

## REAL-LIFE EFFECTIVENESS OF CHANGING COPD THERAPY FROM TIOTROPIUM TO ACLIDINIUM BROMIDE

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### Abstract

#### Background:

Tiotropium was the first approved long-acting muscarinic antagonist (LAMA) as maintenance treatment for COPD. Acclidinium bromide is another LAMA approved in the UK in October 2012.

#### Aim:

To characterise UK patients with COPD changing therapy from tiotropium to acclidinium bromide and assess the success of the change (defined as at least 70% of these patients having a repeat prescription for acclidinium bromide 6 months following the change).

#### Methods:

Observational historical cohort study of UK primary care patients from the Optimum Patient Care Research Database changing their LAMA therapy from tiotropium to acclidinium bromide. Eligible patients had a COPD diagnosis and >2 prescriptions for COPD therapy ( $\geq$ for tiotropium) in the baseline year before their first acclidinium bromide prescription (defined as the index date). All patients were aged at least 40 years on the index date and had a prescription for any LAMA therapy during the 6-month outcome period following the index date. The primary outcome was “change success” defined as  $\geq 70\%$  of patients with  $\geq 1$  prescription for acclidinium bromide during the 6 months following the index date (not including first prescription). Patient characteristics during the baseline year before the first acclidinium bromide prescription were analysed; comorbid asthma was defined as having an ever diagnosis using diagnostic codes for unresolved asthma. Exacerbations were defined as COPD-related hospital admission/attendance or use of acute oral steroids or any antibiotic prescription for lower respiratory tract infections.

#### Results:

Change success has been achieved as 87.7% of the patients had at least one further acclidinium bromide prescription 6 months following therapy change. 27.3% of the patients prescribed acclidinium bromide also had a prescription for tiotropium during the outcome period. 79.2% of the patients only had acclidinium bromide as their last LAMA therapy.

Patient characteristics		Patients N = 106
Age at date of prescription, Median (IQR)		69 (62,76)
Sex, n (%) male		63 (59.4)
Current smokers, n (%)		44 (41.9)
Body Mass Index, Median (IQR), kg/m <sup>2</sup>		27.7 (24,32)
Comorbidities	Asthma, n (%)	18 (16)
	Rhinitis diagnosis, n (%)	15 (14.2)
	Ischaemic heart disease diagnosis, n (%)	27 (24.1)
Exacerbation (baseline), n (%)	0	62 (58.5)
	1	21 (19.8)
	2+	23 (21.7)
Lung function severity, n (%)	Mild n (%)	7 (6.9)
	Moderate n (%)	32 (31.4)
	Severe n (%)	30 (29.4)
	Very severe n (%)	33 (32.4)
GOLD group, n (%)	A	19 (19.0)
	B	16 (16.0)
	C	20 (20.0)
	D	45 (45.0)

**Conclusion:**

The switch from tiotropium to aclidinium bromide had a success rate of 87.7%, exceeding the predefined rate of 70%.