R-ALERGO: A NEW INSTRUMENT TO PREVENT ALERGEN EXPOSURE IN AN URBAN AREA.

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BACKGROUND

Outdoor allergen exposure is influenced by multiple factors: climate conditions, vegetation, urban design, etc. In urban areas there are several sources of information about airborne allergen exposure and the factors that have a potential influence on it. We have developed a mobile application to help people to prevent allergen exposure while moving in and around the city of Valencia.

METHOD

The mobile application is based on spatial analysis supported by network technology with additional modifications.

The proposed modeling is based on the addition of impedances according to the variables influencing allergen exposure: temperature, humidity and wind direction, level of contamination, wooded skin, the seasonal calendar pollination, dog off-leash areas, fountains and water surfaces.

The mobile application is designed according to the recommendations of the “Health Quality Agency from Andalucía”, the first distinctive in Spain that recognizes the quality and safety of health apps. The required allergic information from users and the factors influencing allergen exposure were defined by consensus by a group of allergists from a tertiary hospital.

RESULTS

R-ALERGO is the first mobile application to prevent outdoor allergen exposure in Spain. The new application combining the map of the city, urban information, atmospheric conditions, pollen counts and the user allergy profile, is able to show the way between two points with the lowest allergenic exposure. Calculations are based on the combination of the data from the city map (street network, parks, monuments, etc.) with variables that may have influence on allergic users (climate conditions, pollen counts, etc.).

The application works in 4 steps: 1. Patient profile, 2. Destination from actual location, 3. Route showing the lowest allergen exposure, 4. Specific recommendations for allergic users. R-ALERGO is under evaluation to get certified as a Healthy App.

CONCLUSIONS

The new mobile application R-ALERGO was achieved by the combination of knowledge and expertise of several disciplines (cartography, urbanism, atmospheric conditions, software design and allergy). The application provides patients with updated information to avoid allergen exposure while moving in an urban area.

In relation to this presentation, the authors declare no conflict of interest