

# Are ARIA and US guidelines agreeing?

*O.Pfaar*

*Dept. for Otorhinolaryngology, Medical Faculty Mannheim,  
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## Conflicts of interest (real or perceived)

I and/or my institution have received funding for services as advisor, speaker and/or researcher for the following companies (in the last 36 months):

ALK Abello, Allergopharma, Stallergenes, HAL Allergy, Allergy Therapeutics, Bencard, Lofarma, Novartis, LETI, Biomay, MEDA, Nuvo, Circassia, ANERGIS, Biotech Tools s.a., Sanofi, Mobile Chamber Experts (a GA2LEN Partner), Pohl-Boskamp, Indoor Biotech.

EAACI > ExCom, Past Chair and Board member ITIG  
DGAKI > ext. Board of Directors

# Are ARIA and US guidelines agreeing?

**1- Guidelines in allergic rhinitis**

**2- Weaknesses of EBM-guidelines**

**3- The ARIA strategy: from a guideline to  
change management**

**4- MASK: the IT strategy**

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4- MASK: the IT strategy

# ALLERGIC RHINITIS AND ITS IMPACT ON ASTHMA



## ARIA WORKSHOP REPORT

*In collaboration with the  
World Health Organization*

Allergic Rhinitis and its Impact on Asthma (ARIA) 2008 Update  
(in collaboration with the World Health Organization, GA<sup>2</sup>LEN\*  
and AllerGen\*\*)

2001

J. Bousquet<sup>1</sup>, N. Khaltaev<sup>2</sup>, A. A. Cruz<sup>3</sup>, J. Denburg<sup>4</sup>, W. J. Fokkens<sup>5</sup>, A. Togias<sup>6</sup>, T. Zuberbier<sup>7</sup>, ...

## Allergic Rhinitis and its Impact on Asthma (ARIA) guidelines: 2010 Revision

2008, 2010

Jan L. Brożek, MD, PhD,<sup>a</sup> Jean Bousquet, MD, PhD,<sup>b,c,d</sup> Carlos E. Baena-Cagnani, MD,<sup>e</sup> Sergio Bonini, MD,<sup>f,g</sup>  
G. Walter Canonica, MD,<sup>h</sup> Thomas B. Casale, MD,<sup>i</sup> Roy Gerth van Wijk, MD, PhD,<sup>j</sup> Ken Ohta, MD, PhD,<sup>k</sup>  
Torsten Zuberbier, MD,<sup>l</sup> and Holger J. Schünemann, MD, PhD, MSc<sup>a</sup> *Hamilton, Ontario, Canada, Montpellier, France, Córdoba,*  
*Argentina, Rome, Naples, and Genoa, Italy, Omaha, Neb, Rotterdam, The Netherlands, Tokyo, Japan, and Berlin, Germany*

*Guidelines*

2016

## Allergic Rhinitis and its Impact on Asthma (ARIA) guidelines—2016 revision



Jan L. Brożek, MD, PhD,<sup>a,b</sup> Jean Bousquet, MD, PhD,<sup>c</sup> Ioana Agache, MD, PhD,<sup>d</sup> Arnav Agarwal, BHSc,<sup>a,e</sup>



## Diagnosis and Management of Rhinitis: Complete Guidelines of the Joint Task Force on Practice Parameters in Allergy, Asthma and Immunology

Mark S Dykewicz, MD,‡ Stanley Fineman, MD, MBA,§ *Editors*

David P Skoner, MD,¶¶ *Chair, Workgroup on Rhinitis*

Richard Nicklas, MD||; Rufus Lee, MD; Joann Blessing-Moore, MD¶||; James T Li, MD, PhD\*\*;  
I Leonard Bernstein, MD††; William Berger, MD, MBA‡‡; Sheldon Spector, MD§§; and  
Diane Schuller, MD,||| *Associate Editors*

1998

## The diagnosis and management of rhinitis: An updated practice parameter

**Chief Editors:** Dana V. Wallace, MD, and Mark S. Dykewicz, MD

**Co-Editors:** David I. Bernstein, MD, Joann Blessing-Moore, MD, Linda Cox, MD, David A. Khan, MD, David M. Lang, MD, Richard A. Nicklas, MD, John Oppenheimer, MD, Jay M. Portnoy, MD, Christopher C. Randolph, MD, Diane Schuller, MD, Sheldon L. Spector, MD, and Stephen A. Tilles, MD

2008

Practice Guideline

### Treatment of seasonal allergic rhinitis

An evidence-based focused 2017 guideline update

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2017



# Allergic Rhinitis and its Impact on Asthma guidelines—2016 revision



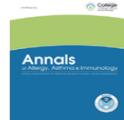
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Hamilton and Toronto,

Ann Allergy Asthma Immunol xxx (2017) 1–23

Contents lists available at ScienceDirect

American Academy of  
Allergy Asthma & Immunology

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ALLERGIC RHINITIS AND ITS  
IMPACT ON ASTHMA

ARIA WORKSHOP REPORT

In collaboration with the  
World Health OrganizationTable of Contents  
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# Allergic Rhinitis and its Impact on Asthma guidelines—2016 revision



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# GRADE

## methodology

Ann Allergy Asthma Immunol xxx (2017) 1–23

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Practice Guideline

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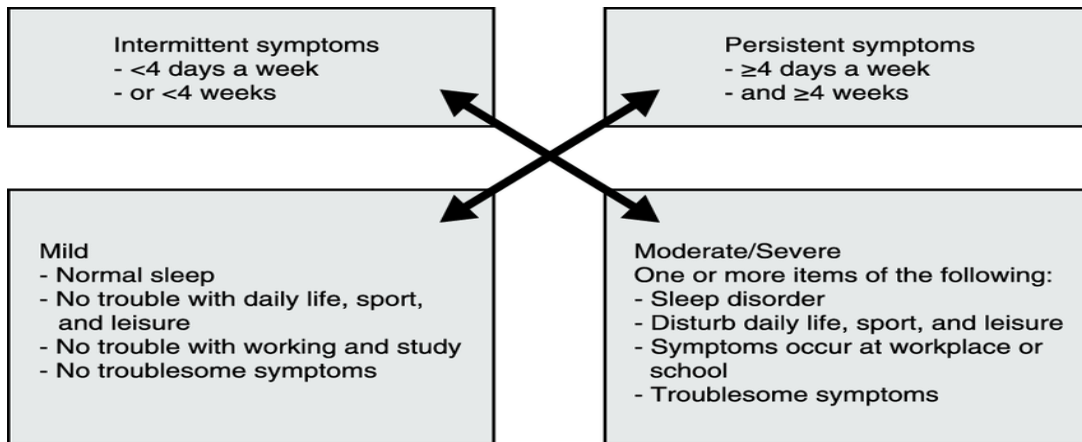
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## Allergic Rhinitis and its Impact on Asthma (ARIA) guidelines—2016 revision



# Classification of Rhinitis



### Categories:

- Seasonal rhinitis
- Perennial rhinitis

### Frequency

Intermittent symptoms  
- <4 days a week  
- or <4 weeks

Persistent symptoms  
- ≥4 days a week  
- and ≥4 weeks

### Severity:

Mild: when symptoms are present but are not interfering with quality of life

more severe: when symptoms are bad enough to interfere with quality of life

**ARIA 2017: we retained the terms *seasonal* and *perennial* allergic rhinitis to enable the interpretation of published evidence.**

## Allergic Rhinitis and its Impact on Asthma (ARIA) guidelines—2016 revision



# Diagnosis of Rhinitis

## History

General ENT examination

## Skin test

- Prick, intracutaneous, atopy patch, prick-prick, scratch test
- Negative control: [Saline resp. diluent used to preserve the allergen](#)
- Positive control: histamine dihydrochloride

## In-vitro

- sIgE

## Nasal challenge

[Environmental exposure units](#)

## History

## Physical examination

## Skin testing

- Positive control histamine
- [Negative control saline or 50% glycerinated HSA saline](#)

## IC testing

## In vitro assays for sIgE

## Conjunctival provocation

## Nasal provocation

## Bronchial challenge

## Specific IgE

Eosinophils, cytokines, etc.

## Allergic Rhinitis and its Impact on Asthma (ARIA) guidelines—2016 revision



Practice Guideline

Treatment of seasonal allergic rhinitis  
An evidence-based focused 2017 guideline update

# Symptomatic Treatment: Questions

1. Should a combination of oral H<sub>1</sub>-antihistamine and intranasal corticosteroid versus intranasal corticosteroid alone be used for treatment of AR?
2. Should a combination of intranasal H<sub>1</sub>-antihistamine and intranasal corticosteroid versus intranasal corticosteroid alone be used for treatment of AR?
3. Should a combination of an intranasal H<sub>1</sub>-antihistamine and an intranasal corticosteroid versus intranasal H<sub>1</sub>-antihistamine alone be used for treatment of AR?
4. Should a leukotriene receptor antagonist versus an oral H<sub>1</sub>-antihistamine be used for treatment of AR?
5. Should an intranasal H<sub>1</sub>-antihistamine versus an intranasal corticosteroid be used for treatment of AR?
6. Should an intranasal H<sub>1</sub>-antihistamine versus an oral H<sub>1</sub>-antihistamine be used for treatment of AR?

Question 2: Should a combination of an intranasal H<sub>1</sub>-antihistamine

Recommendation 2A: In patients with SAR, we suggest either a combination of an INCS with an INAH or an INCS alone (conditional recommendation | moderate certainty of evidence).

The panel me  
of treatmen  
preference  
treatment.  
(approxima  
combination  
act faster th  
preferred b

Recommendation 2B: In patients with PAR, we suggest either a combination of an INCS with an INAH or an INCS alone (conditional recommendation | very low certainty of evidence).

The panel me  
of treatmen  
preference  
treatment.

# Allergic Rhinitis and its Impact on Asthma (ARIA) guidelines—2016 revision



## Symptomatic Treatment: Recommendations!

Seasonal allergic rhinitis	Perennial allergic rhinitis
INCS + OAH or INCS	INCS rather than INCS + OAH
INCS + INAH or INCS	INCS + INAH or INCS
INCS + INAH rather than INAH	OAH rather than LTRA
LTRA or OAH	INCS rather than INAH
INCS rather than INAH	INAH or OAH
INAH or OAH	

Seasonal allergic rhinitis	Perennial allergic rhinitis
INAH	Not yet published
INCS	
LTRA	

ARIA in summary: →

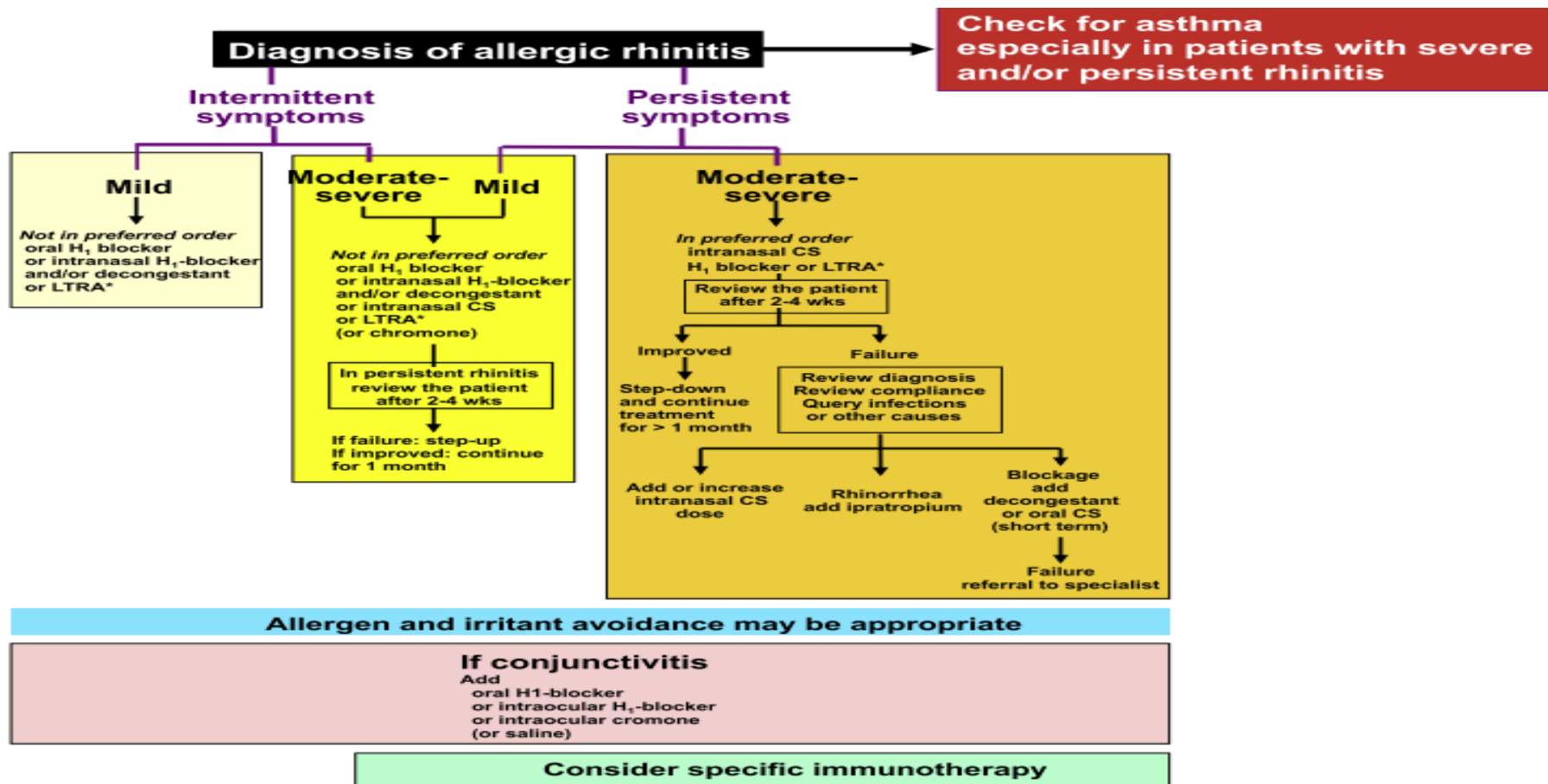
INCS ± OAH  
INCS ± INAH  
OAH  
LTRA  
(INAH)

# AAAAI = Unmet needs

More evidence  
for combination  
therapy !



# Allergic Rhinitis and its Impact on Asthma (ARIA) guidelines—2016 revision



Assessment  
of same  
questions

Same  
conclusions

(ARIA)



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ello-Petersen, DDS, MSc, PhD,<sup>a</sup>  
G. de Sousa, MD, PhD,<sup>k</sup>  
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, PhD,<sup>o</sup> Joao Fonseca, MD, PhD,<sup>r</sup>  
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adopoulos, MD, PhD,<sup>cc</sup>  
id Price, MD,<sup>kk</sup>  
hirad, PharmD, MF,<sup>ll</sup>  
D, MSc,<sup>qq</sup> Alkis To  
Matthew Ventresc  
c Wiercioch, MSc,<sup>aa</sup>  
i Zidarn, MD, MSc,<sup>nn</sup>  
Han

GRADE  
methodology

a Bernstein, MD; Tim Craig, DO;  
i Meltzer, MD;  
D; Chitra Dinakar, MD;  
MD; David Lang, MD;  
MD; Matthew A. Rank, MD;  
MD

A photograph of a long, straight asphalt road with a yellow double line down the center, receding into the distance. The road is flanked by dry, grassy fields. In the far distance, a range of mountains with patches of snow is visible under a blue sky with scattered white clouds. The overall scene conveys a sense of a long journey or a path forward.

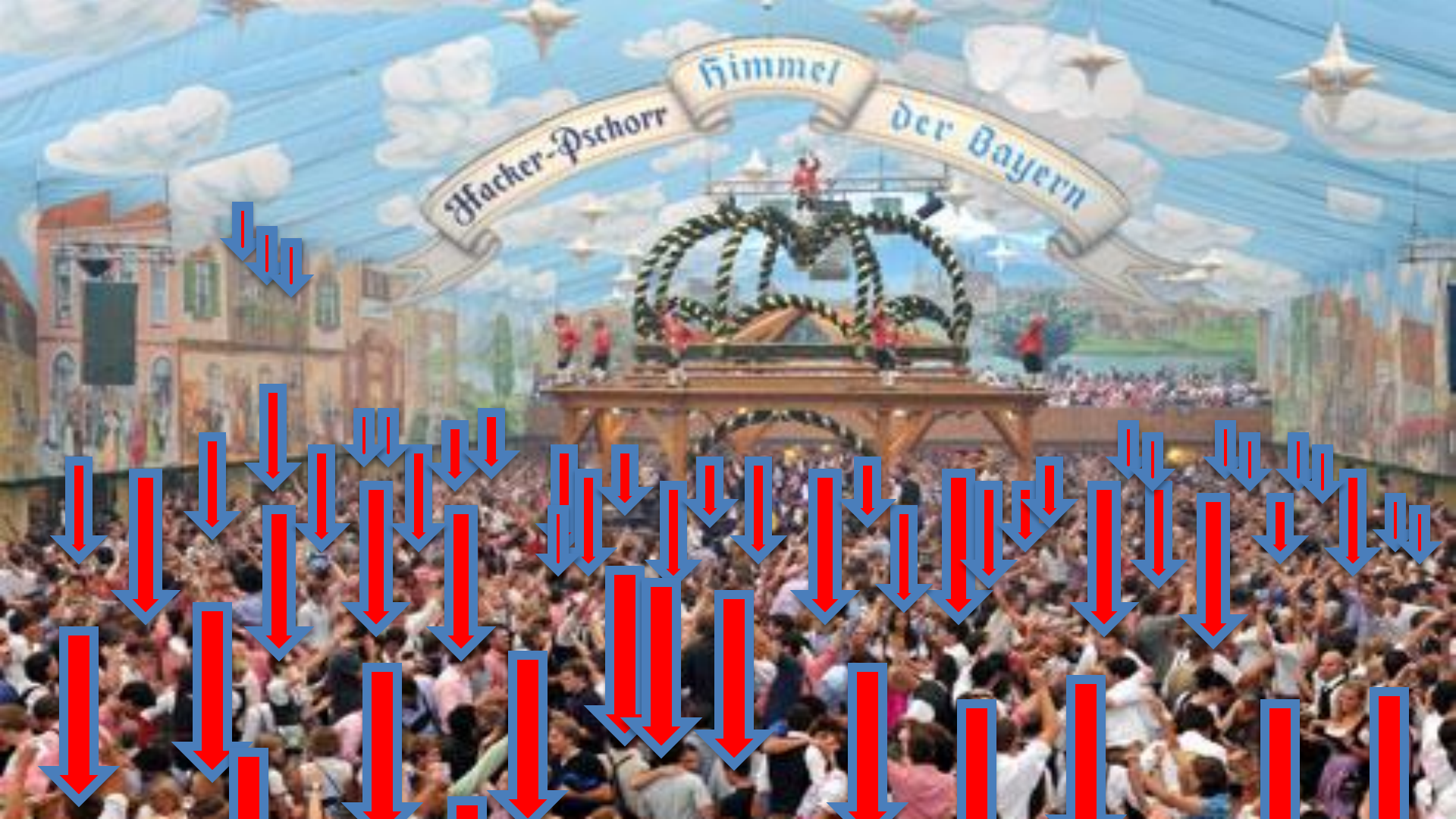
**Are ARIA and US  
guidelines agreeing?**

***YES***













# Are ARIA and US guidelines agreeing?

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# Efficacy of guideline-guided treatment

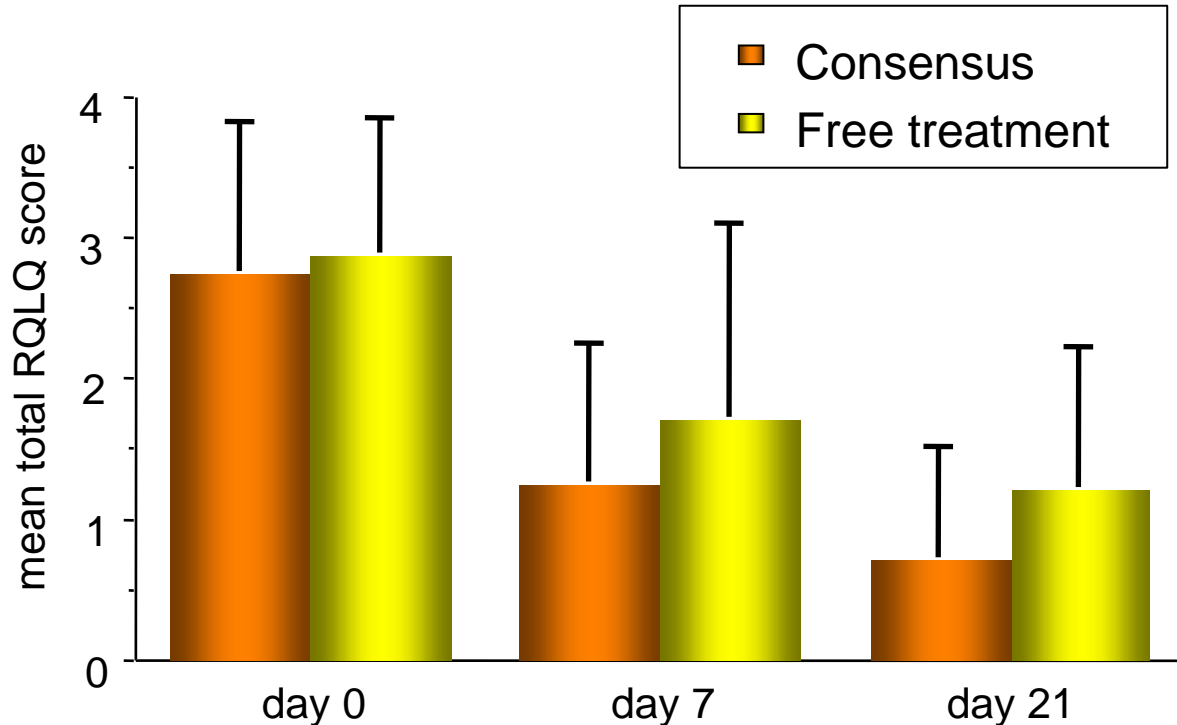
Bousquet et al, Allergy 2003

- Cluster-randomized CT
- 3 EU countries
- 224 patients consensus treated, 241 free of choice
- International consensus on rhinitis
- Pollen season
- primary end point: RQLQ

# Efficacy of guideline-guided treatment

Bousquet et al, Allergy 2003

- Cluster-randomized CT
- 3 EU countries
- 224 patients consensus treated, 241 free of choice
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- Pollen season
- primary end point: RQLQ



# Representativity of AR patients enrolled in RCTs

Costa D et al, J Allergy Clin Immunol 2011

- 311 patients seen by 48 GPs during grass pollen season in South France
- Evaluation of characteristics of patients fullfil with ICs/ECs from 4 RCTs in AR



# Representativity of AR patients enrolled in RCTs

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7.4% (!)

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# ARIA Phase 1: Development



WHO CC rhinitis and asthma



GA<sup>2</sup>LEN



EFA



WHO workshop



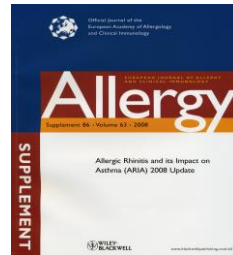
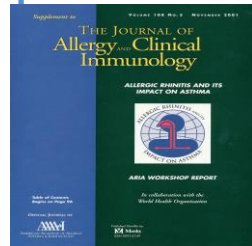
ARIA  
pharmacy

52 languages



Implementation strategy  
and scaling up

Application to developing countries



Guideline development:  
**Shekelle methodology**

1999 2001 2002 2003 2006 2008 2009

# ARIA Phase 2: GRADE



WHO CC rhinitis and asthma



GA<sup>2</sup>LEN

MeDALL



EFA



Original article  
Methodology for development of the Allergic Rhinitis and its Impact on Asthma Guideline 2008 update

**Methodological rigor and reporting of clinical practice guidelines in patients with allergic rhinitis: QuGAR study**

Agnieszka Padjas, MD, PhD,<sup>a</sup> Rohan Kehar, MSc,<sup>b</sup> Sohaib Aleem, MD, MPH,<sup>c</sup> Filip Mejza, MD, PhD,<sup>a</sup> Jean Bousquet, MD, PhD,<sup>a</sup> Holger J. Schünemann, MD, PhD, MSc,<sup>a</sup> and Jan L. Brożek, MD, PhD<sup>a</sup> Krakow, Poland, Hamilton, Ontario, Canada, Lebanon, NH, and Montpellier, France



**Allergic Rhinitis and its Impact on Asthma (ARIA) guidelines: 2010 Revision**

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Journal of Allergy and Clinical Immunology

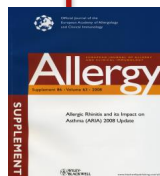
Available online 8 June 2017

In Press, Accepted Manuscript — Note to users

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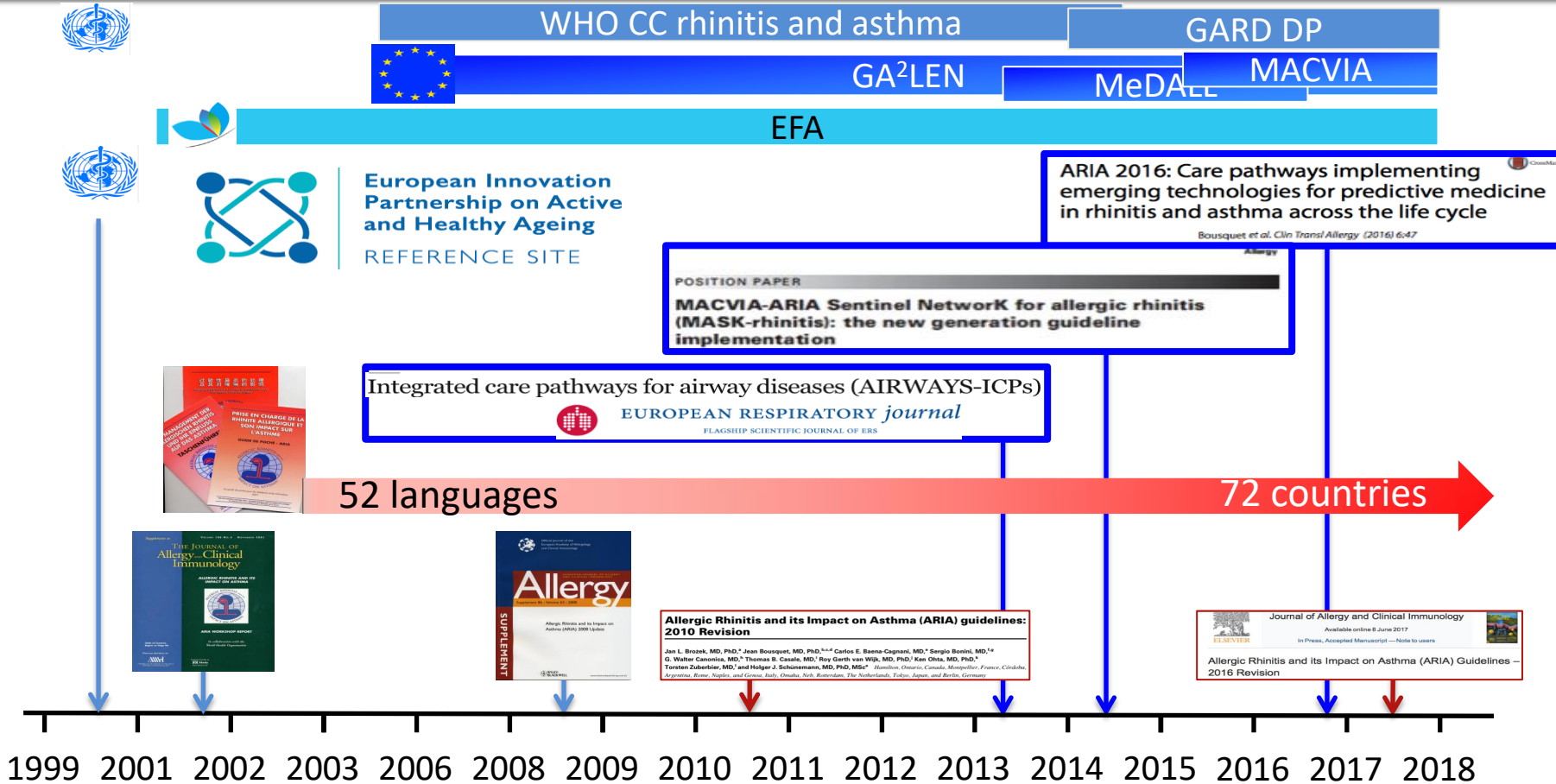
52 languages

72 countries



1999 2001 2002 2003 2006 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018

# ARIA Phase 3: MASK = ICPs





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# One finger approach > cell phone

changes the management of AR with improved shared decision making



Carrier 12:34

< Menu My symptoms

Overall how much are your allergic symptoms bothering you today?

Not at all bothersome Extremely bothersome

Next

A hand pointing at a slider on a mobile app screen. The slider is positioned towards the 'Not at all bothersome' end. The app interface includes a blue header with a back arrow, a status bar at the top showing 'Carrier' and '12:34', and a 'Next' button at the bottom right.

## Assessment of control in untreated symptomatic patient

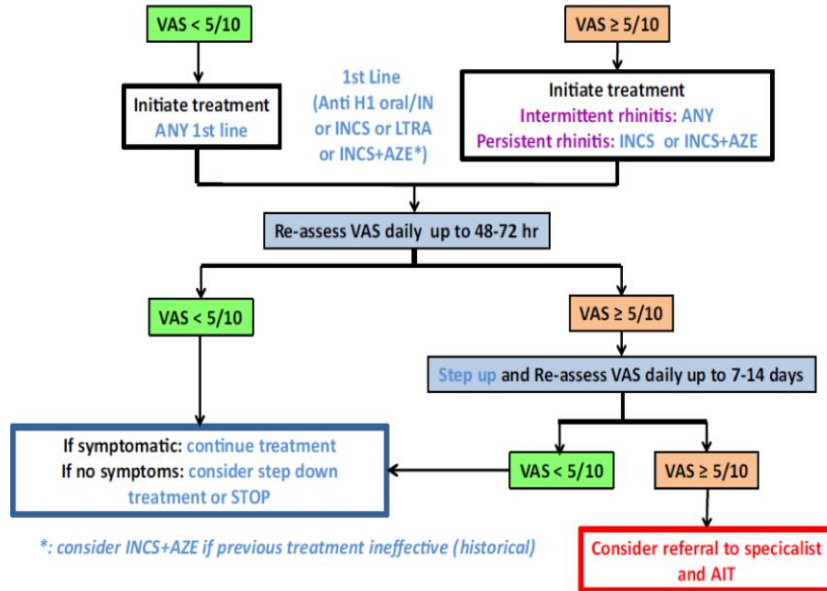


FIG 1. Step-up algorithm in untreated patients using the VAS (adolescents and adults). The proposed algorithm considers the treatment steps and patient preference and VAS levels in ratio. If ocular symptoms remain, add intraocular treatment.

## Assessment of control in untreated symptomatic patient

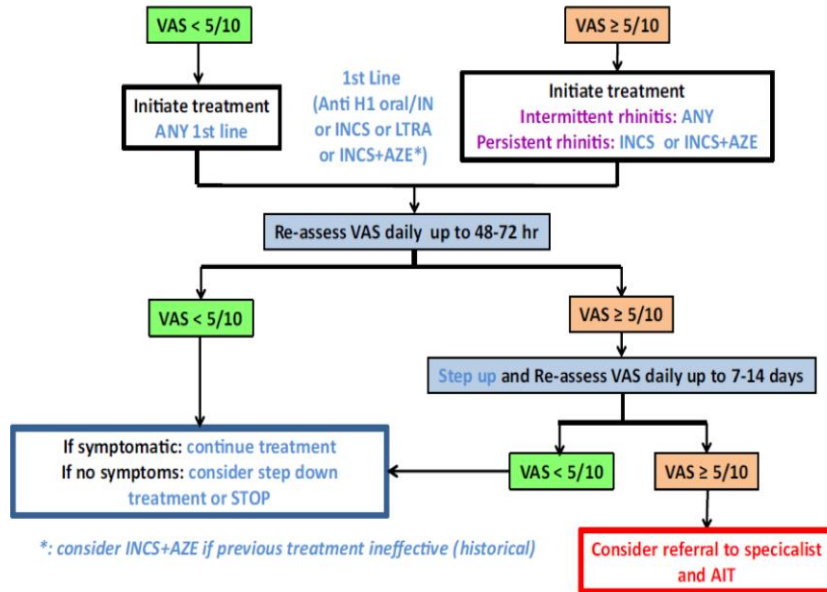


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## Assessment of control in treated symptomatic patient

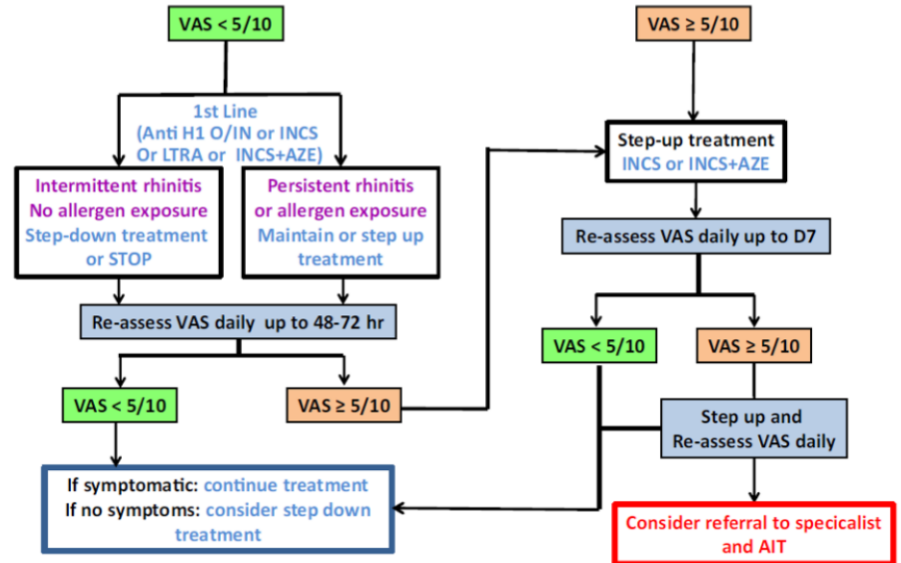
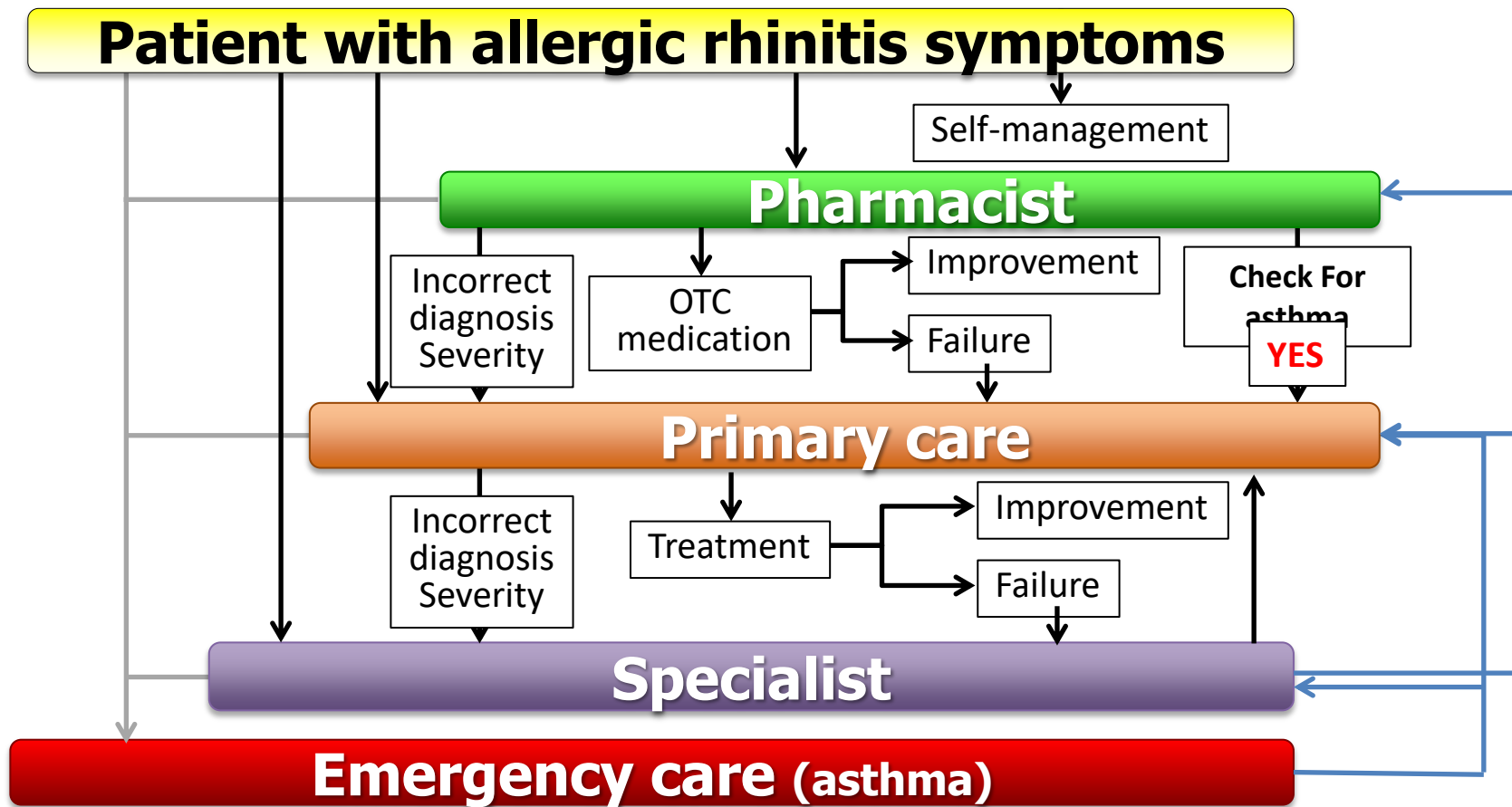


FIG 2. Step-up algorithm in treated patients using the VAS (adolescents and adults). The proposed algorithm considers the treatment steps and patient preference and VAS levels in ratio. If ocular symptoms remain, add intraocular treatment.



# ICP in allergic rhinitis





# ICP in allergic rhinitis

Patient

**Some of the problems in AR management that may be solved by ICPs**

- Self-medication
- From one step to the next
- Integrated connection
- From first symptom to AIT

**Emergency care (asthma)**



# Future of guidelines



ARIA and AAAAI guidelines both follow GRADE-methodology > high grade of harmonization in questions and recommendation

Even EBM guidelines are limited: evidence from clinical trials is narrowed to a limited group of pat.

The guidelines can and should be improved with 'real-life data' >> MACVIA ICPs (one finger approach)





# Thank you

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