



#P360

# Meaningful use of the eROQ rhinitis outcomes questionnaire & ARIA rhinitis control test RCT in an allergy specific personal health record PHR

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## Abstract

### INTRODUCTION:

Patient-centric home-monitoring of chronic diseases like allergic rhinitis is recommended by the Institute of Medicine. We created a personal health record (PHR) -Online Allergy Tracker (OAT) and monitored pollen allergic patients during a pollen season.

### METHODS:

We previously reported the validation & use of the eROQ using industry standard hardware where created software to automate the monitoring of over 200 pollen allergic patients between and during clinic visits. We used guidelines based, validated subjective measures, and correlated them with average weekly pollens/m3 from the National Allergy Bureau.

### RESULTS:

ROQ, ARIA RCT severity (mild-severe), grass & ragweed (data not shown), pollen counts analysis showed significant relationships,  $p < 0.05$ .

### CONCLUSION:

Home and clinic monitoring of allergy patients through the Internet using a prototypic allergy PHR is validated by correlation of ROQ, ARIA RCT and a biological model during a pollen season.

## Title

Electronic rhinitis outcomes questionnaire (eROQ) & allergic rhinitis and its impact on asthma (ARIA) rhinitis control test (RCT) correlations during a pollen season using an allergy specific personal health record (PHR) on the Internet in the clinic and patient's home.

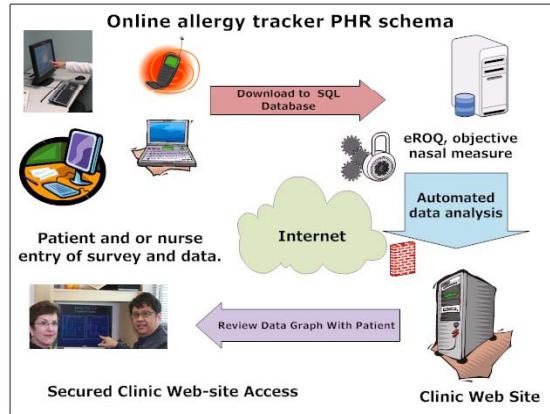
## Rationale

Patient-centric home-monitoring of chronic diseases like allergic rhinitis is recommended by the Institute of Medicine.

Meaningful use of PHR, and related CDSS clinical decision support systems will be required in future EMR.

## Methods

We monitored 200 pollen allergic patients between and during clinic visits by eROQ & ARIA and correlated them with average weekly pollens/m3 from the National Allergy Bureau.



## Results

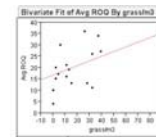


Figure 1 Linear fit  $p=0.03$

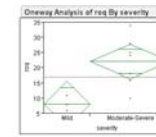


Figure 2.  $p=0.0009$  eROQ compares with ARIA severity

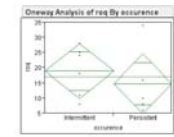
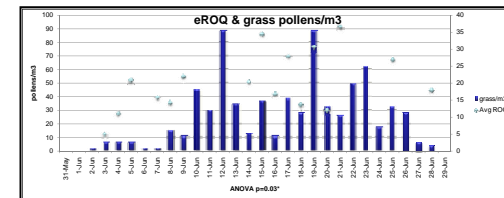


Figure 3.  $p=0.49$ . ROQ does not compare with ARIA occurrence



## Conclusions

1. eROQ correlates with ARIA rhinitis control test severity, grass and ragweed pollen/m3, not ARIA occurrence.
2. Home and clinic monitoring of allergy patients through the Internet using a prototypic allergy PHR is validated by correlation of ROQ, ARIA RCT and a biological model during a pollen season.
3. This prototype can serve as a model for meaningful use of CDSS clinical decision support and PHR personal health record use that will be required in future EMR electronic health record.

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