

Executive Summary - Understanding international provision of allergen information

Introduction

RSM UK Consulting LLP (RSM) along with Dr Audrey DunnGalvin at University College Cork Consulting and members of Allergy UK, have been commissioned by the Food Standards Agency (FSA) to carry out a rapid evidence assessment into the international provision of allergen information associated with the sale of non-prepacked food. The aim of this review is to synthesise and summarise the evidence base, evaluating the current understanding of the international provision of allergen information in the non-prepacked sector. This research serves to support FSA and inform policy development and guidance in this area.

Methodology

To undertake this rapid evidence assessment, we first developed a search protocol to guide the literature search. On the basis of this, we searched for relevant academic and grey literature across all 18 countries within scope. A longlist of records was screened at title (N = 636) and abstracts of the included titles (N = 321) using the second-level inclusion and exclusion criteria in Appendix A (i.e. relevance to research questions or outcomes). This list was tested for relevance and robustness following the Department of Environment, Food and Rural Affairs (DEFRA) guidance for critical appraisal of evidence ([footnote 1](#)) and resulted in a shortlist of 56 articles for full extraction and narrative synthesis for each research question.

We also sought to fill gaps in the reviewed literature and further develop our understanding of areas covered by the literature, and therefore we conducted 13 stakeholder interviews. Two workshops were undertaken with our panel including our academic advisor and representatives from Allergy UK, and FSA stakeholders. Conclusions, evidence gaps and areas for future consideration were triangulated across research themes.

Findings

There was limited or no evidence in the literature reviewed as to whether approaches are associated with improved safety, compliance, unintended consequences or feasibility. Table 1 provides a summary of key findings that address the study themes. We are conscious that much change is taking place in this area on an ongoing basis (with published literature not always being up to date with these developments) and this should be kept in mind when reading this report.

Table 1 Key findings to address study themes

Results theme	Findings
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<p>Non-prepacked sector legislation</p>	<ul style="list-style-type: none"> • We were able to find legislation for nine of the 18 countries within the scope for this project, as well as for the EU region as a whole. • Legislation provision varies across countries/ regions with five mandating written provision (Republic of Ireland, Lithuania, Norway, US and Canada), and in four regions/countries either written or verbal provision is accepted (Netherlands, Switzerland, UK as well as EU-wide except the countries mentioned earlier). • No relevant legislation or guidance was found in English in Belgium, Denmark, Germany, Sweden, Australia, India, Malta, New Zealand or South Africa. However, EU countries follow EU legislation as a minimum requirement, which would apply to Denmark, Belgium, Germany, Malta and Sweden.
<p>Trends in related deaths or incidents</p>	<ul style="list-style-type: none"> • The number of food allergy related reactions or hospitalisations appear to be rising worldwide, as evidenced in New Zealand, South Africa, and USA (footnote 2). • Due to limited data, we were unable to identify or report trends in deaths or allergic reactions pre and post implementation of legislation, in any country. Similarly, there was not enough evidence to allow an analysis of incidents associated with different types or categories of FBOs selling non-prepacked foods. • There are geographical differences in the allergens known to trigger anaphylaxis reactions, based on the most commonly available food sources in that region.
<p>Enforcement process and capabilities</p>	<ul style="list-style-type: none"> • There was limited evidence regarding enforcement processes and capacity across the 18 in-scope countries and regions. • The literature found that verification of the use of PAL can be challenging as it is inconsistently interpreted and applied by food businesses (footnote 3).
<p>Consequences of non-compliance</p>	<ul style="list-style-type: none"> • There is a large variation in the published rates of non-compliance across countries, ranging from 14% in Switzerland (footnote 4) to 88% in Ireland (albeit from 2017) (footnote 5). • There is little evidence on the consequences that FBOs have faced for non-compliance. The available evidence showed that in three countries, non-complying FBOs tend to face fines and/or are issued with written warnings. (footnote 6) (footnote 7) (footnote 8)

What works, for whom and why	<ul style="list-style-type: none">• Our review of the literature highlighted a gap in the current evidence which meant we couldn't answer this question.
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Considerations for further research

The literature reviewed does not provide evidence of 'what works' for different approaches, for example in terms of improved safety, compliance, unintended consequences, or feasibility. This means that we are unable to provide clear recommendations for FSA.

We have instead gathered information on the 'problems raised in the research' including the challenge for inspectors to verify verbal information, the level of confidence amongst consumers with the verbal information provided by food businesses, the gap in awareness or understanding related to food allergies amongst staff and inconsistency in the interpretation and use of PAL by businesses and consumers alike.

There were suggestions in the evidence on what may work including:

- Increasing or improving the written provision of allergen information ([footnote 9](#)) ([footnote 10](#))
- Standardisation of information provision, for example in terms of placement of allergen information and use of symbols ([footnote 11](#)) ([footnote 12](#))
- Introducing best practice or regulation for PAL and improving education for all stakeholders regarding interpretation and use of precautionary labelling ([footnote 13](#))
- Address the potential resourcing gap faced by enforcement authorities ([footnote 14](#))
- Better opportunities for food allergen training, particularly if self-paced, with real world examples and simple language ([footnote 15](#)) ([footnote 16](#))

The above is not an exhaustive list of potential options to consider, and further research is required to develop other options. Further systematic reviews, evaluations or feasibility studies would be required before any potential solution is implemented.

It is important to also note that the strength of the evidence underlying the problems and potential solutions identified in this report from the reviewed literature varied, ranging from news reports, conference papers, published audits, official legislation and peer-reviewed academic literature with large mixed-method studies and systematic reviews.

1. DEFRA (2015)

[Production_of_quick_scoping_reviews_and_rapid_evidence_assessments.pdf](#)
([publishing.service.gov.uk](#))

2. New Zealand: Speakman, S., Kool, B., Sinclair, J. & Fitzharris, P., 2018. Paediatric food-induced anaphylaxis hospital presentations in New Zealand. J Paediatr Child Health, Issue 54, pp. 254-259.

US: Chaaban, M. R. et al., 2019. Epidemiology and trends of anaphylaxis in the United States, 2004-2016. Int Forum Allergy Rhinol., Issue 9, p. 607– 614.

UK: Wells, R. et al., 2022. National Survey of United Kingdom Paediatric Allergy Services. Clinical & Experimental Allergy, 52(11), p. 1276–1290

3. DunnGalvin, A., Roberts, G., Regent, L., Austin, M., Kenna, F., Schnadt, S., Sanchez? Sanz, A., Hernandez, P., Hjorth, B., Fernandez?Rivas, M. and Taylor, S., 2019. Understanding how consumers with food allergies make decisions based on precautionary labelling. *Clinical & Experimental Allergy*, 49(11), pp.1446-1454.
4. Eisenblätter, J., Schumacher, G., Hirt, M. et al. How do food businesses provide information on allergens in non-prepacked foods? A cross-sectional survey in Switzerland. *Allergo J Int* 31, 43–50 (2022). <https://doi.org/10.1007/s40629-021-00191-5>
5. Food Safety Authority of Ireland. Targeted Audit of Allergen Information of Non-prepacked Food. (2017).
6. Food Safety Authority of Ireland. Targeted Audit of Allergen Information of Non-prepacked Food. (2017).
7. Food Safety News. Dutch control finds gaps in allergen information given to consumers (2022).
8. Republic of Philippines, Act mandating the disclosure of food allergens in products offered by food establishments and for other purposes, (2022).
9. Begen, Fiona M., Julie Barnett, Ros Payne, Debbie Roy, M. Hazel Gowland, and Jane S. Lucas. "Consumer preferences for written and oral information about allergens when eating out." *PloS one* 11, no. 5 (2016): e0156073.
10. Marra, C.A., Harvard, S., Grubisic, M., Galo, J., Clarke, A., Elliott, S. and Lynd, L.D., 2017. Consumer preferences for food allergen labeling. *Allergy, Asthma & Clinical Immunology*, 13, pp.1-11.
11. Republic of Philippines, Act mandating the disclosure of food allergens in products offered by food establishments and for other purposes, (2022).
12. Begen, Fiona M., Julie Barnett, Ros Payne, Debbie Roy, M. Hazel Gowland, and Jane S. Lucas. "Consumer preferences for written and oral information about allergens when eating out." *PloS one* 11, no. 5 (2016): e0156073.
13. Madsen, C.B., van den Dungen, M.W., Cochrane, S., Houben, G.F., Knibb, R.C., Knulst, A.C., Ronsmans, S., Yarham, R.A., Schnadt, S., Turner, P.J. and Baumert, J., 2020. Can we define a level of protection for allergic consumers that everyone can accept?. *Regulatory Toxicology and Pharmacology*, 117, p.104751
14. Based on qualitative interviews we conducted in this study
15. Soon, J.M., 2020. 'Food allergy? Ask before you eat': Current food allergy training and future training needs in food services. *Food Control*, 112, p.107129.

16. Lee, Y.M. and Sozen, E., 2016. Food allergy knowledge and training among restaurant employees. *International Journal of Hospitality Management*, 57, pp.52-59