

## Allergen immunotherapy and health care cost benefits for children with allergic rhinitis: a large-scale, retrospective, matched cohort study.

[Hankin CS](#)<sup>1</sup>, [Cox L](#), [Lang D](#), [Bronstone A](#), [Fass P](#), [Leatherman B](#), [Wang Z](#).

### Author information

1

BioMedEcon LLC, Moss Beach, California 94038, USA. [chankin@biomedecon.com](mailto:chankin@biomedecon.com)

### Abstract

#### **BACKGROUND:**

Children with allergic rhinitis (AR) often experience significant impairment in quality of life and health, which increases health care utilization.

#### **OBJECTIVE:**

To determine whether allergen immunotherapy reduces health care utilization and costs in children newly diagnosed as having AR using a retrospective matched cohort design.

#### **METHODS:**

Among children (age <18 years) with a Florida Medicaid paid claim between 1997 and 2007, immunotherapy-treated patients were selected who had newly diagnosed AR, who had not received immunotherapy before their first (index) AR diagnosis, who had received at least 2 immunotherapy administrations after their index AR diagnosis, and who had at least 18 months of data after their first immunotherapy administration. A control group of patients with newly diagnosed AR who had not received immunotherapy either before or subsequent to their index AR diagnosis also were identified, and up to 5 were matched with each immunotherapy-treated patient by age at first AR diagnosis, sex, race/ethnicity, and diagnosis of asthma, conjunctivitis, or atopic dermatitis.

#### **RESULTS:**

Immunotherapy-treated patients had significantly lower 18-month median per-patient total health care costs (\$3,247 vs \$4,872), outpatient costs exclusive of immunotherapy-related care (\$1,107 vs \$2,626), and pharmacy costs (\$1,108 vs \$1,316) compared with matched controls ( $P < .001$  for all). The significant difference in total health care costs was evident 3 months after initiating immunotherapy and increased through study end.

#### **CONCLUSIONS:**

This study demonstrates the potential for early and significant cost savings in children with AR treated with immunotherapy. Greater use of this treatment in children could significantly reduce AR-related morbidity and its economic burden.