



2014 Annual Report For Wyoming

**Submitted by:
Nebraska Regional Poison Center
Omaha, Nebraska**

**Nebraska Regional Poison Center is sponsored by:
Wyoming Department of Health Office of Emergency Medical Services,
Nebraska Medicine, and University of Nebraska Medical Center**

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Nebraska Regional Poison Center

The Nebraska Regional Poison Center (NRPC) is committed to providing the highest quality of service for the citizens of Wyoming. It is certified as a regional poison center by the American Association of Poison Control Centers. The NRPC and its programs are sponsored through collaborative support from the Wyoming Department of Health Office of Emergency Medical Services, Nebraska Medicine, University of Nebraska Medical Center, and the U.S. Department of Health and Human Services.

This report highlights services provided to Wyoming, the medical cost savings associated with the use of NRPC, quality improvement activities, and Wyoming's 2014 poisoning statistics.

24-Hour Emergency Telephone Service

The Nebraska Regional Poison Center operates an emergency telephone service 24 hours a day, seven days a week. It is staffed by a nationally-certified team of registered nurses and physicians whose primary function is to assess and make treatment recommendations during possible poisonings. This service is available to both health care professionals and to the public. A medical toxicologist is always available to provide toxicology consultations as needed.

The following is a summary of Wyoming calls managed by the NRPC in 2014:

- Managed 5,970 total calls in 2014
 - 4,960 calls were human and animal poisoning exposures
 - 1,010 calls were for poison or drug information
- Made 7,295 follow-up calls
- 56% of the poisoning exposures involved children less than 6 years of age
- 80% of poisoning exposures were unintentional; 17% were intentional; 2% were the result of an adverse reaction to a drug or food; and 1% due to contamination, tampering or malicious intent
- Commonly ingested items included medications, cosmetics/personal care products, household cleaning products, foreign bodies, and pesticides
- 66% of poisoning exposures were managed safely at home by NRPC staff
- Medical toxicologists provided consultations with Wyoming healthcare providers on the treatment of 153 poisoned patients

Wyoming Public Education

Wyoming's Poison Center public education activities are organized through Joan McVoy RN CSPI, the education coordinator. Each activity is designed to inform the public about the 24-hour emergency telephone service and to provide education on methods to prevent poisonings. The following is a summary of 2014 activities in Wyoming.

Educational Materials:

The Poison Center distributed 34,028 poison prevention brochures, telephone stickers, magnets, and other educational materials throughout Wyoming. Pinky the Elephant (mascot costume) was used during 21 presentations. A poison prevention program was done in every county of Wyoming.

Videotape Loan Library:

The Poison Center maintains a lending library of audio-visual programs for all age groups. In 2014, a total 5,204 people in Wyoming viewed the programs. The following table represents a breakdown of program usage:

<u>Program Type</u>	<u>Number</u>
Primary (Preschool – Third Grade)	53
Intermediate (Fourth Grade – Junior High)	2
Adult (High School and Adults)	5
Total	60

Community Partners:

Phyllis Lewis, University Extension Educator at the University of Wyoming in Worland, did a total of 14 presentations to an audience of 476 in the counties of Washakie, Hot Springs, Big Horn and Park.

Ms. Lewis produces a bi-weekly radio program and a weekly newspaper column in which she discusses all poison center media releases. Her educational outreach efforts have been highlighted in newspapers in the Northern Wyoming Daily News, Thermopolis Independent Record and Greybull Standard. She developed radio PSA's that were broadcast on subjects such as poison prevention tips, glow stick safety, disc batteries and information on poison prevention opportunities.

The University of Wyoming School of Pharmacy students gave 6 presentations in the Laramie area to an audience of over 300. The pharmacy students attended the 2014 American Society of Health-System Pharmacists Meeting in Anaheim, CA. At the meeting the pharmacy students presented their work on poison prevention outreach efforts in educating the Albany county students. They developed a poster and brochure to share with other pharmacists.

Preventing Poisonings With Pinkie the Elephant



2012 National Poison Data

- ✦ Greater than 2 million exposures reported
 - ✦ Not considering those not reported
- ✦ 50% of reports 5 years old and younger
 - ✦ Greater than 90% in home exposures



WY State Society of Health Systems Pharmacy

- ✦ Present educational material from Nebraska Regional Poison Center to school-aged children
- ✦ In 2013 presented to over 250 children
- ✦ 2014 presentations to over 300 children

What does a presentation look like?

- ✦ Short educational video
- ✦ Games designating which household items are safe and which to avoid
- ✦ Coloring books for children
- ✦ Handouts for parents
- ✦ Guest appearance by Pinkie

Top Offenders

- ✦ Cosmetics
- ✦ Cleaning substances
- ✦ Topical preparations
- ✦ Pesticides



Want to get involved?

- ✦ Contact your regional poison center
- ✦ Contact the University of Wyoming Chapter for more information

University of Wyoming Student Society of Health Systems Pharmacy Society

Poison Education

Who knew a big pink elephant would be so crucial to toxicology education?



Important Dates

- 01/27/14 Presentation to 24 students at Snowy Range Academy
- 2/26/14 Presentation to a classroom of around 14 students at Harmony
- 10/25/14 Pinkie appeared at the 8th Annual "Fall into Good Health Fair"
- 11/17/14 Presentation to Laramie Montessori School

Pinkie the Elephant

According to the 2012 report from the National Poison Data system, more than 2 million exposures were reported to a total of 57 poison control centers. This number under-represents the total amount of toxic exposures given that many cases are not reported directly to Poison Control Centers. Even scarier, children ages 5 and younger made up nearly 50% of poison center calls, with 91.2% of these exposures occur within the home.

Undoubtedly, poison education is pivotal in protecting children from what may be hiding under the kitchen sink, in the garage, or even in the bathroom. The students in the Wyoming State Society of Health Systems Pharmacy are helping with that education by providing important and valuable education to elementary schools and school-age children with the help of Pinkie the Poison Prevention elephant and the Nebraska Regional Poison Center.



Did you know?

Some of the top 10 exposures to toxic chemicals include cosmetics, cleaning substances, topical preps, and pesticides? All of these can potentially be within the reach of children who might not know what substances to

Wyoming Visit:

Joan McVoy, NRPC's education coordinator, visited Wyoming from September 28-October 4th, 2014. Joan's presentations and meetings are summarized below.

- Visited the hospital emergency departments in Cheyenne, Laramie, Casper, Rawlins, Rock Springs, Pinedale, Jackson, Riverton, Douglas and Wheatland. She spoke with hospital staff and asked for feedback on NRPC's service. Poison prevention outreach materials were left at each hospital.
- Met with instructors and pharmacy students at the University of Wyoming, School of Pharmacy. She conducted a training session for the pharmacy students on teaching poison prevention to children. The pharmacy students will present poison prevention programs in Laramie elementary schools.

Presentations were given at:

- University of Wyoming College of Pharmacy
 - West Ridge Elementary, Rock Springs
 - Jackson Elementary, Jackson
 - Jackson Head Start, Jackson
 - Grant Elementary, Glenrock
 - Rossman Elementary, Cheyenne
-
- Distributed poison center brochures and magnets to several Wyoming pharmacies.
 - MEDIA: TV INTERVIEWS
KTWO Casper
KCWY Casper
KGWN Cheyenne

Web Site:

The Poison Center's web site is continuously updated with educational materials. The address is www.nebraskapoison.com.

National Poison Prevention Week:

Congress intended this event as a means for local communities to raise awareness of the dangers of accidental poisoning. In 2014, the Poison Center participated in the following activities:

- Public service announcements, radio, and newspaper interviews
- All elementary schools in Wyoming were sent postcards informing them of the poison center services and materials that are available to them. Materials were targeted to grades K-2nd.

Media Outreach:

The Poison Center regularly sends public service announcements on poison topics to media throughout Wyoming. This generates radio and television interviews and newspaper articles.

2014 Media Releases:

Poison Prevention Week
Nicotine
DEA Drugs
Grandma's House
Summer Hazards
4th of July Hazards
Laundry packets
Drug take back day
Halloween
Thanksgiving – Turkey Tips
Holiday Hazards
Carbon Monoxide

The following table lists NRPC staff's interviews with Wyoming media in 2014.

Date	Media Type	Agency	Topic
1/28/2014	Newspaper	Northern Wyoming Daily News	Poison prevention programs in area
2/25/2014	Newspaper	Northern Wyoming Daily News	Poison Prevention
3/1/2014	Newspaper	Northern Wyoming Daily News	Poison Prevention Month
3/11/2014	Radio	KGAB Cheyenne, WY	PPW
3/19/2014	Newspaper	Ten Sleep Wyoming News	Pinky the Elephant
3/19/2014	Newspaper	Basin Republic Rustler	PPW
4/7/2014	Newspaper	Kaycee Community Newspaper	Drug Take Back Day
4/7/2014	Radio	KGAB Cheyenne, WY	RX Drug dangers
4/8/2014	Radio	KUWT Worland, WY	Poison Prevention
6/23/2014	Radio	KGAB Cheyenne, WY	Grandma's House
6/26/2014	Newspaper	Northern Wyoming Daily News	Poison Prevention
6/28/2014	Radio	KGAB Cheyenne, WY	Glow sticks
7/1/2014	Newspaper	Big Horn Basin Worland, WY	Glow Sticks
7/1/2014	Radio	Kuwt Worland, WY	Glow sticks
7/3/2014	Radio	Big Horn Radio Worland, WY	Glow sticks
7/21/2014	Radio	KGAB Cheyenne, WY	Summer hazards
8/20/2014	Newspaper	Lusk Herald Lusk, WY	Summer hazards
9/19/2014	Newspaper	Pine Bluff Post Pine Bluffs, WY	Drug Take Back Day
9/25/2014	Radio	Cheyenne radio station	Thanksgiving

9/29/2014	Radio	Big Foot Radio KTG Cheyenne, WY	Drug Take Back Day
10/6/2014	Television	KGWN TV Cheyenne, WY	Drug Take Back Day
10/7/2014	Newspaper	Northern Wyoming Daily News	Poison Prevention
10/21/2014	Radio	Cheyenne Radio station	Halloween
10/25/2014	Newspaper	Casper Journal Casper, WY	Halloween
10/28/2014	Newspaper	Northern Wyoming Daily News	Halloween safety tips
10/29/2014	Television	KTWO Casper, WY	Fireball Whiskey
10/30/2014	Newspaper	Powell Tribune	Halloween
11/13/2014	Radio	Cheyenne Radio Station	Laundry packets
11/14/2014	Radio	KUWT Worland, WY	Poison prevention programs
11/15/2014	Radio	KGAB Cheyenne, WY	Laundry Packets
11/24/2014	Radio	County 10 Fremont county, WY	Thanksgiving
11/28/2014	Newspaper	Sheridan Press	Thanksgiving
12/9/2014	Radio	KGAB Cheyenne, WY	Carbon Monoxide
12/11/2014	Television	KGWN TV Cheyenne, WY	Carbon Monoxide
12/15/2014	Radio	KGAB Cheyenne, WY	Holiday Hazards
12/15/2014	Radio	KUWT Worland, WY	Button battery safety
12/23/2014	Newspaper	Northern Wyoming Daily News	Button battery safety

Poisoning Data Collection

The Nebraska Regional Poison Center submits all of Wyoming's poisoning data to the American Association of Poison Control Centers' National Poison Data System. This data is used both nationally and locally to target poison prevention efforts, improve poisoning treatment, and identify poisoning trends.

Professional Education

The Nebraska Regional Poison Center contributes regularly to health care professionals' knowledge in the area of clinical toxicology. The medical director writes periodic clinical toxicology updates for emergency department staff. These are faxed to all Wyoming hospital emergency departments and posted on the NRPC's web site. The following updates were sent to Wyoming hospitals in 2014:

- Hazards of Nicotine Ingestions
- Electronic Cigarettes
- Ethylene Glycol and Methanol Levels
- Potion #9
- Caffeine Powder
- Single Use Detergent Sacs (SUDS)
- Gastrointestinal Decontamination with Activated Charcoal
- When Acetaminophen Levels Are off the Chart

On October 28, 2014 Dr. Kirschner traveled to Wyoming and gave a Drugs of Abuse presentation at the Wyoming Medical Center in Casper, WY. Approximately 25 emergency department physicians, hospitalists and nurses attended the presentation.

Hazardous Material Incidents/Terrorism

The Nebraska Regional Poison Center assists first responders, hospitals, and the public during hazardous material incidents. The center also assists with planning and response for chemical, biological, radiological, and nuclear (CBRN) incidents by:

- Providing immediate CBRN treatment information to health care professionals and the public on a 24-hour basis
 - NRPC staff have received specialized training on CBRN agents
 - NRPC houses an extensive reference library on CBRN agents
- Providing educational presentations to health care professionals on recognition and management of CBRN agents
- Assisting the Wyoming Department of Health with surveillance
- Tracking pharmaceutical capabilities in Wyoming and assisting in the transfer of antidotes between hospitals

An Estimate of Medical Cost Savings from Poison Center Services

The Nebraska Regional Poison Center reduces medical costs associated with treatment of poisoning by decreasing the inappropriate use of emergency departments and by preventing poisoning case progression through early intervention. In addition, the NRPC reduces costs by preventing poisonings.

The following shows how NRPC reduced the cost of poisonings in Wyoming in 2014:

Average estimated cost for emergency department poisoning evaluations = \$1245

If Wyoming did not have a poison center, theoretically, all callers in 2014 would have visited an emergency department.

Human poison exposures in 2014 = 4,848

Total cost of emergency department visits = \$6,035,760

The majority of exposures were managed safely at home by Wyoming's poison center. In 2014, 3,222 poisoning exposures were managed on-site in a non-health care facility.

The cost savings from the prevention of unnecessary emergency department visits is: $3,222 \times \$1,245 = \$4,011,390$.

In 2014, the State of Wyoming reduced the cost of poisonings by 67%, resulting in savings of at least **4 million dollars**. For every dollar spent on poison center services by the State of Wyoming, there is a return of 90 dollars in saved health care costs to the consumer. This estimate does not incorporate savings resulting from poison prevention efforts throughout Wyoming, increased efficiency in medical management of poisonings, or reductions in ambulance and inpatient care utilization.

2014 Quality Improvement Report

Case Audit:

Case audit is an important component of the Nebraska Regional Poison Center's quality improvement program. All human exposure cases involving substances not included on the NRPC list of non-toxic substances are audited daily by Certified Specialists in Poison Information. Each case is reviewed to determine whether the call was handled appropriately, to check calculation accuracy and documentation completeness. The purpose of auditing is three-fold:

1. Quality Assurance - to ensure proper case management.
2. Education - to help the employee learn from mistakes or learn how a case might have been handled better. The audit is also used to commend the individual when cases are handled well.
3. Data Collection - to maintain a complete and accurate database of poisoning cases.

Calculation Errors: All assessment calculations are checked for accuracy. If the auditor identifies a calculation error, the case is forwarded to the Managing Director who generates a Calculation Error Report. The report summarizes the case history, identifies the specific error, and documents what the correct calculation should be. The reports are used as a teaching tool, especially for new Specialists, and are also used to identify calculations to focus on during orientation of new staff. Calculation errors are tracked and integrated into Specialists' performance evaluations.

In 2014, the Wyoming calculation error rate was 0.02% (1 error out of 5,970 calls handled). The error did not result in case mismanagement.

Management Errors: All cases are evaluated for appropriateness of case management. Most cases are audited the same day of the call, and the auditor takes immediate action to optimize patient outcome when a mismanaged case is identified. Deviation from appropriate case management or follow-up, and deviation from medical director-approved clinical triage/treatment protocols (unless the case has been discussed with the on-call toxicologist) results in a management error. Failure to do follow-ups at the time stipulated by the clinical protocol is also considered an error. If the auditor identifies an error, the case is forwarded to the Managing Director who generates a Management Error Report and discusses the case with the Specialist as

needed. Management errors are tracked and integrated into Specialists' performance evaluations. The reports are used to identify problem areas in case management, which are then discussed with staff. The reports have also prompted the development of new or revised protocols or procedures.

In 2014, there were no Wyoming management errors.

2014 Quality Improvement Report

Other Quality Assurance Activities:

In addition to the regular audit process, all Wyoming hospitalized cases are reviewed by the medical director, Dr. Ronald Kirschner. Feedback is then provided to the staff regarding management of those cases. Also, Dr. Kirschner does regular "rounds" with staff and student rotators, which is a discussion of the hospitalized cases being followed by staff. The "rounds" involve interactive discussion of the treatment plan and essential information needed during case follow-up.

The Nebraska Regional Poison Center conducted client satisfaction surveying in 2014. Surveys were periodically done via telephone to a random portion of non-health care professional callers. Results are used to monitor overall satisfaction with the NRPC. A scale from one (poor) to six (excellent) is used.

Satisfaction Parameter	2014 Average Score
Courtesy	6.0
Clarity of Communication	6.0
Completeness of Information Provided	6.0
Overall Satisfaction With Service Provided	6.0

Continuing education contributes to quality assurance by providing up-to-date toxicology information for NRPC staff. Clinical presentations are provided by specialists in poison information, the medical directors, and various guest speakers. The following topics were presented to staff in 2014:

Date	Topic	Presenter
1/14/14	NACCT Highlights 2013	Ron Kirschner, MD
2/11/14	Cardiac Medications Part 1	Ron Kirschner, MD
3/13/14	Cardiac Medications Part 2	Ron Kirschner, MD
4/10/14	Natural Toxins	Ron Kirschner, MD
5/8/14	ICU Therapies for Pediatric Poisoned Patients	Joshi Prashant, MD
6/5/14	Quality Quorum Flu on Call Training	Ron Kirschner, MD Kathy Jacobitz, RN, BSN
7/31/14	Pesticides	Ron Kirschner, MD

8/28/14	APAP study/Pediatric Coin Ingestions	Ron Kirschner, MD
9/23/14	Caustics	Ron Kirschner, MD
11/19/14	NACCT Highlights 2014	Ron Kirschner, MD
12/16/14	Guideline Review	Ron Kirschner, MD