NATIONAL INSTITUTE FOR HEALTH AND CARE EXCELLENCE

Health and social care directorate

Quality standards and indicators

Briefing paper

Quality standard topic: Food allergy and anaphylaxis

Output: Prioritised quality improvement areas for development.

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Contents

1 Introduction

This briefing paper presents a structured overview of potential quality improvement areas for food allergy and anaphylaxis. It provides the Committee with a basis for discussing and prioritising quality improvement areas for development into draft quality statements and measures for public consultation.

1.1 Structure

This briefing paper includes a brief description of the topic, a summary of each of the suggested quality improvement areas and supporting information.

If relevant, recommendations selected from the key development source below are included to help the Committee in considering potential statements and measures.

1.2 Development sources

The key development sources referenced in this briefing paper are:

- Anaphylaxis (2011) NICE guideline CG134. Review decision made August 2014 not to update the guideline.
- Food allergy in children and young people (2011) NICE guidelines CG116. Following consultation with stakeholders (February 2014) this guideline has now been placed on the static list.

2 Overview

2.1 Focus of quality standard

This quality standard will cover diagnosis and assessment of food allergy in primary care and community settings. It will also cover anaphylaxis (caused by any stimulus), including management and what to do after acute treatment, assessment to confirm an anaphylactic episode and referral to a specialist allergy service.

2.2 Definition

Food allergy

Food allergy is an adverse immune response to a food. It can be classified into IgE-mediated and non-IgE-mediated reactions. IgE-mediated reactions are acute and frequently have a rapid onset. Non-IgE-mediated reactions are generally characterised by delayed and non-acute reactions. Some reactions involve a mixture

of both IgE and non-IgE responses and are classified as mixed IgE and non-IgE allergic reactions.

Food allergy symptoms can affect several parts of the body at the same time, including[1]:

- an itchy sensation inside the mouth, throat or ears
- a raised itchy red rash (known as urticaria or hives)
- swelling of the face, around the eyes, lips, tongue and roof of the mouth (known as angioedema)
- vomiting.

Food allergy may be confused with food intolerance, which is a non- immunological reaction that can be caused by enzyme deficiencies, pharmacological agents and naturally occurring substances.

Anaphylaxis

Anaphylaxis is a severe, life-threatening, generalised or systemic hypersensitivity reaction. It is characterised by rapidly developing, life-threatening problems involving: the airway (pharyngeal or laryngeal oedema) and/or breathing (bronchospasm with tachypnoea) and/or circulation (hypotension and/or tachycardia). In most cases, there are associated skin and mucosal changes[2].

In emergency departments a person who presents with the signs and symptoms listed above may be classified as having a 'severe allergic' reaction rather than an 'anaphylactic' reaction. In NICE clinical guideline 134, anyone who presents with such signs and symptoms was classed as experiencing a 'suspected anaphylactic reaction', and should be diagnosed as having 'suspected anaphylaxis'.

Anaphylaxis may be an allergic response that is immunologically mediated, or a non-immunologically mediated response, or idiopathic. Certain foods, insect venoms, some drugs and latex are common precipitants of immunoglobulin E (IgE)-mediated allergic anaphylaxis. Many drugs can also act through nonallergic mechanisms. A significant proportion of anaphylaxis is classified as idiopathic, in which there are significant clinical effects but no readily identifiable cause. The relative likelihood of the reaction being allergic, nonallergic or idiopathic varies considerably with age.

A sub-set of people will experience biphasic anaphylaxis. This is where a recurrence of symptoms occurs within 72 hours (after complete recovery of anaphylaxis) with no further exposure to the allergen that triggered the initial anaphylactic reaction.

[1] Food Allergy. NHS Choices.
[2] Emergency treatment of anaphylactic reactions. Guidelines for healthcare providers.(2008) Resuscitation Council (UK)

2.3 Incidence and prevalence

Food allergy

Food allergy is one of the most common allergic disorders and is a major paediatric health problem in Western countries; due to the potential severity of reactions and a dramatic increase in prevalence. Between March 2013 and February 2014, there was a 6.4% increase in admissions for food allergy to hospitals in England (compared to the previous year)[3].

The prevalence of food allergy in Europe and North America has been reported to range from 6% to 8% in children up to the age of 3 years. Prevalence in adults has been estimated at 1-2%[4].

Determining an accurate estimate of true food allergy prevalence is difficult, as self-reporting is likely to overestimate incidence. The NICE clinical guideline 116 reported that only 25-40% of self-reported food allergy is confirmed as true clinical food allergy by oral food challenge testing.

The most common foods that children and young people are allergic to are: cows' milk, fish, hen's eggs, kiwi fruit, peanuts, sesame, shellfish, soy, tree nuts and wheat. However there are also less common allergies to certain fruits, for example banana. In adults, the most common causes of food allergy are: peanuts, tree nuts (including walnuts, brazil nuts, almonds and pistachios), fish and shellfish (for example crab, lobster, prawns)[5].

Anaphylaxis

People who have had a mild or moderate allergic reaction are at risk of, and may subsequently present with, suspected anaphylaxis. Certain groups may be at higher risk, either because of an existing comorbidity (for example asthma) or because they are more likely to be exposed to the same allergen again (for example people with venom allergies or reactions to specific food triggers).

Between March 2013 and February 2014 approximately 1 in 5 admissions to hospitals in England due to allergies were for an anaphylactic reaction (4070 out of 20,318). This was an increase of 9.9% on the same period in the previous year[6]. Rates of admission for anaphylactic reaction varied nationally between Area Teams

[3] Provisional Monthly Hospital Episode Statistics for Admitted Patient Care, Outpatients and Accident and Emergency Data - April 2013 to February 2014. HSCIC
[4] Memorandum by the Institute of Food Research (IFR). Select Committee on Science and Technology.
[5] Food Allergy. NHS Choices.
[6] Provisional Monthly Hospital Episode Statistics for Admitted Patient Care, Outpatients and Accident and Emergency Data - April 2013 to February 2014. HSCIC

in this period; from 5.1 per 100,000 of the population to 11.2 per 100,000 of the population[7].

Figures on the frequency of anaphylaxis from all causes are difficult to determine. This is because anaphylaxis is often not recorded, or may be misdiagnosed as something else (for example asthma). It may also be recorded by cause, such as food allergy, rather than as an anaphylactic reaction. The NICE CG134 guideline reported an available UK estimate that about 1 in 1,333 of the population of England had experienced anaphylaxis at some point in their lives. However, a systematic review published in 2013 estimated that 1 in 300 people in Europe were affected by anaphylaxis at some point in their lives[8].

A study published in 2010, based on data from The Health Improvement Network database, reported anaphylaxis incidence rates of 21.28 per 100,000 person-years (95% CI, 17.64-25.44) in people with no asthma. In people with asthma, anaphylaxis incidence rates increased to 50.54 per 100,000 person-years[9]. The causes of anaphylaxis in this study (382 cases in total) were drugs (27%), food (24%), insect stings (12%), latex (3%) and unknown cause (27%).

A recently published paper reported a 615% increase in the number of hospital admissions from all-cause anaphylaxis in the UK between 1992 and 2012 (an increase of 1 to 7 cases per 100,000 population per annum)[10]. However, the same paper also reported that annual fatality rates from all-cause anaphylaxis remained stable during this time period (0.047 cases [95% CI, 0.042-0.052 cases] per 100,000 population). A previous study stated that there were approximately 20 deaths from anaphylaxis reported each year in the UK, with around half the deaths being iatrogenic, although this may be an underestimate of the true incidence[11].

The incidence of anaphylaxis caused by a particular trigger varies across age groups. Food has been noted as a particularly common trigger in children, while medicinal products are much more common triggers in older people. A published analysis of hospital admissions and fatalities in England and Wales between 1992 and 2012 reported that the highest rates of drug- and insect-induced anaphylaxis occurred in people aged 60 or older. However, for food-induced anaphylaxis,

[7] Provisional Monthly Hospital Episode Statistics for Admitted Patient Care, Outpatients and Accident and Emergency Data - April 2013 to February 2014. HSCIC
[8] The epidemiology of anaphylaxis in Europe: a systematic review. (2013) Allergy Nov;68(11):1353-61
[9] Anaphylaxis epidemiology in patients with and patients without asthma: a United Kingdom database review. (2010) J Allergy Clin Immunol. May;125(5):1098-1104
[10] Increase in anaphylaxis-related hospitalizations but no increase in fatalities: an analysis of United Kingdom national anaphylaxis data, 1992-2012 (2015) J Allergy Clin Immunol Apr;135(4):956-63.
[11] Lessons for management of anaphylaxis from a study of fatal reactions. (2000) Clin Exp Allergy. Aug;30(8):1144-50

admission was commonest in young people and the highest incidences of fatality occurred in people in their second and third decades of life[12].

2.4 Management

Food allergy

People with a clear diagnosis of food allergy, and mild but persistent symptoms, are usually managed in general practice without referral to a specialist service. Some people with allergies, and the parents or carers of children and young people with allergies, also buy over-the-counter medicines from community or high-street pharmacies. However, if there is diagnostic doubt or symptoms of a more severe disease, GPs often consider referral for a specialist opinion. Depending on the local service provision this may be delivered:

- in an allergy clinic run by an allergist or a paediatric allergist
- in an allergy clinic run by a consultant in another specialty (such as respiratory or immunology)
- within children's services (although many children are seen within adult services).

See appendix 1 for the associated care pathway and algorithms from NICE clinical guideline 116.

Anaphylaxis[13]

Anaphylaxis should always be treated as a medical emergency and an injection of adrenalin should be given as soon as possible – potentially via an adrenalin auto-injector which people at risk of anaphylaxis should carry.

Even if an adrenalin injection has been given, a person with a suspected anaphylactic reaction will still need to go to hospital for observation (symptoms can occasionally return during this time). Oxygen masks can be used to help breathing and an intravenous drip can help to increase blood pressure. In addition to adrenaline, medication such as antihistamines and corticosteroids can be used to relieve symptoms. Blood tests are used to confirm anaphylaxis. The duration of stay in hospital will vary (from a few hours to a few days) depending on the likelihood of symptoms returning and the severity of the reaction.

Follow-up appointments are used to give advice about avoiding future episodes of anaphylaxis, along with provision of an adrenaline auto-injector for emergency use between leaving hospital and attending the follow-up meeting.

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[12] Increase in anaphylaxis-related hospitalizations but no increase in fatalities: an analysis of United Kingdom national anaphylaxis data, 1992-2012 (2015) J Allergy Clin Immunol Apr;135(4):956-63.
[13] Adapted from Anaphylaxis and Anaphylaxis- Treatment. NHS Choices.

See appendix 2 for the associated care pathway and algorithms from NICE clinical guideline 134.

2.5 National Outcome Frameworks

Tables 1–2 show the outcomes, overarching indicators and improvement areas from the frameworks that the quality standard could contribute to achieving.

Table 1 NHS Outcomes Framework 2015–16

Domain	Overarching indicators and improvement areas
2 Enhancing quality of life for people with long-term conditions	***Overarching indicator*** 2 Health-related quality of life for people with long-term conditions** ***Improvement areas*** **Ensuring people feel supported to manage their condition** 2.1 Proportion of people feeling supported to manage their condition **Reducing time spent in hospital by people with long-term conditions** 2.3 i Unplanned hospitalisation for chronic ambulatory care sensitive conditions
4 Ensuring that people have a positive experience of care	***Overarching indicators*** 4a Patient experience of primary care i GP services 4b Patient experience of hospital care 4c *Friends and family test* *4d Patient experience characterised as poor or worse* *I Primary care* *ii Hospital care* ***Improvement areas*** **Improving people's experience of outpatient care** 4.1 Patient experience of outpatient services **Improving people's experience of accident and emergency services** 4.3 Patient experience of A&E services **Improving children and young people's experience of healthcare** *4.8 Children and young people's experience of inpatient services*
Alignment with Adult Social Care Outcomes Framework and/or Public Health Outcomes Framework * Indicator is shared ** Indicator is complementary Indicators in italics in development	

Table 2 Public health outcomes framework for England, 2013–2016

Domain	Objectives and indicators
1 Improving the wider determinants of health	***Objective*** Improvements against wider factors that affect health and wellbeing and health inequalities ***Indicators*** 1.9 Sickness absence rate
4 Healthcare public health and preventing premature mortality	***Objective*** Reduced numbers of people living with preventable ill health and people dying prematurely, whilst reducing the gap between communities ***Indicators*** 4.1 Infant mortality* 4.3 Mortality rate from causes considered preventable** 4.11 Emergency readmissions within 30 days of discharge from hospital*
Alignment with Adult Social Care Outcomes Framework and/or NHS Outcomes Framework * Indicator is shared ** Indicator is complementary Indicators in italics in development	

3 Summary of suggestions

3.1 Responses

Nine stakeholders responded to the 2-week engagement exercise 08/06/15 - 22/06/15. Two further stakeholders responded that they had no comments to make at this time.

Stakeholders were asked to suggest up to 5 areas for quality improvement. Specialist committee members were also invited to provide suggestions. The responses have been merged and summarised in table 3 for further consideration by the Committee.

NHS England's patient safety division submitted comments during stakeholder engagement, requesting that the QS development group recognise the issues of safety as well as effectiveness when considering the management of food allergies and anaphylaxis, and citing relevant work that has been or is being undertaken. The comments (and links to identified documents) can be found in full in appendix 3.

Full details of all the suggestions provided are given in appendix 3 for information.

Table 3 Summary of suggested quality improvement areas

Suggested area for improvement	Stakeholders
Clinical assessment after emergency treatment for suspected anaphylaxis	SCM1
Referral to a specialist allergy service after emergency treatment for suspected anaphylaxis	BSACI, SCM4
Provision of adrenalin injectors after emergency treatment for suspected anaphylaxis	BSACI, SCM1, SCM2, SCM3
Assessment and allergy-focused clinical history	BSACI, SCM1, SCM2, SCM3, SCM4
Diagnosis of IgE mediated food allergy	BSACI, SCM2, SCM4
Diagnosis of non-IgE mediated food allergy • Food elimination diets • Provision of dietary advice	BSACI, NDR-UK, SCM2, SCM4
Referral to secondary or specialist care for people with food allergy	BSACI, SCM1, SCM3

Suggested area for improvement	Stakeholders
Additional areas • Coeliac disease • Future projects and service delivery • Development of an algorithm for secondary care • Suggestions to add further developmental sources	BSACI, CUK, RCPCH, SCM1, SCM2, SCM3
BSACI, The British Society for Allergy & Clinical Immunology CUK, Coeliac UK NDR-UK, Nutrition and diet resources UK RCPCH, Royal College of Paediatrics and Child Health SCM, Specialist Committee Member	

4 Suggested improvement areas

4.1 Clinical assessment after emergency treatment for suspected anaphylaxis

4.1.1 Summary of suggestions

A stakeholder highlighted the importance of recording what happened at the time of an anaphylactic reaction and also the need to undertake the necessary blood tests to confirm whether anaphylaxis has occurred.

4.1.2 Selected recommendations from development source

Table 4 below highlights recommendations that have been provisionally selected from the development source that may support potential statement development. These are presented in full after table 4 to help inform the Committee's discussion.

Table 4 Specific areas for quality improvement

Suggested quality improvement area	Suggested source guidance recommendations
Clinical assessment after emergency treatment for suspected anaphylaxis	NICE CG134 Recommendation 1.1.1 NICE CG134 Recommendation 1.1.2 NICE CG134 Recommendation 1.1.3 NICE CG134 Recommendation 1.1.4 NICE CG134 Recommendation 1.1.5

NICE CG134 – Recommendation 1.1.1

1.1.1 Document the acute clinical features of the suspected anaphylactic reaction (rapidly developing, life-threatening problems involving the airway [pharyngeal or laryngeal oedema] and/or breathing [bronchospasm with tachypnoea] and/or circulation [hypotension and/or tachycardia] and, in most cases, associated skin and mucosal changes).

NICE CG134 – Recommendation 1.1.2

1.1.2 Record the time of onset of the reaction.

NICE CG134 – Recommendation 1.1.3

1.1.3 Record the circumstances immediately before the onset of symptoms to help to identify the possible trigger.

NICE CG134 – Recommendation 1.1.4

1.1.4 After a suspected anaphylactic reaction in adults or young people aged 16 years or older, take timed blood samples for mast cell tryptase testing as follows:

- a sample as soon as possible after emergency treatment has started
- a second sample ideally within 1–2 hours (but no later than 4 hours) from the onset of symptoms.

NICE CG134 – Recommendation 1.1.5

1.1.5 After a suspected anaphylactic reaction in children younger than 16 years, consider taking blood samples for mast cell tryptase testing as follows if the cause is thought to be venom-related, drug-related or idiopathic:

- a sample as soon as possible after emergency treatment has started
- a second sample ideally within 1–2 hours (but no later than 4 hours) from the onset of symptoms.

4.1.3 Current UK practice

Documenting details of anaphylactic reactions

No studies on current practice data were identified concerning the documenting of details of anaphylactic reactions.

Mast cell tryptase testing

Data presented at annual meetings of the British Society for Allergy & Clinical Immunology (BSACI) in 2012 and 2013 suggest varying levels of mast cell tryptase testing:

- A presented retrospective audit of the records of children (< 16 years) presenting to a teaching hospital in 2012 reported that mast cell tryptase measurements were not taken in 3 out of 17 children presenting with features suggestive of anaphylaxis[14].

- An audit of children presenting to the Royal Manchester Children's Hospital (RMCH) A&E department over a similar time period (March 2011 to March 2012)

[14] The management and follow-up of patients presenting with anaphylaxis to the paediatric emergency department. (2013) British Society for Allergy and Clinical Immunology Abstracts of the 2013 Annual Meeting. Clinical & Experimental Allergy. Volume 43, Issue 12.

reported that 1 out of 113 children presenting for allergy in this period (including 14 presenting with anaphylaxis) had mast cell tryptase measured[15].

- In addition, a review of children admitted with suspected anaphylaxis to Morriston hospital between June 2011 and May 2012 (n=28) reported that none had tryptase samples taken appropriately in line with NICE guidance criteria[16].

Notably, all these studies relate to children and all took place shortly after NICE guidance CG134 published.

[15] Audit of paediatric emergency department allergy management in comparison with recent nice guidelines. (2012) British Society for Allergy and Clinical Immunology Abstracts of the 2012 Annual Meeting Clinical & Experimental Allergy, Volume 42, Issue 12.

[16] NICE guidelines on anaphylaxis: Are they implemented in clinical practice? (2013) British Society for Allergy and Clinical Immunology Abstracts of the 2013 Annual Meeting. Clinical & Experimental Allergy. Volume 43, Issue 12.

4.2 Referral to a specialist allergy service after emergency treatment for suspected anaphylaxis

4.2.1 Summary of suggestions

Stakeholders commented that cases of suspected anaphylaxis should be referred to a specialist allergy team (preferably age sensitive) for assessment and management – and that this was not happening throughout the NHS. Referral to such services will help people to manage their allergy/anaphylaxis.

4.2.2 Selected recommendations from development source

Table 5 below highlights recommendation that has been provisionally selected from the development source that may support potential statement development. These are presented in full after table 5 to help inform the Committee's discussion.

Table 5 Specific areas for quality improvement

Suggested quality improvement area	Selected source guidance recommendations
Referral to a specialist allergy service after emergency treatment for suspected anaphylaxis	NICE CG134 Recommendation 1.1.9

NICE CG134 – Recommendation 1.1.9

1.1.9 After emergency treatment for suspected anaphylaxis, offer people a referral to a specialist allergy service (age-appropriate where possible) consisting of healthcare professionals with the skills and competencies necessary to accurately investigate, diagnose, monitor and provide ongoing management of, and patient education about, suspected anaphylaxis.

4.2.3 Current UK practice

An audit of people attending the emergency department at University Hospital Wales (UHW) over a 6 month period identified 77 adults attending with anaphylaxis who resided in the catchment area of UHW's allergy service – however none were referred to this service[17].

[17] Patients with anaphylaxis in accident and emergency are not referred to specialised allergy services (2010) J Clin Pathol 2010;63:375

A single centre retrospective audit at the Royal London Hospital between the start of August 2013 and the end of October 2013 identified 19 people with anaphylaxis with referrals to allergy clinics made in 72% of cases[18].

A retrospective audit of diagnosed anaphylaxis cases (n=49) between September 2007 and September 2012 at the emergency department of Homerton University Hospital (HUH) identified that in 39% of cases a referral was made to an allergy clinic[19].

A further study reviewed adults who attended an emergency department of an inner city University hospital in 2010[20]. Of the 146 patients presenting with anaphylaxis, none were referred to an allergy specialist from the emergency department. In addition, 73 out of the 146 had previously had an anaphylactic episode; 19 of which had either been referred for consultation to an allergy specialist or had appointments pending.

[18] How Good Is the Management of Anaphylaxis in the Emergency Room (ER)? (2015) A UK Centre Experience. (2015) Journal of Allergy and Clinical Immunology. Volume 135, Issue 2.
[19] An audit analysis of anaphylaxis presenting at Homerton University Hospital (HUH). (2013) British Society for Allergy and Clinical Immunology Abstracts of the 2013 Annual Meeting. Clinical & Experimental Allergy. Volume 43, Issue 12.
[20] Management of anaphylaxis in the ED: A clinical audit (2013) International Emergency Nursing. Volume 21, Issue 1, Pages 64–70

4.3 Provision of adrenalin injectors after emergency treatment for suspected anaphylaxis

4.3.1 Summary of suggestions

Stakeholders highlighted the importance of providing adrenalin injectors to people following an emergency treatment for suspected anaphylaxis. In addition, several stakeholders highlighted the importance of providing training in how and when people should use their adrenalin injector – noting that people who do have injectors are often unable to use them. Training should include a demonstration of how to use the injector (not just 'read the instructions' advice). A stakeholder also suggested that a written action plan (tailored to the individual) should be provided – to explain what to do in the event of a future anaphylactic reaction. It's also important that people involved in the care of people with anaphylaxis are aware of issues surrounding the use of adrenaline auto-injectors, and can advise on how and when to use them. Training and support will be needed to help accomplish this.

4.3.2 Selected recommendations from development source

Table 6 below highlights recommendations that have been provisionally selected from the development source that may support potential statement development. These are presented in full after table 6 to help inform the Committee's discussion.

Table 6 Specific areas for quality improvement

Suggested quality improvement area	Selected source guidance recommendations
Provision of adrenalin injectors after emergency treatment for suspected anaphylaxis	NICE CG134 Recommendation 1.1.10 NICE CG134 Recommendation 1.1.11

NICE CG134 – Recommendation 1.1.10

1.1.10 After emergency treatment for suspected anaphylaxis, offer people (or, as appropriate, their parent and/or carer) an appropriate adrenaline injector as an interim measure before the specialist allergy service appointment.

NICE CG134 – Recommendation 1.1.11

1.1.11 Before discharge a healthcare professional with the appropriate skills and competencies should offer people (or, as appropriate, their parent and/or carer) the following:

- information about anaphylaxis, including the signs and symptoms of an anaphylactic reaction
- information about the risk of a biphasic reaction
- information on what to do if an anaphylactic reaction occurs (use the adrenaline injector and call emergency services)
- a demonstration of the correct use of the adrenaline injector and when to use it
- advice about how to avoid the suspected trigger (if known)
- information about the need for referral to a specialist allergy service and the referral process
- information about patient support groups.

4.3.3 Current UK practice

The provision of adrenalin auto-injectors

In the year March 2013 to February 2014 the rate of prescribing emergency adrenaline products was 353 per 100,000 head of the population in England (or one item per 283 people)[21]. Rates of dispensed emergency adrenalin products varied across Area Teams in England; from 183 to 542 items per 100,000 of the population (an "item" may be one or more adrenaline products and a person may get more than one item a year).

A review of prescriptions issued by health practitioners through the English public health system between 1998 and 2012 reported a 325% increase in the prescription of adrenalin auto-injector devices in this time (with a rate of approximately 425 prescriptions per 100,000 population in 2012)[22].

A retrospective audit of patients presenting at the ER at the Royal London Hospital (RLH) with a diagnosis of anaphylaxis (n=241) reported that 55% patients were offered an adrenalin auto-injector on discharge[23].

An audit of patients presenting with anaphylaxis in 2010 to a 'large UK University hospital' reported that of the people who had previously had an anaphylactic reaction (n=73), less than half carried an adrenalin auto-injector. However, it's not clear if this is because they weren't prescribed an auto-injector or if they just didn't carry one[24].

[21] Hospital admissions for allergies up nearly eight per cent in a year (2014) HSCIC
[22] Increase in anaphylaxis-related hospitalizations but no increase in fatalities: An analysis of United Kingdom national anaphylaxis data, 1992-2012 (2015) The Journal of Allergy and Clinical Immunology. Volume 135, Issue 4, Pages 956–963
[23] How Good Is the Management of Anaphylaxis in the Emergency Room (ER)? (2015) A UK Centre Experience. (2015) Journal of Allergy and Clinical Immunology. Volume 135, Issue 2.
[24] Management of anaphylaxis in the ED: A clinical audit (2013) International Emergency Nursing. Volume 21, Issue 1, Pages 64–70

A review of a randomly identified cohort of infants (<1 year old; patients first presented to their GP between 2001 and 2006) with a diagnosis of cows' milk allergy reported that 75% of infants with anaphylaxis were prescribed an epipen[25].

Several relevant studies were reported at the 2012 and 2013 Annual Meetings of the British Society for Allergy and Clinical Immunology (BSACI):

- A review of case notes of children admitted to Morriston Hospital with suspected anaphylaxis between June 2011 and May 2012 reported that 33% of children (pre-December 2011) and 25% children post-December 2011 were prescribed an adrenalin auto-injector on discharge (December 2011 is the date that NICE CG134 published)[26].

- An audit of children presenting to a paediatric emergency department with a diagnosis of anaphylaxis reported that epi pens were given to 14 out of 17 on discharge[27].

- In an audit undertaken of all children presenting with a history and symptoms of allergy to A&E at the Royal Manchester Children's Hospital between March 2011 and March 2012, 14 children presented with anaphylaxis, none were discharged with an adrenalin auto-injector[28].

Use of adrenalin auto-injectors

In a survey of 15-25 year olds with severe allergies in the UK (n=520), all of whom reported being prescribed an adrenaline auto-injector at some point, 66% of respondents carried their auto-injector everywhere they went, with a further 28% reporting that they carried it most places[29]. Six percent of respondents replied that they rarely or never carried their auto-injector. In the same survey, 51% of respondents who had had been to A&E as a result of their allergies reported never having used their adrenalin auto-injector. Most (77%) of respondents reported that they were confident about using their auto-injector, while 23% reported not being confident. In terms of information received, 18% of respondents reported needing more information on their adrenalin auto-injector. Of the people who responded that

[25] Resource implications and budget impact of managing cow milk allergy in the UK (2010) J Med Econ 2010, 13(1):119-128
[26] NICE guidelines on anaphylaxis: Are they implemented in clinical practice? (2013) British Society for Allergy and Clinical Immunology Abstracts of the 2013 Annual Meeting. Clinical & Experimental Allergy. Volume 43, Issue 12.
[27] The management and follow-up of patients presenting with anaphylaxis to the paediatric emergency department. (2013) British Society for Allergy and Clinical Immunology Abstracts of the 2013 Annual Meeting. Clinical & Experimental Allergy. Volume 43, Issue 12.
[28] Audit of paediatric emergency department allergy management in comparison with recent nice guidelines. (2012) British Society for Allergy and Clinical Immunology Abstracts of the 2012 Annual Meeting (2012) Clinical & Experimental Allergy, Volume 42, Issue 12.
[29] Living with severe allergy: an Anaphylaxis Campaign national survey of young people (2013) Clinical and Translational Allergy 2013, 3:2

they were not confident in the use of their auto-injector, 41% said they required more information, compared to 12% of people who were confident self-injecting.

A survey of people (n=245) from 14 paediatric allergy clinics from across the UK published in 2012 reported that 17% of the participants who experienced anaphylaxis used an adrenalin auto-injector. Common reasons for not using an auto-injector included either thinking that adrenalin was unnecessary (54%) or being unsure whether it was necessary (19%)[30].

Qualitative studies have also reported an underuse of adrenalin auto-injectors. Reported barriers to use include failure to recognise anaphylaxis, uncertainty about the technique of using an auto-injector and uncertainty about when to administer adrenalin[31].

Staff knowledge of adrenalin auto-injector use

There was a report at the 2013 Annual Meeting of the British Society for Allergy and Clinical Immunology assessing the skills of Emergency Department (ED) staff in a North of England teaching hospital in adrenaline auto-injector (AAI) use. Of the staff assessed, 63% (25/40) would not have delivered adrenalin through their use of an AAI. Errors included leaving safety caps on, delivering adrenalin to their thumb instead of the target and not using enough force to deploy the device. Of the staff who did use an AAI in a manner which would have delivered adrenalin, faults still existing in use; including not holding the device in place for long enough[32].

[30] The use of adrenaline autoinjectors by children and teenagers (2012) Clinical and Experimental Allergy.42 (2) (pp 284-292).
[31] Epinephrine auto-injector use in adolescents at risk of anaphylaxis: a qualitative study in Scotland, UK (2011) Clin Exp Allergy. 2011;41(6):869–877
[32] Emergency department staff require training in the use of adrenaline auto-injectors (2013) British Society for Allergy and Clinical Immunology Abstracts of the 2013 Annual Meeting. Clinical & Experimental Allergy. Volume 43, Issue 12.

4.4 Assessment and allergy-focused clinical history

4.4.1 Summary of suggestions

Several stakeholders highlighted the importance of taking an allergy focussed clinical history if food allergy is suspected, noting that this is essential for accurate and timely diagnosis. A stakeholder also commented that core competencies are required in primary care to take such histories, and that these do not exist at present. Allergy focussed clinical history can help to distinguish between IgE and non-IgE food allergy (which will determine how a person with a food allergy should be managed) and can also distinguish between food allergy and food intolerance.

Several stakeholders highlighted a lack of awareness that particular signs and symptoms should lead to a suspicion of food allergy. This can lead to a delayed, missed or incorrect diagnosis of food allergy – which causes increased anxiety, a risk of further allergic reactions, prolonged suffering from symptoms and people repeatedly seeking help from GPs and Accident and Emergency services.

4.4.2 Selected recommendations from development source

Table 7 below highlights recommendations that have been provisionally selected from the development source(s) that may support potential statement development. These are presented in full after table 7 to help inform the Committee's discussion.

Table 7 Specific areas for quality improvement

Suggested quality improvement area	Selected source guidance recommendations
Assessment and allergy-focused clinical history	NICE CG116 Recommendation 1.1.1 NICE CG116 Recommendation 1.1.2 NICE CG116 Recommendation 1.1.3

Assessment and allergy-focused clinical history

NICE CG116 – Recommendation 1.1.1

1.1.1 Consider the possibility of food allergy in children and young people who have one or more of the signs and symptoms in table 1, below. Pay particular attention to persistent symptoms that involve different organ systems.

Table 1. Signs and symptoms of possible food allergy

IgE-mediated	Non-IgE-mediated
The skin	
Pruritus	Pruritus
Erythema	Erythema
Acute urticaria – localised or generalised	Atopic eczema
Acute angioedema – most commonly of the lips, face and around the eyes	
The gastrointestinal system	
Angioedema of the lips, tongue and palate	Gastro-oesophageal reflux disease
Oral pruritus	Loose or frequent stools
Nausea	Blood and/or mucus in stools
Colicky abdominal pain	Abdominal pain
Vomiting	Infantile colic
Diarrhoea	Food refusal or aversion
	Constipation
	Perianal redness
	Pallor and tiredness
	Faltering growth in conjunction with at least one or more gastrointestinal symptoms above (with or without significant atopic eczema)

The respiratory system (usually in combination with one or more of the above symptoms and signs)	
Upper respiratory tract symptoms (nasal itching, sneezing, rhinorrhoea or congestion [with or without conjunctivitis])	
Lower respiratory tract symptoms (cough, chest tightness, wheezing or shortness of breath)	
Other	
Signs or symptoms of anaphylaxis or other systemic allergic reactions	

Note: this list is not exhaustive. The absence of these symptoms does not exclude food allergy

NICE CG116 – Recommendation 1.1.2

1.1.2 Consider the possibility of food allergy in children and young people whose symptoms do not respond adequately to treatment for:

- atopic eczema
- gastro-oesophageal reflux disease
- chronic gastrointestinal symptoms, including chronic constipation.

NICE CG116 – Recommendation 1.1.3

1.1.3 If food allergy is suspected (by a healthcare professional or the parent, carer, child or young person), a healthcare professional with the appropriate competencies (either a GP or other healthcare professional) should take an allergy-focused clinical history tailored to the presenting symptoms and age of the child or young person. This should include:

- any personal history of atopic disease (asthma, eczema or allergic rhinitis)
- any individual and family history of atopic disease (such as asthma, eczema or allergic rhinitis) or food allergy in parents or siblings
- details of any foods that are avoided and the reasons why
- an assessment of presenting symptoms and other symptoms that may be associated with food allergy (see recommendation 1.1.1), including questions about:
    - the age of the child or young person when symptoms first started

    - speed of onset of symptoms following food contact
    - duration of symptoms
    - severity of reaction
    - frequency of occurrence
    - setting of reaction (for example, at school or home)
    - reproducibility of symptoms on repeated exposure
    - what food and how much exposure to it causes a reaction
- cultural and religious factors that affect the foods they eat
- who has raised the concern and suspects the food allergy
- what the suspected allergen is
- the child or young person's feeding history, including the age at which they were weaned and whether they were breastfed or formula-fed – if the child is currently being breastfed, consider the mother's diet
- details of any previous treatment, including medication, for the presenting symptoms and the response to this
- any response to the elimination and reintroduction of foods.

4.4.3 Current UK practice

An analysis of the records of 1000 randomly selected infants with diagnosed cows' milk allergy from The Health Improvement Network (THIN) database reported a mean delay of 2.2 months between an initial visit to a GP with suspected cows' milk allergy to the start of an exclusion diet[33].

A report on cows' milk allergy produced by Allergy UK[34] (based on surveys of parents of children with cows' milk allergy carried out in 2012) reported that 19% of parents had visited their GP at least 10 times between presenting their child's problem and a diagnosis of cows' milk allergy being made. In addition, a reported 41% of cases waited more than 3 months for diagnosis and 74% of parents surveyed were unhappy with the speed of diagnosis.

An audit of referrals (October–November 2011) from primary care to a paediatric allergy service hospital in inner London reported that none of the 44 referrals identified included 'adequate information'; citing varied documentation of patient's history (as recommended by NICE)[35].

[33] Resource implications and budget impact of managing cow milk allergy in the UK (2010) J Med Econ 2010, 13(1):119-128
[34] It's time to ACT on cows' milk allergy. Allergy UK.
[35] An audit of the NICE (2011) guidelines for management of food allergy in children within a general paediatric allergy clinic (2012) British Society for Allergy and Clinical Immunology Abstracts of the 2012 Annual Meeting Clinical & Experimental Allergy, Volume 42, Issue 12.

4.5 Diagnosis of IgE mediated food allergy

4.5.1 Summary of suggestions

Stakeholders commented that it is important to use skin prick tests and blood tests to support a preliminary diagnosis of IgE mediated food allergy. However, these tests should only be used after an appropriate clinical history has been taken; testing alone without a history was suggested as unhelpful – with people being incorrectly diagnosed as food allergic on the basis of a positive test alone. Stakeholders commented that competencies need to be in place for these tests to be carried out and interpreted correctly, and that the tests should be appropriately supervised. Stakeholders also highlighted the need for knowledge of further diagnostic tests, such as oral food challenge, and the need for competencies to be in place to carry and supervise such tests.

4.5.2 Selected recommendations from development source

Table 8 below highlights recommendations that have been provisionally selected from the development source that may support potential statement development. These are presented in full after table 8 to help inform the Committee's discussion.

Table 8 Specific areas for quality improvement

Suggested quality improvement area	Selected source guidance recommendations
Diagnosis of IgE mediated food allergy	NICE CG116 Recommendation 1.1.5 NICE CG116 Recommendation 1.1.6 NICE CG116 Recommendation 1.1.7 NICE CG116 Recommendation 1.1.8 NICE CG116 Recommendation 1.1.9 NICE CG116 Recommendation 1.1.10

NICE CG116 – Recommendation 1.1.5

1.1.5 Based on the results of the allergy-focused clinical history, if IgE-mediated allergy is suspected, offer the child or young person a skin prick test and/or blood tests for specific IgE antibodies to the suspected foods and likely co-allergens

NICE CG116 – Recommendation 1.1.6

1.1.6 Tests should only be undertaken by healthcare professionals with the appropriate competencies to select, perform and interpret them.

NICE CG116 – Recommendation 1.1.7

1.1.7 Skin prick tests should only be undertaken where there are facilities to deal with an anaphylactic reaction.

NICE CG116 – Recommendation 1.1.8

1.1.8 Choose between a skin prick test and a specific IgE antibody blood test based on:

- the results of the allergy-focused clinical history and
- whether the test is suitable for, safe for and acceptable to the child or young person (or their parent or carer) and
- the available competencies of the healthcare professional to undertake the test and interpret the results.

NICE CG116 – Recommendation 1.1.9

1.1.9 Do not carry out allergy testing without first taking an allergy-focused clinical history. Interpret the results of tests in the context of information from the allergy-focused clinical history.

NICE CG116 – Recommendation 1.1.10

1.1.10 Do not use atopy patch testing or oral food challenges to diagnose IgE-mediated food allergy in primary care or community settings.

4.5.3 Current UK practice

No studies on current practice data were identified for this suggested area for quality improvement.

4.6 Diagnosis of non-IgE mediated food allergy

4.6.1 Summary of suggestions

Food elimination diets

A stakeholder commented that a short food elimination diet should be trialled for people with a suspected mild to moderate non-IgE mediated food allergy, followed by specific food challenges at home. If a severe non-IgE mediated food allergy is suspected an appropriate elimination diet should be started and an early referral to specialist care made.

Stakeholders also commented on the importance of involving a registered dietitian in the dietary management of food allergy. They stated that restricting the types of food that a person can eat can result in a nutritional imbalance, and an assessment of an individual's requirements by a dietitian is needed to avoid this. A stakeholder highlighted that children with food allergies are already at nutritional risk and avoidance of foods can increase the chance of growth stunting. A stakeholder reported that unnecessary food eliminations are being advised and implemented with little professionally competent guidance. A further stakeholder also highlighted a lack of access to trained paediatric dietitians.

Provision of dietary advice

A stakeholder commented that the provision of good dietary advice with food elimination diets can (i) relieve symptoms, (ii) reduce the risk of anaphylaxis and (iii) ensure that a diet contains appropriate nutrition. Also, tailored information will help to improve understanding and also compliance for the necessary dietary adaptions.

4.6.2 Selected recommendations from development source

Table 9 below highlights recommendations that have been provisionally selected from the development source that may support potential statement development. These are presented in full after table 9 to help inform the Committee's discussion.

Table 9 Specific areas for quality improvement

Suggested quality improvement area	Selected source guidance recommendations
Food elimination diets	NICE CG116 Recommendation 1.1.11
Provision of dietary advice	NICE CG116 Recommendation 1.1.14

NICE CG116 – Recommendation 1.1.11

1.1.11 Based on the results of the allergy-focused clinical history, if non-IgE-mediated food allergy is suspected, trial elimination of the suspected allergen (normally for between 2–6 weeks) and reintroduce after the trial. Seek advice from a dietitian with appropriate competencies, about nutritional adequacies, timings of elimination and reintroduction, and follow-up.

NICE CG116 – Recommendation 1.1.14

1.1.14 If a food elimination diet is advised as part of the diagnostic process (see recommendation 1.1.11), offer the child or young person and their parent or carer, taking into account socioeconomic status and cultural and religious issues, information on:

- what foods and drinks to avoid
- how to interpret food labels
- alternative sources of nutrition to ensure adequate nutritional intake
- the safety and limitations of an elimination diet
- the proposed duration of the elimination diet
- when, where and how an oral food challenge or food reintroduction procedure may be undertaken
- the safety and limitations of the oral food challenge or food reintroduction procedure.

4.6.3 Current UK practice

Food elimination diets

No studies on current practice data were identified on the use of trial elimination of suspected allergens.

Cited studies have reported variation in the choice of replacement formula used for infants with suspected cows' milk allergy. A study of 1,000 infants with cows' milk allergy randomly selected from the UK Health Improvement Network (THIN)

database reported that 60% were initially treated with soy, 18% with an extensively hydrolysed formula and 3% with an amino acid formula[36].

A review of records from the from The Health Independent (THIN) database of a randomly selected cohort of infants (who first presented to their GP between 2001 and 2016, had been diagnosed with cows' milk allergy and who had received one or more prescriptions for a clinical nutrient prescription) reported that 76% of infants under 6 months were initially prescribed soy by their GP, contrary to existing guidelines.

Provision of dietary advice

A survey of young people aged 15–25 years with severe allergies in the UK conducted between February and April 2012 on behalf of the Anaphylaxis Campaign asked about the information needs of this cohort[37]. Areas that respondents reported needing more information included eating out (56% of respondents) and food labelling (43%). 23% of respondents reported wanted more information on managing their allergies independently (without the help of their parents).

[36] Resource implications and budget impact of managing cow milk allergy in the UK (2010) J Med Econ 2010, 13(1):119-128; Diagnosis and management of non-IgE-mediated cow's milk allergy in infancy - a UK primary care practical guide (2013) Clinical and Translational Allergy 2013, 3:23.
[37] Living with severe allergy: an Anaphylaxis Campaign national survey of young people (2013) Clinical and Translational Allergy 2013, 3:2

4.7 Referral to secondary or specialist care for people with food allergy

4.7.1 Summary of suggestions

A stakeholder commented that it is important that people with a food allergy are referred for specialist care when necessary, suggesting that currently people are often referred inappropriately or not at all. This would require increased awareness of local referral pathways. A stakeholder also suggested the need for agreed care pathways for the diagnosis and management of food allergy, and also liaison between primary care and their local allergy unit (specialist and/or secondary care).

4.7.2 Selected recommendations from development source

Table 10 below highlights recommendation that has been provisionally selected from the development source that may support potential statement development. These are presented in full after table 10 to help inform the Committee's discussion.

Table 10 Specific areas for quality improvement

Suggested quality improvement area	Selected source guidance recommendations
Referral to secondary or specialist care for people with food allergy	NICE CG116 Recommendation 1.1.17

Referral to secondary or specialist care

NICE CG116 – Recommendation 1.1.17

1.1.17 Based on the allergy-focused clinical history, consider referral to secondary or specialist care in any of the following circumstances.

The child or young person has:

- faltering growth in combination with one or more of the gastrointestinal symptoms described in recommendation 1.1.1
- not responded to a single-allergen elimination diet
- had one or more acute systemic reactions
- had one or more severe delayed reactions
- confirmed IgE-mediated food allergy and concurrent asthma
- significant atopic eczema where multiple or cross-reactive food allergies are suspected by the parent or carer.

There is:

- persisting parental suspicion of food allergy (especially in children or young people with difficult or perplexing symptoms) despite a lack of supporting history
- strong clinical suspicion of IgE-mediated food allergy but allergy test results are negative
- clinical suspicion of multiple food allergies.

4.7.3 Current UK practice

No data on the proportion of people with food allergy who are referred to secondary or specialist care was identified.

A survey of young people aged 15-25 years old with severe allergies (who had been prescribed an adrenalin auto-injector) conducted in 2012 identified that 28% respondents were currently under the control of an allergy specialist and 47%, while not under the care of an allergy specialist at that time, had been in the past. 24% of respondents had never been under the care of an allergy specialist[38]. While respondent in this survey were not limited to those with a food allergy, the authors stated that the respondents were predominantly food allergic.

The Department of Health's review of allergy services published in 2006 ('A review of services for allergy') found there were 94 allergy clinics in England, of which six offered services led by full-time specialist allergists. However, this number may have changed since this time. Evidence provided by the The Anaphylaxis Campaign to a joint Royal College of Physicians and Royal College of Pathologists Working Party report suggested that the number of sites offering allergy clinics may be slightly higher than this number[39]. On their website, Allergy UK describes the provision of allergy services across the UK as 'highly variable'[40].

[38] Living with severe allergy: an Anaphylaxis Campaign national survey of young people (2013) Clinical and Translational Allergy 2013, 3:2
[39] Allergy services still not meeting the unmet need (2010) Royal College of Physicians and Royal College of Pathologists Working Party.
[40] NHS Allergy Services. Allergy UK [*Accessed 07/07/15*]

4.8 Additional areas

Summary of suggestions

The improvement areas below were suggested as part of the stakeholder engagement exercise. However they were felt to be either unsuitable for development as quality statements, outside the remit of this particular quality standard referral or require further discussion by the Committee to establish potential for statement development.

There will be an opportunity for the QSAC to discuss these areas at the end of the session on 31 July 2015.

Coeliac disease

A stakeholder suggested screening for coeliac disease in symptomatic patients as a quality improvement area. However, as coeliac disease is not an allergy this suggestion falls outside the scope of this quality standard. A quality standard for coeliac disease is due to start later this year.

Future projects and service delivery

A stakeholder highlighted current projects – such as the Itchy Sneezy Wheezy project and GPwSI (GP with a Special Interest) clinics – that are helping to deliver management of allergies, and suggested new service models. However, no corresponding recommendations exist in our source guidelines that we could base any such quality statements on.

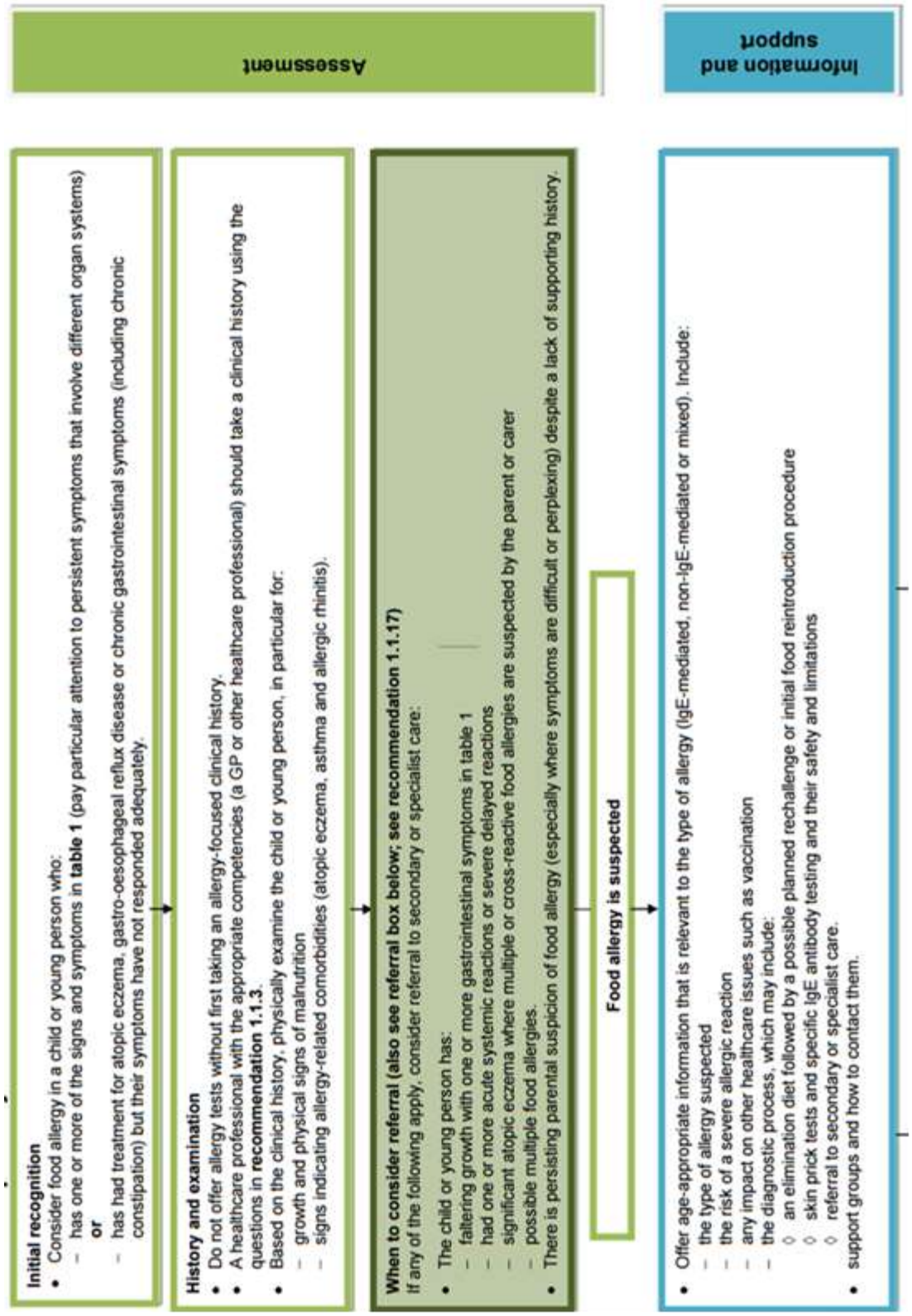
Development of an algorithm for secondary care

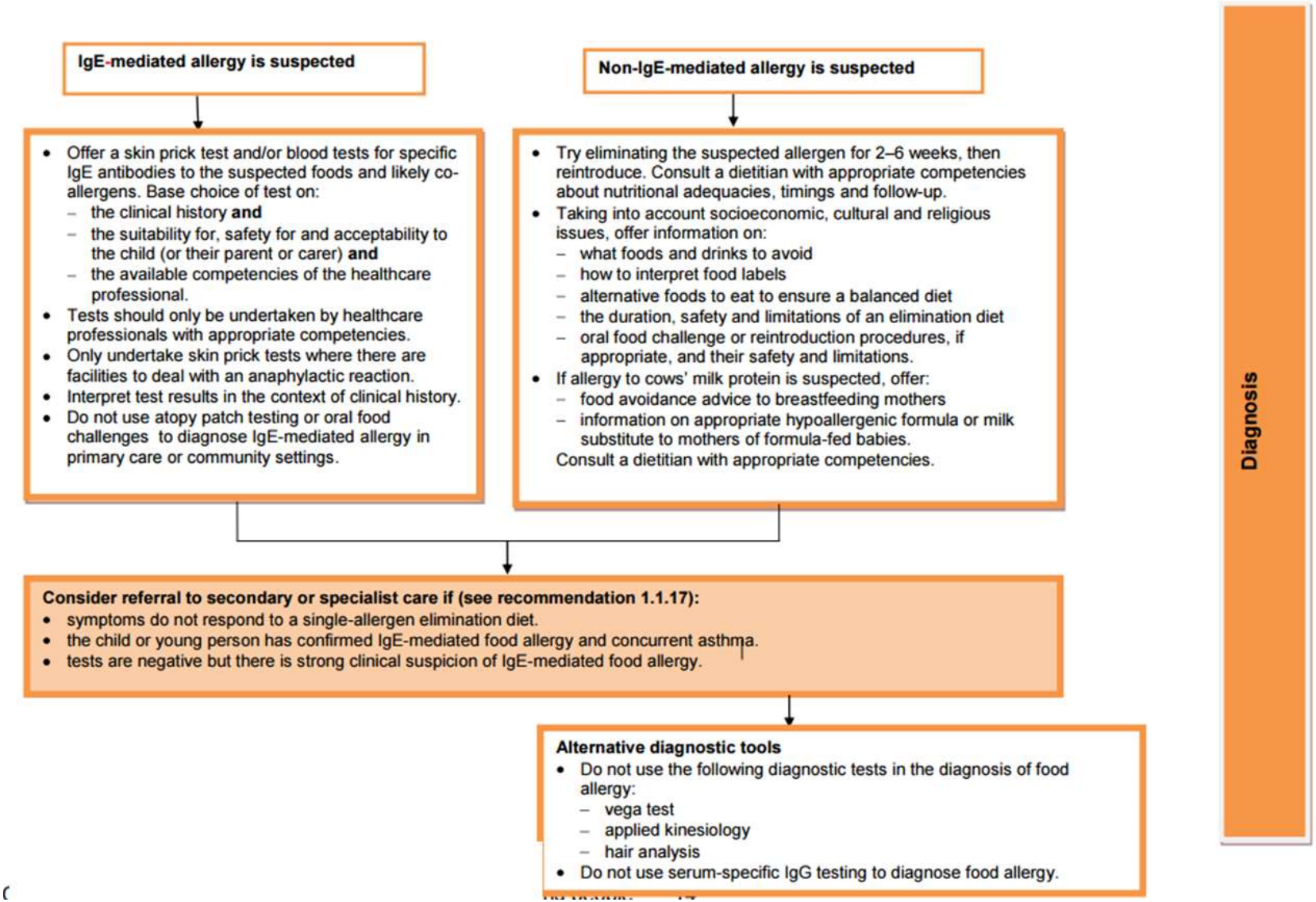
A stakeholder suggested that a simple algorithm for secondary care staff to help management of people who have had a severe allergic reaction should be developed. However, writing new guidance is outside the scope of this quality standard.

Suggestions to add further developmental sources

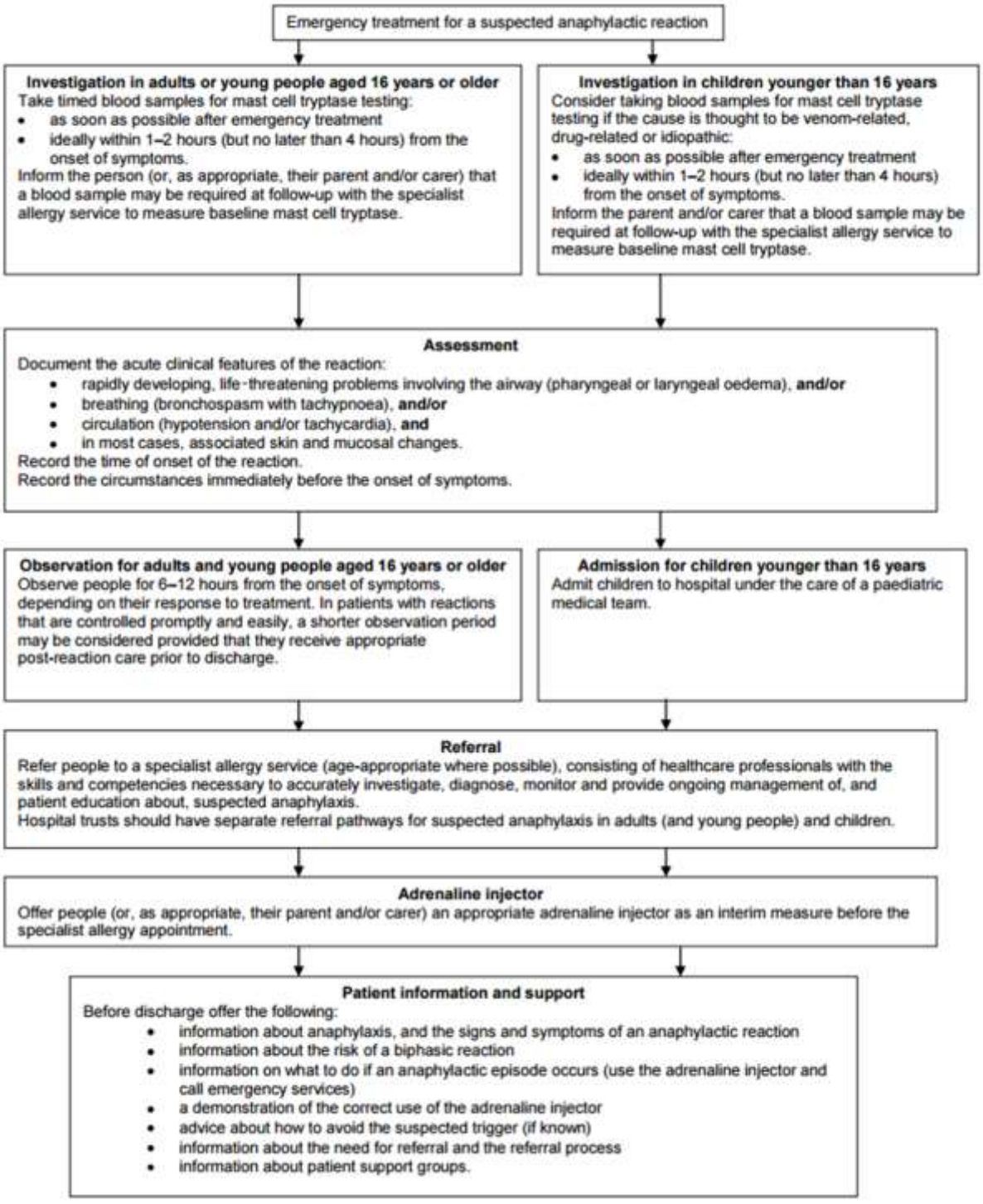
Two stakeholders suggested that additional sources of guidance should be considered for this quality standard, from the European Academy of Allergy and Clinical Immunology (EAACI) and the Children's and Young People's Allergy Network Scotland (CYAN). However, neither of these organisations have NICE accredited guideline development process – so the suggested documents cannot be used as source recommendations on which to base quality standards.

Appendix 1: Care pathway – NICE clinical guideline 116 – Food allergy in children and young people




IgE-mediated allergy is suspected
Offer a skin prick test and/or blood tests for specific IgE antibodies to the suspected foods and likely co-allergens. Base choice of test on:
– the clinical history and
– the suitability for, safety for and acceptability to the child (or their parent or carer) and
– the available competencies of the healthcare professional.
Tests should only be undertaken by healthcare professionals with appropriate competencies.
Only undertake skin prick tests where there are facilities to deal with an anaphylactic reaction.
Interpret test results in the context of clinical history.
Do not use atopy patch testing or oral food challenges to diagnose IgE-mediated allergy in primary care or community settings.
Non-IgE-mediated allergy is suspected
Try eliminating the suspected allergen for 2–6 weeks, then reintroduce. Consult a dietitian with appropriate competencies about nutritional adequacies, timings and follow-up.
Taking into account socioeconomic, cultural and religious issues, offer information on:
– what foods and drinks to avoid
– how to interpret food labels
– alternative foods to eat to ensure a balanced diet
– the duration, safety and limitations of an elimination diet
– oral food challenge or reintroduction procedures, if appropriate, and their safety and limitations.
If allergy to cows' milk protein is suspected, offer:
– food avoidance advice to breastfeeding mothers
– information on appropriate hypoallergenic formula or milk substitute to mothers of formula-fed babies.
Consult a dietitian with appropriate competencies.
Consider referral to secondary or specialist care if (see recommendation 1.1.17):
symptoms do not respond to a single-allergen elimination diet.
the child or young person has confirmed IgE-mediated food allergy and concurrent asthma.
tests are negative but there is strong clinical suspicion of IgE-mediated food allergy.
Alternative diagnostic tools
Do not use the following diagnostic tests in the diagnosis of food allergy:
– vega test
– applied kinesiology
– hair analysis
Do not use serum-specific IgG testing to diagnose food allergy.
Diagnosis

Appendix 2: Care pathway – NICE clinical guideline 134 – Anaphylaxis



Appendix 3: Suggestions from stakeholder engagement exercise – registered stakeholders

ID	Stakeholder	Suggested key area for quality improvement	Why is this important?	Why is this a key area for quality improvement?	Supporting information
01	NHS England Patient Safety Division	Ensuring the QS development group is mindful of potential for safety risks related to food allergy and anaphylaxis and relevant work that has been or is being undertaken	For the QS to recognise the issues of safety as well as effectiveness when considering the management of food allergies and anaphylaxis	Latex is well recognised cause of anaphylaxis and safety advice was issued by the NPSA 'Protecting people with allergy associated with latex' in 2005 (see link) The Royal College of Anaesthetists are currently undertaking a National Audit on anaphylaxis in anaesthesia (see link) and the MHRA are developing an anaphylaxis database in partnership with the Association of Anaesthetists Great Britain and Ireland. Last year new EU regulations came into force in relation to food allergen labelling (see link).	http://www.nrls.npsa.nhs.uk/resources/?entryid45=59791 http://www.nationalauditprojects.org.uk/NAP6home https://www.food.gov.uk/business-industry/allergy-guide
4.1 Clinical assessment after emergency treatment for suspected anaphylaxis					
02	SCM1	Recording of information at time of anaphylaxis	In order for the patient to be correctly diagnosed, managed and referred it is essential to record what actually happened at the time of the reaction and to take the necessary blood tests to determine anaphylaxis.	The anaphylaxis guideline states the importance of this but it is still the case that patients are not being correctly managed in the emergency setting.	NICE anaphylaxis guidance and patient group information
4.2 Referral to a specialist allergy service after emergency treatment for suspected anaphylaxis					
03	BSACI	Key area for quality improvement 5 Referral for identification of the cause/trigger of anaphylaxis	This allows the patient to avoid the cause. If achieved there will be no further anaphylaxis; with improved QoL for the patient/family and reduced use of health care resources (reduced A&E attendance and hospital admission). Review by GP within 1-2 weeks of being seen by accident and emergency after	Reduces or prevents further episodes anaphylaxis	NICE guideline anaphylaxis Examples from food allergy and drug allergy diagnosis. Eg effect of avoidance in nut allergy reduced further reactions to 3% pa (compared to 14-50% in other studies) Clark JACI 2008;

ID	Stakeholder	Suggested key area for quality improvement	Why is this important?	Why is this a key area for quality improvement?	Supporting information
			treatment for reaction to check if AAI prescribed, patient knows how to use it, and referral made. Consider review by GPWSI in case of asthma and food allergies after allergy clinic for continuity follow up care.		
04	SCM4	Key area for quality improvement 6 In keeping with the guidelines - All cases of suspected anaphylaxis must be referred for urgent assessment and ongoing management by a multidisciplinary specialist allergy team, preferably age sensitive to patient	There is published evidence – particularly in the posters at recent BSACI Annual meetings of this aspect of the NICE Anaphylaxis guideline not being adhered to in a significant number of cases throughout the NHS	There is evidence published by the Clinical Allergy Service at Addenbrookes, Cambridge that such patients – seen initially by a multidisciplinary specialist allergy service and then followed up regularly simply are enabled to manage their food allergy/anaphylaxis better	NICE Anaphylaxis Guideline - 2011
4.3	**Provision of adrenalin injectors after emergency treatment for suspected anaphylaxis**				
05	SCM 1	Provision of adrenalin following emergency admission for anaphylaxis	This is essential for patient safety and needs to include how to use the device and what to do in case of further reactions.	The is no standardised system for ensuring this happens without fail in all emergency settings	NICE anaphylaxis guidelines and patient group information
06	SCM 3	Key area for quality improvement 4 **Where anaphylaxis is suspected, patients should be given an adrenaline injector as an interim measure before referral to an allergy clinic**	This is essential for patient safety but must also include training in how to use the device and when.	The patient charity helplines report cases where this isn't happening. This was a key recommendation in the NICE CG134.	NICE CG134
07	SCM 2	Key area for quality improvement 5 **Ensuring all those involved in the care of people at risk of anaphylaxis know the indicators for the issuing of**	All patients at risk of anaphylaxis should receive adrenaline auto-injector(s). However, in order for the prescription to be effective, patients receiving them need to know how and when to use an adrenaline auto-injector, preferably as	Access to adrenaline and education on its use, is the key to the management of severe allergic reactions and could be life-saving. Many patients seen in secondary care have already been prescribed adrenaline but without any knowledge of how and when to administer it. Once a final diagnosis is made,	BSACI guidelines on emergency anaphylactic treatment http://www.bsaci.org/guidelines/emergency-anaphylatic-treatment

ID	Stakeholder	Suggested key area for quality improvement	Why is this important?	Why is this a key area for quality improvement?	Supporting information
		adrenaline auto-injectors, and can advise on how and when to use them	part of an allergy action plan. A plan is important so patients understand what symptoms should occasion the use of adrenaline and what to do following administration. The plan should also give details of when an anti-histamine or inhaled short-acting beta2-agonist should be used prior to injectable adrenaline.	it may be clear that adrenaline is not indicated, but once it has been issued it is then very difficult to reverse the decision. Providing training and support for GPs and other key service providers to better understand which patients may need adrenaline and also standardised digital action plans which can be amended for individual patients would be both highly beneficial and cost-effective.	Resuscitation Council guidelines on anaphylaxis https://www.resus.org.uk/anaphylaxis/emergency-treatment-of-anaphylactic-reactions/ BSACI allergy action plans for children http://www.bsaci.org/about/download-paediatric-allergy-action-plans
08	BSACI	Key area for quality improvement 3 Training in the use of adrenaline auto-injectors	Adrenaline auto-injectors (AAI) are often prescribed, but the majority of patients are unable to use these. AAI training should include practical training using a trainer (dummy) pen. It is not sufficient to tell a patient to 'read the instructions'. AAI techniques can be reviewed as part of annual review of asthma in primary care, if the patient also has this. AAIs should be put on repeat prescription with a marker for re-training. Provision of new training if prescription changes to a new device.	Improve patient safety by enabling them to use the rescue medication provided for severe reactions	BSACI guideline on adrenaline auto-injectors (submitted CEA 2015) NICE guideline anaphylaxis EAACI guidelines on anaphylaxis Muraro A, Roberts G, Worm M, Bilo MB, Brockow K, Fernandez Rivas M, et al. Anaphylaxis: guidelines from the European Academy of Allergy and Clinical Immunology. Allergy 2014;69(8):1026-45.
09	BSACI	Key area for quality improvement 6 Provide written treatment plan – tailored to patient	Necessary so patients understand what to do in the event of an acute allergic reaction/ anaphylaxis; and ii. informs helper eg para medics and A&E staff. Liaise with schools/nurseries as part of this written plan which might be a shared	Improves patient care and saftey; reduces morbidity, near fatal and fatal reactions due to delay in administration of adrenaline	NICE guideline anaphylaxis

ID	Stakeholder	Suggested key area for quality improvement	Why is this important?	Why is this a key area for quality improvement?	Supporting information
			plan in children.		
4.4	**Assessment and allergy-focused clinical history**				
10	SCM 4	Key area for quality improvement 1 Using the available guidelines – to be aware that certain patterns of symptoms and signs should lead to a suspicion of food allergy	There is UK published evidence that this is not happening at primary care level, leading to missed, delayed and also incorrect diagnosis of food allergy	This evidence highlights that with regard to the commonest and clinically most complex food allergy affecting children, cow's milk allergy, this is particularly true	NICE Food Allergy Guideline 2011 NICE CKS on Cow's Milk Allergy 2014 Venter C et al Diagnosis and management of non-IgE mediated cow's milk allergy in infancy Clin Translational Allergy 2013 3 (1) 23 Sladkevicius E et al Resource implications and budget impact of managing cow milk allergy in the UK Journal of Medical Economics 2010 13 (1) 119-128 Taylor R R et al Cost-effectiveness of using an extensively hydrolysed formula compared to an amino acid formula as first time treatment for cow milk allergy in the UK Pediatric Allergy and \immunology 2011 doi 10. 1111/j.13993038.2011.01262.x
11	SCM 3	Key area for quality improvement 1 Timely assessment and diagnosis of their allergy	Accurate and timely assessment and diagnosis can prevent months of misery and stress for those affected and their family. In extreme cases it can prevent fatality in patients with undiagnosed severe food allergy.	Patients are still seeing their GPs many times before allergy is even considered. This QS could save a great deal of money by preventing patients (often in desperation) seeking help from their GP repeatedly, out of hours GPs and Accident and Emergency.	NICE CG116 NICE CG134 RCPCH Allergy Pathways for food allergy and for Anaphylaxis MAP Guidelines Resus Council Guidelines on Anaphylaxis

ID	Stakeholder	Suggested key area for quality improvement	Why is this important?	Why is this a key area for quality improvement?	Supporting information
12	SCM 1	Allergy focused clinical history	This is essential for accurate and timely diagnosis	Even following the food allergy guidelines there are patients who are having to make numerous trips to their GPs before accurate diagnosis	NICE food allergy guidance and patient group information
13	SCM 4	Key area for quality improvement 2 Using the available guidelines - when food allergy is suspected to take an allergy focused history and attempt to clinically distinguish between immediate onset IgE mediated food allergy and delayed onset non-IgE mediated food allergy	Again, there is UK published evidence that this is not happening at primary care level, leading to missed, delayed and also incorrect diagnosis of food allergy	NICE guidelines have now set out clearly which patients with food allergy should be managed in primary care and which should be referred early to specialist care - and this is largely determined by initially clinically attempting to differentiate between IgE and non-IgE food allergy in each case	NICE Food Allergy Guideline 2011 NICE CKS on Cow's Milk Allergy 2014 Venter C et al Diagnosis and management of non-IgE mediated cow's milk allergy in infancy Clin Translational Allergy 2013 3 (1) 23 Vandenplas Y et al Guidelines for the diagnosis and management of cow's milk protein allergy in infants Archives of diseases of Childhood 2007 92 (10) 902-908
14	SCM 2	Key area for quality improvement 1 Recognition of allergic symptoms by GPs, and guidance on taking an allergy-focussed diet and medical history	The history can provide some red flags which indicate a food allergy or differential diagnosis in both children and adults. Guidelines on food allergy diagnosis from the European Academy of Allergy & Clinical Immunology (EAACI) perceive the history to be key in making a diagnosis of food allergy. It helps to guide what tests should be undertaken and is vital to ascertain which foods are responsible. The history can also be used to differentiate between different types of food allergy, food intolerance or a differential diagnosis. For example to	Some simple questions or algorithms used early on can give vital clues as to the likelihood of an IgE mediated food allergy, even before any tests have been undertaken. This means that appropriate tests can be requested, management advice given and onward referral for dietary advice made to ensure nutritional adequacy whilst waiting for further investigations. A diagnosis of PFS using a simple algorithm could also mean that many older children and adults with allergic symptoms to fruits and vegetables do not need to be referred to secondary care. This condition is easy to explain, is not life threatening and can be managed in primary care. This will reduce costs and enable patients with more severe allergies to be seen more quickly. Being better	The guidelines from EAACI on diagnosis of food allergy: http://www.eaaci.org/resources/scientific-output/guidelines/2533-food-allergy-and-anaphylaxis-guideline.html NICE guidance on food allergy in children and young people http://www.ncbi.nlm.nih.gov/books/NBK82184/ In addition, a paper published by an EAACI taskforce outlines the evidence for history and also

ID	Stakeholder	Suggested key area for quality improvement	Why is this important?	Why is this a key area for quality improvement?	Supporting information
			determine whether a child has an IgE-mediated food allergy involving cow's milk, a non-IgE mediated food allergy to milk, lactose intolerance or gastro-oesophageal reflux, or whether an adult might have a wheat allergy, Coeliac disease, wheat intolerance or differential diagnosis of Irritable Bowel Syndrome (IBS). History tools have been developed, which are highly accurate in predicting the presence or absence of specific food allergies including one for Pollen-food Syndrome (PFS), also known as oral allergy syndrome (OAS), which affects about 2% of the adult population of the UK.	informed about the likelihood of drugs causing symptoms, mistaken for a food allergy could also mean the history provides insight into whether a medication review is a sensible first step prior to referral into secondary care.	provides two history tools http://www.ctajournal.com/content/5/1/7 The PFS validated questionnaire/algorithm, and evidence for the prevalence of PFS are in the two papers below: http://www.ncbi.nlm.nih.gov/pubmed/21518043 http://www.ncbi.nlm.nih.gov/pubmed/23889246
15	BSACI	Key area for quality improvement 1 National guidance on taking an food allergy-focussed history in primary care	The history is key to making a diagnosis of food allergy. Core competencies in primary care are required to recognize food allergy and take a food history (these do not exist at present).	The history gives vital clues as to the likelihood of an IgE mediated food allergy, even before any tests have been undertaken; and helps to distinguish food allergy from food intolerance. This means that appropriate management advice can be given to keep patients safe and give them confidence with regard to eating, whilst waiting for further investigations	The European Academy of Allergy & Clinical Immunology (EAACI) guidelines on food allergy diagnosis: http://www.eaaci.org/resources/scientific-output/guidelines/2533-food-allergy-and-anaphylaxis-guideline.html NICE guidance on food allergy in children and young people http://www.ncbi.nlm.nih.gov/books/NBK82184/ EAACI taskforce paper outlines the evidence for history and provides history tools http://www.ctajournal.com/content/5/1/7
16	SCM1	Primary care education	This is usually the first place people present with potential allergic disease	Patient group help lines hear weekly from people who are not able to get the help they need from their GP or	NICE food allergy guidance and patient group information

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				community health team. This leads to increased anxiety and a risk of further reactions	
17	SCM3	Key area for quality improvement 3 Primary care education	Most people present to their Primary care provider with allergic symptoms so it's vital that the people they see have sufficient knowledge about allergy to recognise allergy and seek appropriate care for their patients.	Because we know that frequently this isn't happening. Patient group help lines report that patients are not getting the help they need, whether suffering from type 1 allergy and possible anaphylaxis to babies with non IgE mediated allergy, who are crying for many hours, with reflux and abdominal pain.	NICE CG116 NICE CG134 RCPCH Allergy Pathways for food allergy and for Anaphylaxis MAP Guidelines Resus Council Guidelines on Anaphylaxis
4.5	**Diagnosis of IgE mediated food allergy**				
18	SCM 4	Key area for quality improvement 3 **Using the available guidelines - if IgE food allergy is suspected to confirm either with a clear history and supporting IgE specific skin tests or blood tests or if that is not possible to carry out a supervised food challenge**	It is important to emphasise these diagnostic criteria and to then to also emphasise what competences need to be in place for this to happen	These patients are more likely to either grow out of their allergy slowly or not at all and the monitoring of this should be under specialist allergy supervision	**NICE Food Allergy Guideline 2011** **NICE CKS on Cow's Milk Allergy 2014**
19	SCM 2	Key area for quality improvement 2 The undertaking of and correct interpretation of food allergy tests, and improved knowledge of other relevant tests in the food allergy diagnostic pathway.	After taking an appropriate history, skin prick tests and specific IgE food allergy tests should be used to support a preliminary diagnosis. Skin prick tests are safe and their highly negative predictive value means they can give an immediate indication of the likelihood of an IgE-mediated food allergy. Specific IgE blood tests also give an idea of which foods the patient is sensitised to but a positive or negative SPT or specific IgE result should not alone be used to decide on the presence or absence of a food allergy. Increasingly individual allergens are being used to predict the presence of a primary allergy to a food, as opposed to	Often patients referred to secondary care are avoiding many foods on the basis of positive food allergy tests but without any specific, reproducible symptoms to those foods. More education and support on which tests to undertake, the predictive value of tests and how to use tests with the history to make a diagnosis would greatly improve the efficacy of diagnosis in primary care and community settings. Also the use of CRD for individual allergens will facilitate the diagnosis of a primary or secondary allergy to peanuts and tree nuts in older children, teenagers and adults. Peanut and tree nut allergy is most usually diagnosed in infancy or childhood, with PFS being the most likely cause of symptoms to tree nuts or peanuts in older children and adults. A diagnosis of PFS usually allows the patient to continue to eat nuts not provoking	**The guidelines from EAACI on diagnosis of food allergy: http://www.eaaci.org/resources/scientific-output/guidelines/2533-food-allergy-and-anaphylaxis-guideline.html** **NICE guidance on food allergy in children and young people http://www.ncbi.nlm.nih.gov/books/NBK82184/** **An open access article on CRD which gives practical guidance on which individual**

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			symptoms caused by cross-reactions between foods and pollens These tests, known as component resolved diagnosis (CRD), may be a useful addition in specialist hands, in order to improve diagnosis in primary care. Knowledge of other diagnostic tests and their place in the pathway is also important. This would include oral food challenge (OFC), the gold standard for diagnosis of food allergy. Whilst the OFC is not a procedure normally undertaken in primary care, some aspects might be undertaken at home such as the introduction of baked milk and egg using a milk or egg 'ladder'.	reactions and also there is no issue with avoidance of products with nut label warnings. Research has already identified that certain peanut and hazelnut allergens are liked either to a primary allergy to that food or are allergens which cross-react to tree and/or grass pollen.	**allergens are useful in the diagnosis of food allergy** http://www.ctajournal.com/content/4/1/28 **Milk allergy guidelines** http://www.ncbi.nlm.nih.gov/pubmed/24588904 http://www.ncbi.nlm.nih.gov/pubmed/23835522
20	BSACI	Key area for quality improvement 2 Interpretation of food allergy tests	Skin prick tests (or serum specific IgE) for foods should be used to support a preliminary diagnosis made after taking an appropriate history. Testing alone without a history is unhelpful. A positive test alone should not be used to decide on the presence or absence of a food allergy.	Many patients have positive tests for food IgE, without this resulting in allergy (and hence symptoms). However patients are often incorrectly diagnosed as food allergic on the basis of a positive test alone and are avoiding many foods, but without reproducible symptoms to those foods. More education and support on which tests to undertake, the predictive value of tests and how to use tests with the history to make a diagnosis are required to improve the diagnosis in primary care. This would be part of competencies/ enhanced competencies for primary care; but is also important in secondary care.	**The guidelines from EAACI on diagnosis of food allergy:** http://www.eaaci.org/resources/scientific-output/guidelines/2533-food-allergy-and-anaphylaxis-guideline.html **NICE guidance on food allergy in children and young people** http://www.ncbi.nlm.nih.gov/books/NBK82184/
4.6	**Diagnosis of non-IgE mediated food allergy**				
21	SCM 4	Key area for quality improvement 4 **Using the available guidelines:** **If mild to moderate non-IgE food allergy is suspected to trial a short food elimination diet followed by specific**	The clinical group of pateints with mild to moderate non-ige food allergy are the key group that can be both diagnosed and managed in primary care	Without authoritative guidelines it is unlikely that such patients with both remain in primary care and if they do so will be optimally managed	**NICE Food Allergy Guideline 2011** **NICE CKS on Cow's Milk Allergy 2014** **Venter C et al Diagnosis and management of non-IgE mediated cow's milk allergy in**

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		food challenge at home to confirm diagnosis **If severe non-IgE food allergy is suspected to commence an appropriate elimination diet and refer early to specialist care**			**infancy Clin Translational Allergy 2013 3 (1) 23**
22	NDR-UK	Key area for quality improvement 3 Registered dietitians should be core members of the team caring for children and young people with suspected or proven food allergy	The dietary management of food allergy can be complex. The restriction of food may result in nutritional imbalance unless accurate assessment of requirements and timely, individualised advice is prvodied.	Dietitians alone have the necessary skills and knowledge to ensure this is achieved	**Hubbard S. Nutrition and food allergies: the dietitian's role. Ann Allergy Asthma Immunol. 2003 Jun;90(6 Suppl 3):115-6.**
23	SCM4	Key area for quality improvement 5 On confirmation of the diagnosis of food allergy early dietetic support should be sought for most patients	There is published evidence that both unnecessary food eliminations are being advised and being implemented with little professionally competent guidance	There is published evidence that nutritional deficiencies can occur if there is not dietetic elimination diet. This risk is particularly relevant for young children	**NICE Food Allergy Guideline 2011** **NICE CKS on Cow's Milk Allergy 2014** **Venter C et al Diagnosis and management of non-IgE mediated cow's milk allergy in infancy Clin Translational Allergy 2013 3 (1) 23** **Caffarelli C et al Cow's milk protein allergy in children: a practical guide Italian Journal of Pediatrics 2010 36 (5)** **Ludman S et al Managing cow's milk allergy in children BMJ 2013 347 f5424**
24	BSACI	Key area for quality improvement 7 Nutritional assessment of diet	Result is inadequate diet and impaired growth and nutrition eg protein and calcium.	Preventable illness There is a lack of access to suitably trained	**Papers on problems with growth in children with food**

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		if important food groups excluded long term in infants and young children.		paediatric dieticians, so a recommendation and is required. A framework needs to be in place as it can be difficult for primary care to access dieticians for advice.	**allergy** http://www.ncbi.nlm.nih.gov/pubmed/23937486 http://www.ncbi.nlm.nih.gov/pubmed/26022881 http://www.ncbi.nlm.nih.gov/pubmed/26022881 http://www.ncbi.nlm.nih.gov/pubmed/20561235
25	SCM 2	Key area for quality improvement 3 The correct use of diagnostic diets and better understanding of the nutritional issues in food allergy	Targeted dietary approaches to diagnosis and management are a vital part of the diagnostic pathway, especially when the history and allergy tests suggest there is no IgE-mediated food allergy. The NICE and EAACI guidelines both emphasise the need to trial a tailored elimination of suspect foods for a defined period of time, followed by re-introduction. Sub optimal or deficiencies of individual nutrients, poor quality diets of low nutritional density and unhealthy dietary patterns may all contribute to symptoms in both children and adults.	The use of indiscriminate diets, blanket avoidance of multiple food groups, total elimination diets, or diets prescribed without the involvement of an allergy-trained dietitian put patients of all age-groups at nutritional risk. Children with a food allergy are already at nutritional risk, and the avoidance of several foods increases the chance of growth stunting. Tests to determine whether levels of nutrients such as vitamin D, calcium, iron and other nutrients are sufficient and the correction of any deficiencies could help to improve symptoms. Advice on eating a healthy diet and ensuring dietary patterns are conducive to the digestion and absorption of foods may improve gut symptoms in those with adverse reactions to foods which are not immune-mediated.	**The guidelines from EAACI on diagnosis of food allergy:** http://www.eaaci.org/resources/scientific-output/guidelines/2533-food-allergy-and-anaphylaxis-guideline.html **NICE guidance on food allergy in children and young people** http://www.ncbi.nlm.nih.gov/books/NBK82184/ **NICE guidance on IBS** https://www.nice.org.uk/guidance/cg61/chapter/1-guidance **Papers on problems with growth in children with food allergy** http://www.ncbi.nlm.nih.gov/pubmed/23937486 http://www.ncbi.nlm.nih.gov/pubmed/26022881 http://www.ncbi.nlm.nih.gov/pubmed/26022881 http://www.ncbi.nlm.nih.gov/pubmed/20561235

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					Papers on dietary patterns and allergic disease http://www.ncbi.nlm.nih.gov/pubmed/23995043 http://www.ncbi.nlm.nih.gov/pubmed/24338487 http://www.ncbi.nlm.nih.gov/pubmed/24472626 http://www.ncbi.nlm.nih.gov/pubmed/24508301
26	NDR-UK	Key area for quality improvement 1 Dietary advice for children and young people with suspected or proven food allergy	Treatment and care needs to be supported by evidence based, written information tailored to the needs of the child or young person and their family.	The provision of evidence based, clearly written information are key to understanding and obtaining compliance for the necessary dietary adaptations	Frost G.Heavens P.(1991) does the quality of the diet sheet matter? Practical Diabetes international 8;3:86-88 Lowes R. (1998) patient-centred care for better patient adherence Fam Pract Management Mar;5(3):46-57
27	NDR-UK	Key area for quality improvement 2 Use of food elimination diet as part of the diagnostic process.	There is clear evidence that the timely provision of good dietary advice improves the relief of symptoms, reduces the risk of anaphylaxis and ensures appropriate nutrition for health. A range of exclusion diets can be used for diagnostic purposes.	The provision of evidence based, clearly written information are key to understanding and obtaining compliance for the necessary dietary adaptations	Fisher H. Toit G. Lack G. (2011) specific oral tolerance induction in food allergic children: a meta analysis of published RCT`s. Journal Allergy and Clinical Immunology 126:1119-1128 Grimshaw K.(2006) dietary management of food allergy in children. Proceedings of the Nutrition Society 65:412-417
4.7	**Referral to secondary or specialist care for people with food allergy**				
28	SCM1	Referral pathway	Knowing if and when to refer and to whom is essential in ensuring the patient receives the best level of care.	Currently many patients are either referred inappropriately or not referred at all which leads to increased anxiety and risk of further reaction. The NICE food allergy guidelines state that accurate and timely diagnosis is a priority so it is important that the	NICE guidelines and patient group information

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				doctor to whom the patient first presents is equipped with the necessary knowledge of the pathways available and that these pathways are supported locally.	
29	SCM3	Key area for quality improvement 2 **Appropriate referral to Allergy services**	Knowing when to refer and to whom is essential to ensure the patient received to correct care	Many patients are either not referred or referred inappropriately. This can lead to increased anxiety and the risk of further allergic reactions. It can also lead to ongoing misery to patients and their family when dealing with chronic symptoms.	NICE CG116 NICE CG134 RCPCH Care pathways MAP Guidelines
30	BSACI	Key area for quality improvement 4 Care pathways for diagnosis and management of food allergy	Agreed care pathways to be provided by regional specialist allergy unit to involve and support all providers in the region Liaison between primary care and their local allergy unit, whether specialist and/or secondary care, with agreed pathways of care.	To support allergy care delivery across all levels of care; to enhance patient care and patient safety to provide cost-effective care	NICE guidance on food allergy in children and young people http://www.ncbi.nlm.nih.gov/books/NBK82184/
4.8	**Additional areas**				
31	Coeliac UK	Screening of coeliac disease in symptomatic patients	Recommend screening for coeliac disease (cross-reference with NICE guideline CG 86) if symptoms relate to foods containing wheat or gluten before advising elimination of gluten or wheat from the diet.	Symptoms of coeliac disease vary from person to person and can be confused with food allergy and intolerance. 1 in 100 people in the UK have coeliac disease [1], however only 24% of people in the UK are diagnosed [2]. Some signs of coeliac disease such as faltering growth in children, abdominal pain and constipation can be associated with both coeliac disease (which is IgA –mediated) and non-IgE-mediated food intolerance [3, 4]. There is a clear pathway for screening for coeliac disease. Patients with symptoms of coeliac disease should be offered serological testing and should be advised to continue to eat a normal, gluten containing diet during testing for coeliac disease to avoid a false negative test result [3].	[1] Bingley PJ, Williams AJ, Norcross AJ et al (2004) Undiagnosed coeliac disease at age seven: population based prospective birth cohort study. BMJ 328(7435): 322–3. doi:http://dx.doi.org/10.1136/bmj.328.7435.322 [2] West J, Fleming KM, Tata LJ et al (2014) Incidence and Prevalence of Celiac Disease and Dermatitis Herpetiformis in the UK Over Two Decades: Population-Based Study. Am J Gastroenterol 2014;109:757-768 [3] National Institute for Health

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					and Care Excellence (2009) Coeliac disease: recognition and assessment of coeliac disease (CG86) http://www.nice.org.uk/guidance/cg86 (accessed 11 June 2015) [4] National Institute for Health and Care Excellence (2011) Food allergy in children and young people: Diagnosis and assessment of food allergy in children and young people in primary care and community settings (CG116) http://www.nice.org.uk/guidance/CG116/chapter/Patient-centred-care (accessed 11 June 2015)
32	BSACI	Additional developmental areas of emergent practice	There are projects such as the Itchy Sneezy Wheezy Project where specialist nurses and or consultant staff are doing community clinics alongside an educational programme for primary care. There have also been GPWSI clinics that have proved to be successful . There is scope for allergy to be managed as part of core competencies of general practice. And for GPWSI. This would need an agreed set of competencies which are awaiting review by NHS England.	Fits in with care closer to home, management of long term conditions, reduces waiting lists and attendances at emergency rooms, improves patient experience, reduced costs in overall management shown by Itchy Sneezy wheezy project. There could in the future be a layer of GPWSI with expertise in allergy supported by a hub and spoke model that could manage the mild to moderate allergy reducing the need for hospital attendances and follow up. Quality standards would be required for this service, with agreed competencies and qualifications and agreement on appraisal.	Service evaluation of a UK primary care-based allergy clinic: quality improvement report. Levy ML1, Walker S, Woods A, Sheikh A. Prim Care Respir J. 2009 Dec;18(4):313-9. doi: 10.4104/pcrj.2009.00042. Integrated Care in Paediatric Allergy : A Gp -led MDT community clinic El-Shanawany,I et al, Whittington hospital,Uk Abstract BSACI 2014 www.itchysneezywheezy.co.uk
33	SCM3	Key area for quality improvement 4	A community based dietetic-led allergy/gastro service that can provide a	Developing the food allergy and gastroenterology specialist dietitians in both primary and secondary	NICE guidance on IBS https://www.nice.org.uk/guidanc

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		The development of cost-effective specialist dietetic food allergy /gastroenterology clinics for children and adults in primary care	specialist assessment of both children and adults with gastrointestinal and/or allergy symptoms could be highly cost effective. For those without proven allergy, a dietary approach to symptoms in primary care could support the patient immediately, with referral to secondary care only occurring when dietary approaches have not resolved the symptoms. An example of such a service model for adults with gastroenterological symptoms was included in the recent review of the IBS NICE guidelines This service supports patients to get the correct dietary approach and prevents unnecessary referrals to limited secondary care allergy services. Another model involving GPsi led MDT allergy clinics in primary care has helped to reduce the burden to secondary care allergy services for children. It has helped improved timely referrals from GPs and links with local GPs and Health Visitors to help increase knowledge and awareness of allergy. .	care will enable service models be developed to fit local needs. Specialist dietitians can ensure patients are seen and correct triaged, thus supporting both GPs and allergy consultants in secondary care. Dietitians are trained to take full and detailed dietary histories which can often give clues as to the likely provoking foods. They can also give expert advice on the avoidance of key foods, whilst ensuring the diet is nutritionally adequate. With additional competency-based training, and working within agreed algorithms, dietitians could also undertake food allergy testing and interpret the results. Thus specialist community dietitians, working closely with GPs, can ensure children and adults with true food allergies and/or severe symptoms are correctly referred onwards. Competencies in food allergy have already been published by the Royal College of Paediatric and Child Health (RCPCH). Competencies for all allied health professionals, including dietitians, who are working in allergy. Competencies for nurses have also been published by the British Society of Allergy and Clinical Immunology (BSACI) and are also currently under development for all allied health professionals by a Taskforce set up by the European Academy of Allergy & Clinical Immunology (EAACI). The Itchy Sneezy, Wheezy project is another initiative which could provide useful information when developing new pathways for the specific diagnosis of food allergy. The Itchy Sneezy, Wheezy project aims to improve the patient pathway for all children with allergic conditions by increasing the clinical knowledge, diagnostic and management skills in primary and secondary care and building professional networks..	e/cg61/chapter/1-guidance The itchy, sneezy, wheezy project http://www.itchysneezywheezy.co.uk/ This paper on allergy competencies for dietitians showed there is a need to increase their knowledge of food allergy diagnosis and management http://www.ctajournal.com/content/4/1/37 The BSACI allergy nurses competencies www.bsaci.org/_literature_133141/Allergy_Nurse_Competency_Doc RCPCH food allergy competencies http://www.rcpch.ac.uk/allergy/foodallergy
34	SCM2	Additional developmental areas of emergent practice **Training for staff in A&E on the recognition and**	A simple algorithm for secondary care hospital staff, especially those in A&E, including checking for a history of asthma or anaphylaxis to food, understanding who needs adrenaline on discharge and how to devise a simple management plan using national resources would greatly help support people who have had severe allergic reactions. This will help to reduce anxiety and support patients whilst they are waiting to see their GP or for a referral to secondary care.		

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		management of food allergy			
35	Royal College of Paediatrics and Child Health	Additional developmental areas of emergent practice	Our only comment is that the following should be added to the list of "Key development sources". "EAACI food allergy and Anaphylaxis guidelines: Managing patients with food allergy in the community. Muraro et al Allergy 2014;69:1046-57".		The position paper was prepared by a project group including Professor Jonathan Hourihane as the UK/Ireland expert
36	SCM 4	Additional evidence sources for consideration	**Children's and Young People's Allergy Network Scotland (CYAN) – Recommendations for the diagnosis and management of food allergy in children and young people -2015** **Children's and Young People's Allergy Network Scotland (CYAN) – Recommendations for anaphylaxis management in children and young people in Scotland - 2015**		
37	Royal College of Nursing	This is to inform you that the Royal College of Nursing have no comments to submit to inform on the above topic engagement at this time.			
38	Royal College of Pathologists	The Royal College of Pathologists does not have any comments to submit at this stage.			