P200 THE CLINICAL, UTILITY AND ECONOMIC BENEFITS OF SECURING MINIMAL IMPORTANT DIFFERENCE IN ASTHMA CONTROL TEST USING A NOVEL TOOL: THE A.B.O.V.E. ASTHMA (ACHIEVING-BETTER-OUTCOMES-AND-VALUE-FOR- EVERYBODY-IN-ASTHMA)

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Introduction and Objectives Asthma accounts for an economic loss of € 72 billion annually in the 28 countries of the European Union with a monetised value of DALYs cost of € 38 billion. One of the key priorities in asthma management is achieving asthma control. It is crucial to understand whether providing a minimally clinical important difference (MID) of the asthma control test (ACT) score can bring better clinical, utility and economic outcomes.

Aim To test whether the A.B.O.V.E. ASTHMA (Achieving-Better-Outcomes-and-Value-for-Everybody-in-Asthma) tool works in terms of securing the MID in ACT and, in doing so, we can provide positive outcomes for patients, payers, providers and policy makers.

Methods Using the data obtained from the Italian Medicines Use Review (I-MUR) cluster randomised controlled trial (C-RCT; 2014–2015) involving 1263 asthma patients and 283 pharmacists in Italy, we tested whether A.B.O.V.E. ASTHMA was able to (1) link a clinical outcome (ACT score) to economic and utility dimensions; (2) secure a MID improvement in ACT and the outcomes attached in terms of cost savings

Abstract P200 Table 1 Annual cost savings and utility gains when securing clinical target in asthma control (MID) with A.B.O.V.E. ASTHMA intervention

Possible shifts* (current to target scenario)				@ 3 months Total n=1000			@ 6 months Total n=1000		
	Current scenario (ACT)	Target scenario (ACT)	% of success	Cost savings NHS (euros)	Utility gains (years in full health saved)	% of success	Cost savings NHS (euros)	Utility gains (years in full health saved)
1 RED to RED →	5–10	8–13	2.6	0	0	1.6	0	0
2 RED to YELLOW →	15–16	14–17	5.4	1 00 132 (CI 75,099; 130,172)	4.9 (CI 4.85; 4.94)	5.5	1 02 408 (CI 76,806; 133,130)	4.96 (CI 4.91; 5.00)
3 YELLOW to YELLOW →	15–16	18–19	2.2	0	0	0.9	0	0
4 YELLOW to GREEN →	18–19	20–21	10.5	2 45 880 (CI 184,410; 319,644)	30.56 (CI 30.29; 30.83)	13.8	3 23 075 (CI 242,306; 419,998)	40.16 (CI 39.80; 40.52)
5 GREEN to GREEN →	20–21	≥23	5.3	0	0	6.0	0	0
Total (1+2+3+4+5)			**31.07**	3 46 012 **(CI 259,509; 449,816)**	**35.42 (CI 35.11; 35.73)**	**27.82**	4 25 483 **(CI 319,112; 553,128)**	**45.12 (CI 44.72; 45.52)**

The calculation of the cost-saving for the NHS was estimated for a population of 1,000 asthma patients.

for the healthcare provider and gains in health utility (% of being in perfect health).

Results Data from the C-RCT showed that after receiving the A.B.O.V.E. ASTHMA intervention, patients improved their asthma control, assessed by the ACT, shifting from not controlled (RED) towards partially controlled (YELLOW), and fully controlled (GREEN) groups. Asthma control improved in the vast majority of patients (median ACT score was 19 at baseline, 20 at 3 month and 21 at 6 month post intervention). The number of patients who were on MID target and reached the GREEN group at 3 and 6 months were 129 (15.8%) and 162 (19.9%) respectively. The overall annual cost savings per 1000 patients attached to the shift towards the MID target was equal to: 3 46 012 euros (NHS) at 3 months and increased to 4 25 483 euros (NHS) at 6 months (see Table). Health utility gains were equal to 0.9 and 0.29 years in full health, respectively.

Conclusions The A.B.O.V.E. ASTHMA tool can secure MID in ATC and, in doing so, better outcomes in terms of clinical, utility and economic results.

The calculation of the cost-saving for the NHS was estimated for a population of 1000 asthma patients

P201 PARKRUN DYSPNOEA – ISN'T IT ALL EXERCISE-INDUCED ASTHMA?

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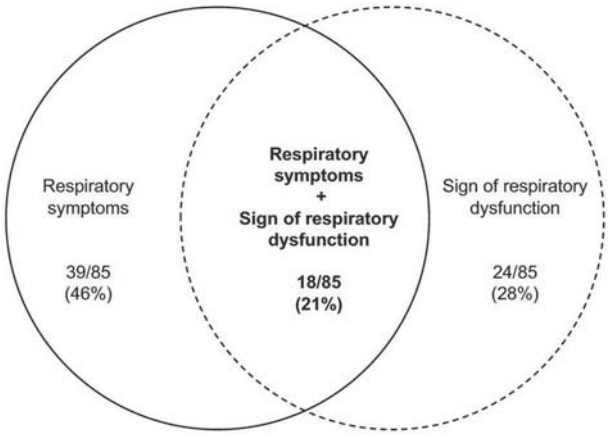
Introduction A broad differential diagnosis exists for exercise-induced dyspnoea (EID) and wheeze in young athletic individuals, however these symptoms are often treated as presumed exercise-induced asthma (EIA). A key differential diagnosis for EIA is exercise-induced laryngeal obstruction (EILO); a condition characterised by transient closure of the larynx precipitating stridor during exercise. Recent studies reveal a prevalence of 5%–7% in Scandinavian adolescents, however the prevalence of EILO in the UK is currently unclear.

Objectives To assess the prevalence of stridor and EID in a cohort of recreationally active individuals.

Methods Cross-sectional field-based evaluation of the prevalence of stridor and EID in a cohort of individuals completing a 5 km Parkrun event in Northern England. Eighty-five adults (male: n=43) (mean ±SD) age: 39±15 years) were enrolled. Pre-race, respiratory symptoms (Dyspnoea-12 [D12 score:≥1–36] in combination with an Allergy Questionnaire for Athletes [AQUA score:≥5) and baseline spirometry were assessed. Immediately post-race, breathing was monitored continuously using an audio recording device for 15 min or until full recovery (i.e., resting tidal breathing had resumed). Recordings were analysed retrospectively and coded for signs of the predominant respiratory noise: 0=nil; 1=inspiratory stridor; 2=expiratory wheeze; 3=combined stridor+wheeze; 4=cough.

Results The majority of the cohort (93%) had normal resting lung function. Despite this, the prevalence of troublesome respiratory symptoms was 46% (D12 score: 6±5 and AQUA score: 13±6). Almost one third of the cohort (28%) had at least one respiratory sign: inspiratory stridor (n=9; 11%), expiratory wheeze (n=7; 8%), combined stridor +wheeze (n=6; 7%); cough (n=2; 2%). Of these, over one fifth (21%) had both a symptom and sign of respiratory dysfunction with sign of stridor and EID the most common (14%) (figure 1).

Conclusion The prevalence of stridor and EID was 14% in recreationally active individuals completing a Parkrun event. Further work is needed to determine if this relates to objective evidence of EILO however these findings indicate a prevalence in keeping with published series.



Abstract P201 Figure 1 Prevalence of respiratory symptoms and signs of respiratory dysfunction in a parkrun cohort.

P202 OBSTRUCTIVE SLEEP APNOEA (OSA) AND NON-EOSINOPHILIC ASTHMA: AN IMPORTANT PHENOTYPE IN THE SEVERE ASTHMA POPULATION

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Introduction An association between Obstructive Sleep Apnoea (OSA) and asthma has been suggested, with OSA adversely impacting on clinical outcomes. The importance of OSA in severe asthma, and understanding of this phenotype in relation to asthma related inflammatory biomarkers remains unclear.

Methods Patients at a tertiary severe asthma service and associated respiratory clinics completed an Epworth Sleepiness Score(ESS) and overnight limited-channel sleep study. Clinical data including the asthma control questionnaire score (ACQ), fractional exhaled nitric oxide (FENO) and peripheral eosinophil count was collected from the most recent clinical visit. Data were analysed using MedCalc software version 15.

Results The total population included 116 asthmatics, 92 (79%) females, 24 (21%) males. Mean ACQ score was 2.87 (95% CI, 2.6–3.2). 103 (88.8%) had severe asthma(SA), and 13 (11.2%) had non-severe asthma(NSA). 66/103 (64.1%) of SA had OSA, 4/13 (30.8%) of NSA had OSA, p=0.0213. FENO was significantly lower in the OSA group 36.4±27.3 parts per billion (ppb) compared to the no-OSA group 53.7 ±49.2 ppb, p=0.021. Peripheral eosinophil count was significantly lower in the OSA group $0.31\pm0.25\times10^9$/L compared to the no-OSA group $0.45\pm0.46\times10^9$/L, p=0.049. ESS was similar in both groups; 10.7±5.2 OSA, 8.8±5.2 no-OSA group, p=0.063.

Conclusion A high prevalence of OSA was noted in this asthmatic population, which was significantly higher in severe