



XXX CONGRESSO NAZIONALE

**SIAAIC**

Società Italiana di Allergologia,  
Asma ed Immunologia Clinica



FIRENZE 6/9 APRILE 2017 | [WWW.SIAAIC2017.ORG](http://WWW.SIAAIC2017.ORG)

# Nuove APPs in allergologia respiratoria

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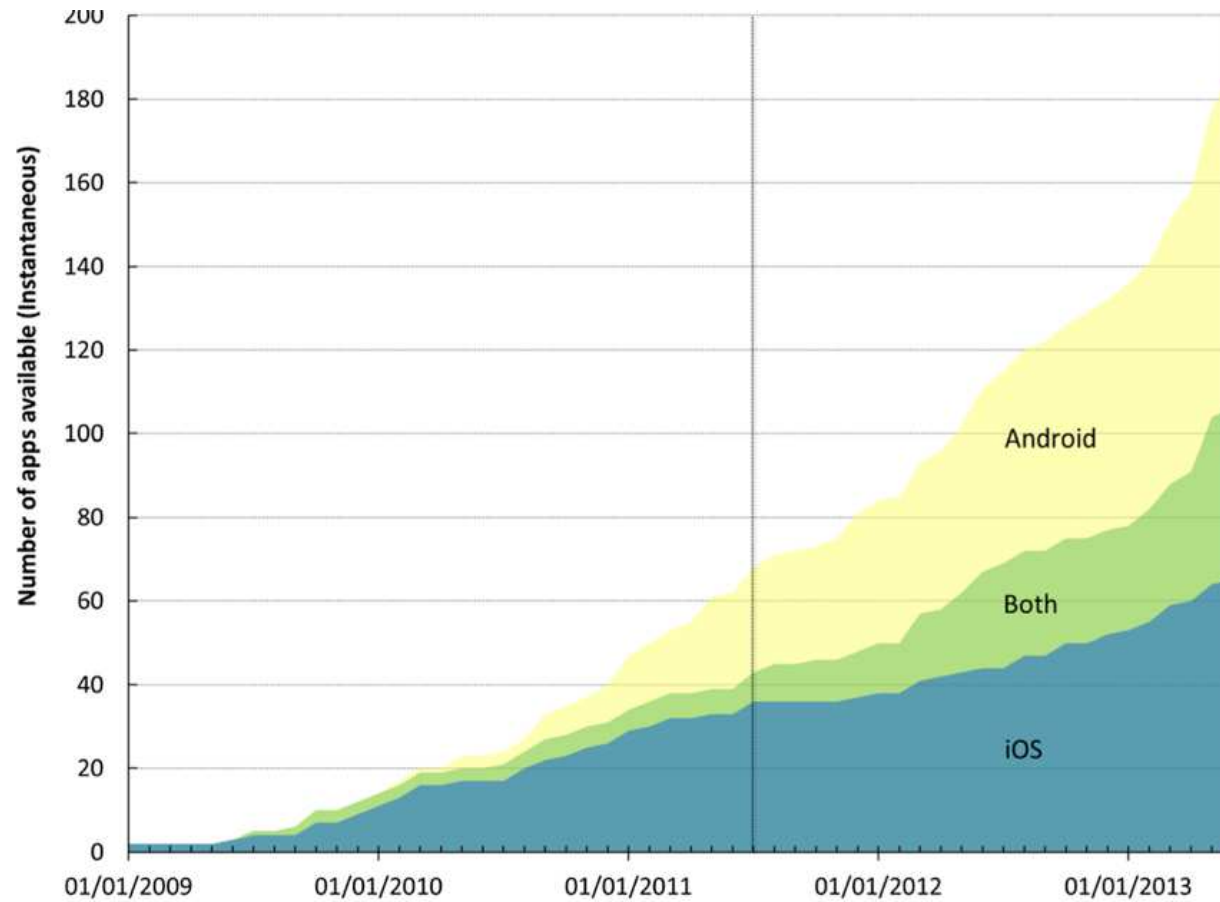


## DISCLOSURE OF INTEREST

☞ l'intero supporto aziendale della presente sessione sponsorizzata ha integrato il budget dei JMs della SIAAIC per la partecipazione al congresso 2017

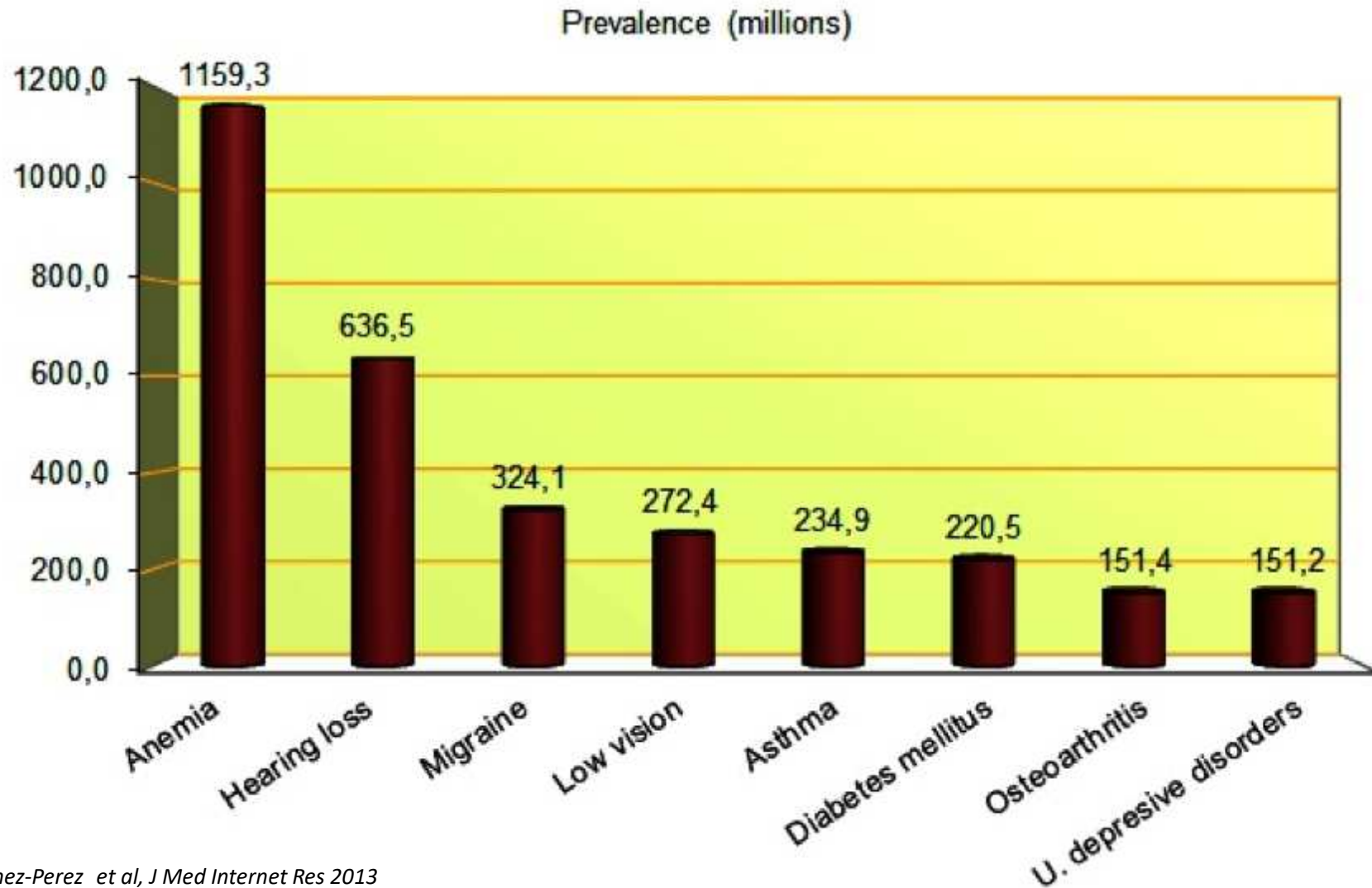
# SIZING THE ISSUE

## THE APP “TSUNAMI”



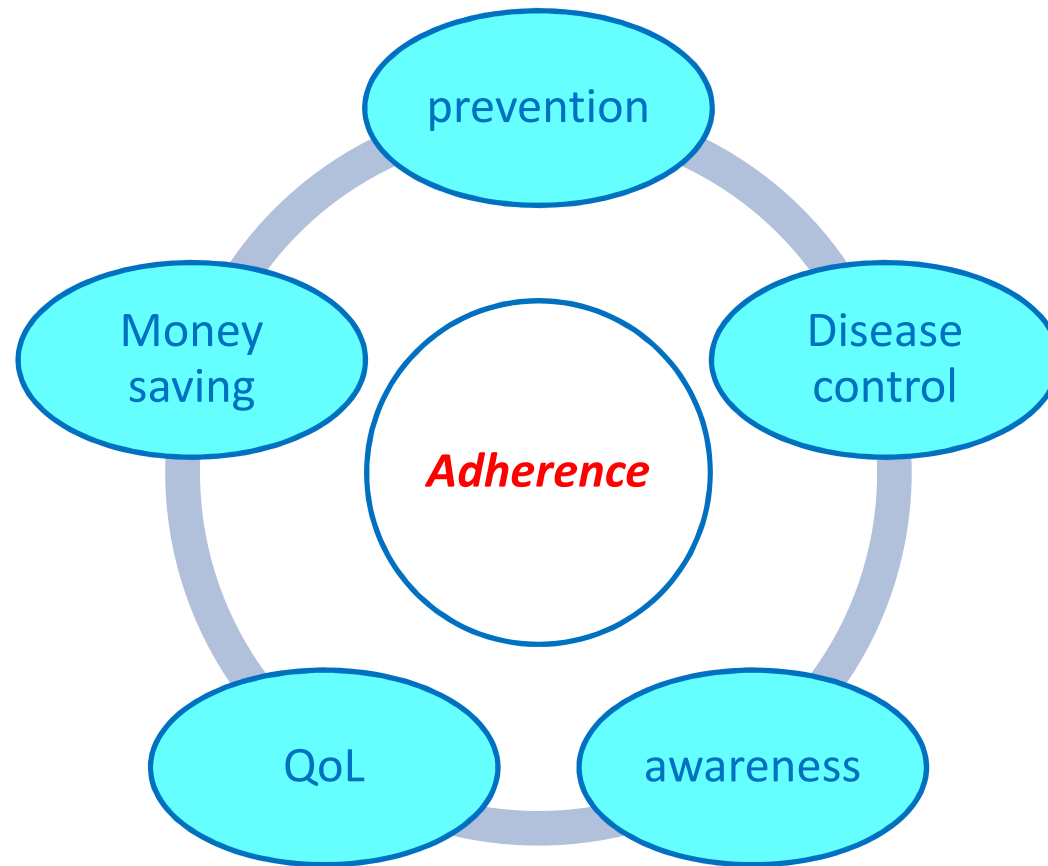
# SIZING THE ISSUE

## THE APP "TSUNAMI"



# APPS AND HEALTH

WHY SHOULD THE APPs BE DOCTORS' BUSINESS?



# APPS AND HEALTH

Table 1. Treatment adherence in common chronic conditions

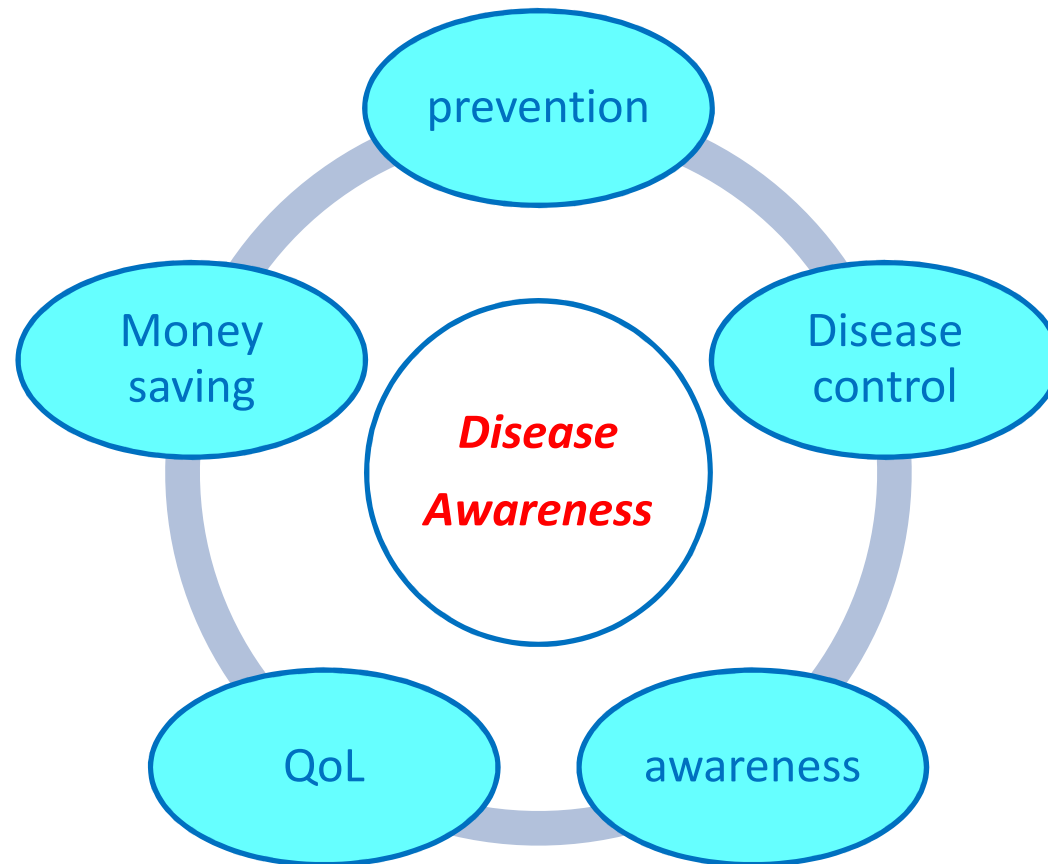
Publication	Disease	Treatment adherence rate (%)	Reasons for nonadherence	Strategies for improving adherence
Shingler et al., 2014 [10]	Cancer	20–88	Adverse events, patient beliefs, inadequate knowledge, disease progression, long treatment duration, and regimen complexity	Understanding of patient preference and home administration
Chowdhury et al., 2013 [11]; Kronish and Ye, 2013 [12]	Cardiovascular diseases	4.9–93.3	Adverse events, costs, uncertainty about effectiveness, concerns about medications, psychological disorders, polypharmacy, and inaccurate knowledge	Enhanced counseling and education, simplification of regimen and reminders (phone/e-mail/text messages), and collaboration with other healthcare professionals
de Achaval and Suarez-Almazor, 2010 [13]	Rheumatoid arthritis	11–92	Uncertainty about effectiveness, concerns about medications, psychological disorders, regimen complexity, poor knowledge, costs, patients' beliefs, polypharmacy, and low socioeconomic and educational status	Reminders (phone/e-mail/text messages) and enhanced counseling and education
Vervloet et al., 2011 [14]	Diabetes	35–95	Polypharmacy, regimen complexity, poor knowledge, and low socioeconomic and educational status	Enhanced counseling and education, simplification of regimen and reminders (phone/e-mail/SMS), and collaboration with other healthcare professionals
Sumino and Cabana, 2013 [15]	Asthma	30–70	Uncertainty about effectiveness, concerns about medications, psychological disorders, polypharmacy, and inaccurate knowledge	Enhanced counseling and education, simplification of regimen, reminders (phone/e-mail/text messages), smartphone apps, and collaboration with other healthcare professionals
Restrepo et al., 2008 [16]	COPD	40–90	Uncertainty about effectiveness, concerns about medications, psychological disorders, polypharmacy, inadequate	Enhanced counselling, monitoring and feedback about inhaler use through electronic medication delivery

## WHY SHOULD THE APPs BE DOCTORS' BUSINESS?

- 👉 provide the patient with immediate feedback about their disease status
- 👉 remind them about the appropriate treatment schedule

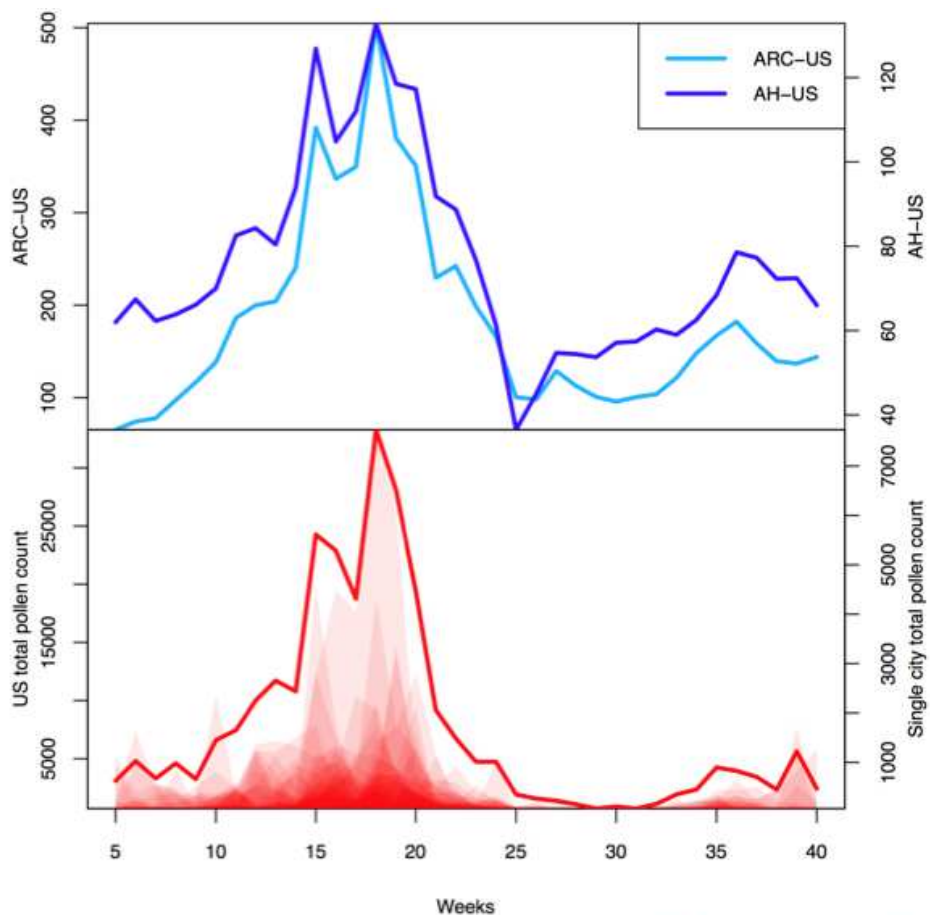
# APPS AND HEALTH

WHY SHOULD THE APPs BE DOCTORS' BUSINESS?



# IL PAZIENTE E L'INFORMAZIONE POLLINICA

QUANTO I PAZIENTI CONSULTANO IL WEB?

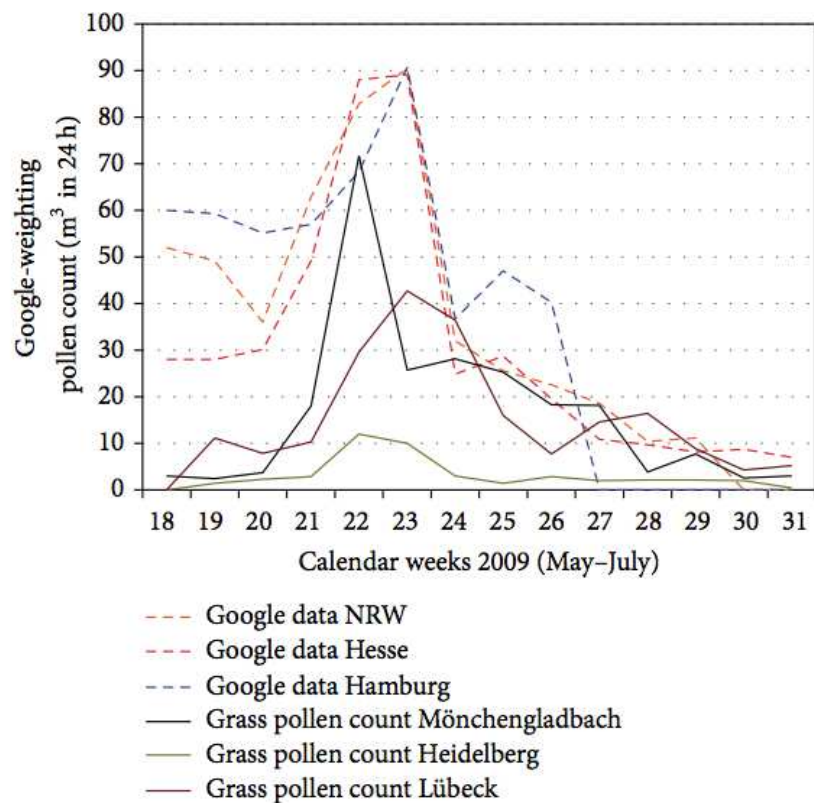


**Fig 1. Tweet trend for ARC case definition, tweet trend for antihistamine drugs and US total pollen count.** In the upper plot: the light blue line represents the weekly averages of tweets satisfying the ARC case definition; the dark blue line represents the weekly averages of tweets including the name of an antihistamine drug. Tweet trends are obtained from tweets which were geolocalized in the US and are plotted on different scales to emphasize the similarities of the trends. In the lower plot: the red solid line represents the sum of the total pollen counts obtained from all US stations; the shaded red areas represent the single city total pollen counts. The single city total pollen counts are represented on the same scales. The sum of the total pollen counts is plotted on a specific scale to allow trend comparison with the single city pollen counts. All trends represent weekly averages for the 35-week (242 day) period starting in week 5 (January 2013) through week 40 (September 2013).

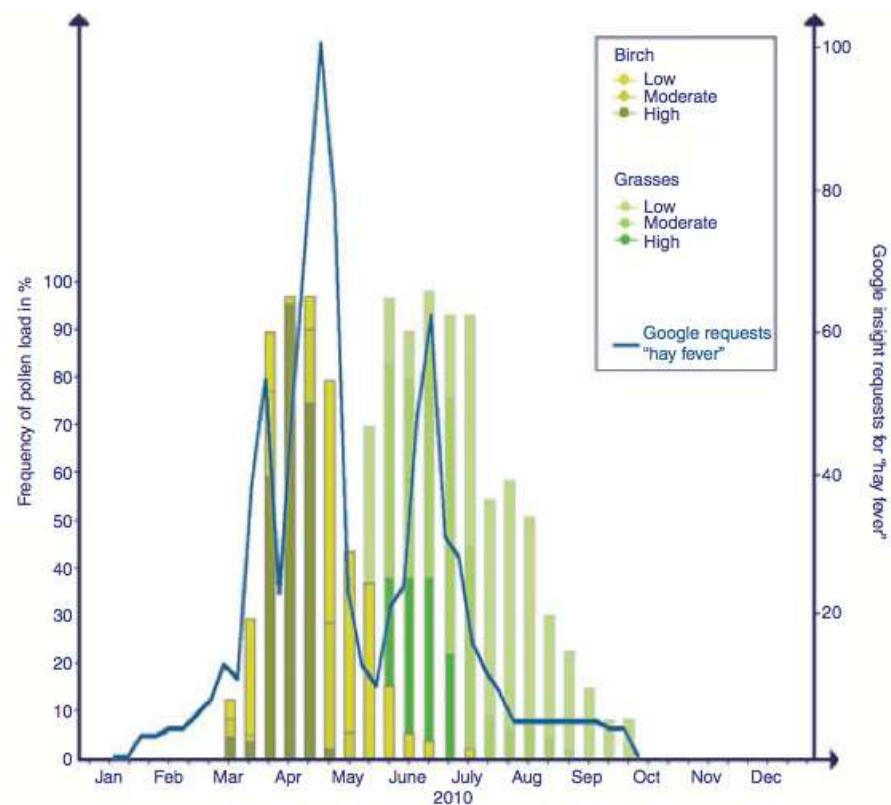


# IL PAZIENTE E L'INFORMAZIONE POLLINICA

## QUANTO I PAZIENTI CONSULTANO IL WEB?



*Konig et al, J Allergy 2014*



*Mosges et al, Allergy 2011*

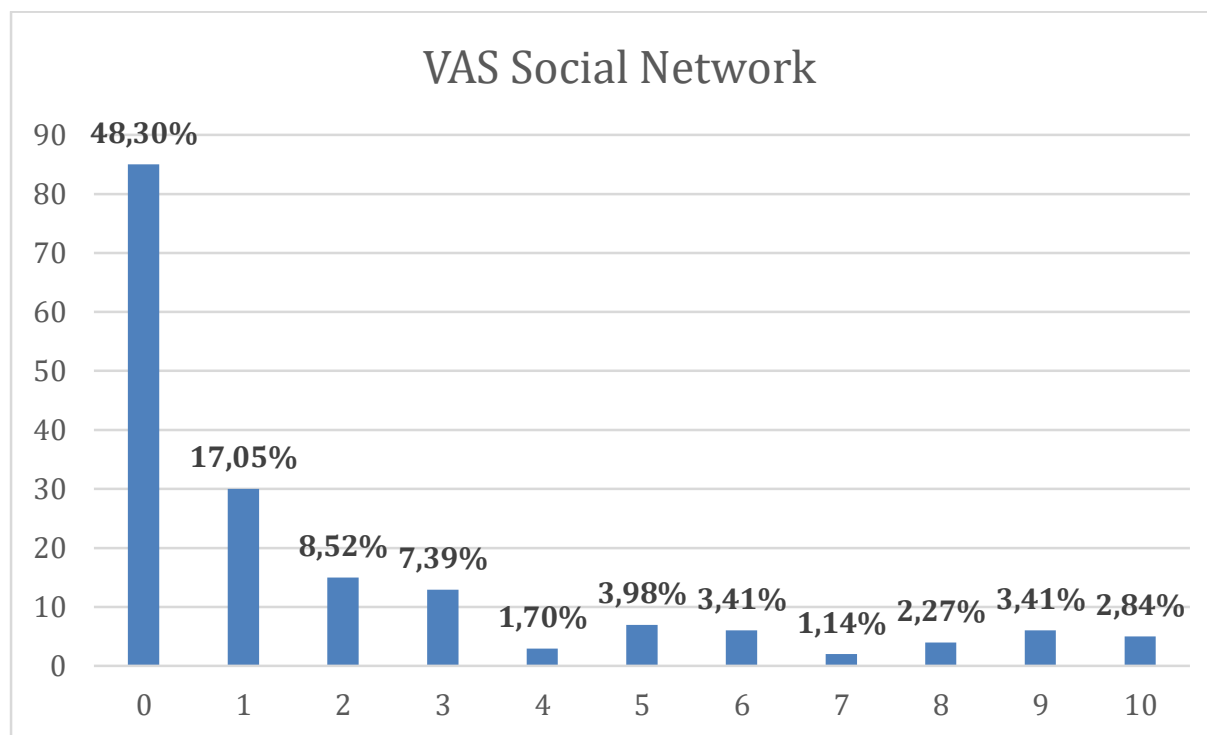
# Adolescent Asthma Assessment

PRELIMINARY RESULTS on 203 questionnaires

13. Pensi che gli strumenti sotto elencati possano aiutarti a ricordarti di assumere i farmaci regolarmente?

Social networks ( Facebook, Tweeter)

Per niente  Molto



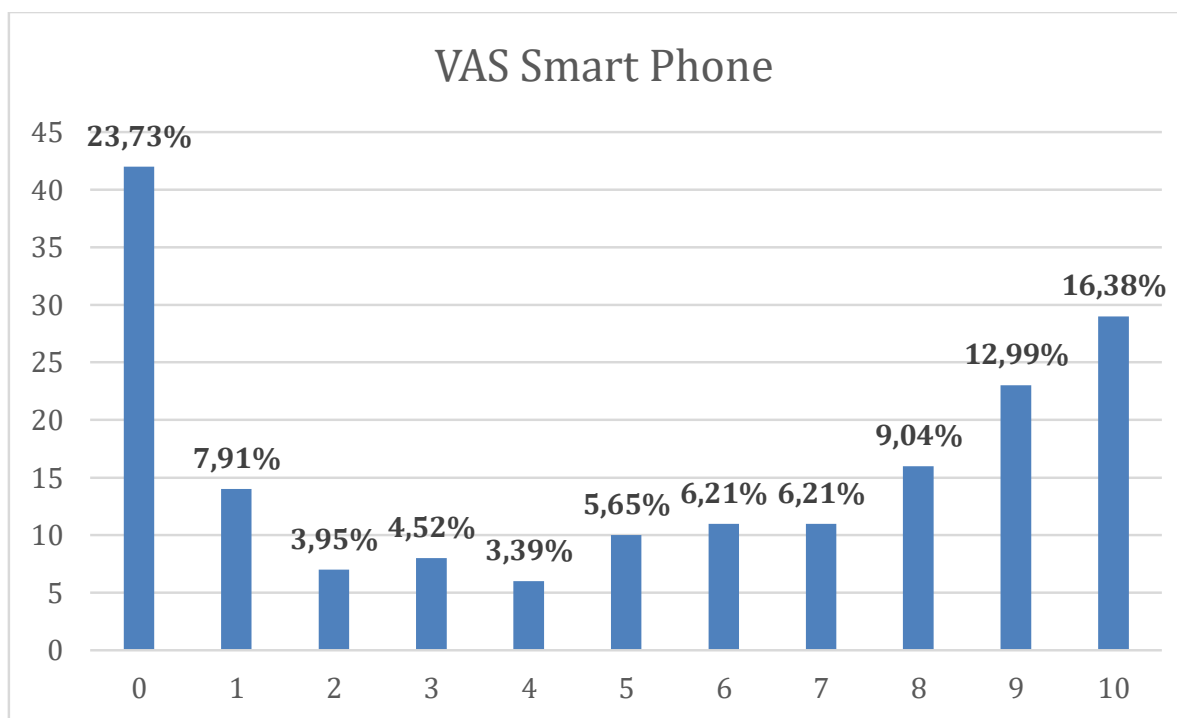
# Adolescent Asthma Assessment

PRELIMINARY RESULTS on 203 questionnaires

13. Pensi che gli strumenti sotto elencati possano aiutarti a ricordarti di assumere i farmaci regolarmente?

Smart phones con un applicazione di memo

Per niente  Molto



## questionario su uso/utilità delle APPs nelle allergopatie respiratorie

**Studio multicentrico nazionale (23 centri partecipanti)**

**Sinora raccolti 438 questionari**

**12 items**

**Età media : 34 anni**

6. effettui il download di APPs?

- si, regolarmente **10 %**
- si, ma solo qualche volta **82 %**
- no, mai **8 %**

7. hai scaricato ancora APPs riguardanti il campo della salute/medicina?

- si, spesso **1 %**
- si, ma solo qualche volta **10 %**
- no, mai **89 %**

# APPS AND ALLERGIC RESPIRATORY DISEASES

## WHAT DO WE KNOW?

### **Smartphone and tablet self management apps for asthma (Review)**

**Marcano Belisario JS, Huckvale K, Greenfield G, Car J, Gunn LH**

☞ 2 RCTs

☞ 408 participants

The current evidence base is not sufficient to advise clinical practitioners, policy-makers and the general public with regards to the use of smartphone and tablet computer apps for the delivery of asthma self management programmes. In order to understand the efficacy of apps as standalone interventions, future research should attempt to minimise the differential clinical management of patients between control and intervention groups. Those studies evaluating apps as part of complex, multicomponent interventions, should attempt to tease out the relative contribution of each intervention component. Consideration of the theoretical constructs used to inform the development of the intervention would help to achieve this goal. Finally, researchers should also take into account: the role of ancillary components in moderating the observed effects, the seasonal nature of asthma and long-term adherence to self management practices.

# APPS AND ALLERGIC RESPIRATORY DISEASES

## WHAT ABOUT RHINITIS?



☞ *nasce per pazienti con asma e rinite*

☞ *non validata né tradotta in italiano*

☞ *scarsa "immediatezza" di compilazione*

- Know and monitor the degree of control of asthma and allergic rhinitis with CARAT
- Add your asthma/rhinitis medication and record medication use
- Set alarms to remind you when to take medications and other tasks such as medical appointments
- Keep a record of your symptoms, attacks, pulmonary function and healthcare use
- customizable access to information about asthma/rhinitis

# ALLERGY DIARY – by MACVIA-ARIA

## A NEW TOOLS FOR PATIENTS AND DOCTORS

POSITION PAPER

### MACVIA-ARIA Sentinel Network for allergic rhinitis (MASK-rhinitis): the new generation guideline implementation

- ☞ early diagnosis and management
- ☞ patient stratification
- ☞ time of onset of the allergy season
- ☞ biomarkers
- ☞ environmental effects on allergic diseases

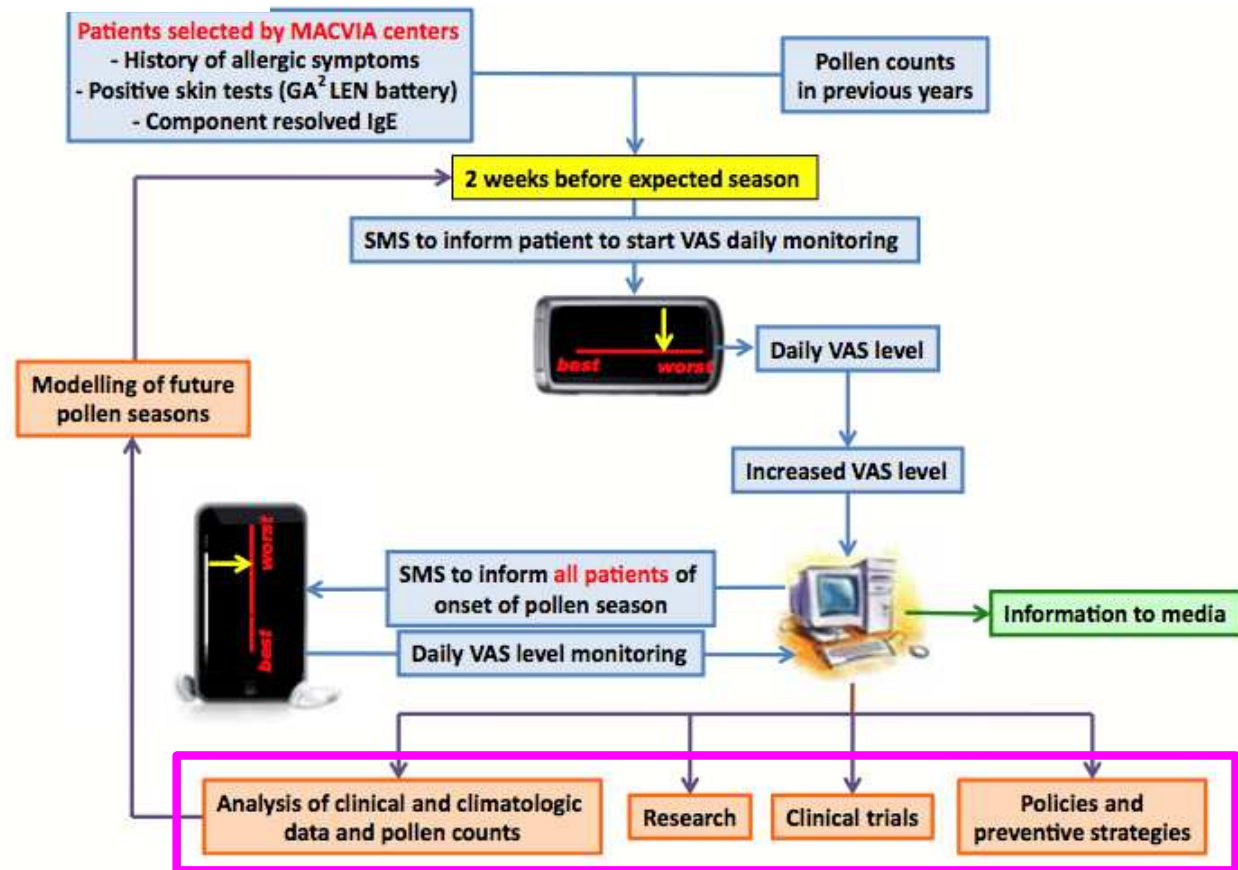
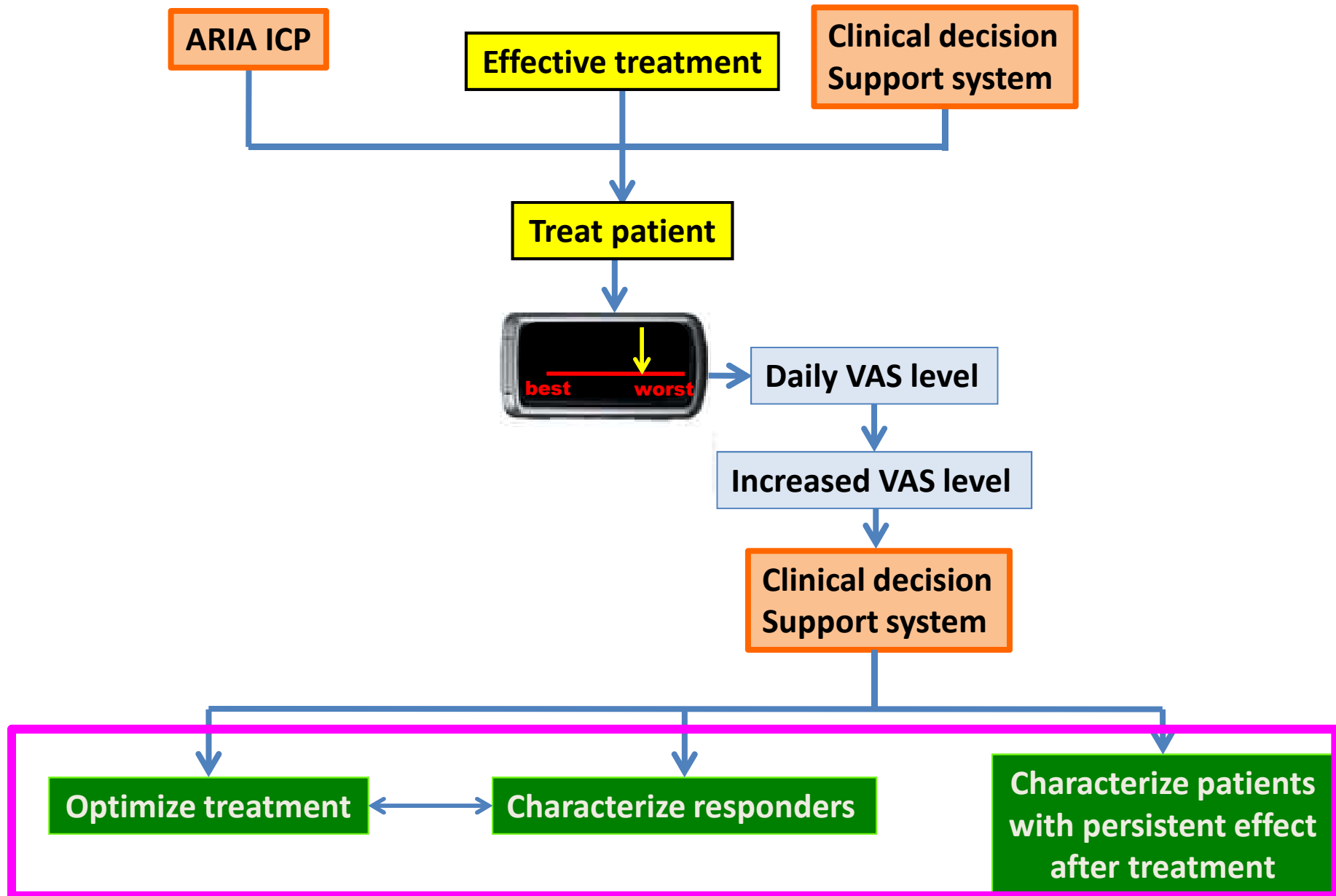


Figure 4 The MASK ICT strategy and usage.







## Definition and Objectives

- MASK (MACVIA-ARIA Sentinel Network) is the e-health tool that has been introduced into ARIA
- *The beginning of the pollen season will be monitored using patients as sentinels (novel approach)*



## Definition and Objectives

- MASK (MACVIA-ARIA Sentinel Network) is the e-health tool that has been introduced into ARIA
- *The beginning of the pollen season will be monitored using patients as sentinels (novel approach)*
- *MASK will function in conjunction with a clinical decision support system (CDSS) that will use the recommendations of ARIA 2015 to follow patients during allergen exposure and to adapt treatment according to regular rhinitis control*

# ALLERGY DIARY – by MACVIA-ARIA

IN DAILY CLINICAL PRACTICE

- On first use, users see a welcome screen, accept terms and conditions of use and are given the opportunity to register and create an account.

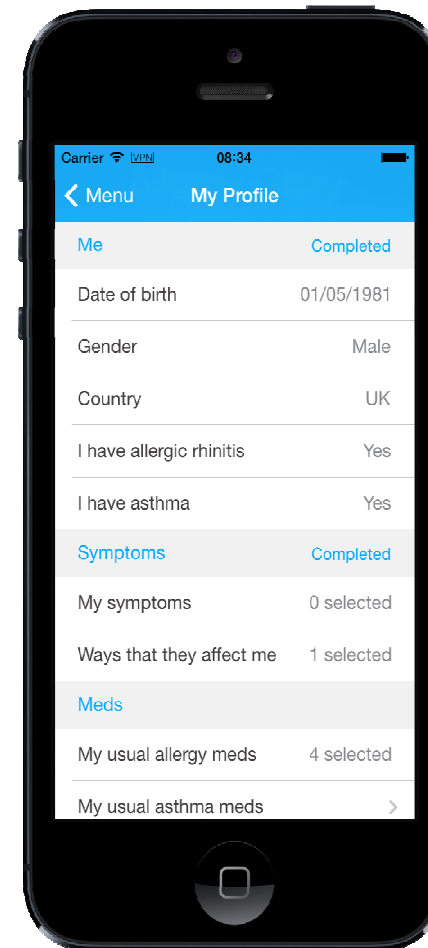


# ALLERGY DIARY – by MACVIA-ARIA

IN DAILY CLINICAL PRACTICE

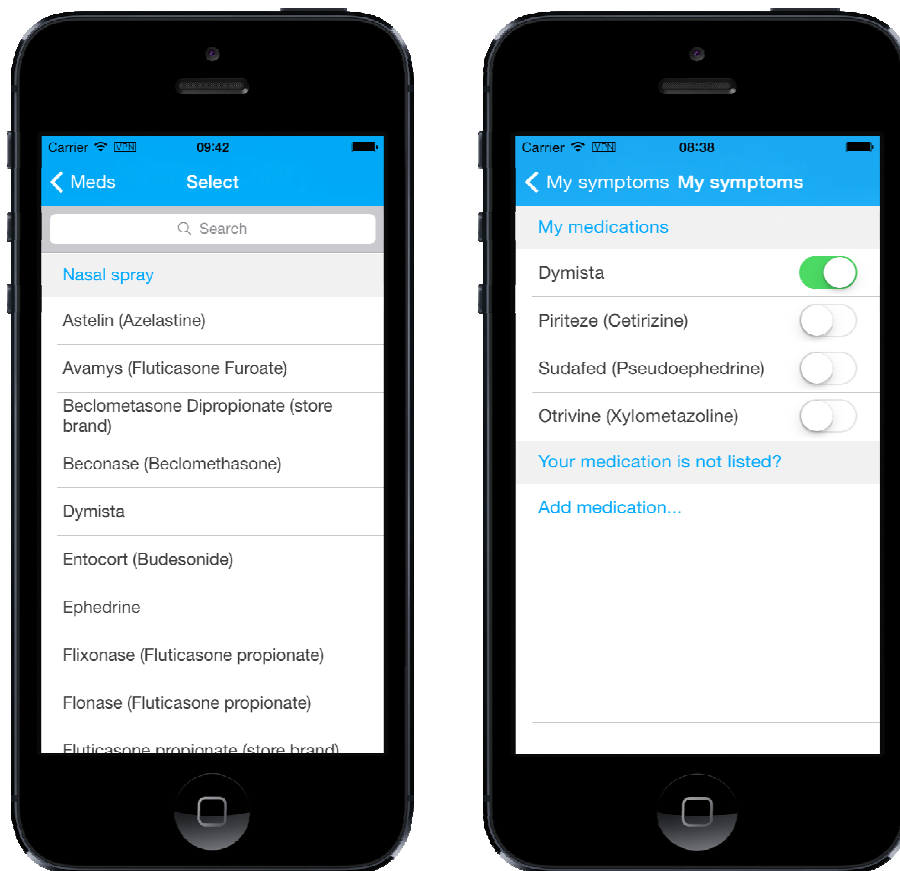
- Me
- Symptoms
- Medication

**All information will be collected in an  
MACVIA ARIA database and can be used  
to stratify results**



# ALLERGY DIARY – by MACVIA-ARIA

## IN DAILY CLINICAL PRACTICE



☞ The meds presented daily are linked to those included in the User profile. User switches meds On as appropriate

☞ Drugs are listed by generic name With associated brand names

☞ Additional meds can be added

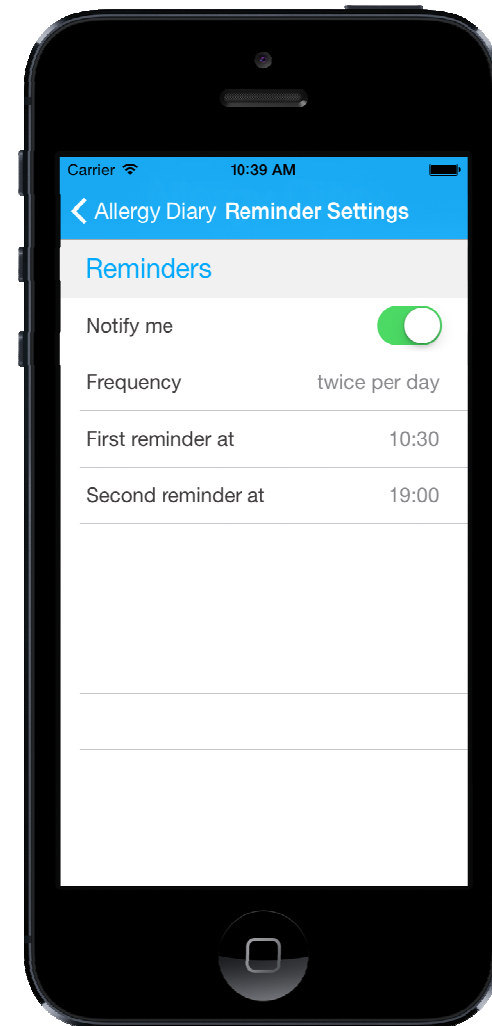
**Multiple therapy usage will be apparent**

# ALLERGY DIARY – by MACVIA-ARIA

## IN DAILY CLINICAL PRACTICE

- An optional reminder to track symptoms and take medication is also included.

**Aim: Improve treatment compliance**

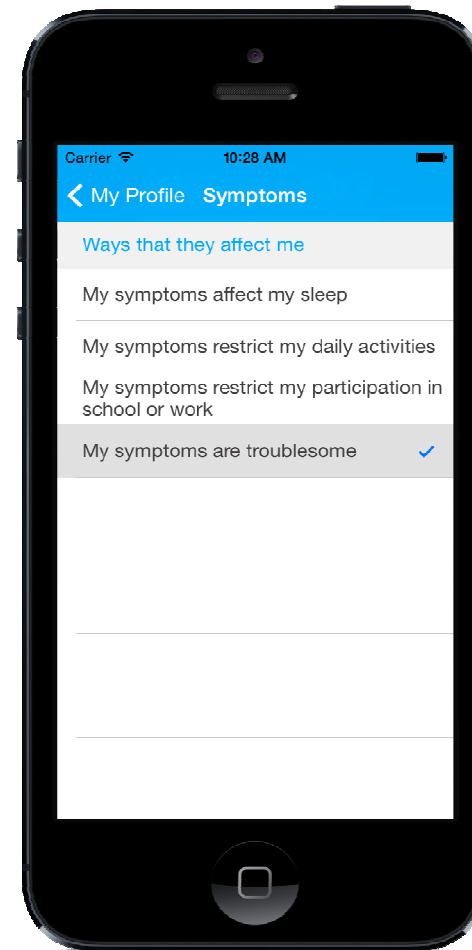


# ALLERGY DIARY – by MACVIA-ARIA

## IN DAILY CLINICAL PRACTICE

- Impact of AR symptoms on patients' lives
  - According to ARIA severity classification
- A simple way to gauge severity

**Moderate/severe patients can be easily identified and treated appropriately**

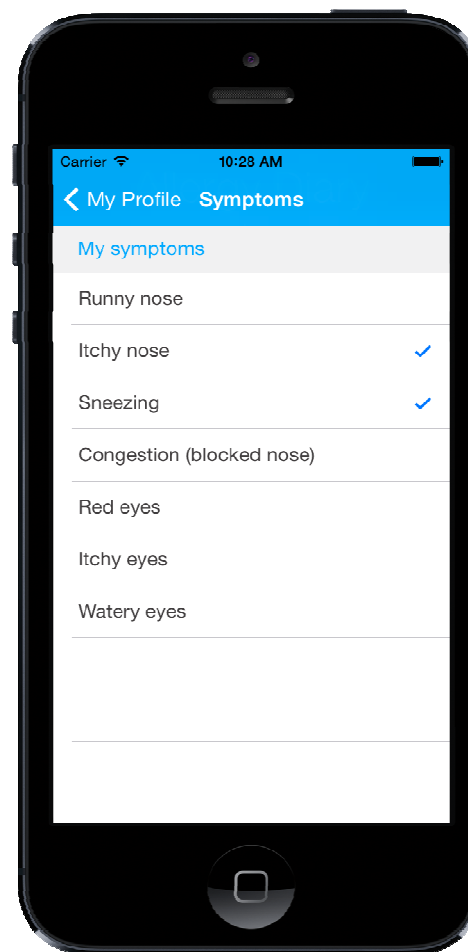


# ALLERGY DIARY – by MACVIA-ARIA

## IN DAILY CLINICAL PRACTICE

- What symptoms in particular?
  - 4 nasal symptoms
  - 3 ocular symptoms
- Users can select and de-select and edit if their symptom pattern changes

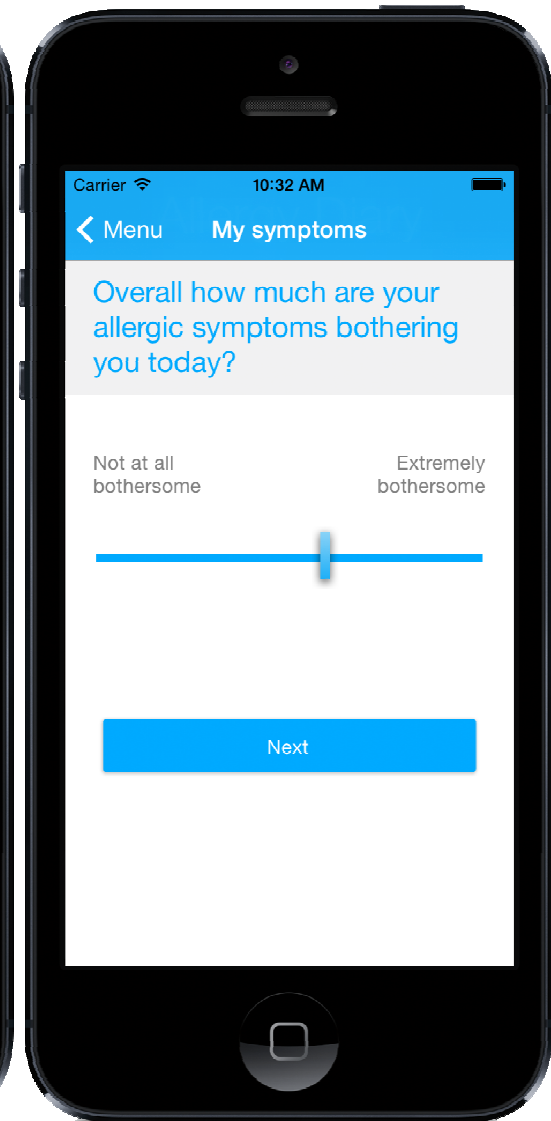
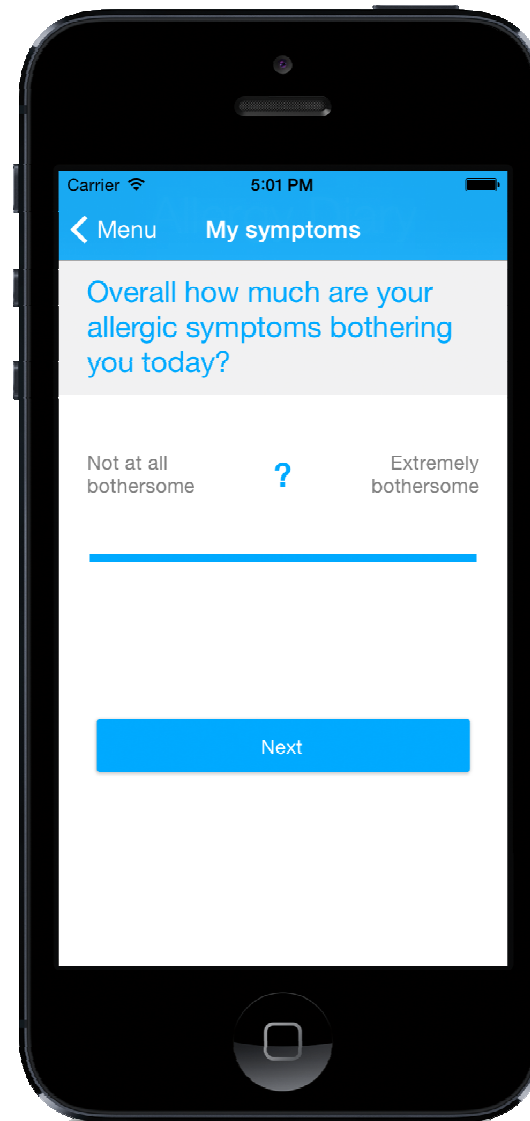
**Permits a rapid assessment  
of patients' symptom  
pattern**







- Based on a VAS
- Users measure allergic symptoms (finger+phone)
- Reply to questions by placing finger on VAS
- Users touch the line to indicate response and a 'marker' appears in that location
- The marker can be moved with a finger to mark the line where intended.
- Once the mark is placed the user then touches 'next' to move on to the next VAS
- Each VAS is completed once daily

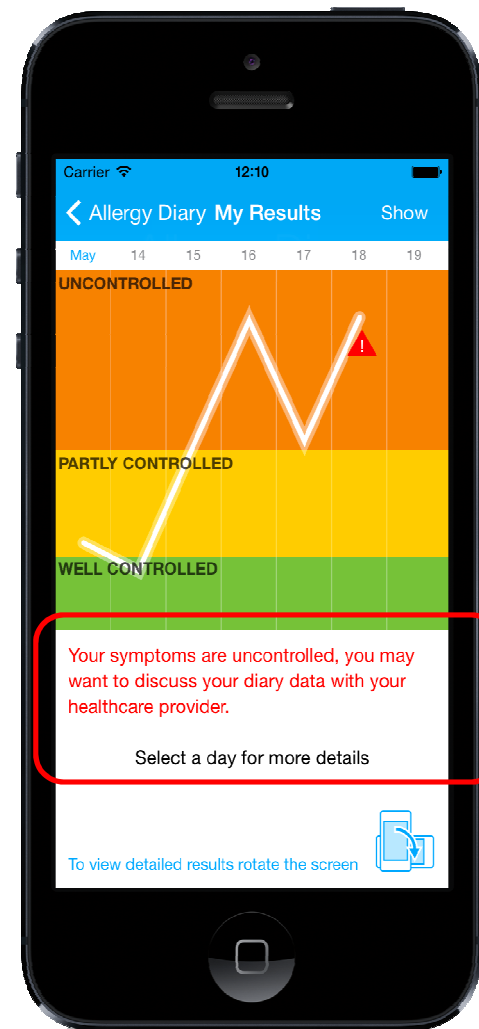


# ALLERGY DIARY – by MACVIA-ARIA

## IN DAILY CLINICAL PRACTICE

- In case of continued high scores the feedback message will display an appropriate message in red type and a warning icon will mark the graph
  - Prompts users to discuss their diary data with their health care provider

**Aim: Get to 'green' and stay there**



# ALLERGY DIARY – by MACVIA-ARIA

IN DAILY CLINICAL PRACTICE



- The overall AR symptom VAS responses are displayed in portrait view; by rotating to landscape view all VAS responses can be seen

# ALLERGY DIARY – by MACVIA-ARIA

## POTENTIAL ADVANTAGES IN DAILY CLINICAL PRACTICE – HCP PERSPECTIVE

- ✓ Immediata visualizzazione del diario dei sintomi e dei farmaci
- ✓ Immediata visualizzazione dell'effettivo regime di trattamento
- ✓ Vantaggio nell'impostazione di nuove terapie
- ✓ Valutazione delle necessità terapeutiche nel corso della stagione
- ✓ Individuazione dei pazienti non controllati dopo la stagione per impostare un nuovo piano terapeutico

# ALLERGY DIARY – by MACVIA-ARIA

## POTENTIAL ADVANTAGES IN DAILY CLINICAL PRACTICE – PATIENT PERSPECTIVE

- ✓ Individuazione precoce dei sintomi e della stagione pollinica
- ✓ Maggior consapevolezza dei propri sintomi e della malattia
- ✓ Durata ottimale del trattamento
- ✓ Miglior controllo della malattia sulla base di protocolli terapeutici raccomandati da esperti per controllare i sintomi e prevenire forme severe
- ✓ Facilità e immediatezza d'uso
- ✓ *self-regulation with support (aderenza, consapevolezza)*

# ALLERGY APPs

## POTENTIAL DRAWBACKS

- ✓ “Tacita complicità” nell’auto-medicazione / autogestione

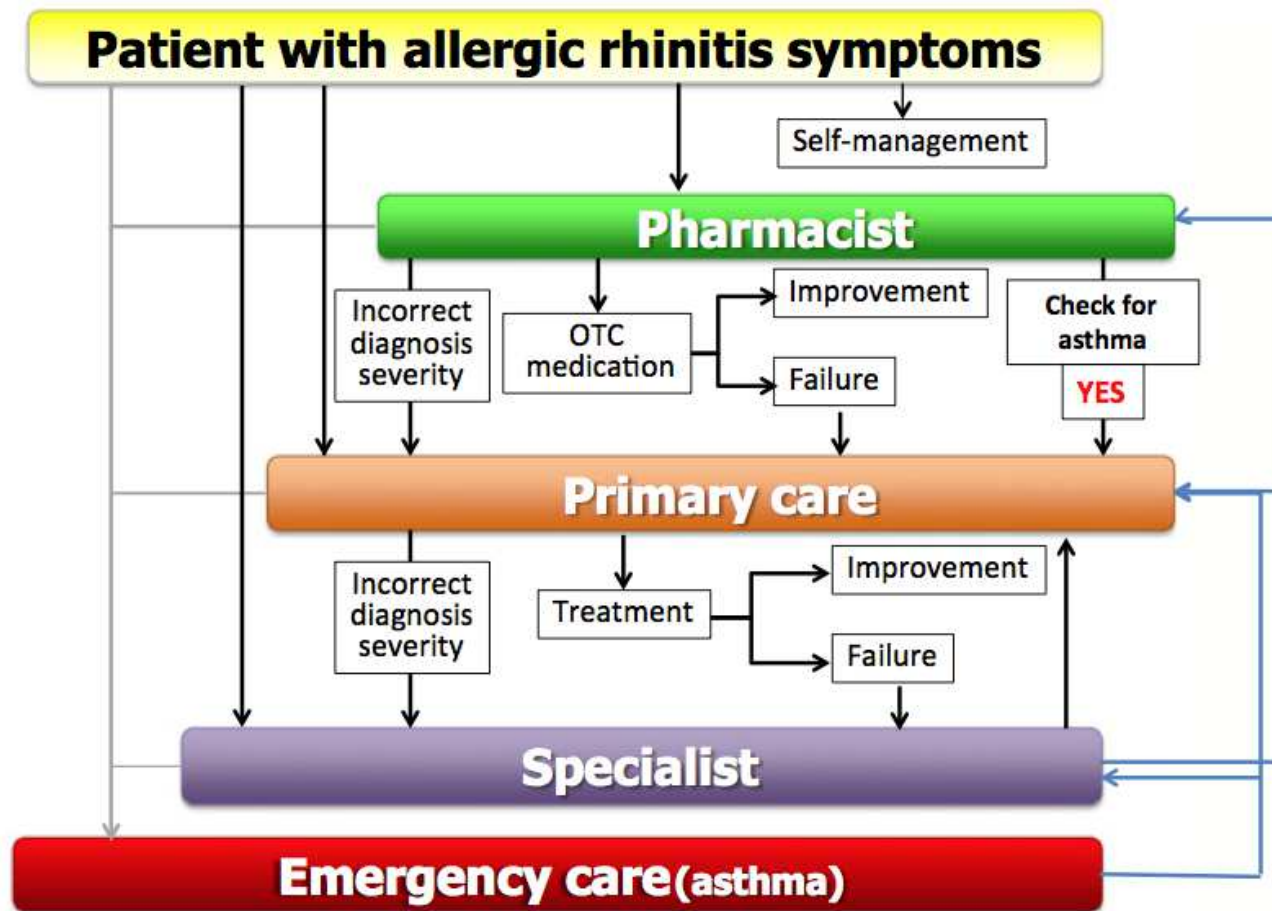


## A TAILORED APPROACH

- ☞ Informazione / Educazione
- ☞ Awareness dei rischi potenziali della propria patologia
- ☞ Coinvolgimento di altri HCPs

# ALLERGY DIARY – by MACVIA-ARIA

ADVANTAGES IN DAILY CLINICAL PRACTICE – HCP PERSPECTIVE



**Figure 8** ICP for MASK-rhinitis.

# ALLERGY APPs

WHAT DO PATIENTS WANT?

👉 Immediate feedback



👉 Immediate relief





REVIEW

Open Access



## Escaping the trap of allergic rhinitis

Oliviero Rossi<sup>1\*</sup>, Ilaria Massaro<sup>2†</sup>, Marco Caminati<sup>3†</sup>, Cristina Quecchia<sup>4†</sup>, Filippo Fassio<sup>5†</sup>, Enrico Heffler<sup>6†</sup> and Giorgio Walter Canonica<sup>7†</sup>

### Abstract

Rhinitis is often the first symptom of allergy but is frequently ignored and classified as a nuisance condition. Ironically it has the greatest socioeconomic burden worldwide caused by its impact on work and on daily life. However, patients appear reticent to seek professional advice, visiting their doctor only when symptoms become 'intolerable' and often when their usual therapy proves ineffective. Clearly, it's time for new and more effective allergic rhinitis treatments. MP29-02 (Dymista<sup>®</sup>; Meda, Solna, Sweden) is a new class of medication for moderate to severe seasonal and perennial allergic rhinitis if monotherapy with either intranasal antihistamine or intranasal corticosteroids is not considered sufficient. MP29-02 is a novel formulation of azelastine hydrochloride (AZE) and fluticasone propionate (FP). It benefits not only from the incorporation of two active agents, but also from a novel formulation; its lower viscosity, smaller droplet size, larger volume (137  $\mu$ l) and wider spray angle ensure optimal coverage of, and retention on the nasal mucosa and contribute to its clinical efficacy. In clinical trials, patients treated with MP29-02 experienced twice the symptom relief as those treated with FP and AZE, who in turn exhibited significantly greater symptom relief than placebo-patients. Indeed, the advantage of MP29-02 over FP was approximately the same as that shown for FP over placebo. The advantage of MP29-02 was particularly evident in those patients for whom nasal congestion is predominant, with MP29-02 providing three times the nasal congestion relief of FP ( $p = 0.0018$ ) and five times the relief of AZE ( $p = 0.0001$ ). Moreover, patients treated with MP29-02 achieved each and every response up to a week faster than those treated with FP or AZE alone and in real life 1 in 2 patients reported the perception of well-controlled disease after only 3 days. MP29-02's superiority over FP was also apparent long-term in patients with perennial allergic rhinitis or non-allergic rhinitis, with statistical significance noted from the first day of treatment, with treatment difference maintained for a full year. Taken together, these data suggest that MP29-02 may improve the lives of many of our patients, enabling them to finally escape the allergic rhinitis trap.

**Keywords:** Allergic rhinitis, Intranasal corticosteroids, Intranasal antihistamines, Therapy

# **GRAZIE**

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