



RESEARCH ARTICLE

Employment of an algorithm of care including chest physiotherapy results in reduced hospitalizations and stability of lung function in bronchiectasis

PURPOSE OF THE STUDY

First-of-its-kind independent study published in *BMC Pulmonary Medicine* evaluating long term clinical effects of high frequency chest wall oscillation (HFCWO) therapy, using the SmartVest Airway Clearance System, as part of a treatment algorithm in treating bronchiectasis.

RESULTS

Patients experienced a significant reduction in bronchiectasis-related exacerbations requiring hospitalizations and overall reduction in antibiotics. Lung function was maintained, which was shown as the mean FEV₁ remaining stable at 1-year post-enrollment.¹

METHOD

The study evaluated the efficacy of a treatment algorithm centered on early initiation of SmartVest therapy. Patients were treated with an algorithm that consisted of:

- » Nebulized bronchodilators
- » Mucolytics
- » Macrolide therapy (*when appropriate*)
- » High Frequency Chest Wall Oscillation

Participants

65 patients with radiographic and symptom confirmed bronchiectasis. 43 patients were eligible due to adequate 1-year baseline and follow-up data at the time of initiation.



**REDUCED
HOSPITALIZATIONS**



**REDUCED
ANTIBIOTIC USAGE**



**STABILIZED
LUNG FUNCTION**

CONCLUSION

Standardized care for bronchiectasis involving an algorithm for mucociliary clearance that centers on initiation of HFCWO may help to reduce lung function decline, need for oral antibiotics, and reduced hospitalization rate.



SMARTVEST IMPROVES OUTCOMES
SEE WHAT THE STUDY MEANS FOR PATIENTS >>



FULL STUDY

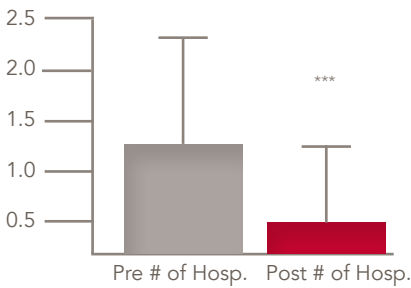
WHAT DOES THE STUDY MEAN FOR BRONCHIECTASIS PATIENTS?

Early initiation of SmartVest HFCWO therapy in combination with a prescribed treatment algorithm, stabilizes lung function, decreases hospitalizations, and decreases antibiotic usage.



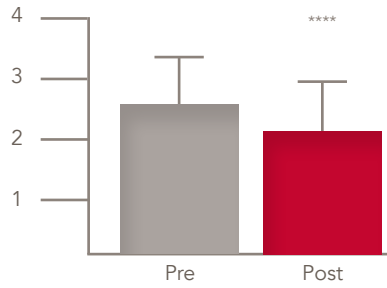
RESULTS

Hospitalizations Pre/Post Initiation
of Bronchiectasis Bundle



*** $p < 0.0001$ by paired t-test (Wilcoxon)

Number of Antibiotic Courses
Pre/Post Algorithm Initiation



**** $p < 0.0001$ by paired t-test (Wilcoxon)



Make SmartVest Part of Your Treatment Plan!

Visit our Clinician Resources page at smartvest.com/clinician-resources for prescription forms, tried and failed requirements, case studies, and additional information about helping your bronchiectasis patients.

¹Powner, Jordan, et al. Employment of an Algorithm of Care Including Chest Physiotherapy Results in Reduced Hospitalizations and Stability of Lung Function in Bronchiectasis. BMC Pulmonary Medicine, BioMed Central. 25 Apr. 2019.