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U.S. Health System Judged Unready For Nuclear Disaster

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The U.S. health care system is not ready to handle the massive number of injuries and other demands that would follow from a large-scale radiation release, the Homeland Security Department determined last year. The finding comes after years of attention to the threat posed by potential terrorist detonation of a crude nuclear weapon or a radiological "dirty bomb," ProPublica reported on Thursday (see [GSN](#), March 30).



(Apr. 8) - Fire crews assist a mock victim during a 2005 radiological "dirty bomb" attack drill in Greenbrae, Calif. U.S. medical capabilities could not yet deal with a large influx of victims following detonation of a dirty bomb or improvised nuclear weapon, a 2010 government report and a number of experts suggested (Justin Sullivan/Getty Images).

"Current capabilities can only handle a few radiation injuries at a time," according to an unpublicized 2010 Homeland Security report. It states that "there is no strategy for notifying the public in real time of recommendations on shelter or evacuation priorities."

The report and interviews with multiple experts also point to other vulnerabilities in emergency preparations for responding to a massive nuclear disaster or attack.

The Strategic National Stockpile, which stores medical countermeasures against WMD threats, roughly two years ago ceased acquiring potassium iodide -- a leading treatment for countering in the young thyroid cancer caused by radiation exposure, according to the U.S. Centers for Disease and Control and Prevention.

Potassium iodide works best when given prior to or shortly after radiation exposure. It is one of only four treatments the stockpile has that are designated for radiation disasters. The determination to cease procurement was taken partly due to the extended amount of time it would take to dispense the treatment during a quickly evolving crisis, said one official who took part in talks on the matter.

The multiagency committee that manages the stockpile determined that "other preparedness measures were more suitable to mitigate potential exposures to radioactive iodine that would result from a release at a nuclear reactor," a CDC spokesman said by e-mail.

While medical centers located close to atomic energy reactors regularly hold radioactive emergency response exercises, hospitals that are more distant from a nuclear site are much less likely to conduct drills. The majority of health workers are unfamiliar with the significant health dangers caused by radiation exposure that could be released by a nuclear device or a radiological weapon that would use conventional explosives to disperse radioactive material, experts told ProPublica.

"The level of education for disasters across the board in American hospitals is really pretty terrible," Harlem Hospital Center trauma specialist Arthur Cooper said. "People don't have a good sense of how to focus on any disaster, let alone a radiation disaster. Radiation adds a level of complexity that most folks aren't prepared to face."

A number of U.S. states do not have a general plan in place for alerting the public of radiation risks and for dealing with those disasters. Basic information such as the importance of staying inside strong buildings to reduce contact with radioactive particles -- an action experts say could save many lives in the event of a radiation release -- has not been disseminated to citizens.

"The bottom line is that the citizenry are not prepared at all," said Global Health Initiatives President Michael McDonald, who has taken part in White House and Capitol Hill sessions on reducing casualties following an atomic incident.

The Homeland Security assessment notes that the present health care system organizational structure "does not support the anticipated magnitude of the requirements" that would follow from the detonation of a crude nuclear weapon. The nation possesses "limited" alternatives for caring for radiation victims and restricted means for moving a large number of people away from the site of an incident, it adds. "The requirements to monitor, track, and decontaminate large numbers of people have not been identified," according to the report.

More study is needed into matters such as the effects of an electromagnetic pulse attack on digital communication systems and to what level modern structures are able to shield individuals from nuclear explosions and radioactive fallout, ProPublica said.

"In almost every measure of public health capacity and capability, the public health system remains poorly prepared to adequately respond to a major radiation emergency incident," the Council on State and Territorial Epidemiologists concluded in a 2010 report. The report analyzes information collected from public health personnel in 38 states. Nearly 85 percent of the surveyed officials said their states could not adequately handle a radiation event due to insufficient preparation and a shortage of personnel and resources.

More worrisome is that matters have not become better since a related assessment was conducted in 2003. "Most of those comparisons appear to indicate either the same poor level of preparedness and planning or a decline in capacity," the council report states.

Due to serious budget deficits at the state and federal level, public investment in radiation response readiness is more likely to shrink than to grow, experts said.

The Obama administration's budget request to Congress would reduce monies by some 10 percent to a nationwide hospital training program.

"If the public isn't demanding that we be better prepared, the politicians won't put the money in for us to be better prepared and the regulators" will not mandate it, Cooper said. "It all begins with the public knowing this is a problem that's got to be solved and it's worth spending some money and effort to try to be prepared in a real way (Sheri Fink, [ProPublica](#), April 7).