

# When Seconds Count

With answers to more than 50,000 phone calls a year, the Oklahoma Poison Control Center saves lives while training young toxicologists.

BY DEBORAH BENJAMIN      Photos by Robert Taylor

**T**he culprit can be as small as an aspirin or as tantalizing to a child's eye as some thin, colored liquid. Poison, after all, takes many forms. Whatever the substance, though, the specialists manning the Oklahoma Poison Control Center's hotline probably have answered a call to remedy its exposure.

Tick and snake bites, overdose, consumption of a foreign substance—these are the types of treatment inquiries that come into the Oklahoma Poison Control Center each day.

The poison center, housed in the Children's Hospital of OU Medical Center, is manned 24 hours a day, seven days a week to answer those questions. Along with answers, specialists help to bring with them a sense of calm during a trying event.

"I'm amazed at how many parents start off with, 'I'm sorry to bother you.' It's what we're here for," says Lindsay Larson, a fourth-year pharmacy student at the University of Oklahoma who interns at the center. "I'd much rather a parent call me because their child licked a Tylenol than have the coroner call us."

"A lot of times we have to delve into what's going on: 'What's the real story?'" adds Scott Schaeffer, a pharmacist who specializes in poison information. According to Schaeffer, sometimes an individual will

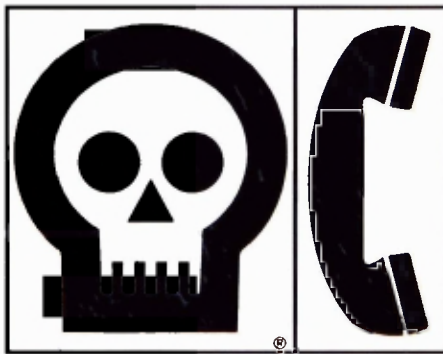
call on behalf of another adult. And while the center's poison experts want to speak directly to the affected adult or the parents or guardian of an affected child, they are trained to get to the bottom of every scenario they are presented, no matter who is on the other end of the line.

"It's almost like playing detective. . . . We have to figure out what they're really asking in a lot of cases," adds Schaeffer, whose desktop full of humorous trinkets belies the somber nature of his job. "You have to play pharmacist, psychologist, confidante."

The small staff on duty, locked behind the dark oak doors along the first-floor halls of the Children's Hospital building, chats between calls. But seldom is a telephone quiet; within seconds a new crisis is on the line. And when a call is taken, there is a sense of hushed concern. In many instances, the poison center staff will follow up on a case within an hour to ensure that the affected individual is in good health.

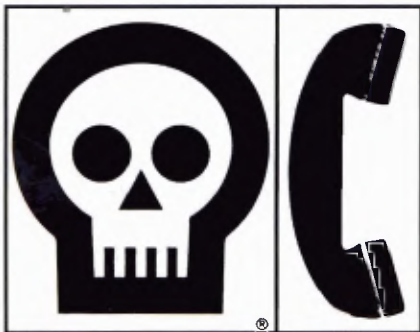
The center estimates that it is able to treat 78 percent of its exposure calls at the home, preventing callers from unnecessary trips to the emergency room. By doing this, Lee McGoodwin, managing director of the Oklahoma Poison Control Center, calculated the center saved the state more than \$11 million in 2005 alone.

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From cleaning products to motor oil, these poison “lookalikes,” shown here with their benign counterparts, can spell big trouble for children who have not yet learned to read. An important feature of the Oklahoma Poison Control Center is its outreach program, which helps educate parents and care providers on ways to keep poisons beyond the reach of toddlers and young children.



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Handling more than 50,000 calls each year, with about 56 percent coming from parents or caregivers of children under the age of five, the Oklahoma Poison Control Center serves all of the state’s 77 counties and employs 11 full-time specialists, eight of whom are pharmacists, and three registered nurses.

That is a far cry from the center’s beginnings in the 1960s, when it took up a corner in a laboratory of the State Health Department. The center only answered about 500 poison calls in 1962. In 1972,

the year that the center moved to the Pediatric Division of Maternal and Child Health Services of the State Health Department, it received almost 10,000, largely from the Oklahoma City metropolitan area. By 1978, the Oklahoma Poison Control Center operations transferred to Children’s Memorial Hospital, and through the addition of a toll-free number, the center’s service capacity increased to cover the entire state. The Oklahoma Poison Control Center was recognized legally in 1994, when the

Oklahoma Legislature passed the Oklahoma Poison Control Act, which also mandated that the OU College of Pharmacy administer all operations of the Oklahoma Poison Control Center in cooperation with Children’s Hospital of Oklahoma.

In 2003, McGoodwin says, the Oklahoma Poison Control Center became a certified poison center as independently evaluated by the American Association of Poison Control Centers. There currently are about 60 poison centers across the country, and every state has access to a center.



Lee McGoodwin, managing director of the Oklahoma Poison Control Center, reviews some recent exposure cases. By surveying patterns of symptoms reported by clients who call the center, specialists can spot possible areas in the state where chemical spills or terrorist activities have occurred.

“I started with the center in 1990. . . . We didn’t have a medical director either. We had one computer and no budget,” says McGoodwin, with a chuckle. As she walks through the center’s headquarters, it is clear that a lot has changed since she began, and for the better. The Oklahoma Poison Control Center now has a medical director, Dr. William Banner Jr., a budget of more than \$1 million and several computer workstations with side-by-side dual monitor displays. And the tedious microfiche of information that McGoodwin had at her disposal at that time has been replaced with software capable of culling such data as the number of cases, clinical effects, therapy/outcome and scenario, among others.

Most people know the Oklahoma Poison Center’s purpose: to assist the community as well as medical professionals, hospitals and law enforcement agencies by providing poison information and advice. What many people may not realize is that the center also is the training ground for many OU pharmacy student interns who want to learn more about toxicology.

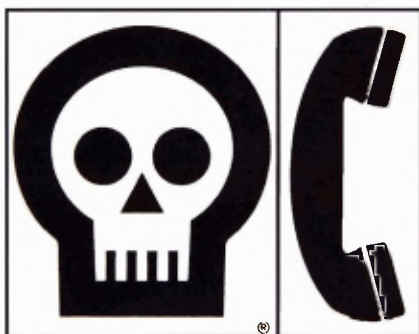
Take Larson, for instance, who has been working at the center since her freshman year in the College of Pharmacy. At the nascent stages, a student intern will gain experience in toxicology by listening to how trained professionals handle exposure calls. When she began, Larson’s duties consisted of taking down basic



Shannon Holcombe, education coordinator for the Oklahoma Poison Control Center, stands in front of posters submitted by Oklahoma students for the National Poison Prevention Poster Contest. Over the past seven years, Oklahoma youth have produced winning posters five times in the national competition.

information from the caller. As her knowledge grew, she has advanced to finishing certain calls—generally those in which the person has no symptoms. McGoodwin says students always confer with a certified specialist. Eight students currently intern at the center, and five more are in training.

“An important part of our education and training is listening in [on calls], so that if in the future they feel we’re mature enough and ready, we can take that call. For example, when I first started, I couldn’t take any calls involving Tylenol, because I didn’t know how to do the calculations [measuring a person’s body weight versus the amount of Tylenol ingested to determine whether the levels are toxic]. I didn’t know the numbers. As I listen in, I am able to handle some of those minor Tylenol issues—where today one parent gives a dose and three



hours later the other parent gives a dose without having realized it was already given. I can help them out,” Larson says.

“I like the fact that I have so much patient exposure, that I am still able, in this short amount of time, to get this information to truly help someone either save a life or at the very least save some panic, save some worry.”

Dena Fisher, a recent graduate of the OU College of Pharmacy, spent a month interning with the Poison Control Center and has devoted considerable time

working on an antidote chart, which will list recommended antidotes and amounts for hospitals and health-care facilities to have on hand, since many of the antidotes are in short supply and can be pricey to keep in stock. Fisher not only has learned about how serious the antidote shortage is in Oklahoma and the nation, but, through her research, she also is helping to complete a necessary component for the center to gain recertification this year.

Fisher says her short time as an intern has been rewarding.

“I’ve learned about toxicology in class,” she says, “but the information that the pharmacists have here is really beyond what we learned in class.”

For the Oklahoma Poison Control Center, that information must extend beyond students and classroom; the public must be educated about ways of preventing poison exposures. That is where Shannon Holcombe comes in. Holcombe, education coordinator for the center, helps to coordinate outreach efforts in poison prevention.

Grade school-age children’s colorful crayon posters adorn the center and show just how important it is to get the poison-prevention message out to youth. “Make poison extinct,” reads a poster with a menacing T-rex. Making poisonings extinct, so to speak, is a tough job, but Holcombe is clearly up for the challenge. The children’s messages must be applied to daily life. Holcombe says the center has made great efforts to work with Oklahoma schools and day-care centers, as well as with Head Start and the Women, Infants and Children Program. Plus, hospitals give new parents information about the center.

“We generally speak to as many schools as possible,” Holcombe says, noting that she receives requests to visit with students as young as pre-kindergarten, using a cartoon porcupine named Spike to deliver the message, all the way through high school. “It’s all poison prevention, and we have it age-appropriate, so we have different curriculum for each age group.”

Holcombe also coordinates outreach



Scott Schaeffer, a senior poison specialist with the Oklahoma Poison Control Center, eyes the center’s database while he fields a call on the hotline. Schaeffer said poison specialists – who man the center 24 hours a day, seven days a week – meticulously document each case in their investigation of poison exposures.



Taking one of the thousands of calls that the Oklahoma Poison Control Center receives each year, Lindsay Larson, a fourth-year pharmacy student at the University of Oklahoma, inputs caller information into a database. Pharmacy students like Larson receive valuable, hands-on training in toxicology as part of their internship with the center.

programs for minorities. The center received a grant three years ago to educate Oklahoma's Native American population about poison prevention. Holcombe says poisonings are high in the Native American community.

"We worked with the Indian Health Authority, here in Oklahoma City, and all the CHRs, which are their community health representatives—and there are several or one for each tribe. And we did a 'train the trainer' program with them, which is a three-hour program that teaches basic poison prevention so they can go out to their families or clients and teach prevention," Holcombe says. The tribes were supplied with various prevention materials, including brochures, handouts and two DVDs, both produced by the center and targeting the needs and issues

of the Native American community, all at no charge.

A similar effort will soon be under way for the Latino population. Brochures in Spanish already are available.

Keeping Oklahomans safe, healthy and together is important to the center, and it shows in the center's workspace. Family photos cling to metal cabinets with the help of the red, black and white Poison Control Center magnets, an almost constant reminder of the center's mission: to prevent any poisoning that could harm a loved one.

"We did a survey in 2005—it was a satisfaction survey—but in this survey I did ask if [callers to the center] had insurance and what kind of insurance. . . . We found that over 90 percent of them, if they didn't have a poison center available, would

have just gone to the emergency room. Some would have stayed at home and not sought treatment," McGoodwin says.

"We definitely save lives." ■

*For more information about the Oklahoma Poison Control Center, log on to <http://www.oklahomapoison.org>. The poison center's Web site also offers free poison prevention materials for educators to download as well as information for adults and health-care workers, not to mention games for children and first-aid tips. The poison center's helpline is (800) 222-1222. All calls are free and confidential.*

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