



49 Blue Kids

WORDS BY MARYANN BRINLEY, PHOTOGRAPH BY ANDREW HANENBERG

ON THIS FIRST COLD DAY OF FALL, the air was crisp and clear. Poison Information Specialist Wilma Pomranetz, RN, answered her phone at NJPIES mid-day. It was one of those calls that challenge, tax and require every ounce of mental acuity. On the telephone was a nurse at St. Mary's, an elementary school in Passaic. After being outside for recess, several children were there in her office complaining of nausea and headache. Their lips were blue.

"Blue?"
"Yes, blue."

Pomranetz's mind raced. Was it cold enough to turn lips blue? Had the kids been properly dressed outside? Could the blue be caused by a decrease in blood circulation? Were they eating berries around the playground?

"No, No, No." In fact, their hands and fingers were blue too. And it wasn't a color that could be wiped or washed off. As the two spoke, the number of children grew to five, six, then nine and ten. Several started to vomit and Pomranetz could now hear the chaos of crying, sick kids as the seconds ticked by.

"Contact parents and get emergency medical care," Pomranetz directed the nurse, as more sick students showed up. Emergency calls were made and the kids were soon being transported to different

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Medical Director's Message

Two to three hundred times a day, twenty four hours a day, 365 days a week, someone in need calls our toll free telephone number and takes advantage of an asset offered by the public health system of the state of New Jersey. Completing our 27th year of operation, New Jersey Poison Information and Education System, (NJPIES) more commonly referred to as the poison center, has responded to over 2 million calls for help, providing up to date, scientifically based advice on a variety of issues.

High Profile Cases Have Included

- When a group of party goers came down with illness thought related to food served at a catering hall in the state, it was the poison center that spotted the cluster and reported it. This resulted in the temporary closure and sanitizing of the catering hall.
- It was the poison center that reported an outbreak of strange neurological symptoms in individuals eating fish and launched an investigation that spread to multiple states and resulted in efforts in another state to abort the outbreak.
- Spotting an unusual number of drug overdoses in the greater Camden area, NJPIES uncovered a nationwide outbreak which had remained under the radar scope for nearly a year.
- Alerted to an unusual number of overdoses in an intensive care unit, NJPIES was instrumental in bringing to justice, Charles Cullen, a nurse who is said to be the greatest mass murderer the state has ever seen.

NJPIES has been involved in other important outbreaks, for example, contaminated heroin, rogue botulinum toxin, accidental ingestion of torch oil, use of the pigment Sindoor as food coloring, resulting in lead poisoning of a family and the uncovering of similar cases as far away as in India itself.

Hospital Cost Efficiencies

Studies done in New Jersey and duplicated elsewhere have shown that calls to poison centers save millions of dollars in health care costs each year. In an article published in 2007, we showed that a hospital calling the poison center is associated with an apparent decrease in hospital stay of 3 days. The cost savings of such a

decreased length of stay, even if it grossly overestimated, is in the tens of millions of dollars a year.

Over eighty percent of the calls to the poison center come from a residence or other non-health care facilities. The vast majority of these are treated without referral to a health care facility, thus saving the victim from an unnecessary, expensive and perhaps risky trip to a hospital emergency room.

With the current economic situation, future funding of the program is in jeopardy. We have been forced to absorb a cut in state funding for the fiscal year which started July 1, 2009. We believe that we can weather this storm, but the future looks a bit more like a hurricane.

A Common Sense Approach to Centralized Services

NJPIES was born out of a task force established by then Governor Byrne and the NJ State Department of Health which looked at all Emergency Medical Services. Initial funding came from a partnership of resources, representing one of the earliest and most successful integrations of private and public funding. Support came from:

- The Federal government, through a small grant from the United States Department of Health and Human Services (then called HEW) Office of Emergency Medical Services,
- The pharmaceutical industry, from a pharmaceutical company (the result of a competition to support developing regional poison control programs),
- The State of New Jersey, from the NJ Department of Health (now known as NJ DHSS)
- New Jersey Hospitals, through voluntary memberships.

Organized and opened by Governor Kean in 1983, the hospital association endorsed the plan. Governor Kean in his introduction, before formally opening the center,



declared that it represented the very epitome of cooperation between public and private industry producing a citizen-serving activity.

The first year 32 hospitals, which had run their own local poison centers, “joined” by sending funds to NJPIES through The New Jersey Hospital Association (NJHA), which was an endorser of the effort and provided accounts receivable services. Because of proven efficiencies, both in service and costs, over the next few years, the US DHSS’s reimbursement arm, Health Care Financing Administration (HCFA) agreed that the hospital contribution to NJPIES was an acceptable overhead cost. The NJ Rate Setting Commission made a membership in NJPIES a “pass through” by adjusting the hospital reimbursement rates for every hospital in the state. NJDHSS then made such membership mandatory in its licensing regulations.

What’s Changed?

In a nutshell, NJPIES is now caught between a funding argument between “the state” and NJHA. Both would support NJPIES if the other paid for it. Both seem to ignore the fact that a large portion of NJPIES funding comes from federal and other grants that supplement services to New Jersey residents. By cutting funds, they force state residents to take a much greater loss in services from subsequent losses of grants predicated on continuing local support at existing levels.

While the initial proportion of hospital support was approximately 20-25%, the portion arising from NJ State funds did not rise. As costs increased, hospital support became the majority source of revenue to support the program.

In time, the hospital industry in the state became deregulated, so there was no longer a rate setting commission to pass through the costs of membership in NJPIES. The costs for such were well ensconced into the general overhead of every hospital, making the support a “level playing field.”

During the Whitman administration, NJHA helped promote a legislative move to transfer the majority of funding of NJPIES into the general state budget. The bill passed, unanimously, in both houses, but was subsequently, conditionally, vetoed by the governor.

In 2008 NJHA complained to the Commissioner of the Department of Health and Senior Services (NJDHSS) that the

hospitals were paying an inappropriate portion of the support of NJPIES. It threatened to sue the Department over what it believed to be an illegal use of the department's regulatory capability when it placed into the regulation for hospital licensing that a hospital must be a member in good standing of NJPIES. A compromise was reached that year and the hospital proportion of support became approximately 30% of the budget. This figure was felt representative of the NJPIES work load which was related to hospitalized patients. The membership fees charged to hospitals in 2008 ranged from \$11,000 to \$18,000.

NJDHSS was able to make up the difference in funding and NJPIES was able to operate by decreasing some of its costs and meeting the budget. Calendar year 2008 ended on a "high-note" in that we did not have to curtail any significant activities. Late in 2009 NJPIES was told that there would be no increase in the hospital funding and that NJDHSS would be unable to sustain the funding from 2008. NJPIES was told to decrease its budget in state fiscal year 2010, which included the second half of calendar year 2009. Fortunately, extra funding was available during the first part of the calendar year to replace aging equipment and update our telephone system.

Again NJHA protested that the hospitals should not be required to support NJPIES. Grasping at straws to bolster their argument, some in the hospital community have claimed that the internet can suffice as their poison information resource, an argument that is not substantiated by the facts and severely underplays the full-range of services the poison center has come to provide.

Data over the past 10 years shows that rather than decreasing use of NJPIES's services by hospital physicians and nurses, the Internet era has actually increased utilization by hospital physicians and personnel by 35% between 2000 and 2009. Further, the initial caller to NJPIES was more often a physician in 2009 than in 2000, that rate increase by 22%!

Current Challenge

When Mr. Christie won the 2009 election for governor his administration appointed a transition team. The team responsible for reviewing DHSS had a strong representation from hospitals in the state. In fact, on November 9, 2009 NJHA released a message to its members that the goal of the

transition team would be to close NJPIES, among other programs, such as newborn screening and the head and spinal injury registry and others they felt were unfunded mandates of the hospitals.

The transition team released its report in early January, calling for closure of NJPIES. It stated that physicians now use the internet to learn how to treat patients and that if a “consumer poison center is still needed” the center should be merged into NYC and Philadelphia. The problem then is that neither NYC nor Philadelphia is likely to agree without some financial incentive,

which would wipe out any saving to the state. When we surveyed other poison centers in other states, we found that our cost per call is among the lowest of all of the regional poison centers once similar cost structures are compared.



We developed a model of a single poison center located somewhere in the United States taking calls from every US citizen. Calculating only on the basis of incoming calls and attributing costs fairly among the states based on population, not only would NJ not save money, it would end up spending over a half million dollars more than it presently does for all poison center services, not just incoming calls.

Meeting the Challenge or Fighting with the Facts

NJPIES must raise funds to continue to exist. The road will be difficult, but if NJPIES is unable to raise funds and starves to death, the effect on the health care system in the state will be manifold. A natural experiment in closing of a poison center happened in the 1990s. A state decided it could not support its poison center and closed it. Within months it became painfully clear that there were increases in ambulance runs and emergency room visits and those costs well exceeded the costs of the poison center. Reinstating a poison center took a substantial amount of funds to re-establish it.

We are asking the Governor’s office and legislature to look carefully at the future of NJPIES so that we do not have to live through what other states have lived through. A source of funding must be found to support the activities of NJPIES.

Steven M. Marcus, MD, Medical Director

Mission of NJPIES

The New Jersey Poison Information and Education System (NJPIES) was created by legislation (N.J.S.A. 26:2-119 et seq.) and began service on February 1, 1983, replacing 32 Poison Control Centers located in New Jersey hospitals. Its mission is to provide treatment and the provision of information concerning poisons drugs and targeted health issues through telephone management, consultation, education and research.

History & Organizational Background

New Jersey's first poison center was established in the late 1950s. By 1975 there were 32 "Poison Control Centers" located in acute care hospitals throughout the state. These centers were located in pharmacies and emergency rooms. The centers were not always open 24 hours a day. No center had staff entirely dedicated to poison center services and little or no records were kept of calls handled by these centers. Though some centers allocated funds to subscribe to a form of informational database, no center had a specific budget for its overall services.



In 1978, New Jersey developed a task force to look into how to provide poison center services in response to a federal initiative to develop regional emergency medical services.

In November 1982, the NJ state legislature passed legislation calling upon the New Jersey Department of Health to develop a drug and poison information program for New Jersey. In February 1983, as the result of this legislation and in a cooperative effort between the New Jersey Hospital Association and the New Jersey Department of Health, the regional poison control system, New Jersey Poison Information and Education System (NJPIES), was born. In 1982, a total of 5,000 calls to the 32 Poison Control Centers were reported. Over 1,000 of those calls were to one center, the future home of the regional program. In 1983, during the first 11 months of its existence, NJPIES responded to over 30,000 calls. The initial staff of 5 information specialists worked in a basement apartment furnished by the host hospital. Funding was provided by a small grant from the federal government and the state, voluntary contributions from the former 31 Poison Control Centers and a grant in aid from a pharmaceutical

company. Administrative support and medical direction was provided by the host hospital.

In 1985, NJPIES became a “line item” in the New Jersey State Budget. In addition, the cost of membership in the state-wide drug and poison information system was determined to be an acceptable, reimbursable part of the member hospital’s administrative costs.

In the early 1990’s, membership in NJPIES became mandatory for all acute care hospitals under New Jersey State Department of Health and Senior Services licensing regulations. The call volume grew, mandating an increase in the size of the staff. The program added a part-time director of drug information and a health educator. In mid 1990, the program covered 100% of the Medical Director’s salary and the number of specialists increased to 22. In addition, the service of a full time information technology professional was added as well as a computer clerk. Funding continued to come from the state budget and from hospital memberships.

Although funds approved by the New Jersey State Department of Health and Senior Services (NJDHSS) and the hospital membership program sufficiently cover the day to day activities of the program, outreach education services and other public health activities fell outside of the budget. The federal Poison Control Stabilization and Enhancement Act funded by the Health Resources and Service Agency (HRSA) of the U.S. Department of Health and Social Services provided the needed funds to cover the aforementioned activities and services.

The long-standing relationship with the original host hospital ceased in 2001, requiring NJPIES to resettle in a new home. The University of Medicine and Dentistry of New Jersey (UMDNJ) agreed to provide space and administrative support and became the new host of NJPIES. Using funds from the HRSA grant, NJPIES was able to establish a parallel hotline site at UMDNJ and the move was accomplished without a single dropped or lost call. NJPIES became part of the Department of Preventive Medicine and Community Health (DPMCH) as of January 1, 2002. UMDNJ provided a temporary space, on an emergency basis, until January 2006, when NJPIES opened its new, state-of-the art, call center in the Ambulatory Care Center Building on the UMDNJ campus located in Newark, NJ.

Who We Are & What We Do

NJPIES, often referred to as the Poison Control Center, is a member of the American Association of Poison Control Centers (AAPCC) and is designated as a regional Poison Control Center under AAPCC guidelines. The Center provides a valuable public service in time of crisis by serving as an information source for the New Jersey Department of Health and Senior Services (NJDHSS). This information may include cases of tampered or recalled products and incidents of food-borne illness. NJPIES provides a statewide emergency service for poison exposures, general poison and drug information 24 hours, 7 days a week. All calls are handled by specialists in Poison Information, who are physicians, nurses or pharmacists

“Thank you for these valuable materials and information! For seniors to know that they can call Poison Control if they forget to take a pill, or take too much, and get prompt advice, its truly beneficial. It can help them avoid going to the emergency room.”

(Social Worker, South River)

In addition, NJPIES has managed the Department of Health and Senior Services AIDS/HIV/STD/Hepatitis Hotline for the past 20 years. The Center provides telephone consultation for people seeking information about HIV and other sexually transmitted diseases. Poison Specialists are “cross-trained” to handle calls for both hotlines.

Although many of the specialists are fluent in Spanish and several are fluent in additional languages, NJPIES contracts with a telephone interpretation service, allowing immediate access to hundreds of languages and dialects. We also offer

“Our doctors refer their patients to call the hotline many times a year”

(Pediatrician, Edison)

a TDD/TTY service for the hearing impaired. Specialists answer questions about identification of medication, possible risks for drug interaction or the potential effects of medicines on pregnancy or breast feeding.

Specialists also answer questions prior to exposure to or use of potentially poisonous or hazardous products, such as household chemicals, plants,

cosmetics or environmental contaminants like lead. They help callers assess the possibility for harm or damage and give recommendations for minimizing or eliminating risk.

**“Your program
saves lives”**

(Parent, Dover)

NJPIES' Services

- Poison emergency telephone service
- Drug information service
- Occupational and environmental toxicology information service
- Professional education
- Public education
- Research and data collection

Media Spotlight

- New Jersey Newspapers ran nearly 150 features
- New Jersey radio and television stations conducted a total of 27 interviews with NJPIES' staff

North American Congress of Clinical Toxicology Conference September 2009 (San Antonio, Texas)

ELLENHORN AWARD & LECTURE

Dr. Steven Marcus, Executive and Medical Director of NJPIES presented the lecture in receipt of the “Ellenhorn Award”

POSTER PRESENTATION

Calello DP, Chu AF, Marcus SM.
A New At-Risk Population: Suicide Attempts
by Poisoning in Patients
40-64 Years of Age.

Gambino AA, Chu AF, Johnson-Arnold L,
Kasinadhuni MD, Ruck B, Marcus SM.
Utilization of Poison Education and Prevention
Services: Results from a Web-based Survey.





PLATFORM PRESENTATIONS

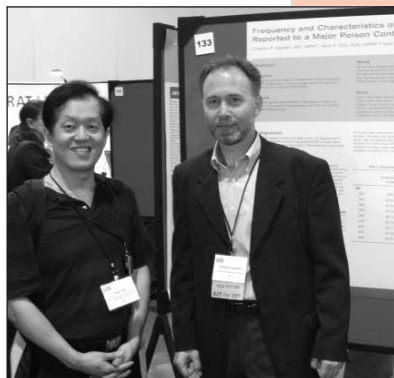
DeBellonia RR, Marcus SM, Ruck B, Chu AF. Digital Imaging: Consistency among Mycologists.

24th International Congress of Pharmacoepidemiology & Therapeutic Risk Management (ICPE) Conference August 2009 (Providence, Rhode Island)

POSTER PRESENTATION

Chu, AF, Vassilev ZP, Marcus SM, Ruck B. Pattern of Reported Exposures to Cough and Cold Medications Among Children Following the Release of an FDA Public Health Advisory.

Vassilev ZP, Chu AF, Marcus SM. Frequency and Characteristics of Pediatric Adverse Drug Reactions Reported to a Major Poison Control Center over a 9-Year Period.



Data Systems

Reporting directly to the NJPIES' Executive Director, the Data Systems Department manages all IT projects and systems within the Poison Control Center. This department is responsible for handling the research, design, evaluation, implementation, management and maintenance of all projects and systems. The Department designs, plans and directs daily and long term projects and operations. In addition to the design, implementation and management of all NJPIES computer domains and servers, the Data Systems Department acts as an in-house consultant for creating network and communication standards which assures compatibility and integrity between all systems. These responsibilities also include handling all telephone switches and other computer and telephone related hardware and systems.

Lead Poisoning

The state of New Jersey has had an active surveillance and treatment program for childhood lead poisoning for over 30 years. Dr. Steven Marcus, the Medical Director of NJPIES, has played a lead role in statewide efforts. He has served in a leadership role in the New Jersey Physicians Lead Poisoning Advisory Committee and has consulted widely. He was instrumental in developing the pilot program to increase awareness and screening for childhood lead poisoning which is now being implemented statewide. He was also involved in the training of individuals who are charged with the responsibility of educating pediatric health care providers in various aspects of lead poisoning from primary prevention to chelation therapy. This was a cooperative effort of NJPIES, New Jersey Department of Health and Senior Services and the New Jersey Chapter of the

American Academy of Pediatrics currently funded through a Robert Wood Johnson Foundation Grant. NJPIES educational staff collaborates with major Medicaid managed care insurance carriers, to develop and distribute educational material to their enrolled population and beyond. NJPIES has re-established the New Jersey Lead Consortium, a monthly meeting of concerned health care and environmental professionals who review problem childhood lead poisoning cases and new relevant literature.



Drug Information and Professional Education

The provision of drug information and professional education are two things we take great pride in at NJPIES. These two programs are very valuable to the residents and health care professionals of NJ. Several times each month, members of the poison center team give lectures to physicians, pharmacists, nurses and students of various health professions either at the poison center or at other locations throughout New Jersey (i.e. hospitals, universities, health-care facilities, etc.)

Almost every day, pharmacy students from Rutgers College of Pharmacy, medical students and residents as well as nursing students participate in the daily activities at the poison center. Students and residents spending time at NJPIES learn about poison prevention and the management of poisoned patients. They participate in daily rounds as well as in formal lectures and informal case discussions. In addition, students and residents completing their 4-5 week rotation at NJPIES learn how to provide evidence-based responses to specific medical inquiries that arise.

Despite the "age of the internet" where people often go online to find information, NJPIES is still recognized as experts providing accurate, unbiased, and factual information in response to patient oriented drug problems. During 2009, the poison specialists (nurses, pharmacists and physicians) of NJPIES responded to over 10,000 requests for drug information from both the lay public and health care professionals.

The majority of these calls (7,274) were for drug identification. Health professionals called to identify medication taken by their patient 477 times this past year. Law enforcement officials called to identify and learn the federal class of drugs found on a suspect 606 times and the lay public called to have medication identified 6,176 times. Approximately 50% percent of drug identification calls were regarding medications with a high potential for abuse and diversion from their intended purpose and users.

Concerns regarding medication safety accounted for a large percentage of drug information calls. Callers often want to know about:

- interactions of their new medication with another medication or food
- side effects of medication/contraindications
- the appropriate administration, storage and disposal of medications
- medication safety during pregnancy or while breast feeding baby

Epidemiology

A number of activities were conducted through the epidemiology core of NJPIES to assess the population we serve and the unmet needs for poison control and prevention services.

Surveillance of Radiation Associated Illness through the National Poison Data System (NPDS)

Although “radiation events” and incidents occur sporadically throughout the world, such events do not usually rise to widespread attention. The recent high profile case of Alexander Litvinenko, with Polonium-210 radiation poisoning in London in 2006, changed all this and led to this attempt to assess the magnitude of the problem as reported to poison control centers nationally. Clinical effects of radiation exposures do not follow principles commonly associated with poisoning by chemical or biological/infectious agents. Furthermore, the infrequency of radiation poisonings has led to a paucity of data both epidemiological and clinical.

According to the United States Centers for Disease Control and Prevention (CDC), “current surveillance activities for radiation are carried out by the Department of Energy (DOE) and the Environmental Protection Agency (EPA), but these activities are mostly concentrated to environmental sampling and contamination by radioactive sources. In the context of a covert malicious nuclear/radiological event (radiation source, food/water radionuclide contamination), there may not be a sentinel incident (i.e. explosion) which will prompt rapid mobilization of a public health response. Victims exhibiting symptoms consistent with radiation-associated illness will most likely be missed in the context of normal patient presentations to clinics and emergency departments due to their non-specific nature.” In order to detect these nuclear/radiological events and track the extent of the affected population early in time, a syndromic surveillance approach incorporating the National Poison Data System (NPDS) was considered for a trial. This system uses a data set developed by the American

Association of Poison Control Centers (AAPCC) and incorporates the data into an electronic database, which can then be searched using a variety of search strategies. In addition to standardized codes, NPDS also contains extensive narrative information written contemporaneously by Specialists in Poison Information (SPIs).

In a competitive grant request for proposal, New Jersey Poison Information and Education System was selected by the CDC as one of four poison centers to participate in a project to determine if NPDS data could be used in a surveillance effort regarding radiation exposures. In our project a 2-tiered selection process was developed by using two existing radiation-associated generic codes in the NPDS, coupled with key-word searching method (“radiation”, “nuclear”, or “microwave” etc.) through the actual SPI narrative case to identify potential radiation cases.

A final report revealed that based on the two specific generic codes, NJPIES was able to identify 237 radiation-related cases in the state of New Jersey. Among these, 96 were exposures and 141 were information-related cases. A summary analysis was performed on these 72 exposure-related cases (22 radon-related and 2 duplicated cases were excluded from the analysis).

As a part of surveillance definition, a key-word searching method was also used to search radiation-related words in the SPI’s narrative. Cases were separated into either exposure- or information-related case. As a result, we identified a total of 400 exposure-related and 285 information-related “radiation” cases. No further review was conducted for the 45 of the 400 exposure cases, since they were previously captured in the generic code method previously. The remaining 355 cases were reviewed to determine whether they were a truly radiation-associated case. Similarly, 39 out of the 285 information cases were not reviewed; the remaining 246 were reviewed in detail for their radiation status. One of the key lessons we learned from this review process was that we were able to identify four cases that were coded as other than the two given generic codes provided by AAPCC, therefore, if the search had been based only upon the two given generic codes, these cases would not have been found.

Investigation of Lamp Oil Poisonings in Children Under the Age of Six

The majority of unintentional poisonings from lamp oil exposures occur among young children in both the United States and Worldwide¹⁻⁵. A study conducted by the New York City Poison Center found that Orthodox Jewish children were at a higher risk for exposure to lamp oil poisonings during the Sabbath and on other religious holidays as compared to other children¹. In Taiwan, a 26-month old healthy child suffered from multiple organ failure, after lamp oil aspiration, when his father induced vomiting by digital stimulation of the boy's throat³. Data provided by the AAPCC in the NPDS revealed that from 1983 to 1990, a total of six fatalities were connected to lamp oil exposures⁶. Despite the primary prevention efforts dedicated to this public health concern, unintentional poisonings from household lamp oil exposures continue to occur.

CDC in conjunction with AAPCC issued a RFP for poison centers to review case records of reported exposures to lamp oil in an attempt to determine causative factors. NJPIES was selected from the applying centers to participate.

References

1. Hoffman, RJ; Morgenstern, S; Hoffman, RS; Nelson, LS. Extremely Elevated Relative Risk of Paraffin Lamp Oil Exposures in Orthodox Jewish Children. *Pediatrics* 2004;113:e377-e379.
2. Van Gorcum, TF; Hunault CC; Van Zoelen GA; DeVries, I; Meulenbel J. Lamp oil poisoning: Did the European Guideline Reduce the number and Severity of Intoxications. *Clinical Toxicology* (2009) 47, 29-34.
3. Yu MC; Lin, JL; Wu CT; Hsia SH; Lee F. Multiple Organ Failure Following Lamp Oil Aspiration. *Clinical Toxicology* (2007) 45, 304-306.
4. Martins, L; Caraccio, TR; Mofenson, HC. Shining the Light on Lamp Oil. *Pediatrics* 1999;103;1080.
5. CDC. Near Fatal Ingestion of Household Lamp Oil – Ohio, August 1997. *MMWR* 1998;47(41):880-2.

6. Litovitz, T; Bailey, KM; Schmitz, BF, et al. 1990 Annual Report of The American Association of Poison Control Centers National Data Collection System. Am J Emerg Med. 1997;9:504.

Attempted Suicides in the State of New Jersey and the United States

Death by suicide is a major, preventable, public health problem and continues to draw attention from different government agencies in the United States. As the eleventh leading cause of death, or approximately 11 suicides for every 100,000 population, suicide not only affects the loss of life, but also impacts the survivors emotionally and economically.

In the United States, poisoning is the third most commonly used method in a suicide after firearms and suffocation. Recent reports indicate that more than 50% of the suicide victims in the US used firearms to commit suicide, as compared to only 31% in New Jersey. On the other hand, 22% of suicide victims used suffocation and 18% used poisonings in the nation, as compared to 32% and 22% in New Jersey; respectively 1:2. In New Jersey, strict gun control laws and a relatively low rate of handgun ownership may play a role in the lower rate of suicide incidences.

The epidemiology division of NJPIES looked at the problem of suicides from poisonings nationally and within the state of New Jersey.

All cases coded as "intentional suspected suicide" between 2000 and 2008 were used.

The preliminary results are revealed as follows:

- A total of 1,587,143 attempted suicides were reported to the poison centers in the US between the years of 2000 and 2008.
- The number of attempted suicides increased from 145,715 cases in 2000 to 206,218 cases in 2008, a 42% increase in the 9-year period.

- Of the 1,587,143 attempted suicide cases received by the poison centers, 549,950 (34.7%) were males; 1,033,916 (65.1%) were females and 1,397 (0.1%) were pregnant women and 1880 had no gender recorded.
- Medical outcomes were distributed as 343,067 (21.6%) no effect; 581,113 (36.6%) minor effect; 338,789 (21.4%) moderate effect; 81,706 (5.1%) major effect/death; and 242,468 (15.3%) unable to follow/unrelated effect.
- Nearly 95% of suicide attempt incidences occurred at home and 71% of the calls were from a health care facility.
- The South Atlantic and West South Central Divisions of the South Region had the highest number of suicide attempts per 100,000 population in the years between 2000 and 2008. Whereas the East South Central Division of the South Region had the lowest number of suicide attempts per 100,000 population. (see chart)
- The state of New Jersey is among the lowest suicide attempt states in the US. (see chart)

References

1. <http://www.suicide.org/suicide-statistics.html>. Suicide Statistics. Access on February 22, 2010.
2. Hempstead, K. "Youth Suicide: What can we learn from the New Jersey Violent Death Reporting System?". Center for Health Statistics, Office of Injury Surveillance and Prevention. New Jersey Department of Health and Senior Services, May 16, 2006.

The attempted suicides by the US regions, divisions, and state of New Jersey/100,000 population (2000–2008)

| US Regions, Divisions, and New Jersey | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | % Change |
|---------------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|----------|
| Overall | 51.6 | 55.9 | 56.9 | 57.8 | 60.9 | 60.3 | 61.3 | 63.8 | 66.8 | 29.5% |
| New Jersey | 36.5 | 41.4 | 41.6 | 46.0 | 50.0 | 47.8 | 45.5 | 50.8 | 54.8 | 50.0% |
| Northeast | 46.0 | 51.2 | 52.1 | 51.5 | 53.2 | 53.6 | 54.1 | 57.2 | 60.3 | 31.2% |
| <i>New England</i> | 39.0 | 46.4 | 49.6 | 47.5 | 54.2 | 57.1 | 59.0 | 62.3 | 67.7 | 73.7% |
| <i>Middle Atlantic #</i> | 48.4 | 53.0 | 53.0 | 52.9 | 52.9 | 52.3 | 52.3 | 55.4 | 57.7 | 19.2% |
| Midwest | 51.2 | 54.4 | 55.3 | 58.3 | 62.8 | 61.7 | 63.3 | 66.5 | 70.8 | 38.2% |
| <i>East North Central</i> | 47.7 | 52.4 | 53.0 | 56.0 | 61.6 | 60.6 | 62.9 | 65.9 | 69.8 | 46.4% |
| <i>West North Central</i> | 59.7 | 59.2 | 60.7 | 63.7 | 65.8 | 64.2 | 64.3 | 68.0 | 73.2 | 22.8% |
| South | 57.6 | 60.4 | 62.0 | 62.0 | 65.2 | 64.2 | 65.6 | 67.3 | 68.9 | 19.6% |
| <i>South Atlantic</i> | 96.2 | 100.6 | 102.1 | 101.8 | 107.3 | 106.6 | 112.0 | 114.4 | 117.0 | 21.6% |
| <i>East South Central</i> | 20.6 | 20.2 | 22.9 | 22.4 | 22.8 | 22.8 | 22.5 | 22.9 | 23.6 | 14.7% |
| <i>West South Central</i> | 103.0 | 113.2 | 112.9 | 115.2 | 123.5 | 120.1 | 119.6 | 123.8 | 126.5 | 22.8% |
| West | 47.1 | 53.9 | 54.4 | 55.8 | 58.4 | 58.1 | 58.4 | 61.0 | 64.9 | 37.6% |
| <i>Mountain</i> | 44.9 | 56.2 | 55.8 | 56.4 | 59.7 | 59.3 | 60.0 | 62.8 | 65.0 | 44.9% |
| <i>Pacific</i> | 44.1 | 48.0 | 48.9 | 50.5 | 52.6 | 52.5 | 52.5 | 54.7 | 59.2 | 34.3% |

Data Source: The National Poison Data System of the American Association of Poison Control Centers.

The State of New Jersey is one of the three states in this division.

Public Education

Poison Prevention Education Can Help Save Lives!

In 1999, NJPIES hired a health educator to foster public awareness of the poison center's 24 hour Poison Help Hotline and services.

"Our goal is to educate our public to prevent preventable emergencies"

(EMT, Newton)

Since then, the education initiative at NJPIES has evolved into a department consisting of a Director of Public Education and two Health Educators. The education department coordinates all aspects of health promotion for the poison center.

Programs are developed and implemented

for a variety of audiences including; children, parents, seniors, healthcare professionals, and child care providers.

Through education, we can empower New Jersey residents with the information necessary to carry out poison safe practices in their homes, workplaces, and communities.

Spotlight: Marketing/Communications Campaign

At the end of 2009, we contracted with SGW, a local marketing firm, to increase public awareness of NJPIES services throughout New Jersey. Messaging included communicating that NJPIES is much more than just a poison hotline only to be used in an emergency. In addition, it is a trusted, reliable, central resource for all questions that pertain to poison prevention and education.

Online ads were created covering the topics of mushroom poisoning, pills mistaken for candy, pet poisoning, seniors and medication, spider bites, and food poisoning. They ran on various news web sites including NJ.com, NYTimes.com, About.com, and appeared in "contextual" placements. For example, when a web visitor was reading an article on food poisoning on a web site, the NJPIES banner would be seen. For greater efficiencies, the banners were geo-targeted so only web viewers in New Jersey saw them.

A series of eleven print ads were developed featuring the tagline: Real people. Real answers. Each ad featured a provocative one or two-word headline followed by copy "For poison prevention, education or emergencies, call 24/7," followed by the toll free phone number. The print ads ran in over 118 weekly newspapers in the state of New Jersey reaching over 3 million readers with each weekly insertion. In 2010, the online banner ads and print ads will be repurposed to rotate throughout the NJPIES' web site.

Several radio sponsorship scripts were developed to run on traffic, news and weather reports. The spots were live-reads by the radio station personalities, and a series of different messages were developed for the sponsorships that covered an array of reasons to call the toll-free number. For example scripts were developed for food poisoning, general information, allergies, pill identification, spider bites, pet poisoning, lead and carbon monoxide poisoning and bee stings. Over 800 sponsorships aired on New Jersey radio stations generating over 1.8 million impressions to individuals in New Jersey.

Awareness building was supplemented with more aggressive public relations outreach highlighting key seasonal topics. An early fall release on the H1N1 anticipated pandemic provided key information on how to recognize flu symptoms and detailed what can be done at home in order to lighten unnecessary service volume at already overloaded emergency room, hospital and medical centers.

Although other releases highlighted key topics from Halloween safety tips to prescription drug abuse, Public Relations was geared towards providing an overview of the Center's services and our 24/7 availability to the public. Releases reminded the public to use the phone as a first line of defense when confronting all sorts of medical concerns and emergencies. Media outreach in December, for example, reminded consumers that the Center never sleeps and poison information specialists were available throughout Christmas and New Year's.

Before the end of the year, Dr. Marcus and Dr. Ruck's faces were becoming increasingly familiar on broadcast shows ranging from News 12 New Jersey Cable TV news to WCBS-AM radio spots featuring holiday safety tips. Together, they appeared on more than two dozen radio and TV programs reaching different areas of the state.

At the very end of the year, we entered the Social Media age and launched the first NJPIES Facebook site. Studies showed that most poison centers have between 30 - 500 followers. Within one month, NJPIES had 250 followers, and by the next big holiday – Valentine's Day 2010 – had more than 600 followers, becoming the number 1 followed poison center site on Facebook nationally, surpassing earlier sites set up in other and larger states as well as the national American Association of Poison Control Centers (AAPCC).

The late 2009 foray into digital media turned out to be fortuitous as early 2010 brought the challenge of ever decreasing funding by the state and potential elimination of the Poison Center. Through Facebook, outbound email, aggressive PR outreach through newspaper opinion pages, and updates to the web site including an impromptu online petition, the public responded with support for the continuation of the Center in its current form.

Data showed increasing usage of NJPIES' services particularly from medical care providers in hospitals. Call volume from hospitals in Bergen County, the most populated county in NJ, increased by 65% from 2000 to 2009. Call volume from hospitals statewide increased by 35% over the same time period.

Even though 2009 ended strongly with December showing 17 placements in weekly newspapers, and 2 placements in daily newspapers, January placements continued to keep awareness high. Based on the Transition Team's recommendations to close the center, stories about the Center ran in 11 weeklies, 5 dailies and across 14 online news portals.

By February 2010, NJPIES had not been named in the new Governor's first round of budget cuts. However, with a continually challenged state budget, NJPIES is staying vigilant in presenting the facts and the Center's value to New Jersey residents from Cape May to the Highlands.

Highlights

- Nearly 17,000 individuals across the state attended a poison prevention program conducted by NJPIES' health educator.
- Over 1.3 million pieces of printed educational material were distributed statewide to residents and providers in schools, community-based organizations, faith-based organizations, hospitals, health departments, emergency medical services, and other healthcare facilities, etc.
- Residents received educational materials provided at over 100 state-wide health fairs.



- Monthly press releases were distributed to the public and health care professionals. (To view all press releases, log onto: www.njpies.org/News.php#Press_Releases)
- On November 14th New Jersey became the first state in the nation to coordinate a statewide effort, Operation Medicine Cabinet, to rid homes of unwanted and unneeded drugs of all types. The operation was deemed a success when over 9,000 pounds of prescription and over-the-counter medicine (OTC) were collected during the one-day event. NJPIES, with its long history of efforts to educate the public about the dangers of drugs in the home, supplied educational material to the collection sites around the state.
- All law enforcement agencies around the state were sent information about the drug identification services provided by NJPIES. Business cards alerting law enforcement professionals about our ability to assist them in their drug identification needs were made available.
- Through educational programs, mailings of poison prevention materials, tv/radio/newspaper coverage of press releases, health fairs, print ads, online banners, Metro Shadow radio sponsorships and NJPIES' website, the entire state of New Jersey (all 21 counties) was blanketed with messages positioning NJPIES as the "go to" for poison emergencies as well as the resource for finding information on anything poison-related.
- The education department participated in the "It's Your Life 411" program. This unique program about decision-making, character education, and prevention, is conducted in schools throughout many NJ counties during the school year. The program has 7th, 8th, and/or 9th graders "role-play" real-life situations that many teens face to discover for themselves the life-altering consequences of poor decision-making when engaging in high risk behaviors. It also educates students about the valuable services provided by community agencies. NJPIES provided the coordinator with poison scenarios to incorporate into the program.



The following materials can be ordered through visiting NJPIES' web site at www.njpies.org

- Babysitter's Do's and Don'ts *
- Carbon Monoxide Pamphlet *
- Children's activity sheets +
- Annual Report +
- Lesson plans, activities, videos, etc. +
- Your Poison Center Brochure *
- Poisons in the Home Brochure *
- Poison Control Center Services Poster *
- Look-A-Like Posters
- National Pet Poster
- Medicine Information Poster
- Medicine spoons
- National Poison Center 1-800 Hotline Magnet *
- Telephone stickers for healthcare facilities
- Telephone stickers for in-home use *



* Materials are available in both English and Spanish
+ Can be downloaded off the website

National Poison Prevention Week

In order to prevent unintentional poisonings, it is important to promote awareness of poison prevention through various activities and outreach initiatives. Each year, during the third week of March, NJPIES observes National Poison Prevention Week (March 15-21, 2009). There were two themes this year - "Children Act Fast, So Do Poisons" and "Poisonings Span a Lifetime." The first theme reminded parents to always be watchful when household chemicals or drugs are being used. Many incidents happen when adults are using a product but are distracted (for example, by the telephone or the doorbell) for a few moments. Adults must make sure household chemicals and medicines are stored away from children at all times. The other theme was meant to increase awareness that poisonings can happen to people of any age including children, adults, and older adults.

Highlights

- The state was blanketed from North to South with mailed postcards promoting awareness of NJPIES and National Poison Prevention Week. Hospitals, pharmacies, public and private schools, public libraries, health departments, emergency medical service agencies, police departments, county offices on aging, community-based organizations, senior centers, members of the state legislature, pediatricians, childcare directors, Safe Kids, Federally Qualified Healthcare Centers (FQHC), fire departments, etc. were invited to participate in National Poison Prevention Week by ordering free educational materials and/or requesting a poison prevention education program via our website or the hotline. Postcard recipients were encouraged to pass along the information to their colleagues, friends, and families.
- Press releases were distributed statewide to media outlets (English, Spanish, and Portuguese) promoting the observance. Write ups ran in newspapers and community/organization newsletters
- Requests were made to the Governor, State Legislature, and local mayors to issue a proclamation designating the third full week of March as National Poison Prevention Week.
- During the observed week, the education department set-up information tables around our host institution, UMDNJ – Newark Campus, to promote awareness of the poison center and its services, distribute poison prevention education materials, and answer any questions. Through this effort, the education department was able to reach the public, health care professionals, and staff.

Website – www.njpies.org

In 1998, NJPIES introduced a comprehensive Internet Website, which since its launch, has received visitors from all over the world. In 2008, the center launched its new and improved site with the help of the Pacific Institute of Research and Evaluation (PIRE). The site enhances NJPIES' statewide presence and increases the public's awareness of the Poison Control Center's services. Visitors are encouraged to log onto and explore all the site has to offer from alerts for potentially dangerous substances to interactive learning activities. In addition, the site acts as a resource for healthcare professionals.

All requests (education program or materials) can be submitted by logging onto www.njpies.org and clicking on the links on the homepage.



Resource Development and Marketing

The Poison Control Center is funded through a contract with the state of New Jersey, Federal and other grants, and private donations. With the support of the Foundation of University of Medicine and Dentistry of New Jersey (UMDNJ), NJPIES has been actively seeking funding from individuals, private foundations and corporate sponsors to help promote its 1-800-222-1222 Poison Help Hotline and poison prevention and education efforts. NJPIES is a tax exempt non-profit organization under the federal 501(c)3 guidelines.

For further information on how to support NJPIES or become a key partner in promoting our programs, please contact the Foundation of UMDNJ at (866) 44 – UMDNJ (86365). For online donations please visit www.umdnj.edu/foundweb

Poison Help Hotline

NJPIES Poison Help Hotline is also the National Toll Free Hotline

1-800-222-1222

In February 2000, President Clinton signed the Poison Control Center Enhancement and Awareness Act (PL 106-174) to ensure every U.S. resident has access to a certified regional poison center. Funding was provided to create a single toll-free number to be shared by poison centers across the country. The National Center for Injury Prevention and Control of the U.S. Centers for Disease Control (CDC) and Prevention and the Maternal and Child Health Bureau of the Health Resources and Services Administration (HRSA) are providing funding for the 1-800-222-1222 toll-free national number. By calling the number, callers reach specially trained health care specialists – nurses, pharmacists, and doctors - who can provide help with poison emergencies or answers to questions from drug information to breast feeding and medication use. The national number automatically and immediately identifies the caller's location, and then connects the caller to the closest Poison Control Center. All services are free and confidential, are available for the hearing impaired and for those who speak languages other than English.



New Jersey AIDS/HIV/STD/Hepatitis Hotline

1-800-624-2377

In 1988, NJPIES was asked to provide administrative responsibility and personnel to run the state AIDS Hotline. Over the past 18 years NJPIES has provided telephone consultation for people seeking information about the disease. Callers receive general information, referrals, counseling and testing locations and information on treatment and adverse reactions to medications. Based on a request from the New Jersey Department of Health and Senior Services (NJDHSS), services have expanded to include other sexually transmitted diseases and hepatitis. Poison Specialists are “cross-trained” to handle calls for both hotlines.

TDD/TTY Line (For the Hearing Impaired)

1-973-926-8008

For use by the hearing and speech impaired. We are developing the capability to handle these calls through the 1-800 Poison Help Hotline number. We hope to have this operational by mid 2010. Additionally, we are exploring text messaging technology to enable the hearing impaired to text their questions to an information specialist. Please check with us for updates.

Special Services

Bioterrorism

NJPIES became intimately involved with the state's efforts at homeland defense and counter-terrorism. The Medical Director was appointed by the governor to the MedPrep Terrorism Preparedness Council and subsequently also to its executive council. This program has morphed into the Health Emergency Preparedness Advisory Council (HEPAC) and NJPIES holds a "seat at the table." NJPIES became part of the Newark Metropolitan Medical Response System (MMRS). NJPIES' Medical Director serves on the MMRS' steering and surveillance committees. As part of his responsibility, he has been spending an increasing amount of time in this process.

Computerized Case Records

Trends and patterns can be identified on cases through computerized medical records that are maintained by NJPIES. All calls are confidential. The American Association of Poison Control Centers' (AAPCC) National Poison Data System receives data throughout the day from New Jersey Poison Control. Through the efforts of NJPIES, computerized formatted data on poison exposure in New Jersey has been available for over 10 years. An NJPIES epidemiologist reviews all data for trends and patterns in poisoning within the state. The epidemiology service can provide data to communities to the 5 digit zip code level.

Language Interpretation

Available 24 hours a day, 7 days a week with a myriad of languages and dialects through a contract with a language translation service.

Pesticide Surveillance

NJPIES assists and provides information to citizens regarding spraying and health issues related to pesticide use in New Jersey.

Public Health Surveillance

The New Jersey Poison Control Center is committed to reducing the impact of poisoning by collecting, analyzing and dispensing data for the development and implementation of poison prevention and awareness strategies. NJPIES stores information regarding poisoning-related calls in an electronic database. This information is used to educate residents, health care professionals and media on poisoning trends in the state of New Jersey. This information is also used in the development of poison prevention strategies. As a safeguard in instances of food poisonings, adverse drug or product reactions, and drug tampering, NJPIES notifies local and state agencies, the media and the public of potential health threats.

Member Hospital Program

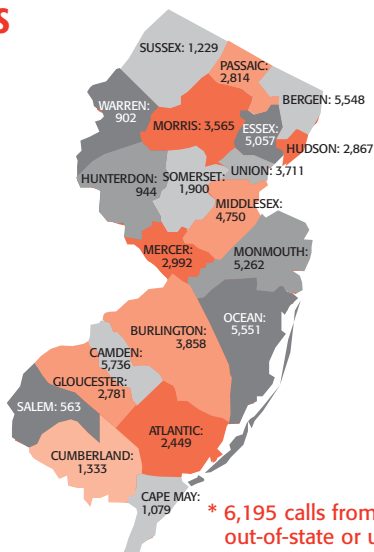
The Member Hospital Program provides a large portion of funds that support NJPIES. In addition, the cooperation of every member hospital in the exchange of information facilitates the appropriate, timely and cost-efficient care of exposed individuals requiring hospital care. This cooperation, in the form of financial support, insures appropriate management in a cost efficient fashion. A phone call to the Poison Control Center early in the treatment process saves both time and money.

Expenses 2009

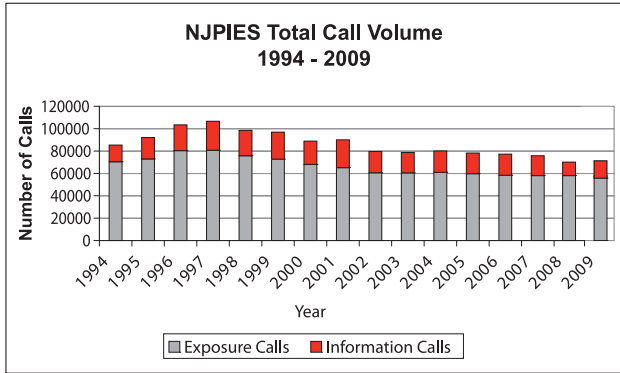
| | |
|-----------------------------------|---------------------|
| Salaries | 2,053,421.10 |
| Actual Fringe | 522,986.75 |
| Total Salary and Fringe | 2,576,407.85 |
| Rent | 110,000.00 |
| Telephone Services* | 44,784.78 |
| Postage | 31,781.20 |
| Education Program/printing/travel | 246,019.86 |
| Office Supplies | 5,651.31 |
| Equipment | 185,651.14 |
| Meetings | 1,526.00 |
| Staff Travel (conferences, etc) | 7,423.44 |
| Lease/Purchase (copiers) | 6,923.56 |
| Subscriptions/Membership** | 52,276.78 |
| Other | 4,922.95 |
| | 696,961.00 |
| Total | 3,438,144.75 |
| Indirect (overhead) | 310,746.12 |
| Total Expense | 3,748,890.87 |

The following statistics reflect only those poisonings reported to the New Jersey Poison Control Center during 2009. The data does not reflect the overall incidence of poisoning in New Jersey because poisoning victims may not call the New Jersey Poison Control Center for assistance. If you have any questions concerning the statistics or would like additional statistics, please feel free to call 1-800-222-1222 for more information.

Calls to NJPIES by County*

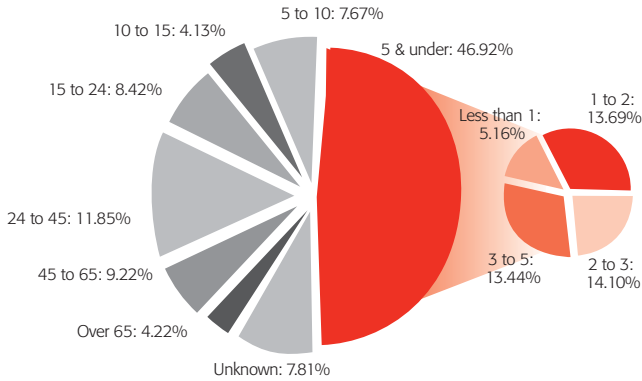


* 6,195 calls from either out-of-state or unknown locations.

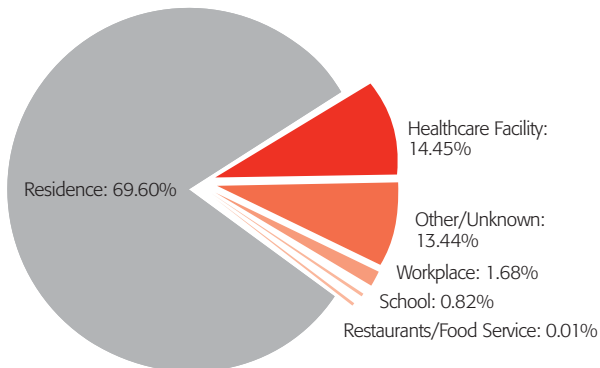


2009

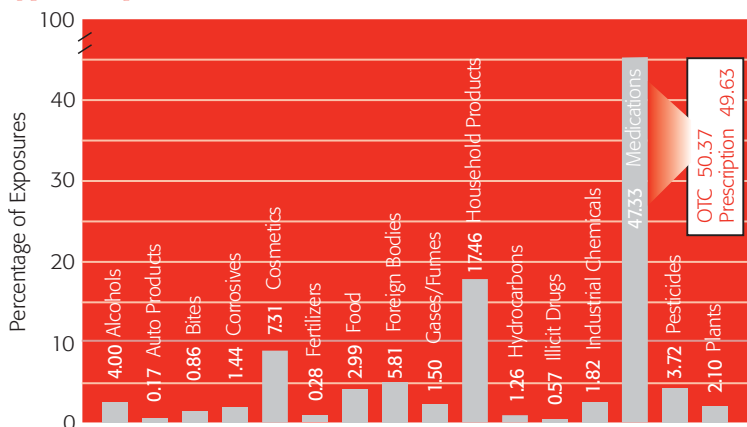
Call Volume: Age of those exposed



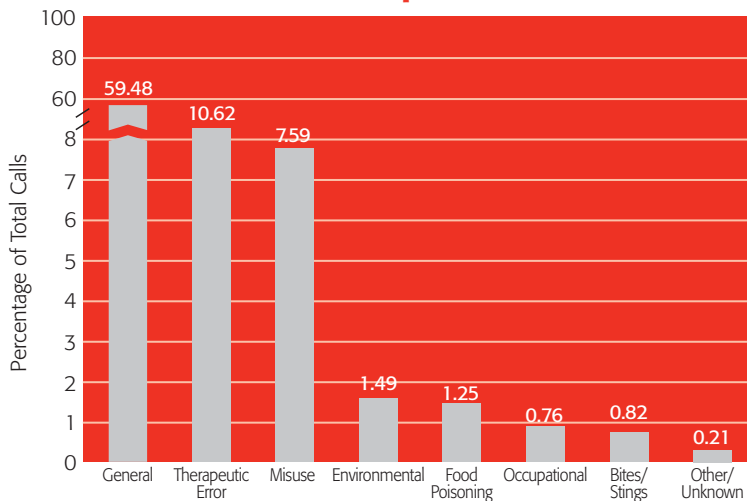
Location: Where the calls come from



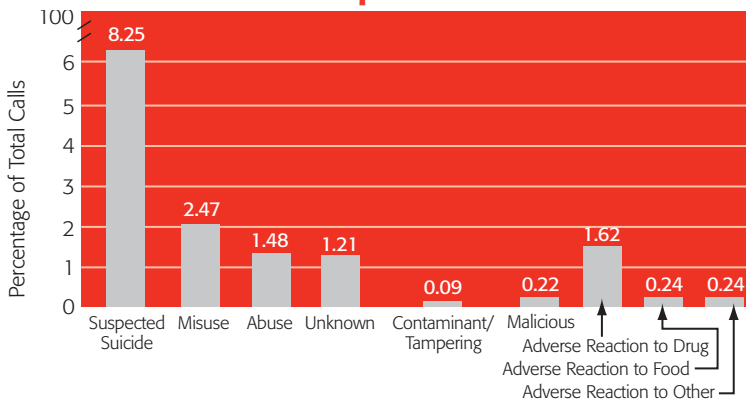
Types of products involved



Call Reason: Unintentional Exposures



Call Reason: Intentional Exposures



**SUBSTANCES MOST FREQUENTLY INVOLVED
IN HUMAN EXPOSURES
2009**

| Substance | Number |
|---|---------------|
| Analgesics | 7,255 |
| Cosmetics/Personal Care Products | 5,350 |
| Cleaning Substances (Household) | 4,453 |
| Sedative/Hypnotics/Antipsychotics | 3,934 |
| Foreign Bodies/Toys/Miscellaneous | 3,406 |
| Topical Preparations | 2,759 |
| Alcohols | 2,504 |
| Cardiovascular Drugs | 1,984 |
| Cold and Cough Preparations | 1,972 |
| Antihistamines | 1,909 |
| Antidepressants | 1,895 |
| Vitamins | 1,775 |
| Antimicrobials | 1,478 |
| Pesticides | 1,431 |
| Arts/Crafts/Office Supplies | 1,314 |
| Hormones and Hormone Antagonists | 1,206 |
| Gastrointestinal Preparations | 1,016 |
| Plants | 954 |
| Anticonvulsants | 902 |
| Stimulants and Street Drugs | 891 |
| Chemicals | 779 |
| Information Calls | 759 |
| Electrolytes and Minerals | 757 |
| Hydrocarbons | 607 |
| Food Products/Food Poisoning | 581 |
| Asthma Therapies | 554 |
| Bites and Envenomations | 542 |
| Dietary Supplements/Herbals/Homeopathic | 508 |
| Other/Unknown Nondrug Substances | 506 |
| Fumes/Gases/Vapors | 504 |
| Miscellaneous Drugs | 504 |
| Deodorizers | 484 |
| Eye/Ear/Nose/Throat Preparations | 482 |

(continued on next page)

**SUBSTANCES MOST FREQUENTLY INVOLVED
IN HUMAN EXPOSURES
2009**

| Substance | Number |
|------------------------------------|---------------|
| Muscle Relaxants | 407 |
| Paints and Stripping Agents | 333 |
| Adhesives/Glues | 304 |
| Unknown Drug | 287 |
| Anticholinergic Drugs | 282 |
| Swimming Pool/Aquarium | 241 |
| Batteries | 212 |
| Essential Oils | 212 |
| Heavy Metals | 212 |
| Building and Construction Products | 186 |
| Diuretics | 174 |
| Automotive/Aircraft/Boat Products | 171 |
| Industrial Cleaners | 168 |
| Anesthetics | 163 |
| Anticoagulants | 136 |
| Polishes and Waxes | 131 |
| Fertilizers | 111 |
| Tobacco Products | 106 |
| Fire Extinguishers | 95 |
| Lacrimators | 81 |
| Mushrooms | 75 |
| Veterinary Drugs | 63 |
| Dyes | 62 |
| Serums, Toxoids, Vaccines | 42 |
| Antineoplastics | 38 |
| Matches/Fireworks/Explosives | 36 |
| Narcotic Antagonists | 14 |
| Weapons of Mass Destruction | 13 |
| Diagnostic Agents | 9 |
| Photographic Products | 9 |
| Sporting Equipment | 4 |
| Waterproofers/Sealants | 2 |
| Radioisotopes | 1 |
| Total | 60,335 |

POISON RELATED FATALITIES 2009

| Patient Age | Substance Description | Reason |
|--------------|--|------------------------|
| 19 yo Female | Tylenol PM | Suicide |
| 48 yo Female | Unknown brand acetaminophen | Unknown |
| 52 yo Female | Unknown acetaminophen | Unknown |
| 46 yo Female | Tylenol | Unknown |
| 75 yo Male | Tylenol PM/sertraline | Suicide |
| 42 yo Female | Unknown acetaminophen/carbamazepine | Suicide |
| 41 yo Male | Citalopram/bupropion/lisinopril/ simvastatin/topiramate | Suicide |
| 79 yo Male | Trazadone | Suicide |
| 77 yo Female | Venlafaxine/diltiazem/glimepiride/ doxazocin/simvastatin/alprazolam/ hydrochlorothiazide/levothyroxine/ chlordiazepoxide/lisinopril | Suicide |
| 55 yo Female | Mirtazapine | Suicide |
| 73 yo Male | Diltiazem/ zolpidem | Unknown |
| 59 yo Female | Amlodipine/zolpidem | Suicide |
| 73 yo Female | Quetiapine/zolpidem | Unknown |
| 19 yo Male | amlodipine | Suicide |
| 68 yo Male | Nifedipine/cocaine | Suicide |
| 29 yo Female | Amlodipine/atenolol/aspirin/alprazolam | Suicide |
| 42 yo Female | Verapamil/ Quetiapine/tequila | Suicide |
| 25 yo Female | Metform/unknown alcohol | Unknown |
| 27 yo Male | Metformin/ethanol/naproxen | Suicide |
| 63 yo Male | Metformin/lopressor | Suicide |
| 46 yo Male | Metformin/Tylenol PM/rum | Suicide |
| 50 yo Male | Ethylene glycol | Suicide |
| 16 yo Female | Ethylene glycol/unknown drug | Unknown |
| 34 yo Male | Ethylene glycol | Suicide |
| 50 yo Male | Methanol | Suicide |
| 48 yo Male | Diazepam/oxycodone | Suicide |
| 51 yo Male | Oxycodone | Unknown |
| 35 yo Female | Heroin/alprazolam | Abuse |
| 43 yo male | Unknown but urine positive for methadone, opiates, benzodiazepines, cocaine and tricyclic antidepressants | Unknown |
| 46 yo Female | Unknown benzodiazepine | Unknown |
| 50 yo Female | Sumatriptan | Adverse effect of drug |
| 47 yo Female | Morphine/ Quetiapine/risperidone | Suicide |
| 36 yo Female | Morphine/phenobarbital/levothyroxine/ alprazolam/clonazepam | Suicide |
| 71 yo Male | Methadone | Intentional misuse |
| 2 yo Male | Methadone | Unintentional general |

(continued on next page)

POISON RELATED FATALITIES 2009

| Patient Age | Substance Description | Reason |
|--------------|---|--------------------------|
| 87 yo Male | Methadone | Therapeutic error |
| 54 yo male | Ultracet/ibuprofen | Adverse reaction to drug |
| 17 yo female | Heroin | Abuse |
| 55 yo male | Zectran (pesticide) | Suicide |
| 52 yo male | Chemsico ultrakill (weed killer)/ethanol | Unknown |
| 79 yo female | Hydrocodone/vicodin/Premarin | Suicide |
| 42 yo male | Percocet | Intentional misuse |
| 2 yo male | Dryer sheets | Unintentional general |
| 45 yo male | Cyanide | Occupational |
| 87 yo male | Metoprolol/isosorbide/ spironolactone/furosemide | Suicide |
| 29 yo male | Unknown drug | Unknown |
| 27 yo male | Formaldehyde | Unknown |
| 93 yo female | Digoxin | Intentional misuse |
| 97 yo male | Baking soda | Intentional misuse |
| 55 yo female | Diphenhydramine | Suicide |

| Species | Product |
|-----------|---------------------------|
| Cat | Diltiazem |
| Cat | Unknown |
| Cat | Enforcer Flea Powder |
| Cat | Fabuloso All |
| Cat | "Moth balls" unknown type |
| Cat | Boric acid |
| Cat | Cat food |
| Parakeets | Suspected food |
| Cat | Unknown |

Findings/Observations

Rather than abstracts of the cases this year, we draw your attention to some interesting observations. The first is that acetaminophen as at least a co-ingredient is a significant problem. The FDA convened a special panel to review the national problem with acetaminophen with the possibility of developing some strategy to decrease the occurrence of toxicity.

The appearance of metformin in significant numbers is sobering. We had about 170 cases in 2008 and 2009 of metformin exposures with these 4 deaths. There really is very little that can be done for a person who overdoses on this medication. They develop a severe lactic acidosis that does not respond to alkali therapy, in fact that therapy may make them worse. All that we can offer is hemodialysis and that does not always alter the clinical course. Ethylene glycol continues to be a problem in this state. Over the past 2 years we have averaged in excess of 100 cases of automotive antifreeze ingestions each year. Several times each year the diagnosis is made late, after severe acidosis appears, making treatment inefficient. Early treatment is very effective with the use of fomepizole, so an index of suspicion must be raised in a patient appearing inebriated without evidence of other intoxicant and perhaps a wide osmolar gap.

Of great sadness were the two accidental methadone overdose deaths. The child gained access to his grandparent's "take home" methadone and suffered a cardiac arrest on arrival at the emergency department. The other was a senior citizen who drank what he thought was orange juice but was his son's methadone which had been placed into the orange juice and was left on the kitchen table while the son went to the bathroom. Again, the senior arrested shortly after reaching the emergency room. Clearly, both of these deaths were preventable. The common thread was liquid methadone in the home as part of take home methadone for trusted clients in methadone maintenance. We are working with a legislator in the NJ Assembly to craft legislation requiring lockable medicine safes in every home and I am pressuring the state and federal authorities to change the regulations on take home methadone to require a solid form, and a lockable medicine chest.

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Man Yee Wong, BS, RPh, CSPI

About NJPIES

NJPIES, often referred to as the Poison Control Center, is a poison emergency and drug information service. The center operates 24 hours a day, seven days a week. You can call NJPIES to get help in a poison emergency, for poison prevention information, for drug information or to get treatment advice following an animal bite. Specialists in Poison Information, who are physicians, nurses, or pharmacists, handle all calls. They will tell you what to do if you, your child or your pet is poisoned. The New Jersey Poison Control Center staff is ready to answer questions about poisons in your home and provides a wealth of information regarding general poison prevention.



New Jersey Poison Information and Education System (NJPIES)
Located at UMDNJ
140 Bergen Street, Suite G 1600
P.O. Box 1709
Newark, NJ 07101-1709
Administrative Office: (973) 972-9280
Fax: (973) 643-2679
Poison Help Hotline: 800-222-1222
TDD/TTY Line (For the Hearing Impaired) 1-973-926-8008
Website: www.njpies.org