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**Falling standards, rising peril;
RISKY RIDE / A SPECIAL REPORT Millions of people ride the nation's
600,000 elevators and 30,000 escalators every day, assuming that they are
safe. But a four-month Globe investigation has found that crippling
accidents -- even deaths -- occur with alarming frequency. First of three
parts
This project was overseen by Stephen Kurkjian, senior assistant
metropolitan editor.**

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The usual workday bustle in a crowded lobby of the McCormack state office building came to an abrupt halt one day last year when horrified employees waiting for an elevator saw streams of blood flow down the closed elevator door.

From the floor above, harrowing screams pierced the morning routine.

There, 38-year-old Andy Gomez, the state's undersecretary for education, was sprawled on the floor of an elevator, his mangled leg crushed in the small space between the floor of the elevator and the wall of the shaft.

His leg was nearly severed, according to witnesses.

Gomez was alone when he entered the elevator from the garage on his way to the Education Department's offices on the 14th floor. As he stepped into the elevator, investigators believe, the car began moving with the doors open, knocking Gomez down. The doors then closed on Gomez' leg as the elevator traveled up. During the ascent, his leg was pulled farther out of the car and crushed against the shaft wall.

Quick-acting Boston firefighters used inflatable devices to free Gomez, and surgeons at Massachusetts General Hospital saved his leg during a 30-day hospital stay. But the once-active Gomez, father of two small children, today needs a cane to walk. He has left Massachusetts and moved to Florida.

Tragically, accidents similar to what happened to Gomez are occurring with increasing frequency.

A Globe investigation has found that tens of thousands of people, from small children to senior citizens, are injured on the nation's escalators and elevators every year.

Riders trapped in out-of-control elevators or caught on malfunctioning escalators have lost fingers, toes, arms and legs. Children have been maimed, adults have been crippled. In the past few years, dozens have died.

Last year, the number of people injured in such accidents nationally - one rough estimate puts it at close to 18,000 - shot up by nearly 20 percent.

Most of the accidents are preventable. But government's failure to properly inspect elevators and escalators,

companies' reluctance to adopt proven safety measures, and a cozy relationship between the industry and inspectors mean that when someone steps into an elevator or onto an escalator, he or she may be taking an unnecessarily risky ride.

The industry defends its record.

"Our guarantee is that on a per capita basis, this is the safest form of transportation in the world," said Steve McWilliams, executive director of the National Association of Elevator Contractors.

But such statements are merely guesses. Without the reporting requirements imposed on airplanes, automobiles and trains, there is no way to compare the safety records of elevators and escalators with other forms of transportation.

Among the probe's major findings:

- Despite an estimated 85 billion elevator and escalator trips annually in the United States, the industry is free of the stringent federal regulatory requirements imposed on other transportation industries, such as mandatory reporting of safety problems and defects.

- With no federal oversight, regulation of elevator and escalator companies is left to the states, which do a checkered job. In Massachusetts, for example, almost half the escalators and elevators are not inspected annually, as required by law.

- With no requirement to compile accident statistics, the industry has funded a publicity campaign that blames accidents not on unsafe equipment, but careless riders.

- The codes for construction of elevators and escalators in the United States are far less stringent on safety issues than those in place throughout Europe and Canada - partly because the committees that set the codes are controlled by the industry.

- Thousands of accidents, many resulting in horrific injuries, are not reported to those responsible for investigating them. In Massachusetts, a review of lawsuits in Boston-area courts shows that as many as 75 percent of accidents are not reported to the public safety department by building owners and elevator and escalator companies, despite a law that requires such notification.

- There are close ties between elevator and escalator companies and the regulators who inspect their equipment and investigate accidents. Critics charge this relationship means that inspectors rarely challenge the safety practices of the companies.

Millions of Americans ride elevators and escalators without incident every day. But Bernard Dolan, an elevator consultant, says, "You are taking a risk as the general public riding elevators. There is a high percentage of unreliability."

Even Public Safety Commissioner Larry F. Giordano, in charge of overseeing the inspection of all elevators and escalators in Massachusetts, is cautious. Giordano, who resigned unexpectedly Friday, confided, "I don't like elevators or escalators. I use the stairs."

David Ohlson, a 29-year-old Lynn man, learned firsthand the unfortunate consequences of the elevator industry's cost-conscious attitude and reluctance to adopt an aggressive approach toward safety.

Ohlson suffered a serious head injury when the elevator he boarded at the University of Massachusetts at Boston, expecting to ride to the basement, suddenly shot up, soaring five stories in seconds before crashing into the roof of the elevator shaft.

"I thought I was going to die," Ohlson said recently of the accident.

The March 12, 1990 accident transformed Ohlson from a dean's list student and full-time master electrician to an unemployed drop-out who suffers from frequent seizures caused by brain damage, blurred vision and back pain.

A state probe concluded that a drive shaft broke away from the motor. The fracture caused the 4,200-pound weights that counter-balance the elevator car to fall to the bottom of the shaft, catapulting the car into the roof.

If the elevator was outfitted with a simple device known as a rope brake, Ohlson likely would have walked away unscathed, according to elevator specialists. When an elevator starts moving too fast, sensors cause the brake to clamp onto the elevator cables, stopping the car.

The rope brake has won support from US safety officials because it stops out-of-control elevators that are moving up or down. Conventional safety devices are designed to stop cars only when they are dropping.

But the rope brake, like several other safety inventions, has been spurned by elevator companies, which frequently reject obvious safety improvements that are invented by someone outside the company or deemed too costly, safety advocates say. Rope brakes cost about \$ 8,000 to install.

Despite rigorous, successful testing and the backing of safety officials across the country, the rope brake has been installed on only about 40 elevators in the United States, said Ray Gielarowski, president of Bode America, which sells one of two rope brakes available in the United States.

However, the rope brake is not required by the national elevator code, which specifies how elevators are built - and how much emphasis is put on safety. The codes for elevators and escalators are set by committees controlled by manufacturers and industry representatives. There are no representatives of consumer groups and few independent experts.

George Gibson, chairman of a special code committee task force studying up-direction crashes, acknowledged the rope brake "has worked for years" in other countries. He said the delay in changing the code is solely the result of the task force expanding the scope of its review, not because of cost or who invented a device.

Lindley Manning, a Reno engineer who has investigated two up-direction crashes, including one that crushed a man's spine and reduced his height by 4 1/2 inches, said devices like the rope brake correct a fundamental flaw in elevators.

"There are devices out there to stop these accidents," he said. When asked why the elevator manufacturers fail to install these safety devices, he said, "The only thing I can think of is cost."

Although the code committee has been studying the issue of up-direction crashes since at least 1990, changes to the code are not expected soon.

For David Ohlson, any action will come too late.

Although he received a \$ 596,000 settlement from the Atlas Elevator Co. last year, Ohlson remains bitter that his dreams were dashed when he stepped into an elevator car in 1990.

"The money doesn't make me feel any better," he said. "I wanted to be a doctor."

David Ohlson and Andy Gomez are among the increasing number of people being rushed to hospital emergency rooms seeking treatment from elevator and escalator accidents every year.

Last year, according to the US Consumer Product Safety Commission, an estimated 17,711 people received emergency room treatment from such mishaps. The estimate, extrapolated from a check of 91 hospitals across the country, was 18 percent higher than the 1992 estimate of 14,457.

The emergency room estimate is the only source of national statistics for elevator and escalator injuries, but has a margin of error of 11 percent and no information on the cause of accidents, the type of equipment involved or specifics about injuries.

Hubert Hayes, a New York City elevator consultant, said the sampling vastly underestimates the injury numbers, which he put at more than 27,000.

"Nationwide, if we had a tracking system, I think we would be shocked at the number of accidents," he said.

With little in the way of statistics to counter its claims, the \$ 4.3 billion elevator industry has developed a largely

unchallenged mantra: The equipment is safe, but people are hurt when they misuse it.

"A lot of times, the safety problems associated with elevators, escalators, etc. relate not to the equipment, but unsafe ridership," said McWilliams of the elevator contractors' group.

To promote its message, the industry formed and funded the Elevator/Escalator Safety Foundation in 1991 to educate the public on safe riding. The group is currently promoting a campaign aimed at school children that is highlighted by a rap video and stickers urging them to "Be a Safe Rider."

Mechanical defects, poor maintenance, code inadequacies or deficient inspections are not mentioned in any of the group's publications.

"Our indications are the main cause of accidents is improper use of equipment," said Ray Lapierre, executive director of the foundation. Pressed for documentation to support his claim, Lapierre said the primary source is a "bunch of industry folks who have indicated what their feeling is."

However, The Globe found numerous cases where elevators and escalators allegedly failed or had not been maintained properly. They include:

- Luis Santiago, 2 1/2, suffered a partial severing of his thumb while holding onto the handrail of an allegedly defective escalator he was riding with his mother at the Maverick MBTA station in East Boston.
- Boston School Department custodian Edward Finn injured his back and leg in 1991 when an elevator at Hyde Park High School dropped three floors and crashed into the basement pit, a state report says. A school department report said the elevator had been previously classified unsafe.
- Charlesre is a state law requiring all escalator and elevator accidents to be reported to the state, most are not. When the state does not know about safety problems, they may not get fixed. And that can have disastrous effects, as 24-year-old Lisa Norton of Nashua learned.

Last December, the elevator in which she was riding plummeted four stories before stopping with a hard snap in the basement of the Westwood building where she works. The jarring impact, Norton says, forced a disc in her back to slide out of alignment. A year after the accident, she is often unable to pick up her 3-year-old son.

Norton's accident did not surprise her coworkers at Cellular One. Mishaps and malfunctions with the elevators in the building happened regularly, according to a lawsuit.

Yet as far as state inspectors knew, there was no problem with the elevator. Neither the building owner nor the company that maintained the elevator ever informed the state of prior accidents, records show. A spokeswoman for the building owner, Prudential Real Estate Advisors, declined comment because of the pending lawsuit by Norton.

Like most states, Massachusetts requires building owners and licensed elevator and escalator companies to report any accident or unsafe condition within 24 hours. Massachusetts officials know that the 92 accidents reported to the state last year represent a fraction of the actual number of accidents.

In his annual report this year, chief elevator inspector Robert T. Farley said, "In my opinion, procedures for the reporting of accidents is not being followed properly. Therefore, some of our figures may not be truly accurate."

The Globe reviewed 75 lawsuits, selected from hundreds of cases filed in the past 5 years against elevator companies, that alleged personal injury from accidents. The sample revealed that only 24 percent were reported to the state.

The state public safety department is responsible for enforcing the reporting requirement - but it doesn't. Giordano, the state's top inspection official, said he would have to go to court to punish companies that do not report accidents, a process he described as long and difficult.

Although state law allows for a \$ 500 fine for failure to report an accident, the state inspection office has sought fines in only one case; a judge declined to levy a fine.

When Gomez was hurt in the accident at the McCormack building at One Ashburton Place last year, the inspectors,

whose office is on the 13th floor of the same building, began an investigation.

Six days after the accident, two senior inspectors handed in a report blaming a malfunctioning relay device that allowed the elevator to move with its doors open.

For the Montgomery Elevator Co., under contract to maintain the elevators, the report was good news because it faulted equipment made and installed by other companies. After Gomez filed suit against Montgomery, the company turned around and filed claims against the relay manufacturer and the company that installed it.

The report also did not fault a Montgomery mechanic and his helper, who were working on the elevator shortly before the accident and had returned it to service earlier that day.

What the state's report does not note is that the two senior inspectors investigating the accident formerly worked for Montgomery. And the Montgomery employee who worked with state inspectors to find the cause of the accident was hired as a state inspector three weeks after the accident.

The man who oversaw the investigation was Farley, the state's chief elevator inspector who was fined by the state Ethics Commission in 1984 for a no-show job arrangement with Montgomery.

In an interview, Murphy said the fact that he and the other investigator on the Gomez case used to work for Montgomery had no influence on his investigation, and he was "1,000 percent sure" that the malfunctioning relay device caused the accident.

"It is just quite convenient that when you inspect the background of elevator inspectors and elevator companies, everyone knows everybody else," said Steven Schafer, a Boston lawyer who represents elevator-accident victims. "They go back and forth between the public and private sector. It seems to be too convenient to make for a completely arms-length inspection program."

This cozy relationship was evident at an October meeting of the Massachusetts Elevator Safety Association, comprised of inspectors and elevator company workers.

One session, with Boston lawyer Barry McDonough, was designed to help the inspectors answer questions they might get in a legal deposition. It also gave McDonough, who represents Montgomery in the Gomez accident, the opportunity to be seen in a favorable setting by inspectors whose investigations could make or break his client.

At one point, McDonough engaged in role-playing with Charles Murphy, the state's No. 2 elevator official and a lead inspector in the Gomez case. Murphy is scheduled to be a witness when the Gomez case goes to trial. He received a primer on how to handle himself in such legal forums from McDonough, who plans to depose Murphy in the Gomez case and will be the defense counsel in that trial.

During the session, attended by the Globe, McDonough admonished Murphy for guessing that he had inspected an elevator "about six weeks" before an accident.

"Don't ramble . . . don't guess," he warned. If Murphy didn't remember the exact date, McDonough said, he shouldn't answer.

McDonough declined to comment about the Gomez case.

The state report contained just two short statements from the Montgomery mechanics about their work on the elevator. Murphy acknowledged that the work was relevant; in fact, he said, he was "convinced the Montgomery mechanic and his helper caused" the relay to malfunction when they were cleaning the elevator machinery.

So why leave it out? Murphy said his conclusion was merely "guesswork."

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GRAPHIC: PHOTO, 1. GLOBE STAFF PHOTO/JOHN TLUMACKI /Elevator maintenance mechanic Vin Stuart

checks cables in a Boston high-rise. But in many other cases such inspections go undone.(COLOR) 2. GLOBE STAFF PHOTO/GEORGE RIZER / Andy Gomez, top, is carried from the McCormack state office building in Boston last year after his leg was severely injured in an elevator accident. 3. GLOBE STAFF PHOTO/JOHN TLUMACKI / The number of people injured on escalators and elevators in the United States last year rose by nearly 20 percent, according to one estimate.

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