

EVERGREENHEALTH DOUBLES RESPIRATOR FIT TESTING AMIDST COVID-19 PANDEMIC

Case Study

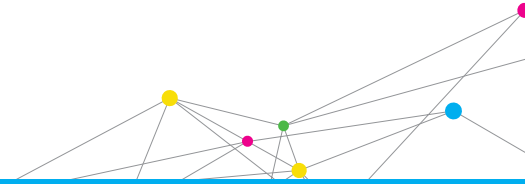
EvergreenHealth is located in Kirkland, Washington, just outside of Seattle and was the first hospital in the country to treat a wave of patients diagnosed with community-spread COVID-19. In March 2020, the integrated healthcare system was facing an immediate need to ramp up protective practices to help to keep staff safe while caring for patients with COVID-19.

To prepare for the oncoming health emergency, EvergreenHealth administrators conducted an evaluation of its respiratory protection processes and procedures. They found that it was difficult to keep up with respirator fit testing requirements. Seeking help, EvergreenHealth reached out to the air particle measurement experts at TSI Incorporated (TSI®). With the addition of new, upgraded fit testing equipment from TSI®, they were able to save staff time, develop better training practices, and carry out high-volume quantitative fit testing to ensure safe, effective PPE practices.



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The Problem:

A Lack of Resources to Perform Frequent Respirator Fit Tests

The emergence of COVID-19 put a spotlight on EvergreenHealth's respiratory protection program. Nearly all staff needed respirators. Before the pandemic, EvergreenHealth had focused their respiratory fit program on the infectious disease teams. Expanding respirator use beyond those teams meant that staff who now needed to wear respirators, also needed fit testing—fast.

In the past, a single TSI® PortaCount® Respirator Fit Tester (a quantitative, science-based method of respirator fit testing) sufficiently met EvergreenHealth's fit test needs, as required by Occupational Safety and Health Administration's (OSHA) guidelines. However, the pressure was growing as the increased demand for respirator fit tests combined with an uncertain supply chain of N95 respirators in the U.S. Industry-wide shortages of PPE (personal protective equipment) meant introducing new brands and models of respirators into the fit testing program. EvergreenHealth teams decided that efficient and reliable respirator fit testing processes were critical to manage potential health risks to staff and patients from the aerosol-based coronavirus.

With fit testing needs that required resources beyond EvergreenHealth's existing processes, the organization first implemented a qualitative fit testing program, also known as the "taste test." Administrators trained staff to execute qualitative fit testing, setting up areas convenient for employees to fit test before, after, or during a shift. However, they soon found that the complicated and subjective nature of qualitative testing was not efficient.

"It was really difficult to efficiently evaluate all of our staff members with a qualitative fit test approach," said Therese Bovee-McKelvey, R.N., M.N., Employee Health Supervisor at EvergreenHealth. "Qualitative fit testing is time-consuming, complex, and requires a lot of extra steps to execute the test properly. Because of this, we realized it would be much more efficient to process staff with quantitative testing by leveraging additional PortaCount® instruments."

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Employee Health Supervisor at EvergreenHealth.*

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The Solution: Increase Interactive, Quantitative Fit Testing Capabilities

To handle the growing fit test demands, EvergreenHealth added six additional PortaCount® Respirator Fit Testers to its resources. Because each PortaCount could complete a single quantitative fit test in two minutes and twenty-nine seconds, EvergreenHealth was able to fit test each staff member and restore them to their posts quickly. Administrators felt confident that their employees had passed objective tests for respirator fit.

Of particular benefit to EvergreenHealth were PortaCount's unique training features. In addition to enhanced fit test capabilities and speed, the PortaCount® system and software provides step-by-step instructional animations that walk each person through the fit test. Real-time feedback educates the user on simple adjustments that they can make to ensure that the mask is fitted properly. With each move that staff members make, the visible effect of the movement on the fit of the respirator shows clearly on the screen.

"Our staff was given an opportunity to visually see why fit testing is critical in keeping them safer from airborne viruses, including COVID-19," said Bovee-McKelvey. "Staff much preferred using the PortaCount® because they saw the results in real-time. They left the test feeling confident that their respirator would keep them safe from infection. It takes just one quantitative fit test to train staff better on what a properly fitting respirator feels like. Our frontline workers were not only protected, but were also learning how to use their PPE in the most effective manner. Using the PortaCount® is simply a better way of doing it."



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Results: Safe and Properly Trained Staff

EvergreenHealth administrators estimated that they were able to process at least twice the staff with PortaCount's quantitative method versus the qualitative approach. In addition, PortaCount's software will enable EvergreenHealth to decentralize the testing locations across its network of facilities, while maintaining centralized fit testing records. With all of the data coming to Employee Health Services, we needed an automated method to capture and record all of the fit tests. PortaCount® made that much easier for us.

"Qualitative is hard to execute and staff much preferred using the PortaCount® because they could see the results of the fit test as it was happening," said Bovee-McKelvey. "While the fit test is occurring, the PortaCount® machine itself helps train staff on how to use an N95 and how the respirator should fit each time they don one. The PortaCount® is a better, more accurate way to do the fit testing and it's keeping staff safer. We now have the right processes and equipment in place to meet respiratory program protocols and expand our fit test program for the future."

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