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Hospital-bed crisis foreseen

By [Karen Blakeman](#)
Advertiser Staff Writer

Hawai'i medical authorities are moving ahead quietly with plans for dealing with a worldwide flu outbreak, but with hospitals operating at near capacity on a day-to-day basis, a pandemic would quickly overwhelm most traditional forms of medical care.

Treating so many patients would mean a new set of rules.

"Sometimes," said Patty Dukes, chief of Emergency Medical Services, "it feels like one of those old black-and-white science fiction movies you see on television."

With hospitals in the state — like most hospitals nationwide — operating at nearly 90 percent capacity under normal circumstances, medical authorities are devising means of coping with the thousands of additional patients who would flood hospitals, emergency rooms and clinics during a pandemic.

Part of the preparation, Dukes said, is familiar to paramedics and other emergency workers, and useful for disasters such as hurricanes and tsunamis.

"A pandemic will just move in more insidiously," she said. "The patients will trickle in, then they will double, then triple, quadruple ..."

Eventually, a pandemic could affect 25 percent to 30 percent or more of O'ahu's 900,000 residents and visitors, Dukes said.

She foresees her paramedics and the ambulance crews of American Medical Response moving away from immediately delivering patients to hospitals — which would gradually become overwhelmed with patients — and working toward longer term emergency patient care. That would mean working with fire crews, military personnel and volunteer organizations such as the Red Cross to treat patients in makeshift staging areas.

"We're purchasing equipment that will be relatively easy for the volunteers to monitor," Dukes said.

Gowns, masks and other protective equipment for the paramedics are being stockpiled, she said.

Some of the scenarios sound dire, but Gregory Poland, director of the Mayo Vaccine Research Group and professor of medicine and infectious diseases at the Mayo Clinic in Rochester, Minn., said Hawai'i is moving to the front of the pack in terms of preparation to face the medical and other challenges a pandemic would create.

"I think Hawai'i is one of the top states thus far in pandemic preparedness," he said. "They aren't waiting and reacting, they are preparing in advance, and that is a huge, huge advantage."



Five tent hospitals like this one are stationed across the state and could be used during a pandemic. Each can hold 20 to 25 patients, or the tents can be grouped to form a 120-bed hospital.

Healthcare Association of Hawai'i

BIRD-FLU PLANNING

On June 14, 300 invited representatives of Hawai'i businesses and government agencies will discuss how to deal with pandemic-related challenges. How to create more alternative space for medical treatment will be among the topics.

Basic information on pandemic flu and preparing for a pandemic is available at the state Health Department's Web site, www.hawaii.gov/health, and on the federal government Web site, www.pandemicflu.gov.

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Pandemic flu planning is becoming even more crucial as the World Health Organization launched an investigation last week into whether an Indonesian family caught avian flu through limited human-to-human contact. A pandemic could develop if the virulent virus mutates to allow it to be passed easily from person to person.

Hawai'i wants to be prepared before that happens.

The Healthcare Association of Hawai'i, or HAH, which represents hospitals, long-term-care facilities, hospices and home-care organizations, would coordinate care among the state's medical facilities and report to the state Department of Health during a pandemic.

Toby Clairmont, registered nurse and HAH's emergency program manager, said a pandemic flu virus would likely affect the population in waves, each lasting eight weeks. The waves could continue for up to 18 months, he said.

Flu-surge models developed by the CDC and based on population size show Hawai'i's hospitals would likely be inundated with nearly 5,000 additional people seeking care during each wave, he said.

In preparation, the state and HAH have been stockpiling equipment in secure locations throughout Hawai'i.

Emergency communications equipment is being installed in medical facilities, and workers are being trained to use it.

Five Mobile Treatment Facilities — updated, civilian versions of MASH-style tent hospitals, each able to care for 20 to 25 people — are stationed on four islands and can be located next to hospitals to stretch capacity or, grouped together, form one facility to house 100 to 120 beds.

To help stretch medical staff, HAH is working with the state to create a recall registry of retired doctors and nurses.

The stockpiling and planning are initial measures, but HAH sees additional steps being needed.

Dr. John M. Murray, medical director for HAH and chief of emergency medicine at Kaiser Permanente Moanalua Medical Center, said the thousands of people infected by the flu won't be the only patients.

"A pandemic or outbreak or any other kind of mass casualty situation does not stop the normal flow of other diseases and injuries that people are used to going to the hospital for," he said. "There is still going to be that steady stream of people who have other urgent problems that need to be addressed."

Those patients, Murray said, have kept Hawai'i's hospitals running at near capacity for the past decade.

Clairmont said the near-capacity operation of medical facilities is seen as good business practice.

"Vacant beds represent economic irresponsibility," he said.

A snapshot from EMSsystem, a computer program that tracks hospital bed and emergency room availability, shows what happened with those high occupancy rates at 6 p.m. on Jan. 16, a winter day during a relatively mild flu season.

Thirteen Honolulu hospitals were listed. Four of them — The Queen's Medical Center, Straub Clinic & Hospital, St. Francis Medical Center at Liliha and Kuakini Medical Center — had reached capacity and listed their status for paramedics and ambulances as "total reroute." Four other hospitals advised caution; they were nearing capacity.

"Ten or 15 years ago, total reroutes were a rarity," said Dukes, the paramedics chief. "It's becoming more and more frequent regardless of the season."

Paramedics also are spending more time in hospital hallways, their patients on gurneys, waiting for the chance to hand off to

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nurses, she said.

Murray and Clairmont said that in the event of a pandemic, hospitals would start clearing beds immediately after notification that the virus had struck and that Hawai'i was likely to fall victim. Preferably, this notification, obtained through the state Department of Health or the CDC, would come before the flu hit here.

Elective surgeries would be canceled and patients would be sent home early.

"Statewide, we can generate almost 400 beds within two hours," Clairmont said.

The hospital's regular patients probably wouldn't be pleased about that development, Murray said.

"If you've been waiting for your elective hip replacement for several weeks," Murray said, "and someone tells you it is canceled because there is some disease outbreak in Milwaukee, you may not be very happy about that."

Having an oversight organization such as HAH working with the Health Department to set emergency policy would take the pressure off individual hospital administrators and ensure that each hospital complied, he said.

As patients flooded in and information became available about how the new flu virus was attacking people, medical authorities would tell the public about who could best be cared for at home.

Emergency clinics and hospitals, including the Acute Care Modules and the makeshift clinics manned by paramedics and volunteers, would go into use. Other facilities — from schools to hotels — could be taken over by state authorities and used to care for patients, provided medical staff is available.

If the CDC model holds true, 25 percent to 30 percent of doctors and nurses would have to stay home because they or their family members would be sick. Hawai'i medical authorities anticipate that Mainland hospitals, dealing with their own pandemic-related problems, would provide little or no augmentation.

Ultimately, even the emergency medical facilities would run out of space and staff.

"You can optimize your resources," Murray said, "but if this pandemic rules out to have the number of patients that some of the predictions hold, you are still going to overwhelm those resources."

"At that point it will come down to what will probably be the hardest decision for medical folks to make: triage, that sorting of patients according to who will benefit most from the resources that are available."

Providing life-saving medical assistance to those most likely to survive and withholding it from others runs counter to the way doctors and nurses operate, he said.

Triage usually is implemented in a single-event disaster: The patients are gathered and medical authorities are faced with clear evidence of how many more people will die if time and resources are spent on a patient unlikely to survive.

"It's harder to imagine on a systemwide basis," he said.

Murray said the triage element would be implemented as late as possible during an outbreak, and he hopes that by that time the CDC or World Health Organization would be able to provide detailed guidance on which patients would be unlikely to survive.

"If you've got a patient who is this age, whose blood pressure is this low, whose oxygenation is this bad," he mused, "then these people aren't going to get better no matter what is done."

The patient would be made comfortable, he said, but respirators and life-saving medications would be used on others.

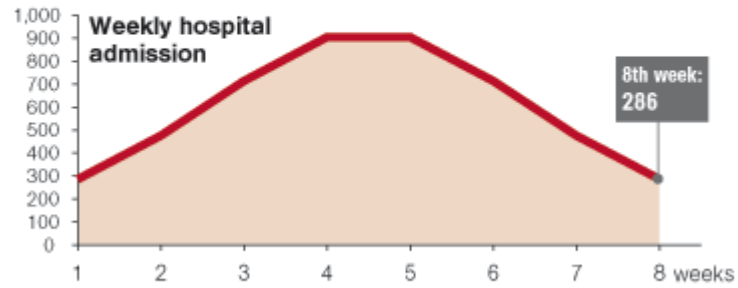
"We've done a lot of work here," Murray said of the state's planning, "but there is a lot more to be done."

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FLU SCENARIO

Centers for Disease Control and Prevention pandemic flu models, when applied to Hawaii's population, predict that 4,762 people would be hospitalized during each eight-week wave of flu outbreak. Under the most likely scenario, 934 people would die.



* - All results shown in this table are based on most likely scenario.

Source: Healthcare Association of Hawai'i

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