ST. LOUIS, Mo. -- A crude new method of making methamphetamine poses a risk even to Americans who never get anywhere near the drug: It is filling hospitals with thousands of uninsured burn patients requiring millions of dollars in advanced treatment — a burden so costly that it’s contributing to the closure of some burn units.

So-called shake-and-bake meth is produced by combining raw, unstable ingredients in a 2-liter soda bottle. But if the person mixing the noxious brew makes the slightest error, such as removing the cap too soon or accidentally perforating the plastic, the concoction can explode, searing flesh and causing permanent disfigurement, blindness or even death.

An Associated Press survey of key hospitals in the nation’s most active meth states showed that up to a third of patients in some burn units were hurt while making meth, and most were uninsured. The average treatment costs $6,000 per day. And the average meth patient’s hospital stay costs $130,000 — 60 percent more than other burn patients, according to a study by doctors at a burn center in Kalamazoo, Mich.

The influx of patients is overwhelming hospitals and becoming a major factor in the closure of some burn wards. At least seven burn units across the nation have shut down over the past six years, partly due to consolidation but also because of the cost of treating uninsured patients, many of whom are connected to methamphetamine.

Burn experts agree the annual cost to taxpayers is well into the tens if not hundreds of millions of dollars, although it is impossible to determine a more accurate number because so many meth users lie about the cause of their burns.

Larger meth labs have been bursting into flame for years, usually in basements, backyard sheds or other private spaces. But those were fires that people could usually escape. Using the shake-and-bake method, drugmakers typically hold the flammable concoction up close, causing burns from the waist to the face.

"You’re holding a flame-thrower in your hands," said Jason Grellner of the Franklin County, Mo., Sheriff’s Department.

Also known as the "one-pot" approach, the method is popular because it uses less pseudoephedrine — a common component in some cold and allergy pills. It also yields meth in minutes rather than hours, and it’s cheaper and easier to conceal. Meth cooks can carry all the ingredients in a backpack and mix them in a bathroom stall or the seat of a car.
The improvised system first emerged several years ago, partly in response to attempts by many states to limit or forbid over-the-counter access to pseudoephedrine. Since then, the shake-and-bake recipe has spread to become the method of choice.

By 2010, about 80 percent of labs busted by the federal Drug Enforcement Administration were using shake-and-bake recipes, said Pat Johnakin, a DEA agent specializing in meth.

So instead of a large lab that supplies many users, there are now more people making meth for their personal use. The consequences are showing up in emergency rooms and burn wards.

"From what we see on the medical side, that's the primary reason the numbers seem to be going up: greater numbers of producers making smaller batches," said Dr. Michael Smock, director of the burn unit at Mercy Hospital St. Louis.

It's impossible to know precisely how many people are burned while making shake-and-bake meth. Some avoid medical treatment, and no one keeps exact track of those who go to the hospital. But many burn centers in the nation's most active meth-producing states report sharp spikes in the number of patients linked to meth. And experts say the trend goes well beyond those facilities.

The director of the burn center at Vanderbilt University in Tennessee, the state that led the nation in meth lab seizures in 2010, said meth injuries are doubly damaging because patients often suffer thermal burn from the explosion, as well as chemical burns. And the medical challenge is compounded by patients' addictions.

"You're not judgmental in this kind of work, but you see it day after day," said Vanderbilt's Dr. Jeffrey Guy. "We've had patients say, 'I'm going out for a smoke,' and they come back all jacked up. It's clear they went out and did meth again."

Few people burned by meth will admit it.

"We get a lot of people who have strange stories," said Dr. David Greenhalgh, past president of the American Burn Association and director of the burn center at the University of California, Davis. "They'll say they were working on the carburetor at 2 or 3 in the morning and things blew up. So we don't know for sure, but 25 to 35 percent of our patients are meth-positive when we check them."

Guy cited a similar percentage at Vanderbilt, which operates the largest burn unit in Tennessee. He said the lies can come with a big price because the chemicals used in meth-making are often as dangerous as the burns themselves.

He recalled the case of a woman who arrived with facial burns that she said were caused by a toaster. As a result, she didn't tell doctors that meth-making chemicals got into her eyes, delaying treatment.
"Now she's probably going to be blind because she wasn't honest about it," Guy said.

In Indiana, about three-quarters of meth busts now involve shake-and-bake. And injuries are rising sharply, mostly because of burns, said Niki Crawford of the Indiana State Police Meth Suppression Team.

Indiana had 89 meth-related injuries during the 10-year period ending in 2009. The state has had 70 in the last 23 months, mostly from shake-and-bake labs, Crawford said.

What's more, meth-related burns often sear some of the body's most sensitive areas — the face and hands.

"I don't think a lot of these patients will be able to re-enter society, said Dr. Lucy Wibbenmeyer of the burn center at the University of Iowa. "They'll need rehab therapy, occupational therapy, which is very expensive."

Researchers at the University of Iowa found that people burned while making meth typically have longer hospital stays and more expensive bills than other burn patients — bills that are frequently absorbed by the hospital since a vast majority of the meth-makers lack insurance.

Medicaid provides reimbursement for many patients lacking private insurance, but experts say it amounts to pennies on the dollar.

Doctors at Bronson Methodist Hospital in Kalamazoo, Mich., performed a five-year study of meth patients in the early 2000s, then a follow-up study in 2009-2010. Their investigation concurred with the Iowa findings. The Kalamazoo study also found that meth burn victims were more likely to suffer damage to the lungs and windpipe, spent more time on ventilators and needed surgery more often.

That report also found that only about 10 percent of meth patients had private insurance coverage, compared with 59 percent of other patients. And in many cases, their injuries leave them unable to work