Allergy Today

Allergy UK's publication for healthcare professionals

Spring/Summer 2022

AllergyUK

It's Time to Take Allergy Seriously

Allergy News

APPEAL Study - The Patient Charter - It's Time Campaign

Allergy in Asthma - Spotlight on Immunotherapy

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AllergyUK

Allergy UK is the operational name of the British Allergy Foundation. We are the leading charity for people living with allergic disease, providing support and advice about all kinds of allergic conditions. We act as the 'voice' of the millions of people who live with allergies, representing the concerns and healthcare needs of those affected by this multi-organ disease.

Our strategy for the next five years is centred on a new Mission:
"For everyone in the UK to take allergy seriously"

With our Vision that:
"No-one should die from allergy"

The allergic community is at the heart of everything that we do and our work is focused on improving the lives of people who live with allergic disease.

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Foreword

Professor Adam Fox
Chair of the Allergy UK Health Advisory Board
Consultant Paediatric Allergist, Evelina London Children's Hospital

Welcome to this edition of Allergy Today.

I am writing this Foreword at a time when Covid 19 cases in the UK are dropping, following a surge of the Omicron variant in the early part of the year. At the same time, the government's vaccine booster programme is in place, with a further booster for the over 75's. While this is good news, people living with an allergic condition remain understandably concerned about vaccinations and the BSACI continues to provide up to date information on vaccines for GPs and patients for Allergy UK to disseminate through its busy Helpline, website, and other communication channels.

In the last edition of Allergy UK, I wrote about the report from the All Party Parliamentary Group for Allergy which was presented to Gillian Keegan, the Minister of State for Care and Mental Health last October. "Meeting the Challenges of the National Allergy Crisis" highlighted the need for a national plan for allergy supported by steps to expand and improve training programmes. Now, Allergy UK has taken a further important step forward in driving the changes needed to bring about improvements in the care of people living with allergic disease, and this time through the voices of patients themselves.

Last year Allergy UK conducted the largest ever survey by an allergy patient charity into perceptions of allergy, both from patients and broader society. Over 7,000 people responded to the survey and the results informed its new campaign to create better awareness and understanding of allergy – "It's Time to take Allergy Seriously". They also formed the basis for the development of a new Patient Charter – the first ever Patient Charter for allergy patients. The Charter was developed in consultation with patients, parents and clinicians and it is fundamental to the charity's work to improve the lives of people living with allergy. It is a powerful representation of patients' voices.

Allergy UK's Patient Charter was launched at a Parliamentary reception earlier this month and it will form the cornerstone of the charity's work as the movement to improve care for those living with allergy builds momentum. Parliamentary champions are already stepping forward to support the Charter and this initiative marks a turning point in our ongoing efforts to bring about the long overdue changes that will improve the lives of people living with allergy.

I hope you find this edition of Allergy Today interesting and that the background to the Patient Charter and the research will provide food for thought.

Welcome

Like many other organisations, some of our plans have been on hold over the last couple of years as we responded to the Covid pandemic and focused on supporting our community through the impact of this global issue. Our charity had to implement risk management actions to ensure we were sustainable throughout the pandemic and now, with reinstated staff resources, we are progressing with the implementation of key campaigns and projects around the improvement of healthcare provision for people living with allergy.

These are exciting times for Allergy UK, with the development of a youth engagement group, a drive to bring in more volunteers, a new campaign aligned with our Mission that "it's time to take allergy seriously" and ground-breaking initiatives through which patients' voices are heard loud and clear.

Serving people living with allergic disease is at the heart of everything we do, and this year we have heard their voices through the major research study we carried out in 2021. The results are, in some areas, quite shocking as they highlight what it can really mean to live with a condition that can impact on pretty much every aspect of a person's life. Following this research, our first public campaign launched in April's Allergy Awareness Week focuses on the psychological impacts of allergy. The research findings were extensive and our campaigns will develop further with more focus to come in the coming year as we turn the spotlight onto specific conditions and their impacts on those living with allergic disease. Our dedicated Mission that **"it's time to take allergy seriously"** will be the context of all these research-based campaigns.

We were delighted that patients, parents, and clinicians joined with us earlier this year to develop the first ever Patient Charter for people with allergy. This is an innovative piece of work that will resonate through everything we do over the coming years to help and support our community as we continue to drive change for all living with allergy in the UK.

As a core part of our activities, we will continue to provide our education and information services, and alongside articles about our research and the new Patient Charter, you will find our 2022 Masterclass, together with articles by experts in their field. We hope that you will find the content of interest and that you will attend one of our online Masterclasses this year.

We also hope that you will support our charity as we campaign for the UK to **'take allergy seriously'**.

Carla Jones, CEO

Amena Warner, Head of Clinical Services

Allergy News

Appeal Study - Highlights the Practical and Emotional Impact of Living with Peanut Allergy

Earlier in February this year, Aimmune Therapeutics UK Ltd published the UK and Ireland data from the APPEAL (Allergy to Peanuts ImPacting Emotions And Life) study. APPEAL is the largest European study to date, focused on the emotional and psychosocial impact of peanut allergy, and was created through a collaboration of allergy specialists and representatives of patient advocacy groups from eight European countries.

The results demonstrate the wide-ranging practical and emotional impact of peanut allergy on the lives of children, teenagers, adults, and their caregivers, and highlight a significant need to improve education, care, and management for these individuals.

"Our research shows that most people in the studies with peanut allergy face an overwhelming feeling of uncertainty, stress and anxiety in their day-to-day lives, even in daily activities that are meant to be relaxing and fun, with only a third feeling that they cope "extremely well" managing their allergy. Most shockingly, children are reluctant to tell other people about their peanut allergy in fear of being bullied or to avoid embarrassment," said Marina Tsoumani, School of Biological Sciences, University of Manchester, and lead author of the publication. "These data indicate an urgent need for greater support and education to ensure those with peanut allergy feel confident their condition is managed, and both their risk of anaphylaxis and fear of bullying is minimised, if not eliminated."

Key findings include:

- Due to living with peanut allergy, the majority of patients and caregivers experience levels of uncertainty (79%), stress (71%) and feeling anxious (75%). More than a third even reported feeling worried in situations that don't involve food (35%).
- Among children and teenagers, just over half reported experiencing bullying or teasing because of their peanut allergy (52% of survey participants).
- Over a fifth of patients and caregivers reported feelings of isolation (22%) and 28% have been made to feel different because of their or their child's peanut allergy.
- All adult, teenage and caregiver respondents, and over half of the children interviewed reported a negative impact of peanut allergy on their social activities. Restricted choices were reported in various situations, including choosing where to eat out (82%), special occasions (76%), and when choosing a holiday destination (68%).
- More than half of the caregivers reported an adverse impact on their relationship with their partner, mainly due to the stress around paying enough attention to avoiding peanuts.

References
Tsoumani M, et al. (2022) Allergy to Peanuts imPacting Emotions And Life (APPEAL): The impact of peanut allergy on children, teenagers, adults and caregivers in the UK and Ireland. PLoS ONE 17(2): e0262851. https://doi.org/10.1371/journal.pone.0262851.

Cow's Milk Allergy Road Map
A New Resource Pack for Parents

In March this year, Allergy UK launched a new resource pack for parents whose child has been diagnosed with cow's milk allergy. The pack, designed as a Roadmap, tackles the challenges of feeding and caring for children with cow's milk allergy, step by step. It focuses on eight key milestones from diagnosis and management through to the stage when a child might outgrow the condition, providing practical advice and information along the way.

Supported by Reckitt Benckiser, each milestone Factsheet includes comments from a parent of a child with the condition, highlighting their own experiences, anxiety and concerns around caring for a child with cow's milk allergy. Around 2% of babies have a diagnosed cow's milk allergy and research has shown that parents are anxious about the condition and want more information about the future wellbeing of their infant. The Roadmap provides the support and information they need in milestones that align with their baby's development. For further information go to: **https://www.allergyuk.org/resources/cma-roadmap/**

It's Time the UK Took Allergy Seriously

During the Spring Allergy Awareness Week, Allergy UK launched a new national campaign to bring its Mission to life, reaching a wide range of audiences across the UK through the broadcast media, online platforms and social media with campaign themes that confront the realities of living with allergic conditions.

This public campaign is just the first step in our plans for 2022 – there is more to come – and we will be asking our allergic community to join us in our mission, to support our campaign to highlight the day-to-day burden of allergic disease and bring about change.

The campaign reflects the most important things Allergy UK has learnt about the lives of people living with allergy, from research, from calls to the Helpline, from focus groups and from meeting members of the allergic community. It captures the reality of living with an allergic disease, and it asks the UK to take allergy seriously. We are calling for improved healthcare provision, better awareness in service industries and improved care standards in education environments for adults and children whose lives have been impacted by allergy.

More than three quarters (76%) believe allergies should be taken more seriously

Our major research study in 2021 gave us some key insights into living with allergic disease, as well as public perceptions of allergy.

This important piece of research – the first of its kind to gain a better understanding of life with an allergic condition and the attitudes of our society – provides the foundation of our commitment to improve the lives of people living with allergy.

- Over half (53%) of people living with allergies in the UK regularly avoid social situations due to their allergy.
- Over half, (52%) of people feel they had to play down their allergies due to fear of judgement.
- 2 in 5 (40%) parents of children with allergies reported their child had experienced bullying due to a condition.
- 76% believe allergies should be taken more seriously.

Carla Jones, CEO at Allergy UK says - *"An allergy-free life is now the exception, not the rule. For many, the perception is that an allergy, like hay fever, is a minor and seasonal problem. However, this research, the largest study undertaken by an allergy patient organisation in the UK has highlighted the impact that negative perceptions and misunderstandings have on our allergic community."*

The full results of this study will be published later this year.

Our Campaign Themes

The fear and anxiety that an allergic condition can cause are captured in this first campaign. The fear of a mother with a child with food allergy, the feelings of isolation that can a skin allergy can bring and the feeling that no-one really understands what it can be like to live with allergy are captured in simple testimonies.

You will see these across social media and online platforms. Please show your support by sharing them where you can and getting in touch.

Our Allergy UK Champions

We are privileged to have the support of politicians and celebrities who believe in our Mission and who are working with us to achieve three key asks for the improvement of healthcare provision for people living with allergy:

- A National Strategy for Allergy to address the current gaps in healthcare provision for those affected by allergies
- The establishment of a National Clinical Lead/ Director for allergy
- An Integrated Model for Allergy in Primary Care through increased education among primary care professionals.

Please Support Us

As we move forward with this campaign, we will be asking you to join us and make your voice heard with stories and experiences. You can follow the campaign on our dedicated web page: **www.allergyuk.org/its-time/**

Launch of the Patient Charter for Allergy

Allergy UK has formally launched a new Patient Charter for Allergy at a Parliamentary Reception hosted at the House of Commons. The reception, held on 11th May 2022, brought together Parliamentarians, clinical experts, and Allergy UK to discuss the profound impact that allergies can have on quality of life. For over 30 years, Allergy UK has been working tirelessly to support those affected by allergic disease.

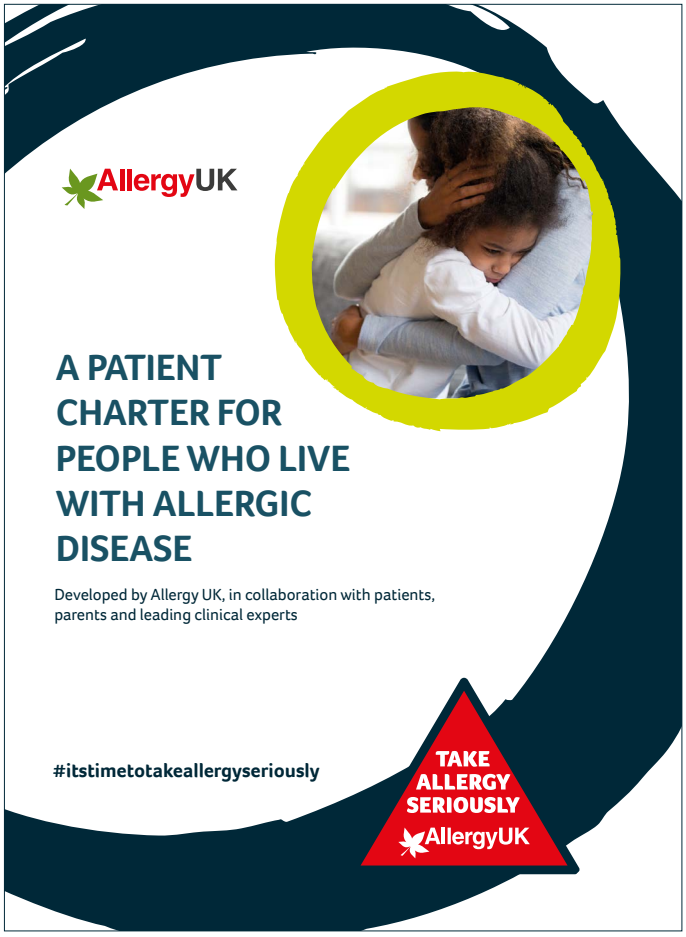
As the leading charity for people living with allergy, Allergy UK has developed the Patient Charter which reflects the challenges that patients face in every single aspect of their lives – from accessing high quality care, wherever they live in the UK, to feeling equal in a society that dismisses their condition and disregards their needs.

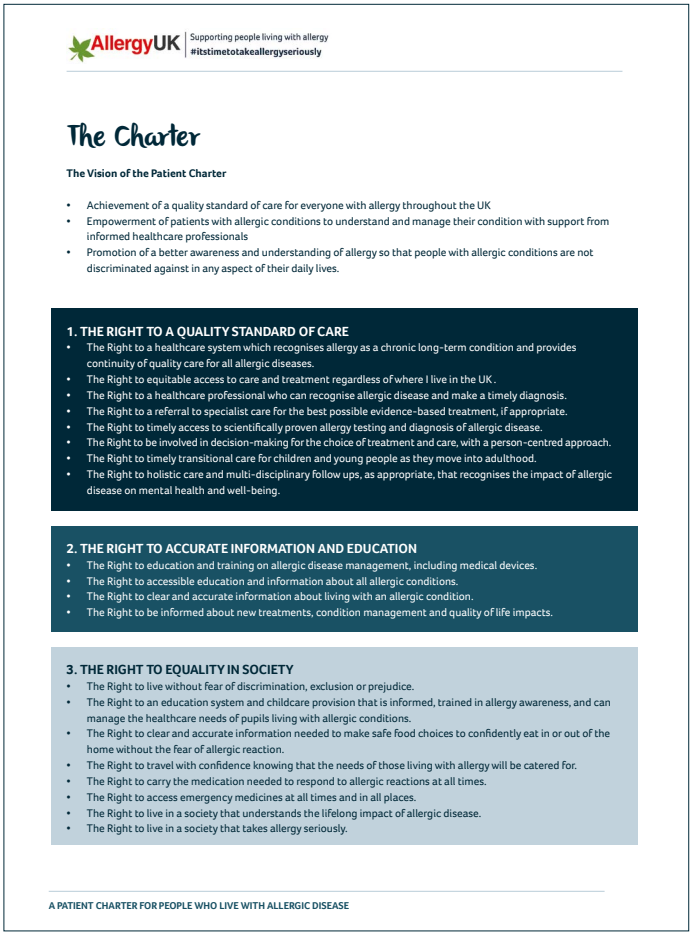
Jon Cruddas MP for Dagenham and Rainham, Labour sponsored Allergy UK's Parliamentary Reception. Jon is also chair of the All-Party Parliamentary Group on Allergy as well as an Allergy UK Parliamentary champion.

He said: *"I'm delighted to pledge my support to Allergy UK's Patient Charter. It is apparent that not enough is being done to support patients, and this must change. In Parliament I will call upon the government to support Allergy UK's Patient Charter, and for a drastic improvement in access to allergy services across the UK".*

The Vision of the Patient Charter

- Achievement of a quality standard of care for everyone with allergy throughout the UK
- Empowerment of patients with allergic conditions to understand and manage their condition with support from informed healthcare professionals
- Promotion of a better awareness and understanding of allergy so that people with allergic conditions are not discriminated against in any aspect of their daily lives.




AllergyUK Supporting people living with allergy
#itstimetotakeallergyseriously

The Charter

The Vision of the Patient Charter

- Achievement of a quality standard of care for everyone with allergy throughout the UK
- Empowerment of patients with allergic conditions to understand and manage their condition with support from informed healthcare professionals
- Promotion of a better awareness and understanding of allergy so that people with allergic conditions are not discriminated against in any aspect of their daily lives.

1. THE RIGHT TO A QUALITY STANDARD OF CARE
- The Right to a healthcare system which recognises allergy as a chronic long-term condition and provides continuity of quality care for all allergic diseases.
- The Right to equitable access to care and treatment regardless of where I live in the UK.
- The Right to a healthcare professional who can recognise allergic disease and make a timely diagnosis.
- The Right to a referral to specialist care for the best possible evidence-based treatment, if appropriate.
- The Right to timely access to scientifically proven allergy testing and diagnosis of allergic disease.
- The Right to be involved in decision-making for the choice of treatment and care, with a person-centred approach.
- The Right to timely transitional care for children and young people as they move into adulthood.
- The Right to holistic care and multi-disciplinary follow ups, as appropriate, that recognises the impact of allergic disease on mental health and well-being.

2. THE RIGHT TO ACCURATE INFORMATION AND EDUCATION
- The Right to education and training on allergic disease management, including medical devices.
- The Right to accessible education and information about all allergic conditions.
- The Right to clear and accurate information about living with an allergic condition.
- The Right to be informed about new treatments, condition management and quality of life impacts.

3. THE RIGHT TO EQUALITY IN SOCIETY
- The Right to live without fear of discrimination, exclusion or prejudice.
- The Right to an education system and childcare provision that is informed, trained in allergy awareness, and can manage the healthcare needs of pupils living with allergic conditions.
- The Right to clear and accurate information needed to make safe food choices to confidently eat in or out of the home without the fear of allergic reaction.
- The Right to travel with confidence knowing that the needs of those living with allergy will be catered for.
- The Right to carry the medication needed to respond to allergic reactions at all times.
- The Right to access emergency medicines at all times and in all places.
- The Right to live in a society that understands the lifelong impact of allergic disease.
- The Right to live in a society that takes allergy seriously.

A PATIENT CHARTER FOR PEOPLE WHO LIVE WITH ALLERGIC DISEASE

For people who do not experience allergy in their lives it can be viewed as a trivial and insignificant condition. However, the realities of living with an allergy can be very far from this perception. The evidence we have gathered from our major research study is powerful in capturing the immense challenges of living with allergy:

- 61% would like government to do more to help people with allergies
- 65% of parents wanted specialist allergy nurses in GP surgeries
- 64% parents wanted allergy services in hospitals, GP surgeries and local pharmacies
- 63% of parents wanted quick tests to identify allergy
- 65% say their child has felt discriminated against in a restaurant, because there was nothing they could safely eat
- 72% of parents feel that sometimes their children's allergies are not taken seriously
- 76% feel people should take allergies seriously

The Vision for Patient Charter is:

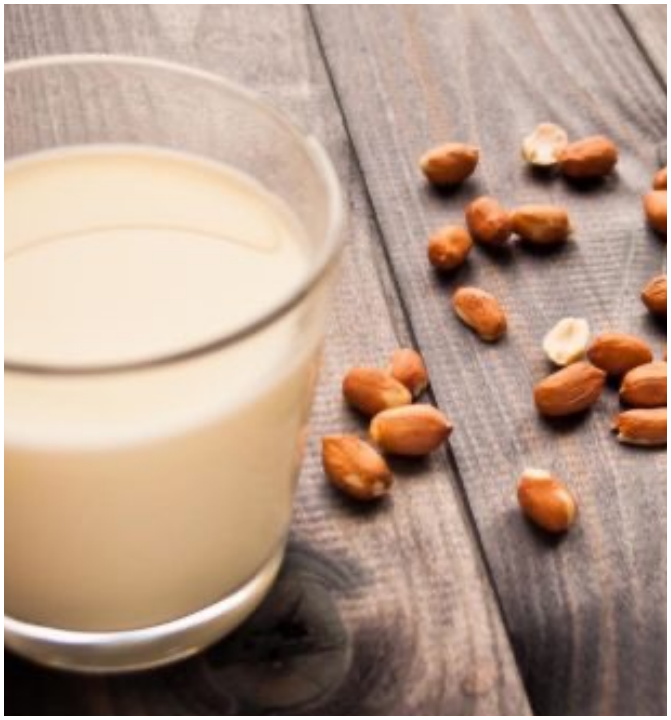
- Achievement of a quality standard of care for everyone with allergy throughout the UK
- Empowerment of patients with allergic conditions to understand and manage their condition with support from informed healthcare professionals
- Promotion of a better awareness and understanding of allergy so that people with allergic conditions are not discriminated against in any aspect of their daily lives.

The Patient Charter has been developed in consultation with parents, young people and clinicians. As the leading charity, Allergy UK has for over 30 years provided help, support and resources for people living with allergies, as well as education resources for healthcare professionals on the diagnosis and treatment of allergies. It also lobbies politicians and decision makers for improvements in the healthcare provision for people with allergies.

Carla Jones, CEO at Allergy UK says - "We are very proud to launch the first ever Patient Charter for allergy. It provides a platform for the allergic community to campaign for greater awareness, better treatment, more understanding, and ultimately increased resources to tackle the challenges of living with allergy. We urge patients, clinicians, and policy makers to endorse this Charter as a commitment to improving the lives of people with allergy in the UK".

The Patient Chater can be downloaded at: **https://www.allergyuk.org/resources/allergy-uk-patient-charter/**

NARF Clinical Trial



The Natasha Allergy Research Foundation (NARF) has rectly announced a new three-year, oral immunotherapy (OIT) trial looking into cow's milk allergy and also peanut allergy. It is to be led by the University of Southampton under Professor Hasan Arshad (a former Allergy UK trustee) and co-chief investigator Dr Paul Turner at Imperial College London (a member of Allergy UK's health advisory board). There will be other trial sites around the country including the University Hospitals of Leicester NHS Trust, Newcastle University and Sheffield Children's Hospital.

The £2.2 million funded trial investigates if taking two key foods (peanut or cow's milk) that are classed as 'everyday foods' on a daily basis, starting with extremely small amounts and building up over time, can 'reprogramme' their immune system so they do not react to trace amounts or foods that maybe cross contaminated with the allergen due to production etc. The trial aims also help find what their tolerance levels are but is not deemed a 'cure' for allergy, although with cow's milk allergy many children grow out of this and it very rarely found in adults.

The study will recruit a total of 216 people between the ages of 3 and 23 with food allergy to cow's milk and aged 6 and 23 with food allergy to peanut. Following an initial 12 months of desensitisation (carried out according to a standardised protocol under strict medical supervision), participants will be monitored for a further two years in order to report on longer-term safety and cost-effectiveness. To find out more about this research, please visit: **https://www.narf.org.uk/the-natasha-clinical-trial.**

The recently published LEAP and EAT studies have shown that introduction of allergens into the diet for under 2-year-olds may prevent food allergy from starting and also guided by a dietitian or other knowledgeable clinician, we now have the milk and egg ladder to support with this, which should help reduce food allergies for many children. Clinical advice now is to introduce small amounts as frequently as possible into the diet of a range of foods including egg, fish, smooth peanut/nut butters etc. for pre-2-year-olds that introduced into the diet as early as possible could aid prevention. Most infants grow out of egg and milk allergy but if they do not grow out of these food allergies then current advice is to introduce the "milk ladder" – under supervision, preferably of a dietitian, further guidance can be found in our Cow's Milk Allergy Roadmap **https://www.allergyuk.org/resources/cma-roadmap/**

Allergy to peanuts is usually a life-long food allergy. There is currently only one current treatment available for peanut immunotherapy which has National Institute of Clinical Excellence (NICE) approval and is the only peanut immunotherapy available to under 18-year-olds. A report has been published with data to prove its effectiveness, but this treatment is not yet easily available across the UK.

It is wonderful that food allergy research has had this large amount of funds injected for this trial. It will be interesting to see if positive outcomes from this trial will be translated to the wider food allergic community but we shall have to await until completion to see what these may be.

The importance of allergy in asthma

Stephen R Durham
Professor of Allergy and Respiratory Medicine Imperial College London and Royal Brompton Hospital London

Bronchial asthma – where are we?

Asthma affects up to 10% of the UK population. Symptoms are variable and include wheeze, cough, chest tightness, and shortness of breath. Symptoms are often worse at night and in the early morning and on exertion. Asthma commonly interferes with work/school performance, leisure activities, and sleep. Commonly associated conditions include rhino conjunctivitis, atopic dermatitis (eczema), and occasionally food allergy, all of which may have an additional impact on the quality of life for asthma sufferers and their families.

Inhaled allergens such as house dust mite, domestic pet dander, and seasonal exposure to tree and grass pollens and mould spores represent major provoking factors in many asthmatics. A major problem is the occurrence of asthma attacks triggered by common colds and other viral infections. The combination of a viral cold together with allergen exposure has been shown to be highly synergistic in provoking severe asthma exacerbations. Outdoor pollutants such as diesel particulates, nitric oxide and ozone prevalent in inner city areas are further predisposing/provoking factors.

Modern asthma treatment is highly effective for most patients

A holistic approach is necessary to empower patients with asthma to control their own symptoms, prevent exacerbations and reduce drug side effects to a minimum. Patient education about their disease, the need to avoid/minimise provoking factors such as inhaled allergens, the need for regular 'controller' treatment, attention to inhaler technique, and recognition and treatment of co-morbidities such as rhino conjunctivitis are all important examples of this approach that is best facilitated

by the specialist practice nurse, along with a clear written personalised asthma action plan and access to regular follow up as needed. Lung function testing using portable spirometry and home monitoring by use of peak expiratory flow meters is an important aspect of care, as recently emphasised by the EAACI in their patient survey during the COVID-19 pandemic. Patient charities including Allergy UK and Asthma UK represent a major resource of information for patients with allergies and asthma with provision of dedicated helplines staffed health professionals, accessible and patient-focused websites, and supply of information leaflets on all aspects of asthma care.

Pharmacotherapy over the past 50 years has revolutionised the quality of life of asthma sufferers. Advances include the availability of long-acting as well as short-acting inhaled bronchodilators. Modern inhaled corticosteroids have reduced potential for systemic absorption and associated side effects. 'Combination inhalers' that include a corticosteroid that is inhaled together with a long-acting bronchodilator are highly effective and have improved asthma control and reduced exacerbations. Improvements in inhaler design together with the use of spacer devices have ensured a better drug delivery to distal airways, with reduced risk of upper airway side effects such as hoarseness and candidiasis (thrush).

So, what's the problem?

Despite a holistic approach by skilled health care professionals and the availability of modern treatments, the 'bête noir' remains severe asthma exacerbations triggered by viruses and/or allergen exposures. Exacerbations may appear 'out of the blue' in patients with otherwise mild well-controlled asthma, as well as in those with more severe disease requiring high dose inhaled steroids and/or steroid tablet treatment. Although necessary for the treatment of exacerbations when prednisolone tablets are given in high doses and/or for prolonged periods of time they cause unacceptable side effects (Table 1). It should be emphasised that inhaled corticosteroids are highly effective, the mainstay of asthma treatment, and largely free of general side effects. Inhaled corticosteroids may also cause general side effects, particularly when combined with topical corticosteroids by other routes such as nasal sprays and skin corticosteroids creams that all add to the steroid burden and this becomes particularly important in children.

Table 1 Common corticosteroid side-effects

- Indigestion, heartburn
- Increased appetite, weight gain
- Difficulty sleeping
- Mood changes including feeling irritable anxious, or depressed
- Increased risk of infections
- High blood pressure
- Osteoporosis
- High blood sugar, diabetes
- Thin skin, easy bruising, and purple striae
- Cataract
- Glaucoma

So, what's the solution?

More Holistic approach!

Happily, there often is a solution to improve asthma control and avoid drug side effects. Patients with 'difficult asthma' not responding to usual treatment should be referred to a specialist asthma clinic. This enables re-evaluation of the diagnosis and an opportunity to address issues that may be responsible for poor asthma control - first and foremost assess adherence to treatment and proper use of inhalers. I call this the 'Baker's dozen' of causes of 'difficult asthma' (listed in Table 2).

Common causes of worsening asthma include environmental allergen exposures. Perennial mite and domestic pet exposures commonly underly perennial asthma. Tree and grass pollen commonly cause hay fever in more than 1 in 4 asthmatics, may exacerbate asthma and requires

Table 2 'Baker's dozen' (What to do when asthma does not respond to treatment!)

- Wrong diagnosis (or additional diagnoses)
- Nonadherence to treatment (not taken regularly, poor inhaler technique)
- Undiagnosed allergies (e.g. pets, moulds, occupational allergens, food)
- Psychosocial problems (Family, home, work/school bullying, separation, bereavement)
- Laryngeal/vocal fold dysfunction
- Rhinosinusitis with/without nasal polyps
- Gastroesophageal reflux (although correction often improves reflux but not the asthma)
- Hormonal changes (pregnancy, menstrual cycle, menopause, thyroid dysfunction)
- Allergic bronchopulmonary aspergillosis (bronchial inflammation due to aspergillus mould)
- Drug side effects (aspirin, beta-blockers)
- Vasculitis (organ damage due to eosinophilic granulomatous inflammation)
- Corticosteroid resistance (rare, only to be diagnosed when 1-11 excluded!)
- 'Other' – we should always be on the lookout for other reversible causes

separate recognition and treatment. Frequently unrecognised occupational causes include catalysts used in resin manufacture and two-part paint systems and varnishes, colophony in electronic solders and small animal exposure in laboratory animal workers (and rarely, exposure to flour in bakers!).

Psychosocial factors include abusive behaviour towards both children and adults, bereavement, parental separation, and financial difficulties. Laryngeal dysfunction is a common accompaniment of asthma and may be the sole cause of airway obstruction, requiring the attention of an expert speech therapist for diagnosing and treating the condition.

Obesity is an increasing problem in the UK and may be exacerbated by corticosteroid use. Excess fat tissue releases inflammatory mediators that may worsen asthma, and lack of exercise may result in deconditioning. An obese neck may compress the upper airway and cause obstructive sleep apnoea that can mimic asthma, and when recognised may respond extremely well to assisted ventilation using continuous positive airway pressure devices at night.

Other causes include rhinosinusitis, acid reflux, hormonal influences, drug-induced asthma such as aspirin intolerance, and rare causes such as allergic aspergillosis and serious vasculitic disorders that may be life-threatening if not diagnosed and treated.

Why the Baker's dozen? Because the baker's tray accommodates pastry for baking 12 pies and there is always a bit left to roll up and make a 13th. This reminds us that even having identified and resolved the 12 common causes, we should remain alert to look for that 'other' 13th cause not listed that may be an important asthma provoker for our individual patient. Attention to these factors may avoid the need for escalation of asthma medication and may even allow dose reduction.

Monoclonal antibody therapies

Having confirmed the diagnosis and after attending to items above and listed in table 2, there remains a small proportion of patients with confirmed eosinophilic asthma, so-called 'type 2' asthma, in whom the recent availability of monoclonal antibody therapies has represented a major advance in treatment.

Monoclonal antibodies include anti-IgE (Xolair), 'anti-Th2' cytokines such as anti-IL-5 (Mepolizumab), anti-TSLP (Tezepelumab), and anti-Th2 receptors (Reslizumab, and Dupilumab). Monoclonal antibodies target the so-called 'Th2' pathway that is the major driver of asthma for many patients including atopic allergic asthma as

well as 'late onset' eosinophilic asthma that may be associated with nasal polyps and sensitivity to aspirin-like drugs. Monoclonal antibodies have replaced immunosuppressive drugs such as cyclosporin and methotrexate that were previously used (and often ineffective) to treat the most severe confirmed asthma cases. In rigorous controlled clinical trials, monoclonal antibody therapies have been shown to prevent exacerbations and to reduce the need for 'rescue' high dose corticosteroids as well as reduce dependence and/or the dose of long-term maintenance prednisolone tablets and attendant side effects (Table 1).

In the UK these drugs have received regulatory approval and have been included in international guidelines, including the recently 2021 GINA guideline (Fig.1) at step 4/5 of asthma therapy. There are two caveats – firstly, in view of very high cost to the NHS, they should be reserved for those patients who have been through the above rigorous review in a specialist asthma clinic registered to prescribe them. Secondly, although of proven value in this carefully selected group of 'type 2' asthmatics, nonetheless, they represent a symptomatic treatment as with other anti-asthma drugs, with no disease modification and with relapse as soon as they are discontinued, hence the need for their continuous long-term prescription and adherence to treatment in order to maintain asthma control.

Anything else?

Well, there is actually. I think quite exciting. A theme in this short communication has been the impact of allergen exposure as well as viruses in inducing exacerbations of asthma, even today a cause of occasional asthma fatalities. Also, the need to treat co-morbidities such as allergic rhinitis in order to improve the quality of life of asthma sufferers whether, or not there is an impact on their asthma control per se (which remains nonproven).

Asthma patients are rightly concerned about the need to identify and treat the underlying causes of their condition, rather than just symptomatic treatment. For allergic asthma, there is the need to avoid provoking allergens to which they have established sensitivity. For example, avoidance of animals to which they are sensitive, effective treatment for their hay fever during the pollen season where pollen exposure is unavoidable (and too restrictive). House dust mite avoidance methods using hard flooring, mite-proof mattress/duvet/pillow covers and regular vacuum cleaning (by someone else!) have not been proved to be efficacious in adults whereas there has been some success in mite-allergic asthmatic children.

What about allergen immunotherapy?

In patients with seasonal allergic rhinitis, (hay fever) with/without allergic asthma, over the past 110 years, and initially preceding the availability of antihistamines and nasal steroid sprays, allergen immunotherapy (desensitisation) has been shown to be very effective. After an initial up dosing phase, this took the form of repeated monthly injections into the subcutaneous tissue of grass pollen or tree pollen extracts and house dust mite or animal dander extracts. Although effective, subcutaneous immunotherapy requires specialist supervision and there is the risk of allergic side effects, including anaphylaxis following injections. In contrast, use of sublingual immunotherapy for seasonal pollens has proved highly effective and safe and able to be self-administered in the patients' home environment. This involves placing a concentrated high-dose allergen solution in the form of drops, or more recently, in the form of a tablet under the tongue. When taken 4 months before the pollen season, this has been shown for both grass pollen and tree pollen to be highly effective, and moreover, if taken daily as a fast-dissolving grass pollen or tree pollen tablet daily for 3 years, to be able not only improve seasonal symptoms but modify the course of the disease with the persistence of clinical benefit (long-term tolerance) for several years after its discontinuation.

Figure 1 – Reproduced with permission by Global Initiative for Asthma
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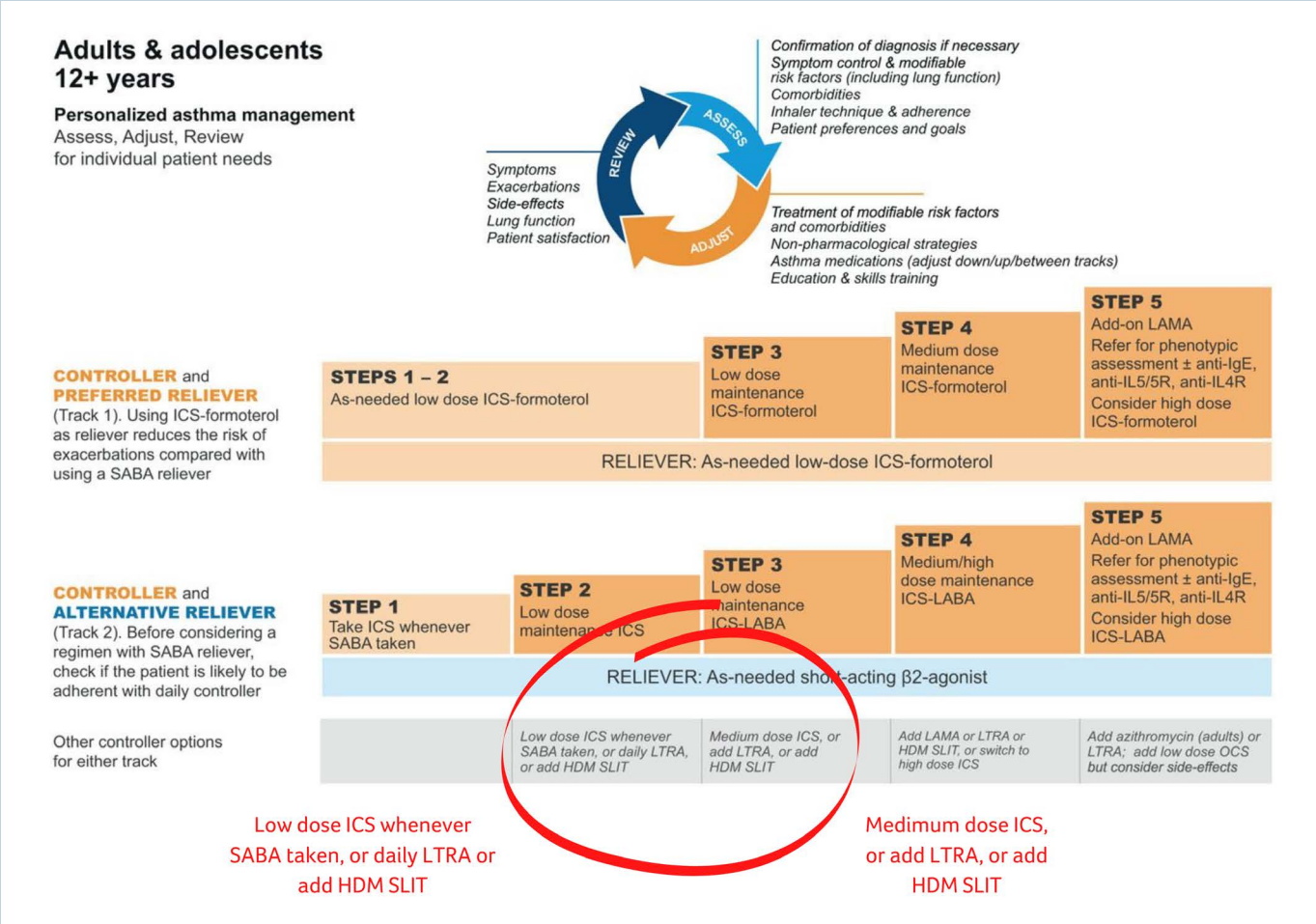

Interestingly, studies of a house dust mite tablet from 2 independent manufacturers have also been shown to be effective for perennial allergic rhinitis due to house dust mite. Further, the fast-dissolving freeze-dried tablet has been shown to be effective in reducing required maintenance doses of inhaled corticosteroids and to prevent asthma exacerbations in house dust mite allergic adult asthmatics who had partially controlled asthma. In the UK and Europe, the tablet now has regulatory approval to treat house dust mite-driven asthma associated with allergic rhinitis.

In the recent GINA 2021 Guideline, SLIT fast-dissolving house dust mite tablets have an indication for use in patients with house dust mite allergic asthma and associated rhinitis at step 2-4 on the asthma treatment pathway (Fig.1). This is at the step prior to consideration of monoclonal antibody treatment (step 4-5) that is indicated in more severe asthma as a symptomatic treatment. So, the good news is that we have a disease-modifying treatment for both seasonal rhinitis to tree and grass pollens and for carefully selected patients with moderate perennial house dust mite-driven asthma, with the potential to reduce exacerbations, reduce steroid burden and as proven for seasonal pollen allergy, likely induce long-term clinical benefits and remission, although the long-term effects for house dust mite tablet immunotherapy remain to be established in long-term trials.

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Spotlight on Immunotherapy

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Amena is Head of Clinical Services at Allergy UK. She took up this appointment after working as a Clinical Nurse Specialist in Immunology and Allergy at an NHS Hospital Trust. She trained at University College Hospital, followed by paediatric training at Great Ormond Street Hospital in London. She also holds a Public Health and Specialist Practice in School Nursing qualification gained in 1994. Visiting schools and carrying out health assessments made Amena very aware of the rising incidence of allergy in the UK and was instrumental in developing her interest in the field.

Amena is a member of the College of Nursing Immunology & Allergy Nurses group and is the first nurse to sit on the British Society of Allergy & Clinical Immunology (BSACI) council where she started the National Nurses in Allergy Group.

Summary of article content: The immune system helps the body fight infections and other diseases. It is made up of white blood cells, organs and tissues of the lymph system.

Allergy is an over or exaggerated response of the immune system to what would usually be deemed as something harmless such as a pollen or a food. Immunotherapy is a disease modifying treatment.

Allergy represents a major burden to individuals, families and health services as it affects so many (estimated prevalence of 23 million in the U.K.) with allergic rhinitis, asthma and food allergy being the most common, with deaths from Anaphylaxis being mainly due to insect venom and food allergy. Allergists and Immunologists have a good understanding of these diseases and how to manage them.[(2)] Most patients have good disease control with simple pharmacotherapy and avoidance strategies, but unfortunately a minority still have persistent symptoms or remain at risk of life-threatening allergic reactions; they need additional therapy.[(2)]

Immunotherapy, is an increasingly commonly used term for some highly specialist treatments. Immunotherapy can be used for the treatment of autoimmune diseases and cancer as well as for allergies. We discuss allergies here where it is an immune modulating treatment that can change the course of allergic disease. Immunotherapy to a specific allergen is a medical treatment for mainly environmental allergens such as insect venom, pollens, house dust mites, animals or food like peanut. It is referred to as Allergen-Specific Immunotherapy (AIT or SIT) and often the word desensitisation is used to mean the same. Allergen Immunotherapy is not new and has been used for just over a century. It involves exposing the allergic individual to set amounts of allergen in an attempt to change the immune system's response.

More recently an exciting area of development has been research into using Immunotherapy for Allergy to specific foods, with one product already licensed and received NICE approval (although not widely available yet via the NHS, there is ongoing discussion with pediatric Allergy/immunology Services on how best to fund the whole care package required to deliver this type of Immunotherapy, due to the adverse reactions, including Anaphylaxis, that children may experience during the course of treatment). Oral Immunotherapy has successfully induced desensitisation in some children with a clinically meaningful increase in peanut threshold.

So for families where quality of life is so poor due to ongoing anxiety, constantly having to check food labels, including adherence to precautionary allergen labelling and frequent serious allergic reactions, this still provides the best treatment currently available for specific foods, e.g. peanut, where avoidance is so difficult.

There is currently no cure for allergy, but immunotherapy is the nearest treatment to reducing risk of allergic reactions. Which is why it is so important to highlight the availability of this treatment and the impact it can have on the lives of those who receive it.

Immunotherapy is initiated in secondary or tertiary specialist allergy services for patients referred with severe allergy, usually from a referral via primary care/GP.

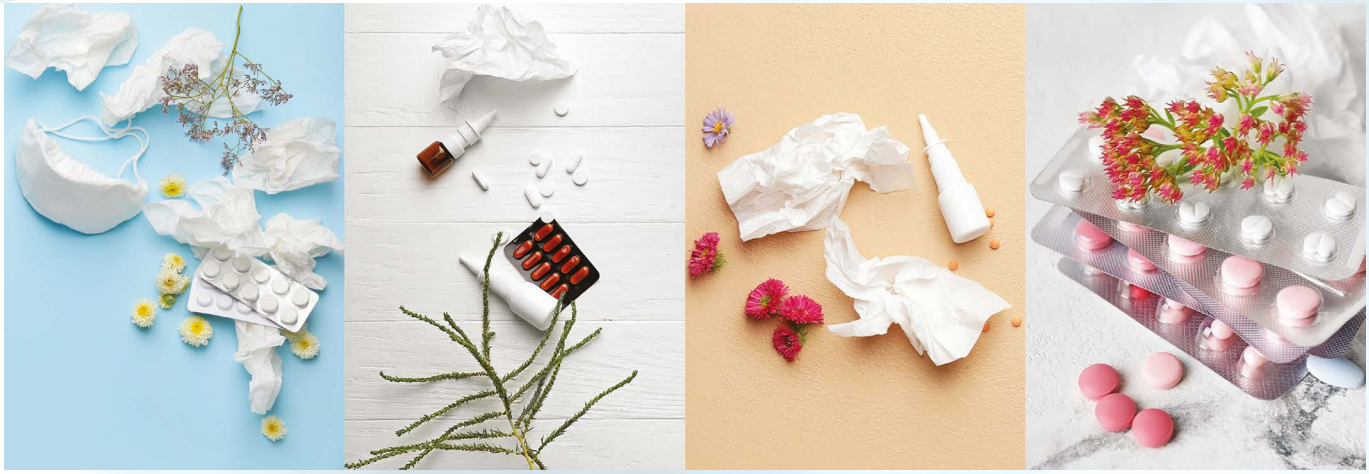
There is a need to raise awareness of immunotherapy as a treatment in the UK, as currently there is a large discrepancy between the use of immunotherapy across Europe compared with the UK. This has led to inequity of access to treatment for people with severe allergic disease in the UK.

There is much more Immunotherapy use in Europe than the U.K. and much of its use in the U.K. is via unlicensed products, although we are now seeing many more Immunotherapy products getting marketing authorisation. This means that they are a licensed medicine, where clinicians along with drug and therapeutic committees of NHS Trusts can see safety and efficacy data, for decision making.

Immunotherapy is a high-cost medication and the associated issues with access to treatment in the UK - including references to the significance of timing in relation to the referral process - can be barriers to patient access. It is important to have some knowledge of which patients may benefit from this treatment. Patient identification & Selection is a crucial factor for primary care, so the correct patients get the correct treatments.

Allergy symptoms can have a significant negative impact on quality of life. A survey of children and adolescents 4 to 17 years of age and their parents or caregivers indicated that allergy decreased school performance, interfered with daily activities, and disrupted sleep patterns.[3]

Allergen immunotherapy is an effective treatment for allergic rhinitis with or without conjunctivitis (AR/C), and, in contrast to pharmacotherapy, allergen immunotherapy induces immunologic tolerance.[4] Furthermore, children receiving allergen immunotherapy have a decreased risk for the development of asthma.[5]



Why is it important to treat rhinitis? As well as reduction in the nasal symptoms and trying to improve QOL, allergic rhinitis is a risk factor in the development of asthma and treatment of rhinitis is associated with benefits for asthma. There is a 'one airway one disease' concept where it is acknowledged that the nasal airways have a direct correlation to the respiratory airways.

It is so important that these children are referred to an Allergist/ Immunologist for assessment and management. If children are referred at an early stage before developing asthma, then they may be more eligible for treatments like Immunotherapy which could change the course of their allergic journey and dramatically improve quality of life.

What happens if usual over the counter or GP/Nurse prescribed medications such as antihistamines, nasal steroid spray's, leukotriene receptor antagonist etc, don't work?

There should be a step wise approach i.e. long acting, non-sedating antihistamines (if eye symptoms coexist i.e. allergic rhino conjunctivitis, then it is important to treat these symptoms) patients should be taught how to use any prescribed aqueous nasal steroid spray for greater compliance and effectiveness. Then think about addition of leukotriene receptor antagonist. If QOL is impacted and patient's symptoms not well controlled then think Referral to an allergy (or Immunology) service. This helps not only to identify triggers but also access to advanced management strategies of therapeutic benefit such as use of immunotherapy/ desensitisation. Immunotherapy is highly effective when the specific allergen is the responsible driver for the symptoms and is available usually for monosenstised individuals, such as those who have severe allergic rhinitis driven by allergy to grass or some tree pollens. Also for those who's work is affected by allergy to animals, such as vets. There is strict criteria for its use.

Additional monoclonal antibody therapy may be helpful for those with clinically important polysensitization. These are newer types of therapies and appear efficacious.[1]

Currently types of allergy that are treated with immunotherapy include:

- Grass pollen allergy
- Tree pollen allergy
- Housedust mite allergy
- Animal dander, including immunotherapy for cat allergy and dog allergy

Immunotherapy Treatment is usually given via the following routes, sublingual (SLIT), subcutaneous (SCIG) (injection) or in the case of peanut by the oral route (OPIT). (other food allergens are also being researched and there is also an epicutaneous patch (EPIT) which is showing promising results).

Immunotherapy is usually given over a 3-5 year period on a regular basis for patients being treated for severe allergy. Post immunotherapy treatment should provide effects for several years.

Venom immunotherapy (VIT)

VIT is the only specific treatment currently available to prevent systemic reactions/anaphylaxis to bee and wasp stings in patients with a previous history of anaphylaxis/life-threatening immediate (type 1) hypersensitivity reactions to bee or wasp stings. It is usually not indicated in patients with systemic non-life threatening reactions e.g.: urticaria and/or angioedema or in localised reactions.[1]

About half of adult patients will react similarly or worse to another sting unless desensitized with a series of appropriate venom injections. The percentage of serious reactions to another sting is less with children, but may still occur. Multiple factors including occupation (e.g. farmer, tree surgeon etc.) hobbies, (bee keeper) access to emergency medical care and patient preferences/anxiety are important determinants in the decision-making process.[1]

Immunotherapy is the desensitisation treatment and is given every 6-8 weeks once the updosing schedule has successfully been completed, usually for between 3 and 5 year's. Although, in special circumstances individuals may have their treatment course extended (i.e. if the patient has mastocytosis and receiving venom Immunotherapy). Venom immunotherapy is believed to be 95 percent effective, so it is worth the time investment of this long term treatment for peace of mind that research has shown can reduce anxiety from fear of having a fatal allergic reaction to a bee or wasp sting as it provides a high level of protection. This treatment is available at NHS clinics.

I hope that you have enjoyed reading this spotlight on Immunotherapy and a key message to remember is:

Unlike pharmacotherapy, AIT has the potential to really modify patient journeys delivering them long term therapeutic benefit.[2]

References

[1] BSACI Immunotherapy Guidelines

[2] EAACI Allergen Immunotherapy guidelines part 2: recommendations 2017

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Are you prescribing allergen immunotherapy? If you are a GP or other non-specialist prescribing allergen immunotherapy therapy then you should be aware of the national registry. The BSACI Registry for Immunotherapy or BRIT records the use of these specialist treatments in the UK. It covers treatment with aero-allergens such as grass and mites, venom and peanut treatment. We currently have over 50 sites involved in the UK and registration is part of the RCP accreditation process for allergy centres. The registry keeps track of patients progress by regularly asking them for patient related outcome measures so that you can see if treatment is working. So it is an active clinical tool for prescribers to monitor progress. If you would like to find out more contact the registry administrator **Maria.Smith@bsaci.org**

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