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>32 (28%)</td>
<td>37 (36%)</td>
<td>0.002</td>
</tr>
<tr>
<td>Breathing rate on arrival</td>
<td>47 (41%)</td>
<td>39 (36%)</td>
<td>0.02</td>
</tr>
<tr>
<td>PEF before treatment</td>
<td>22 (19%)</td>
<td>38 (44%)</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>PEF after treatment</td>
<td>8 (7%)</td>
<td>37 (36%)</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Steroid therapy</td>
<td>50 (50%)</td>
<td>57 (62%)</td>
<td>0.006</td>
</tr>
<tr>
<td>Follow-up after ED discharge</td>
<td>1990 (21%)</td>
<td>3547 (37%)</td>
<td>&lt;0.001</td>
</tr>
</tbody>
</table>

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

P1286
Under-treatment in asthmatic outpatients with mild bronchial obstruction
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Under-treatment 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 the domiciliary treatments carried out by outpatients (Opts) and that prescribed by the specialists (SpS) based on the severity of symptoms referred.

A retrospective study of 112 consecutive Opts (51 males, 61 females; mean age: 29 years; range: 13-61) with FEV1 ≥ 70% (mean: 99%, range: 70-126%) 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 Opts and prescribed by the SpS was compared.

SpS's rank correlation was used for nonparametric data.

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

We found a significant difference between the therapy used by Opts at home and that prescribed by the SpS (median: home therapy = 0.5; SpS = 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 Opts, unlike that of the SpS (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 SpS' therapy and day symptoms (r = 0.22, p < 0.01), shortness of breath due to exertion (r = 0.23, p < 0.02) and also night symptoms.

In conclusion, in asthmatics with mild bronchial obstruction: 1) the treatment used by the Opts at home is different from that prescribed by the SpS and their treatment level is indicated by the severity of day symptoms and shortness of breath due to exertion; 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'
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According to present guidelines (GINA), the level of anti-inflammatory therapy 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) leads to more effective control. 15 non-smoking adults with mild to moderate asthmatic asthma (15-80 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: geom; mean ± SD: 0.63 mg/ml ± 2.11 DD) was assessed and the subjects received asthma symptoms, 22-agonist usage and morning + evening PEF on a diary card, during 14 days. At each visit, in both strategies, controller medication with inhaled corticosteroids and/or prednisone (4 levels: no steroids, 400, 800, 1600 µg/day+2 wk prednisone) was adjusted according to a stepwise approach similar to GINA, and to which 4 corresponding classes of AHR 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).

We conclude that a treatment strategy aimed at 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 implies 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
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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 inhaler use, daytime wheezing and disruption of activities) to produce an 8 point questionnaire score (Q score) which 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 FEV1, and with the UK asthma guidelines treatment step. The score was equally distributed in 21 patients randomly selected from 3 general practices (mean (SD), age 44 (13) yr, 26 male, PEF 345 (138), FEV1 2.2 (0.9)) and repeated the observations two weeks later in a subset of 21 patients.

The paired observations showed that both Juniper (r = 0.87) and Q score (r = 0.79) were repeatable with similar validity. The Q score was negatively correlated with the Juniper symptom score (r = 0.79, p < 0.01) and total score (r = -0.75, p < 0.01) and both Juniper and Q score correlated with level of resting FEV1 (Q: r = 0.44, J: r = -0.42) and with the severity of asthma as indicated by the treatment step (Q: r = 0.47, J: r = -0.36, p < 0.01) although there was considerable scatter for the latter. The Q score 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
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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 I) that given special education for 1 year and randomly selected 27 cases (group II) that given no special education for 3 years. In both groups, questionnaire 'Quality of Life in Asthma' was filled and also asthma symptoms, current medication, average frequency of hospitalization, the amount of hospitalization, the amount of medication, costs, visits to the doctor and the number of attacks were recorded. The results were evaluated by comparison of the differences between the groups. p < 0.0001 was accepted as the level of significance. Results: In the group I patients, there was a significant decrease of all variables, especially the asthma symptoms, asthma medication and the number of hospitalization. The education was effective in patients' life quality and morbidity. In conclusion, the education is of great importance even if the application is difficult in some cases. It is necessary for each country to make special education programmes and to make them possible for all patients.