

Reduction in Serum IgE Allergy Tests in NL

Choosing Wisely Canada Recommendation

Do not perform screening panels (IgE tests) for allergy without previous consideration of pertinent medical history.

Practice Points

1. Most allergic reactions are immediate hypersensitivity reactions caused by IgE antibodies.
2. Common triggers include environmental allergens (pollens, pets, and dust), food, venom and medications. Symptoms occur within minutes to two hours after exposure.
3. Symptoms of food allergy include cutaneous (e.g. hives), respiratory (e.g. wheeze), gastrointestinal (e.g. vomiting) and cardiovascular (e.g. hypotension). Allergy testing for foods may be associated with high rates of false positives, up to 50%.
4. Allergy testing includes skin prick testing and serum specific IgE to the given allergen. Skin prick testing is more sensitive than specific IgE testing. Specific IgE testing for environmental allergens is not necessary.
5. Allergy testing should only be ordered if the history is suggestive of an allergic reaction and only to allergens suspected on history.
6. Ordering more than three IgE tests at a time may be inappropriate.

Methods

1. Provincial data from the Meditech Laboratory Information System from Eastern Health for 2015/16 was analyzed in 2017 and distributed in a physician campaign in May of 2018. Other educational resources were provided such as an accredited online module.
2. Potential inappropriateness was defined as ordering more than three serum specific IgE tests for one patient at one time.
3. Provincial data from 1 Jan 2017 – 31 Aug 2019 was obtained, analyzed and compared to the previous data to assess for change in ordering patterns.

Results

- In the 32 months from 1 Jan 2017 – 31 Aug 2019, 14,861 IgE tests were ordered and 66% of tests were bundled inappropriately, compared to 16,822 in the 24 months from 1 Jan 2015 – 31 Dec 2016, 69% of which were bundled inappropriately.
- There has been a 38% decrease in overall test ordering annually from 2015–2018, and adjusting for the remainder of 2019, the decrease is 50%.
- The largest decrease in test ordering was seen amongst Family Physicians and Pediatricians.

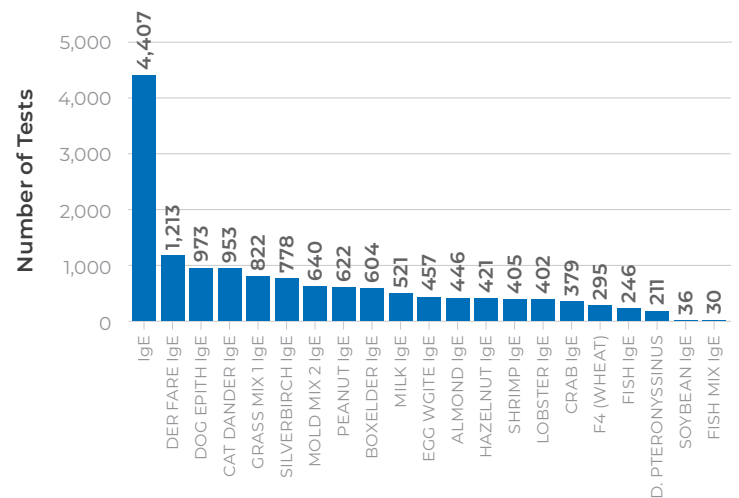


Fig. 1. Number of Orders for Each IgE Test (1 Jan 2017 – 31 Aug 2019)

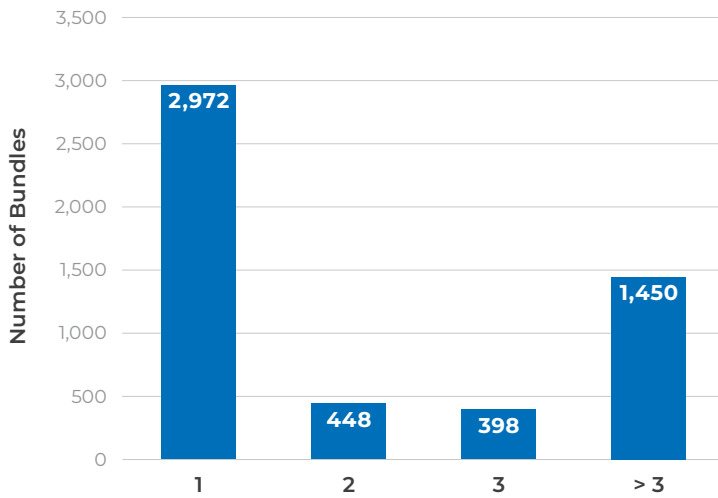


Fig. 2. Number of Bundles by Number of Tests per Bundle (1 Jan 2017 – 31 Aug 2019)

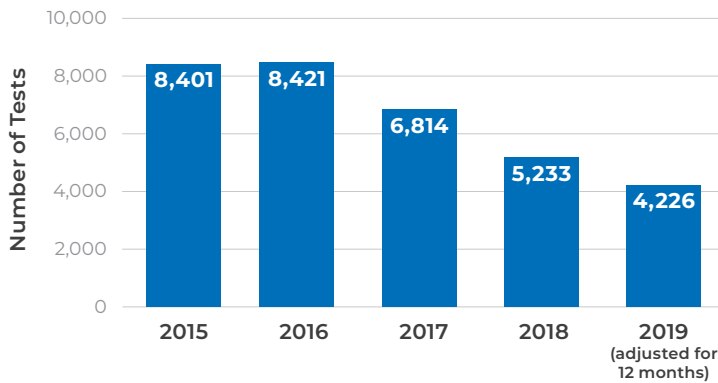


Fig. 3. Number of Tests per Year by all Specialties (1 Jan 2016 – 31 Aug 2019 (Adjusted))

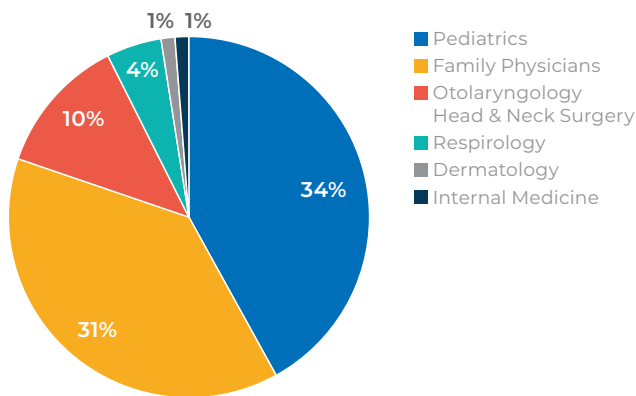


Fig. 4. Percentage of Tests Ordered by Specialty (32 Months)

Conclusions

1. Only order allergy testing if the history is suggestive of an allergic reaction and only to allergens specified on history.
2. Ordering of more than three IgE tests per bundle, which is likely inappropriate, is decreasing but still occurs quite frequently.
3. There has been a 50% reduction comparing serum IgE testing in 2019 to that in 2015.