Patient perspectives of allergic rhinitis and allergen immunotherapy: A qualitative study

Joshua Jacob, MD,[a,b,c] Caroline Joyce, PhD,[a] Melanie Lloyd, PhD,[d,e] Adrian Lowe, PhD,[c,f] and Constance Katelaris, PhD[a,b,c] *Sydney, Campbelltown, Parkville, and Melbourne, Australia*

Background: Allergic rhinitis (AR) is a highly prevalent condition associated with significant morbidity globally. Few recent studies have detailed the experiences of sufferers and explored their perspectives of treatment options. Allergen immunotherapy (AIT) is an effective treatment option that remains underused in eligible patient populations.

Objective: We sought to describe patient perspectives of AR and treatment options including AIT.

Methods: Twenty-five semistructured interviews were conducted with adult participants at a tertiary hospital center in Sydney, Australia. Authors used an inductive thematic analysis methodology to code and interpret the data.

Results: Three major themes emerged from the qualitative thematic analysis: (1) a prolonged journey with symptoms, (2) multiple trials of therapy with incomplete symptom control, and (3) diverse experiences with AIT. Several subthemes were identified: (1) delays to diagnosis and management, (2) underestimating the impact of symptoms, (3) substantially impaired quality of life, (4) limited efficacy of symptomatic pharmacotherapy, (5) perceptions of tolerance and dependence, (6) motivations to access AIT, (7) diverse expectations of AIT, and (8) barriers to AIT access.

Conclusions: Sufferers of AR experience an impactful symptom journey, with many achieving inadequate disease control despite symptomatic pharmacotherapy. The uptake of AIT is constrained by direct medication costs, insufficient public awareness, and limited prescriber availability. The findings of this study offer insights for health care professionals and policymakers to formulate strategies to enhance AR management and improve AIT access for eligible patients. (J Allergy Clin Immunol Global 2026;5:100621.)

Key words: *Allergic rhinitis, allergen immunotherapy, patient perspectives, patient experiences*

Abbreviations used

AIT:	Allergen immunotherapy
AR:	Allergic rhinitis
COVID-19:	Coronavirus disease 2019
SCIT:	Subcutaneous immunotherapy
SLIT:	Sublingual immunotherapy

Allergic rhinitis (AR) is a common upper respiratory tract condition in which environmental allergens induce a type 2 inflammatory response. Prevalence of self-reported AR ranges with a reported median of 18.1% in the global population,[1] with 13% to 46% in Australia[2] and 10% to 30% in the United States.[3] Despite the availability of several treatment options, uncontrolled AR symptoms continue to impose a substantial burden on patients' quality of life.[4-6]

Available management strategies include pharmacologic therapy, nonpharmacologic measures to minimize allergen exposure, and surgery for select patients with anatomical obstruction.[3] Pharmacologic therapy can be categorized into symptomatic pharmacotherapy, which aims to provide short-term symptom control, and allergen immunotherapy (AIT), which is a longer-term disease-modifying therapy. Symptomatic pharmacotherapy such as intranasal corticosteroid or oral antihistamine is suitable for milder cases. A cohort of patients will still have moderate to severe disease despite symptomatic pharmacotherapy, which is when AIT is most useful.[7] The Allergic Rhinitis and Its Impact on Asthma severity classification is useful in clinical practice, with moderate to severe cases being defined by the presence of sleep disturbance, impairment of daily activities, impairment of school or work, or troublesome symptoms as reported by the patient.[8]

AIT is the sole disease-modifying treatment available for AR. It ameliorates symptoms by inducing regulatory T and B cells, thereby attenuating the immune response to specific antigens.[9,10] Systematic review and meta-analysis data confirm that a course of AIT for AR can result in significant improvements in both patient-reported symptoms and medication scores.[11] Despite this, AIT remains underused, and uptake is limited in patient populations that would be eligible for treatment.[12]

The imperative for continued research to understand patient values and preferences in AR is well established.[13] Effective shared decision making requires a comprehensive understanding of patient perspectives.[14,15] The objective of this study was to characterize patient experiences of AR and explore their perspectives of treatment options, with a focus on AIT.[16]

METHODS

Design

We conducted a qualitative study of adult patients with AR at a tertiary metropolitan center in Australia. The inductive thematic

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From [a]Western Sydney University, Sydney; [b]Campbelltown Hospital, Campbelltown; [c]the National Allergy Centre of Excellence (NACE), Parkville; [d]Monash University, Melbourne; [e]Murdoch Children's Research Institute, Parkville; and [f]the University of Melbourne, Melbourne.

Received for publication July 14, 2025; revised September 17, 2025; accepted for publication October 1, 2025.

Available online December 1, 2025.

Corresponding author: Joshua Jacob, MD, Department of Clinical Immunology & Allergy, Campbelltown Hospital, Therry Rd, Campbelltown, NSW 2560, Australia. E-mail: Joshua.jacob@health.nsw.gov.au.

2772-8293

https://doi.org/10.1016/j.jacig.2025.100621

analysis approach was selected to facilitate data-driven exploration of individual experiences. A semistructured interview guide was designed by the research team and was piloted with a group of 4 volunteers. A patient advocacy group, Allergy & Anaphylaxis Australia, was consulted to review the question items and provide suggestions for improvement. The semistructured interview guide is provided in Appendix E1 (in the Online Repository available at www.jaci-global.org).

Participants

Adult patients (≥18 years) were invited to participate via the Allergy and Immunology Clinic at Campbelltown Hospital in New South Wales, Australia. A purposeful sampling approach was used for recruitment. Purposeful sampling criteria encompassed clinician-confirmed AR diagnosis, variation in AIT treatment exposure, and demographic diversity across age and sex. Interviews were offered to participants in their first language, with a live video link interpreter (TIS National, Melbourne, Australia) being available to enable inclusion. Participants were not offered incentives or reimbursement. Sample size was guided by thematic saturation, a methodological approach in which data collection and interpretation continue until no novel themes emerge from iterative analysis. This is consistent with qualitative health research practices[17] and appropriate for the methodology of qualitative thematic analysis.[18]

Procedure

A single interviewer (J.J.) was selected from the research team to maintain consistency in data collection. No previous relationships existed between the interviewer and the participants before the study. Written informed consent was obtained from the participants before the enrollment. Interviews were conducted in person or via Microsoft Teams, depending on the participants' preference. Audio recordings were transcribed verbatim using Microsoft 365 (Redmond, Wash) and then cross-checked for accuracy. To preserve confidentiality, identifying data were removed and participants were assigned study numbers (P1-P25). The transcripts were coded using the NVivo (version 15; Lumivero, Melbourne, Australia) software package. The study protocol and interview guide were reviewed and approved by the South West Sydney Local Health District Human Research Ethics Committee (approval no. 2023/ETH02937).

Data analysis

Qualitative analysis was performed applying the 6 steps outlined for thematic analysis.[19] Following familiarization with the data, an inductive coding process was used to generate a preliminary codebook. Descriptive codes were assigned to transcript segments representing specific ideas or concepts. To account for researcher positionality, critical reflexivity was maintained during the data collection and analytical steps. The interviewer is an allergy specialist clinician with existing knowledge of AR and AIT. The research team comprised both academic researchers and clinicians, and regular discussions were held to consider the impact of professional backgrounds and ensure interpretation remained grounded in participants' accounts. Coding was performed independently by a clinician (J.J.) and an academic researcher (C.J.) to minimize bias from any single professional viewpoint. Coding disagreements were resolved by joint reexamination of relevant data segment and deliberation until consensus was reached. When necessary, the senior author (C.K.) served as the final arbiter for coding discrepancies. Emerging themes were then identified by clustering related codes. Themes and subthemes were developed through discussions among all 5 authors. Study participants did not provide feedback on coding or analysis. Data analysis began after 10 interviews had been completed and continued until saturation of themes was reached. Thematic saturation was confirmed after 20 interviews, because the final 5 (P21-P25) contributed only further illustrative examples within the established framework of themes and subthemes without introducing novel content.

RESULTS

Twenty-five participants were recruited between February 2024 and January 2025. A single participant was elected to be interviewed in a language other than English, and the interview was conducted with the assistance of a Thai language interpreter. Demographic variables of study participants are provided in Table I. Three overarching themes were identified: “A prolonged journey with symptoms,” “Multiple trials of therapy with incomplete symptom control,” and “Diverse experiences with AIT.” Representative quotes illustrating themes and subthemes are provided in Table II.

Theme 1: A prolonged journey with symptoms

Participants described protracted disease journeys spanning several years before a diagnosis of AR being made. Sneezing, rhinorrhea, nasal congestion, ocular pruritus, epiphora, and dyspnea were described as the most problematic symptoms. The onset of symptoms ranged from early childhood (<10 years) to middle adulthood (40-65 years).

Delays to diagnosis and management. Many participants recounted diagnoses of recurrent infection, nasal anatomical obstruction, and asthma before recognition of AR as the causative condition. Empirical antibiotic treatment was trialed in some cases. Most initial diagnoses of AR were made by general medical practitioners. Some participants recalled an allergy specialist giving them the diagnosis, and others had ascribed self-diagnoses. Participants reported difficulties in accessing allergy specialists for diagnostic skin testing and management of AR symptoms. Contributing factors to this were out-of-pocket costs for private clinics, long waiting lists at public hospitals, and absence of specialist services in the local area.

Underestimating the impact of symptoms. Many participants reported initially underestimating the severity of AR symptoms, leading them to defer medical assessment for several years. The recognition of AR-associated functional impairment was the impetus for subsequent engagement in treatment. Several participants felt that friends and family members trivialized the impact that AR had on their quality of life. One participant (P25) felt that dismissive attitudes from family members at a young age deterred them from seeking medical care till middle adulthood. Another participant (P11) recalled work colleagues and friends downplaying her symptoms with the sentiment “It's only hay fever, get over it.” Participants found that community perceptions of AR being a mild illness were an inaccurate portrayal of their lived experience.

TABLE I. Demographic variables of study participants

Variable	Mean (min, max, 25th percentile, 75th percentile)/n (%)
Age (y) at interview	35.9 (18, 66, 24, 47)
Age (y) at diagnosis of AR	18.2 (5, 45, 8, 20)
Sex assigned at birth	
Male	12 (48)
Female	13 (52)
Ethnicity, as described by participants	
European/White	14 (56)
Asian/East Asian	4 (16)
Asian/South Asian	4 (16)
African	1 (4)
Egyptian	1 (4)
Lebanese	1 (4)
Atopic comorbidities	
Allergic asthma	8 (32)
Eczema	5 (20)
Food allergy	2 (8)
Primary source of income in the last 12 mo	
Job salary	16 (64)
Family support	7 (28)
Social welfare/unemployment benefit/health care allowance	2 (8)
Educational attainment	
Tertiary education/university degree	14 (56)
Secondary/high school education	7 (28)
Primary/elementary education	1 (4)
Not reported	3 (12)
Geographic location	
Urban/metropolitan	15 (60)
Regional	8 (32)
Rural/remote	2 (8)
AIT exposure	
AIT not commenced	9 (36)
<1 y of AIT	3 (12)
1-1.9 y of AIT	5 (20)
2-2.9 y of AIT	5 (20)
>3 y of AIT	3 (12)

Substantially impaired quality of life. Participants universally reported that AR adversely affected their quality of life, with all participants exhibiting clinical features of moderate to severe AR as per the Allergic Rhinitis and Its Impact on Asthma severity classification.[8] Several functional aspects were affected, including sleep, mood, socialization, activities of daily living, work productivity, and engagement with learning activities. As a result of AR symptoms, participants expressed emotions of frustration, sadness, irritability, and apathy.

Some participants reported adopting behavioral changes to reduce AR symptom flares. P4, a 19-year-old student, purposefully avoided social visits to friends' residences, anticipating that indoor allergen exposure would cause symptom exacerbation. P12, a 32-year-old mother of a young child, felt that she was confined to her home during pollen season, fearing that her symptoms would flare if she attended outdoor activities. These participants felt that the burden of activity restrictions significantly diminished their quality of life.

When AR symptoms were experienced in public settings, they were accompanied by feelings of embarrassment and social discomfort. Participants described a heightened impact of this sentiment following the coronavirus disease 2019 (COVID-19) pandemic.

Two participants (P4 and P11) who were allied health professionals by occupation reported that AR symptoms hindered their ability to deliver care to patients. P4 reported exhaustion of their sick leave entitlements and disrupted care-plans for patients because of their leave absences. Several other participants reported diminished creativity and motivation in completing tasks on days affected by AR symptoms. Many participants recounted academic difficulties attributable to their AR symptoms. These challenges manifested as either absenteeism or impaired concentration during attendance. For example, P21 reported that attendance during their final year of high school was only 70% because of sick days, which affected their academic performance. P15, a 24-year-old university student, reported that on days that AR symptoms were active, she was able to attend lectures but unable to concentrate on learning the information presented.

Theme 2: Multiple trials of therapy with incomplete symptom control

Participants had trialed nonpharmacologic strategies including regular washing of linen, vacuuming, mite-resistant bedding, closing windows, avoiding being outdoors, protective eyewear, and mask-wearing. Two participants trialed complementary medical therapies (aerosolized salt and ear candling) without symptomatic benefit. A small number of participants trialed dietary modification, with varied perceptions of efficacy. Overall, participants perceived nonpharmacologic strategies to be demanding, and they did not have a large effect in alleviating symptoms.

Limited efficacy of symptomatic pharmacotherapy. Symptomatic pharmacotherapy that had been trialed included oral antihistamines, intranasal corticosteroids with or without combined antihistamine, antihistamine-containing eye drops, intranasal decongestants, and oral mast-cell stabilizing agents. Participants reported variable efficacy in their experience of these treatments, with some reporting positive short-term outcomes and others no discernible benefit. Some participants expressed a reluctance to pursue any further lines of AR treatment because of the poor efficacy of previously prescribed medications. No participants felt that symptomatic pharmacotherapy resulted in sustained improvement of their AR symptoms.

Perceptions of tolerance and dependence. A commonly reported sentiment was the concern for developing tolerance and dependence with symptomatic pharmacotherapy. Participants consequently cycled between different oral antihistamine and intranasal products, perceiving a temporary increase in effectiveness with a new medication. P4, a 24-year-old allied health professional, felt that he became addicted to intranasal corticosteroids with long-term use. He perceived that AR symptoms were worse during treatment interruptions as compared with their severity before medication initiation.

Theme 3: Diverse experiences with AIT

Most participants had experienced AR symptoms for several years before learning of AIT as a treatment option. Although participants frequently cited advertisements, pharmacists, and personal networks as sources of information for symptomatic

TABLE II. Themes, subthemes, and exemplar quotes

Theme	Subthemes	Exemplar quotes
A prolonged journey with symptoms	Delay to diagnosis and management	P22: “I think that I just got used to the symptoms … even when we would go to a doctor, I wouldn’t really complain about it.”
		P12: “I had to have a specialist tell me I had it by looking at my nose, the blood test and then the scratch test. I wouldn’t have thought of [allergic rhinitis].”
	Underestimating the impact of symptoms	P25: “It was my mum and my grandparents, who all suffered from it, they were a bit dismissive. They were like, oh, it’s just hay fever. It’s nothing serious. Take a tablet, you know, just get on with your life … That’s kind of been the pervasive attitude I’ve experienced.”
		P15: “People don’t really get how bad it is. They think oh it’s just a bit of hay fever. Everybody has it. They say just get on with life. But for me, it really does affect my life. A lot.”
	Substantially impaired quality of life	P9: “I’m constantly sneezing and nose blowing at work. I can’t be as creative or motivated to do things that aren’t absolutely necessary. It makes me perpetually tired when I can’t sleep well.”
		P25: “I would choose not to go to social events, for example, because I was just like snotty, sneezy and felt terrible. I was lethargic and tired a lot of the time because I wasn’t sleeping well. I missed work a lot. I couldn’t get up in front of the classroom and teach while couldn’t breathe properly … feeling pretty miserable.”
		P18: “Especially since COVID, anyone that has any hay fever symptoms, you get treated like you’ve got the plague. If you’re having a bit of a cough or sneeze everyone thinks you’ve got some major disease.”
Multiple trials of therapy with incomplete symptom control	Limited efficacy of symptomatic pharmacotherapy	P14: “Like constant antihistamines for the last decade, lots of different nasal sprays, nasal washes, different eye drops. Some work a while, then they stop working, then I switch brands, that sometimes helps. But nothing really fixed the symptoms consistently.”
		P25: “I just tried multiple types of … tablets, sprays, topical treatments … over and over. They seemed to lessen things like sneezing, but on a really high pollen day, I would take the [oral antihistamines], I would take the nasal spray, and I’d probably still have a pretty bad day.”
	Perceptions of tolerance and dependence	P17: “With the antihistamines, my concern is that when you really do need these things to work, are you not going get any benefit, because you have been taking them every single day? Like your body gets used to them.”
		P21: “I think at one point I felt like I was depending on [oral antihistamines] too much. So, I was trying to reduce how often I took them. But when I reduced, then the symptoms became more severe. I felt I had to be dependent on it.”
Diverse experiences with AIT	Motivations to pursue AIT	P12: “Well, I think I’ve tried pretty much every kind of allergy tablet you could have over the years. Going through different brands to see if that made a difference. Doing the saline washes, morning and night, for probably the best part of 10-15 years … none of that had a material impact, which is why I started [AIT].”
		P15: “When the pandemic happened, I became a lot more conscious of my symptoms. When I was sneezing or had a runny nose, everyone thought I had the plague. I felt really embarrassed. I kept getting sent home from work. That made me want to get more treatment and try the immunotherapy.”
	Varied expectations of AIT	P11: “I was hoping from what I heard from my in-laws that I would have to do it one year and then I’d be like cured.”
		P2: “I’m hoping that my symptoms go away considering how much the medicine costs … hoping that they go away completely.”

(Continued)

TABLE II. *(Continued)*

Theme	Subthemes	Exemplar quotes
		P12: "Well, look, I was just happy for any improvement. From what I was living with, if there was a 25% improvement then great. If it was 50%, even better. And if it cured me, impressive."
	Barriers to accessing AIT	P14: "Yeah, I think if the immunotherapy was available on [government subsidy scheme], I'd certainly give it a shot. But the cost is just too much for me right now. I just get a bit disheartened … when you see our government support so many things … it's like they choose not to support allergies. Any of the treatments are private prescriptions … I feel like people with hay fever are penalised for having this."
		P10: "It was mostly a financial decision, financially I can't afford to continue. I'm a single mum. I work part-time … I don't have any other contributing income."
		P25: "There's no one in [my region] that the GP [general medical practitioner] could refer me to. So, she referred me to [another region], which is an hour drive from us. What that meant was that if I had an appointment, then that was a full day off work."
		P18: "[AIT] needs to be a bit more widespread. I didn't really know how to access the therapy and how much easier it could make life, until I saw a specialist."

pharmacotherapy, they indicated that AIT was not mentioned in these channels. Most participants learned about AIT at their specialist appointment. Among those who had commenced AIT, all participants reported near total adherence with very few missed doses. Employment status differed between participants who had initiated AIT and those who had not, with a higher proportion of employed participants having commenced treatment. Notably, both unemployed participants in the study had not initiated AIT.

Motivations for accessing AIT. The most common motivation to pursue AIT was severe symptoms and consequent functional impairment despite a trial of symptomatic pharmacotherapy. Increased social embarrassment stemming from AR symptoms in the aftermath of the COVID-19 pandemic was cited by some participants as a factor enhancing their motivation to pursue AIT.

Most participants in our study with exposure to AIT were treated with subcutaneous immunotherapy (SCIT). Inconvenience of frequent dosing, perceived incapacity to take a daily medication, and reduced direct costs were cited reasons for participants to choose SCIT over sublingual immunotherapy (SLIT). In contrast, some participants chose SLIT to avoid the inconvenience of monthly in-person medical visits for dose administration.

Diverse expectations of AIT. Participants who were yet to commence AIT had high expectations for efficacy, with many expecting "a complete cure." When probed, some participants revealed that the significant out-of-pocket expenses increased their expectation that AIT would be highly effective. Among those already undergoing AIT, expectations for improvement ranged from any reduction to a complete amelioration of symptoms. Overall, participants who had received AIT demonstrated contrasting perspectives on treatment efficacy compared with those who had not yet accessed this therapy. AIT recipients reported more nuanced expectations, with a larger proportion describing realistic goals such as "some improvement" or "better control," contrasting with nonrecipients who more frequently expressed expectations of "never having to use medication again." Those with AIT experience understood the treatment timeline, acknowledging that benefits emerged gradually over months to years, whereas treatment-naive participants often expected immediate symptom resolution. Some participants reported that their expectations for symptom improvement were met, whereas others hoped for more benefit with continued therapy. Most participants reported satisfaction with AIT efficacy.

Barriers to accessing AIT. Participants discussed out-of-pocket costs, availability of specialist clinics, and lack of awareness of AIT as barriers to access. Several participants felt that direct medication costs rendered AIT unaffordable, particularly for those not engaged in salaried employment. For example, P9, a 47-year-old single parent, prematurely discontinued AIT, primarily because of a change in her financial situation. A smaller group of participants felt that AIT was affordable and the cost was justified for the medication. Participants also expressed disappointment that AR medications including AIT were not reimbursed by the Australian government subsidies scheme. For instance, P8, a 34-year-old woman, felt it was unfair that AR sufferers faced much higher medication expenses than those with asthma or food allergies.

Participants discussed other challenges accessing prescribers of AIT, including long public hospital waiting lists for specialists and limited geographical service coverage. Individuals residing in regional areas faced substantial travel burdens and endured longer periods of uncontrolled symptoms before their initial assessments. Although participants were aware of private outpatient clinics that offered shorter waiting periods, the associated out-of-pocket expenses constituted an additional barrier to access.

DISCUSSION

This study aimed to characterize the perspectives of individuals living with AR and highlights key themes describing their experience. Sufferers of AR endure a prolonged journey with symptoms, facing delays in diagnosis, an underestimated impact of symptoms, and substantially impaired quality of life. Multiple treatment options are trialed before consideration of AIT, often yielding suboptimal symptom control. Awareness of AIT as a treatment option is low, and access is hindered by long specialist waiting lists, shortages of prescribers, and high out-of-pocket costs. To our knowledge, this is the first published study to apply thematic analysis in a cohort of patients with moderate to severe AR, with a focus on AIT as a treatment option.

Previous qualitative research has included a spectrum of AR severity from mild to severe cases and thus reported a range of impacts on well-being.[20,21] Our study highlights the experiences of moderate to severe AR sufferers, because recruitment took place from patients referred to a specialist clinic. Participants in our study reported reduced, interrupted, and poorer quality sleep. Those engaged in work and learning activities reported both presenteeism and absenteeism. Manifestation of AR symptoms in public was associated with feelings of social self-consciousness and embarrassment, with intensification of this sentiment following the COVID-19 pandemic. Fear of AR symptom exacerbation led to avoidance of social and physical activities. Our findings confirm that AR substantially diminishes the quality of life in individuals with moderate to severe disease, presenting opportunities to improve function across multiple functional domains with adequate treatment.

Participants in our study articulated a desire for increased information to improve community understanding of AR as a disease entity and awareness of AIT as a treatment option. This finding is consistent with a previous European study identifying a knowledge gap regarding AIT among clinicians who are not allergy specialists.[22] In contrast, a previous Dutch study found that AR sufferers expressed minimal perceived benefits of increased information provision about allergies and treatments.[21] Variation in findings could stem from selection of participants with more severe AR in our study and differing geographical location. Participants in our study also indicated that the community perception of AR being a trivial disease was a factor in their decision to endure unmanaged symptoms for several years. This is consistent with previous qualitative work that found that sufferers of AR obtain fragmented advice from people in their life who often trivialize the severity of AR.[21,23] Dismissive attitudes from family members particularly influenced participants to remain ambivalent to AR symptoms in our study. This warrants further investigation, and health care policymakers should consider interventions to address inaccurate community perceptions about AR. Potential solutions could include coordinated public health information initiatives, engagement with allergy-focused patient support organizations, and production of publicly available education materials.

Participants expressed misconceptions regarding the risks associated with symptomatic pharmacotherapy, specifically articulating concerns of tolerance and addiction. These participants were prescribed second-generation antihistamines and intranasal corticosteroids, which are not associated with tachyphylaxis or dependence. The observed withdrawal and adverse effects of first-generation antihistamines and intranasal decongestants present a challenge for clear patient messaging.[3] These concerns were reported by participants in our study to reduce use of symptomatic pharmacotherapy. These misconceptions indicate insufficient health literacy skills in evaluating information sources, resulting in adoption of outdated information, anecdotal accounts, or nonmedical sources rather than evidence-based medical guidance. Proactive identification of misconceptions during patient consultations can present opportunities for treating allergists to provide helpful education to address this.

In our cohort, active AR significantly affected work productivity, leading to both absenteeism and presenteeism, consistent with previous literature.[24] Most participants in our study reported presenteeism, where they attended work while unwell, had lower productivity, and in some cases made costly mistakes. Absenteeism was reported by the other participants, who articulated frustration with having to impose additional workload on teammates and the inability to deliver adequate services to clients. Appropriate treatment of AR symptoms can reduce the indirect costs from absenteeism and presenteeism.[25] Policymakers should consider the benefit of reducing these indirect costs when evaluating interventions to improve access to AR medications.

Published studies exploring barriers to AIT access are sparse. A previous mixed-method study exploring AIT in European countries identified lack of knowledge, infrastructural weaknesses, reimbursement policies, and communication with specialists as barriers to providing AIT.[26] Our study confirms that Australian patients face similar systemic challenges such as out-of-pocket costs and infrastructural weaknesses, leading to long waiting lists for specialist care. Another study from the Republic of Ireland identified factors including uncertain clinical criteria, unclear referral pathways, and lack of local services as barriers.[22] A physician-based survey among US allergists found that the primary barrier to SLIT prescription was the limitation of treating a single allergen.[27] Although these themes were not identified within our cohort, they reflect the health care provider perspective, which was not included in the present study. Previous literature, including a published systematic review and a recent US study, indicates that real-world adherence to a full course of AIT is low.[7,28] In contrast, participants in our study reported high levels of adherence, with only minimal missed doses. However, because these findings were based on self-reported data, analyses using objective measures, such as prescription refill records, may have produced different results. Our study is the first to examine barriers to AIT prescription in Australia, identifying low community awareness, long public hospital waiting lists, limited access to prescribers outside metropolitan areas, and high out-of-pocket costs as key obstacles.

The availability of AIT prescribers was a challenge for many participants in our study. Extended public hospital waiting lists for outpatient services caused delays in initiating treatment. The financial cost for consultations in private clinics dissuaded participants from this option. Those living outside a metropolitan center traveled long distances to access specialist care. These findings are consistent with a parliamentary report recognizing a shortage of allergists resulting in extended waiting times for allergy care in Australia.[29] Similarly, a previous systematic review found that demand for allergy services has outpaced supply in many high-income countries.[30] Overcoming the shortage of AIT prescribers presents a considerable challenge. A potential solution is to support allergist-led educational initiatives that equip general medical practitioners in underserviced areas to manage AIT. This approach aligns with findings from a European study that highlighted the importance of developing shared-care models between specialists and general medical practitioners.[26]

Most participants with previous AIT exposure reported high satisfaction with the therapy; however, perceptions of efficacy varied significantly. Pretreatment expectations of symptom improvement also varied among participants. Those with high expectations, such as expecting “a complete cure,” frequently reported that their expectations were not met. This finding underscores the necessity for prescribers to define accurate expectations to achieve satisfactory patient-perceived outcomes from AIT.

AIT is associated with out-of-pocket costs in our local context. Medication costs are approximately $2300 (A$3600) for SLIT and $800 to $1600 (A$1200-A$2400) for SCIT for a 3-year course. Government medication subsidies do not support AIT, and private insurers offer minimal rebates. Most participants in our study cohort felt that the medication was "very expensive" and created a barrier in commencing or continuing AIT, with a smaller group of participants feeling that the cost was justified for the treatment. Sampling solely from a public hospital population likely influenced this finding. Many participants identified that their attitude to the affordability of AIT was directly related to their employment status and source of income. In our local context, most medicines for many chronic conditions such as allergic asthma attract government subsidies, thus reducing out-of-pocket costs and ensuring equitable access to effective treatments.[31] Participants in our study cohort felt frustrated that medications for AR were not subsidized, surmising that policymakers considered their condition to be unimportant. A solution would be to subsidize AIT by listing it on the government reimbursement schedule. Further studies are necessary to evaluate the cost-effectiveness of AIT in our local context, thus informing policymakers of the use of this intervention.

Several limitations of our study must be acknowledged. Exclusive recruitment from a tertiary hospital allergy clinic overrepresented patients with moderate to severe AR, introducing a selection bias that may limit generalizability of findings. Participant responses may have been influenced by recall bias, because individuals were asked to reflect on experiences spanning several years since symptom onset. Efforts to minimize this were undertaken during interviews by using probing and clarification questions to confirm recalled details. Data triangulation was not performed, and the inclusion of health care provider and family member perspectives in future studies may improve trustworthiness of findings. Lastly, despite proactive efforts to include participants from varied cultural and linguistic backgrounds, our study ultimately included only 1 non–English-speaking individual. Limited cultural representation precluded meaningful analysis of how cultural background influences experiences of AR and perceptions of AIT. This participant's unique responses highlight the significant value of incorporating more diverse cultural perspectives in future studies.

DISCLOSURE STATEMENT

J.J. is supported by a PhD scholarship from the Australian government–funded National Allergy Centre of Excellence, hosted by the Murdoch Children's Research Institute, and their work was supported by the Victorian government's Operational Infrastructure Support Program.

Disclosure of potential conflict of interest: The authors declare that they have no relevant conflicts of interest.

We acknowledge article review and contributions of biostatistician Amalia Karahalios, PhD.

Clinical implications: This study highlights key facets of patient experience with AR and associated treatment challenges. An understanding of these patient perspectives is important for clinicians to provide personalized management strategies and optimize treatment outcomes.

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