

Dr. David Yamane was awarded the Star Research Award at the 2024 Critical Care Congress for the presentation of the HYPERACT Study - a randomized controlled trial demonstrating Vapotherm's High Velocity Therapy effectively treats moderate-severe acute exacerbations of COPD, while improving patient comfort

EXETER, N.H., March 6, 2024 /PRNewswire/ -- Vapotherm, Inc. (OTCQX: VAPO), ("Vapotherm" or the "Company") today announced that David Yamane, MD was awarded the Star Research Award by the Society for Critical Care Medicine (SCCM) at the 2024 Critical Care Congress. The award is in recognition of the HYPERACT study – a new multi-center, randomized controlled trial which offers high velocity therapy as an additional, more comfortable, option for clinicians treating acute exacerbations of moderate-severe COPD.

(https://journals.lww.com/ccmjjournal/citation/2024/01001/42__high_velocity_nasal_insufflation_vs.43.aspx)

This study compared non-invasive positive pressure ventilation (NiPPV) to Vapotherm high velocity therapy by measuring relief of dyspnea (breathlessness) as well as blood chemistry values and patient response.

Dr. Yamane shared his sentiments, stating, "I am deeply honored by this recognition and genuinely excited about the potential impact of the HYPERACT study on health care. Offering an alternative to mask-based therapies that is both effective and comfortable for patients marks a significant advancement in our approach to COPD treatment."

Acute exacerbations of COPD contribute to over 600K emergency room (ER) visits and 140K deaths annually in the US alone. The cost is approximately \$50 billion per year. (1,2)

This is the first multi-center, randomized, controlled trial focused on patients with moderate to severe exacerbations of COPD, showing similar improvement in pH and pCO₂ comparing high velocity therapy and NiPPV.

"When patients present to the emergency department out of breath, they're often placed on a mask-based therapy that uses pressure to open their airways. It can be even more distressing when you can't breathe to have a mask on your face, forcing air down your lungs" said Vapotherm's Chief Medical Officer, Jessica Whittle, MD, PhD. "This study concludes that high velocity therapy provides similar clinical results and statistically superior patient reported comfort compared to mask-based therapies."

Over time, patients reported improved comfort on high velocity therapy while patients on NiPPV reported more discomfort from baseline. 19% of NiPPV patients failed therapy compared to 11% of high velocity therapy patients.

Joe Army, Vapotherm's President and Chief Executive Officer expressed his enthusiasm, stating, "11% of patients on high velocity therapy in HYPERACT were effectively treated in the ED and were discharged home, whereas 0% of patients treated with NiPPV were discharged directly home – that's a huge cost savings for hospitals." Mr. Army continues, "This is a win-win-win scenario: a win for the clinician to use a simple, evidence-based therapy, a win for the patient regarding comfort, and a win for the hospital because mask-based complications add costs." (3)

Dr. Yamane was presented with the award at the 2024 Critical Care Congress on January 23rd, 2024, in Phoenix, AZ. He also presented the HYPERACT findings at the conference.

- Sullivan J, Pravosud V, Mannino DM, Siegel K, Choate R, Sullivan T. National and state estimates of COPD morbidity and mortality - united states, 2014-2015. *Chronic Obstr Pulm Dis*. 2018;5(4):324-333. doi: 10.15326/jcopdf.5.4.2018.0157.
- Nguyen PL, Uddin MM, Mir T, et al. Trends in incidence, and mortality of acute exacerbation of chronic obstructive pulmonary disease in the United States emergency department (2010-2018). *COPD: Journal of Chronic Obstructive Pulmonary Disease*. 2021;18(5):567-575. <https://doi.org/10.1080/15412555.2021.1979500>. doi: 10.1080/15412555.2021.1979500.
- Carron M. et al. Complications of non-invasive ventilation techniques: a comprehensive qualitative review of randomized trials. *British Journal of Anaesthesia*. 110(6):896-914. (2013) <https://www.ncbi.nlm.nih.gov/pubmed/23562934>

About Vapotherm

Vapotherm, Inc. (OTCQX: VAPO) is a publicly traded developer and manufacturer of advanced respiratory technology based in Exeter, New Hampshire, USA. The Company develops innovative, comfortable, non-invasive technologies for respiratory support of patients with chronic or acute breathing disorders. Over 4.2 million patients have been treated with the use of Vapotherm high velocity therapy® systems. For more information, visit www.vapotherm.com.

Vapotherm high velocity therapy is mask-free non-invasive respiratory support and is a front-line tool for relieving respiratory distress—including hypercapnia, hypoxemia, and dyspnea. It allows for the fast, safe treatment of undifferentiated respiratory distress with one tool. The HVT 2.0 and Precision Flow systems' mask-free interface delivers optimally conditioned breathing gases, making it comfortable for patients and reducing the risks and care complexities associated with mask therapies. While being treated, patients can talk, eat, drink and take oral medication.

Legal Notice Regarding Forward-Looking Statements

This press release contains forward-looking statements under the Private Securities Litigation Reform Act of 1995, including statements about the Company's business and growth prospects in Brazil. In some cases, you can identify forward-looking statements by terms such as "expect," "anticipate," "continue," "plan," "intend," "will," or "typically," or the negative of these terms or other similar expressions, although not all forward-looking statements contain these words, and the use of future dates. Each forward-looking statement is subject to risks and uncertainties that could cause actual results to differ materially from those expressed or implied in such statement. Other risks and uncertainties included under the heading "Risk Factors" in Vapotherm's Annual Report on Form 10-K for the fiscal year ended December 31, 2023, as filed with the SEC on February 22, 2024, and in its subsequent filings with the SEC. The forward-looking statements contained in this press release reflect Vapotherm's views as of the date hereof, and Vapotherm does not assume and specifically disclaims any obligation to update any forward-looking statements whether as a result of new information, future events or otherwise, except as required by law.

Investor Contact:

John Landry, SVP and CFO

<http://investors.vapotherm.com/>

SOURCE Vapotherm, Inc.

<https://investors.vapotherm.com/2024-03-06-Dr-David-Yamane-was-awarded-the-Star-Research-Award-at-the-2024-Critical-Care-Congress-for-the-presentation-of-the-HYPERACT-Study-a-randomized-controlled-trial-demonstrating-Vapotherms-High-Velocity-Therapy-effectively-treats-moderate-severe-ac>