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Northwell Health study on burn pit veterans records real-time health data

By Robert Brodsky robert.brodsky@newsday.com @BrodskyRobert Updated January 12, 2024 7:25 pm

9–11 minutes.

Marine veteran Patrick McCaffrey of Selden never gave much thought to the football field-sized burn pits roaring just 50 yards from his small outpost in Iraq from 2007 through 2011.

Tires. Computers. Rusted ammunition. Medical waste. Plastic water bottles. Batteries. Jet fuel. All set ablaze, in part, to prevent them from falling into the enemy's hands.

It was only after McCaffrey, 36, returned home to Long Island that he started to notice something wasn't right with his health.

"I didn't even pick up that I had any complications," said McCaffrey, who was diagnosed with asthma and sleep apnea linked to burn pit

exposure. "I noticed myself getting slower and my breathing a little bit harder. But I just kind of figured it was a normal thing."

When the airborne particles in burn pits are inhaled, they enter the lungs and irritate or constrict their internal passages, experts said. The particles can inhibit the lungs' ability to introduce oxygen to the bloodstream.

McCaffrey, who now works for Northwell Health's office of Military Liaison Services as a care management coordinator, recently joined 34 former service members in a three-year study recording real time health data, such as heart rate, blood pressure, EKG and oxygen saturation levels through a ring-shaped pulse oximeter that works similar to an Apple Watch.

Dr. Anthony Szema, director of the International Center of Excellence in Deployment Health and Medical Geosciences at Northwell Health, said he hoped the data, which goes to an app on the patient's phone, could be used to improve screening for burn pit exposure and to better understand how long-term respiratory disease develops.

Szema, whose Northwell office is in South Setauket, estimates there are about 8,000 veterans in the metropolitan area who served in Iraq and Afghanistan that were likely exposed to burn pits and an

estimated 3.5 million in the United States.

“We can construct mathematical predictive models of who's going to get sick and get disease,” said Szema, a pulmonologist and leading expert on burn pit exposure who leads the study. “How can we detect people earlier, before things bad things happen?”

In addition, Szema has developed a specialized burn pit respiratory questionnaire, filled out by participants annually, that screens for conditions resulting from exposure, including sleep apnea, asthma and cancers. Additional surveys screen participants for respiratory illness, mental health, urological issues and sleep quality.

And the size of the study group is likely to grow as Szema has funding for about 75 patients.

In August 2022, President Joe Biden signed the PACT Act, considered by experts to be the most significant expansion of veteran benefits in more than three decades.

The bill extends benefits to service members from Vietnam, the Gulf War and post-9/11 era conflicts who have cancers and 22 other severe illnesses linked to burn pits, airborne pollution, Agent Orange and other pollutants. Veterans can still receive benefits if they have a condition that's not on the list, but the burden is on

them to prove the link to burn pits. The Department of Veterans Affairs in the past has denied the majority of those claims.

To date, more than 5 million veterans have received the VA's new toxic exposure screenings required to file a PACT Act claim, and 1.3 million claims have been submitted — roughly half of which have been approved, according to the agency. In New York, 31,255 claims have been submitted for approval, department data shows.

Juan Serrano, 43, of East Meadow, served in the Marines from 2000 through 2009 and was stationed in Iraq and Kuwait, where he often supervised the use of massive burn pits.

Years later, Serrano, who is a participant in Szema's study, has difficulty sleeping, suffers with shortness of breath and has been prescribed an inhaler.

“The studies, and everything that we're doing, is to give service members reassurance that it's OK to open up and talk about their conditions,” said Serrano, who serves as Northwell's vice president of military and veterans liaison services, helping current and former service members address medical issues. “It's OK to say that you're not feeling well. It's OK to look for help.”

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WHAT TO KNOW

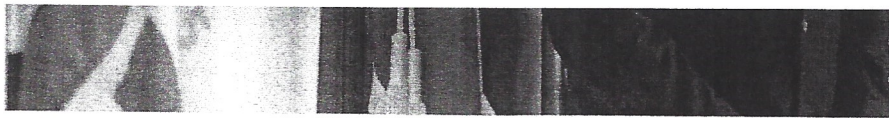
- **A three-year study by Northwell Health** hopes to improve screening for exposure to burn pits to veterans overseas and to better understand long-term respiratory disease.
- **Participants in the study wear a ring-shaped pulse oximeter** that records real time health data, such as heart rate, blood pressure, EKG and oxygen saturation levels.
- **In 2022, President Joe Biden signed the PACT Act**, which

extends benefits to service members from Vietnam, the Gulf War and post-9/11 era conflicts who have cancers and 22 other illnesses linked to burn pits, airborne pollution and Agent Orange.

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Patrick McCaffrey, a Marine veteran who served in Iraq and a care management coordinator for Northwell Health, is a participant in a Northwell study tracking burn pit victims. Credit: Danielle Silverman

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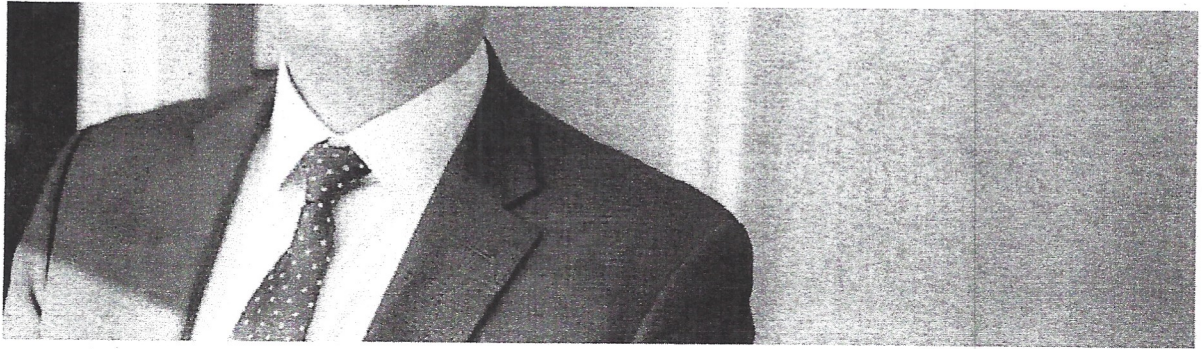
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Juan Serrano, vice president, military and veterans liaison services for Northwell Health, is a Marine veteran participating in a Northwell burn pit study. Credit: Danielle Silverman

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Robert Brodsky is a breaking news reporter who has worked at Newsday since 2011. He is a Queens College and American University alum.