

NEW YORK STATE

**POISON CONTROL
NETWORK**

**ANNUAL REPORT
1999 DATA**

June 18, 2001

Dear Member of the Legislature:

On behalf of the New York State Poison Control Network, I am pleased to submit the annual report for data collected during the 1999 calendar year.

This report summarizes the activities, effectiveness, impact and benefits of the Poison Control Network for the noted time period.

Sincerely,

Antonia C. Novello, M.D., M.P.H., Dr. P.H.
Commissioner of Health

Enclosure

NEW YORK STATE

POISON CONTROL NETWORK

ANNUAL REPORT

ON 1999 DATA

NEW YORK STATE POISON CONTROL NETWORK

**WESTERN NEW YORK REGIONAL POISON CENTER
Children's Hospital of Buffalo
219 Byrant Street
Buffalo, New York 14222**

**FINGER LAKES REGIONAL POISON AND DRUG INFORMATION CENTER
Strong Memorial Hospital/University of Rochester
601 Elmwood Avenue
Rochester, New York 14642**

**CENTRAL NEW YORK REGIONAL POISON CONTROL CENTER
University Hospital
Upstate Medical University/SUNY Health Science Center
750 East Adams Street
Syracuse, New York 13210**

**HUDSON VALLEY REGIONAL POISON CENTER
Phelps Memorial Hospital Center
701 North Broadway
Sleepy Hollow, New York 10591**

**LONG ISLAND REGIONAL POISON AND DRUG INFORMATION CENTER
Winthrop University Hospital
107 Mineola Boulevard
2nd Floor
Mineola, New York 11501**

**NEW YORK CITY REGIONAL POISON CONTROL CENTER
New York City Department of Health
455 First Avenue, Room 123
New York, New York 10016**

NEW YORK STATE POISON CONTROL NETWORK

MISSION STATEMENT

The New York Poison Control Network, comprised of six regional poison control centers, provides poison emergency assessment and treatment information, public education, and health professional education to the citizens of New York State for the purpose of preventing injury and death from poisoning. The Network enhances the prevention of poisoning and management of poisoning victims by early recognition of new risks and continued research in the field.

TABLE OF CONTENTS

Executive Summary

Introduction

History and Background of the New York State Network

Location of Centers (Map)

Services Provided by Poison Control Centers

Professional Organization Involvement

Operations

Finances

Statistical Information

Management of the Societal Impact of Poisoning

Toxicosurveillance

Public Education and Awareness

Inhalant Awareness Programs

Toxicology Training

Research and Publications

APPENDICES

Appendix One:

Management Information for the Poison Control Centers in New York State

Appendix Two: Graphic Presentation of Statistical Information

1999 Total Calls

Information Calls

Age Distribution

Management of Human Exposure Cases

Medical Outcome of Human Exposures

Reasons for Human Exposure Calls

Route of Human Exposure Calls

Site of Human Exposure Calls

Appendix Three:

Common Substances Involved in Human
Exposures and in Pediatric Human Exposures

Appendix Four: Public Education Programs

Appendix Five: Professional Education and Prevention Programs

Appendix Six: Publications

NEW YORK STATE POISON CONTROL NETWORK

ANNUAL REPORT ON 1999 DATA

EXECUTIVE SUMMARY

Poison control services have existed in New York State since 1955. The Poison Control Network Act established regional poison control centers in the State in 1986. The Act created a statewide network to reduce poisonings, educate the public about hazardous exposures and assure statewide emergency coverage by poison control facilities.

The New York Poison Control Network, comprises six (6) regional poison control centers, is dedicated to preventing injury and death from poisoning by providing poison emergency assessment and treatment information, public education, and health professional education. The centers disseminate expert information to the general public as well as to professionals, participate in the collection of uniform data and conduct research to enhance the science of toxicology.

The centers are immediately available, 24 hours per day, seven days per week, to health care professionals, as well as the general public, for the purpose of providing expert telephone consultation for emergency poison exposures and inquiries. The emergency telephone numbers and services are widely publicized in each of the regions. The centers serve as a source of information on life saving antidotes and vaccines, as well as being a primary resource for education and research on poison related issues, servicing health care professionals as well as the general public. The centers provide professional education to medical students, physicians, pharmacists, nurses and other health care professionals. Overall, the Network strives to promote poisoning prevention among the general public through a variety of outreach programs, various education programs and literature distribution designed for specific age groups.

One of the functions of the Poison Control Network is to report information on pesticide poisonings to the New York State Department of Health for the monitoring of acute and chronic effects of pesticide exposure. In 1999, the three centers within the Network with constituents in the greater New York metropolitan area collected and conducted a retrospective review of pesticide information relative to the outbreak of the West Nile Virus. This review proved useful in evaluating public response to the West Nile Virus and in serving as a potential resource in the event of bioterrorism events in the future.

During 1999, the poison control centers in New York State were supported through reimbursement authorized under the Health Care Reform Act (HCRA) of 2000. In addition, poison center host institutions are provided an add-on to their Medicaid emergency room rate. The current HCRA methodology provides five million dollars annually, which is distributed through the host institutions.

A recent study conducted by the Network revealed that if the services of the poison control centers were not available when a poisoning exposure occurred, forty percent (40%) of the general public would go to a hospital, forty-four percent (44%) would go to a physician's office, and sixteen percent (16%) would call a friend, pharmacist, or do nothing. Those members of the general public who would do nothing present a potential risk of an increase in morbidity and mortality due to poisonings.

Appendix Two provides graphic reports of the statistical data specific to the telephone services provided by the centers in 1999.

- The two major categories of telephone calls received are human exposure and information calls.
- The Network of centers received over 188,000 calls in 1999. Approximately two-thirds (2/3) of these calls were related to human poisonings and almost one-third (1/3) of all calls are requests for information.
- Forty-two percent (42%) of the information calls in 1999 dealt with questions concerning drug information and identification;
- Poisoning to children under five constitute almost half (45%) of human exposure calls in 1999;
- Unintentional poisonings are the predominant number of human poisoning exposures;
- Over three-quarters (3/4) of all human exposure calls were the result of ingestion;
- The vast majority of the human exposure calls (72% in 1999) are managed on-site without need for additional health care intervention, contributing significantly to the cost savings to the health care system;
- Of the 124,998 human exposure calls received during 1999, approximately one percent (1%) resulted in a major effect or death.

The poison centers within the Network continue to work directly with the State's 911 system by providing training and education to the dispatchers. The poison centers are involved in triaging 911 patients involving poison exposure. The Network recognizes trends in poisonings as well as seasonal hazards and coordinates services throughout the Network as a statewide service.

INTRODUCTION

HISTORY AND BACKGROUND OF THE NEW YORK STATE NETWORK

Historical Perspective

Poison control services have existed in New York State since 1955, when the first poison control centers were established as a result of the collaborative efforts of the American Academy of Pediatrics, the New York Academy of Medicine and local medical societies.

Over the next two decades, additional regional programs provided poison services. The scope of these programs varied depending on the needs of the community and the available funding. To determine the level of poison control services available, the Department of Health in 1979 conducted a survey of all poison control services in the State. Results illustrated that only 50% of New York State's population received any level of poison control services and there was a lack of service uniformity in those areas.

State Involvement

In 1981, the Commissioner of Health established an advisory council on poison prevention and control. The purpose of the council was to advise the Department of Health on the further development of statewide standards for poison control services. The collaborative efforts of the council and the department resulted in the development in 1984 of the comprehensive Administrative Guidelines for the Operation of Poison Control Centers. Those guidelines were subsequently used in the development of State regulations.

The Poison Control Network Act was signed on May 12, 1986 and provided for the establishment of regional poison control centers to form a statewide network to reduce poisonings, educate the public about hazardous exposures and assure statewide emergency coverage by poison control facilities. Poison control centers must disseminate expert information to professionals and the public. Centers must also participate in collection of uniform data and conduct research to enhance the science of toxicology. It was recognized that regional poison control centers can reduce hospital costs by handling nontoxic and mildly toxic poisoning emergencies through telephone consultation.

Together the centers formed the Association of Poison Control Centers of New York State, for the purpose of collaborating on issues of concern to all of the centers and interacting with the New York State Department of Health.

Previous Consolidations

Extensive consolidation of poison control services has taken place since its inception in 1955. During 1956 - 1981, there were 17 - 21 poison control centers in New York State. Many of these existed as a part of emergency room services and many handled calls during day time hours only. There were no regulations or guidelines for these services.

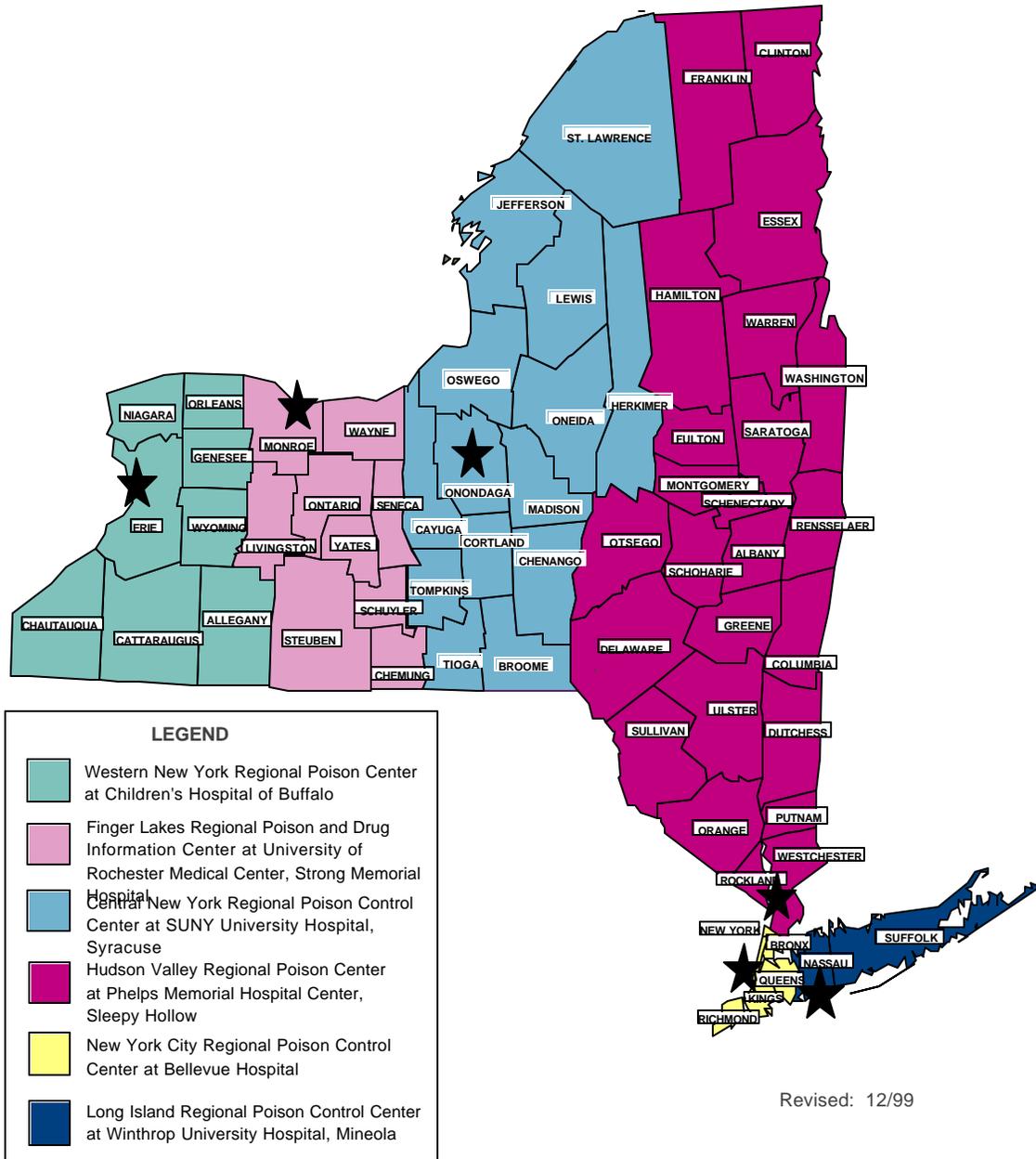
With the enactment of the New York State Poison Control Network Act in 1986, eight poison centers were designated, one for each of the state's health service areas. In 1990, Ellis Hospital Poison Control in Schenectady transferred their services to the Hudson Valley Regional Poison Control Center and the Southern Tier Poison Center in Binghamton was absorbed by Central New York Regional Poison Control Center.

For the past decade, the six remaining poison centers have effectively carried out the delivery of services to the 18 million people of New York State. Each of the centers is now certified by the American Association of Poison Control Centers.

STRUCTURE OF THE NETWORK

LOCATION OF CENTERS

The current network consists of six (6) poison control centers, strategically located throughout the state as noted on the map below. Management information specific to the individual centers is included in **Appendix One**.



SERVICES PROVIDED BY POISON CONTROL CENTERS

Each poison control center is staffed by a Toxicology Board Certified Medical Director, an Administrative and/or Clinically Board Certified Managing Director, a team of Specialists in Poison Information, Health Educators, and support staff. In New York State, the poison control centers perform the following services:

Telephone Communications

Centers publicize their emergency telephone numbers and services to the general public and to health care professionals. Each center's emergency telephone number is listed on the inside front section of all local telephone directories and is provided to all telephone operators. Poison control centers with large geographic regions maintain toll-free numbers for callers outside of their local calling area. Centers have telecommunications that allow contact with hearing impaired persons. Commercial translation services are used by centers with a large number of foreign speaking populations.

Specialists in Poison Information (registered nurses and/or pharmacists) are trained in toxicology, certified by examination, and answer incoming calls to the poison control center. Services include the provision of:

- expert telephone consultation for emergency poison exposures and inquiries 24 hours per day, seven days per week to health care professionals and the public;
- assessment of the risk of toxicity associated with poisoning emergencies;
- home treatment information to the public and clinical consultation to health care professionals;

The following case illustrates the cooperation amongst healthcare professionals, the patient and the poison specialist:

In early April the poison center received a call from a 47 year old man. He was suffering from numbness and tingling in his arms and legs. He stated that he also had tremors and severe itching. The patient had gone to his local emergency room but had not received any treatment and was sure he was not convincing to hospital staff that he had such symptoms mainly because he blamed his symptoms on a fish he had eaten in Puerto Rico three weeks earlier. Upon further questioning, the history on the exposure was revealed. This patient had eaten a barracuda, which he caught while fishing off Puerto Rico. He also fed some to his dog. Soon after, he developed severe nausea and vomiting which required treatment in Puerto Rico. His dog died. Neurological signs and symptoms began later, and the emergency room physician seemed to believe they were unrelated. The poison information specialist recognized the symptoms matched that of ciguatera poisoning, which may last for months, and knew that barracuda was a common source. The specialist consulted with a physician who was a friend of the patient, and arrangements were made for the patient to be treated at a VA hospital with amitriptylline, Vitamin C, and diphenhydramine to ease his discomfort.

Crisis Intervention

Poison control centers have immediate access to on-line and print toxicology resources, which display the most current information on more than 500,000 products, drugs, plants, and environmental toxins. The centers are supported 24 hours per day, every day, by medical and clinical toxicologists, and have access to expert consultants in specialties such as plants, mushrooms, snakes, insects and environmental and industrial toxins.

Crisis intervention services:

- serve as a source of information on life saving antidotes and vaccines;
- contribute to reducing health care costs by avoiding visits to emergency departments or other health care settings;
- provide drug information for the public and health care professionals;
- serve as resource for chronic lead poisoning and other environmental toxins;
- serve as a resource for substance abuse information and management;
- provide reporting, surveillance and act as an early warning network for the following: pesticide exposures, food poisoning episodes, substance abuse, herbal products and alternative medicine, biological and chemical warfare terrorist attacks, and exposures associated with malicious acts;
- cooperate in reporting all clusters of similar exposures and hazards to government agencies including the FDA, CPSC, OSHA, EPA, CDC, Department of Environmental Conservation, and local and state health departments.

Education and Research

- provide professional education to medical students, physicians, pharmacists, nurses, and other health care professionals;
- identify new toxic risks;
- conduct research to better prevent poisoning and enhance the management of poisoned persons;
- participate in nationwide sharing of data regarding poisonings;
- promote poisoning prevention among the general public;
- have an analytical toxicology laboratory available.

Most emergency calls to the centers are managed by poison specialists over the phone, avoiding expensive visits to a health care facility. Center staff follow-up on the patient's status by calling them at home at regular intervals to ensure the patient's welfare. If staff assess that further evaluation or treatment by a physician is necessary, they refer the caller to the nearest health care facility capable of providing appropriate care; call that facility to inform the staff of the referral; if necessary, arrange for emergency transportation of the patient. Patient status is monitored by the specialists until the patient is released from the treatment facility. The poison control centers

provide expert consultation to health professionals in emergency departments and other health care settings 24 hours per day, seven days per week. Centers conduct product surveillance for use as early warning systems.

The medical and managing directors play important roles in the centers by providing expert toxicology in-service training, hands-on intervention with patients at host facilities, and consultations for health professionals from their own hospitals and from other health care facilities. This vital service provides medical students and residents with hands-on experience in management of poisoned patients, thus helping prepare physicians and future toxicologists. In addition, medical and managing directors meet with members of the community they serve including EMS providers, 911 communication centers, city, county and regional emergency management agencies, health care provider users and advocacy groups.

Health educators at each of the centers conduct extensive community outreach and education regarding the services provided by the centers and the prevention of poisoning. The health educators are responsible for promoting the center's emergency telephone number throughout their region, facilitating poison prevention promotional/awareness events and delivering educational programs targeting teachers, children, parents and care givers.

PROFESSIONAL ORGANIZATION INVOLVEMENT

Each poison center in New York State belongs to, and is certified by, the American Association of Poison Control Centers (AAPCC). Members of the centers take an active, and in some instances, leadership role in the operations of the association including membership on board of directors, certification committee, public education committee, nominating committee, personnel proficiency, long range planning, specialist in poison information committee, and manager's committee. Members of the New York State Network participate fully in the educational and information sharing components of the AAPCC through attendance at the annual and mid-year meetings.

In addition, The Association of Poison Control Centers of New York State, a network made up of the members of the six poison control centers, collaborate to set policy, share case information, exchange ideas in administration, public education, professional education, data collection and conduct research.

OPERATIONS

FINANCES

Support for the Cost of Services

New York State has supported the Poison Control Network first through reimbursement add-ons for poison center host institutions (usually a hospital) through the NYPHRM legislation. An emergency room rate add-on was determined based on the cost of poison center services as reported by the host institution in their annual Institutional Cost Report. When the NYPHRM legislation expired, the state continued support of poison center services in the Health Care Reform Acts of 1996 and 2000 (HCRA). In addition to continuing the add-ons for the Medicaid emergency room rates, HCRA authorized grants to the poison control centers to assist them with meeting operating costs that may not be funded by other payers subsequent to the expiration of NYPHRM which regulated rate setting for all payers. The grant funding compensates for each center's allocable share of projected revenue lost plus the poison control center's cost allocable to the Medicare program. The methodology under HCRA provided for up to \$5 million in 1997 and up to \$3 million in 1998. An additional \$2 million was authorized for poison centers in 1998 from the Commissioner's Priority Distribution Pool monies to bring the 1998 funding up to the 1997 level. In 1999, the Governor signed new HCRA legislation which provides funding at \$5 million for each year through June 2003.

	Bellevue Hospital Center	Children's Hospital of Buffalo	Phelps Memorial Hospital Center	Strong Memorial Hospital	University Hospital/ SUNY Health Science Center	Winthrop University Hospital	Total
1999	\$650,631	\$435,615	\$1,199,232	\$722,858	\$521,453	1,245,840	4,775,629
Medicaid	404,925	147,414	113,510	216,390	334,454	81,069	1,297,762
Total	\$1,055,556	\$583,029	\$1,312,742	\$939,248	\$855,907	\$1,326,909	\$6,073,391

Cost Savings

Poison control centers have long proven their value in saving money by reducing the burden on 911 systems, emergency transport services and avoiding unnecessary trips to the emergency department.

The Network conducted a cost study survey with callers from the general public and health care professionals. When asked what they would do without the services of a poison control center, 40% of the general public stated they would go to a hospital, 44% to a physician's office, and the remaining 16% would call a friend, pharmacist or do nothing. These patients were insured 82% of the time by private insurance or HMOs, and 12% by public insurance programs. The patients who would do nothing if the poison control center did not exist represent a possible increase in morbidity and mortality among inadequately treated poisoning victims. It was also noted that 90% of patients already in the emergency department for treatment of a poisoning, did not consult the poison center before coming to the hospital.

In 1999, the New York Centers handled 124,998 human exposure calls. Seventy two percent (72%) or 90,142 of those calls were managed without health care facility, 911, or emergency services intervention. If the average emergency department cost of \$350 is applied, the Network can be credited for saving 31.5 million health care dollars.

STATISTICAL INFORMATION

The entire Network participates in the Toxic Exposure Surveillance System (TESS), submitting data on calls to the poison centers to the national database.

Statistical information is provided in graphic form in **Appendix Two**. The two major categories of calls are human exposure and information calls. Data for these two categories are broken down into more specific analysis.

Summary of 1999 Statistics

In 1999, the Network received 188,179 calls for assistance. Sixty-seven percent (67%) of these calls involved human poisoning, 4,434 calls involved animal poisonings, and 58,422 represented a wide range of information calls.

The remaining charts provide information specific to the calls received involving human exposure. Children under five were involved in forty-five percent (45%) of poisonings. Unintentional poisonings remained the predominant number of exposures. The majority of exposures (72%) were managed on-site, without need for additional health care intervention. Newly collected data for 1999 on the site-of-exposure indicates that eighty-eight percent (88%) of the exposures occurred in the home.

An analysis of the most common substances involved in human exposures and in pediatric human exposures is contained in **Appendix Three**.

MANAGEMENT OF THE SOCIETAL IMPACT OF POISONING

TOXICOSURVEILLANCE

Early Warning System

The Network participates in early warning surveillance by notifying each other of local trends, personal hazards, hazardous material incidents, and product recalls. In addition, the New York State Network shares and reviews this information with centers nationwide through the American Association of Poison Control Centers.

Each center has conducted a survey of hospitals, their services and their antidote availability.

Toxic Exposure Surveillance System (TESS)

Administered by the American Association of Poison Control Centers, all poison centers nationwide contribute to this database. Data is analyzed for trends in poisoning and feedback is given to the poison centers, government agencies and industry. The data can be used to monitor product safety providing an early opportunity to consider product reformulation or repackaging.

911 System

Centers continue to provide training and education to the 911 dispatchers. Protocol stipulates that all 911 calls involving a poison exposure are called into the poison center prior to dispatching an ambulance. With 911 on the line, the centers triage the calls and then determine if the patient needs to be transported. If the patient is unconscious or experiencing life-threatening problems, 911 dispatches an ambulance and the EMTs on the scene contact the poison center for recommendations during transport. If the patient is asymptomatic and no serious effects are expected from the exposure, 911 are advised that a transport is not necessary and the poison center handles the case, including follow-up.

Pesticide Reporting

Each center in the Network reports information on pesticide poisonings to the New York State Department of Health, which maintains a registry that monitors both the acute and chronic effects of pesticide exposure. It investigates occurrences of pesticide poisoning and may perform environmental monitoring to determine the source and circumstances of exposure. Both occupational and environmental incidents are

followed. Appropriate acute and long-term interventions (changes in work practice/protective equipment) work to prevent pesticide poisoning.

In response to the outbreak of West Nile Virus (WNV) encephalitis in the greater New York metropolitan area in the summer and fall of 1999, ground and aerial application of pesticides was used to control the adult mosquito population. The use of these pesticides has raised concerns about possible health effects among individuals who were in areas where spraying occurred. To retrospectively examine this issue, information was collected from the New York City (NYC), Long Island (LI), and Hudson Valley (HV) Poison Control Centers (PCCs), and cases reported to the New York State Pesticide Poisoning Registry (NYSPPR) were reviewed.

The review described calls received by the PCCs and reports to the New York State Pesticide Poisoning Registry during the period of active spraying in September and early October 1999. The pesticides most commonly used for WNV-related mosquito control included Malathion, which is an organophosphate, and Scourge and Anvil, both pyrethroids.

The review also showed how surveillance conducted by the Regional Poison Control Centers proved useful in evaluating the public response to WNV and was beneficial in providing a rehearsal for a bioterrorist attack. Another key outcome of the study has resulted in all the poison centers in New York State strengthening their surveillance activities in a closer partnership with the New York State Pesticide Registry as well as with numerous local health units in the state. The poison centers in New York State are able to provide enhanced education and surveillance of these types of calls for all residents.

Number of WNV-Related Pesticide Calls Reported by Each Involved Poison Center

	Exposed, No Symptoms			Exposed, Symptoms		
	New York City	Long Island	Hudson Valley	New York City	Long Island	Hudson Valley
Pesticide						
Malathion	101	0	0	187	0	1
Anvil	---**	1	4	---**	4	10
Scourge	---**	1	0	---**	2	0
Other	---**	0	0	---**	6	13
Repellant DEET	0	0	4	0	0	6
Total Calls	101**	1****	8	187*	11****	30

*These calls reflect mostly self-reported pesticide exposures and health symptoms.

**Eight individuals reported to the NYCPC that they had exposure to malathion and another pesticide; however, it is unknown whether these individuals stated they had symptoms.

****More than one pesticide could be reported.

Hazardous Materials

Centers work with local emergency planning boards and emergency services to assist and advise during toxic spills, fires and hazardous incidents. They also participate in disaster drills conducted by host institutions.

Bioterrorism

The Network is working with local officials and the American Association of Poison Control Centers to prepare for involvement of terrorist acts involving nuclear, biological, and chemical agents. Training is in progress for Network staff. Poison center staff members have attended locally sponsored and national training programs. The AAPCC has supplied all centers with extensive educational materials.

Quality Assurance

Centers conduct quality assurance activities on a daily basis. Direct assessment occurs with peer review of active cases and supervisory review of active, random and high-risk cases. Feedback is provided and instruction given at staff meetings to address recurring problems and unusual poisonings, as well as review of protocols and guidelines. In addition, centers conduct periodic satisfaction surveys, hospital services and antidote availability. Fatalities are reviewed and discussed and abstracts written for submission to the national database. Staff receive periodic evaluation and skills assessment for competency.

PUBLIC EDUCATION AND AWARENESS

The Network strives to offer a variety of outreach programs throughout the state in an effort to instruct the public in poison prevention and to create an awareness of the services of poison centers.

Various education programs have been designed and developed for the general public targeting specific age groups and are provided in different areas of the state. Examples of the types of programs provided are identified in **Appendix Four**.

The following case points out the need for awareness of potential poisons in our everyday environment.

The pink pills must have looked like candy to 18 month old Gregory B, because he ate a handful of them. They were not candies. They were glyburide tablets, a glucose-lowering agent for diabetic patients, which were left out by his grandfather. Thankfully, Gregory B's mother noticed that the pills were missing, and quickly contacted the

Regional Poison Control Center where a Nurse Specialist in poison information took her call. "Mrs. B was frantic at first," the Nurse said. "I calmed her down, then assessed the situation and made arrangements for her son to be taken to an Emergency Department". She then called the Emergency Department to alert the staff and to provide specialized case management information. Without the immediate treatment he received in the hospital, the boy's dangerously low glucose level could have produced convulsions, brain damage-even ultimately, death. But intravenous glucose administration restored his blood chemistry to a normal range, and ongoing monitoring in the Pediatric Intensive Care Unit that Gregory received was on track. He was stable by morning, and able to return home the following day. As they prepared to take Gregory home, his parents received detailed poison prevention information, and his grandfather was reminded to keep his medications out of sight and reach of small children.

A statistical summary of public education outreach efforts is presented below:

Public Education Statistics

<u>Literature Distributed</u>	<u>1999</u>
Brochures/Telephone Stickers	1,487,851
Other (videos, curriculum packets)	20,598
 <u>Programs Conducted</u>	
Fairs	113
Lectures/Talks/Workshops	195
 <u>Media</u>	
News Releases	44
Public Service Announcements	27
TV and Radio Interviews	64

New Additions to Statewide Network Public Education

SCHOOL NURSE VIDEO – The public educators collaborated to design an educational intervention to train New York State school nurses in the function, services and resources of the New York State Poison Control Network. An instructional video was produced by the Central New York Regional Poison Control Center and distributed to each of the six poison control centers. A handbook and brochure will supplement this educational tool. The goal of this program is to help school nurses recognize poisonings and contact the poison control centers for advice before sending a child to an emergency room.

INHALANT AWARENESS PROGRAMS

STUDENT PROGRAM – Reintroduces the concept of poison prevention and focuses specifically on poisons in their environment including inhalants. Topics include recognition of inhalants, short and long term effects, sudden sniffers death and how to help a friend who is using inhalants.

PARENT PROGRAM – This program educates parents and other adults about common household products being abused by children. This program teaches the who, what, why and when of inhalant use, including signs and symptoms, short and long term effects, sudden sniffers death, and what to do if you find your child using an inhalant.

Collaboration With Community Groups

Poison control centers collaborate with the following community groups:

BOCES Head Start
Girl Scouts of America
Mayor's Anti-Graffiti Task Force
Head Start Programs
Schools of Pharmacy
Safe Kids
Child Care Councils
School Nurses
Department of Environmental Services
Cooperative Extension

Poison Prevention Week

National poison prevention week is recognized during the third full week in March. Centers conduct special activities throughout the month.

1999 Highlights:

- Introduction of a statewide school nurse education program
- Activated Charcoal Educational Campaign
- Poster, Essay and Coloring Contests
- Special News Releases, Public Service Announcements and Proclamations
- Chain and Neighborhood Pharmacy literature distribution and advertisement programs
- Addition of Drug Information Service at Long Island Poison and Drug Information Center
- Lead Conference
- Introduction of Inhalant Educational Program for parents.

TOXICOLOGY TRAINING

In order to stay abreast of changes in the field of toxicology, all staff at the poison centers participate in toxicology symposia, in-service training, electronic continuing education, conferences and meetings. In turn, staff of the poison center teach pharmacy and nursing students, ambulance personnel (EMT) and physician assistants.

Appendix Five includes a description of these programs.

Health Professional Training:

Students:	
Pharmacy	40
Physician	191
Nurses/ LPN	150
Physician Assistant	7
EMT/Other	13

Staff:

Symposia	37
Lectures	154
In Service	57
Case Reviews/Grand Rounds/Journal Clubs	144
Electronic Continuing Education	340

RESEARCH AND PUBLICATIONS

The Network conducts research, studies, case reviews, quality assurance and presents and/or publishes its findings.

Appendix Six includes examples of research conducted and articles published, and abstracts presented at annual meetings for 1997 and 1998.

1997 - 1998

Research Projects	36
Publications	78
Abstracts Presented	49

APPENDIX ONE

**MANAGEMENT INFORMATION
FOR
THE POISON CONTROL CENTERS IN
NEW YORK STATE**

Appendix One

Western New York Regional Poison Center

Location:

Children's Hospital of Buffalo
219 Bryant Street
Buffalo, New York 14222

Population Served: 1.6 Million

Counties Served: Allegany
Cattaraugus, Chautauqua, Erie,
Genesee, Niagara, Orleans,
Wyoming

Medical Director:

Prashant Joshi, MD, FRCPC

Poison Center Coordinator:

Rhonda Collins, RN, CSPI

Poison Information Specialists:

5.5 FTE's

Telephone Numbers:

Emergency TOLL-FREE

1-800-888-7655

Emergency Local:

(716) 878-7654

Office/Administrative:

(716) 878-7871

Public Educator:

(716) 878-7657

Website Address: chob-edu/

E-Mail Address:

kidsdoc@buffalo.edu
wynypoisonteam@hotmail.com (general inquiries
only)

Finger Lakes Regional Poison and Drug Information Center

Location:

Strong Memorial Hospital
University of Rochester
601 Elmwood Avenue
P.O. Box 321
Rochester, New York 14642

Population Served: 1.2 Million

Counties Served: Monroe,
Livingston, Chemung, Steuben,
Schuyler, Seneca, Wayne, Yates,
Ontario

Medical Director:

Ruth A. Lawrence, MD

Assistant Medical Director:

Paul M. Wax, MD, FACMT

**Associate Medical and Managing
Director :**

John G. Benitez, MD, M.P.H.

Health Educator:

Nancy Warburton, R.N., BSN

Secretary/Clerical:

Cheryl I. Cicero

Drug Information Coordinator:

Sharon Ternullo, Pharm.D.

Poison Information Specialists :

7.0 FTE's

Telephone Numbers:

Emergency TOLL-FREE

1-800-333-0542

Emergency Local:

(716) 275-3232

Office/Administrative:

(716) 273-4155

Public Educator:

(716) 273-4621

TTY: (716) 273-3854

Website Address:

urmc.rochester.edu/urmc/flrpc

E-Mail Address:

[ruth_lawrence@urmc.
rochester.edu](mailto:ruth_lawrence@urmc.rochester.edu)

john_benitez@urmc.rochester.edu

Central New York Regional Poison Control Center

Location:

University Hospital,
Upstate Medical University
SUNY Health Science Center
750 East Adams Street
Syracuse, New York 13210

Population Served: 1.7 Million

Counties Served: Cayuga,
Broome, Herkimer, Lewis,
Jefferson, Oneida, Tompkins,
Onondaga, Chenango, Oswego,
Cortland, Tioga, Madison,
St. Lawrence

Medical Director:

Richard Cantor, MD

Managing Director:

Christine Stork, Pharm.D., ABAT

Education Coordinator:

Gail Banach, MSEd

Operations Manager:

Michele Caliva, R.N. CSPI

Secretary/Clerical:

Lauri Van Atta

Poison Information Specialists :

7.0 FTE's

Telephone Numbers:

Emergency TOLL-FREE

1-800-252-5655

Emergency Local:

(315) 476-4766

Office/Administrative:

(315) 464-7078

Public Educator:

(315) 464-5423

Website Address: Pending

E-Mail Address:

storkc@upstate.edu

Hudson Valley Regional Poison Center

Location:

Phelps Memorial Hospital Center
701 North Broadway
Sleepy Hollow, New York 10591

Population Served: 3.6 Million

Counties Served: Albany, Clinton, Columbia, Delaware, Dutchess, Essex, Franklin, Fulton, Greene, Hamilton, Montgomery, Orange, Otsego, Putnam, Rensselaer, Rockland, Saratoga, Schenectady, Schoharie, Sullivan, Ulster, Warren, Washington, and Westchester

Medical Director:

William Chiang, MD, ABMT

Administrative Director:

Patricia L. Purello, M.S., M.P.A.

Managing Director:

Bernard Sangalli, M.S., ABAT

Clinical Coordinator:

Ralph Lucanie, RPh., CSPI

Program Manager, Education and Communications:

Beth Enser, M.P.S.

Secretary/Clerical: Angelika Gross

Poison Information Specialists :

9.6 FTE's

Telephone Numbers:

Emergency TOLL-FREE
1-800-336-6997

Emergency Local:
(914) 366-3030

Office/Administrative:
(914) 366-3031

Public Educator:
(914) 366-3033

TTY: 1-800-421-1220

Website Address:

members.aol.com/hvrpc/

E-Mail Address: hvrpc@aol.com

Long Island Regional Poison and Drug Information Center

Location:

Winthrop University Hospital
107 Mineola Boulevard
2nd Floor
Mineola, New York 11501

Population Served: 2.7 Million

Counties Served: Nassau and Suffolk

Medical Director:

Howard C. Mofenson, MD

Managing Director:

Thomas Caraccio, Pharm.D.

Education Coordinator:

Vito Mannino

Secretary/Clerical:

Audrey Prah/Pat Palazzo

Poison Information Specialists :

10.5 FTE's

Telephone Numbers:

Emergency Local:
(516) 542-2323 or
(516) 663-2650

Office/Administrative:
(516) 663-4574

Public Educator: (516) 663-4455
TTY: Nassau (516) 747-3323
TTY: Suffolk (516) 925-8811

Website Address: LIRPDIC.org

E-Mail Address:

Tcaracci@winthrop.org

or

Vmannino@winthrop.org

New York City Regional Poison Control Center

Location:

New York City Dept. of Health
455 First Avenue, Room 123
New York, New York 10016

Population Served: 8 Million

Counties Served: Bronx, Brooklyn, Queens, Staten Island and Manhattan

Medical Director:

Lewis Goldfrank, MD

Director:

Robert S. Hoffman, MD

Managing Director:

Maria Mercurio-Zapala, RPh., M.S., CSPI, DABAT

Education Coordinator:

Lauren Schwartz, M.P.H.
Maryann Howland, Pharm.D.

Information Services

Coordinator: Sandra Rodriguez

Poison Information Specialists :

14.0 FTE's

Telephone Numbers:

Emergency Local:
(212) 340-4494
(212) POISONS (764-7667)
(212) VENENOS (836-3667)

Office/Administrative:
(212) 447-2666

Public Educator: (212) 447-2599

TTY: (212) 689-9014

Website Address:

ci.nyc.ny.us/html/DOH/nhtml/poison/power.bta

E-Mail Address:

bobhoff@pol.net

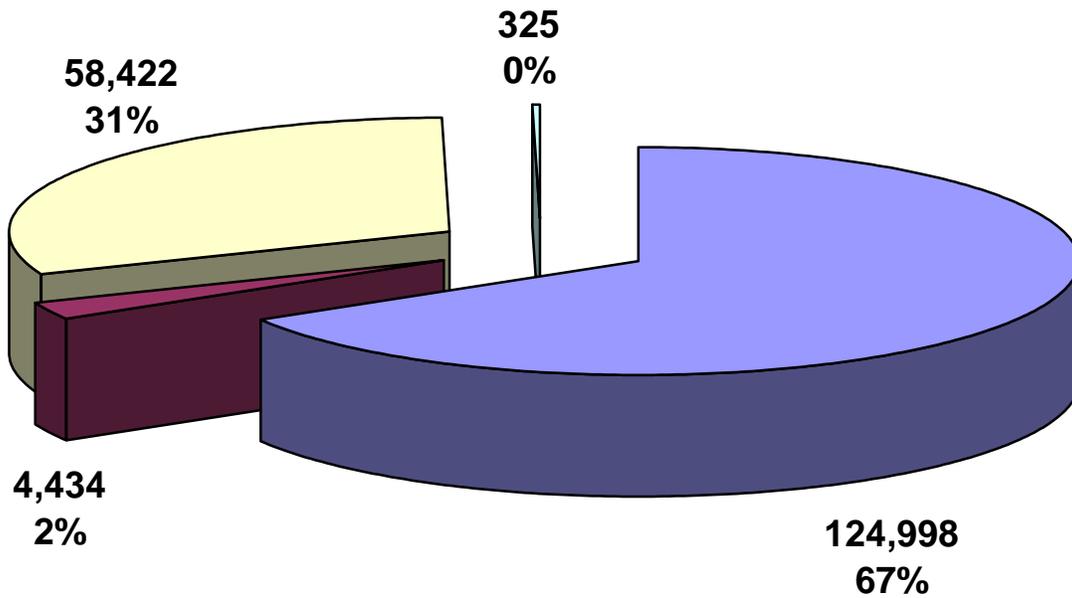
Lnelson@pol.net

APPENDIX TWO

**GRAPHIC PRESENTATION
OF
STATISTICAL INFORMATION**

1999 TOTAL CALLS

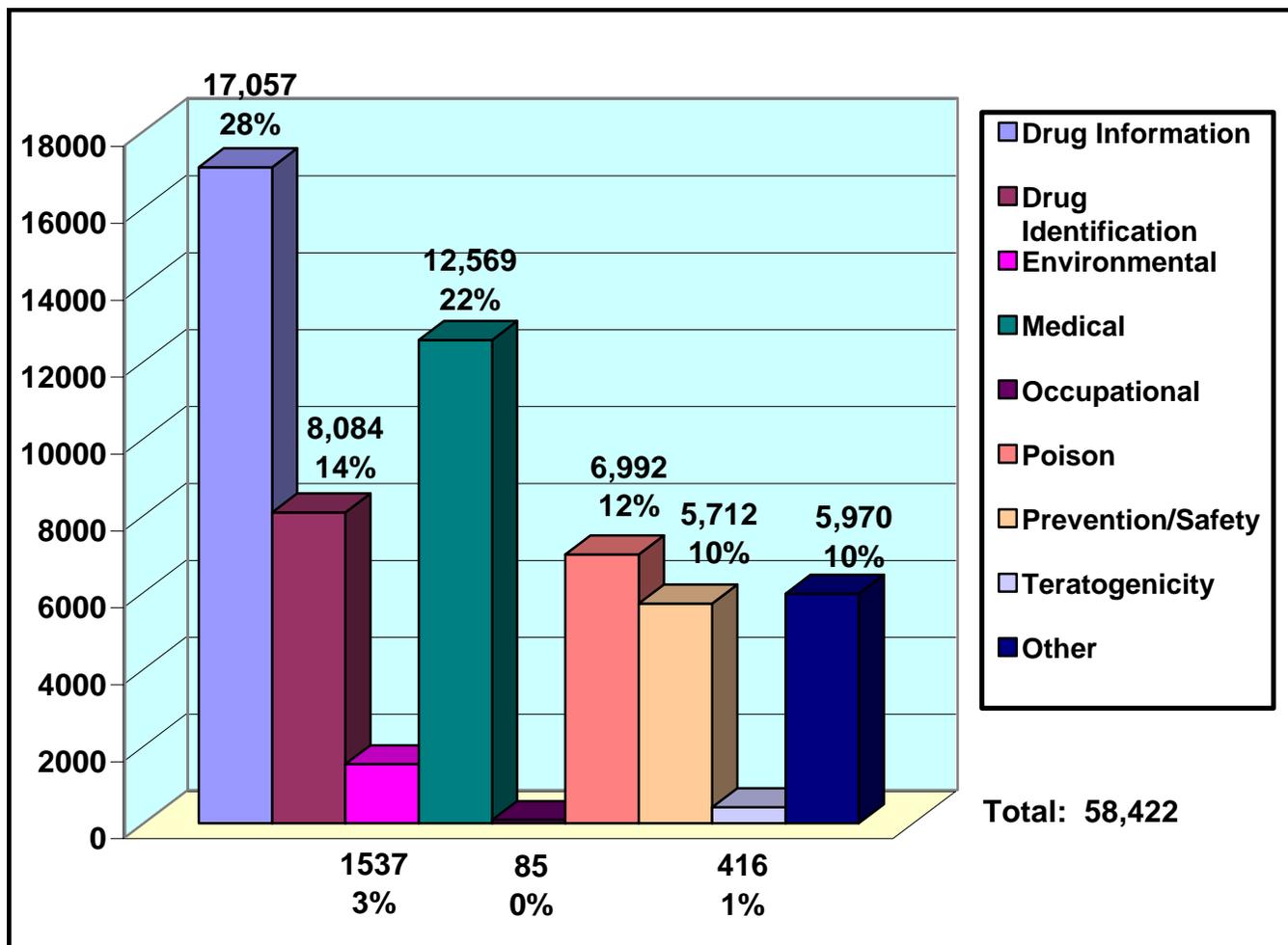
Information and Exposure Calls



Total: 188,179



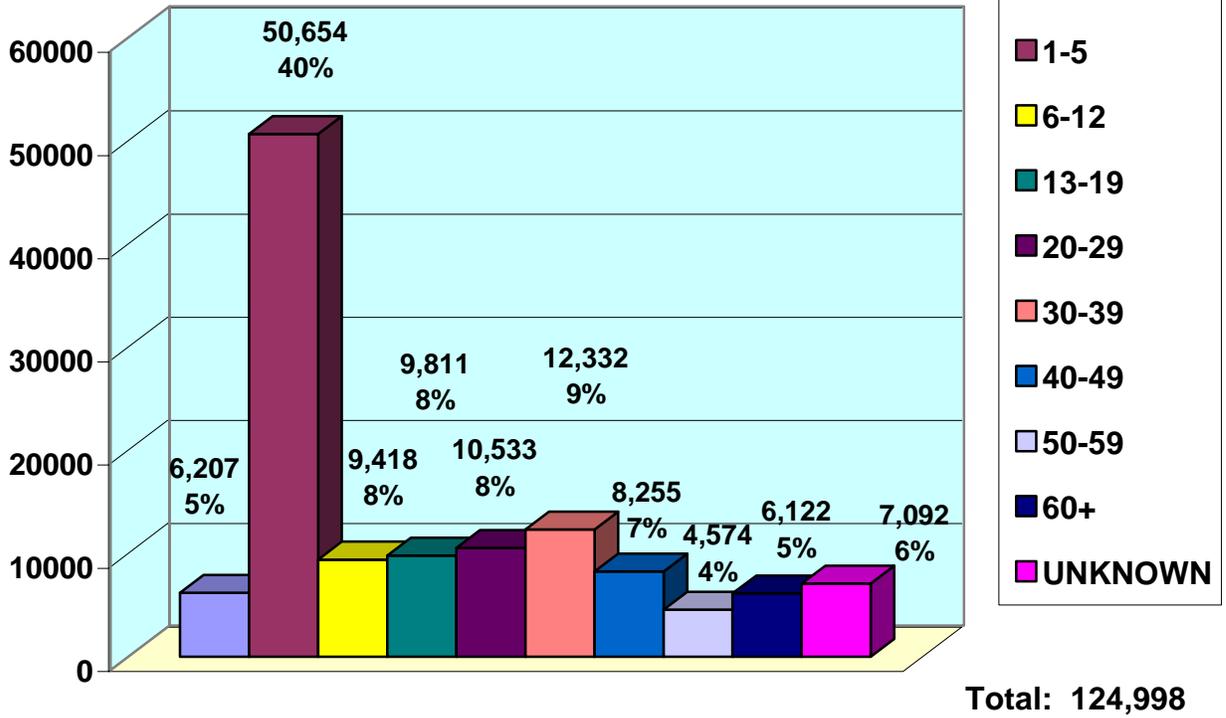
INFORMATION CALLS



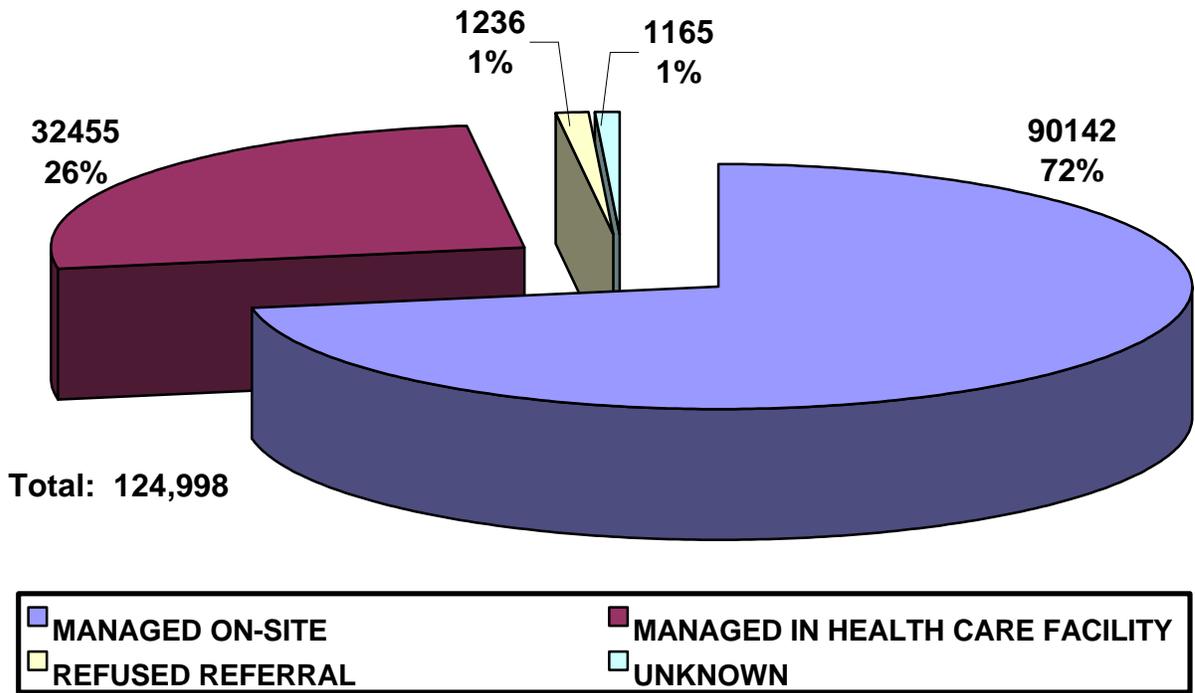
Definitons of Information Calls Collected by the Poison Centers

- Drug Information:** Questions about drugs such as dosage, indications, contraindications, side effects, interactions and ingredients.
- Drug Identification:** Questions involving the identity of a drug or medication.
- Environmental:** Questions involving contamination of air, water or soil including disposal of chemicals, potential danger of treatments by lawn care or exterminators.
- Medical:** Questions not related to poisonings.
- Occupational:** Questions about potential job related exposures.
- Poison:** Questions regarding drug and substance abuse, unconsumed food that may be spoiled or contaminated, safe food handling, mutagenicity, carcinogenicity, or toxicity of a substance.
- Prevention/Safety:** Questions regarding product safety, poison prevention, requests for literature.
- Teratogenicity:** Questions regarding fetal effects of drugs or chemicals.
- Other:** Requests for lectures or media interviews, checking accuracy of the poison center telephone number or any other pertinent questions not included above.

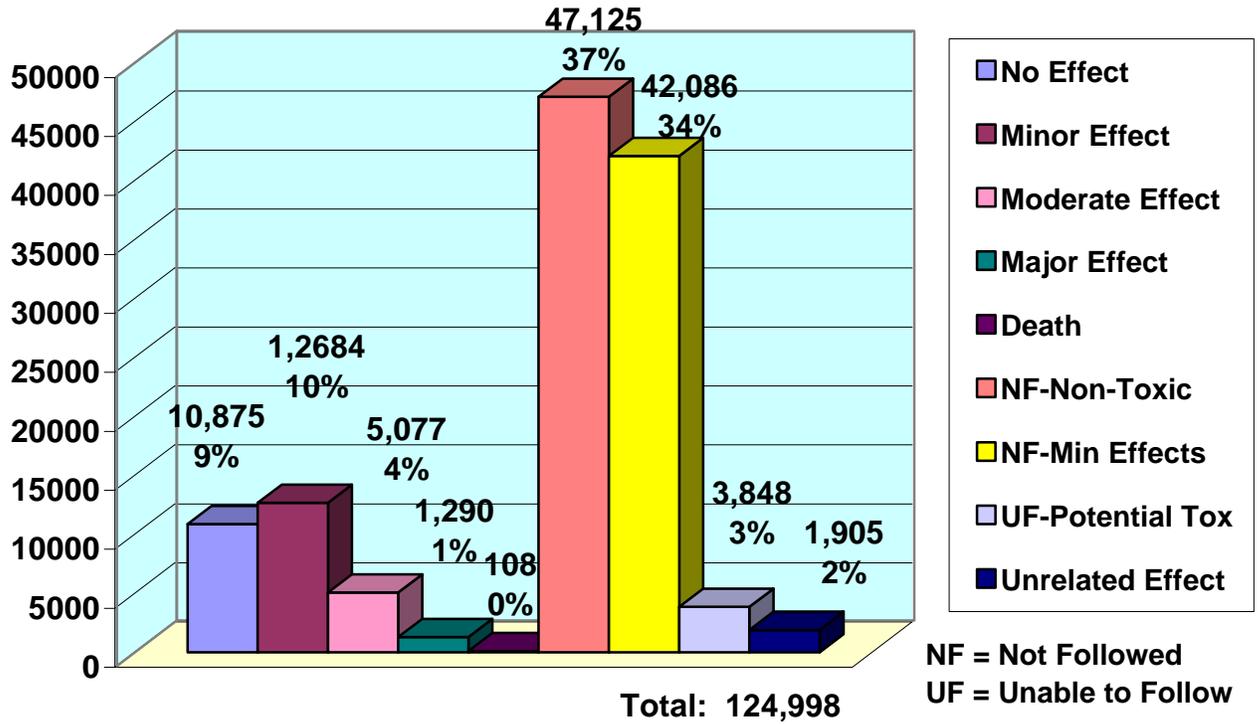
AGE DISTRIBUTION



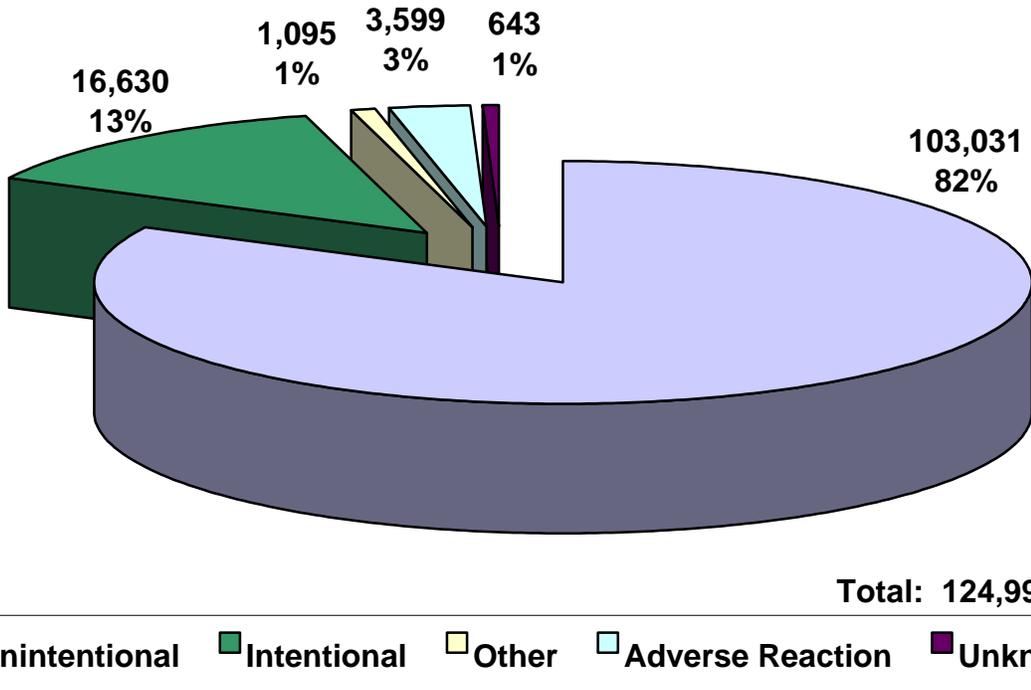
MANAGEMENT OF HUMAN EXPOSURE CASES



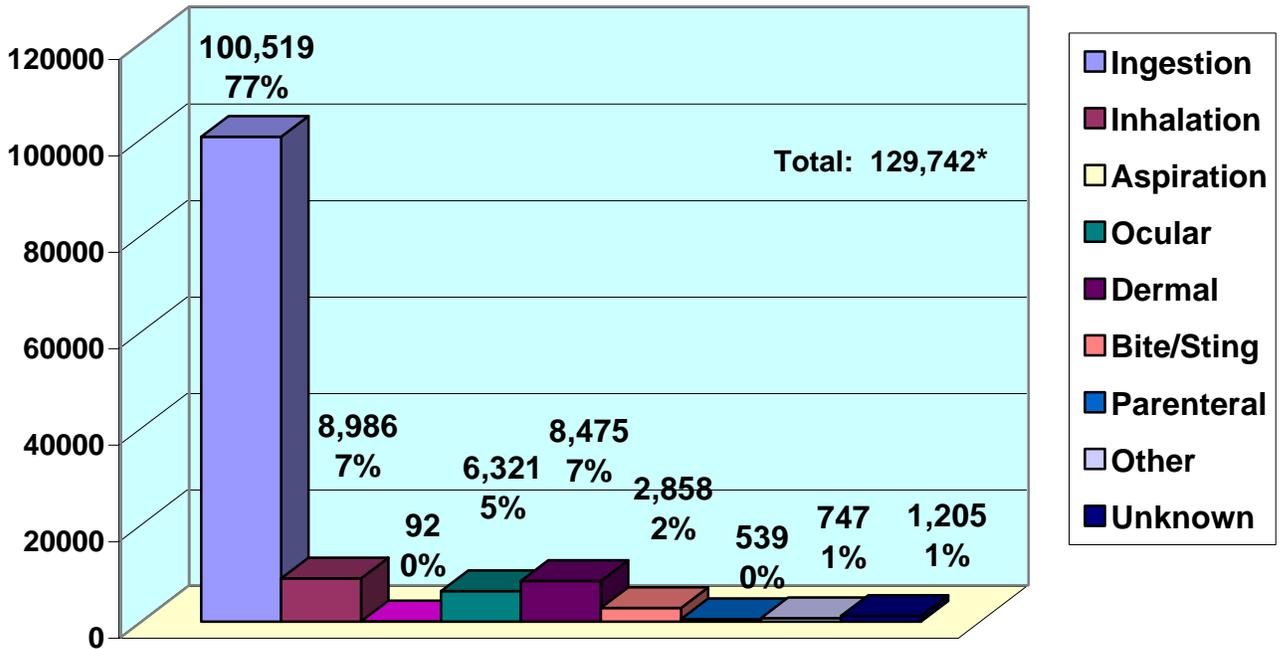
MEDICAL OUTCOME OF HUMAN EXPOSURES



REASONS FOR HUMAN EXPOSURE CALLS

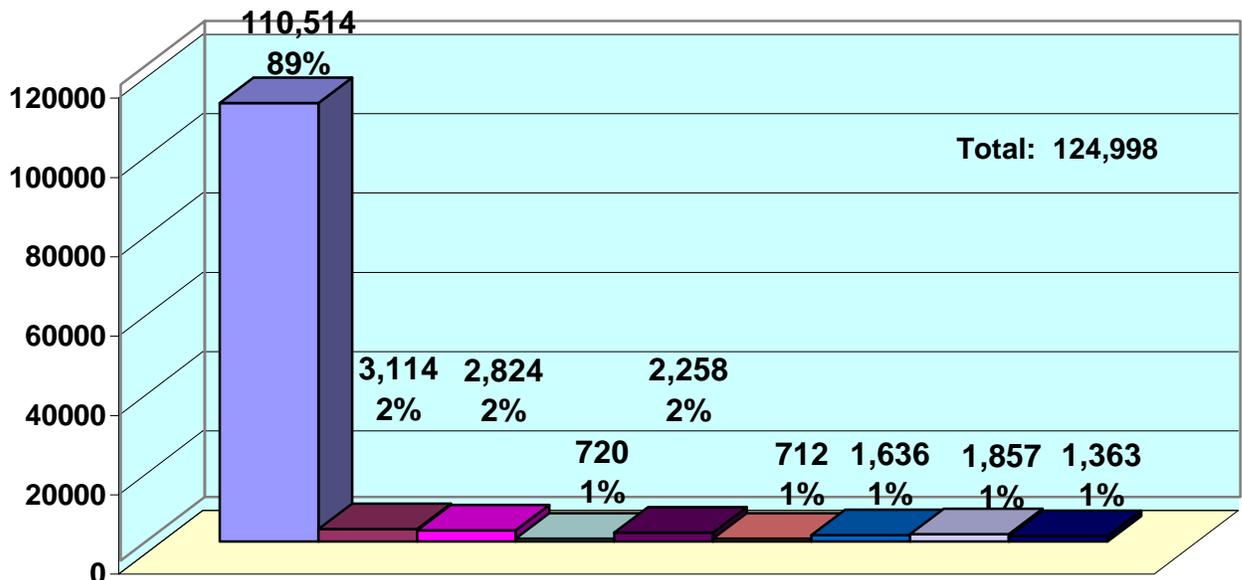


ROUTE OF HUMAN EXPOSURE CALLS



*Note: Some Exposures involve more than one route.

SITE OF HUMAN EXPOSURE CALLS



- | | | |
|--|---|---|
| ■ Own Residence | ■ Other Residence | ■ Workplace |
| ■ Health Care Facility | ■ School | ■ Restaurant/Food Service |
| ■ Public Area | ■ Other | ■ Unknown |

APPENDIX THREE

COMMON SUBSTANCES INVOLVED IN HUMAN EXPOSURES

AND IN

PEDIATRIC HUMAN EXPOSURES

APPENDIX THREE

Substances Most Frequently Involved in Human Exposures

- 1. Analgesics**
- 2. Cosmetics and Personal Care Products**
- 3. Cleaning Substances**
- 4. Antidepressants**
- 5. Foreign Bodies**
- 6. Plants**
- 7. Sedatives/Hypnotics/Antipsychotics**
- 8. Topicals**
- 9. Food Products, Food Poisoning**
- 10. Cough and Cold Preparations**

Substances Most Frequently Involved in Pediatric Human Exposures

(Children Under 6 years)

- 1. Cosmetics and Personal Care Products**
- 2. Cleaning Substances**
- 3. Analgesics**
- 4. Foreign Bodies**
- 5. Plants**
- 6. Cough and Cold Preparations**
- 7. Topicals**
- 8. Vitamins**
- 9. Arts/Crafts/Office Supplies**
- 10. Antimicrobials**

APPENDIX FOUR

PUBLIC EDUCATION PROGRAMS

APPENDIX FOUR

PUBLIC EDUCATION PROGRAMS

Children Under Five

Wizard of Woe

- A storybook on tape which tells the tale of poison prevention with storybook supplements.
- Big book program.
- Puppet show animated story time program.

ABC's of Poison Prevention

A teaching guide for early education in poison prevention.

Power Over Poison Pre-School

A complete teaching package for pre-school, day care centers and nursery school. The kit contains a teacher's manual with suggested activities and audio-visual and reinforcement materials.

Mom and Me Program

Designed to teach mothers how to keep their family safe from accidental poison exposures and provides an introduction to the services of the poison center. Provides poison prevention materials and tips for making the home "poison-safe."

Look Alike Teaching Kit

Features many poisonous and non-poisonous household items that "look-alike."

Head Start

Standards for home safety and poison prevention for staff, parents and children are taught with activity sheets for children and a video for parents and teachers.

School Children

Power Over Poison Elementary School

A game show format, complete with a teacher's guide, a 28-minute video for children, a 10-minute video which provides background information for the teacher, reinforcement activities and an audio tape of the Power Over Poison song. Children learn about poison prevention in this enjoyable format by answering questions about the forms of poisons, how and why poisonings occur and what everyday products can be poisonous. Reinforcement materials are provided throughout the year.

Babysitters Workshop

Designed to bring awareness to the baby sitter on the potential poisons found in and around the home. This program includes the forms of poisons, how and why poisonings occur, what to do if an accidental poison exposure occurs while babysitting children and how to contact their local poison control center.

What is a Poison Center:

Provides the history and background of the Regional Poison Center. Review poison prevention safety education for use in the home. Learn about the staff of the poison center and the possible career options.

CD Rom

"Poison Awareness" interactive computer software that teaches children about poisons and prevention.

Candy Medicine Poster

An educational tool for clinics, schools, pediatricians' offices and WIC centers which shows similarities between candies and medicines.

Teens and Pre-Teens

Inhalants Awareness for Students

Reintroduces the concepts of poison prevention, specifically focusing on poisons in their environment including inhalants. Topics include what are inhalants, short and long term effects, sudden sniffers death and how to help a friend who is using.

Adults/Parents

Inhalants Awareness for Parents

Promotes awareness about how some common household products are being abused by our children. Identifies common inhalants around the home, who, what, why and when of inhalant use including sign and symptoms, short and long term effects, sudden sniffers death and what to do if you find your child using.

Activated Charcoal in the Home

Home use of charcoal is taught in a variety of written materials.

School Nurses/Teachers

In-Service Training

Workshop for teachers, nurses, department of health employees, etc., provides a complete background on the poison center and its services. The who, how and why of poisonings and what to do in the event of a poison exposure. Participants receive educational program training and materials for implementing a complete curriculum. Participants become part of the Educator Resource Network.

Educator Resource Network

Consists of trained volunteers who conduct poison prevention awareness and information programs for organized groups in their community.

<p>Herbal Products Articles have been written for newsletters by network staff to educate both the public and health care professionals on the dangers associated with herbals.</p> <p>Parent Packets Contain information literature, phone stickers and a coupon for syrup of ipecac.</p>	<p>School Nurses Poison Prevention Programs A statewide effort to provide poison prevention and education to school nurses through video and specially designed curriculum</p>
<p style="text-align: center;">Seniors</p> <p>Medication Management in the Elderly Designed to teach the growing elderly population how to better manage their medications. It includes information on drug interactions, label reading, poison center services and medication management devices.</p> <p>Treating Yourself With Care Teaches seniors about medication logs, common drug interactions and side effects.</p>	<p style="text-align: center;">Special Groups</p> <p>Power Over Poison for the Hearing Impaired Previously mentioned programs adapted for the hearing impaired student through the use of signed and close-captioned video.</p> <p>Women, Infants, Children Nutrition Program/Public Health Nursing Program/Department of Health Educational program to educate WIC staff, so they in turn can educate their clients about poison center services and distribute literature and telephone stickers.</p>
<p>Other</p> <p>Media Packets News releases and public service announcements distributed to newspapers, television, radio and magazines. Media packets target various poison prevention issues, concerns and trends in an effort to heighten public awareness.</p> <p>Newsletters A quarterly publication featuring seasonal topics in poisoning exposures and prevention education. Designed as an educational tool for the public communities.</p> <p>Tours and Orientations Tours and orientations are available to both professional and public groups. Public groups are provided an age related program in poison prevention and a tour of the center. These groups include day care centers, preschools, girl scouts, boy scouts and teachers.</p> <p>Informational Displays/Fairs Poison prevention informational displays, literature distribution and prevention education provided at school, community or organizational health and wellness fairs.</p> <p>Fairs with Presentations Similar to above mentioned with the inclusion of a scheduled talk or presentation.</p> <p>Conference/Presentations: Professional presentation provided at a conference or symposium on poison related topics.</p> <p>Teaching Days Poison prevention program delivered to all students in a targeted grade level or multi-grades depending on school size. Half day or whole day programs available and can be tailored for age appropriate, experiential programs.</p> <p>Pharmacy Network Centers work with local and chain pharmacies to distribute poison prevention literature to the public and cooperate in advertising poison prevention week.</p> <p>Video Library Available for loan to teachers, parents, community groups. Includes “Billie and the Poison Roundup,” “Poisonality.”</p>	

APPENDIX FIVE

PROFESSIONAL EDUCATION AND PREVENTION PROGRAMS

APPENDIX FIVE

Professional Education and Prevention Program Summaries

<p>Pharmacy and Medical College Preceptorships Pharmacy and medical students spend a five-week module at the poison center as an elective in their rotational component for their year of study prior to graduation. Drug education, treatment of poisonings, poison center history, facts, protocol, and computer resource training are included in their training. A research paper and oral presentation are required.</p> <p>In-Service Training Primarily for poison center staff. Provides current trends in poisoning, new drugs, and review of guidelines for common and uncommon toxicological protocols.</p> <p>Journal Club and Case Review Bimonthly presentations and discussions of advancements and new findings in toxicology and pharmacology. Discussion of new and difficult cases. Open to poison center staff, students and other medical professionals.</p> <p>Electronic Continuing Education Sponsored by the American Association of Poison Control Centers. Specialists in Poison Information provide continuing education topics, questions and answers on a daily basis.</p>	<p>Workshops Workshop for EMT, ambulance, nursing and fire personnel, provides background on the poison center, staff and services. Common and uncommon poison exposures in the field as well as management and treatment protocol. Explores how and when to utilize the services of a poison control center</p> <p>Professional Newsletter A professional publication featuring updates in toxicology, pharmacology and poison exposure management. Designed as a communication tool for the professional/medical communities.</p> <p>Tours and Orientations Tours and orientations available to professional and public groups. Professional groups receive information on poison exposure treatment protocol, and how and why a poison center can be of assistance to them in their profession.</p> <p>Conferences/Presentations Professional presentation at a conference or symposium on poison related topics.</p>
--	--

APPENDIX SIX

PUBLICATIONS

Journal Articles

Brubacher JR, Lachmanen D, Hoffman RS. Efficacy of Wyeth polyvalent antivenin used in the pretreatment of copperhead envenomation in mice. *Wilderness Environ Med* 1999;10:142-145.

Brubacher JR, Lachmanen D, Ravikumar PR, Hoffman RS. Efficacy of digoxin specific Fab fragments (Digibind) in the treatment of toad venom poisoning. *Toxicon* 1999;37:931 -942.

Cobaugh DJ, Gibbs M, Shapiro DE, Krenzelo EP, Schneider SM. A comparison of the bioavailabilities of oral and intravenous ethanol in healthy male volunteers. *Acad Emerg Med* 1999;6:984-988.

Cobaugh DJ. An overview of pesticide poisoning: part 1. *Pharmacy Practice News*, 1999;26:28.

Cobaugh DJ. Childhood lead poisoning: an ongoing problem. Part 1. *Pharmacy Practice News*, 1999;26:18.

Cobaugh DJ. Childhood lead poisoning: an ongoing problem. Part 2. *Pharmacy Practice News*, 1999;26:10.

Cobaugh DJ. Clinical toxicology information resources. *Therapeutic Drug Monitoring & Toxicology* 1999;20:257-66.

Cobaugh DJ. Cyanide poisoning: the role of the cyanide antidote kit. *Pharmacy Practice News*, 1999;26:18&27.

Cobaugh DJ. Digitalis glycoside toxicity: the role of digibind. *Pharmacy Practice News*, 1999;26:38-39.

Cobaugh DJ. Strategies to identify and treat inhaled solvent abuse and toxicity. *J. Emerg Med Services* 1999;24:66-75.

Cobaugh DJ. Toxic effects of methemoglobinemia can be reversed with methylene blue. *Pharmacy Practice News*. 1999;26:18.

Cobaugh DJ. US poison centers: a valuable regional resource. *Pharmacy Practice News*, 1999;26:5&18.

Conners GP, Cobaugh DJ, Feinberg R, et al. Home observation for asymptomatic coin ingestion: Acceptance and outcomes. *Acad Emerg Med* 1999;6:217-217.

Conners GP, Cobaugh DJ, Feinberg R, Lucanie R, Carracio T, Stork CM, for the New York State Poison Control Center Coin Ingestion Study Group. Home observation for asymptomatic coin ingestion: acceptance and outcomes. *Acad Emerg Med* 1999;6:213-217.

Davis CO, Cobaugh DJ, Leahey N, Wax P. Toxicology training of paramedic students in the United States. *Am J Emerg Med* 1999;138-140.

Davis CO, Cobaugh DJ, Leahey NF, Wax PM. Toxicology training of paramedic students in the United States. *Am J Emerg Med* 1999;17:138-40.

Davis CO, Wax PM. Prehospital epinephrine overdose in a child resulting in ventricular dysrhythmias and myocardial ischemia. *Pediatr Emerg Care* 1999;15:116-8.

Hack JB, Leviss JA, Nelson LS, Hoffman RS. Severe symptoms following a massive intentional L-thyroxine ingestion. *Vet Human Toxicol* 1999;41:323-326.

Hack JB, Powell G, Nelson LS, Hoffman RS, Howland MA: Acute pediatric exposure to pramipexole dihydrochloride (Mirapex). *J Toxicol Clin Toxicol* 1999;37:891-892.

Hoffman RS, Stringer JA, Feinberg RS, Goldfrank LR: Comparative efficacy of thallium adsorption by activated charcoal, Prussian blue, and sodium polystyrene sulfonate. *J Toxicol Clin Toxicol* 1999;37:833-837.

Hoffman RS. Antidote stocking in the ED. *Emergency Medicine Alert* 1999;6:26.

Hoffman RS. Biological terrorism and the emergency department. *Emergency Medicine Alert* 1999;6:53-54.

Hoffman RS. Calcium and digoxin toxicity. *Emergency Medicine Alert* 1999;6:25-26.

Hoffman RS. Comprehensive drug screening in pediatric patients: Is it worth it? *Emergency Medicine Alert* 1999;6: 11-12.

Hoffman RS. Observation for potentially poisoned patients: How long is enough? *Emergency Medicine Alert* 1999;6:52-53.

Hoffman RS. Rattlesnake envenomation: Tourniquet or not? *Emergency Medicine Alert* 1999;5:59-60.

Hoffman RS. Route of naloxone administration for out-of-hospital opioid overdose. *Emergency Medicine Alert* 1999;5 :76-77.

Hoffman RS. The Importance of Gastrointestinal Decontamination. *Int J Med Toxicol* 1999;2:5.

Hoffman RS. The use of antiemetics in overdose: More is better. *Emergency Medicine Alert*. 1999;12:91.

Hoffman RS. You say Lasix, I say Losec. *Emergency Medicine* 1999;6:49-50.

Hofman RS. Digoxin and verapamil toxicity. *Emergency Medicine Alert* 1999;6:26.

Horn KD Wax P Schneider SM et al. Biomarkers of liver regeneration allow early prediction of hepatic recovery after acute necrosis. *American Journal of Clinical Pathology*. 1999;112:351-7.

Hosek WT, Stork CM. Methanol Poisoning. *Emergency Medicine* 1999;31:51-53.

Howard CR, Lawrence RA. Drugs and breastfeeding. *Clinics in Perinatology* 1999;26:447.

Lawrence RA, Howard CR. Given the benefits of breastfeeding, are there any contraindications? *Clin Perinatol* 1999; 26:4479-4490.

Lawrence RA. Storage of human milk and the influence of procedures on immunological components of human milk. *Acta Paediatr Suppl* 1999;88;14-8.

Martins L, Caraccio TR, Mofenson HC. Shinning the light on lamp oil. *Pediatrics* 1999;103:1080.

McCabe JL, Menegazzi JJ, Cobaugh DJ. TCA overdose. *Ann Emerg Med* 1999;33:724.

Mofenson HC, Caraccio, TR Reporting occupational injuries; *Annals Emerg Med* 1999;34:401.

Nelson LS, Howland MA, Hoffman RS. Central nervous system depression after ingestion Of RenewTrient. *N Engl J Med* 1999;340:570.

Rao RB, Ely SF, Hoffman RS. Deaths related to liposuction. *N Engl J Med* 1999;340:1471-1475.

Rao RB, Ely SF, Hoffman RS. Deaths related to liposuction. *N Engl J Med* 1999;341 :1002-1003.

Stork CM, Guenther P, Cantor R. Goldschlager allergy. *Vet Human Toxicol* 1999;41:246.

Vassallo SU, Delaney KA, Hoffman RS, Slater W, Goldfrank LR. A prospective evaluation of the electrocardiographic manifestations of hypothermia. *Acad Emerg Med* 1999;6: 1121-1126.

Wax PM, Cobaugh DJ, Lawrence RA. Should home ipecac-induced emesis be routinely recommended in the management of toxic berry ingestions. *Vet Hum Toxicol* 1999;41:394-397.

Book Chapters

Chiang WK, Wang RY. Pesticide poisoning. In *Irwin and Rippe's Intensive Care Medicine*. 4th edition, Edited by Irwin RS, Cerra FB, Rippe JM, Lippincott - Raven Publishers, Philadelphia, Pennsylvania, 1999, 1754-1775.

Cobaugh DJ, Lawrence RA. Poisoning, in Berkow R, Beers MH (eds): *The Merck Manual*, ed 17. New Jersey: Merck & Co. Inc. 1999:2619-2644.

Cobaugh DJ. The Nurse's Role in Drug Therapy During Breastfeeding and Lactation, in Biancuzzo, M (ed): *Breastfeeding the Newborn: Clinical Strategies for Nurses*, Missouri: Mosby, Inc., 1999:284-306.

Mofenson HC, Caraccio TR, Greensher, J. Acute poisoning management. In: *Conn's Current Therapy*. WB Saunders, Philadelphia, PA 1999, 1182-1258.

Mofenson HC, Caraccio TR. Herbal Products and Alternative Medications Booklet Sponsored by Nassau County Pediatric Society to be distributed to members of Chap II District II of the American Academy of Pediatrics

Rella JG, Nelson LS, Hoffman RS. Cocaina. In Duenas-Laita A: *Intoxicaciones agudas en medicina de urgencia y cuidados criticos*. Masson, Barcelona, Spain, 1999, 222-225.

Rella JG, Nelson LS, Hoffman RS. Nicotina. In Duenas-Laita A: *Intoxicaciones agudas en medicina de urgencia y cuidados criticos*. Masson, Barcelona, Spain, 1999, 317-320.

Schneider SM, Cobaugh DJ. L toxicity, in Tintinalli, Ruiz, Krome (eds): *Emergency Medicine: A Comprehensive Study Guide*, New York, McGraw Hill, 1999, 1089-1092.

Wax PM. Withdrawal Syndromes. In: Irwin RS, Cerra FB, Rippe JM,, eds. *Irwin and Rippe's Intensive Care Medicine*. 4th ed. Philadelphia: Lippincott-Raven, 1999:1806-1815.

Abstracts

Banach, Gail, Kuhl, H. Effectiveness of an Activated Charcoal Media Campaign. *J Toxicol Clin Toxicol* 1999;37:599.

Ciancaglini PP, Cobaugh DJ, Wax PM, Lawrence RA. Evaluation of an electronic continuing education (CE) program for specialists in poison information. *J Toxicol Clin Toxicol* 1999;37:588.

Cobaugh DJ. A Review of MCT Gastric Decontamination Position Statements. Genesee Regional Emergency Nurse's Association, Gates, NY, April 13, 1999.

Cobaugh, DJ. Alcohol, Drugs & Poisonings. 1999 Genesee Regional EMS Conference, Rochester Marriott Thruway Hotel, March 26-27, 1999.

Ely S, Rao RB, Heller M, Nelson LS, Hoffman RS. Asphyxiation by carbon dioxide due to sublimation of dry ice in a closed space. *J Toxicol Clin Toxicol* 1999;37:659.

Fishman C, Cobaugh DJ, Ciancaglini PP, Wax PM, Lawrence RA. A description of continuing education (ce) for specialists in poison information in US poison centers. *J Toxicol Clin Toxicol* 1999;37:587.

Garvie AA, Howland MA, Brubacher JR, Hoffman RS. Endogenous digoxin-like substance in hypothermic patients. *Acad Emerg Med* 1999;6:376.

Hack JB, Buschmann D, Hoffman RS, Nelson LS. Early predictors of severity in resistant alcohol withdrawal. *J Toxicol Clin Toxicol* 1999;37:651.

Hahn I, Hoffman RS, Nelson LS. Contrast CT scan fails to detect the last heroin packet. *J Toxicol Clin Toxicol* 1999;37:644-645.

Hahn I, Hoffman RS, Nelson LS. EMLA-induced methemoglobinemia (MetHb) and lidocaine toxicity. *J Toxicol Clin Toxicol* 1999;37:621.

Hoffnung A, Cobaugh DJ, Wax PM, Schneider SM, Lawrence RA. Paramedics' general knowledge about treating poisoned patients with activated charcoal (AC). *J Toxicol Clin Toxicol* 1999;37:598.

Hoffnung A, Cobaugh DJ, Wax PM, Schneider SM, Lawrence RA. Paramedics' use of activated charcoal (AC) and perceptions about barriers to its administration. *J Toxicol Clin Toxicol* 1999;37:598.

Kious T, Wax P, Cobaugh D. Tramadol and fluoxetine induced serotonin syndrome with subsequent severe hyperpyrexia despite cyproheptadine. *J Toxicol Clin Toxicol* 1999;37:631-632.

Lee CH, Carter WA, Chiang WK, Williams CM, Asimos AW, Kaufman JS, Goldfrank LR: Occupational exposure to blood among emergency medicine residents. *Acad Emerg Med* 1999;6:1036-1043

Lopez OA, Chiang WK, Friedman-Jimenez G. Occupational-related hand injuries in the emergency department. *Ann Emerg Med* 1999;34:S94

Lynch S, Fill S, Hoffman RS. Intentional quetiapine (Seroquel) overdose. *J Toxicol Clin Toxicol* 1999;37:631.

McFee RB, Caraccio TR, Mofenson HC. A two year nationwide survey of the triage management of tricyclic antidepressant ingestions involving children: towards a mg/kg rationale. *J Toxicol Clin Toxicol* 1999;37:632.

McFee RB, Caraccio TR, Mofenson HC. The "Granny syndrome" and medication access as significant cause of unintentional pediatric poisoning. *J Toxicol Clin Toxicol* 1999;37:593.

McFee RB, Caraccio TR, Mofenson HC. From the Prescription Pad to the Patient: Granny Syndrome and Other Preventable Causes of Pediatric Medication Exposures. *Prevention '99, The National Conference for Preventive Medicine, Washington, DC, Apr 1999.*

Moran GJ, Talan DA, Mower W, Newdow M, Ong S, Childs JF, Pinner RW, the EMERGENCY ID NET Study Group: Appropriateness of emergency department rabies post-exposures in the United States. *Acad Emerg Med* 1999;6:376

Olmedo RE, Hoffman RS, Nelson LS. Limitations of whole bowel irrigation and laparotomy in a cocaine "body-packer". *J Toxicol Clin Toxicol* 1999;37:645.

Olmedo RE, Hoffman RS, Nelson LS. Ventricular dysrhythmia and subsequent death in a patient with acute promyelocytic leukemia treated with arsenic trioxide. *J Toxicol Clin Toxicol* 1999;37:622.

Olmedo RE, Rella JG, Hoffman RS, Nelson LS. Lead poisoning in late pregnancy due to maternal pica. *J Toxicol Clin Toxicol* 1999;37:626.

Oransky S, Chiang WK. Central nervous system toxicity associated with metronidazole therapy. *J Toxicol Clin Toxicol* 1999; 37:602.

Petropoulos PS, Stork CM, O'Neil N, Prince L, Skarulis T. Prolonged cardiotoxicity from poison lilly (*Veratrum viride*). *J Toxicol Clin Toxicol* 1999;37:619.

Rao RB, Smiddy M, Nelson LS;Howland MA, Hoffman RS. Paratonia (rapid rigor mortis) in salicylate (ASA) poisoning. *J Toxicol Clin Toxicol* 1999;37:605-606.

Rella JG, Nelson LS, Hoffman RS. 5 Years of 3,4-methylenedioxymethamphetamine (MDMA) toxicity. *J Toxicol Clin Toxicol* 1999;37:648.

Salvador AV, Feinberg RS, Nelson LS, Hoffman RS. The effects of fosphenytoin compared to other anticonvulsants for the prevention of theophylline-induced seizures. *Acad Emerg Med* 1996;6:392-392.

Sangalli BC, Enser B, De Tino M, Chiang WK. Recipe for nut meg abuse (*Myristica Fragrans*) abuse. *J Toxicol Clin Toxicol* 1999; 37:618.

Smith S, Cobaugh DJ, Dragalin V, Wax PM, Lawrence RA. An enhanced palatability charcoal in the management of pediatric poisoning victims. *J Toxicol Clin Toxicol* 1999;37:611.

Spiller HA, Weber J, Hofman M, Sollee DR, Winter M, Klein-Schwartz W, Stork C, Krenzelok E. Multicenter case series of adult metformin ingestion. *J Toxicol Clin Toxicol* 1999;37:639.

Wax P, Branton T, Cobaugh D, Kwong T. False positive ethylene glycol determination by enzyme assay in patients with chronic acetaminophen hepatotoxicity. *J Toxicol Clin Toxicol* 1999;37:604.

Wax P, Linden E. Fulminant hepatic failure after successful liver transplantation: unmasking the culprit. *J Toxicol Clin Toxicol* 1999;37:665-666.

Wax P, May J. Tracking iatrogenic poisoning fatalities using the American Association of Poison Control Centers Toxic Exposure Surveillance System. *Ann Emerg Med* 1999;34:S29.

Wax P, McMartin K. Fomepizole elimination kinetics in fulminant hepatic failure. *J Toxicol Clin Toxicol* 1999;37:655-657.

Wax P. The impact of demographics and practice patterns on medical toxicology billing practices. *J Toxicol Clin Toxicol* 1999;37:587.

Zelman G, Howland MA, Nelson LS, Hoffman RS. Erythropoietin overdose treated with emergency erythropheresis. *J Toxicol Clin Toxicol* 1999;37:602-603.



State of New York
George E. Pataki, Governor

Department of Health
Antonia C. Novello, M.D., M.P.H., Commissioner

