Workshop

Education & Asthma

Fulvio Braido
Allergy and Respiratory Diseases Department
University of Genoa
Asthma Control in Europe

(468 asthma subject treated with ICS in the last year)
(ECRHS II; 1999-2002)

- Controlled: 15%
- Partly controlled: 36%
- Uncontrolled: 49%

Cazzoletti, Cerveri et al, JACI 2007
Two reviews of medical literature have identified the most important factors that could limit the doctor’s non-adherence to guidelines [6*,22]. Analysing 76 different studies, 293 possible ‘obstacles’ have been identified and grouped in seven ‘barriers’, according to a common theme: although the educational programs and the incentives for compliance, practitioners tend to perceive barriers to guidelines implementation, and therefore they do not follow them in daily practice [23].
### Table 1 Factors that influence guidelines implementation not correlated to physicians and patients

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Factors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Guidelines</td>
<td>Credibility [5], Complexity [6*], Evidence-based strategy [7], Trialability [8], Degree of evidence of recommendations [5], Concreteness in the description of unexpected behaviours [5], Transparency and clear purpose [9*], Social and clinical norms and habits [10], System efficiency [11], Ethics [12], Compatibility of recommendations with the system of existing values in a specific culture [5], Kind of disease [5], Number of personal and organizational changes to make [5], Financial incentives [5], Standards of practice [5]</td>
</tr>
<tr>
<td>Context</td>
<td>Organizational characteristics [13], Communication strategies [14], Educational strategies and techniques [14], Use of incentives [15]</td>
</tr>
</tbody>
</table>
Why do doctors not follow guidelines?

Knowledge
- Lack of consciousness
- Lack of familiarity

Attitude
- Lack of agreement
- Lack of auto-effectiveness
- Lack of success expectations
- Lack of motivation

Behaviour
- Internal barriers
- External barriers
Development of the Asthma Control Test: A survey for assessing asthma control

Robert A. Nathan, MD,a Christine A. Sorkness, PharmD,b Mark Kosinski, MA,c Michael Schatz, MD, MS,d James T. Li, MD, PhD,e Phillip Marcus, MD, MPH,f John J. Murray, MD, PhD,g and Trudy B. Pendergraft, MSPHh
Unsatisfactory Asthma Control: Astonishing Evidence from General Practitioners and Respiratory Medicine Specialists

F Braido, I Baiardini, E Stagi, MG Piroddi, S Balestracci, GW Canonica

Allergy & Respiratory Diseases, DIMI-Department of Internal Medicine, University of Genoa, Genoa, Italy

Should a patient who has symptoms once a week, no nocturnal awakenings or limitation in daily activities, and does not have to use salbutamol as needed be considered uncontrolled, partly controlled, or controlled?

Respondents: 789/811 GPs, 221/230 specialists

<table>
<thead>
<tr>
<th></th>
<th>Uncontrolled</th>
<th>Partly controlled</th>
<th>Controlled</th>
<th>GPs vs Specialists</th>
</tr>
</thead>
<tbody>
<tr>
<td>GPs, No. (%)</td>
<td>184 (23.32)</td>
<td>511 (64.77)</td>
<td>94 (11.91)</td>
<td>(\chi^2 = 26.51)</td>
</tr>
<tr>
<td>Specialists, No. (%)</td>
<td>20 (9.05)</td>
<td>157 (71.04)</td>
<td>44 (19.91)</td>
<td>(P &lt; .0001)</td>
</tr>
</tbody>
</table>

*J Invest Allergol Clin Immunol 2010; Vol. 20(1):*
Choose one of the following options concerning the Asthma Control Test (ACT):

<table>
<thead>
<tr>
<th></th>
<th>GPs</th>
<th>Specialists</th>
</tr>
</thead>
<tbody>
<tr>
<td>Responders</td>
<td>789</td>
<td>212</td>
</tr>
<tr>
<td>I don’t know it</td>
<td>58 (7.35%)</td>
<td>16 (7.55%)</td>
</tr>
<tr>
<td></td>
<td>p=0.461</td>
<td></td>
</tr>
<tr>
<td>I’ve heard of it but I’ve never seen it</td>
<td>111 (14.06%)</td>
<td>20 (9.43%)</td>
</tr>
<tr>
<td></td>
<td>p=0.038</td>
<td></td>
</tr>
<tr>
<td>I know it but I don’t use it in clinical practice</td>
<td>467 (59.19%)</td>
<td>85 (40.09%)</td>
</tr>
<tr>
<td></td>
<td>p&lt;0.0001</td>
<td></td>
</tr>
<tr>
<td>I know it and I use it</td>
<td>153 (20.15%)</td>
<td>91 (42.92%)</td>
</tr>
<tr>
<td></td>
<td>p&lt;0.0001</td>
<td></td>
</tr>
</tbody>
</table>

$\chi^2 = 51.76$  
$p<0.0001$
Patient Reported Outcomes in ASTHMA Educational Project

GPs

Home work
Enduring material
Patient education
Class work
Residential Course

Survey
At least 3 patients/GPs

2332 GPs
7884 patients

Braid et Al Journal of Asthma In press
# Summary Statistics

## 2332 GPs (mean age 54.39 ± 5.93)

<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
<th>Count</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sex</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Males (M)</td>
<td></td>
<td>1674</td>
<td>75%</td>
</tr>
<tr>
<td>Females (F)</td>
<td></td>
<td>658</td>
<td>25%</td>
</tr>
<tr>
<td><strong>Years of practice</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt; 15</td>
<td></td>
<td>56</td>
<td>2.4%</td>
</tr>
<tr>
<td>16-30</td>
<td></td>
<td>1372</td>
<td>58.8%</td>
</tr>
<tr>
<td>&gt; 30</td>
<td></td>
<td>895</td>
<td>38.4%</td>
</tr>
<tr>
<td><strong>Provenance</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Northern Italy</td>
<td></td>
<td>1212</td>
<td>51.5%</td>
</tr>
<tr>
<td>Central Italy</td>
<td></td>
<td>323</td>
<td>13.8%</td>
</tr>
<tr>
<td>Southern Italy</td>
<td></td>
<td>549</td>
<td>23.5%</td>
</tr>
<tr>
<td>Islands</td>
<td></td>
<td>236</td>
<td>10.1%</td>
</tr>
</tbody>
</table>
The structuration and the analysis of the questions of the survey addressed to the physicians is performed taking into consideration the concept of “social desirability”.


**SURVEY Background & Format**

Each physician performs different strategies and behaviours when approaching to an asthma patient.

Indicate the frequency with which you use each one of the following behaviours in daily practice:

Baido et Al Journal of Asthma In press
I investigate how the patient represents the disease to himself
(which signs he gives importance to, what worries him, what makes him feel ill)

- never: 10 (1%)
- seldom: 37 (3%)
- sometimes: 195 (13%)
- often: 670 (46%)
- always: 544 (37%)

2332 physicians

17% of GPs don’t investigate how the patient represents asthma to himself
I encourage the patient to express his doubts, expectations, concerns.

never: 19 (1%)
seldom: 72 (5%)
sometimes: 299 (26%)
often: 662 (45%)
always: 404 (28%)

1 physician out of 3 is little used to helping the patient to express those aspects which risk compromising adherence.
Almost all physicians (95%) believe they provide adequate information to the patient (although 20% of them do not ask the patient what does the disease mean to him)
I supply the patient with supporting educational material

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Count (Percentage)</th>
</tr>
</thead>
<tbody>
<tr>
<td>never</td>
<td>40 (10%)</td>
</tr>
<tr>
<td>seldom</td>
<td>364 (25%)</td>
</tr>
<tr>
<td>sometimes</td>
<td>582 (40%)</td>
</tr>
<tr>
<td>often</td>
<td>281 (19%)</td>
</tr>
<tr>
<td>always</td>
<td>89 (6%)</td>
</tr>
</tbody>
</table>

The use of brochures which could enable the patient to read at home always available information on his disease is still scanty.
The written action plan is considered an effective strategy to improve adherence, but only about 60% of physicians declare they use it in clinical practice.
I provide the patient with both oral and written personalized information about the disease.

Only 50% of GPs provide superimposable oral and written information.
I inform the patient about the potential risks associated to the disease

never: 3
sheldom: 21 (1%)
sometimes: 143 (10%)
often: 516 (35%)
always: 773 (53%)

1 physician out of 10 is reluctant to inform the patient about the risks related to asthma
I frighten the patients describing the asthma-related risks

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>never</td>
<td>169 (12%)</td>
</tr>
<tr>
<td>seldom</td>
<td>258 (18%)</td>
</tr>
<tr>
<td>sometimes</td>
<td>450 (31%)</td>
</tr>
<tr>
<td>often</td>
<td>368 (25%)</td>
</tr>
<tr>
<td>always</td>
<td>211 (14%)</td>
</tr>
</tbody>
</table>

Doctors often have recourse to the weapon of “fear” (30%).
I simplify, when possible, the treatment regimen

15% of physicians declare that, even when possible, they do not simplify the treatment
I try to involve the patient in the asthma management strategies

The self-management plan is not often considered by physicians
In your experience, what does worry the patient the most?

- The need of taking care of himself in a continuative way 1086 (75%)
- Drug side-effects 229 (16%)
- The potential addiction provoked by drugs in the course of time 61 (4%)
- The difficulty of taking the drug 80 (5%)

2 physicians out of 3 think that patients are mainly worried by the opportunity of a long term treatment
In your experience, which is the aspect a patient has less awareness of?

<table>
<thead>
<tr>
<th>Aspect</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asthma chronicity</td>
<td>585 (40%)</td>
</tr>
<tr>
<td>Need of a long-term therapy</td>
<td>690 (47%)</td>
</tr>
<tr>
<td>Symptoms</td>
<td>33 (2%)</td>
</tr>
<tr>
<td>Level of bronchial obstruction</td>
<td>148 (10%)</td>
</tr>
</tbody>
</table>

Physicians believe that the aspects patient have less awareness of is The need of a long-term therapy.
Knowledge  Behavior  Environment

Physician

Real Life Results

Patient

Knowledge  ..................
Why do patients not follow guidelines?

- Variables related to the patient
- Variables related to the disease
- Variables linked to the treatment
- Variables linked to the relationship doctor/patient.

Education
Coping
Perception
Alexythimia

*Curr Opin Allergy Clin Immunol. 2009*
# Adherence to Treatment: Assessment of an Unmet Need in Asthma

I Baiardini, F Braido, A Giardini, G Majani, C Cacciola, A Rogaku, A Scordamaglia, GW Canonica

## Cognitions area

<table>
<thead>
<tr>
<th>Not at All / A Little</th>
<th>Enough</th>
<th>Much / Very Much</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Difficulties in accepting your illness</td>
<td>41 (65.1%)</td>
<td>15 (23.8%)</td>
</tr>
<tr>
<td>2. Accept your illness limitations</td>
<td>31 (49.2%)</td>
<td>22 (34.9%)</td>
</tr>
<tr>
<td>3. Think you know your illness</td>
<td>16 (25.4%)</td>
<td>30 (47.6%)</td>
</tr>
<tr>
<td>4. Think treatment has helped your illness management</td>
<td>6 (9.5%)</td>
<td>22 (34.9%)</td>
</tr>
<tr>
<td>5. Think treatment has improved your QoL</td>
<td>7 (11.1%)</td>
<td>27 (42.9%)</td>
</tr>
<tr>
<td>6. How much family/friends have helped in your illness management</td>
<td>22 (34.9%)</td>
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## Behavioral area

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<th>Not at All / A Little</th>
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<tbody>
<tr>
<td>7a. Been able to take the medicines correctly</td>
<td>16 (25.4%)</td>
<td>22 (34.9%)</td>
</tr>
<tr>
<td>7b. Been able to attend follow-up visits on time</td>
<td>11 (17.5%)</td>
<td>24 (38.1%)</td>
</tr>
<tr>
<td>7c. Been able not to smoke (only for smokers)</td>
<td>12 (85.8%)</td>
<td>1 (7.1%)</td>
</tr>
<tr>
<td>7d. Been able to identify worsening signs</td>
<td>12 (19.0%)</td>
<td>26 (41.3%)</td>
</tr>
<tr>
<td>7e. Been able to monitor clinical parameters (PEF, clinical diary)</td>
<td>36 (57.1%)</td>
<td>15 (23.8%)</td>
</tr>
</tbody>
</table>

## Therapy satisfaction area

<table>
<thead>
<tr>
<th>Not at All / A Little</th>
<th>Enough</th>
<th>Much / Very Much</th>
</tr>
</thead>
<tbody>
<tr>
<td>8a. Think your medicines were necessary</td>
<td>5 (7.9%)</td>
<td>21 (33.3%)</td>
</tr>
<tr>
<td>8b. Been worried about side effects of medicines</td>
<td>45 (71.6%)</td>
<td>9 (14.2%)</td>
</tr>
<tr>
<td>8c. Think treatment benefits were greater than possible disadvantages</td>
<td>10 (15.9%)</td>
<td>19 (30.1%)</td>
</tr>
</tbody>
</table>
Self-management of asthma in daily life presents some critical aspects: patients report being unable to take medicines correctly (25.4%), an inability to identify worsening signs (19%) and monitor clinical parameters (57.1%).

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</table>
Patients are aware that drugs are necessary in asthma treatment and that the benefits of treatment are greater than the possible disadvantages although at least 28% of them are worried about their side effects.
25% of patients do not know asthma features

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Patient Reported Outcomes in ASTHMA Educational Project

GPs

Home work
Enduring material  Patient education  Residential Course

Class work

Survey

At least 3 patients/GPs

2332 GPs  7884 patients

Braido et Al Journal of Asthma In press
Objective: development of a patient-oriented educational tool

Method:

Drafting of a preliminary list of potential cognitive elements on asthma which can have a relevant value for the patient

Selection of 10 elements by patients belonging to Patient Associations (UNA – LIAMAR) and by a panel of specialists involved in the Italian adaptation of GINA Guidelines

Statistical analysis of the choices made by the 2 groups according to the frequency and the relevance with the development of the “patient educational plan” with 10 points.

Braido et Al Jounal of Athma In press
PEP Items

- What must be done in case of an asthma crisis
- Periodical checkups
- What must be done in case of presence of asthmatic symptoms
- The asthmatic symptoms
- How to modify the lifestyle
- Asthma trigger factors
- How to use the aerosol
- The meaning of asthma control
- Asthma is a chronic pathology
- The aim of the anti-asthmatic therapy
I dieci punti che ogni paziente asmatico deve conoscere.

Che cosa fare in caso di crisi asmatica

Gli attacchi asmatici gravi possono essere pericolosi per la vita. Il trattamento delle crisi, specie se gravi e durature, deve essere concordato con il controllo medico. Ogni paziente asmatico deve avere sempre con sé un broncodilatatore a breve durata (ad esempio salbutamolo) da usare in caso di crisi (2-4 puff ogni 20 minuti, fino a 3 volte nella prima ora). L’uso dei farmaci ai bisogni deve essere limitato al controllo dei sintomi occasionali. Se i sintomi durano più di 2 ore, si deve ricorrere a più di 2 volte alla settimana per il farmaco al bisogno, la terapia e il controllo dell’asma deve essere riveduta e implementata.

I sintomi asmatici

I sintomi più frequenti e comuni sono: la difficoltà o il ritardo all’inspirazione, la tosse, il respiro mioticante, l’espirazione a forza, il respiro sibilante, il senso di soffocamento, la tosse, la febbre, la irritazione alla gola, la tosse secca o dirottata, il bisogno di respirare ad assorbimento. Tali sintomi possono insorgere improvvisamente e durare da poche ore a giorni, possono risolversi spontaneamente o dopo terapia. Sono inoltre possibili episodi o crisi, stagionali o presenti durante tutto l’anno. Caratteristiche dell’asma sono la variabilità di frequenza e durata dei sintomi, l’esistenza di sintomi specifici, l’aggravarsi di sintomi, l’irritazione alla gola e la necessità di riconoscere e trattare il trattamento farmacologico. In alcuni pazienti, l’unico sintomo può essere la tosse secca e/o persistente, come da sintomi di respirazione interrotta e/o stimolante fisico.

Come modificare il stile di vita

L’asma correttamente diagnosticata e trattata non deve limitare la vita dei pazienti. Conoscere la causa della propria asma consente di prendere in atti misure preventive (ad esempio modificare gli abitudini alimentari, prevenire la tossicità di attività sportive, ecc.) ed affrontare il trattamento più efficiente. Per raggiungere e mantenere un buon controllo dell’asma è importante adottare uno stile di vita sano: evitare il fumo di sigaretta, svolgere un’attività fisica regolare, mantenere sotto controllo il peso corporeo, assicurarsi regolarmente i controlli.

I fattori scatenanti dell’asma

I sintomi asmatici possono essere inoltre scatenati da diversi elementi specifici (es. allergeni, fumo, fumo passivo, gradi, odori, ecc.). I sintomi asmatici possono anche essere associati a fattori estremi (ad es. infertri urti, fumo di sigaretta, inquinamento atmosferico, sondaggio chino, fumi di colpo, strobo-foto). È importante che ogni paziente conosca i fattori che possono scatenare un attacco asmatico e che siano pronti ad affrontare i sintomi.

Come usare gli aerosol dosati

La terapia iniziale è quella che permette ai farmaci di raggiungere direttamente l’organismo bersaglio e, in particolare, riduce il rischio di infezioni sinospiritali. In caso di uno o più episodi di tosse, è importante che il paziente sappia aderire alla terapia e che il controllo dell’asma sia adeguato. La terapia iniziale è quella che permette ai farmaci di raggiungere direttamente l’organismo bersaglio e, in particolare, riduce il rischio di infezioni sinospiritali. In caso di uno o più episodi di tosse, è importante che il paziente sappia aderire alla terapia e che il controllo dell’asma sia adeguato.

Che cosa vuol dire controllo dell’asma

L’asma è sotto controllo quando non si ha nemmeno un episodio (o comunque sintomi minimi), nessuna riacutizzazione (o comunque riacutizzazioni), nessuna visita d’emergenza o ricovero a causa dell’asma, nessun bisogno di associazione o di aggiornamento del trattamento farmacologico e nessuna interruzione nelle attività della vita quotidiana (comprensiva attività fisica e sportiva) e quando si ha una variazione giornaliera del PEFR di meno del 20% e valori spirometrici normali (o comunque al meglio possibile). Le prove scientifiche dimostrano che con il trattamento farmacologico questi obiettivi sono raggiunti nei soggetti con asma di tipo cronico e maggiore gravità.

L’asma è una patologia cronica

L’asma è una malattia persistente cronica, che può essere controllata, ma non è possibile guarire. L’asma è una malattia variabile, caratterizzata da fasi di peggioramento in cui compaiono i sintomi (呼吸道), o riacutizzazioni asmatiche, alle quali si alternano periodi di completo benessere. L’asma cronica è una malattia infiammatoria, per il cui trattamento deve essere continuato anche in assenza di sintomi.

Qual’è lo scopo della terapia antiasmatica

La terapia dell’asma prevede farmaci per il trattamento di fondo e per il trattamento ai bisogni, che vanno utilizzati con il consenso del medico. I farmaci da bisogno (broncodilatatori, prevenuttori, antiasmatici) devono essere prescritti in azione e in un’alimentazione adeguata. Le terapie sistemiche, che contengono numerosi farmaci, sono efficaci nel trattamento dell’asma. Le terapie sistemiche migliorano la qualità della vita dei pazienti con asma.

Asma

Piano Educazionale per il Paziente
Please indicate the 3 topics on which you are less aware
Topics’ ranking defined by patients choices

<table>
<thead>
<tr>
<th>Patients survey ranking</th>
<th>Topics</th>
<th>number of patients</th>
<th>% patients</th>
<th>PEP ranking</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>The meaning of asthma control</td>
<td>1105</td>
<td>14</td>
<td>8</td>
</tr>
<tr>
<td>2</td>
<td>How to integrate asthma in daily life</td>
<td>1048</td>
<td>13,3</td>
<td>5</td>
</tr>
<tr>
<td>3</td>
<td>Periodical checkups</td>
<td>1000</td>
<td>12,7</td>
<td>2</td>
</tr>
<tr>
<td>4</td>
<td>Asthma trigger factors</td>
<td>864</td>
<td>11,0</td>
<td>6</td>
</tr>
<tr>
<td>5</td>
<td>Asthma is a chronic pathology</td>
<td>853</td>
<td>10,9</td>
<td>9</td>
</tr>
<tr>
<td>6</td>
<td>What must be done in case of an asthma crisis</td>
<td>715</td>
<td>9,1</td>
<td>1</td>
</tr>
<tr>
<td>7</td>
<td>How to use the metered dose inhaler</td>
<td>668</td>
<td>8,5</td>
<td>7</td>
</tr>
<tr>
<td>8</td>
<td>The aim of the anti-asthmatic therapy</td>
<td>599</td>
<td>7,5</td>
<td>10</td>
</tr>
<tr>
<td>9</td>
<td>What must be done in case of presence of asthmatic symptoms</td>
<td>553</td>
<td>7,0</td>
<td>3</td>
</tr>
<tr>
<td>10</td>
<td>Which are the asthmatic symptoms</td>
<td>479</td>
<td>6,0</td>
<td>4</td>
</tr>
</tbody>
</table>
Patient & his/her Physician relationship
Are less aware of the meaning of asthma control those patients whose physicians

- do not investigate how the patient represents the disease to himself \( (p=0.001) \)
- supply the patient with little supporting educational material \( (p=0.009) \)
- do not listen much to the patient \( (p=0.045) \)
- are not prone to involve the patient in management strategy \( (p=0.037) \)
Are less informed on how to integrate asthma in their life those patients whose physicians

• supply the patient with little supporting educational material ($p=0.002$)
• do not inform the patient about the potential disease related risks ($p=0.049$)
• want to be consulted before any treatment change ($p=0.001$)
Are less informed on the opportunity of periodical check-ups those patients whose physicians

• do not provide prescriptions which can be integrated in patient day (p=0.001)
• do not ask the patient to repeat the prescriptions together (p=0.027)
• do not simplify the treatment regimen (p=0.047), do not provide a written action plan (p=0.001),
• do not involve the patient in the choice of the treatment plan (p=0.001)
<table>
<thead>
<tr>
<th>PROs</th>
<th>Patient’s Related factors influencing PROs</th>
<th>PROs influencing PROs</th>
<th>Disease/Treatment related factors influencing PROs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quality of Life</td>
<td>Alexithymia, Coping, Illness Perception, Mood, Stress</td>
<td>Satisfaction, Adherence, Willigness to pay Behaviors, Illness perception, Symptoms, Comp. Score</td>
<td>Severity, Treatment, T. Schedule, Comorbidity</td>
</tr>
</tbody>
</table>
COPING

Adaptation to a chronic disease depends not only on the seriousness of the disease, but can also be influenced by an individual’s capacity to evaluate and react on stressors (coping strategies).

Coping strategies

- Positive reinterpretation and growth
- Restraint
- Mental disengagement
- Active coping
- Focus on and venting of emotions
- Denial
- Use of instrumental social support
- Religious coping
- Use of emotional social support
- Humor
- Behavioral disengagement
- Acceptance
- Substance use
- Planning
- Suppression of competing activities
Factors associated with hospital admissions and repeat emergency department visits for adults with asthma

Robert J Adams, Brian J Smith, Richard E Ruffin

| Odds ratios for variables associated with any (≥ 1) admissions to hospital |
|-------------------------------------------------------------|-----------------|-------------|-------|
| **Baseline variables**                                      | OR*             | 95% CI      | p value |
| Clinical asthma status                                     |                 |             |        |
| Moderate asthma severity                                   | 0.4             | 0.2 to 0.8  | 0.007  |
| Severe asthma                                              | 1.0             | —           | —      |
| Hospital admission past year                               | 14.4            | 4.5 to 45.8 | <0.0001 |
| No admission past year                                     | 1.0             | —           | —      |
| Taking oral corticosteroids regularly                      | 2.7             | 1.1 to 7.1  | 0.04   |
| Not on oral corticosteroids regularly                      | 1.0             | —           | —      |
| Taking “other” asthma medications                          | 2.0             | 1.0 to 4.2  | 0.049  |
| Not taking “other” asthma medication                       | 1.0             | —           | —      |
| Feels asthma generally getting better                      | 0.2             | 0.1 to 0.5  | 0.01   |
| Feels asthma generally staying the same                     | 0.4             | 0.2 to 1.1  |        |
| Feels asthma generally getting worse                       | 1.0             | —           | —      |
| Processes of care                                          |                 |             |        |
| GP visits for asthma in past year: 0–3                     | 0.3             | 0.1 to 0.7  | 0.004  |
| GP visits for asthma in past year: 4–6                     | 0.5             | 0.2 to 1.4  |        |
| GP visits for asthma in past year: >6                      | 1.0             | —           | —      |
| No written asthma action plan                              | 3.4             | 1.5 to 7.7  | 0.003  |
| Has written asthma action plan                             | 1.0             | —           | —      |
| Patient characteristics and attitudes                      |                 |             |        |
| Less dislikes of asthma medication                         | 0.8             | 0.6 to 0.9  | 0.02   |
| Less use of avoidance coping                               | **0.4**         | **0.3 to 0.6** | <0.0001 |
| Lower autonomy preferences in moderate attacks             | 1.6             | 1.0 to 2.1  | 0.05   |

*Odds ratios were adjusted for age, sex, education, household income, and employment status.
Table 5  Odds ratio for variables associated with repeat (≥ 4) emergency department visits

<table>
<thead>
<tr>
<th>Baseline variables</th>
<th>OR*</th>
<th>95% CI</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Clinical asthma status</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Moderate asthma severity</td>
<td>0.3</td>
<td>0.1 to 0.6</td>
<td>0.001</td>
</tr>
<tr>
<td>Severe asthma</td>
<td>1.0</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>No hospital admission in past year</td>
<td>1.0</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Admission in past year</td>
<td>2.9</td>
<td>1.1 to 7.8</td>
<td>0.03</td>
</tr>
<tr>
<td>Taking oral corticosteroids regularly</td>
<td>12.1</td>
<td>3.7 to 34.1</td>
<td>&lt;0.0001</td>
</tr>
<tr>
<td>Not taking oral corticosteroids regularly</td>
<td>1.0</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Taking “other” asthma medication</td>
<td>5.5</td>
<td>2.3 to 13.7</td>
<td>0.0001</td>
</tr>
<tr>
<td>Not taking “other” asthma medication</td>
<td>1.0</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Self-rating of asthma over past 3 months</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Severe</td>
<td>7.3</td>
<td>1.3 to 41.6</td>
<td>0.001</td>
</tr>
<tr>
<td>Moderate</td>
<td>3.7</td>
<td>0.7 to 19.2</td>
<td></td>
</tr>
<tr>
<td>Mild/no problem</td>
<td>1.0</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Feels asthma generally getting worse</td>
<td>2.8</td>
<td>1.5 to 5.1</td>
<td>0.0008</td>
</tr>
<tr>
<td>Feels asthma generally getting better/staying same</td>
<td>1.0</td>
<td>1.0</td>
<td></td>
</tr>
<tr>
<td><strong>Processes of care</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GP visits for asthma past 12 months 0–3</td>
<td>0.2</td>
<td>0.1 to 0.6</td>
<td>0.002</td>
</tr>
<tr>
<td>GP visits for asthma past 12 months 4–6</td>
<td>0.4</td>
<td>0.1 to 1.1</td>
<td></td>
</tr>
<tr>
<td>GP visits for asthma past 12 months &gt; 6</td>
<td>1.0</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>No written asthma action plan</td>
<td>3.1</td>
<td>1.5 to 7.1</td>
<td>0.0039</td>
</tr>
<tr>
<td>Has written asthma action plan</td>
<td>1.0</td>
<td>1.0</td>
<td></td>
</tr>
<tr>
<td><strong>Patient characteristics and attitudes</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Less dislikes of asthma medication</td>
<td>0.7</td>
<td>0.6 to 0.9</td>
<td>0.0034</td>
</tr>
<tr>
<td><strong>Less use of avoidance coping</strong></td>
<td>0.6</td>
<td>0.4 to 0.8</td>
<td>0.001</td>
</tr>
<tr>
<td>More use of active coping</td>
<td>0.7</td>
<td>0.5 to 1.1</td>
<td>0.05</td>
</tr>
<tr>
<td>Less perceived social support</td>
<td>1.6</td>
<td>1.2 to 2.3</td>
<td>0.001</td>
</tr>
<tr>
<td>Cost concerns delay seeking care for asthma</td>
<td>3.7</td>
<td>1.3 to 10.5</td>
<td>0.01</td>
</tr>
</tbody>
</table>

*Odds ratios were adjusted for age, sex, education, household income and employment status.
Coping with ASTHMA

199 patients suffering from asthma and rhinitis

12% GINA step 1 (in therapy)
25% Step 2
28% Step 3
8% Step 4
1% Step 5

35% M
65% F

49% intermittent Rhinitis according to ARIA
51% persistent Rhinitis

P Positive reinterpretation and growth: valore medio: 11,49; deviazione standard: 2,62
P Active coping: valore medio: 11,23; deviazione standard: 2,31
P Planning: valore medio: 11,16; deviazione standard: 3,04
P Use of instrumental social support: valore medio: 9,83; deviazione standard: 3,06
P Acceptance: valore medio: 9,49; deviazione standard: 2,98
P Restraint: valore medio: 9,44; deviazione standard: 2,68;
P Suppression of competing activities: valore medio: 9,14; deviazione standard: 2,59;
N Use of emotional social support: valore medio: 8,87; deviazione standard: 3,0
P Focus on and venting of emotions: valore medio: 8,35; deviazione standard: 2,31;
N Religious coping: valore medio: 8,08; deviazione standard: 4,79
N Mental disengagement: valore medio: 7,89; deviazione standard: 2,20;
N Humor: valore medio: 6,91; deviazione standard: 2,68;
N Behavioral disengagement: valore medio: 5,93; deviazione standard: 2,08;
N Denial: valore medio: 5,72; deviazione standard: 1,97
N Substance use: valore medio: 4,36; deviazione standard: 1,6
La tua asma
affrontiamola insieme

Affrontando un problema, ognuno di noi tende ad utilizzare comportamenti diversi.

In物业管理，各项行动对问题的解决至关重要。不同的方法可能导致不同的结果。

1. **Coping attivo**
   - **Recherche di informazioni**
     - Occuparsi attivamente di ricercare informazioni adeguate.
   - **Umorismo**
     - Utilizzare umorismo e ridere per ridurre il stress e la tensione.
   - **Negazione**
     - Negare la realtà della situazione per evitare la disperazione.
   - **Pianificazione**
     - Preparazione e pianificazione per gestire efficacemente la situazione.

2. **Distanziazione mentale**
   - **Ritiro mentale**
     - Creare una barriera mentale per isolare la situazione da se stessi.
   - **Dedicarsi alla religione**
     - Prendere atto della religione come fonte di supporto e conforto.
   - **Accettazione**
     - Accettare la realtà della situazione come un fatto del passato.
   - **Reinterpretazione positive**
     - Riformulare la situazione in termini positivi per aumentare la resilienza.

3. **Distacco comportamentale**
   - **Verifica all'interno**
     - Analizzare i propri comportamenti per determinarli utili o dannosi.
   - **Dopo e di non pensare**
     - Prendere distanza dai pensieri negativi e centrarsi sui fatti.
   - **Mi affido al destino o alla fede**
     - Far affidamento nella scelta di prendere azioni o di lasciare che si svolga come deve.
   - **Riconosco il problema e lo accetto**
     - Accettare il problema e lavorare per trovarne una soluzione.
In order to make sense of, and respond to the presence of a disease, patients create their own models or representations of their illness.

Patients develop their own ideas about their disease, what it means for them;

These ideas determine their behaviour,

Behaviour affects outcomes.

Personal representations have been shown to predict outcomes in several health conditions

Searle et al., J Psychosom Res 2007 - Foster et al., Pain 2008
Is near-normal quality of life achievable in patients with allergic asthma and comorbid rhinitis in real life setting?

Braido F, Baiardini I, Menoni S, Gani F, Senna GE, Ridolo E, Schoepf V, Rogkakou A, Canonica GW

209 patients

Mean age 45.14 + 16.75 years

Braido et Al (submitted)
Asthma and rhinitis related quality of life, rhinitis symptoms and level of control expressed as minimal, maximal and mean scores in observed population.

<table>
<thead>
<tr>
<th></th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>RHINASTHMA UA</td>
<td>0</td>
<td>100.00</td>
<td>31.6025</td>
<td>23.54</td>
</tr>
<tr>
<td>RHINASTHMA LA</td>
<td>0</td>
<td>84.62</td>
<td>30.5953</td>
<td>21.77</td>
</tr>
<tr>
<td>RHINASTHMA RAI</td>
<td>0</td>
<td>87.50</td>
<td>25.7852</td>
<td>20.27</td>
</tr>
<tr>
<td>RHINASTHMA GS</td>
<td>0</td>
<td>83.33</td>
<td>29.6147</td>
<td>18.58</td>
</tr>
<tr>
<td>T5SS TOT</td>
<td>0</td>
<td>15</td>
<td>7.01</td>
<td>4.04</td>
</tr>
<tr>
<td>ACT TOT</td>
<td>5</td>
<td>25</td>
<td>18.44</td>
<td>5.33</td>
</tr>
</tbody>
</table>

Only 70% of the best achievable quality of life

Near Normal QoL: 78/209 (37.32%)
Association between Demographic Characteristics and Near Normal HRQoL achievement.

<table>
<thead>
<tr>
<th>DEMOGRAPHIC CHARACTERISTICS</th>
<th>Male</th>
<th>Female</th>
<th>χ²</th>
<th>ns</th>
<th>p &lt; 0.05</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sex</td>
<td>36.5%</td>
<td>63.5%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Smoking</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Smoker</td>
<td>16.5%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-smoker</td>
<td>72.9%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Former smoker</td>
<td>9.6%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Education</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Primary school</td>
<td>9.3%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Secondary school</td>
<td>19.5%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>High school</td>
<td>47.8%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Academic degree</td>
<td>23.4%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>45.14</td>
<td>16.75</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Association between Rhinitis and Asthma severity and Near Normal HRQoL achievement.

<table>
<thead>
<tr>
<th></th>
<th>$\chi^2$</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intermittent vs persistent rhinitis</td>
<td>1.753</td>
<td>0.229</td>
</tr>
<tr>
<td>Mild/moderate vs severe rhinitis</td>
<td>.142</td>
<td>0.737</td>
</tr>
<tr>
<td>Treatment on demand (GINA 1) vs Chronic treatment (GINA 2, 3, 4, 5)</td>
<td>3.430</td>
<td>0.088</td>
</tr>
</tbody>
</table>
Illness perception in patients reaching near-normal HRQoL (GS score <20) or not (GS >20)
IPQ Identity Factor

![Graph showing the comparison between GS < 20 and GS >= 20. The graph indicates a statistically significant difference with p < 0.001.](image-url)
Illness perception in patients reaching near-normal HRQoL (GS score <20) or not (GS ≥20)

<table>
<thead>
<tr>
<th>IPQ-R Symptom</th>
<th>Presence of the symptom</th>
<th>Relation between the symptom and asthma/rhinitis</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>GS &lt;20</td>
<td>GS ≥20</td>
</tr>
<tr>
<td>Pain</td>
<td>0.17 ± 0.38</td>
<td>0.28 ± 0.45</td>
</tr>
<tr>
<td>Sore Throat</td>
<td>0.29 ± 0.46</td>
<td>0.47 ± 0.50</td>
</tr>
<tr>
<td>Nausea</td>
<td>0.08 ± 0.28</td>
<td>0.16 ± 0.36</td>
</tr>
<tr>
<td>Breathlessness</td>
<td>0.75 ± 0.43</td>
<td>0.85 ± 0.36</td>
</tr>
<tr>
<td>Weight Loss</td>
<td>0.04 ± 0.20</td>
<td>0.12 ± 0.33</td>
</tr>
<tr>
<td>Fatigue</td>
<td>0.58 ± 0.50</td>
<td>0.79 ± 0.41</td>
</tr>
<tr>
<td>Stiff Joints</td>
<td>0.08 ± 0.28</td>
<td>0.33 ± 0.47</td>
</tr>
<tr>
<td>Sore Eyes</td>
<td>0.67 ± 0.47</td>
<td>0.71 ± 0.45</td>
</tr>
<tr>
<td>Wheeziness</td>
<td>0.82 ± 0.38</td>
<td>0.92 ± 0.27</td>
</tr>
<tr>
<td>Headache</td>
<td>0.32 ± 0.47</td>
<td>0.54 ± 0.50</td>
</tr>
<tr>
<td>Upset Stomach</td>
<td>0.18 ± 0.39</td>
<td>0.38 ± 0.49</td>
</tr>
<tr>
<td>Sleep Disturbances</td>
<td>0.33 ± 0.47</td>
<td>0.69 ± 0.46</td>
</tr>
<tr>
<td>Dizziness</td>
<td>0.14 ± 0.35</td>
<td>0.36 ± 0.48</td>
</tr>
<tr>
<td>Loss Of Strength</td>
<td>0.47 ± 0.50</td>
<td>0.74 ± 0.44</td>
</tr>
</tbody>
</table>
ALEXITHYMIA: difficulty in identifying and verbalizing emotions

People with alexithymia are characterized by:

- inability to identify and express emotions
- difficulty in differentiating between feelings and bodily sensations that accompany emotional arousal
- paucity of imaginary life with externally oriented rather than psychologically minded thought

Sifneos PE, Psychoter Psychosom, 1973
Pitfalls in Respiratory Allergy Management: Alexithymia and Its Impact on Patient-Reported Outcomes

Ilaria Baiardini,¹* Fulvio Braido,¹ Gianluca Ferraioli,¹ Stefania Menoni,² Marco Bruzzone,¹ Maria Elisabetta Conte,³ Federica Gani,⁴ Erminia Ridolo,⁵ Antonio Scordamaglia,¹ and Giorgio Walter Canonica¹

Journal of Asthma
In press
Results: Alexithymia and Asthma Control

A negative, significant correlation was found between alexithymia and ACT (r = -0.31 p = 0.002)

Alexithymic patients compared to non-alexithymic ones, had significantly lower ACT scores (15.86 vs 19; p = 0.02)
Results: Alexithymia and HRQoL

There was no correlation between alexithymia and UA ($r=0.152; p=0.112$), while a correlation existed between alexithymia and LA ($r=0.472, p<0.001$), RAI ($r=0.373, p<0.001$) and GS ($r=0.424, p<0.001$).
Often information is

- Told, but not heard
- Heard, but not understood
- Understood, but not accepted
- Accepted, but not put into practice
- Put into practice, but for how long

Konrad Lorenz

Patient Reported Outcomes & Patient’s Related factors influencing PROs should be considered in the development of educational tools and strategies