

[NEWS](#)

# Greenwich Hospital tests hyperbaric oxygen therapy for COVID patients

[https://www.beaumontenterprise.com/news/coronavirus/article/Wanted-to-be-able-to-breathe-Greenwich-15726928.php?fbclid=IwAR04TjSEP7EzwU6WPnD1-8naExXhmBX072GOUZqT95t-IgQ8cz\\_IJfurKJY](https://www.beaumontenterprise.com/news/coronavirus/article/Wanted-to-be-able-to-breathe-Greenwich-15726928.php?fbclid=IwAR04TjSEP7EzwU6WPnD1-8naExXhmBX072GOUZqT95t-IgQ8cz_IJfurKJY)

[Ken Borsuk](#)

Nov. 14, 2020 Updated: Nov. 14, 2020 8:55 p.m.

[Comments](#)



1 of 7

Ellen Stacom, RN, demonstrates the hyperbaric oxygen chamber at Greenwich Hospital in Greenwich, Conn. Thursday, Nov. 5, 2020. Greenwich Hospital will be taking part in a year-long trial that will examine treatment for COVID-19 through the use of hyperbaric oxygen therapy.

Tyler Sizemore / Hearst Connecticut Media



GREENWICH — In the ongoing battle against the coronavirus, Greenwich Hospital is one of six medical facilities slated to take part in a yearlong trial that will examine a treatment for COVID-19 using hyperbaric oxygen therapy — a treatment that one local man said saved his life.

The method is used more often for treating difficult to heal wounds and as a treatment for decompression sickness, a potential risk of scuba diving. It's beneficial in cases of carbon dioxide poisoning, when oxygen is critically needed in the lungs and the bloodstream. That's where it could help coronavirus patients.

"COVID causes a very severe pneumonia, and it essentially has several mechanisms by which it blocks your body's ability to extract oxygen by regular air and put it into the bloodstream so that your organs can be sustained," said Dr. Sandra Wainwright, medical director at Greenwich Hospital's Center for Hyperbaric Medicine and Wound Care.

This treatment "fully saturates every red blood cell with oxygen and dissolves additional oxygen into the plasma that carries red blood cells around," Wainwright said. The use of hyperbaric therapy lifts oxygen levels to extremely high levels at a time when oxygen is vital for a patient, she said.

The method dates to the 1800s, when it was used to treat patients with the flu, Wainwright said. If effective, the treatment could now keep patients with COVID-19 off ventilators, which can make a huge difference in survival and recovery.

It's way of giving patients oxygen as a sort of drug, which can be very effective in delivering more oxygen without the use of a ventilator, Wainwright said.

A patient would undergo hyperbaric oxygen therapy for five straight days, she said. The treatment consists of 10 minutes of pressurization in the hyperbaric chamber, which is comparable to deep sea diving and sends more oxygen into the body and organ. Once the pressure is set, the patient can comfortably drink water, watch television or go to sleep for the 90-minute treatment, the doctor said.

The chambers can also be effective in relaxing patients with COVID-19 who may be struggling to breathe, she said.

"Once we get them in the chambers, you can see the tension leave their bodies," Wainwright said. "You can see their respiratory rates slow down closer to normal. They weren't panting."

“COVID patients breathe at a rate of 50 or 60 per minute,” she said. “Look at the second hand of your clock and take a breath in and out, in and out, in and out every time it moves. You will know how a COVID patient breathes.”

When a patient enters the hyperbaric chamber, which looks like a large clear tube with a bed inside, “they slow down and breathe more normally,” she said.

“The fear leaves their eyes and they can turn over on their sides and actually fall asleep and get a nap,” Wainwright said. “It’s such a blessing.”

Some COVID patients are afraid to go to sleep because they think that they may stop breathing, Wainwright said.

## Success with a patient

Greenwich Hospital has already seen encouraging results after treating three patients with the HBOT chambers, although they were not part of the trial.

Two of those patients did “very well,” according to Wainwright, recovering within a week after they were “very sick.”

The third patient had to use a mechanical ventilator, Wainwright said, likely because the treatment did not happen soon enough.

One patient was Cayetano Aparicio-Velasco, a 35-year-old resident of Port Chester, N.Y., who was admitted to Greenwich Hospital on Oct. 21.

His HBOT treatment began Oct. 22 and ended Oct. 28, with five treatments in seven days. He was discharged Oct. 30 and recovered enough to be back working as a chef and living a normal life.

“I didn’t know I had COVID until I got to the hospital,” Aparicio-Velasco said. “I was home sick for 10 days. I thought I had the flu. I had a heavy cough, and when I would stop coughing, I felt I wasn’t getting enough oxygen.”

His cough was symptomatic of the coronavirus. “Every time I coughed, I felt I couldn’t catch my breath, that I couldn’t get enough oxygen,” he said.

“I realized this was not normal. I finally went to the Emergency Department at Greenwich Hospital because I couldn’t breathe,” Aparicio-Velasco said. “I could barely talk when I got to the hospital.”

Describing the treatment, Aparicio-Velasco said at first he felt pressure in his ears, but that went away after about 10 minutes and he was comfortable.

As a result of the treatment, “I was able to breathe better,” he said.

“I think this therapy can help other people to breathe better,” Aparicio-Velasco said. “I agreed to the treatment right away because I wanted to get better and the doctor thought this would greatly help me. I wanted to be able to breathe. I think everything the doctors and nurses did, including the oxygen therapy and other treatments, helped to save my life.”

## Trial set to begin soon

Six medical institutions are participating: New York University, Louisiana State University, the University of Nebraska, the Intermountain Medical Center in Utah and Erlanger Health System in Tennessee will join Greenwich Hospital in testing the hyperbaric oxygen therapy treatment on 600 patients in the next year.

It is unclear how many of those 600 patients will be tested in Greenwich. The trial is expected to begin in late November or early December. When the trial begins, Wainwright said, it will be with the full consent of patients.

“We’re going to get the number to prove this is an efficacious therapy,” she said. “We are the only hospital in the Yale New Haven Health System that is capable of doing hyperbaric therapy in COVID patients because we have the chambers here in the hospital on site.”

As a pulmonary critical care doctor, Wainwright has been at the front lines of Greenwich Hospital's fight against the coronavirus, often working round-the-clock shifts in the ICU when the virus hit its peak in Greenwich in the spring.

She said she saw the damage the virus can wreak on patients' lungs and how, if they can avoid intubating a patient, "That is a wonderful thing."

The idea of using the HBOT chambers came to her after she read a paper out of Wuhan, China, where a doctor tried the treatment.

"That was about the time we realized that if you intubated patients with COVID, they stayed on the ventilators for a very long time and the mortality rate was high," Wainwright said.

She called the hyperbaric oxygen therapy "an intriguing concept," and they began discussing the idea at "Greenwich Hospital in about April and my colleagues at NYU, who set this trial up, did about 20 patients and were able to prevent mechanical ventilation in a large number and reduce the mortality rate."

Greenwich Hospital has supported her work, Wainwright said.

"What's so great about Greenwich Hospital is when you bring up an idea and you can back it with some science and energy they are all in," she said. "I have gotten incredible support from the hospital."

*kborsuk@greenwichtime.com*