

# Information about airborne pollen concentrations and pollen forecast using SMS (Short Messaging Service)

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## BACKGROUND

Information about pollen concentration and its forecast during the pollen season is an useful resource for allergic patients. Because of its wide distribution and ease of use, the mobile phone offers an excellent basis for the delivery of this information. The aim of our study has been to evaluate the feasibility and efficacy of sending SMS text messages to the mobile telephones of allergic patients during the main pollen season.

## METHODS

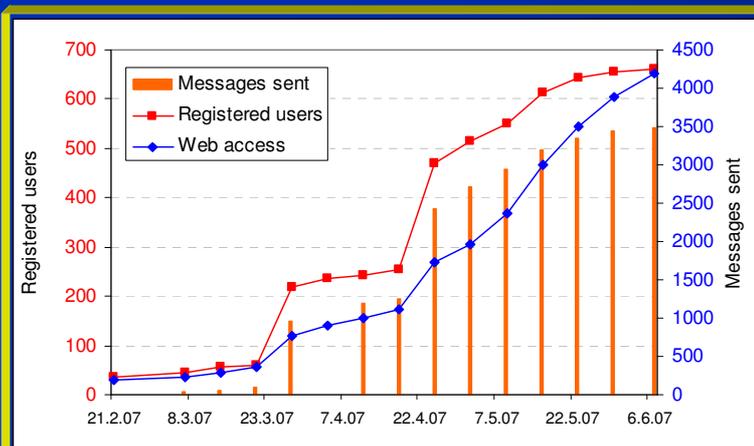
- From the beginning of March to the beginning of June of 2007, weekly information about the pollen concentration for the main airborne pollen types and its forecast for the next days was sent by SMS to people registered in our web site <http://www.aerouex.es>.
- This information was the result of data obtained by: 1) a fixed Hirst sporetrap with a continuous sampling, 2) two personal volumetric air samplers sampling during 20 minutes at 12:00 h, 3) the comparison of these data with the data of previous 14 years, 4) the weekly phenological study of the bloom of 30 species of the five most relevant pollen types in our area (*Poaceae*, *Quercus*, *Olea*, *Platanus* and *Plantago*), and 5) the daily information of temperature and rain for the period studied.
- The messages have been implemented using the web application provided by the mobile telephone company.
- We assessed the level of knowledge and the interest of allergic patients about our information by a questionnaire.



Burkard portable trap

## RESULTS

- 668 users were registered in our web site and 3898 SMS were sent.
- After sending the SMS, we detected a simultaneous increase in the number of patients who accessed to our web site.
- In addition to that, the number of new registrations asking for the SMS messages doubled after the news appeared in newspapers informing about the availability of this free service.
- 132 allergic patients answered the questionnaire. 97% found interesting our service, and most of them were interested in receiving this information by SMS.



## CONCLUSIONS

- SMS may be an effective media to deliver information to allergic patient during the pollen season.
- Our patients have found this information very interesting and useful.
- The knowledge of pollen concentrations and pollen forecast can help allergic patients to plan their activities and medication.

