P623 - A Retrospective Cohort Study Comparing the Impact of Two Oscillating Positive Expiratory Pressure (OPEP) Devices in Patients with Chronic Obstructive Pulmonary Disease (COPD) or Chronic Bronchitis on Hospital Readmissions at 30 Days and 12 Months

J. Suggett[1], V. Kushnarev[1], D. P. Coppolo[2], J. Tse[3], K. Wada[3];
[1]Trudell Medical International, London, ON, Canada, [2]Monaghan Medical, Syracuse, NY, United States,
[3]IQVIA, Virginia, VA, United States.

Aerobika® MD-040A-0520. ATS May 2020

Rationale:

- In patients with COPD, acute exacerbations are the most common reason for hospital admissions, with approximately 1 in 5 patients requiring re-hospitalization within 30 days of discharge.

- The ***Aerobika***® OPEP device has previously been shown to significantly improve outcomes such as ease in bringing up sputum, forced vital capacity, quality of life, and exacerbations, when added to standard of care.

- This retrospective cohort study describes real-world outcomes among patients with COPD or chronic bronchitis, comparing the ***Aerobika***® OPEP device to a commonly used alternative OPEP device.

Methods:

- IQVIA's Charge Detail Master (CDM) hospital claims database linked to medical (Dx) and prescription claims (LRx) data were used to identify patients receiving the ***Aerobika***® OPEP device (Trudell Medical International) or the Acapella† (Smiths Medical) OPEP device between September 2013 and April 2018; the index date was the first CDM record with an OPEP device.
- Patients were required to be ≥18 years of age and have ≥1 hospital and LRx/Dx records within 12 months before and after index, ≥1 COPD/chronic bronchitis diagnosis during the index visit and no asthma diagnosis before index or post-operative OPEP device use within 30 days of index.
- Patients receiving the ***Aerobika***® OPEP device were propensity score (PS) matched to patients receiving the Acapella† device based on demographics, baseline comorbidities, history of exacerbations and drug therapy. Study measures included proportion of patients experiencing COPD/chronic bronchitis related readmission within 30 days and 12 months of the index visit.

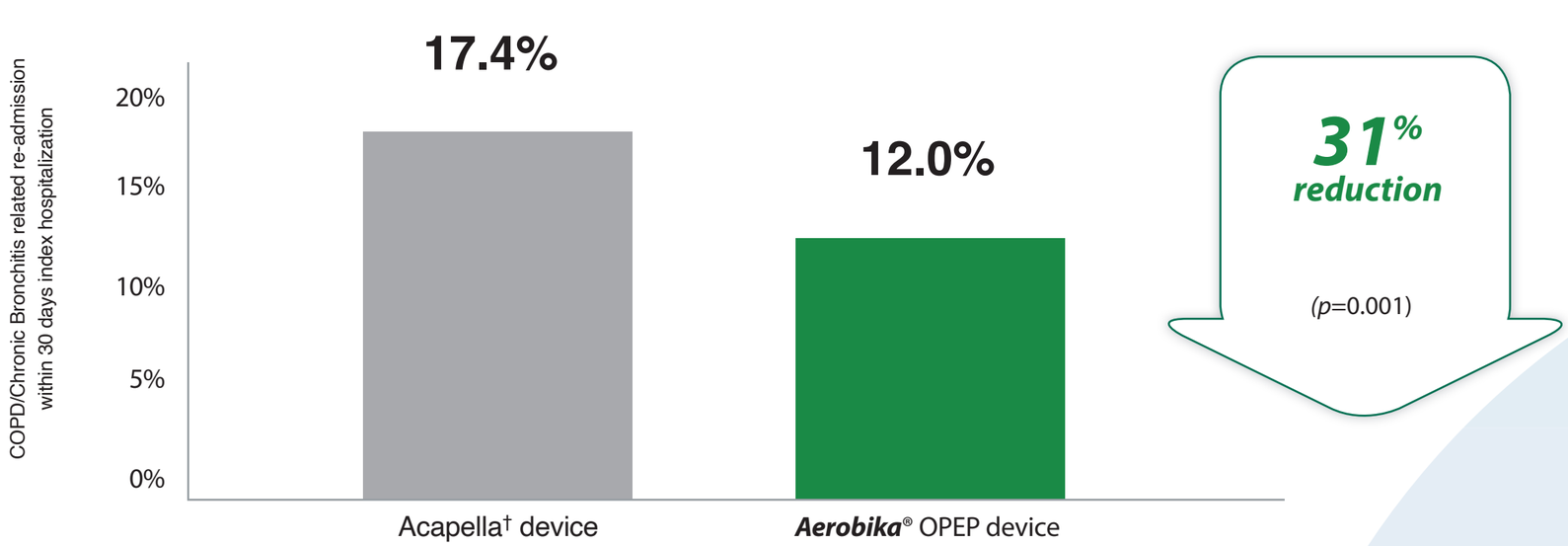
Aerobika® OPEP device
Trudell Medical International, Canada

Acapella Choice†
Smiths Medical

Results:

- After 1:3 PS matching, 619 patients receiving the ***Aerobika***® device and 1,857 receiving the Acapella† device were compared (mean age 72 years).
- Baseline characteristics were well-balanced. Patients using the ***Aerobika***® OPEP device had a 31% reduction in COPD/chronic bronchitis related readmission within 30 days of the index hospitalization (12.0% vs.17.4%; p=0.001) compared to the Acapella† device.

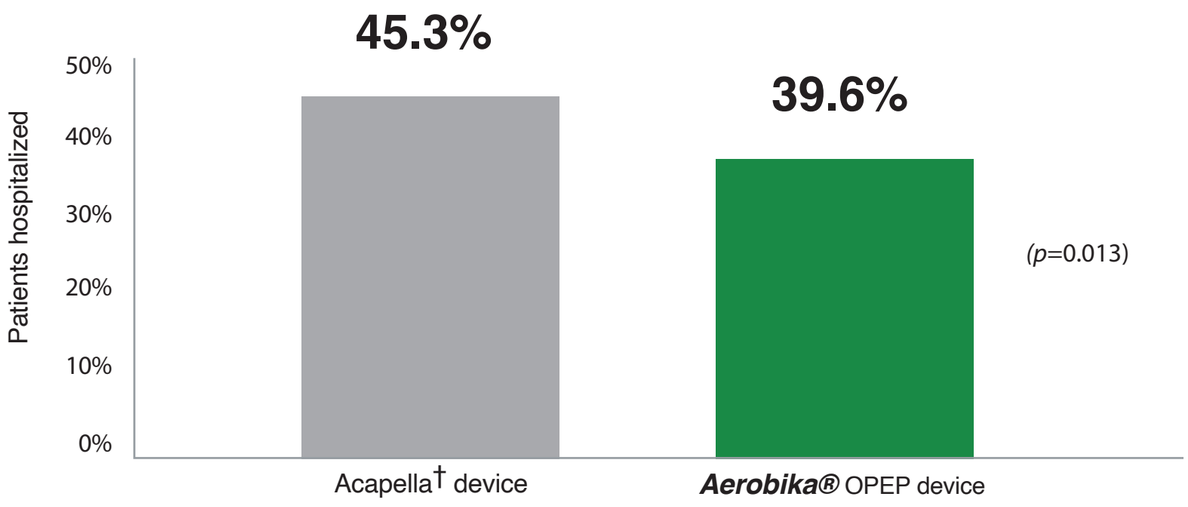
30 Days Results

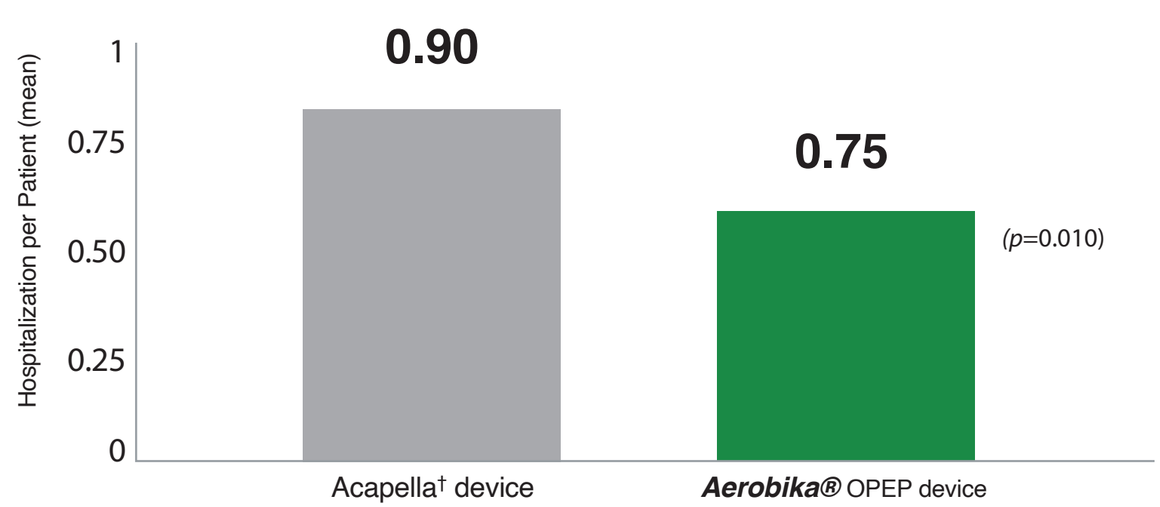


Results:

- This significant difference persisted over a 12-month duration, with a smaller proportion of the ***Aerobika***® OPEP device patients having a hospitalization (39.6% vs. 45.3%; p=0.013) and fewer hospitalizations per patient (mean, 0.75 vs. 0.90; p=0.010).

12 Months Results





Conclusion:

- Results from this study demonstrate a reduction in the proportion of patients requiring COPD/chronic bronchitis related readmission within 30 days and 12 months of the ***Aerobika***® OPEP device therapy initiation compared to an alternative OPEP device.
- This further supports the use of the ***Aerobika***® OPEP device as an add-on to usual care to manage COPD/chronic bronchitis patients post-exacerbation and highlights that not all OPEP devices are the same in terms of 30-day and 12-month readmissions.

https://www.trudellmed.com/ATS-2020