



IPCRRG Exchanges

Asthma Guidelines 2008



How useful to primary care professionals around the world are they?

Global experiences of primary care

The first international guidelines for managing asthma were published in 1992, and the Global Initiative for Asthma (GINA) was launched in 1993 by the WHO. Today, in addition to the GINA guidelines, other international asthma-related guidelines and consensus statements include those of the Allergic Rhinitis Impact on Asthma (ARIA) initiative, the IPCRRG, and the PRACTALL initiative.

Clinical guidelines seek to summarise information and offer evidence-based recommendations to guide clinicians in daily practice. The guidelines listed here have been aimed at all clinicians treating asthma and some have had a 'specialist' focus and flavour to them. An exception are the IPCRRG's own guidelines, which were written by primary care and firmly aimed at those working in a primary care setting around the world. The pocket guide versions of ARIA, GINA and PRACTALL are also designed for primary care.

Equally important, the evidence on which guidelines are based rarely comes from primary care. International guidelines such as GINA assign the highest level of evidence to randomised controlled trials (RCTs). However, to remove confounding factors, RCTs typically study highly selected patient populations and exclude most 'real-life' patients—such as those with comorbidities, or at the extremes of age, seen frequently in primary care.

RCTs typically study highly selected patient populations and exclude most 'real-life' patients - such as those with comorbidities, or at the extremes of age, seen frequently in primary care.

Most asthma, however, is diagnosed and treated in primary care, where asthma is, of course, but one of many conditions with which primary care professionals (PCPs) must be familiar. Diagnostic facilities and treatment options often differ greatly from primary to secondary care, from country to country, and from low- to high-income countries.

The IPCRRG therefore launched an initiative to gather primary care reflections on the use and impact of new and updated guidelines internationally. Hailing from 11 countries on four

continents, 11 PCPs and 2 patient representatives participated in interviews, following a structured questionnaire. The aims were to understand how the latest guideline updates are being received and accepted in primary care globally, and to assess how useful they are to busy working PCPs.

Asthma guidelines 2008: a summary

Global Initiative for Asthma (GINA)

The GINA guidelines have undergone annual updates since they were first published in full in 2002.¹ While the GINA guidelines changed little in 2007, the 2006 guidelines contained an important change in approach to asthma management, placing the emphasis on assessing, treating, and monitoring patients based on level of asthma control rather than asthma severity. This resulted from a growing international feeling that assessing control is more useful and practical as a guide to management than trying to assess severity. Asthma control as defined by GINA is summarised in the Table.

Allergic Rhinitis Impact on Asthma (ARIA)

The 2008 Update to the 2001 ARIA-WHO Workshop Report has just been published,² and the online version is available together with a pocket guide containing a diagnosis and management algorithm for allergic rhinitis.³ The 2008 Update reaffirms the links between asthma and allergic rhinitis originally proposed in 2001 and presents new evidence supporting the 'one airway' model of upper and lower airways inflammatory disease. Moreover, the new classification of allergic rhinitis has been validated, subdividing rhinitis into intermittent (<4 days/week or ?4 weeks) or persistent disease. (This classification is considered more relevant clinically, replacing the prior

Levels of asthma control according to the Global Initiative for Asthma (GINA) Reprinted with permission.			
Characteristic	Controlled (All of the following)	Partly controlled (Any measure present in any week)	Uncontrolled
Daytime symptoms	None (twice or less/week)	More than twice/week	Three or more features of partly controlled asthma present in any week
Limitations of activities	None	Any	
Nocturnal symptoms/awakening	None	Any	
Need for reliever/rescue treatment	None (twice or less/week)	More than twice/week	
Lung function (PEF or FEV ₁) [‡]	Normal	<80% predicted or personal best (if known)	
Exacerbations	None	One or more/year*	

FEV₁ = forced expiratory volume in 1 second; PEF = peak expiratory flow.
 * Any exacerbation should prompt review of maintenance treatment to ensure that it is adequate.
 † By definition, an exacerbation in any week makes that an uncontrolled asthma week.
 ‡ Lung function is not a reliable test for children 5 years and younger.

Interview Panel

Angela Boque MRCP, DCH
Paediatrician, Primary health care
Palma de Mallorca, Spain

Sandra Frateiacci
President, Lazio Regional Association for
Asthma and Allergies (ALAMA), affiliate of
Federasma, Rome, Italy

Len Fromer, MD, FAAFP, Dipl ABFM
Assistant Clinical Professor, UCLA School of
Medicine, Los Angeles, California, USA

Svein Høegh Henrichsen, MD
GP (Specialist in General Practice)
Chair, Norwegian College of General
Practitioners Respiratory Group
Oslo, Norway

Chris Hogan, MBBS, DRACOG, DipRCOG,
FRACGP
General practitioner, Family Medical Centre
Sunbury, Australia

Antonio Infantino, MD
General Practitioner, Pneumology and
Allergy Specialist
Chair, National Pneumology Department of
IAFP – Italian Academy of Family Physicians,
IPCRG Senate Member & Italy Delegate
Casamassima (Bari), Italy

Pål Johansen
President, Norwegian Asthma and Allergy
Association, Oslo, Norway

Alan Kaplan, MD, CCFP (EM), FCFP
Family Physician
Chairperson, Family Physicians Airways
Group of Canada
International Editor, Primary Care Respiratory
Journal, Ontario, Canada

Mohammad Osman Yusuf, MD, MSc,
MCPS, PhD (Allergy), FACAII
Allergy and asthma specialist, The Allergy
and Asthma Clinics, Pakistan

Dermot Ryan, MB, BCh, BAO, MRCP,
MICGP, DCH
General Practitioner
Loughborough and Clinical Research Fellow,
University of Aberdeen
Member of Committee of General Practice
Airways Group
Aberdeen, UK

Sarath Paranavitane, MBBS, DCH, DFM,
FCGP
Family Physician, Nugegoda, Sri Lanka

Björn Stållberg, MD
General practitioner
Department of Public Health and Caring
Sciences, Uppsala University
Chair of the Swedish College of General
Practitioners Asthma Group, Sweden

Hakan Yaman, MD, MS
Associate Professor of Family Medicine,
Akdeniz University, Antalya, Turkey

subdivisions of seasonal, perennial, and occupational rhinitis).

In addition, the ARIA report includes updated information on the definition and classification of rhinitis; risk factors, mechanisms, burden, diagnosis, and management of rhinitis; primary prevention of atopic disease; other comorbidities and complications; and rhinitis in children. The guidelines recommend intranasal corticosteroids as first-line therapy in patients with moderate to severe rhinitis, H₁-antihistamines as important treatments for all patients, and leukotriene receptor antagonists (LTRAs) for patients with concomitant rhinitis and asthma.

PRACTALL consensus statement on childhood asthma

The European Academy of Allergology and Clinical Immunology (EAACI) and the American Academy of Allergy, Asthma and Immunology (AAAAI) teamed up in the PRACTALL initiative, which recently published a consensus on managing childhood asthma.⁴ The full consensus and a pocket guide are available on the EAACI website.⁵

The consensus is comprehensive, covering natural history, pathophysiology, and a discussion of the heterogeneity of childhood asthma and asthma phenotypes according to four age groups (0–2 years, 3–5 years, 6–12 years, and adolescence).⁴ Allergy testing of children with suspected asthma is encouraged, and exhaled nitric oxide measurement is proposed as a useful adjunct to routine clinical assessment. The management section includes a treatment algorithm, as well as specific recommendations for the use of inhalers and for managing acute asthma episodes, exercise-induced asthma, difficult asthma, and the youngest children (0–2 and 3–5 years).

IPCRG primary care guidelines

In 2006, the IPCRG published guidelines for diagnosing chronic respiratory diseases, managing asthma, and managing allergic rhinitis in different general practice settings globally.^{6–8} The differential diagnosis of chronic respiratory diseases is described using a symptom-based approach, as this is how patients present.⁶ Practical tools are included, such as questionnaires and diagnosis guides by age groups, with particular focus on children <6 and 6–14 years old and patients 15–39 and ≥40 years old.

The IPCRG asthma and allergic rhinitis management guidelines cover treatment goals and pharmacologic therapy for the two conditions. The asthma guidelines refer to two age groups, pre-school children (<6 yrs) and older children and adults.⁷ The allergic rhinitis guidelines, consistent with the ARIA guidelines, emphasize the link between asthma and allergic rhinitis.⁸

IPCRG debate on the reasons for poor asthma control

To improve understanding and describe issues relating to the patient's perspective as it influences asthma control, the IPCRG convened an international panel whose discussion was published in 2007.⁹ The panel identified patient-related factors that can result in poor asthma control, including patient expectations, aspirations, goals, and beliefs about asthma and its treatment, as well as other aspects of self-management. From this meeting arose a list of needs for primary care:

1. Simple tools to assess and monitor asthma control,
2. Tools to identify patient-related factors influencing poor control, and
3. Incorporation of patient perspectives into the routine review of asthma.

A second meeting was held in September 2007 (discussion to be published) to review potentially modifiable reasons for poor asthma control, including the wrong diagnosis, incorrect choice of inhaler or poor technique, non-adherence to treatment, individual variation in response to treatment, smoking, and co-morbid rhinitis. The ultimate objective of this IPCRG initiative is to develop tools for use in primary care to identify and address these important reasons for poor asthma control.

The IPCRG perspective: experience of practising clinicians

New and updated international guidelines: reflections

The experiences and observations of the clinicians we interviewed illustrate the vast differences internationally in the dissemination, as well as the applicability of international guidelines. We asked our panel their views about the guidelines and in particular on how the recent updates will be accepted and received in primary care.

In most cases, the guideline

recommendations were in keeping with the outlook and opinions of our interview panel. All supported the change in GINA guidelines to classifying asthma control rather than severity as the means to guide therapy. Moreover, interviewees welcomed the symptom-based approach, which they felt to be most relevant in day-to-day practice, of the IPCRG guidelines for diagnosing respiratory diseases.

The new ARIA guidelines have a focus on paediatric allergy that was missing in the 2001 report, according to Osman Yusuf. With regard to the PRACTALL consensus, the most important change identified was the addition of LTRAs as a first-line therapeutic alternative to inhaled corticosteroids (ICS) for children. "This agrees with my experience and interpretation of the literature," said Alan Kaplan, noting that childhood asthma is frequently associated with allergies.

Other contributions of international guidelines listed by our panel include the global perspective they provide, as well as their academic contribution to the field. Dermot Ryan noted, moreover, that international guidelines can help to apply pressure on governments to ensure that basic standards of care are being met.

Guidelines: should they be local?

The need for local guidelines was raised by many on our panel. "Asthma and allergies, unlike any other illness, are greatly dependent on local, regional, and individual factors. Proper implementation of any guideline has to ensure its local applicability, acceptability, and eventually, its efficacy," noted Osman Yusuf. Hakan Yaman added that guidelines must be adapted to local needs, languages, and cultural issues.

"Asthma and allergies, unlike any other illness, are greatly dependent on local, regional, and individual factors..."

Several practical difficulties to the implementation of international guidelines at a local level were discussed. Recommended medications may not be reimbursable under some national healthcare systems, or there may be a difference between what primary and secondary care can prescribe, as in Turkey, where the prescribing of LTRAs is limited to secondary and tertiary care. In Sri Lanka, as in some other low-income countries, PCPs are reluctant to prescribe ICS.

Lack of funding limits the ability to develop national or local primary care guidelines in Turkey and many other countries. Even when national guidelines are available, as in Sri Lanka, the task of raising awareness of these guidelines and gaining their acceptability among PCPs was described by Sarath Paranavitane as "Herculean."

In Spain, local guidelines have been produced in several of the 17 regions by primary care paediatricians and paediatric pneumonologists. Angela Boque described how these guidelines are hand-delivered to each PCP in Palma de Mallorca. Well-accepted by physicians, the 100-page guidelines in paper form, together with an electronic paediatric asthma protocol for follow-up, include drawings and handouts that physicians can print out for patients.

Guidelines in primary care: what limits their usefulness?

Perhaps more important than the need for local guidelines, according to Antonio Infantino, is the need for guidelines centred in primary care. "Guidelines are most commonly developed by specialists with little attention to the primary care setting, which is very different from their own," he noted. Furthermore, as Dermot Ryan pointed out, "There is an overemphasis in the guidelines on what to do and not enough on how to do it."

"Guidelines are most commonly developed by specialists with little attention to the primary care setting, which is very different from their own"

The lack of time - time to read, understand, and use asthma guidelines - emerged frequently as an important barrier to their use. PCPs worldwide see their patients under tight time constraints. Asthma guidelines may be but one of many guidelines landing on their desks each year. The reality of 'guideline overload' is illustrated by the publication in 2007 in Germany of a book containing ~1000 guidelines! A further challenge is for PCPs to update themselves as guidelines change from year to year.

Guidelines: how can they be improved?

The consensus of the panel was that guidelines may be best accepted if they are concise and recognise the real-world constraints of primary care. The ideal guidelines for primary care would be short, practical, easy to follow, and written locally by PCPs, using colour to define different messages: "Just the headlines and expressed as 'we should do this' rather than 'you should do this,'" per Björn Ställberg. Alan Kaplan concurred, despite noting the challenge in condensing guidelines down to 1 page or, better yet in his opinion, a flow diagram.

The ideal guidelines for primary care would be short, practical, easy to follow, and written locally by PCPs

With regard to disseminating the guidelines to their colleagues, many interviewees called for a process of one-on-one peer-led conversations. As Svein Høegh Henrichsen pointed out, "We won't get people to change if they don't see the need to change." In Australia, a system of peer support and peer-led meetings has been successful in disseminating national asthma guideline recommendations in primary care.

Tools to improve asthma control in primary care

Better tools to monitor asthma and guide treatment decisions, both computer-based and paper-based, were seen as still needed for primary care. Alan Kaplan described the use of a simple, paper-based tool—a self-inking stamp summarising Canadian guideline criteria for assessing asthma control and therapy—that has been shown to increase physician knowledge and improve patient outcomes.¹⁰

...a simple, paper-based tool - a self-inking stamp summarising Canadian guideline criteria for assessing asthma control and therapy - has been shown to increase physician knowledge and improve patient outcomes.

More costly, spirometry access varies greatly among countries. In Turkey, better availability of spirometry is needed for PCPs. On the other hand, Norway now requires spirometry results to obtain government funding for asthma medications. Svein Høegh Henrichsen expressed frustration with the inflexibility of this Norwegian policy, noting, moreover, that spirometry alone is not sufficient to diagnose or manage asthma.

Improving asthma control through understanding the patient's perspective

Patients having knowledge of their asthma was considered by our panel to be crucial to gaining control of asthma. Thus, the first step in the physician-patient interaction should be to assess the patient's knowledge. "Before you pour the tea, you must first empty the cup," Chris Hogan stated. "What do they know? Then you update their knowledge." Characterising patients according to how they perceive their asthma diagnosis - as 'acceptors,' 'deniers,' 'distancers,' and 'pragmatists,' for example - can help PCPs determine how best to manage an individual's asthma, according to Monsur Habib.

"Without this understanding, however, it is difficult for patients to take the next step, which is for them to realise that they can gain control of their asthma."

Sandra Frateiaci described several reasons why patients may not have full understanding of their asthma, including denial, shame, inability to manage their symptoms, and social issues causing them to hide their asthma. "Without this understanding, however, it is difficult to take the next step, which is for them to realise that they can gain control of their asthma," she said. Antonio Infantino suggested a short questionnaire to assess patient knowledge that could be used in conjunction with a tool to measure asthma control. Len Fromer stressed the importance of written asthma action plans to assist patients in understanding and managing their asthma day-to-day.

Mass education campaigns

Our interview panel had mixed opinions of mass patient education for reasons summarised by Osman Yusuf: "Proper mass education campaigns are extremely effective, while inappropriate ones often lead to scare, stigma, despair, and above all, a sense of denial." In Bangladesh, two young girls committed suicide upon learning their asthma could require life-long treatment. Thus, it is essential to avoid negative language (e.g., 'incurable illness') and instead to convey the message that asthma is a controllable condition and that people with asthma can lead a normal, active life. Osman Yusuf

"Proper mass education campaigns are extremely effective, while inappropriate ones often lead to scare, stigma, despair, and above all, a sense of denial."

stressed the importance of message content, timing, mode of presentation, and above all, social acceptability in ensuring the success or failure of a mass educational campaign.

Extensive and successful media campaigns have been conducted in Australia following a sequence of 1) could it be asthma? 2) asthma and smoking, and 3) having a written action plan. "As a result, Australians are quite sophisticated as far as public awareness of asthma is concerned," Chris Hogan stated.

...convey the message that asthma is a controllable condition and that people with asthma can lead a normal, active life.

Most people in Sri Lanka have a television and could be reached successfully by this medium, according to Sarath Paranavitane. He summarised, "Quite simply, I feel that if we are to manage asthma successfully, to achieve well-controlled status, our strategies should be directed at:

1. Creating public awareness of the disease—this should include dispelling myths about asthma;
2. Creating guidelines that are modified to suit the needs of each particular country; and
3. Constantly updating the information for PCPs - preferably by conducting small group meetings led by peers, by members of primary care respiratory groups in each country." ●

Acknowledgments

Many thanks to the individuals who participated in the interviews and gave so generously of their time. Thanks also to the IPCRG Senate, with particular thanks to Monsur Habib, Bangladesh, and Thomas Hausen, Germany, for their review.

References

1. Global Initiative for Asthma (GINA). www.ginasthma.org.
2. Bousquet J, Khaltaev N, Cruz AA, *et al*. Allergic Rhinitis and its Impact on Asthma (ARIA) 2008 update (in collaboration with the World Health Organization, GA(2)LEN and AllerGen). *Allergy*. 2008;**63** Suppl 86:8-160.
3. Allergic Rhinitis Impact on Asthma (ARIA). www.whiar.org.
4. Bacharier LB, Boner A, Carlsen KH, *et al*. Diagnosis and treatment of asthma in childhood: a PRACTALL consensus report. *Allergy*. 2008;**63**:5-34.
5. PRACTALL on pediatric asthma. www.eaaci.net/webcasts.htm.
6. Levy ML, Fletcher M, Price DB, *et al*. International Primary Care Respiratory Group (IPCRG) Guidelines: diagnosis of respiratory diseases in primary care. *Prim Care Respir J*. 2006;**15**:20-34.
7. van der Molen T, Ostrem A, Stallberg B, *et al*. International Primary Care Respiratory Group (IPCRG) Guidelines: management of asthma. *Prim Care Respir J*. 2006;**15**:35-47.
8. Price D, Bond C, Bouchard J, *et al*. International Primary Care Respiratory Group (IPCRG) Guidelines: management of allergic rhinitis. *Prim Care Respir J*. 2006;**15**:58-70.
9. Horne R, Price D, Cleland J, *et al*. Can asthma control be improved by understanding the patients perspective? *BMC Pulm Med*. 2007;**7**:8.
10. Renzi PM, Ghezzi H, Goulet S, *et al*. Paper stamp checklist tool enhances asthma guidelines knowledge and implementation by primary care physicians. *Can Respir J*. 2006;**13**:193-7.

Date of Preparation: May 2008

Author: Elizabeth V. Hillyer, New Jersey, USA **Advisor:** Mike Thomas **Editors:** Hilary Pinnock, Siân Williams, IPCRG

Website: <http://www.theipcr.org> **Email:** sam.knowles@abdn.ac.uk

This edition of IPCRG Exchanges has been generously supported by an educational grant from Merck & Co., Inc., Whitehouse Station, NJ, USA.

The views expressed in this publication are not necessarily those of the International Primary Care Respiratory Group (IPCRG)

Licensed under Creative Commons Attribution-No Derivative Works Licence. <http://creativecommons.org/licenses/by-nd/3.0/>

The IPCRG is a charity registered in Scotland working internationally (SC No: 035056) and a company limited by guarantee

(Company number 256268). Registered Offices: Department of General Practice and Primary Care,

Foresterhill Health Centre, Westburn Road, Aberdeen, AB25 2AY

