Participatory action research to disseminate EAACI food allergy and anaphylaxis guidelines and raise whole school food allergy awareness via development of a practical online 'self-service' process toolkit for UK secondary schools

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Introduction
Recent deaths in UK schools have reinforced the urgency for embedding whole school allergy awareness to minimise risk [1]. Whilst essential, training for emergency AAI administration is not an adequate safeguard in isolation for the school environment [2]. Participatory action research [3-4] is a powerful symbiotic method employing a series of iterative loops of diagnosing, planning, taking action and evaluating to gradually create a contextually appropriate solution to a problem [5]. This analytical framework helps schools immediately begin to improve their whole school practices, whilst working towards implementation of school-specific action plans and a robust allergy policy, embracing best practice [2, 6-7]. Focusing on secondary schools recognises the high risk of this age group [8-10].

Methods
A key stakeholder cross-disciplinary workshop in 2015 initiated a participatory action research programme to develop resources, enabling hands-on, school-led, iterative evaluation of support materials at every stage of the process towards developing whole school allergy awareness. User feedback justified modification, ready for re-testing in three different case study schools. This co-productive approach resonates with school systems. Self-service piloting by new schools, with remote support and monitoring by us will proof-test the toolkit ready for release in downloadable format.

Results
1. Refined process toolkit now available for schools to work through the consecutive stages 'in-house'[11].
2. Toolkit comprises template meeting agendas, activities and resources.
3. Staged process drives whole school risk assessment via a School Allergy Action Group, enabling education of ALL staff, catering, parents and pupils; creation of bespoke action plans, designed to address identified priority issues for their school; and development of best practice policy.
4. Continuous review process is instilled into toolkit for risk reduction.
5. Figure 1 illustrates example outcomes.

Figure 1: Whole School Allergy Awareness Process stages with Outcomes

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<tr>
<th>School Allergy Action Group (SAAG) programme and meeting objectives</th>
<th>Example Outcomes from case study schools that have resulted in policy change and influenced toolkit content</th>
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<td>Pre SAAG: Telephone introductions: To register and discuss the current situation in your school; and outline the process involved.</td>
<td>Sch 1- approached for help 'after experiencing an incident which gave them the warning needed to make some rigorous changes in their allergy management practices and, just as importantly, in the approach of the whole school community towards allergy management'.</td>
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**SAAG 1: Where are we NOW in relation to food allergies?** To introduce the project; explain the role of the SAAG; and find out what is currently happening in school in relation to food allergy management.

- **Sch 2** identified that AAIs are in a locked cupboard, in a locked room, with only staff access and the keys are with reception next door.
- **Sch 2 & Sch 3** identified that they did not have an allergy policy; nor good knowledge of numbers in the school with allergies.
- **Sch 2** identified that many of the AAIs held for pupils were out of date.

**Sch 1** - Although appropriate allergy and medical information is available via SIMs and a central list, it was suggested that all sports coaches (including part time) should have more dedicated time with nurse so that they have the necessary knowledge; a broader staff INSET on allergies could be scheduled.

**Sch 3** - Feedback from in house survey - majority of pupils felt the school wasn’t safe for pupils with a food allergy.

**SAAG 2: Where do we want to be in relation to food allergies?** To provide information on why a Whole School Allergy Awareness Policy on Food Allergy Management is important; to give the whole group an insight into what it is like to live with a food allergy; to consider results of the pupil, parent and staff surveys carried out by SAAG members.

- **Sch 1** - Although appropriate allergy and medical information is available via SIMs and a central list, it was suggested that all sports coaches (including part time) should have more dedicated time with nurse so that they have the necessary knowledge; a broader staff INSET on allergies could be scheduled.
- **Sch 3** - Feedback from in house survey - majority of pupils felt the school wasn’t safe for pupils with a food allergy.

**Sch 1** - Realised that its catering dept operated a ‘nut-free’ policy whereas the school did not. Steps were taken through SAAG 3 to discuss alternative communication mechanisms for catering to encourage pupils with allergy to ask questions and not assume the dining room was safe. Catering recognised this as a more helpful approach for preparing pupils for independent living.

**Outcome:** Focus on the importance of appropriate communication around food allergy to encourage constant vigilance by all (e.g., talking about ‘nut-bans’ is not a policy for whole school awareness).

**Sch 3** - Catering staff to audit that products are allergen free.

**Sch 3** - School trip medication policy is now being updated to include a section on allergy.

**SAAG 3: Empowering the consumer:** To explore how the school can empower pupils with food allergy to make informed choices for themselves and thereby help prepare them for living in the wider world.

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**SAAG 4: How are we going to get there?** To reflect on the importance of time management when treating anaphylaxis and how this may inform practice in school; to compare current food allergy management practice in relation to the EAACI guidelines; and to start raising awareness of food allergy throughout school.

- **Sch 3** - No SMT presence at the meeting resulted in poor leadership and no agreement on next steps.

**Outcome:** Reinforced need for SMT to be integral with the process from outset and this is now embedded into the framework.

**SAAG 5: Drawing it altogether and creating policy:** To draw on the conversations and discussions that have taken place in SAAG’s 1-4 in order to: 1) Draft the Whole School Allergy Awareness and Practical Information, issues and actions carried out during the previous SAAGs helps schools to develop allergy policy specific to them.

**Outcome:** Sample policies are available on the Allergy UK’s website.
**Action Management Policy; 2) Draft the schools associated Action Plan.**

**SAAG 6: The End Product:** To consider the first drafts of the Whole School Allergy Awareness and Practical Action Management Policy and Action Plan; To agree how to disseminate the policy and action plan throughout the school; and to celebrate the work done.

**Sch 2-** The SAAG process identified there was confusion around allergy management: if pupils had a reaction, they would be (incorrectly) advised to go to reception; and AALs were only available in a locked cupboard in a locked room. Policy has been written to reflect EAACI guidelines and practices have changed.

**Sch 1-** SAAG meetings have helped to develop better communications with parents on allergy matters – parents who have attended have made valuable input into helping the School develop its policies and procedures and have also, on several occasions, been reassured by the measures that the school already has in place.

**SAAG 7[+] Regular re-assessment of the impact of your schools Whole School Allergy Awareness and Management Policy:** To recap on the requirements of effective allergy management; to recruit, update and inform new SAAG members; to review progress against your action plan; to assess the impact of your policy and plan; to consider how the SAAG process could be utilised to start to consider non-food allergens; to troubleshoot as appropriate; and to embed timeline for regular review.

**Sch 1-** reported concerns that the same recurring agenda may cause interest in attending review SAAG meetings to wain.

**Outcome:** a new agenda is under development designed to ensure a unique experience at each SAAG meeting and so maintain interest.

**Conclusion**

Live testing in school, with concurrent evaluation and modification of materials has enabled faster development of effective tools for wide scale dissemination. Following the remote piloting and evaluation it will be made available as a free download on [https://www.allergyuk.org/](https://www.allergyuk.org/). As an online process toolkit, continued evolution based on best practice guidance is automatically picked up by schools, since regular review has been built in.

Improving awareness of the whole school community has the potential to reduce risk of allergic reactions and empower secondary school pupils with allergies, to live independent lives.

**References**


