2026 California Thoracic Society Annual Educational Conference

& Chronic Obstructive Pulmonary Disease Symposium

Thursday March 12, 2026-Sunday March 15, 2026

Earn up to 19 CME/CEU/MOC Credits

Jointly Provided by AKH Inc., Advancing Knowledge in Healthcare and the California Thoracic Society

PORTOLA HOTEL & SPA
AT MONTEREY BAY

Thursday March 12, 2026 (6 CME/CEU/MOC Credits)
COPD Symposium
Friday March 13, 2026 (6.5 CME/CEU/MOC Credits):
Advances in Interventional Pulmonary, Remote Monitoring in Pulmonary and Sleep Medicine, Approach to Symptom Management in Chronic Lung Disease and Critical Care
Saturday March 14, 2026 (6.5 CME/CEU/MOC Credits)
Sepsis and Shock, Extracorporeal Membrane Oxygenation, Inpatient Pulmonary Complications of Cancer Care
Sunday March 15, 2026
Fellow and Resident Track Symposium

California Thoracic Society
ATS Chapter Serving California and Arizona

AKH INC.
ADVANCING KNOWLEDGE IN HEALTHCARE

California Thoracic Society
Annual Conference
March 12-15, 2026
Portola Hotel and Spa, Monterey, CA

Friday March 13, 2026

Advances in Interventional Pulmonary

8:00 am – 8:10 am: Welcome and Introduction

8:10 am – 8:55 am: Keynote Address – Evolution of Bronchoscopy in Diagnosing Lung Nodules

- **Christine Argento, MD (Johns Hopkins) -** This speaker will discuss the recent advances in bronchoscopy from radial EBUS, to electromagnetic navigation, to robot technologies, and how advancement has improved lung nodule diagnosis.

8:55 am – 9:20 am: Implications of the new TNM9 staging for lung cancer

- **Colleen Channick, MD (UC Los Angeles) -** This speaker will discuss the new TNM staging system, how staging is currently performed, and how to approach staging in the patient with suspected lung cancer.

9:20 am – 9:45 am: Management of Central Airway Obstruction

- **Raed Alalawi, MD (Arizona-Phoenix)-** This speaker will discuss how interventional pulmonary practitioners can manage and treat central airway obstruction.

9:45 am – 10:10 am: The Changing Landscape of Pleural Disease Management

- **Joon Chang, MD (Stanford) -** This speaker will discuss advances in management of pleural disease by the interventional pulmonologist including when to use an intrapleural catheter, and when to use

10:10 am – 10:20 am: Question and Answer

10:20 am – 10:50 am: Break

Remote Monitoring in Lung Disease and Sleep Medicine

10:50 am – 11:15 am: Developing a home spirometry program

- **Steven Hays, MD (UC San Francisco) -** This speaker will discuss how to approach the development of a home spirometry program to monitor lung disease, how to use digital health technologies to integrate results into the EHR.

11:15 am – 11:40 am: Home Non-Invasive Ventilator Monitoring

- **Christal Hawkins, RRT (UC San Diego) -** This speaker will review how to monitor home non-invasive ventilators for compliance and for adequate control of sleep disordered breathing.

11:40 am – 11:55 am: Pro: Virtual Pulmonary Rehabilitation is Ready for Prime Time

- **Aimee Kizziar, RRT (UC Davis) -** This speaker will argue in favor of virtual pulmonary rehabilitation programs.

11:55 am – 12:10 pm: Con: Virtual Pulmonary Rehabilitation is not ready for Prime Time

- **Julia Rigler, BA. RRT (UC San Francisco) -** This speaker will argue against virtual pulmonary rehabilitation programs.

12:10 pm – 12:20 pm: Question and Answer

12:20 pm – 1:00 pm: Awards Ceremony

1:00 pm – 2:00 pm: Lunch

Hands On Session:

2:00 pm – 3:00 pm: Robotic Bronchoscopy **Raed Alalawi, MD (Arizona-Phoenix) & Joon Chang, MD (Stanford)** Cough Monitoring **Lauren Eggert, MD (UCSF)**; Endobronchial Ultrasound **Pranjal Patel, MD (Stanford)**; Home NIV **Krystle Leung, MD (Stanford)**

3:00 pm – 3:20 pm: Break

Approach to Symptom Management in the Pulmonary Patient

3:20 pm – 3:45 pm: Addressing the Unmet Needs of Refractory Chronic Cough

- **Krishna Sundar, MD FCCP FAASM ATSF (UC Davis) -** This speaker will discuss the etiology behind refractory chronic cough and the treatment approaches for management

3:45 pm – 4:10 pm: Frailty in Pulmonary and Critical Care Medicine

- **Jonathan Singer, MD MPH (UC San Francisco) -** This speaker will discuss the concept of frailty and how it impacts health in patients with lung disease. The speaker will also discuss how frailty can change as lung disease is treated.

4:10 pm – 4:35 pm: Palliative Care for the Patient with Chronic Lung Disease

- **Grace Amadi, MD (UC Davis) -** This speaker will discuss how palliative care teams can benefit patients with chronic various lung disease including ILD, COPD, and pulmonary hypertension.

4:35 pm – 5:00 pm: Palliative Care for the Patient with Critical Illness

- **B. Corbett Walsh, MD, MBE (UC Los Angeles) -** This speaker will discuss how palliative care teams can benefit the inpatient with advancing lung disease, the importance of advance care planning, and palliative care in the intensive care unit.

5:00 pm – 5:10 pm: Question and Answer

5:30 pm – 7:00 pm: Women in Pulmonary, Critical Care, and Sleep Medicine (NON-CME) – Food and beverages will be served

Christal Hawkins, BSRT, RRT, is a respiratory clinical educator at UC San Diego Health with more than 16 years of experience in acute and outpatient respiratory care. In her current role, she oversees a team of therapists who provide specialized pulmonary support across multiple multidisciplinary clinics, including neuromuscular, ALS, and complex chronic disease programs. She also assists with respiratory transition of care, coordinating the safe and effective movement of patients from inpatient hospitalization to outpatient management for complex pulmonary conditions.

Ms. Hawkins played a key role in the development and implementation of the Neuromuscular Respiratory Program across three University of California campuses, helping establish standardized respiratory care pathways and expanding access to comprehensive ventilatory management for patients with progressive neuromuscular disorders.

Her professional interests include chronic ventilatory management, airway clearance optimization, outpatient respiratory education models, and the advancement of interdisciplinary approaches to long-term respiratory care. She remains committed to improving patient outcomes through evidence-based practice and clinical excellence.

Home Non-Invasive Ventilation Therapy Monitoring

Christal Hawkins, BSRT, RRT
Respiratory Clinical Educator
UC San Diego Health
California Thoracic Society — 2026

Disclosures

- I have the following relationships with ACCME defined ineligible companies:

No relevant financial relationships to disclose

- I **WILL NOT** discuss off-label use and/or investigational use of any drugs or devices.

Learning Objectives:

By the end of this session, participants will be able to:

- Identify the Why, When, What, & Who of Home NIV Monitoring.

- Allowing participants to :
  - ✓ Understand the importance of NIV monitoring
  - ✓ How to place it into practice
  - ✓ Clinically assessment of the data (apply a practical monitoring framework)
  - ✓ Team approach to guide clinical decisions

What Is NIV Therapy Monitoring?

It is the review of ventilation device generated therapy data to evaluate ventilation performance and treatment effectiveness.

Methods of obtaining data:

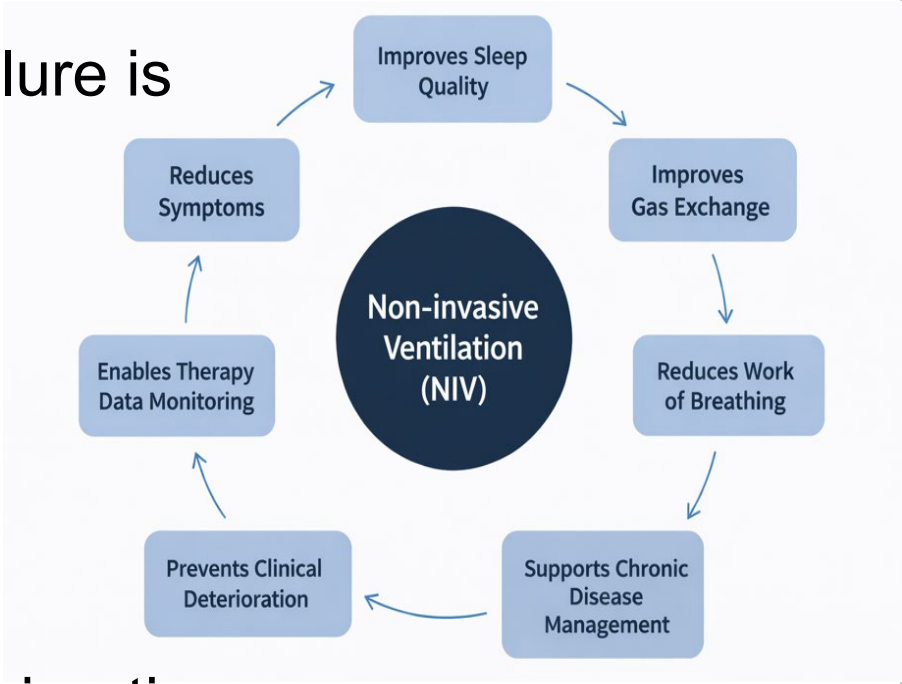
- ✓ SD Cards
- ✓ USB export
- ✓ Online platform

Online Platforms:

- ResMed = Airview
- Luisa = Prisma Cloud
- React Health = React Health Connect

Why Home NIV Monitoring Matters

- Detect early respiratory compromise (NIV failure is often silent)
- Guide adjustments as disease progresses
- Optimize ventilatory support
- Identify ventilation needs before clinical deterioration
  - ✓ Compliance does not equal effective ventilation



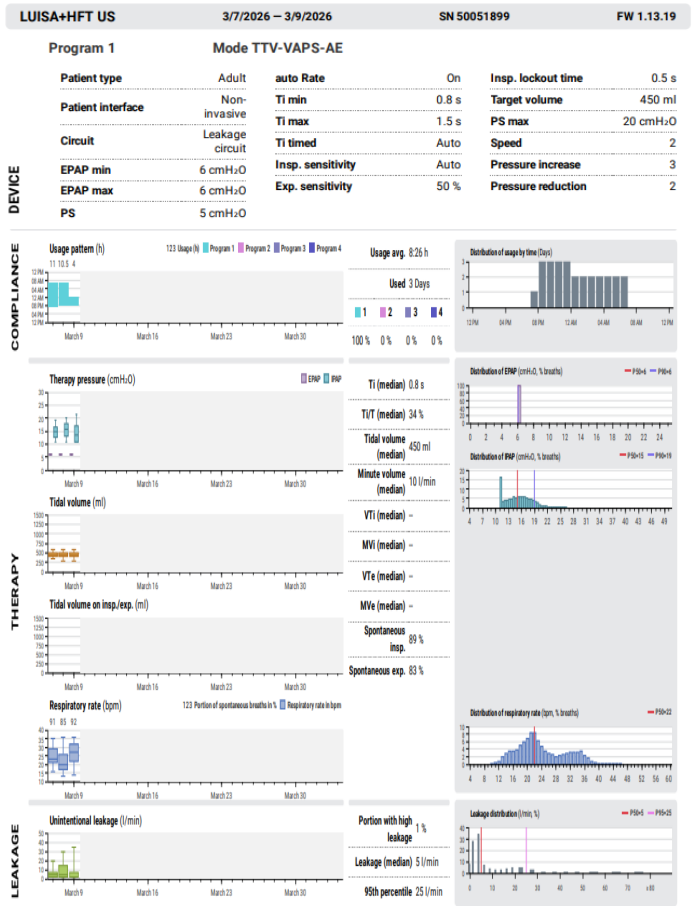
Monitoring is a clinical safety tool — not just a compliance review.

Janssens JP et al. Eur Respir Rev. 2011;20:131–142

When NIV Monitoring Fits Into Patient Care

- Prior to clinic visits
- After initiation of therapy
- During transitions of care
- In response to patient symptoms

What Data Do We Actually Have?



- Adherence and usage patterns
- Ventilation metrics (tidal volume, minute ventilation, respiratory rate)
- Residual respiratory events
- Pressure behavior and time at limits
- Leak patterns
- Synchrony and waveform review
- Physiologic correlation ($TcCO_2$, ABG, bicarbonate)

Monitoring is more than "Hours + AHI" — it's a multi-parameter assessment interpretation

What That Information Means Clinically

- ✓ **Adherence confirms therapy exposure — not ventilation effectiveness**
  - Patients can be compliant & under-ventilated
- ✓ **Summary values may appear stable while instability exists overnight**
  - Never anchor on the medians
  - Review detailed patterns
- ✓ **Patterns in therapy data can signal early respiratory compromise**
- ✓ **Physiologic measures help confirm whether ventilation is truly effective**

Good Compliance ≠ Successful Therapy

Chatwin M et al. Monitoring of Long-term NIV. Eur Respir Rev. 2018

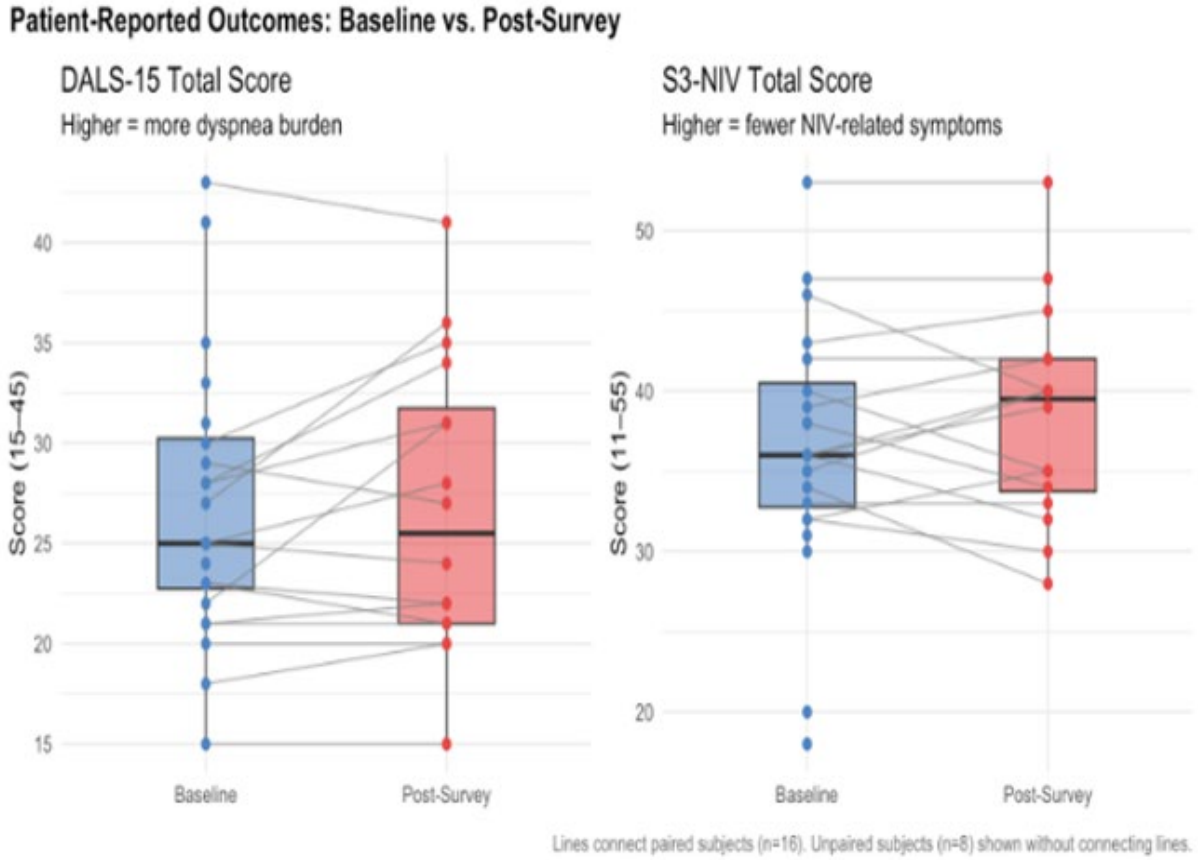
Who Interprets NIV Therapy Data

- Respiratory therapists review detailed therapy data reports
- Pulmonologists integrate findings into clinical decision-making
- Multidisciplinary teams correlate symptoms and physiologic testing

"Therapy data becomes clinically meaningful when interpreted collaboratively."

Patient-Reported Symptom Trends Following NIV Therapy Adjustment

- 1 year of monthly RT-lead active therapy monitoring
- Improvement in NIV-related symptom scores (S3-NIV)
- Stable to modest improvement in dyspnea burden (DALS-15)
- Patient-reported improvements in headache, mask comfort, and ventilator support perception



These exploratory findings suggest that review and adjustment of NIV therapy data may contribute to improved patient-reported outcomes despite disease progression.

CCHS – Symptoms Despite "Reassuring" Data

Clinical Concerns:

- Nocturnal awakenings
- Daytime fatigue
- Central hypoventilation dependent on stable NIV
- Concern for ineffective ventilation

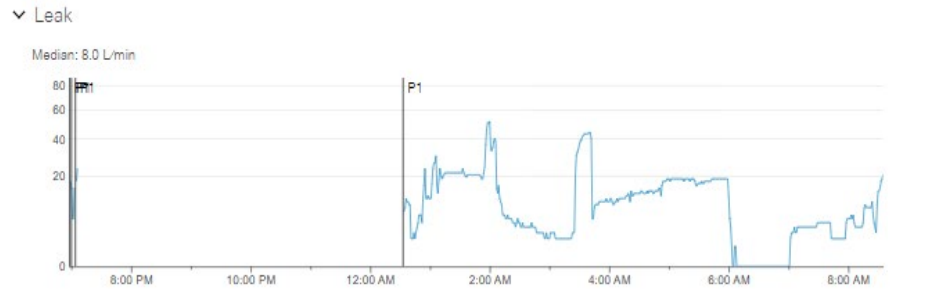
Context:

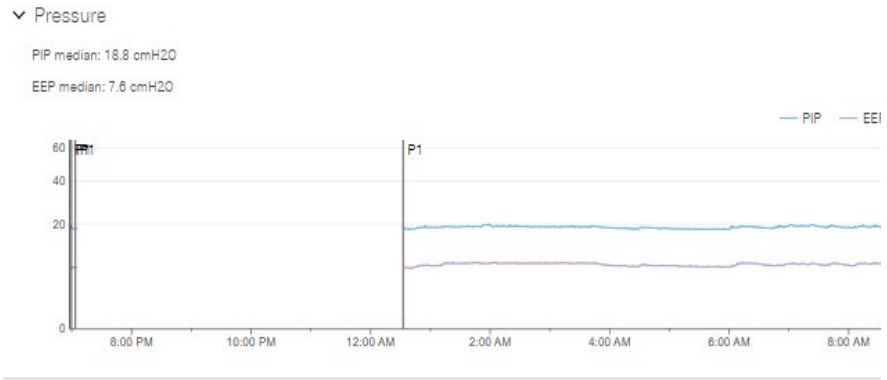
- Excellent adherence (8.5 hrs./night)
- Summary metrics appeared acceptable
- Minimal leak

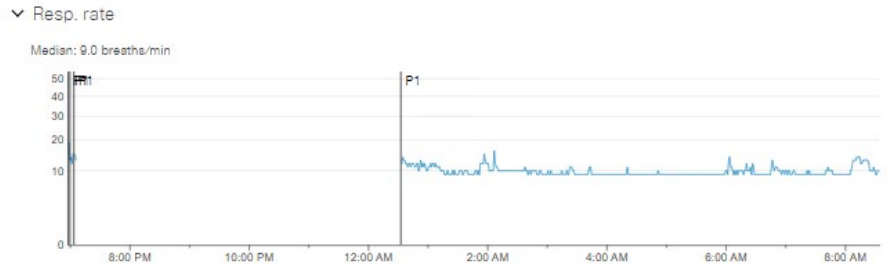
Astral 150: Program 1 [redacted]	
Device Settings: Program 1	
Mode	iVAPSAutoEPAP
Circuit	Single with leak
Patient Interface	Mask
Mask	Full Face
Patient Type	Adult
Height	65.0 in
Inspiratory Phase Delivery Settings: Program 1	
Target alveolar ventilation	3.9 L/min
Min PS	11 cmH2O
Max PS	13 cmH2O
Rise time	300 ms
Inspiratory Trigger Settings: Program 1	
Target patient rate	14 breaths/min
Trigger	Medium
Inspiratory Phase Duration Settings: Program 1	
Ti Min	0.8 sec
Ti Max	1.6 sec
Cycle	30.0 %
Expiratory Phase Settings: Program 1	
Auto EPAP	On
Min EPAP	7 cmH2O
Max EPAP	8 cmH2O

Monitoring revealed algorithm-driven instability that was not apparent in summary data.

Download Interpretation







- Delivered tidal volumes exceeded target ventilation
- Algorithm reduced pressure support to normalize target
- Respiratory rate became unstable (below backup rate)
- Summary metrics appeared acceptable

The device reports numbers — clinicians must interpret physiology

Therapy Adjustment and Outcome

$TcCO_2$ Values:

Date	Result
08/29/2024	35
02/06/25	37.6
07/09/2025	35

Intervention

- Increased target alveolar ventilation
- Expanded pressure support range
- Increased backup respiratory rate

Outcome

- Ventilation stabilized
- Symptoms improved
- $TcCO_2$ aligned with clinical improvement
- Device data aligned with patient physiology.

Goal: stabilize delivered ventilation rather than chase numeric targets

We changed: Algorithm's definition of success!

Key Takeaways:

- NIV therapy monitoring provides insight into ventilation performance outside the clinical encounter
- Cloud-based platforms allow clinicians to identify potential ventilation problems earlier
- Summary device metrics alone may not reflect effective ventilation
- Detailed therapy data and physiologic correlation improve interpretation
- Collaborative review of therapy data supports more informed clinical decisions

References

Chatwin M, et al.
Monitoring of long-term noninvasive ventilation. *European Respiratory Review*. 2018;27:170121.

Windisch W, et al.
ERS guidelines on long-term home non-invasive ventilation for management of COPD. *European Respiratory Journal*. 2019;54:1901003.

Murphy PB, et al.
Long-term non-invasive ventilation in chronic hypercapnic respiratory failure. *Lancet Respiratory Medicine*.

Janssens JP, et al.
Monitoring of home noninvasive ventilation: why, how and when. *European Respiratory Review*. 2011.

Thank you

I would like to thank the UCSD Leadership and Physicians that make this program possible:

- Jacqui Soucy (Director of Respiratory Care Dept)
- Jessica Goggin (Director of Pulmonary)
- Dr. Jeremy, Orr (Director of Neuromuscular Ventilation Program)
- Dr. Kenneth Chen (Neuromuscular Specialty Pulmonologist
- Dr. Rajat, Suri (Pulmonary Clinic Medical Director)

Contact Information:

Email: chhawkins@health.ucsd.edu

Work Cell: (619)538-1206