

State doing little to track hospitals with severe earthquake safety risks

Christina Jewett, California Watch, 11-6-10

State authorities and hospital officials have discovered serious structural weaknesses at more than a dozen hospital buildings, but they have taken few steps to notify the public about the facilities nor have they required a detailed inventory of hundreds of other potentially dangerous sites.

More than a dozen hospital buildings in the Bay Area and Southern California face the highest-known chances of crumbling during an earthquake, based on a complex mash-up of each building's structural strength, distance from a fault line and expected ground motion, California Watch has learned.

While the problem of hospital safety has been widely debated, few people know how little California is doing to detect its riskiest hospital buildings. Regulators do not require hospital owners to determine a collapse risk for every building they own, making it impossible to know which should be fixed first.

The state is focused on nearly 700 hospital buildings that were identified in the 1990s as potentially dangerous. Public health officials can revoke a hospital's license – effectively shutting down the facility – if it doesn't retrofit, replace or remove patients from those buildings by 2013 or 2015.

But with this impending mandate, state authorities have determined the collapse risks for only 90 of the nearly 700 structures [XLS]. Among those potentially dangerous buildings, 14 carry collapse risks of nearly 10 to 32 percent, far higher than the score officials consider reasonably safe – which is set at 1.2 percent.

Public officials and hospital authorities expect dozens of hospitals [PDF] to miss their deadlines to shore up or evacuate key buildings. Even so, the state is unlikely to order a mass shutdown of hospitals, a scenario some deem just as life-threatening as a quake.

The state doesn't force hospitals to determine their collapse risks – the process is voluntary. The lack of an authoritative inventory of the riskiest buildings concerns people who work in these facilities.

“Those are odds we don't want to mess with,” said Stephanie Roberson, legislative advocate for the California Nurses Association, which has opposed extending the seismic safety deadline for hospitals. “It's our patients that are at risk in these facilities.”

Hospital buildings with high collapse risks include those at Kindred Hospital in San Leandro and the California Hospital Medical Center in Los Angeles. The collapse risk is 20 percent for the original building at Hollywood Community Hospital in Hollywood based on a 6.4 magnitude quake, according to analyses completed in 2008 and 2009.

When calculating a collapse risk score, the state accounts for the strongest-likely quake that could erupt from the closest fault to each hospital building. Seismologists predict that California will almost certainly see [PDF] a 6.7-magnitude or stronger quake within 30 years.

America Segura, a nurse at Citrus Valley Medical Center's Queen of the Valley campus in West Covina, works in a building linked to that facility's main hospital tower. The six-story main building's collapse risk is 30 percent, according to the computer program that simulates how the tower would shake in a magnitude 7.1 earthquake.

The number is unsettling to Segura, who said a small quake in 2008 cracked the floor in a second-story lounge and lined stairwell walls with fractures. “It’s scary,” she said. A spokeswoman for the hospital, which is part of a small nonprofit chain called Citrus Valley Health Partners, said the quake damaged the plaster on some walls but did not cause significant structural damage.

Deadline extensions

The California Hospital Association has been outspoken about the problem, saying the retrofitting requirements under the 1994 mandate are built around arbitrary deadlines. In 2007, the group helped push through a deadline extension until 2020 for hospitals under financial hardship – but without consideration of collapse risk.

Sen. Denise Ducheny, D-Chula Vista, helped write the deadline extension law and stands by it. She said giving those hospitals a break might be the best way to ensure that patients get needed care.

“The question is, do you close all the hospitals in the inner cities, or do you find out a way for them to comply?” she said. “Granted, many of them have these risks.”

In her work on hospital seismic safety, Ducheny said she had not considered the degree of risk some buildings face. About to leave office, Ducheny added: “Somebody else might have to do that.”

Ducheny’s final proposed law, sponsored this year by the California Hospital Association, would have granted additional three-year extensions to hospitals facing roadblocks in their efforts to update buildings.

But Gov. Arnold Schwarzenegger vetoed it. “For years, hospitals have been granted one extension after another,” the governor said in his veto message. “For hospitals that have been responsible and met the seismic deadlines, these types of extensions reward the exact type of behavior that should not be allowed to continue.”

Four decades of laws

Early in the morning of Feb. 9, 1971, beams and girders began tearing through the carpet of Olive View Medical Center in Sylmar. Concrete and insulation fell from the ceilings. Several staircases peeled from the hospital and crashed to the ground.

Three patients died there, and the magnitude 6.6 quake was linked to dozens of other deaths in area hospitals.

That spurred lawmakers to pass landmark seismic safety legislation, and the magnitude 6.7 Northridge quake in 1994 inspired an even more stringent law that set deadlines for hazardous hospital buildings. Structural engineers – using the best technology at the time – concluded that 1,100 buildings were at risk for collapse and needed to meet seismic safety deadlines, which were then set for 2008.

The goal, though, seemed increasingly impossible, given the enormous costs. To winnow the list of highest-risk hospitals, state officials turned to newer technology: a program called HAZUS that used information about a hospital’s structure and ground motion to produce a “collapse risk” score.

In 2006, the state’s hospital building safety board allowed buildings with a low enough score to be placed in a lower-risk category and see their seismic safety deadlines moved to 2030.

However, state authorities have not made the collapse risk scores accessible. The scores are not posted and were provided only upon request to journalists at California Watch and the Los Angeles Times.

Charles Kircher, a Mountain View structural engineer who helped develop HAZUS for California, said the program accounts for likely ground acceleration near the hospital, a building's range of motion during a quake and how well its frame might withstand the shaking.

Like any prediction about a force of nature, the resulting collapse risk scores are not bulletproof, Kircher said. They are science-based measures that give officials a way to prioritize buildings that pose the greatest hazard.

The program gives the highest scores to facilities closest to volatile faults that have one or more "deadly sins," or structural flaws that have proved disastrous in prior quakes.

Kircher reviewed a state record provided by California Watch and said the "deadly sins" present at the Queen of the Valley campus in West Covina, for example, include a first floor that may not support the upper five stories and a structure that's likely to shake unevenly in a quake.

"They definitely should do something about this building," Kircher said.

Segura, the nurse at that Citrus Valley Medical Center campus, said the hospital has not notified staff or patients of the 30 percent collapse risk.

"(The hospital) keeps talking about earthquake preparedness for us at home," Segura said. "What if we are here at hospital? That's not really going to help us if the building falls down."

A spokeswoman for Citrus Valley's Queen of the Valley campus said hospital administrators are working with a structural engineer to determine what work is needed. The hospital has not submitted upgrade plans to state authorities.

By Oct. 1, state officials had received construction plans for six of the 14 hospital buildings that face a 10 to 32 percent collapse risk, records show.

Two chains with high-risk buildings

Nearly half of the 14 hospitals with the highest-known collapse risks belong to two hospital chains. Catholic Healthcare West, the largest nonprofit health provider in California, owns three. Another three belong to a for-profit Kentucky-based chain, Kindred Healthcare.

Catholic Healthcare West told state building authorities in a June 2009 letter [PDF] that it faced a "perfect storm" of problems and did not know when it could fix buildings at St. Mary's Medical Center in San Francisco, California Hospital Medical Center in Los Angeles and Glendale Memorial Hospital and Health Center in Glendale.

Collapse risks for buildings at those campuses range from 13 to 17 percent and include a nine-story office and patient care tower at the Los Angeles hospital and a juvenile psychiatric facility at St. Mary's.

The letter to hospital building authorities said Catholic Healthcare West could not start or finish building retrofits "until the nation's economic recovery." Nevertheless, the company cleared \$100 million more profit in the 2009 fiscal year than in the prior year.

By June 2010, the chain sent state authorities an updated seismic safety plan, Catholic Healthcare West said in a statement. The chain already has spent \$800 million on upgrades to its 27 California hospitals and expects to be in full compliance with seismic safety laws by 2015.

Kindred Healthcare owns two of the three hospitals with the highest-known collapse risks in the state: a hospital in San Leandro with a 24 percent collapse risk in a magnitude 7.3 quake and Kindred Hospital in Ontario with a 32 percent collapse risk in a magnitude 7.2 quake. Its Los Angeles main hospital building has a score of 13 percent.

The firm owns 83 long-term acute care hospitals nationwide and is known on Wall Street for its rapid growth. Kindred's hospitals cater to patients who tend to stay at facilities about 30 days and have complex medical conditions; many are on ventilators or are recovering from surgery.

The chain said its total revenues in 2009 were more than \$4 billion, which reflect income from its hospitals, nursing homes and home health businesses, financial disclosures say.

The firm's 91-bed Ontario hospital has the highest-known collapse risk in the state, at 32 percent. The facility also had a profit margin that exceeded that of most California hospitals in 2008.

The hospital posted a 20 percent profit, far more than the average 3 percent profit for California hospitals that year, according to reports by state hospital finance authorities. Although the facility is required to report its financials to the state, it has no mandate to warn patients or staff of the precise risk its hospitals pose.

"If I had known (the collapse risk) when dad was there last summer I probably would have worried about it the entire time," Cheryl Nakao of Walnut Grove wrote in an e-mail to California Watch. She said her father stayed in the Ontario facility for three weeks.

Anita Cook was a clerk and technician at Kindred's 99-bed San Leandro facility, where patients tend to stay for 50 days, state records show. Cook worked for 16 years at the four-story hilltop building. It has a 24 percent collapse risk, the third-highest known risk in the state.

"That's terrible," said Cook, who expressed concern that she had not been trained in how to help patients in case of a quake.

She said she went out of her way to dance for patients on birthdays or call them "handsome" and "diva" to cheer them up. State hospital authorities and hospital management, she said, should take the same care in ensuring that staff know how to help save lives in case of a quake.

"(Management) gets paid to protect patients," Cook said. She was fired this month for what she described as outspoken advocacy for patients and staff.

Kindred Hospital San Francisco Bay Area issued a statement saying it does not discuss internal personnel issues but noted that it reviews emergency plans during orientation with new employees.

The company also emphasized that it does look out for staff. A May presentation to investors said Kindred's management philosophy includes "taking care of our people" and focusing "on quality and customer service."

The company plans to meet all seismic safety deadlines by 2013, according to a statement sent to California Watch [PDF]. Kindred officials said they have spent \$3.5 million in engineering and construction for the upgrades.

The company statement also said Kindred has been "proactive and transparent" in submitting reports to state officials, noting that more than 100 other hospitals have started the process of calculating their collapse risk scores. But, Kindred's statement noted, those hospitals have not given officials the information needed to calculate a final score.