

How can time to COPD exacerbation be delayed? A Real-World Study Comparing Two Oscillating Positive Expiratory Pressure (OPEP) Devices in Patients with Chronic Obstructive Pulmonary Disease (COPD) or Chronic Bronchitis

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RATIONALE

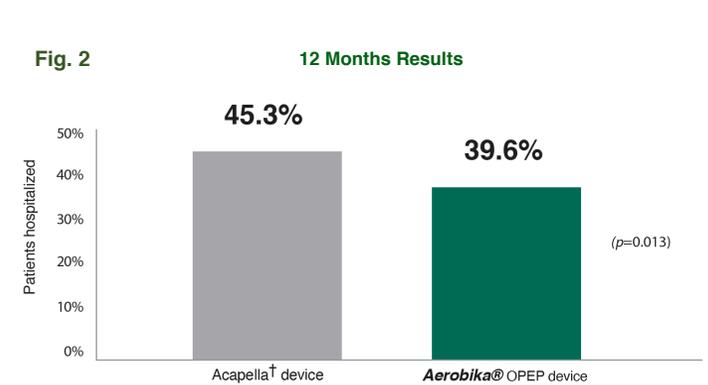
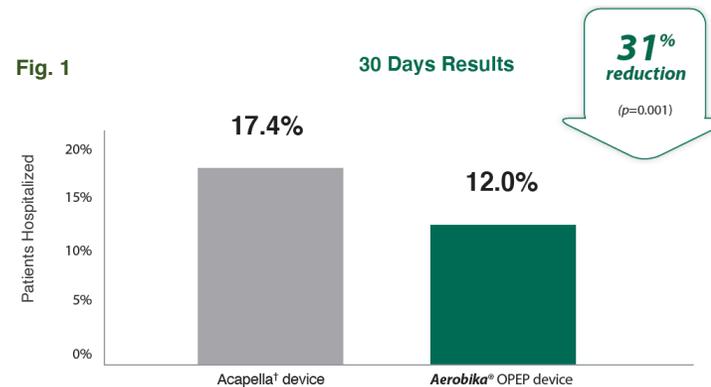
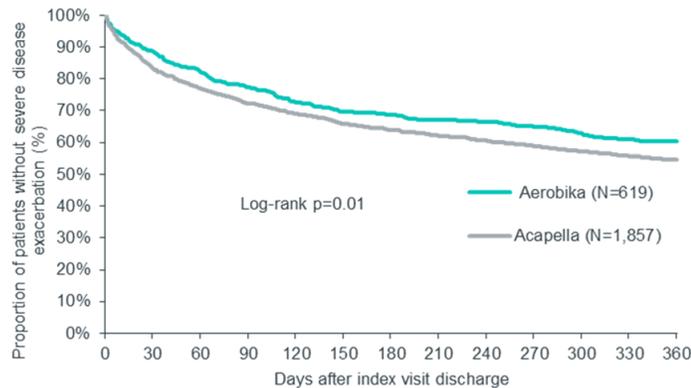
- Acute COPD exacerbations are common and a main driver of hospitalizations. This retrospective study compared disease-related hospital readmission in COPD/chronic bronchitis patients using two OPEP devices.

METHODS

- Patients were identified with either the **Aerobika**^{*} (Trudell Medical International) or Acapella[†] (Smiths Medical) OPEP devices from September 2013 to April 2018 in IQVIA's hospital claims data linked to medical (Dx) and prescription claims (LRx); the first COPD/chronic bronchitis hospital visit with an OPEP device was index.
- Patients were ≥18 years old, had ≥1 hospital, LRx, and Dx record within 12 months before and after index, and had no asthma diagnosis before index or post-operative OPEP device use within 30 days before index. Kaplan-Meier survival analysis was used to compare time from discharge to disease-related readmission, and readmission rates were also determined at 30 days and 12 months post-discharge for 1:3 propensity score (PS)-matched **Aerobika**^{*} and Acapella users.

RESULTS

- 619 **Aerobika**^{*} users were matched to 1,857 Acapella users (mean age 72 years). **Aerobika**^{*} users had a significantly longer time to readmission than Acapella[†] users (p=0.01). Readmission rates (proportion of patients having at least one) were lower for **Aerobika**^{*} users at 30 days (11% vs 17%) and 12 months (40% vs 45%). See Fig.1-Fig. 2



CONCLUSION

- COPD/chronic bronchitis patients given an **Aerobika**^{*} OPEP device compared to an alternative OPEP device had delayed time to readmission. This supports use of the **Aerobika**^{*} OPEP device as an add-on to usual care post-exacerbation and highlights differences in OPEP device effectiveness.