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## Masks state distributed were deficient, tests show, sparking concerns among police

By Dugan Arnett and Victoria McGrane Globe Staff, Updated April 29, 2020, 8:14 p.m.



Some of the masks acquired and distributed by the state, all of which tested below the standard N95 masks preferred for protection from coronavirus.

When the Brockton Police Department received hundreds of protective respirator masks from the Massachusetts https://www.bostonglobe.com/2020/04/29/nation/police-fire-departments-latest-voice-concern-with-state-provided-masks/

Emergency Management Agency earlier this month, they came as a welcome gift to officers increasingly worried about

exposure in the line of duty. The masks were soon distributed to each of the department's 200 sworn personnel. More were packed into kits and placed inside cruisers.

But on Friday, the department received notice from the agency that new tests showed the masks to be severely deficient, filtering just 28 percent of airborne particles — far below what is considered safe for front-line workers. The department immediately recalled the masks.

"We had the masks out there for quite some time before we found out about the deficiencies," said Brockton Police Chief Emanuel Gomes. "They were in daily police use. ... Officers were using these on every call."

The state, which has been accumulating respirator masks however it can amid a national shortage and distributing them to people who most need them, last week began notifying police departments, nursing homes, and other recipients that recent tests it commissioned from the Massachusetts Institute of Technology revealed that some of the masks provide little protection.

While the tests showed some of the masks filtered out more than 90 percent of airborne particles, none performed as well as the US industry standard N95 mask, which filters out at least 95 percent of airborne particles, according to the publicly posted results.

One type of mask sent out by the state filtered only 28.1 percent of airborne particles. Another type performed at only 52.3 percent, according to the results. State officials did not disclose how many of those masks were distributed or to

## whom.

As the pandemic has played out, officials in Massachusetts and other states have had to scramble to find masks for health care workers and others amid a severe nationwide shortage of protective equipment. The Federal Food and Drug Administration issued emergency authorizations to allow the use of certain Chinese-manufactured masks that adhere to high standards, known by the designation KN95, but many counterfeit or substandard masks have turned up.

On April 13, the Missouri State Emergency Management Agency recalled 48,000 KN95 masks it had distributed to local law enforcement and fire services throughout the state. The agency said the masks failed to meet standards and that it would not be distributing any additional KN95 masks.

And many health care workers in Massachusetts have been wary; earlier this month, several questioned the quality of the KN95 masks the state received from China in an April 2 shipment brought by the New England Patriots team plane.

At the time of that shipment, Governor Charlie Baker repeatedly described the masks as N95s, but many turned out to be KN95s. State officials said they have received additional masks from the federal government that are also KN95s.

Sharon Torgerson, a spokeswoman for the state's COVID-19 Response Command Center, said this week that the masks in that shipment were "a combination of KN95 and N95."

She did not directly respond to a question about whether Massachusetts officials knew some of the masks they were buying from China were KN95. "Most of the masks available from China are KN95," she said.

Massachusetts spent about \$2 million for the masks in the Patriots' shipment, Torgerson said.

The state-commissioned tests by MIT's chemical engineering department measured the effectiveness of the various https://www.bostonglobe.com/2020/04/29/nation/police-fire-departments-latest-voice-concern-with-state-provided-masks/ KN95 masks the state has received, Torgerson said. The tests were performed on all China-made masks, which includes

the shipment delivered on the Patriots' plane, she said.

Baker said on Tuesday that the state is doing its best to manage a difficult situation.

"When we started distributing this stuff, people had nothing," he said. "And I think in many respects, from our point of view, testing them, figuring out what the results of those tests were, sending the data associated with those results out to people, and giving them guidance with respect to how they should be used, and what purpose they could be used for, was an appropriate thing to do."

Through Wednesday, nursing homes had been the largest recipients of the state's supply of respirator masks, receiving more than 260,000, according to state data. Hospitals were next with 200,000 masks received, followed by public safety departments with 167,325. According to state data, all of the respirator masks distributed by the state to public safety entities were from the Patriots' plane shipment.

Information posted by the state does not detail how many of each kind of mask has been distributed and which organizations got which type of masks.

An e-mail from the Massachusetts Department of Health warned that one of two types of masks it distributed, which were labeled as "KN-95 Disposable Face Mask" in white packaging, "demonstrated a lower filtration level when tested. Accordingly, the Department recommends that these products should be used as a face mask only."

As Baker earlier this month welcomed the arrival of nearly a million protective masks from China – at least some of which were KN95s – the governor said that "for the many, many dedicated front-line workers across this state who are

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battling COVID-19 ... this gear will make an enormous difference.<sup>2</sup> And even as his own hospital declined to use them, Mass. General president Peter Slavin called the KN95 masks "a godsend."

Rich MacKinnon Jr., president of the Professional Fire Fighters of Massachusetts, has been among those to voice concerns with the masks in recent days. Some 60 different departments had received masks from MEMA, he said, and he has heard from one department whose masks had tested somewhere in the 70 percent to 80 percent range.

"That was still concerning for us at the time, because if they're being advertised that they're equal and comparable to an N95, then that's not true," he said. "We wanted our members to know that if they're forced to use these KN95s, then their risk for exposure grows."

In Chelsea, one of the state's worst-hit cities, local police received hundreds of masks from MEMA about a week ago — five apiece for the department's 111 sworn personnel, according to Police Chief Brian Kyes.

Thankfully, he said, the department has enough N95 masks to get by; the others, he said, are currently being shelved.

"We're standing by with them," Kyes said. "Hopefully they're as safe as they're supposed to be, and if not, we'll try to figure out how to rectify that."

Gomes, the Brockton police chief, has so far been able to get by with a collection of N95 masks he says the department was able to obtain independently through a local company.

That collection is expected to last only another 10 to 14 days, he said, though his department had been assured by MEMA that it was working to procure higher-quality masks.

"It's a pretty serious matter to our troops and our front-line people," Gomes said. "And it wasn't just Brockton police; I'm sure this [affects] fire personnel, all other first responders."  $Matt\ Rocheleau\ of\ the\ Globe\ staff\ contributed\ to\ this\ report.$ 

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