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### President's Message

**Jordan M. Warchol, MD, MPH, FACEP**

Dear Nebraska Emergency Physicians,

Today, I write to you for the first time as Chapter President. I am honored to join the line of dedicated emergency physicians who have served our organization in this role.

I hope that over the next two years, this chapter can continue to become more engaging to our members and more engaged on the national and local levels.

I know there are many of you throughout the state who I have not yet had the pleasure of meeting, so let me introduce myself. I am originally from the Twin Cities area of Minnesota but attended college and medical school in Omaha. I completed residency at UNMC and then went on to do fellowship in Health Policy at George Washington University in Washington, DC. While there, I completed an MPH and had the opportunity to work in the US Senate for a year, working on both medical finance and broader medicine-related issues. Policy is my true passion, and I have continued working in that space since my return to the faculty at UNMC in 2018. I currently also sit on the Nebraska Medical Association board of directors and am the Legislation Commission chair for the NMA, as well as the Chair of the Nebraska Medical PAC. I also am one of the representatives to the AMA House of Delegates for our state. My husband, Myles, and I have one son, Frasier, and one fur baby, Fischer, and live in West Omaha.

Please feel free to contact me at any time by call, text, or email if you have concerns about the practice of EM or the lives of EPs in Nebraska. My job is to serve this chapter and its members in whatever ways I can be helpful, so please do not hesitate to [reach out!](#)

I look forward to fulfilling this role over the next 2-years.

# Vapotherm

## How does Vapotherm High Velocity Therapy Compare to Noninvasive Positive Pressure Ventilation (NiPPV)?

Vapotherm high velocity therapy provides mask-free ventilatory support to patients in respiratory distress. Given the cannula interface, this modality often gets confused for generic high flow—a respiratory support tool with a cannula interface that delivers high liters of flow at low velocity. However, unlike generic high flow, high velocity therapy is indicated for ventilatory support and can be used as a frontline tool for respiratory failure in patient populations traditionally treated with NiPPV. But what patient types can be managed and how does this Mask-Free NIV® compare to traditional NIV when it comes to patient outcomes?

The figure below illustrates the summaries of studies examining comparisons between these two modalities.

### High Velocity Therapy vs NiPPV for Respiratory Distress

Adult Population		
<p><b>Doshi 2018</b> RCT, all-comers in the ER n = 204 Failure to intubation: NiPPV 13% High velocity therapy: 7%</p> <p><b>Key Take-Away:</b> High velocity therapy is noninferior to NiPPV for undifferentiated respiratory distress</p>	<p><b>Haywood 2019</b> Subgroup analysis, CHF patients n = 42 Failure to intubation: NiPPV 0% High velocity therapy: 0%</p> <p><b>Key Take-Away:</b> No difference in treatment failure among patients studied</p>	<p><b>Doshi 2020</b> Subgroup analysis, COPD patients n = 65 Failure to intubation: NiPPV 16.1% High velocity therapy: 5.9%</p> <p><b>Key Take-Away:</b> No difference in intubation and pH and PCO<sub>2</sub> trended similarly among patients studied</p>
Pediatric Population	Neonatal Population	
<p><b>Cesar 2020</b> Randomized pilot trial, critical bronchiolitis n = 63 Treatment failure: CPAP 35.7% High velocity therapy: 37.1%</p> <p><b>Key Take-Away:</b> No difference in therapy failure among critical bronchiolitis patients studied</p>	<p><b>Lavizzari 2016</b> RCT, primary respiratory support n = 316 Treatment failure: CPAP/Bi-level 9.5% High velocity therapy: 10.8%</p> <p><b>Key Take-Away:</b> High velocity therapy is noninferior to NiPPV for primary respiratory support in NICU</p>	<p><b>Collins 2013</b> RCT, post-extubation support n = 132 Treatment failure: CPAP 34% High velocity therapy: 22%</p> <p><b>Key Take-Away:</b> High velocity therapy is noninferior to NiPPV for post-extubation respiratory support in NICU</p>

#### IN THE ADULT POPULATION

Adult All-Comers in the Emergency Department: [Doshi and colleagues \(2018\) conducted a head-to-head randomized controlled trial comparing Vapotherm high velocity therapy and NiPPV](#) in the treatment of emergency department patients with respiratory distress.<sup>1</sup> Clinicians in the participating study centers randomized patients presenting in the emergency department with undifferentiated respiratory distress—i.e. the physicians included patients presenting with a variety of causes of their respiratory distress - including hypoxemic and hypercapnic respiratory failure—to either NiPPV or Vapotherm high velocity therapy.

The trial found no difference between the therapies in intubation rates or treatment failure rates. In other words, the patient outcomes regardless of whether patients were treated with the traditional modality of NiPPV or with high velocity therapy, were comparable. The authors concluded that Vapotherm high velocity therapy is

noninferior to NIPPV for the treatment of adult patients experiencing undifferentiated respiratory failure in the Emergency Department.

Although there was similar efficacy between the two modalities, physicians rated high velocity therapy more favorably when it came to physician perception of patient response, patient comfort, and simplicity of use.<sup>1</sup>

[For an in-depth summary of the Doshi 2018 trial, download this free eBook.](#)

**COPD Patients:** Doshi and colleagues (2020) published a subgroup analysis of the above trial focused on just COPD patients and their outcomes.<sup>2</sup> Approximately one third of the patients in the trial — 65 out of 204 — had a discharge diagnosis that included hypercapnic respiratory failure or COPD and the question was how these patients' outcomes compared between Vapotherm high velocity therapy and NIPPV. The authors found that, Vapotherm therapy had comparable outcomes to NIPPV in the treatment of respiratory distress among these COPD patients. [You can read an in-depth summary of this analysis here.](#)

**CHF Patients:** Similarly to the COPD subgroup analysis, Haywood and colleagues (2019) took the data from the large randomized controlled trial and analyzed it for the Congestive Heart Failure (CHF) patient population.<sup>3</sup> There was no difference in primary outcomes of intubation rate or therapy success between NiPPV and high velocity therapy among these patients. Additionally, there was no significant difference in baseline patient characteristics between the two randomized groups. [You can read a more detailed summary of the study here.](#)

Overall, these studies comparing NiPPV to high velocity therapy in adult patients suggest that physicians can use either modality for the management of respiratory distress.

## IN THE PEDIATRIC POPULATION

**Bronchiolitis Patients:** Cesar and colleagues (2020) conducted a pilot study comparing CPAP to Vapotherm high velocity therapy in infants with critical bronchiolitis.<sup>4</sup> The authors defined treatment failure as escalation to either intubation or bi-level NiPPV. In these patients studied, the two arms showed similar outcomes for both, treatment failure and PICU length of stay, as [summarized here.](#)

## IN THE NEONATAL POPULATION

**Primary Respiratory Support:** In a randomized controlled trial, Lavizzari and colleagues (2016) examined how Vapotherm high velocity therapy compares to CPAP/ bi-level PAP for RSD support in premature neonates.<sup>5</sup> They concluded that high velocity therapy was as effective as traditional NIV support in this patient population.

**Post-Extubation Support:** Collins and colleagues (2013) conducted a randomized controlled trial comparing Vapotherm high velocity therapy to CPAP for post-extubation support of premature neonates. Similar to Lavizzari's outcomes, the authors found that high velocity therapy was noninferior to the traditional modality of CPAP.<sup>6</sup>

It's important to note that both of these trials were conducted using exclusively Vapotherm high velocity therapy. These outcomes should not be conflated with similar trials that compare low-velocity high flow modalities to pressure-based NIV. Although generic high flow and high velocity both use nasal cannula interfaces, the [two modalities are mechanistically different.](#) This [summary of ten studies in neonates](#) illustrates some of the differences in patient outcomes between HFNC and high velocity/Mask-Free NIV.

## ONE COMFORTABLE AND EFFECTIVE TOOL ACROSS PATIENT POPULATIONS

In conclusion, studies that examine how high velocity therapy compares to mask-based NIV—like CPAP or bi-level PAP—have shown similar patient outcomes in the management of respiratory distress. This suggests that Mask-Free NIV can be an attractive alternative to traditional NIV modes, giving clinicians an efficacious, comfortable, and safe tool in their arsenal.

**TO WATCH A ROUNDTABLE DISCUSSION OF ADULT CRITICAL CARE AND EMERGENCY PHYSICIANS USE HIGH VELOCITY THERAPY IN THEIR PRACTICES, [CLICK HERE](#).**

1. Doshi, Pratik et al. High-Velocity Nasal Insufflation in the Treatment of Respiratory Failure: A Randomized Clinical Trial. *Annals of Emergency Medicine*, 2018.
2. Doshi P, Whittle JS, Dungan G et al, The ventilatory effect of high velocity nasal insufflation compared to noninvasive positive-pressure ventilation in the treatment of hypercapneic respiratory failure: A subgroup analysis *Lung*. 2020 Apr 6. <https://doi.org/10.1016/j.hrtlng.2020.03.008>
3. Haywood ST, Whittle JS, Volakis LI et al HVNI vs NiPPV in the Treatment of ADHF: Subgroup analysis of a multi-center trial in the ED. *American Journal of Emergency Medicine*, 2019.
4. Cesar, Regina Grigolli, Bibiane Ramos Pinheiro Bispo, Priscilla Helena Costa Alves Felix, Maria Carolina Caparica Modolo, Andreia Aparecida Freitas Souza, Nelson K. Horigoshi, Alexandre T. Rotta. High-Flow Nasal Cannula versus Continuous Positive Airway Pressure in Critical Bronchiolitis: A Randomized Controlled Pilot. *J Pediatr Intensive Care*. April 2020. DOI: 10.1055/s-0040-1709656
5. Lavizzari A, Colnaghi M, Ciuffini F, Veneroni C, Musumeci S, Cortinovi I, Mosca F. "Heated, humidified high-flow nasal cannula vs nasal continuous positive airway pressure for respiratory distress syndrome of prematurity – a randomized clinical noninferiority trial." *JAMA Pediatr*. 2016 Aug
6. Collins C, Holberton J, Barfield C, Davis P. "A randomized controlled trial to compare heated humidified high-flow nasal cannulae with nasal continuous positive airway pressure postextubation in premature infants." *J Pediatrics*. 2013 May; 162: 949-54.

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## Welcome New Members!

**Alba Duvall, MD**  
**Andrew Lundberg Hatfield, MD**  
**Benjamin McIntire**  
**Bradford Christopher Huff, MD**  
**Brian H. Cunningham, MD, FACEP**  
**Brian R. Freeman, DO**  
**Brian William Bristol**  
**Devin Rickett, MD, FACEP**  
**Gerald Christian**  
**Alexander Kulish, MD**  
**Jeffrey Cooper, MD, FACEP**  
**Jeremy Craig Brown**

**John Evaristo Perez, III, MD**  
**Joseph M. Werner, MD**  
**Joshua A. Henry, MD**  
**Katherine Elizabeth Merritt, MD**  
**Kimberly Vogelsang, MD**  
**Michael James Backer**  
**Molly Clare Geraghty, MD**  
**Morgan Elizabeth McKinney, DO**  
**Peter Anaradian, MD**  
**Ryan Boyland**  
**Ryan Ronald Pavelka, DO**  
**Thomas Szamocki, DO**

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**FROM NATIONAL ACEP**



## ACEP Resources & Latest News

**ACEP Calls for Stronger Protections for Emergency Physicians Who Raise Workplace Safety Concerns:** ACEP spoke directly to the Occupational Safety and Health Administration (OSHA) during a public meeting about whistleblower protections. ACEP Council Speaker Kelly Gray-Eurom, MD, MMM, FACEP, [raised the need for due process protections](#) for emergency physicians on the job.

ACEP Clinical Alert: [Shortages in Iodinated Contrast Media, Baby Formula](#)

### Workforce:

- **A new analysis of the EM physician resident workforce in [Annals of Emergency Medicine](#)** finds that while the number of residency programs is increasing, new programs are disproportionately located in urban areas in states with existing programs, rather than rural communities with limited access to emergency care. [Read more](#)
- **Building toward a better future, ACEP is moving forward on EM workforce initiatives.** [Watch an update](#) from ACEP President Dr. Gillian Schmitz on ACEP's progress during this April 28 town hall webinar hosted by the EM Workforce Section.
- **The Changing Role of Physician Assistants and Nurse Practitioners in the Emergency Department:** On May 26, ACEP's Democratic Group Practice Section is hosting a webinar with a panel discussion about best practices when using PAs and NPs in the emergency department. Topics will include ACEP's new policy on the role of PAs/NPs in the ED, economic considerations, workflow challenges, and how shared visits work. [Register for this free webinar.](#)

ACEP has launched a **public campaign "[Who Takes Care of You in an Emergency?](#)"** that includes a series of videos outlining unique aspects of the job and explaining the significant difference in training and education required for physicians. Here are [new scope of practice talking points](#).

**Problem solving: It's what we do.** [Take a look at the issues we're tackling](#) and how you can join the cause.

More than 100 leaders, members and staff worked together to create **[ACEP's new strategic plan!](#) It's an important roadmap for our future.** Together we'll build a better future for emergency physicians everywhere!

### It's Emergency Medicine Wellness Week!

May is Mental Health Awareness Month, and ACEP's Wellness Section is marking the occasion by kicking off its annual Emergency Medicine Wellness Week tomorrow, May 22. View more physician wellness resources by visiting [ACEP's Wellness Hub](#).

The **[May issue of ACEP Now](#)** features **new articles focused on behavioral health**, including [The Importance of System-Level Wellness](#) and [How to Approach Psychiatric Patients who Wish to Refuse Treatment in the ED](#).

### Advocacy:

**Help Move the Workplace Violence Prevention Bill Forward!** Ask your U.S. Senators to co-sponsor and support the "Workplace Violence Prevention for Health Care and Social Service Workers Act" (S.4182). [Take Action!](#)

On May 4, ACEP and the Emergency Nurses Association hosted a press event at Capitol Hill to increase public awareness of workplace violence in the emergency

department and to push for swift passage of the "Workplace Violence Prevention for Health Care and Social Service Workers Act." [Read the press release with more information about the bill](#). Watch the [Facebook Live recording](#) of the press event.

### No Surprises Act

In the latest twist, the government requests Texas court place a "hold" on its surprise billing appeal. [What does this mean for ACEP's lawsuit?](#) [Dive deeper and learn more](#) about ACEP's many years of advocacy on this issue that led up to this law.

### Prioritize Physician Mental Health

It's Mental Health Month and a good time to look at the recently-passed Dr. Lorna Breen Act. This vital legislation, named after an ACEP member who struggled and was tragically lost during the first surge of the pandemic, went from an idea to a law that will help protect the emotional health and wellbeing of emergency physicians. [See ACEP's Role](#).

## Regulatory Updates:

- [NEW BLOG SERIES: Value based Care in Emergency Medicine-- an Overview](#) (5/19/22)
- [CMS Finalizes New Network Adequacy Requirements for Certain Private Health Plans](#) (5/12/22)
- [No Alternative Payment Model for Emergency Physicians and other Specialists... The AMA Has a Proposed Solution](#) (5/5/22)
- [ACEP Responds to FTC and DOJ Request for Information on Mergers and Acquisitions in Health Care](#) (4/21/22)

## Upcoming ACEP Events and Deadlines

- **May 26:** [The Changing Role of Physician Assistants and Nurse Practitioners in the Emergency Department](#) - Webinar hosted by the ACEP Democratic Group Practice Section
- **May 31:** Last day to utilize current [student loan rate discount for ACEP members](#)
- **May 31:** Last day to join the [ACEP22 QI Challenge](#)
- **June 1:** [Weird Baby Stuff: Managing Brief Resolved Unexplained Events](#) - Webinar hosted by the ACEP Pediatric Emergency Medicine Section
- **June 16:** [Breaking Down Barriers to ED Care for People with Sickle Cell Disease](#) - Webinar hosted by the CDC
- **June 16:** [EM Clinical Support Tool for Sickle Cell Disease](#)
- **June 17:** Last day to apply for the new [EMF health policy scholar grant](#)
- **June 20:** [Caring for our Heroes: Special Considerations for Treating Veterans in Emergency Departments](#) - Webinar hosted by ACEP
- **Aug. 23-25:** [Independent EM Group Master Class](#)
- **Nov. 11:** Last day to submit [ACEP23 course proposals](#)

Jordan M. Warchol, MD, MPH, FACEP - President  
Adriana Alvarez - Executive Director  
(469) 499-0177 | [ne.chapter@acep.org](mailto:ne.chapter@acep.org) | [Website](#)  
Nebraska Chapter ACEP  
c/o National ACEP  
4950 West Royal Lane  
Irving, Texas 75063-2524

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