

The implications of not well controlled asthma: UK results from a European survey

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Introduction

- The BTS/SIGN British Guideline on the Management of Asthma states that 'the aim of asthma management is control of the disease'.¹
- Data from the European National Health and Wellness Survey (NHWS) in 2006 showed that the majority of patients receiving treatment for asthma (55%) remain uncontrolled.² In the UK, this figure was slightly better at 45%.²

Objectives

- Data from the European NHWS in 2008 was used to reassess the level of asthma control. European results have previously been presented.^{3,4,5}
- We investigated if asthma control in the UK had improved.
- We also looked at the implications of a patient using ≥ 2 puffs of rescue medication per week.

Methods

- Data came from the European NHWS in 2008, an annual cross-sectional survey of the health status, attitudes, behaviours and outcomes carried out in France, Germany, Italy, Spain and the UK.
- Invitations to participate in this survey were sent to a sample of patients (18 years and above) drawn from an internet panel and stratified according to gender, age and race.
- Patients were administered a detailed questionnaire and data were collected between May and July 2008.
- Patients with self-reported, diagnosed asthma were used in this analysis and the Asthma Control Test™ (ACT) was used to assess levels of control.
- The ACT consists of 5 asthma-specific questions to determine level of asthma control for the past 4 weeks (Figure 1). It is validated, reliable, easy to interpret and responsive to detect change over time that matters to patients.⁶
- ACT scores range from 5 to 25. An ACT score of 20-25 identified patients whose asthma was well controlled (WC), whilst a score of ≤ 19 identified patients whose asthma was not well controlled (NWC).
- The 12-item Short-Form Health Survey (SF-12®), a much shorter, yet valid, alternative to the SF-36® was used to assess health related quality of life.

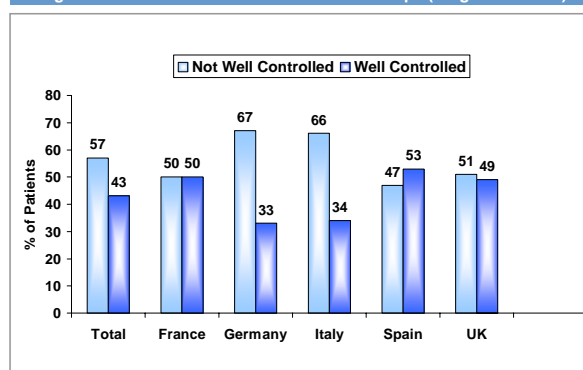
Figure 1: The Asthma Control Test™

Q1	During the past 4 weeks, how often did your asthma prevent you from getting as much done at work, school or home?	Score:
	All of the time 1 Most of the time 2 Some of the time 3 A little of the time 4 None of the time 5	
Q2	During the past 4 weeks, how often have you had shortness of breath?	Score:
	More than once a day 1 Once a day 2 3-6 times a week 3 1-2 times a week 4 Not at all 5	
Q3	During the past 4 weeks, how often did your asthma symptoms (wheezing, coughing, chest tightness, shortness of breath) wake you up at night or earlier than usual in the morning?	Score:
	4 or more times a week 1 2-3 nights a week 2 Once a week 3 Once or twice 4 Not at all 5	
Q4	During the past 4 weeks, how often have you used your reliever inhaler (usually blue)?	Score:
	3 or more times a day 1 1-2 times a day 2 1-3 times a week 3 Once a week or less 4 Not at all 5	
Q5	How would you rate your asthma control during the past 4 weeks?	Score:
	Not controlled 1 Poorly controlled 2 Somewhat controlled 3 Well controlled 4 Completely controlled 5	

Results

- There were 15,000 UK respondents. Of these, 1,523 patients (10.2%) had a diagnosis of asthma (mean age 45.3 years).
- 1369 (89.9%) of patients with a diagnosis of asthma were receiving treatment.
- 700 (51.1%) of patients receiving treatment for their asthma in the UK were NWC in 2008. This compared to UK figure of 45% in 2006 ($p = 0.010$).²
- When looking at self-reported levels of asthma control, only 29.5% rated their asthma as NWC. 44.3% of patients whose asthma was NWC actually rated their asthma as WC.
- Levels of asthma control across Europe are summarised below (Figure 2). Spain showed the highest levels of asthma control, whilst Germany and Italy showed the lowest.

Figure 2: Levels of asthma control across Europe (weighted results)



- Patients with asthma that was NWC were more likely to be unemployed, female, older, have lower college attendance rates, higher BMI and a higher incidence of having ever smoked (Table 1).

Table 1: UK patient characteristics (weighted results)

	NWC	WC
Male (%)	37.2	44.9
Female (%)	62.8	55.1
Age (years)	47.4	43.3
Employed (%)	43.1	61.8
College educated or higher (%)	33.8	39.4
BMI ≥ 25 (%)	70.2	65.4
Ever smoked (%)	66.8	55.4

- In the UK, the majority (84.9%) of patients whose asthma was NWC used ≥ 2 puffs of rescue medication per week.
- Furthermore, patients whose asthma was NWC experienced significantly more night-time awakenings and visited their physician more frequently than those whose asthma was WC (Table 2).
- NWC patients had lower SF-12 Physical Functioning and Social Functioning scores compared with WC patients (Table 2). A change of 3 to 5 units for the SF-36 has been deemed clinically important. We inferred that a similar change in SF-12 would also be clinically important.

Table 2: Patient burden of NWC asthma in the UK (unweighted results)

	NWC	WC	p-value
% with night-time awakenings (≥ 1 /week)	58.2%	1.8%	$p < 0.001$
Mean visits to physician about asthma in past 12 months	2.53	1.10	$p < 0.001$
Mean SF-12 Physical Functioning score	39.84	47.19	$p < 0.001$
Mean SF-12 Social Functioning score	39.25	46.52	$p < 0.001$

Conclusions

- The level of asthma control in the UK has worsened since 2006. The percentage of patients whose asthma was NWC in the UK was 45% in 2006 versus 51.2% in 2008.
- Patients whose asthma was NWC experienced significantly more night-time awakenings and visited their physician more frequently than those with WC asthma.
- Furthermore, these patients were less able to perform physical activities (e.g. housework, sports) and social activities.
- Patients underestimate their level of asthma control.
- This survey suggests that using ≥ 2 puffs of rescue medication per week is a useful way of identifying patients with asthma who are NWC.
- Further assessment (e.g. using validated tools such as ACT) can help to ensure that these patients are optimally managed and treated according to the BTS/SIGN guideline, with the goal of improving quality of life and asthma control in the UK.

References

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