Results: This approach resulted in a significant enhancement of the quality of care criteria analyzed:

<table>
<thead>
<tr>
<th>Documented in the medical record</th>
<th>Before (n = 115)</th>
<th>After (n = 93)</th>
<th>( p )</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recent focus of the disease</td>
<td>79 (65%)</td>
<td>88 (75%)</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Presence of follow-up</td>
<td>33 (28%)</td>
<td>39 (42%)</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Breathing rate on arrival</td>
<td>64 (56%)</td>
<td>74 (86%)</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>PEF before treatment</td>
<td>22 (19%)</td>
<td>58 (62%)</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>PEF post treatment</td>
<td>8 (7%)</td>
<td>79 (90%)</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Steroid therapy</td>
<td>56 (49%)</td>
<td>71 (76%)</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Follow-up after ED discharge</td>
<td>1990 (21%)</td>
<td>3547 (74%)</td>
<td>&lt;0.001</td>
</tr>
</tbody>
</table>

Discussion and Conclusion: Implementation of locally developed guidelines with the participation of all healthcare personnel was time consuming but had a significant impact on the ED management of asthma patients. This program should be continued to further increase the quality of patient care. The impact on clinical outcome is currently being assessed.

P1286
Undertreatment in asthmatic outpatients with mild bronchial obstruction
B. Farhollini, M.S. Gaurtiani, S. Pucci, M.B. Bibb, L. Antonicelli, F. Bonifazi. Allergy Respiratory Units, Hospital Umberto I, Ancona, Italy

Undertreatment is one of the reasons for symptoms, sleep disturbance and limitation of activities in asthmatics. Inhaled anti-inflammatory drugs, in particular steroids, are very effective in controlling asthma symptoms in patients of all ages and severity.

The aim of our study was to evaluate, in asthmatics with mild bronchial obstruction, the difference between domiciliary treatments carried out by outpatients (Ots) and that prescribed by the specialists (Sp’s) based on the severity of symptoms referred.

A retrospective study of 12 consecutive Ots (51 males, 61 females; mean age: 29, range: 13-63) with 6% p FEV1 ≥ 70 (mean: 98%, range: 70-132%) was performed.

The patients’ histories and disease severity score in the previous four weeks (DSS) were investigated and the therapy (level 0-4) used by the Ots and prescribed by the Sp’s was compared. Spearman’s rank correlation was used for nonparametric data.

Only 6 out of 112 (5%) Ots did not report symptoms of asthma (DSS equal to 0) after domiciliary treatment.

We found a significant difference between the therapy used by Ots at home and that prescribed by the Sp’s (median: home therapy: 0.5; Sp’s: 2; \( p < 0.0001 \), Wilcoxon test), even if a correlation did exist between them (\( r = 0.39, p < 0.0001 \)).

The total DSS was not associated with the therapy used by the Ots, unlike that of the Sp’s (\( r = 0.24, p < 0.001 \)).

We found a significant correlation between the domiciliary therapy and day symptoms only (\( r = 0.20, p < 0.03 \)) and shortness of breath due to exertion (\( r = 0.19, p < 0.04 \)); on the contrary there was significant correlation between Sp’s therapy and day symptoms (\( r = 0.22, p < 0.01 \)), shortness of breath due to exertion (\( r = 0.22, p < 0.01 \)) and also night symptoms (\( r = 0.21, p < 0.02 \)).

In conclusion, asthmatics with mild bronchial obstruction: 1) the treatment used by the Ots at home is different from that prescribed by the Sp’s and the treatment level is indicated by the severity of day symptoms and shortness of breath due to exertion (\( r > 0.19, p < 0.04 \)); 2) the anti-inflammatory therapy is not used regularly; therefore the right symptoms are probably still present.

P1287
Non-participation in early intervention with inhaled steroids in asthma and chronic obstructive pulmonary disease (COPD): The role of ‘fear of steroids’. Results of the ‘DIMCA’ study
P.M. van Grunsven, C.P. van Schayck, H.J.M. van Kollenburg, K. van Bosheide, Department of General Practice and Social Medicine, University of Nijmegen, The Netherlands

Treatment of chronic airflow obstruction with inhaled steroids at an early stage has shown to preserve the lung function. However, long-term treatment with inhaled steroids may cause local and systemic adverse effects. We tested the hypothesis that asthma patients with bronchial obstruction, early intervention, early monitoring and intervention program on COPD and Asthma. 1749 Randomly selected adult subjects derived from 10 general practices were invited to a screening program to detect asthma or COPD. 604 Subjects were selected on the basis of the presence of bronchial obstruction, reversibility of obstruction and bronchial symptoms. After a 2-year monitoring period 424 patients were repeatable with similar variability. The Qscore was negatively correlated with level of resting FEV1 (Q: \( r = -0.01 \)) and both Qscore and Juniper correlated with level of resting FEV1 (Q: \( r = -0.47 \), J: \( r = -0.36 \), all \( p < 0.01 \)) although there was considerable step (Q: \( r = 0.47 \), J: \( r = -0.36 \), all \( p < 0.01 \)).

In conclusion, asthmatics with mild bronchial obstruction: 1) in asthma patients ‘fear of steroids’ may be an important reason of non-participation in the ‘DIMCA’ project. 2) The anti-inflammatory therapy is not used regularly; therefore the right symptoms are probably still present.

P1288
The clinical control of asthma after adding airway hyperresponsiveness (AHR) to the goal of lower symptom scores. A two-year randomized trial
F. Sem 1, 2, L.N.A. Willums 1, E.H. Bel 1, C.E. Everts 1, J.P. Vandenbroucke 2, P.I. Sterk 1, the AMPUL Study Group, Departments of 1Pulmonology; 2Clinical Epidemiology, Leiden University Medical Centre, The Netherlands

According to present guidelines (GINA), the level of anti-inflammatory treatment for asthma is solely based on symptoms and lung function. In a randomised parallel design we investigated whether a treatment strategy aimed at reducing AHR (strategy B) on top of improving symptoms, FEV1 and peak flow (PEF) variability (strategy A) lead to a more effective control in 150 non-smoking adults with mild to moderate atopic asthma (18-50 yr; 23 newly detected; FEV1; median ± SD: 92 ± 15 %pred) visited the chest physician, every 3 months during 2 yrs. Prior to each visit, methacholine PC20 (baseline: mean ± SD: 0.63 mg/ml ± 2.11 DD) was assessed and the subjects received asthma symptoms, FEV1, PEF variability and morning + evening PEF on a diary card, during 14 days. At each visit, both strategies, controller medication with inhaled corticosteroids and/or bronchodilators (4 levels: no steroids, 400, 800, 1600 µg/day+2wk prednisone) was assessed according to a stepwise approach similar to GINA, and to which 4 corresponding classes of asthma were added. In 62% of all instances, AHR-class indicated the need for an increased medication level, which was only applied in strategy B. Improvements in FEV1 and morning PEF (% personal best) were more pronounced in strategy B vs A (B: 5.0 %pred, 9.0% and A: 1.0%pred and 3.5 %, respectively; \( p < 0.05 \)).

Top in both groups was 2.2 times lower in strategy B vs A (Cox regression; \( p < 0.05 \)). Furthermore, individual standard deviations over the last 1.5 yr period for %pred %, morning PEF, PEF-variability and PC20 were smaller in strategy B vs A (MANOVA; \( p < 0.05 \)).

This indicates that: reducing BHR on top of improving symptoms, FEV1 and PEF-variability leads to more effective control of asthma, resulting in fewer exacerbations and less variable airflow limitation. This implicates a role for monitoring AHR in the long-term management of asthma.

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P1289
Use of a simple patient focused asthma morbidity score
L.D. Rimington, L. Acroffsky, A. Movatt, E. Wharburton, I. Ryland, M.G. Pearson. Antwerp Chest Centre, Liverpool and Dept Rehabilitation, Univ of Salford, UK

Established and validated questionnaires have been shown to be useful research tools with which to assess asthma morbidity (Juniper 1995), but they too time consuming for routine clinical practice. We have used four questions that the doctor would usually ask in each consultation (covering night waking, reliever inhalers use, daytime breathing and disruption of activities) to produce a 3 point score that requires no extra time from the clinician. We have assessed this short questionnaire score (Q score) with the Juniper morbidity score (total score and symptom score), with levels of PEF, and with the UK asthma guidelines treatment step (Q score vs A: MANOVA: \( p < 0.05 \)).

The difference between the domiciliary treatments carried out by outpatients (Ots) and that prescribed by the specialists (Sp’s) was repeatable with similar variability. The Qscore was negatively correlated with level of resting FEV1 (Q: \( r = -0.01 \)) and both Qscore and Juniper correlated with level of resting FEV1 (Q: \( r = -0.47 \), J: \( r = -0.42 \)) and with the severity of asthma as indicated by the treatment step (Q: \( r = 0.47 \), J: \( r = -0.36 \), all \( p < 0.01 \)) although there was considerable variability for the latter. The Qscore correlates well with both the established longer questionnaire and also shows similar relationships to lung function and to severity. If it also shows sensitivity to changes in asthma status over the next year it may provide a practical tool with which to estimate asthma morbidity in routine practice.

P1290
Effects of patient education to the life quality in asthma patients: 3 years experience
E. Aksaya, A. Yilmaz, F. Ece, B. Bayangürler, A. Baran, A. Akalp. SSK Sişliyeypaşa Center for Chest Diseases and Thoracic Surgery, Istanbul, Turkey

Acceptance and application of the International Asthma Report by most countries made asthma therapy more than a simple prescription. It may be expected that patient education in addition to drug treatment will improve the life quality and prognosis of patients. For this reason, we studied randomly selected 25 cases (group 1) that given special education for 1 year and randomly selected 27 cases (group 2) that given special education for 1 year but without special education for 3 years.