A doctor takes vital signs from a pretend patient in a test of a novel triage system for handling a pandemic.

A couple of months ago, during the swine flu scare, Stanford Hospital & Clinics had a preview of what a real pandemic might look like: Hundreds of people, fearing they might be sick with the H1N1 virus, showed up at the emergency department looking for help. Hospital officials scrambled fast, converting some space overnight into an infection-controlled triage area.

On the morning of June 12, Stanford Hospital tested a different triage model, one that could become the standard for how hospitals respond when thousands need care at the height of a pandemic. It's a drive-through triage-and-care system that keeps sick people in their cars, preventing them from infecting anyone else, while allowing doctors, nurses and pharmacists to care for them as quickly and efficiently as possible through an open window.

"One of the biggest issues in a pandemic is cross-contamination," said emergency medicine physician Milana Boukhman, MD, as she waited for another volunteer "sick" person to arrive at her treatment station, one of several set up in a parking garage near the hospital. "Cars are self-contained contamination units. And this works if you have limited resources, too."

The system tested June 12, with 40 patients and 50 health-care providers, was simple. Each pretend patient, wearing a card with a list of symptoms on a neck string, drove to each step in the process to be questioned or examined by a physician, nurse or pharmacist through the window. Evaluators and observers, both health-care and emergency-preparedness officials, hovered near each stage, timing transactions and recording data. Each patient was registered, evaluated, treated and then discharged. The gathered data will be sent on to the U.S. Centers for Disease Prevention and Control for evaluation and review.

"We know this way is more cost-efficient and safer," said Eric A. Weiss, MD, medical director for disaster planning at both Stanford and Packard Children's hospitals. "This doesn't take any more staff than would be required to see patients in the emergency department."

Weiss and Gregory Gilbert, MD, another Stanford Hospital emergency medicine physician, share credit for the approach, which has similarities to a famous chain of hamburger sellers. In fact, not too long after Gilbert mentioned the drive-through idea to Weiss, Weiss had a personal, real-life glimpse of it. He and his family were in Montana and pulled into a McDonald's parking lot. The restaurant, Weiss and his wife could clearly see, was packed with coughing and sick-looking people. The Weiss family decided to pick up their food at the drive-through window.

Weiss' wife, Amy, was one of the volunteer patients. She's a former hospital emergency department administrator and an industrial engineer who saw the logic of translating hamburger delivery to health-care delivery. "You have to have something like this," she said.

Hospital officials got on-the-spot feedback from observers who included physicians, nurses and disaster relief experts, such as American Red Cross volunteer Karl Matze. He's seen triage and treatment in tents, but using cars as self-contained infection control units "takes things to another level."

Stanford Hospital's emergency preparedness coordinator Per Schenck was at the exercise as well, observing with the recent H1N1 experience still fresh in his mind. "We almost did this a few weeks ago," he said. "It can be done within 24 hours notice, and it's a model that could be used almost anywhere."

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