

Minnesota Poison Control System

2015 Annual Report

Serving Minnesota since 1972
www.mnpoison.org



The Minnesota Poison Control System

(Poison Center) has served the residents of Minnesota since 1972. It is one of only 55 U.S. Poison Centers accredited by the American Association of Poison Control Centers (AAPCC), which sets stringent criteria to ensure quality service and care.



Jon Cole, MD, speaking at a press conference on nicotine

In 2015, we answered 47,406 calls from Minnesota residents and health care facilities regarding patients that either were or were in danger of being poisoned. Calls to the Poison Center are answered 24/7 in real time by experienced pharmacists certified by the AAPCC as Certified Specialists in Poison Information. This wealth of experience allows us to continue to keep 92% of all patients safely in their homes while offering up-to-date, cutting edge advice to the small number of patients who require specialized critical care. Studies estimate for every dollar spent on Poison Centers, \$13.39 is saved in unnecessary health care costs and lost productivity, saving Minnesotans over \$32 million dollars last year.

Each year the epidemiology of poisonings changes in Minnesota and the Poison Center serves a unique surveillance role in tracking these trends. In 2015, we continued to see the rise of e-cigarettes and liquid nicotine exposures in both adults and children. In addition, we maintained our collaboration with the Minnesota Department of Health in an exploratory epidemiologic investigation to track the health care burden of illicit synthetic drug use in Duluth, Minnesota.

The Minnesota Poison Control System is supported by consulting medical toxicologists who volunteer their time to assist clinicians across the state treating critically ill poisoned patients. On behalf of our Associate Medical Directors, Drs. David Roberts, Benjamin Orozco, and Louis Ling, we would like to sincerely thank Beth Baker MD, Elisabeth Bilden MD, Jennifer Englund MD, Carson Harris MD, Katherine Katzung MD, Michael Kinnan MD, JoAn Laes MD, Samuel Stellpflug MD, Mathew Sztajnkrzyer MD, and Andrew Topliff MD for their service.

We strive to prevent poisonings wherever possible via an active education program. In 2015, the Poison Center conducted poison prevention events attended by over 13,000 people and participated in 123 professional events attended by health care professionals. On site, we educated students and residents in multiple specialties and we also continued our very successful collaboration with HealthPartners Institute for Graduate Medical Education as a major training site for Minnesota's only Medical Toxicology Fellowship.

The Poison Center was successful in obtaining an additional annual appropriation of \$750,000 at the 2015 Minnesota state legislature – the bill was signed into law by Governor Dayton on May 23rd. This funding augments a \$500,000 annual appropriation increase in base funding passed during the 2013 legislature. Funds are being used to maintain statewide emergency 24/7 call center services and to provide additional prevention education and public health surveillance. More than 450 people from hospitals, EMS, disaster preparedness coalitions, community groups, and the public across the state assisted with letters, emails and phone calls to legislators, testimonials, critical contacts, and coalition building. The statewide Poison Center Coalition in support of this critical funding ultimately included 117 groups, hospitals, clinics, and disaster preparedness coalitions serving every county in Minnesota. We are deeply grateful for the support and help in this effort.

We look forward to serving Minnesota in 2016.

Jon B. Cole, MD
Medical Director

Deborah L. Anderson, PharmD
Managing Director

Meet Our Staff

Director

Deborah Anderson, PharmD

Medical Director

Jon Cole, MD, ABMS

Senior Associate Medical Directors

Louis Ling, MD, FACMT, ABMT, ABMS

David Roberts, MD, ABMT, ABMS

Associate Medical Director

Benjamin Orozco, MD

Clinical Supervisor

Stacey Bangh, PharmD, DABAT

Educator

Kirk Hughes, RN, EMT-B, CSPI

Specialists in Poison Information

Rachel Brandt, PharmD, CSPI

Alisha Floan, PharmD, CSPI

Gregory Grande, RPh, CSPI

Ted Gray, RPh, CSPI

Alyssa Klotz, PharmD, SPI

Rebecca Lange, PharmD, SPI

Samantha Lee, PharmD, CSPI

Chris Lintner, RPh, DABAT, CSPI, BCPS

Hsiao-Ting Regelman, PharmD, SPI

Steve Setzer, RPh, CSPI

Kelsey Stokkeland, PharmD, CSPI

Jill Topeff, PharmD, CSPI

Greg Wedin, PharmD, DABAT

Laurie Willhite, PharmD, CSPI

Consultants

Beth Baker, MD, ABMS

Elisabeth Bilden, MD, ABMS

Jennifer Englund, MD, ABMS

Rebecca Gardner, MD

Carson Harris, MD

Katherine Katzung, MD, ABMS

Mike Kinnan, MD, ABMS

JoAn Laes, MD, ABMS

Sam Stellpflug, MD, ABMS

Matthew Sztajnkrzyer, MD, ABMS

Andrew Topliff, MD, ABMS

***ABMS American Board of Medical Specialties*

***DABAT Diplomate of the American Board of Applied Toxicology*

***CSPI Certified Specialist in Poison Information*



Samantha Lee, PharmD,
Certified Specialist in Poison Information

Poison Information Providers

Jane Axelrod

Jenna Bednar

Sarah Derr

Calley Gruenhagen

Francis Herzog

Amanda Kurtti

Renee Petroski

Toxicology Fellows

Sean Boley, MD

Jenna LeRoy, MD

Abby Montague, MD

Travis Olives, MD

Administrative Support

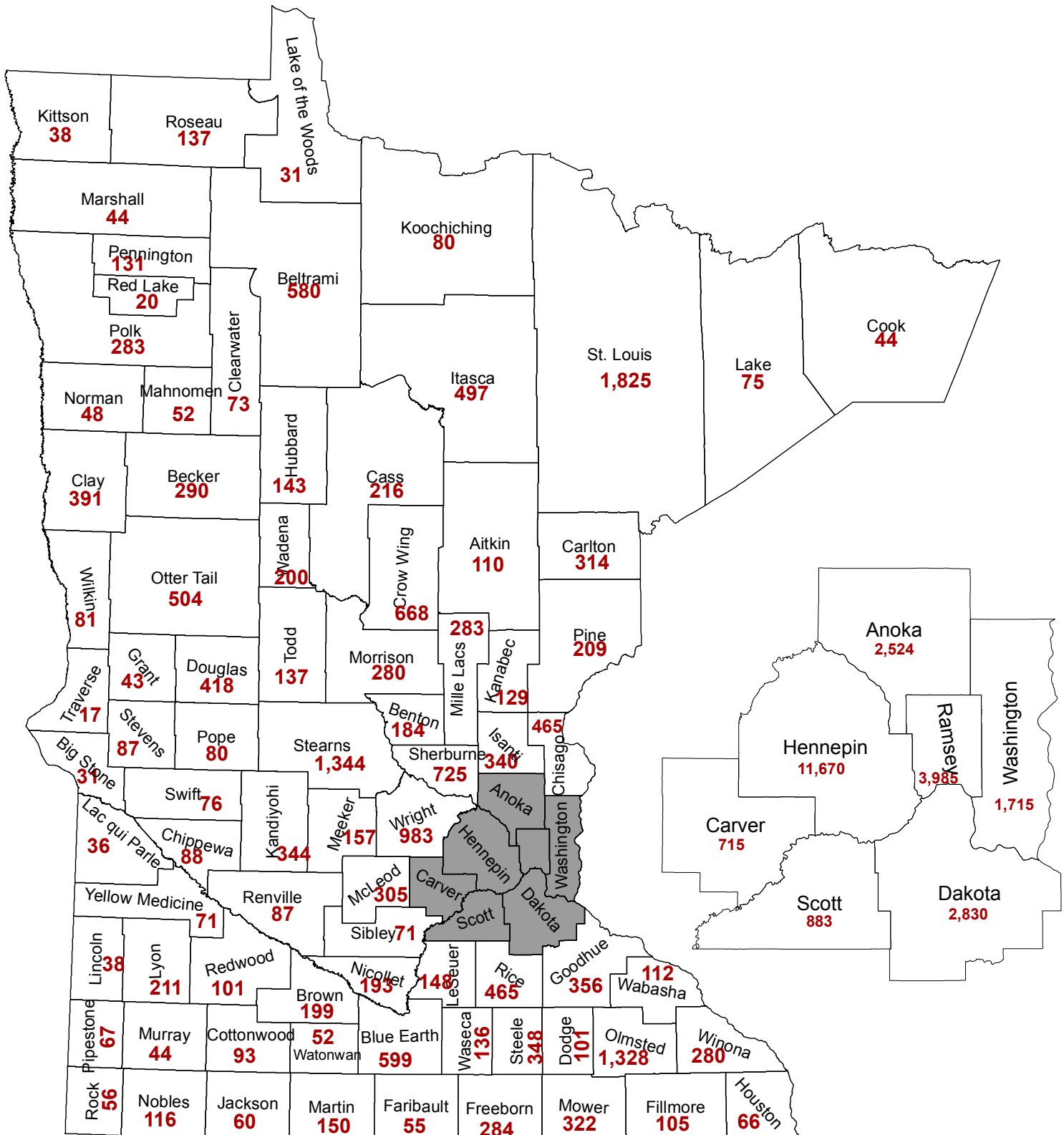
Kimberly Burns

LaVonne Leih

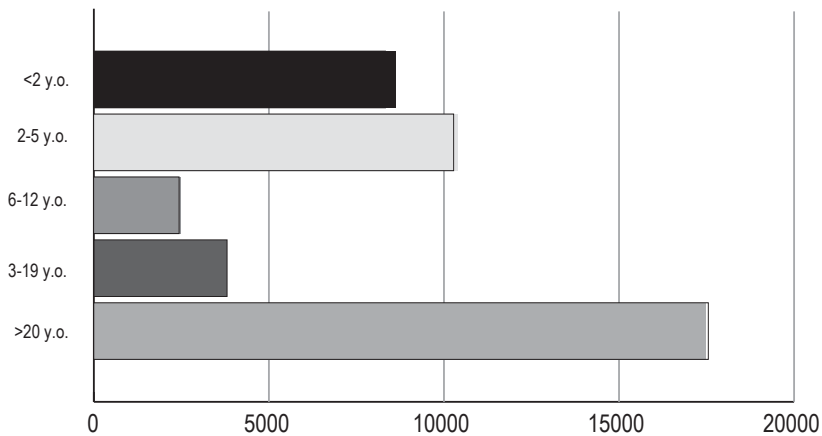


Thank you to Minnesota State Legislature and Minnesota residents for supporting funding for Poison Center Services.

Calls Per Minnesota County

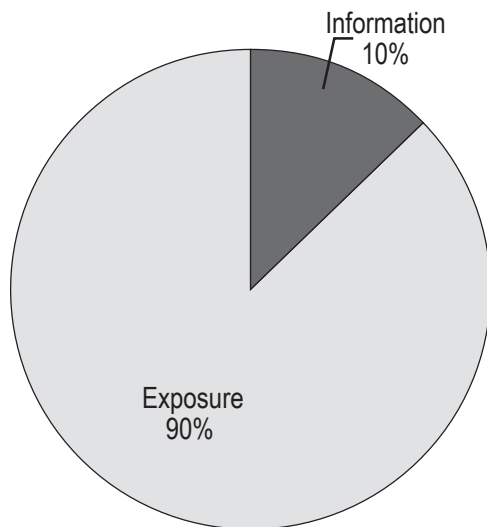


Age of Patients

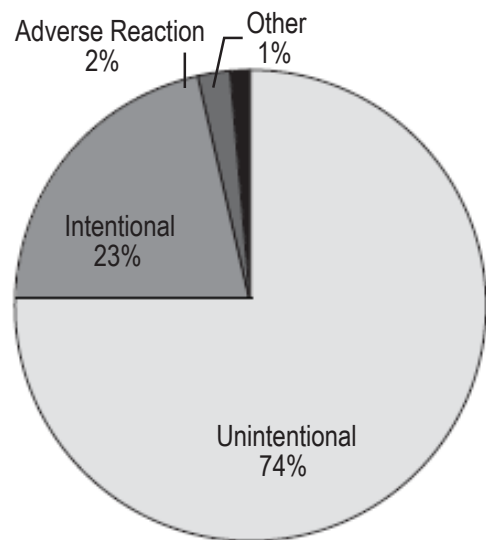


- 1-800-222-1222 is available 24/7, including all holidays
- Provided IMMEDIATE help to 47,406 callers in 2015
- Calls are free of charge and information is kept private
- Minnesota Relay and interpretive services available
- Staffed by specially trained pharmacists nationally certified as Specialists in Poison Information
- In 2015, 44% of calls involved a child under the age of 6 years

Number of Calls

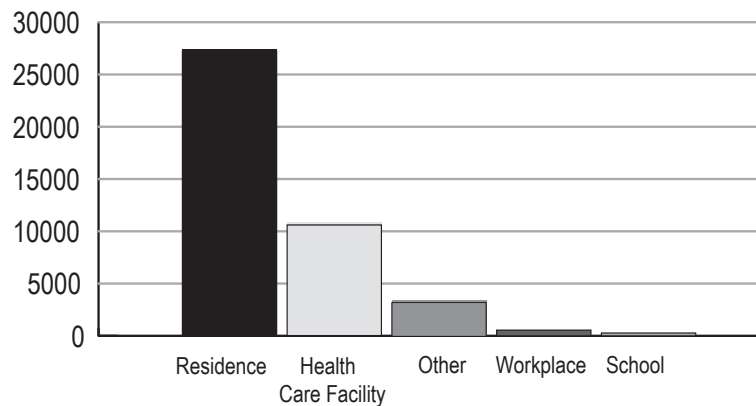


Reason for Exposure

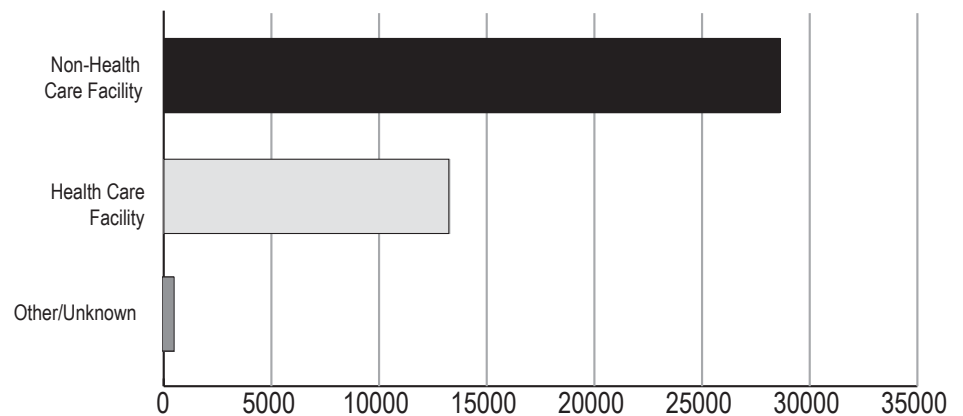


- 92% of exposures occurring in a residential setting were safely managed at home with Poison Center assistance
- 85% of callers would have sought emergency medical attention if the Poison Center was not available
- 25% of calls received were from health care providers seeking patient treatment recommendations
- 89% of calls transferred from nurse lines were able to be managed at home
- 62% of exposures involved prescription and/or over-the-counter medications

Caller Site



Management Site



Top 5 Substances Involved in Poisoning

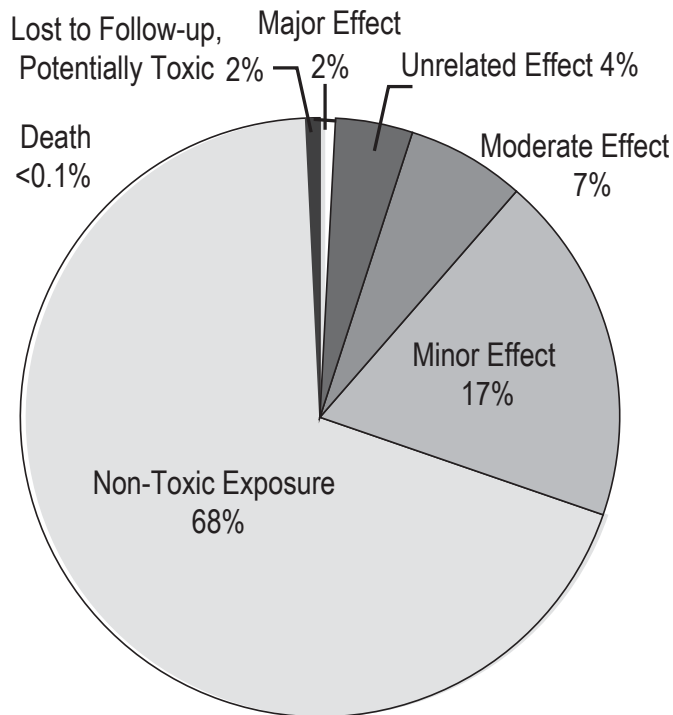
Non-Drug

1. Cosmetics, personal care items
2. Household cleaners
3. Foreign bodies, toys, silica gel packets
4. Alcohols
5. Pesticides

Drug

1. Analgesics
2. Antidepressants
3. Sedatives, Hypnotics, Antipsychotics
4. Cardiovascular drugs
5. Stimulants and Street Drugs

Medical Outcomes



- Patients admitted to hospitals with poisonings who receive Poison Center assistance have measurable reductions in average hospital stays
- Total annual expenses \$2,101,570
- 82% of budget are personnel expenses
- Every \$1 spent on Poison Center services saves an estimated \$13 on unnecessary health care costs and lost productivity
- \$27 million in costs avoided annually through use of the Poison Center

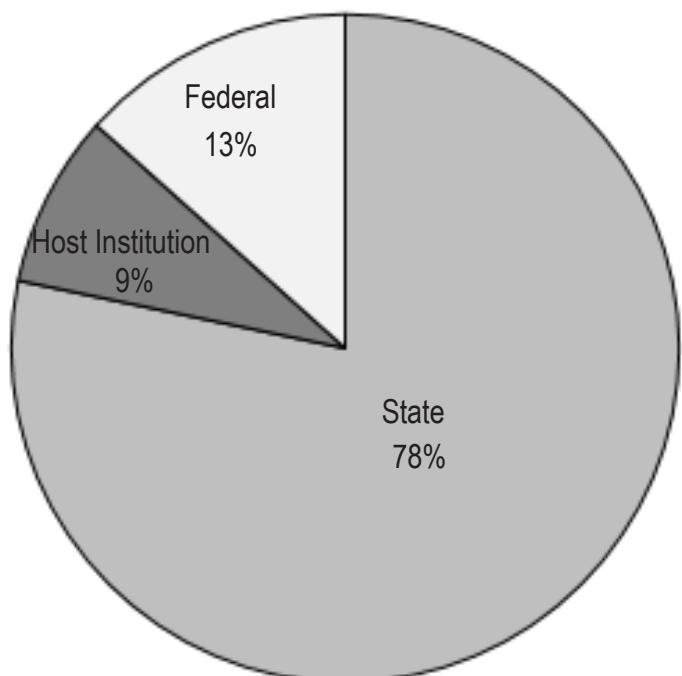
Statewide Public & Professional Education Outreach

- Distributed 80,816 pieces of poison prevention materials
- Participated in 109 public poison prevention events to over 13,000 Minnesotans
- Conducted 123 professional training events to public safety and health care professionals

On-site Health Care Professional Education

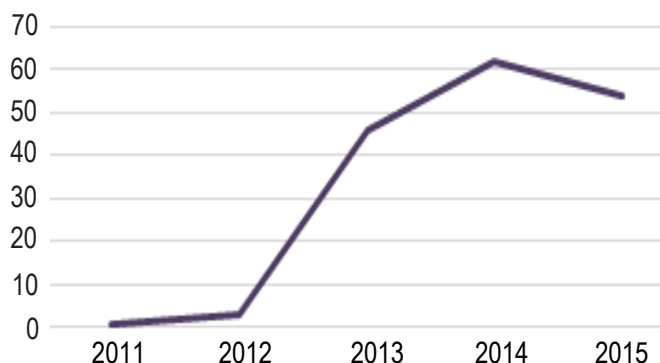
- 29 medical residents (emergency medicine, family medicine, pediatrics)
- 5 physician medical toxicology fellows
- 20 pharmacy residents and students
- 17 medical students

Funding Sources



Electronic Cigarette Exposures

E-cigarette/Liquid Nicotine Exposures Among Minnesota Children Aged 5 Years and Younger: 2011-2015



E-cigarette/Liquid Nicotine Exposures Among Minnesota Children: Age Breakdown for 2011-2015

Age	2011	2012	2013	2014	2015
<1 year	0	0	7	10	4
1 year	0	0	17	17	23
2 years	1	3	12	22	17
3 years	0	0	6	10	4
4 years	0	0	3	1	5
5 years	0	0	1	2	0
Exact Age Unknown (<=5 years)	0	0	0	0	1
Subtotal 5 and under	1	3	46	62	54

- Electronic Cigarettes are vaporizers that heat concentrated flavored nicotine liquid to be inhaled.
- Nicotine poisoning can cause symptoms such as abnormal heart rate, agitation, nausea, vomiting, and seizures.
- There were 91 total exposures to e-cigarette devices or liquid nicotine in 2015.
- The most common route of exposure for 0-5 year olds was ingestion (85% of cases).
- In 2015, the Minnesota Poison Control System hosted a press conference with the Minnesota Department of Health regarding e-cigarette and liquid nicotine safety.



Minnesota Poison Control System
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