GUIDELINE-DRIVEN CARE

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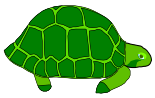
WELCOME TO THE WORLD CONGRESS ON ASTHMA – QUEBEC 2012

Guidelines-driven care

Learning Objectives:

- Discuss the grading system and review process used to develop the EPR-3 and GINA guideline recommendations
- Some key-recommendations of current asthma guidelines
- Develop strategies for guideline dissemination to health care professionals and translation to patients
- Explore clinical decision-making when non-guideline based care is indicated

Why are guidelines developed ?



Research → Discovery

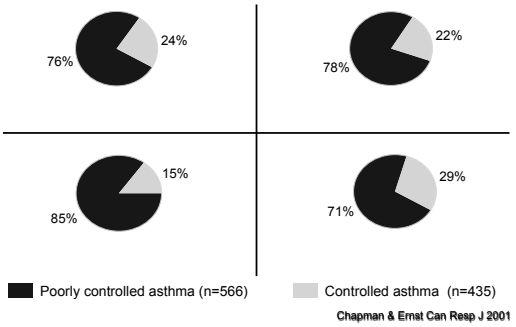
Education → Improved care

The AIRE Study: data analysis of 753 European children with asthma

Blanc FX et al. Rev Mal Respir 2002;19:585.

- Analysis of the paediatric data from the study "Asthma insights and reality in Europe" : 73,880 households in 7 countries
- 753 children < 16 y
- Diurnal symptoms 38.2%
- Sleep disturbance ≥ once a week 28 %
- Lmitation of sporting activities 29.5%
- Absence from school 42.7% in the past year
- 26% of children used ICS while 45.9% had persistent asthma
- 61% of parents of children with severe persistent asthma considered asthma to be well controlled.

Consequences of poor asthma control on health care use



Chapman & Ernst Can Resp J 2001

Guidelines-driven care

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EPR-3

Expert Panel Report 3: Guidelines for the Diagnosis and Management of Asthma

Clinical Practice Guidelines

National Asthma Education and Prevention Program, Third Expert Panel on the Diagnosis and Management of Asthma.

Bethesda (MD): National Heart, Lung, and Blood Institute (US); August 2007.
Report No.: 07-4051

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Excerpt

The Expert Panel Report 3 (EPR 3): Guidelines for the Diagnosis and Management of Asthma was developed by an expert panel commissioned by the National Asthma Education and Prevention Program (NAEPP) Coordinating Committee (CC), coordinated by the National Heart, Lung, and Blood Institute (NHLBI) of the National Institutes of Health.

Using the 1997 EPR 2 guidelines and the 2004 update of EPR 2 as the framework, the expert panel organized the literature review and final guidelines report around four essential components of asthma care, namely: assessment and monitoring, patient education, control of factors contributing to asthma severity, and pharmacologic treatment.

EPR-3 PROCESS

- In response to a recommendation by the National Asthma Education and Prevention Program (NAEPP) Coordinating Committee, an Expert Panel was convened by the NHLBI to update the asthma guidelines
- In addition to using a methodologist to guide preparation of the Evidence Tables, several layers of external content review were also embedded into the guidelines development process
- In addition to review by consultants, an early draft of the guidelines was circulated to a panel of guidelines end-users forreview and feedback on ways to enhance guidelines utilization
- Finally, a draft of the guidelines was posted on the NHLBI Web Site for review and comment by the NAEPP Coordinating Committee and to allow opportunity for public review and comment before the guidelines were finalized and released.

EPR-3 PROCESS

The steps used to develop this report included:

(1) completing a comprehensive search of the literature;

(2) conducting an indepth review of relevant abstracts and articles;

(3) preparing evidence tables to assess the weight of current evidence with respect to past recommendations and new and unresolved issues;

(4) conducting thoughtful discussion and interpretation of findings;

(5) ranking strength of evidence underlying the current recommendations that are made;

(6) updating text, tables, figures, and references of the existing guidelines with new findings from the evidence review;

(7) circulating a draft of the updated guidelines through several layers of external review, as well as posting it on the NHLBI Web site for review and comment by the public and the NAEPP CC, and

(8) preparing a final-report based on consideration of comments raised in the review cycle.

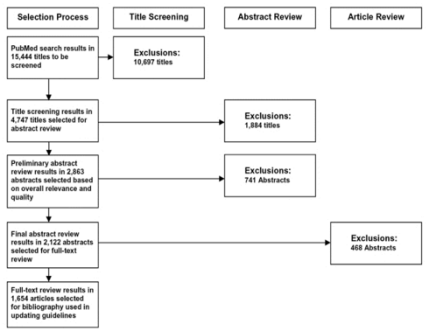

Figure 1-2

LITERATURE RETRIEVAL AND REVIEW PROCESS: OVERALL SUMMARY

THE GLOBAL INITIATIVE FOR ASTHMA

Scientific Committee

- Mark FitzGerald **Chair**
- Neil Barnes
- Peter Barnes
- Eric D. Bateman
- Allan Becker
- Jeffrey M. Drazen
- Robert F. Lemanske
- Paul O'Byrne
- Ken Ohta
- Soren Erik Pedersen
- Emilio Pizzichini
- Helen K. Reddel
- Sean D. Sullivan
- Sally E. Wenzel
- Heather J. Zar

GINA D& I Committee

Louis-Philippe Boulet, MD, Canada, Chair
Eric Bateman
Alvaro Cruz
Mark FitzGerald
Tari Haathela
Mark Levy

GINA Assembly

- GINA Assembly members from 45 countries (names are listed on
- website: www.ginasthma.org

GRADE

STRENGTH OF EVIDENCE AND GRADING OF RECOMMENDATIONS

Quality of Evidence	Grade A	Well-designed randomized controlled trials with consistent and directly applicable results.
	Grade B	Randomized trials with limitations including inconsistent results or major methodological weaknesses.
	Grade C	Observational studies, and from generalization from randomized trials in one group of patients to a different group of patients
Strength of Recommendations	Grade 1	Strong recommendation, with desirable effects clearly outweighing undesirable effects (or vice versa). **Wording of Recommendation:** We recommend that.....
	Grade 2	Weak recommendation, with desirable effects closely balanced with undesirable effects. **Wording of Recommendation:** We suggest that.....
When there is insufficient evidence or no consensus		**Wording of Recommendation:** There is insufficient evidence and lack of consensus to make a recommendation regarding....

Adapted from: Guyatt G, Gutterman D, Baumann M, Addrizzo-Harris D, Hylek E, Phillips B, Raskob G, Lewis S, Schunemann H. Grading Strength of recommendations and quality of evidence in clinical guidelines: report from an American College of Chest Physicians task force. Chest 2006; 129:174-81.

Canadian Respiratory Guidelines

- To address possible local biases in guidelines adaptation, the ADAPTE approach offers a generic adaptation process to foster high-quality CPGs
- The ADAPTE approach recommends the use of the Appraisal of Guidelines Research & Evaluation (AGREE) instrument to assess quality of CPGs. The AGREE instrument does not assess the quality of the evidence.
- Once the decisions about the quality of the CRGs are made, the GRADE software helps the Committee to present the key results in a table format used in Cochrane systematic reviews and guides users through the process of grading the quality of the evidence. (www.gradeworkinggroup.org)

Canadian Respiratory Guidelines

Developing the Question

Looking at the Evidence (GRADE)

Adapting other Guidelines (ADAPTE)

Ensuring or Appraising Quality (AGREE)

Ensuring Implementability (GLIA)

Guidelines-driven care

Learning Objectives:

- Discuss the grading system and review process used to develop the EPR-3 and GINA guideline recommendations
- Some key-recommendations of current asthma guidelines
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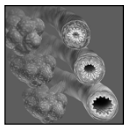
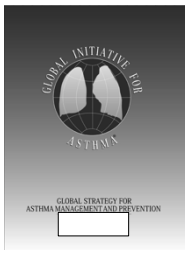
Clinical Control of Asthma

- No (or minimal)* daytime symptoms
- No limitations of activity
- No nocturnal symptoms
- No (or minimal) need for rescue medication
- Normal lung function
- No exacerbations



** Minimal = twice or less per week*

Asthma Management and Prevention Program: Five Components



1. Develop Patient/Doctor Partnership
2. Identify and Reduce Exposure to Risk Factors
3. Assess, Treat and Monitor Asthma
4. Manage Asthma Exacerbations
5. Special Considerations

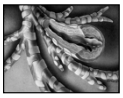
Asthma Management and Prevention Program

Goals of Long-term Management

- Achieve and maintain control of symptoms
- Maintain normal activity levels, including exercise
- Maintain pulmonary function as close to normal levels as possible
- Prevent asthma exacerbations
- Avoid adverse effects from asthma medications
- Prevent asthma mortality

Asthma Management and Prevention Program

- Asthma can be effectively controlled in most patients by intervening to suppress and reverse inflammation as well as treating bronchoconstriction and related symptoms



- Early intervention to stop exposure to the risk factors that sensitized the airway may help improve the control of asthma and reduce medication needs.

Asthma Management and Prevention Program

Develop Patient/DoctorPartnership

- Guidelines on asthma management should be available but adapted and adopted for local use by local planning teams
- Clear communication between health care professionals and asthma patients is key to enhancing compliance

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- Educate continually
- Include the family
- Provide information about asthma
- Provide training on self-management skills
- Emphasize a partnership among health care providers, the patient, and the patients family

Asthma Management and Prevention Program

Identify and Reduce Exposure to Risk Factors

- Measures to prevent the development of asthma, and asthma exacerbations by avoiding or reducing exposure to risk factors should be implemented wherever possible.
- Asthma exacerbations may be caused by a variety of risk factors – allergens, viral infections, pollutants and drugs.
- Reducing exposure to some categories of risk factors improves the control of asthma and reduces meds. needs.
  - Reduce exposure to indoor allergens
  - Avoid tobacco smoke
  - Avoid vehicle emission
  - Identify irritants in the workplace
  - Explore role of infections on asthma development

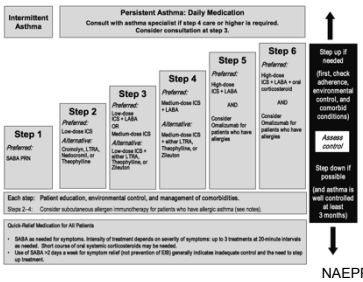
Asthma Management and Prevention Program

Assess, Treat and Monitor Asthma

The goal of asthma treatment:

- "to achieve and maintain clinical control"
- can be achieved in a majority of patients
- a pharmacologic intervention strategy should be developed in partnership between the patient/family and the health care professional

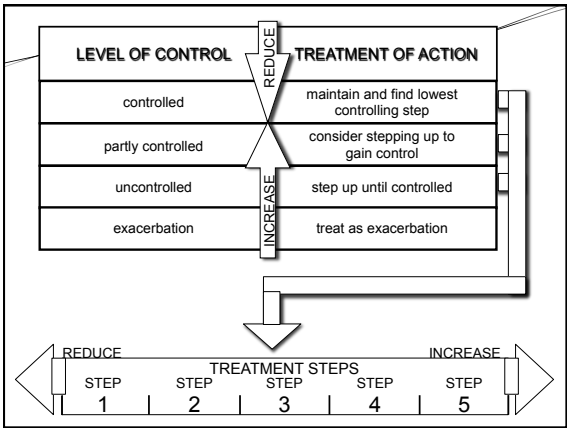
STEPWISE APPROACH FOR MANAGING ASTHMA IN YOUTHS ≥12 YEARS OF AGE AND ADULTS



NAEPP 2007

Asthma Severity - NAEPP 2006

Components of Severity		Classification of Asthma Severity ≥12 years of age			
		Intermittent	Persistent: Mild	Persistent: Moderate	Persistent: Severe
Impairment	Symptoms	≤2 days/week	>2 days/week but not daily	Daily	Throughout the day
	Nighttime awakenings	≤2x/month	3–4x/month	>1x/week but not nightly	Often 7x/week
	Short-acting beta$_2$-agonist use for symptom control (not prevention of EIB)	≤2 days/week	>2 days/week but not daily, and not more than 1x on any day	Daily	Several times per day
	Interference with normal activity	None	Minor limitation	Some limitation	Extremely limited
Normal FEV$_1$/FVC: 8–19 yr 85%; 20–39 yr 80%; 40–59 yr 75%; 60–80 yr 70%	Lung function	• Normal FEV$_1$ between exacerbations • FEV$_1$ >80% predicted • FEV$_1$/FVC normal	• FEV$_1$ >80% predicted • FEV$_1$/FVC normal	• FEV$_1$ >60% but <80% predicted • FEV$_1$/FVC reduced 5%	• FEV$_1$ <60% predicted • FEV$_1$/FVC reduced >5%
Risk	Exacerbations requiring oral systemic corticosteroids	0–1/year (see note)	≥2/year (see note)		
		Consider severity and interval since last exacerbation. Frequency and severity may fluctuate over time for patients in any severity category. Relative annual risk of exacerbations may be related to FEV$_1$.			
Recommended Step for Initiating Treatment		Step 1	Step 2	Step 3	Step 4 or 5
(See Figure 4-5 for treatment steps.)		In 2–6 weeks, evaluate level of asthma control that is achieved and adjust therapy accordingly.		and consider short course of oral systemic corticosteroids	



Asthma control (GINA)

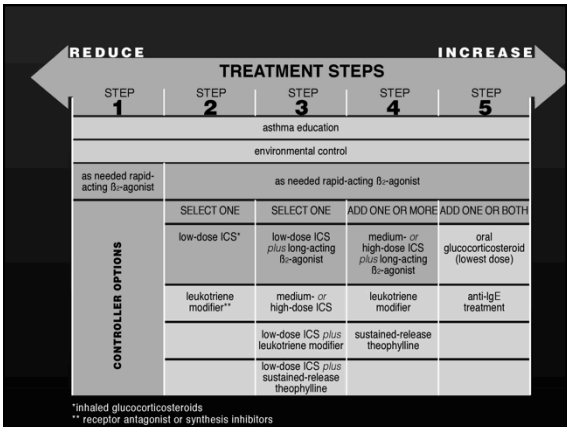
A. Assessment of current clinical control (over the past 4 weeks)

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*†
Limitation 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)	

B. Assessment of Future Risk (risk of exacerbations*, instability, rapid decline in lung function, side-effects)

Patients with any of the following features are at increased risk of adverse events in the future:
Poor clinical control, frequent exacerbations in past year, ever admitted to critical care for asthma, low FEV$_1$, exposure to cigarette smoke, high dose medication requirement

* 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 week
‡ Lung function is not a reliable test for children 5 years and younger



Asthma Management and Prevention Program

Assess, Treat and Monitor Asthma

The choice of treatment should be guided by:

- Level of asthma control
- Current treatment
- Pharmacological properties and availability of the various forms of asthma treatment
- Economic considerations

Treating to Maintain Asthma Control

Stepping up treatment in response to loss of control

- Rapid-onset, short-acting or long-acting inhaled β2-agonist bronchodilators provide temporary relief.
- Need for repeated dosing over more than one/two days signals need for possible increase in controller therapy
- Use of a combination rapid and long-acting inhaled β2-agonist (*e.g.,* formoterol) and an inhaled GCS (*e.g.,* budesonide) in a single inhaler both as a controller and reliever is effecting in maintaining a high level of asthma control and reduces exacerbations (Evidence A)
- Doubling the dose of inhaled glucocorticosteroids is not effective, and is not recommended (Evidence A)

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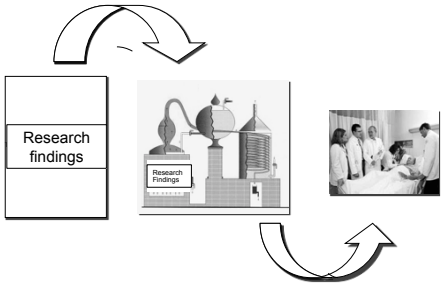
How to improve implementation of guidelines recommendations?



Knowledge and use of guidelines

2002 Release of NZ guidelines for Dx and Tx of adult asthma
2 wks later (n=729) Fax-back questionnaire to all NZ GPs
Response rate : 422 (58%)

Have you ?	422
Read them in detail?	51 (12%)
Put in future reading pile?	84 (20%)
Skim-read them?	133 (32%)
Not read them at all and have no intention of reading them?	24 (6%)
Missing	130 (30%)

J NZ Med J 2003;116(1168)

How to improve translation of guidelines

- At the level of caregivers…

Evidence of the Effectiveness of Guideline Dissemination and Implementation Strategies 1966–1998.

Grimshaw & al 2006

- 309 comparisons derived from 235 studies.
- The overall quality of the studies was poor.
- The majority of comparisons (86.6%) observed improvements in care
- The median absolute improvement in performance across interventions ranged from
  - 14.1% for reminders,
  - 8.1% for dissemination of educational materials,
  - 7.0% for audit and feedback
  - 6.0% for multifaceted interventions involving educational outreach.

Do practices comply with key recommendations of the British Asthma Guideline? If not, why not?

*Sharon Wiener-Ogilvie[a], Hilary Pinnock[b], Guro Huby[c], Aziz Sheikh[d], Martyn R Partridge[e], John Gillies[f]

Primary Care Respiratory Journal 2009

	Aware of it ?	Useful ?	Audit %
Recommendation 1 Objective tests to confirm asthma	**95.3%**	**72.6%**	**67.0%**
Recommendation 2 Trial of other meds before increasing the dose of ICS over 800 mcg/day (adults)	**100%**	**85.9%**	**67.1%**
Recommendation 3 Self-management education offered, including a written action plan	**98.4%**	**79.7%**	**22.8%**

Barriers to Guidelines Implementation: Practice Environment

Structure Factors
- Work pressure
  - Information overload
  - Competing demands/ time
  - Chaotic environment
- Human resources
- Decision-making
- Policies, rules, laws
- Available technology
  - Equipment, testing
- Physical layout

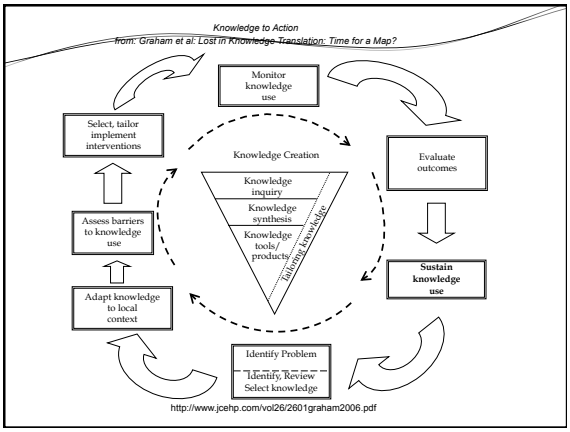
Culture/social Factors
- Culture & belief systems
- Norms, institutionalized habits
- Leadership
- Politics & personalities
- Peer influence

Other Factors
- **Patients/Consumers**
  Case mix, behavior, attitudes, preferences & demands
- **Economic Considerations**
  Resources, remuneration, funding systems
- **Medical/Legal Issues**
- **Other Organizational/System b Factors**

Ian Graham, 2005

How to improve the situation ?

- Shorter, more user-friendly guidelines
- More effective methods of guideline D& I
- Provide support to D& I (tools)
- Team work
- System changes
- Provide resources
- Integration of recommendations to electronic patient chart
- Patients' involvement



GINA GUIDELINES

DEVELOPMENT OF AN IMPLEMENTATION PLAN

Assess needs and current environment

↓

Collect data on asthma outcomes
(hospitalisations, ED (A&E) visits, general practice acute visits, etc...)

↓

Identify stakeholders and motivation to contribute

↓

Develop a working group
(including representatives of the targeted population)

↓

Examine possible implementation strategies and prioritize

↓

Establish goals, evaluate resources required and distribute tasks

↓

Perform strategy
(ideally with an initial pilot project)

↓

Evaluate how the strategy was successful
(reassess changes in asthma outcomes)

↓

Determine if strategy should be pursued/improved

↓

Consider how strategy can be further disseminated and sustained

Effectiveness of Knowledge Translation Interventions

Generally Effective

- Educational outreach visits
- Reminders
- Interactive educational meetings
- Multifaceted interventions including two or more of:
  - Audit and feedback
  - Reminders
  - Local consensus processes
  - Social marketing

Bero et al. 1998, Grimshaw et al. 2001

How to improve translation of guidelines

- At the level of patients and their family…

How to improve guidelines recommendations uptake by patients

- Patient education
- Improve monitoring of asthma control
- Promote adherence to treatment
- Shared-decision making
- Adapt recommendations to patient's characteristics and background
- Regular review/follow-up

Patient education

- To know
- To understand
- To agree
- To be motivated
- To have tools and means to apply self-management skills
- To be supported and followed

We may have the best medical care…

if patients do not apply recommendations properly…

there will be no improvement of outcomes…

Effects of asthma self-management

- Reduced
  - hospitalisations
  - emergency room visits
  - unscheduled visits to the doctor
  - days off work or school
  - nocturnal asthma
- Improved quality of life
- Measures of lung function mostly unchanged

Information only not effective . Gibson 2002

Effects of asthma action plans

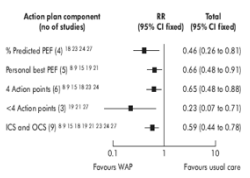


Figure 1 Comparison of the effects of action plan components on hospital admissions for asthma. WAP = written action plan; PEF = peak expiratory flow; ICS = inhaled corticosteroids; OCS = oral corticosteroids.

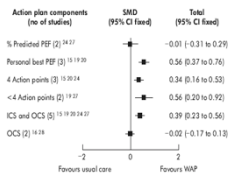
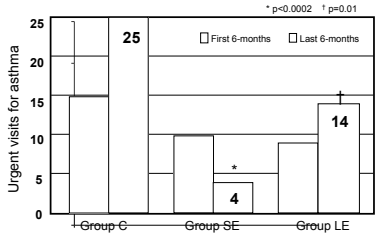


Figure 2 Comparison of the effects of action plan components on mean peak expiratory flow (PEF) in asthma. WAP = written action plan; ICS = inhaled corticosteroids; OCS = oral corticosteroids; SMD = standardised mean difference.

A Structured Education Program Reduces Emergency Department Visits for Asthma



- **Basic notions**
- **Inhaler technique**
- **Action Plan**
- **Reference to an asthma educator**

C: control group
SE: structured education
LE: limited education

Coté J. Am J Respir Crit Care Med 2001;163:1415

Influence of action plans on asthma-related morbidity

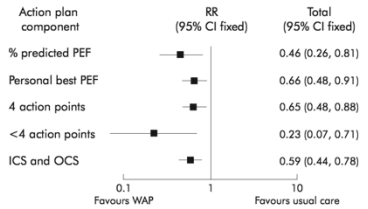


Figure 1 Comparison of the effects of action plan components on hospital admissions for asthma. ICS, inhaled corticosteroid; OCS, oral corticosteroid.

Salzburg statement on shared decision making

We call on clinicians to:

- Recognise that they have an ethical imperative to share important decisions with patients
- Stimulate a two way flow of information and encourage patients to ask questions, explain their circumstances, and express their preferences
- Provide accurate information about options and the uncertainties, benefits, and harms of treatment in line with best practice for risk communication
- Tailor information to individual patient needs and allow them sufficient time to consider their options
- Acknowledge that most decisions do not have to be taken immediately, and give patients and their families the resources and help to reach decisions

BMJ 2011

Salzburg statement on shared decision making

We call on patients to:

- Speak up about their concerns, questions, and what's important to them
- Recognise that they have a right to be equal participants in their care
- Seek and use high quality health information

We call on policy makers to:

- Adopt policies that encourage shared decision making, including its measurement, as a stimulus for improvement
- Amend informed consent laws to support the development of skills and tools for shared decision making

BMJ 2011

Guidelines-driven care

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Explore clinical decision-making when non-guideline based care is indicated

1) For many recommendations, there is insufficient or minimal evidence

2) Some recommendations do not apply to all patients

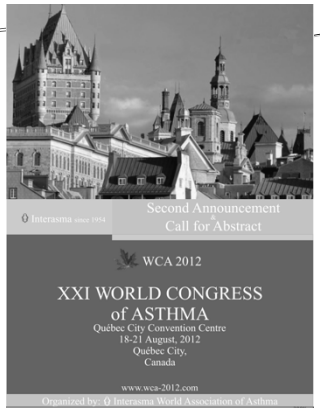
3) The final decision should be made by the clinician in light of each individual case's characteristics

Should we always use guidelines recommendations in all patients ?

- Guidelines remain « a general guide »
- Evidence is gathered from well standardized studies in specific sub-populations
- We need more detailled guidelines according to the asthma phenotype (e.g. smoker with asthma, obese patient…)
- Recommendations to be adapted according to:
  - Characteristics of the disease
  - Preferences & background of the patient
  - Contra-indications for some treatments
  - Available resources

Conclusions

- CPGs are useful tools for optimizing asthma treatment
- Guidelines such as the NAEPP and Global Initiative for Asthma reports offer international standards for the management of asthma – to be adapted in each country
- Efforts should be made to help implement recommendations
- The GINA 5-year asthma control challenge is a major world-wide initiative to help reduce asthma hospitalisations



Additional slides

ASTHMA CONTROL CHALLENGE

Cut hospitalizations 50% by 2015!

GINA challenges health care providers worldwide to cut asthma-related hospitalizations in half over the next 5 years

Why target hospitalization?

Expensive: a major portion of the financial burden of asthma for individual families and for societies at large

Measurable: a clear outcome that is comparable across many different socioeconomic conditions and health care systems. Many countries already collect data on asthma hospitalizations.

Preventable - The vast majority of emergency visits and hospital admissions caused by asthma can be avoided if patients avoid triggers whenever possible and know how to use medication when their symptoms increase.

How to do it ?

Form a group

At the national or local level, bring together stakeholders including public health authorities, government representatives, NGOs, respiratory societies, and others to participate in the Asthma Control Challenge.

Determine the baseline

Find the number of hospitalizations caused by asthma in 2010 or 2011. Use national or local registries, or make educated estimates. Implement more effective data recording practices if necessary.

How to do it ?

Make a plan

Focus on asthma control and preventing asthma exacerbations through appropriate care

Carry it out

With local **specialists** and **opinion leaders**, create an effective network with a motivated group of **general practitioners, nurses**, **pharmacists**, and other **health educators**

Track the results

Organize follow-up of hospitalizations caused by asthma and collect yearly numbers to be analyzed for further actions and benchmarking.

How GINA will help

- ✓The GINA Report, *Global Strategy for the Diagnosis and Management of Asthma*, offers an evidence-based program for achieving, monitoring, and maintaining asthma control.
- ✓Data regarding the burden of asthma worldwide.
- ✓Guidance on how to collect data and measure hospitalizations at the local/national level, to make sure that all participants are collecting comparable data.

How GINA will help

- ✓Evidence-based "Guide on How to Implement GINA Guidelines" and other guideline implementation tools
- ✓Asthma Care Map: Treatment flow charts to present individualized management strategies in a variety of settings with a framework to evaluate effectiveness
- ✓Models of asthma guideline implementation initiatives
- ✓Suggestions of activities for World Asthma Day, to increase awareness of asthma and the 5-year Asthma Control Campaign

Which groups should to be targeted ?

- Specialists
- General Practitioners
- Allied Health Professionals
- Patients and their family
- Policy Makers and Health Administrators
- General Public