

# The Boston Globe

## Brigham and Women's hospital completes investigation of coronavirus outbreak

By [Felice J. Freyer](#) Globe Staff, Updated October 19, 2020, 7:28 p.m.

The COVID-19 outbreak among dozens of employees and patients at Brigham and Women's Hospital last month probably started with a highly infectious patient who tested negative twice before spreading the virus across three units.

That's the conclusion of the Brigham doctors who worked to understand how such an event could occur despite infection control protocols that seemed to have prevented in-hospital transmission for months.

The hospital concluded its investigation Friday, waiting 14 days — the maximum COVID-19 incubation period — after the last infection connected to the cluster was identified on Oct. 2.

The cluster ultimately involved 42 employees and 15 patients. None of the 57 became critically ill from COVID-19; one employee was briefly hospitalized but has gone home and is recovering, a hospital spokeswoman said.

But the outbreak shook the hospital and led to a massive effort to figure out what went wrong.

“Here we are, we've gone from March to September without anything like this,” said Dr. Michael Klompas, hospital epidemiologist. “Our infection control policy was pretty stable for the last couple of months. And lo and behold, this happens. ... You can't let your guard down. You've got to respect the virus, and be humble and cautious.”

Hospital officials said the chief factors that likely contributed to the spread included: inconsistent mask use among patients, low use of eye protection by

employees, and staff's failure to distance from each other while eating in often crowded break rooms.

Klompas said the hospital has been working to address all these issues.

Staff members "have been really good on masking themselves — north of 99 percent," Klompas said. "What's more difficult is getting patients to wear a mask."

Patients often remove their masks because they're uncomfortable, especially for those who have trouble breathing. The hospital has added signs and other reminders, such as notes on meal trays urging patients to mask up after eating.

As for eye protection, the hospital had a policy requiring staff to wear it during each patient encounter, but found that many were skipping this step. Those who became infected were half as likely to wear eye protection as those who didn't become infected, Klompas said.

Many found the eye coverings uncomfortable and prone to fogging. The hospital is in the process of supplying easier-to-tolerate goggles and face shields that don't fog up, he said.

Providing enough space to workers to eat, relax, and confer has been challenging for many hospitals. The Brigham has set up an outdoor tent with picnic tables for meals and is working to locate more indoor space.

Trish Powers, chairwoman of the Massachusetts Nurses Association's unit at the Brigham, said she hasn't noticed big changes at the hospital, just more frequent exhortations to wear masks and eye protection. The break rooms are still too small, she said, and the outdoor option isn't going to work as the weather gets colder.

The outbreak occurred when the hospital was treating relatively few COVID-19 patients. Before that, Brigham and Women's had treated nearly 1,000 COVID-19 patients and 20,000 patients without the virus, and published a study about its success at "zero transmission."

The patient who probably introduced the virus had symptoms of a respiratory infection when the person came to the hospital for another reason, Klompas said. But the patient twice tested negative for COVID-19.

The patient infected a roommate, was transferred to another unit where the person infected three successive roommates, and then went to a third unit

where two more roommates were infected, Klompas said. There ensued a web of transmission among multiple patients and employees, he said.

The outbreak was detected Sept. 22 when a staff member became ill with COVID-19. The staff member had worked during the days right before falling ill, a time when people can be highly infectious. Because this staff member cared for the first patient, that patient was tested again and found to be positive. The hospital also found that other patients who had previously tested negative were now testing positive, a sign that in-hospital transmission had occurred.

Brigham and Women's said it launched an aggressive testing effort that included: all inpatients, tested every three days; patients recently discharged from the affected units; and all potentially exposed employees. Patients who tested positive were transferred to a COVID-19 unit while infected employees were furloughed, Klompas said.

Powers, the union leader, objected to the hospital's policy of notifying employees of an infected co-worker only if the circumstances meet a strict definition of exposure.

For example, she said, she worked for almost 12 hours in the operating room alongside someone who — she learned through the grapevine — later tested positive. But the hospital did not consider her potentially exposed because she and the infected person were both wearing masks. A hospital spokeswoman said any more extensive notification would violate privacy.

Powers also called for easier and more frequent COVID-19 testing for employees. Hospital spokeswoman Erin McDonough said that Mass General Brigham, the hospital's parent company, is working on plans to “restructure and simplify access to COVID-19 testing for our employees.”

The Brigham cluster is the second largest of at least six outbreaks in a Massachusetts hospital. Baystate Health in Springfield faced a July outbreak affecting 61 people. Last month, Sturdy Memorial Hospital in Attleboro confronted a small outbreak; a hospital official said Monday it was limited to four patients and 16 staff members in a single unit.