ABSTRACT
While High-Frequency Chest Wall Oscillation (HFCWO) vests have long been used to treat patients who require airway clearance, few studies establish their long-term effectiveness for non-cystic fibrosis (non-CF) bronchiectasis. 2596 records extracted from a registry of adult bronchiectasis patients using HFCWO therapy allowed examination of hospitalization patterns before and after initiation of HFCWO therapy, as well as antibiotic use and self-reported metrics of quality of life. When compared to the prior year, the rate of hospitalization fell sharply, an improvement in respiratory health and ability to clear lungs. This improvement was rapid and corresponded to the initiation of HFCWO therapy.

RESULTS
• Patients with no respiratory-related hospitalizations: >50.9% one year prior vs. 76.6% one year after initiating therapy.
• Patients who required 3+ hospitalizations: >14.3% one year prior vs. 5.6% one year after initiating therapy.
• Yearly rate of hospitalization dropped 30.3%.
• Patients who reported currently taking oral antibiotics ≥57.7% upon initiation, 29.9% at one year (P-value < 0.0001).
• Overall respiratory health rating as good-excellent >13.6% upon initiation, 60.5% at one year (P-value < 0.0001).
• Ability to clear your lungs rating as good-excellent >13.9% upon initiation, 76.6% at one year (P-value < 0.0001).

DISCUSSION
• There was a strong association of HFCWO with positive outcomes.
• The strength of the association was sustained for one year.
• The objective measure of hospitalization rate was consistent with self-reported quality of life measures.
• The improvement was rapid and corresponded to initiation of therapy.
• HFCWO response was independent of practice patterns.

This analysis of adult non-CF bronchiectasis patients showed improved self-reported outcomes associated with the initiation of HFCWO therapy as measured by number of hospitalizations, antibiotic use, and the subjective experience of airway clearance. The improvement was rapid and sustained for one year.