IPCRG Exchanges

Children with Asthma

Global experiences of primary care

Asthma in children

The prevalence of asthma among children continues to increase worldwide, even in countries where asthma prevalence appears to be levelling off among adults. Moreover, surveys indicate that asthma control is less than optimal for many children despite existing clinical practice guidelines for asthma.

Childhood asthma guidelines: the key issues

The Paediatric Consensus Working Group Conference on the Management of Paediatric Asthma, co-chaired by Professor Ulrich Wahn of Charité University Hospital Berlin and Dr. Erkka Valovirta of the Turku Allergy Centre in Finland, brought together 36 specialists in childhood asthma from 18 European and Eurasian countries for a 2-day meeting in Berlin, Germany, in September 2005. (http://www.metrostreaming.com/paediatricconsensusmeeting)

This expert group identified nine important issues in childhood asthma for further study and consideration for inclusion in future guidelines for childhood asthma:

- Recognition of the different age-related forms (phenotypes) of asthma with multiple triggers, such as the common cold/viruses, allergies, and childhood activities such as play and sport (exercise-induced asthma);
- The pathophysiology, and unique prevailing triggers of childhood asthma as distinct from those of adults with asthma;
- The varying treatment needs of children of different ages and need for flexibility to individualise therapy and manage airway inflammation and symptoms;
- The long-term safety profile and efficacy of currently available treatment options;
- The long-term monitoring of symptoms;
- The diagnosis of co-morbidities and their impact on childhood asthma;
- The importance of patient and physician education and empowerment;
- Diagnostic criteria; and
- Prevention strategies for overcoming potential environmental risk factors.

Professor Wahn explained, "Asthma in children is effectively a different disease from adult asthma, because children have a greater susceptibility to viral and allergic triggers that may require different treatment approaches than for adults with asthma. It's time that these differences are now recognised by the guidelines community."

The IPCRG perspective - experience of practising clinicians

Community and primary care settings are where most asthma is diagnosed and managed. Seeking to define the reality that any new guidance must address, the IPCRG interviewed 11 primary care practitioners and a patient representative to gather their reactions to these nine issues and the conference findings. The telephone interviews followed a structured Discussion Guide (http://www.theipcrg.org/ipcrgexchanges).

Working in 12 countries on 5 continents (see sidebar, page 2), our interviewees painted a varied portrait of childhood asthma care around the world that helps explain much of the difficulty in achieving consistent and optimal asthma care.

Approaches to asthma care for children

Osman Yusuf describes the perspective of a primary care physician working in the marketplace in Pakistan with 3 to 5 minutes per patient: "He's seeing lots of children with many diseases. He will be looking first for acute viral or bacterial pneumonias, which are very common here; there are a lot of chest infections. Tuberculosis, even in children, is also something to worry about; they typically present with a chronic cough. An asthma diagnosis will be on the back burner." While this example may be extreme, it illustrates two common challenges faced by physicians in primary care, namely, limited time and a broad range of diseases to consider.

The physicians we interviewed are well aware of these challenges. Moreover, all have a special interest in asthma, as well as extensive experience of providing asthma treatment for children. Reflecting their evident passion for asthma care, they have found ways to manage time and equipment limitations within the framework of their countries' health-care systems. Many of the solutions they propose are simple and straightforward. Some of their ideas are summarized here; others are recorded in full (http://www.theipcrg.org/ipcrgexchanges) under specific topics.

Diagnosis of asthma in children

All interviewees describe similar common presenting symptoms of asthma, namely, wheezing, cough, nocturnal cough, shortness of breath, and, more commonly in older children, exercise intolerance.

Eczema and atopy, especially allergic rhinitis, are the most common co-morbidities in children with asthma, and often precede the onset of asthma. Svein Høegh Henrichsen observes, "I diagnose asthma very often on the basis of the child having other atopic disease as well…There's lots of overlap."

All respondents said that allergic rhinitis is very common, citing percentages of 50% to as high as 80%, among children with asthma

Interviewees

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

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

Len Fromer MD, FAAFP, Dipl ABFM
Assistant Clinical Professor, UCLA Medical School, 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 MB, BS, Dipl RCOG, Dipl RACOG, FRACGP
General practitioner, Family Medical Centre, Sunbury, Australia

Alexandre Holanda MD
Family physician, Universidade de Fortaleza, Fortaleza, Brazil

Alan Kaplan MD, CCFP (EM)
Family Physician, Ontario
Chairperson, Family Physicians Airways Group of Canada
International Editor, PCRJ

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

Dermot Ryan MB, BCh, BAO, MRCGP, MICGP, DCH
General practitioner, Loughborough, UK
Clinical Research Fellow, University of Aberdeen, UK

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

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

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

Len Fromer is a strong proponent of allergy screening as an integral part of the asthma work-up; he points out that 90% of children have the atopic form of asthma. He advocates serum testing for specific IgE using the CAP-RAST, while Björn Ställberg, who also allergy tests at the time of asthma diagnosis, uses either the IgE test or skin prick testing. They note the importance of halting the "allergic march" by recognizing and controlling triggers and treating allergies if possible to prevent asthma developing.

Challenges in diagnosing asthma in children

In many places, including Brazil, Pakistan, Sri Lanka, and Turkey, peak flow meters and spirometers are scarce. Where this equipment is available, a young child's inability to perform lung function testing presents a challenge for diagnosing asthma.

All interviewees emphasised the larger differential diagnosis for the youngest children, as well as the difficulty at younger ages in distinguishing between post-viral wheeze and asthma. Asthma is frequently a clinical diagnosis based on the history, in the context of a personal or family history of atopy, and the therapeutic response.

Most interviewees report a reluctance by primary care practitioners to affix the label of 'asthma.' In Canada, when doing emergency work, Alan Kaplan frequently finds himself delivering an asthma diagnosis to caregivers of a child who has had multiple prior wheezing attacks. In Pakistan, "the term is avoided because it's associated with a lot of taboos…The parents don't want the child labelled as an asthmatic," says Osman Yusuf. In the US, Len Fromer notes that the term 'asthma' may be avoided, perhaps because of a social stigma associating asthma with being a 'nerd' in popular culture, as well as steroid phobia on the part of parents and possible ramifications regarding health and life insurance (higher rates).

Treatment of childhood asthma

All interviewees acknowledge and generally follow their national or international guideline recommendations for asthma therapy. The most common reliever medication prescribed is an inhaled short-acting ß2-agonist; the most common anti-inflammatory controller medications prescribed are inhaled corticosteroids and often leukotriene receptor antagonists. For more moderate asthma, combinations of inhaled corticosteroid and a leukotriene antagonist or inhaled corticosteroid and a long-acting ß2-agonist are generally used. Recognizing inflammation as being the underlying problem in asthma and treating the "one airway" were stressed by Len Fromer. Moreover, several interviewees note that leukotriene receptor antagonists are a good option for children with asthma and allergic rhinitis. Alan Kaplan adds,

"if you don't control the nose, you can't control the lungs."

Björn Ställberg notes, "Today there are very good medications - not for the youngest, the wheezers - but for allergic asthma." Availability of child-friendly formulations and affordability are other key considerations. Medications that are taken for granted in some countries are scarce or too costly in others. In Sweden, chewable tablets, dry powder inhalers, as well as portable nebulisers for very young children, are readily available. In Brazil, only systemic ß2-agonists and oral corticosteroids are available through the public health-care system for asthma therapy, contrary to published recommendations in the national asthma guidelines. Moreover, many primary care physicians in Brazil do not have experience in prescribing inhaled corticosteroids.

Challenges in treating children with asthma

"Getting parents to accept a diagnosis of asthma; teaching them to administer medication; convincing them that kids really do need to take medications on a daily basis; and persuading them to stop smoking," are the important challenges in treating children with asthma

lists Dermot Ryan. A universal observation by interviewees was that patients tend to stop controller medications when they are doing better.

"No sooner do the cough and wheeze settle down, than the parents stop the medications…"

…even though I had counselled them

not to," asserts Sarath Paranavitane. Poor compliance among teenagers appears to be a worldwide problem!

Some interviewees spoke of the challenges associated with inhaled medications, particularly teaching children and their caregivers how to administer them. "With inhaled medicines, we never know exactly how much gets into the child," observes Angela Boque, "and whether the family understands the use of inhalers." Muslim children may feel uncomfortable taking even inhaled medications when fasting for Ramadan. In Italy, where school hours are long for many children, there is no one designated to administer medications at school to children with asthma or allergies; parents have to depend on a teacher volunteering to do so.

Sandra Frateiacci points out that even when parents are well-informed and have instituted preventive steps at home, children spend a lot of time at school and outside the home, where buildings may not be well-maintained or well-cleaned and where they can encounter potential trigger factors such as other peoples' pets and cigarette smoke. The extent to which cigarette smoking is a problem varies among countries; it appears to be increasing among young people in some countries (eg, Australia) and decreasing in others (eg, Norway). In Brazil, passive smoking is a problem because many people may share one room. Potential triggers in Sri Lanka include exposure to cooking smoke in closed rooms and fumes from mosquito coils, as well as roadside dust and the severe air pollution in the capital city of Colombo.

The top three problems faced by children and parents in daily life

All interviewees touched on similar themes when asked this question. (http://www.theipcrg.org/ipcrgexchanges)

Len Fromer's top three are:

1. Trigger avoidance;
2. Adherence to anti-inflammatory controller medications; and
3. The stigma of asthma in the social milieu; the challenge of not wanting to show that they have asthma. Children want to hide the fact that they have to take medications and have to avoid trigger factors. I teach them to say, 'I'm allergic to it,' rather than, 'I can't eat it. I have asthma.'

Sandra Frateiacci, mother of a child with asthma and allergies, notes that

children with severe asthma dislike feeling different and being told they cannot do certain things. "They can become excluded from normal social life and experience a profound isolation because they're different."

The consultation

One important challenge described by all is the need to help children, and their parents, understand their asthma. Osman Yusuf, working as a primary care physician trainer, is not alone in encouraging practitioners to train someone to provide patient education. This has been done by several interviewees in their own practices, even when not supported by the health-care system. In the UK, most practices assign 20-minute slots for trained asthma nurses to work with patients, in addition to the 10-minute doctor's appointment. Canada is unique in having certified asthma educators who provide varied programmes for children and their caregivers, although Alan Kaplan expressed frustration at the lack of sufficient funding for this important programme.

A team approach that enlists every member of the support staff to play a role can optimise asthma care and patient education. Both Len Fromer and Chris Hogan point out the important function that pharmacists can play in educating patients about treatments and monitoring medication adherence. In Brazil, the government-funded community health-care teams follow structured programmes for treating patients with two other chronic diseases, type 2 diabetes mellitus and hypertension; Alexandre Holanda hopes there will soon be a programme specific for asthma to facilitate long-term preventive care.

Len Fromer promotes 'regular planned care':

"For patients with pollen allergies, regular planned care means scheduling revisits 2-4 weeks before the pollen season."

He laments that "the tyranny of the urgent" often supersedes preventive medicine in the US; this was echoed by other interviewees who all note the importance of scheduled follow-up visits. In the UK, structured annual reviews are encouraged. In Pakistan, the revisit schedule is dictated in part by travel time to the clinic, which may be as long as 2 days. While Angela Boque schedules regular revisits for asthma, she observes that most primary care doctors in Spain do not; Sandra Frateiacci reports the same problem in Italy - and both consider this limits the quality of asthma care in their countries.

A lack of knowledge about asthma among many primary care physicians emerges in the interviews as an important problem in Brazil, Sri Lanka, Turkey, Pakistan, Italy, and Spain. "We have national [asthma] guidelines in Sri Lanka that have been sent to every practitioner in the country. But I really don't know whether people have read them. My personal view is that it is important to have one-on-one talks with practitioners," says Sarath Paranavitane. "No one can force them to use the guidelines. They have to be convinced."

Patient asthma education

As defined by Chris Hogan,

education is "...more than the simple provision of information. Education is the integration of new information into a person's pre-existing beliefs and understandings."

Furthermore,

"from understanding the disease comes the understanding of how to treat the disease,"

states Alexandre Holanda. Both of these practitioners note the difficulty in explaining the concept of a chronic disease that needs to be controlled but cannot be cured. In traditional cultures, there is no concept of chronic illness: "Illness means death, so they expect death or a cure. The idea of modification of lifestyle is foreign," says Chris

Hogan. Hakan Yaman points out the cultural differences between rural and more westernized urban areas in Turkey; societal pressures in rural areas may influence patient behaviour.

"In Pakistan, health is not a top priority, people have other things to worry about."

"Health insurance is relatively uncommon, and people do not have a budget for health expenses…So they try home remedies and unorthodox treatments that are cheaper and more accessible in the areas where they live. They go to the doctor as the last resort." Osman Yusuf dedicates a large portion of his time to public education, trying to raise public awareness of allergy and asthma. Educational strategies used by several interviewees are summarized in the Table below.

Resources on asthma

Many physicians had printed resources available for children and their caregivers to read while waiting in the clinic, or to reinforce a consultation. Moreover, numerous Internet-based resources are available in the native language of most developed countries. Interviewees have recommended several websites for their countries (http://www.theipcrg.org/forum/index.php).

A call for E X C H A N G E S

From an understanding of the problems come ideas for the solutions. We hope that this first issue of IPCRG Exchanges will begin a dialogue comparing key issues and problems in managing children with asthma in primary care worldwide.

Do any of these stories reflect your experience? Can you add any solutions? Do you think guidelines will help? Are doctors and/or nurses the right people to talk to children with asthma? Please let us know by contributing to the discussion forum [http://www.theipcrg.org/forum/index.php].

Acknowledgements

Many thanks are due those who helped in developing the Discussion Guide through review and pilot interviews: John Haughney, Barbara Yawn, Hilary Pinnock, and Ron Tomlins. Particular thanks to the individuals who participated in the interviews and gave so generously of their time.

Which educational strategies work?	
AB:	Talking and answering questions and listening. The ideal would be to form groups of patients of the same age, groups of parents/caregivers, so they can talk and compare experiences.
LF:	Using a personalized written asthma plan and trending sheets for peak flow measurements. Actively involving the patient and family in the treatment plan and soliciting their feedback on the care they're receiving.
SHH:	Motivating the patient to take the medications is the most important goal and the biggest challenge: Explain the nature of the disease - underlying inflammation, chronic changes - and that treatment is to keep the inflammation down. Discuss triggers and how to avoid them.
CH	The best strategy is to have multiple strategies.
MOY:	Everything, anything, leaflets, cartoon books in school, educating doctors; TV talk shows to discuss asthma get the biggest response.
DR:	Telling the patients about what the disease is and what the medications are for. Telling them that by taking the medications on a regular basis, they control the disease and can lead a completely normal life. Stressing the normality of asthma rather than the downside.
SP:	One-on-one conversation, verbally explaining the disease and the treatment.
BS:	Individualized education. Keep the treatment plan simple and the messages consistent from doctor, nurses, pharmacists. It is very important to talk about treatment goals: namely, 1. symptom-free, 2. no need of rescue medications, and 3. no exercise-induced problems.

Date of Preparation: May 2006

Author: Elizabeth V. Hillyer, New Jersey, USA **Editors**: Hilary Pinnock & Siân Williams, UK

Website: http://www.theipcrg.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, New Jersey USA.

Registered Offices: Department of General Practice and Primary Care, Foresterhill Health Centre, Westburn Road, Aberdeen, AB25 2AY, UK

Tel: +44 1224 552427 Fax: +44 1224 550683