Assessment of Asthma Control in Respiratory Specialist Offices in the US

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Background

- Despite available therapies, previous survey studies reported a prevalence of uncontrolled asthma of 40-60%[1-3] depending on the population studied and asthma control measure used; however, none have assessed the extent of uncontrolled asthma among the patient population seeking care at respiratory specialist clinics.

Objective

- This study assessed the level of control reported by asthma patients who were seen in specialists' offices in the US, and in a subgroup of patients receiving inhaled corticosteroid (ICS)/long-acting beta-agonist (LABA) therapy.

Methods

- A multi-site, cross-sectional survey study of adult asthma patients was conducted between January 21 and April 29, 2019 across 12 pulmonary and 12 allergy clinics in the US.
- Patients completed an electronic questionnaire that included the Asthma Control Test (ACT), demographics, medical history, current asthma treatment, healthcare resource use (HRU), and St. George's Respiratory Questionnaire (SGRQ) to measure health-related quality of life (HRQoL).

Inclusion criteria	Exclusion criteria
• Aged 18 years or older • Physician diagnosis of asthma • Used ICS-containing medication for maintenance therapy at least once in the past 4 weeks	• History of chronic obstructive pulmonary disease, chronic bronchitis, or emphysema • Current or recent (within past 6 months) participation in a respiratory-related research study

Asthma Control Test (ACT)

- The Asthma Control Test™ (ACT™) is a five question health survey used to measure asthma control with a 4 week recall.
- Scoring ranges from 5 to 25, with higher scores reflecting greater asthma control.

ACT Scoring

- ✓ **Well Controlled: ACT ≥20**
- ✓ **Not Well Controlled: ACT ≤19:**
  - **–Partially Controlled: ACT 16-19**
  - **–Poorly Controlled: ACT ≤15**

Results

774 patients participated across 24 respiratory specialty clinics in US

Table 1.

Demographic and Clinical Characteristic	Total Population N = 774	Well Controlled Asthma (ACT Score ≥ 20) N = 364	Not Well Controlled Asthma (ACT Score ≤ 19) N = 410
Primary Reason for Visit (%)			
Routine Visit	76.6	83.8	70.2
Symptomatic Visit	23.4	16.2	29.8
Female, (%)	74.2	69.2	78.5
Age, mean (years) (SD)	54.5 (16.2)	54.7 (16.8)	54.4 (15.6)
Age at Initial Asthma Diagnosis, mean (years) (SD)	30.4 (21.8)	31.0 (22.0)	29.9 (21.6)
Geographic Region, (%)			
Northeast	34.4	37.6	31.5
South	42.4	40.7	43.9
Midwest	18.5	18.7	18.3
West	4.8	3.0	6.3
Race, n(%)			
White or Caucasian	590 (76.2%)	288 (79.1%)	302 (73.7%)
Black or African American	95 (12.3%)	40 (11.0%)	55 (13.4%)
Other	92 (11.9%)	40 (11.0%)	52 (12,7%)
Select conditions in past 12 months, (%)			
Nasal allergies	65.9	64.6	67.1
GERD, acid reflux, or chronic heartburn	39.3	32.4	45.4
Sleep apnea, other nocturnal breathing problems	28.3	18.4	37.1
Skin allergies (eczema, atopic dermatitis)	23.4	21.7	24.9
Current Smoker, (%)	7.5	5.9	8.6
Body Mass Index (BMI, kg/m²), mean (SD)	31.9 (8.2)	30.1 (7.05)	33.5 (8.7)

Table 2.

Asthma Control Test (ACT)	Total Population N = 774	Well Controlled Asthma (ACT Score ≥ 20) N = 364	Not Well Controlled Asthma (ACT Score ≤ 19) N = 410	Poorly Controlled Asthma* (ACT Score ≤15) N= 233
Overall, (%)	100.0	47.0	53.0	30.1
ACT Mean Score (SD)	18.1 (5.0)	22.4 (1.6)	14.3 (3.6)	11.6 (2.5)
Individual ACT Questions, Mean (SD)				
1. *Asthma kept me from getting as much done at work/school/home*	3.9 (1.1)	4.7 (0.6)	3.3 (1.0)	2.8 (0.9)
2. *Had shortness of breath*	3.4 (1.4)	4.4 (0.6)	2.5 (1.2)	2.0 (1.1)
3. *Symptoms wake you up at night or early morning*	3.7 (1.4)	4.7 (0.5)	2.8 (1.4)	2.1 (1.1)
4. *Used rescue inhaler or nebulizer medication (such as albuterol)*	3.4 (1.3)	4.3 (0.8)	2.6 (1.1)	2.1 (0.9)
5. *Rate asthma control (not controlled to completely controlled)*	3.6 (0.9)	4.3 (0.5)	3.0 (0.8)	2.7 (0.7)

* Poorly Controlled Asthma is a subset of the Not Well Controlled Asthma group.

53% of asthma patients were not well controlled and 30% were poorly controlled

Patients who were not well controlled…

- Scored lower on all five ACT questions.
- Reported increased shortness of breath and night-time awakening symptoms

Figure 1. SGRQ Mean Scores by Asthma Control

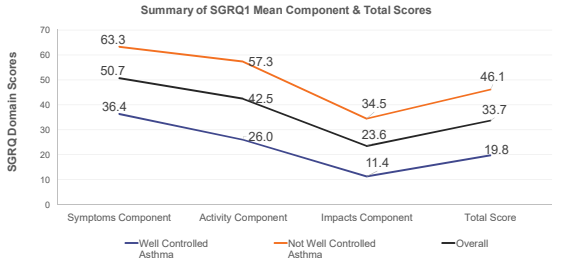
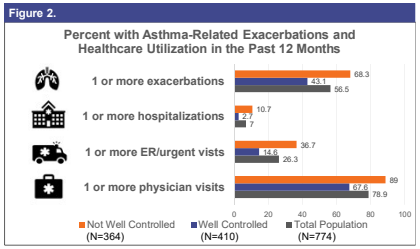


Figure 2.



Patients with not well controlled asthma reported lower quality of life, higher asthma-related healthcare use and asthma exacerbation rates.

Table 3. Current use of ICS/LABAs

ICS/LABA Use in the Past 4 Weeks	% of Total Population N = 774	Well Controlled Asthma (ACT Score ≥ 20) N=364	Not Well Controlled Asthma (ACT Score ≤ 19) N=410
Any ICS/LABA (fixed dose), n (%)	N = 657 (84.9%)	289 (44.0%)	368 (56.0%)
Low dose	N = 138 (17.8%)	75 (54.3%)	63 (45.7%)
Medium dose	N = 259 (33.5%)	110 (42.5%)	149 (57.5%)
High dose	N = 206 (26.6%)	83 (40.3%)	123 (59.7%)
Low or medium dose	N= 397 (51.3%)	185 (46.5%)	212 (53.4%)
Medium or high dose	N= 465 (60.1%)	193 (41.5%)	272 (58.5%)

Among asthma patients treated with any ICS/LABAs, or low-medium dose or medium-high dose ICS/LABAs, 56.0%, 53.4%, and 58.5% were not well controlled, respectively.

Conclusions

- **A high level of uncontrolled asthma and associated large disease burden exists among patients receiving care at respiratory specialist clinics in the US, and despite treatment with ICS/LABA combination therapy.**
- **This highlights unmet needs in current asthma education, management and/or treatment compliance.**

References

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- CA, BH, NM and DS are employees and hold stocks/shares. LZ, AG, DR, DM are current employees of RTI Health Solutions, a consulting company that has received research funds from GSK for study conduct only and not for poster development.

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