

The NHS Grampian Active Allergy Programme: A Digitally-Enabled Paediatric Dietetic Service for Cow's Milk Protein Allergy



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Introduction

Cow's milk protein allergy (CMPA) affects 2-3% of children and usually presents in the first few months of life. The International Milk Allergy Protein Guidelines (iMAP) (1) set out recommended diagnosis and management, which includes specialist allergy dietitian assessment and an appropriate milk exclusion diet.

The Challenge in Grampian

1. Infants in NHS Grampian have limited access to specialist paediatric dietitians due to a combination of broad geography and a small workforce
2. Most infants with non IgE mediated CMPA were being managed by GPs, who often have limited training and experience in CMPA
3. Audits of prescribing of CMPA formulas in Grampian showed 2-3x higher spending than expected for CMPA prevalence rate, suggesting high levels of inappropriate prescribing

Aim & Objective

Aim: To assess the efficacy and safety of a new technology-enabled 100% remote specialist allergy dietitian service across NHS Grampian for the management of non-IgE mediated CMPA

Objective: Drive >£100k of savings in CMPA-related prescribing costs which were historically increasing 10% year-on-year.

Methods

Implementing a new care pathway

We undertook a 12 month pilot from 01/04/2018 to 31/3/2019 which included:

1. New Rapid Access clinic that GPs and Health Visitors could refer into for infants with suspected or diagnosed non-IgE mediated CMPA.
2. GP practice audits, identifying all infants currently on a formula for CMPA, and inviting them for dietitian assessment to support best practice management.
3. Education sessions, both face-to-face and via a digital platform, for healthcare professionals including GPs and Health Visitors

All patient care was provided remotely as an initial phone or video-call, with follow up via the NHS Digital approved Oviva smartphone app or phone calls.

Data collection and evaluation

We monitored:

- The number of GP practices signing up
- The number of rapid access referrals received, and their diagnoses and management plans
- The findings of GP practice audits, including whether iMAP guidelines were being followed
- The number of parents/carers opting for Oviva smartphone app based follow up
- Feedback (via survey forms) from service users as well as GPs and Health Visitors
- Prescribing spends for CMPA formulas in NHS Grampian on a quarterly basis.

Results

During the project:

- 31 GP practices signed up
- 222 total rapid access referrals were received and assessed by the dietitian
- 17 GP practices were audited and a further 170 infants were identified as likely on an inappropriate formula, with 119 of these being reviewed by the dietitian.

Our findings:

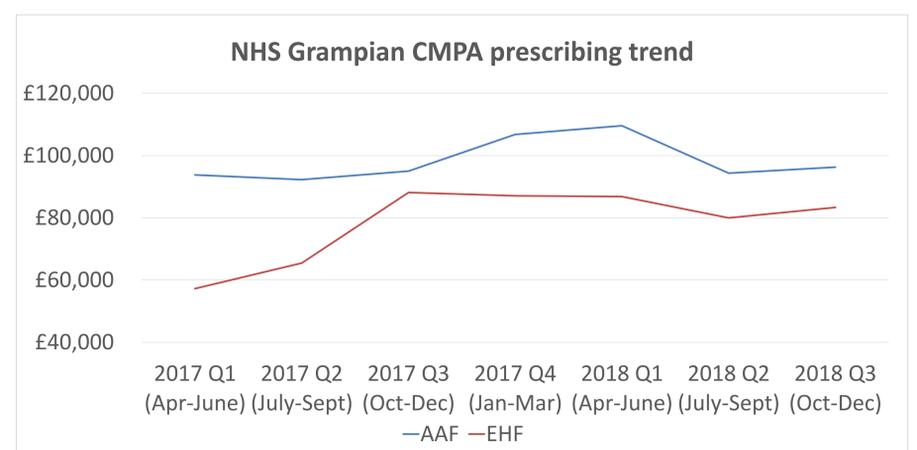
- 9 in 10 of parents opted for Oviva app based follow up
- Nearly 100% of infants were not having the Milk Challenge or Ladder as per the iMAP guidelines, resulting in significant avoidable prescribing costs
- Of 222 referrals into the rapid access clinic, 83% (186) were on a prescribed formula for CMPA. Following the Milk Challenge, 13% of 100 infants were found not to have CMPA and could have their formula stopped.
- Of 119 reviews of infants identified in audit, 79% (94) had formulas stopped (safely transitioned to store-bought alternatives), and a further 7% (8) had their prescription volumes reduced.
- We achieved £175,000 of prescribing savings, with an average 2% quarterly decline in infant formula prescribing since service commencement compared to a historical trend of 10% quarterly growth

Parents: 100% positive feedback

(N = 52) strongly agreed or agreed that they would recommend the service to friends and family, found the Oviva app simple to use, and felt more confident in managing their child's diet.

GPs and Health Visitors: 100% positive feedback

(N = 40) strongly agreed or agreed that training from the allergy dietitian has improved their knowledge and management of CMPA.



Conclusion

Findings show that iMAP guidelines are not being implemented in primary care in NHS Grampian resulting in significant avoidable costs and potential risks to infants.

Providing a 100% remote, technology-enabled specialist paediatric allergy dietitian service has demonstrated clear efficacy and safety, with strong parent and GP satisfaction levels. The service has increased 'quality of care' through higher adherence to the International Milk Allergy Protein Guidelines and driven 'value and sustainability' through significant prescribing efficiencies in NHS Grampian.

Rolling out such a service across NHS Scotland could dramatically improve diagnosis and management of CMPA and drive over £5 million in annual prescribing savings.

(1) Venter C, et al. Better recognition, diagnosis and management of non-IgE-mediated cow's milk allergy in infancy: iMAP - an international interpretation of the MAP (Milk Allergy in Primary Care) guideline. Clinical and Translational Allergy 2017;7:26 <https://doi.org/10.1186/s13601-017-0162-y>

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