

ORAL PRESENTATION

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# Molecular-based allergy diagnostics in the real world: evidence for a cost explosion and an impact vacuum

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From Food Allergy and Anaphylaxis Meeting 2014  
Dublin, Ireland. 9-11 October 2014

## Background

Molecular-based allergy (MA) diagnostics are used to identify patient sensitization to individual allergen components. Despite a recent consensus statement, the clinical utility of MA diagnostics in routine practice remains unclear.

## Aim

To review the cost and usage patterns of MA diagnostics at a regional level and to estimate the clinical value of such testing strategies.

## Methods

Laboratory data on Northern Ireland MA diagnostics ordering between 2010 and 2013 was obtained. Data specific to Regional Immunology Service patients from 2013 was further interrogated. A retrospective review of case records from adults (n=70) and children (n=53) was carried out to determine the impact of MA test results.

## Results

MA testing has increased annually since its introduction in 2010. Spending on MA diagnostics exceeded £20,000 in 2013. Increases in test numbers were observed across a range of allergen groups during the time period and suggests routine ordering (Figure 1). Analysis of request sources indicated a surge in test numbers across 5 key user hospital units (Figure 2). Additionally, a marked increase in MA diagnostics orders from non-specialist sources was noted.

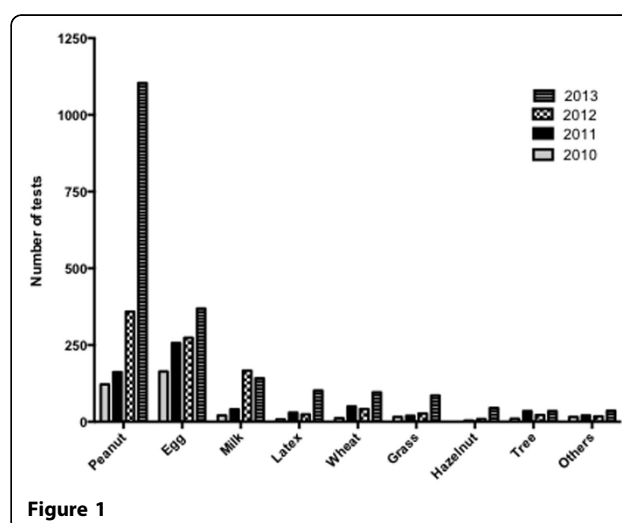


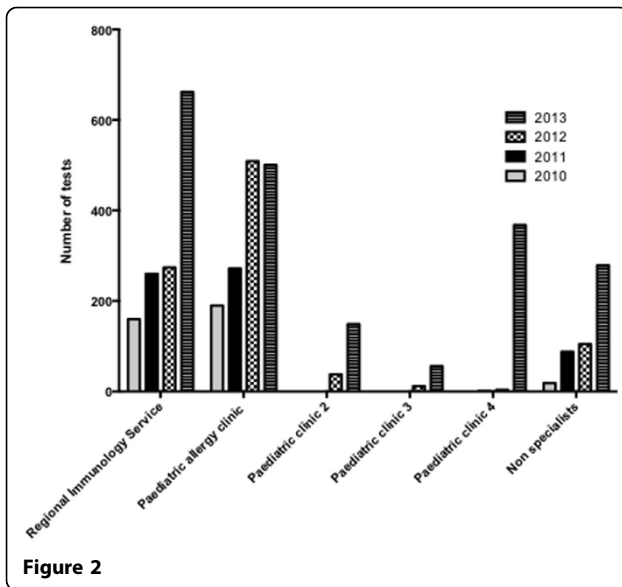
Figure 1

Use of MA diagnostics introduced a mean increase in cost of 156% in adults (range 11%-900%) and 197% in children (range 9%-600%)(Table 1). Review of individual cases indicated that MA diagnostics had no specific impact on diagnosis or management in 78.6% of adults and 83.0% of children.

## Discussion

This study suggests that the use of MA diagnostics is entering routine clinical practice and is associated with a cost premium. The minimal clinical impact of these testing modalities argues for the establishment of demand management programs in resource-constrained environments.

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**Table 1**

	Adults (n=70)	Children (n=53)
Mean age (sd)	31.9 (12.3)	9.2 (4.2)
% cost increase with MA (range)	156 (11-900)	197 (9-600)
MA test results altered management, n(%)	6 (8.6)	7 (13.2)
MA test results provided useful diagnostic support, n(%)	9 (12.8)	2 (3.7)
MA test results had no impact on diagnosis or management, n(%)	55 (78.6)	44 (83)

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Published: 30 March 2015

doi:10.1186/2045-7022-5-S3-O3

**Cite this article as:** Conlon *et al.*: Molecular-based allergy diagnostics in the real world: evidence for a cost explosion and an impact vacuum. *Clinical and Translational Allergy* 2015 **5**(Suppl 3):O3.

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