Arabia. Managing Director, Linda Kalin showcased how the ISPC serves the approximate 3 million Iowans. The Saudi pharmacists were also interested in staff training, data collection and quality assurance. The Saudi center is expected to open in 2009 in Riyadh, the capital of Saudi Arabia, and will serve the country's more than 20 million people. Mohammed and Omar also visited the Iowa Drug Information Network (IDIN) in Iowa City, directed by Ronald A. Herman. The IDIN is an innovative program developed by the Division of Drug Information Service of the University of Iowa College of Pharmacy to assist its members in accessing the latest in drug information and applying it to patient care decisions. Several countries, including Saudi Arabia, use the Iowa Drug Information Service (IDIS) database, which the University of Iowa College of Pharmacy produces.



*Partnership between Iowa Health System and  
University of Iowa Hospitals & Clinics*

Iowa Statewide Poison Control  
Center  
401 Douglas St., Suite 402  
Sioux City, Iowa 51101

24-Hour Poison Information  
and Emergency  
1.800.222.1222  
(TTY accessible)

Administration 712.279.3710

Fax 712.234.8775

Education  
Sioux City 712.279.3717  
Iowa City 319.356.2600

Web Site  
<http://www.iowapoison.org>

*Nationally accredited by the  
American Association of Poison  
Control Centers*

## On Our Team

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Education Coordinator, Iowa City  
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Specialists in Poison Information:  
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Jennifer Cullenward, RN  
Cheryl Current, RN  
Sue Gottsch, RN, BSN, CSPI  
Janet Gray, RN, BSN, CSPI  
Pat Gunia, RN, BSN, CSPI  
Bill Motz, RN, BSN  
Sue Ringling, RN, BSN, CSPI

**POISON**  
**Help**  
**1-800-222-1222**

The Iowa Statewide Poison Control Center is available to every Iowa resident through a toll-free telephone number, 1-800-222-1222. Access is available for the hearing impaired through TDD/TTY, and non-English speaking callers are supported by interpreters who are conferenced in by phone on a moment's notice.