



# Welcome back Kotter-Developing a National Allergy strategy for Australia

Sandra L. Vale, BSc<sup>a,b,c,d,x</sup>, Maria Said, RN<sup>a,b,c,d</sup>, Jill Smith, BSc<sup>b</sup>, Preeti Joshi, PhD<sup>a,b,e</sup> and Richard KS. Loh, FRACP<sup>b,d,f</sup>

## ABSTRACT

**Background:** Allergic diseases have become an increasing health issue worldwide, being one of the fastest growing chronic diseases in Australia and other westernized countries. In 2013, allergic diseases were reported to affect 20% of the Australian population. Despite the high prevalence there was no national strategy to address these complex health issues, to enable the health system to manage the increasing number of patients. This project aimed to develop and implement a national strategy to improve allergy management in Australia, with a view of improving the quality of life of people living with or caring for someone with allergic diseases.

**Methods:** The need for a national strategy to improve allergy management was identified. The Australasian Society of Clinical Immunology and Allergy (ASCI) and Allergy & Anaphylaxis Australia (A&AA) worked together as partners to progress a national strategy using a theoretical model to underpin its development. Unrestricted education grants were sought to fund engagement with stakeholder organizations for both development and implementation summits. Several stages of advocacy were undertaken.

**Results:** The National Allergy Strategy was developed as a partnership between ASCIA and A&AA. The Kotter's Change Management Model provided the basis for the steps undertaken to develop and implement the National Allergy Strategy. Two Allergy Summits, one for development and the other for implementation, were held. Several events were held to advocate for federal government funding. Five individual funding grants were achieved to implement National Allergy Strategy projects addressing the most urgent issues.

**Conclusion:** The development of the National Allergy Strategy, a partnership between ASCIA and A&AA, was important in enabling successful advocacy for funding and implementation of important Australia-wide projects. The partnership has also helped facilitate engagement with key stakeholders to help advocate for funding and provide guidance and expertise in project implementation and resource development. The National Allergy Strategy has been successful in attracting funding to implement projects and develop resources urgently needed. The National Allergy Strategy has also provided a framework and a collaborative approach, for advocacy for further funding and future work to be undertaken.

**Keywords:** National Allergy Strategy, Funding, Kotter's Change Model, Allergy, Strategy, Advocacy, Partnership, Implementation

<sup>a</sup>National Allergy Strategy, Sydney NSW 2000, Australia  
<sup>\*</sup>Corresponding author. National Allergy Strategy, Sydney NSW 2000, Australia E-mail: [sandravale@inet.net.au](mailto:sandravale@inet.net.au)  
Full list of author information is available at the end of the article  
<http://doi.org/10.1016/j.waojou.2022.100706>

Received 1 June 2022; Received in revised form 7 September 2022; Accepted 12 September 2022  
Online publication date xxx  
1939-4551/© 2022 The Author(s). Published by Elsevier Inc. on behalf of World Allergy Organization. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

## INTRODUCTION

Allergic diseases have become an increasing health issue worldwide.<sup>1,2</sup> The increasing prevalence of food allergy is well documented,<sup>3</sup> along with the high prevalence of allergic rhinitis<sup>3</sup> and atopic dermatitis.<sup>4</sup> Indeed, allergic diseases have become one of the fastest growing chronic diseases in Australia and other westernized countries.<sup>5</sup>

Internationally, there has been an abundance of research being undertaken into allergy prevention, allergy treatments and the impact of allergic diseases on quality of life, with landmark food allergy prevention studies being published in 2015.<sup>6-10</sup> The concept of the "atopic march" has been published in the literature for some time with evidence indicating that the presence of one allergic condition in children increases the risk of developing other allergic conditions.<sup>11</sup> Atopic dermatitis is a common paediatric condition and is considered to be the gateway to the atopic march, as it is commonly diagnosed before the development of other allergic conditions such as food allergy, allergic rhinitis and asthma.<sup>11</sup> In accepting the atopic march concept, the key is to disrupt the atopic march and prevent further allergic disease from developing which requires optimal treatment of the diagnosed allergic conditions.<sup>11</sup>

In 2013 allergic diseases were reported to affect 20% of the Australian population.<sup>12</sup> There was no national strategy to address these complex health issues to enable the health system to manage the increasing number of patients. The burden on the health system was evident through a five-fold increase in anaphylaxis hospital admissions,<sup>13</sup> a four-fold increase in food-induced anaphylaxis hospital admissions,<sup>13</sup> an infant food allergy prevalence of 10%,<sup>14</sup> and increased drug allergy deaths.<sup>15</sup> Furthermore, asthma prevalence appears to have stabilized in recent years<sup>16</sup> despite reports of increased asthma admissions.<sup>17</sup>

In 2008, the Finnish Allergy Programme was established and aimed to improve the prevention and management of allergic diseases and asthma

across Finland.<sup>18</sup> This was the first national approach taken by a country to address allergic diseases in response to the increasing allergy prevalence and ineffective prevention strategies at the time.<sup>19</sup> In response to Australia's increasing allergic disease prevalence, the Australasian Society of Clinical Immunology and Allergy (ASCI) and Allergy & Anaphylaxis Australia (A&AA), the peak medical and patient support organizations for allergy in Australia, identified the need for a national strategy to managing allergic diseases in Australia.

Australia has national health strategies for several diseases considered to be public health issues, the most recent addition being a National Preventive Health Strategy, launched in December 2021.<sup>20</sup> While development of some national health strategies is supported by federal government funding,<sup>21-23</sup> this is not always the case. In 2013 in Australia, allergic diseases were not a recognized chronic disease under the then National Chronic Disease Strategy (replaced by the National Strategic Framework for Chronic Conditions),<sup>24</sup> nor were they considered a National Health Priority Area,<sup>25</sup> making it difficult to attract government support to establish a coordinated national approach to allergy management. To date, allergic diseases are still not recognized as a chronic disease by the Australian Government.

Theories of change models are well known for their use in business and are being utilized more in health.<sup>26</sup> Kotter's model has been utilized for health advocacy in recent years with modifications to suit the health context.<sup>26,27</sup> The value of theoretical change models such as Kotter's, is the provision of a step-by-step process to guide advocacy.<sup>26</sup>

This project aimed to develop and implement a national strategy to improve allergy management in Australia, with a view of improving the quality of life of people living with, or caring for, someone with allergic diseases, using a theoretical change model.

Kotter's 8 Steps	National Allergy Strategy Steps	Actions undertaken	Progress to date
1. Create a sense of urgency.	Use evidence to establish urgency.	<ul style="list-style-type: none"> <li>• Review of the literature.</li> <li>• Development and distribution of the AIDA and Allergy in Australia Reports.</li> </ul>	Completed.
2. Build a guiding coalition.	Create partnerships and alliances to establish change action.	<ul style="list-style-type: none"> <li>• Partnership between ASCIA and A&amp;AA.</li> <li>• Engagement with key stakeholder organizations.</li> </ul>	Completed. Ongoing stakeholder engagement.
3. Form a strategic vision and initiatives.	Identify goals and establish an advocacy vision.	<ul style="list-style-type: none"> <li>• Engagement with key stakeholder organizations to establish the guiding principles, goals and mission of the National Allergy Strategy.</li> <li>• Engagement with key stakeholder organizations to establish an implementation plan.</li> <li>• Establishment of a Parliamentary Allergy Alliance.</li> </ul>	Ongoing stakeholder engagement for implementation.
4. Enlist a volunteer army.	Communicate advocacy messages.	<ul style="list-style-type: none"> <li>• Continued engagement with key stakeholders and utilisation of media-based advocacy.</li> </ul>	Ongoing advocacy for further funding for the National Allergy Strategy.
5. Enable action by removing barriers.	Empower others to work towards goals.	<ul style="list-style-type: none"> <li>• Continued engagement with key stakeholders encouraging advocacy support.</li> <li>• Encouraging consumers to advocate.</li> </ul>	Ongoing engagement with stakeholders, consumers and Parliamentary Allergy Alliance.
6. Generate short term wins.	Build and maintain momentum.	<ul style="list-style-type: none"> <li>• Communication about National Allergy Strategy project achievements to continue to engage key stakeholders and government.</li> <li>• Conducting an advocacy event to</li> </ul>	Ongoing engagement with stakeholders and advocacy via media and social media.

(continued)

Kotter's 8 Steps	National Allergy Strategy Steps	Actions undertaken	Progress to date
		celebrate National Allergy Strategy achievements in Parliament House, Canberra.	
7. Sustain acceleration.	Use achievements to create additional change opportunities.	<ul style="list-style-type: none"> <li>Utilising program achievements to facilitate further funding grants from the federal government.</li> <li>National Allergy Strategy submission to the parliamentary inquiry into allergies and anaphylaxis.</li> <li>Ongoing engagement with government.</li> </ul>	Ongoing advocacy regarding National Allergy Strategy achievements and funding of the National Allergy Strategy as part of the response to the parliamentary inquiry recommendations.
8. Institute change.	Acknowledgement of allergic diseases as a public health issue.	<ul style="list-style-type: none"> <li>Government acknowledgement that allergic diseases are a public health issue through ongoing funding support of the National Allergy Strategy.</li> </ul>	4 years of sustainability funding provided from 2019-23. Further ongoing funding still required.

**Table 1.** Application of Kotter's Change Management Model to the National Allergy Strategy (Adapted from David et al.<sup>28</sup>)

## METHODOLOGY

This project was conducted by ASCIA and A&AA in partnership. We adapted and utilized Kotter's Eight 8-Step Change Management Model<sup>26</sup> for the development and implementation of the project, and for the advocacy achievements. Table 1 provides a step-by-step guide through the 8-Steps for Leading Change and different phases of the project are described below.

### Phase 1: Leadership and partnership

In 2013, ASCIA identified the need for a national approach to improve allergy management. A small working group of ASCIA Council representatives and past presidents was convened. A suitable theoretical model to underpin developing a national approach to allergy management was sought. A&AA as the national patient support organization was engaged early in discussions and

establishment of a partnership between the two peak bodies was considered important.

### Phase 2: Developing a national allergy strategy for Australia

In 2014, in a world first, ASCIA and A&AA partnered to develop a national strategy to allergic disease diagnosis, treatment and management in Australia. An Allergy Summit with ASCIA and A&AA as the lead partners was planned and key stakeholder organizations were invited to participate. An independent facilitator, experienced in the development of national strategies was an important consideration. The aim of the Allergy Summit was to engage with key stakeholders, initiate the consultation process, identify gaps in care and develop the mission, goals and guiding principles for a national allergy strategy. The Allergy Summit was funded by unrestricted education grants.<sup>28</sup>

### Phase 3: Implementation

A second Allergy Summit was convened to launch the National Allergy Strategy and engage with key stakeholders to discuss implementation of the strategy. The second Allergy Summit was funded by unrestricted education grants.<sup>28</sup>

### Phase 4: Advocacy

Letters were written to state and federal health ministers and officials to raise awareness of allergic diseases and request meetings.

A&AA continued to work with federal politicians to foster support for improved acknowledgement and funding of allergic diseases. The establishment of a Parliamentary Allergy Alliance, a tri-partisan group of co-convenors, was an initiative of A&AA who had been engaging with politicians for several years. The 3 main political parties, Coalition of the Liberal and National Parties of Australia, Australian Labor Party and Australian Greens, all nominated a co-convenor, who could assist with promoting allergy issues in parliament.

Pre-budget submissions including projects identified as requiring urgent attention were submitted in 2015, 2016, 2017 and 2018 and followed up by meetings with Parliamentary Allergy Alliance (PAA) co-convenors, health/shadow health ministers and assistant/shadow assistant health ministers.

A National Allergy Strategy advocacy meeting was planned to be held in Parliament House, Canberra in 2018. The aim of this meeting was to showcase the achievements of the National Allergy Strategy since the launch in 2015, acknowledge previous funding from the federal government and advocate for sustainability funding for the National Allergy Strategy.

Ongoing advocacy to raise awareness of allergic diseases as a public health issue was planned, including making a submission to a *Parliamentary Inquiry into Allergies and Anaphylaxis* in 2019.

## RESULTS

Kotter's Change Management Model<sup>26,29</sup> provided the basis for the steps undertaken to

progress a national approach to allergy management. [Table 1](#) provides an overview of the progress to date after application of the 8-Stage Process.

### Leadership and partnership

Between 2013 and 2014, ASCIA developed two reports to advocate for the recognition of allergic diseases as a national health priority area in Australia, in consultation with ASCIA members and A&AA representatives. The *ASCIA Allergy and Immune Diseases in Australia (AIDA) Report* was circulated to state and federal health ministers, chief medical officers and health departments. Meetings were held with state health ministers and health department representatives in several states and territories. The *ASCIA Allergy in Australia Report* was developed and circulated in 2014 based on advice to focus on allergy, from state health ministers and health department representatives. A&AA facilitated engagement with politicians and key stakeholders through established relationships.

### Developing a national approach

The Allergy Summit was held on the August 8, 2014 in Sydney and was attended by 55 participants representing 26 stakeholder organizations ([Supplement A](#)). The National Allergy Strategy guiding principles, mission and goals were developed ([Box 1](#)) at the Allergy Summit.

After the Allergy Summit, stakeholders were invited to participate in the development of the National Allergy Strategy through 5 working groups – Care (standards and access); Education (health professional and consumer); Food service; Research; and Evidence. Between August 8, 2014 and May 2015, the working groups and key stakeholder organizations contributed to and reviewed draft versions of a National Allergy Strategy via working group teleconferences and electronic consultation.

### Implementation

A National Allergy Strategy for Australia was developed and launched at a second Allergy Summit attended by representation from 35

## Box 1. National Allergy Strategy guiding principles, mission and goals.

### Guiding principles

- Patients and consumers must be at the centre of everything we do.
- All goals need to be 'SMART' - Smart; Measurable; Achievable; Realistic; and Targeted and timely.
- Evidence based.
- A national collaborative and consistent approach to identify deficits and avoid duplication.
- Provision of optimal care over efficiency of care.

### Mission

To improve the health and quality of life of Australians with allergic diseases, and minimise the burden of allergic diseases on individuals, their carers, healthcare services and the community.

### Goals

1. Develop **standards of care** to improve the health and quality of life of people with allergic diseases.
2. Ensure **timely access to appropriate healthcare management** for people with allergic diseases.
3. Improve access to best-practice, evidence-based and consistent information, **education and training** on allergic diseases for health professionals, people with allergic diseases, consumers, carers and the community.
4. Promote **patient-focused research** to prevent the development of allergic diseases and improve the health and quality of life of people with allergic diseases.
5. Recognition of allergic diseases as a prioritised chronic disease and **National Health Priority Area**.

stakeholder organizations. The timeline for the process of development and advocacy are outline in Fig. 1.

As the National Allergy Strategy is an equal partnership between ASCIA and A&AA, the National Allergy Strategy Steering Committee included ASCIA and A&AA Co-chairs and 4 additional representatives from ASCIA and A&AA. Each of the National Allergy Strategy Working Groups also had an ASCIA and A&AA Co-chair. The five Working Groups were revised down to 4 and as funding was achieved, the Working Groups became project specific.

### Advocacy and funding

A&AA worked with federal politicians to establish a Parliamentary Allergy Alliance, which was launched in Parliament House, Canberra on Monday August 10, 2015.

In August 2018, the National Allergy Strategy held an advocacy meeting in Parliament House, Canberra. The meeting was supported by the Minister for Health, Assistant Minister for Health, Leader of the Australian Greens and Shadow Health Minister, all of whom presented at the advocacy meeting.

The National Allergy Strategy received four funding grants from the Australian Government Department of Health. The first three grants were for one or two-year terms and it was not until 2019 that a four year sustainability grant was provided after a strong advocacy approach which enabled projects to continue, as well as long term planning. Table 2 provides an overview of the National Allergy Strategy funding grants and projects undertaken.

In September 2019, a *Parliamentary Inquiry into Allergies and Anaphylaxis* was announced and in October 2019 the National Allergy Strategy made

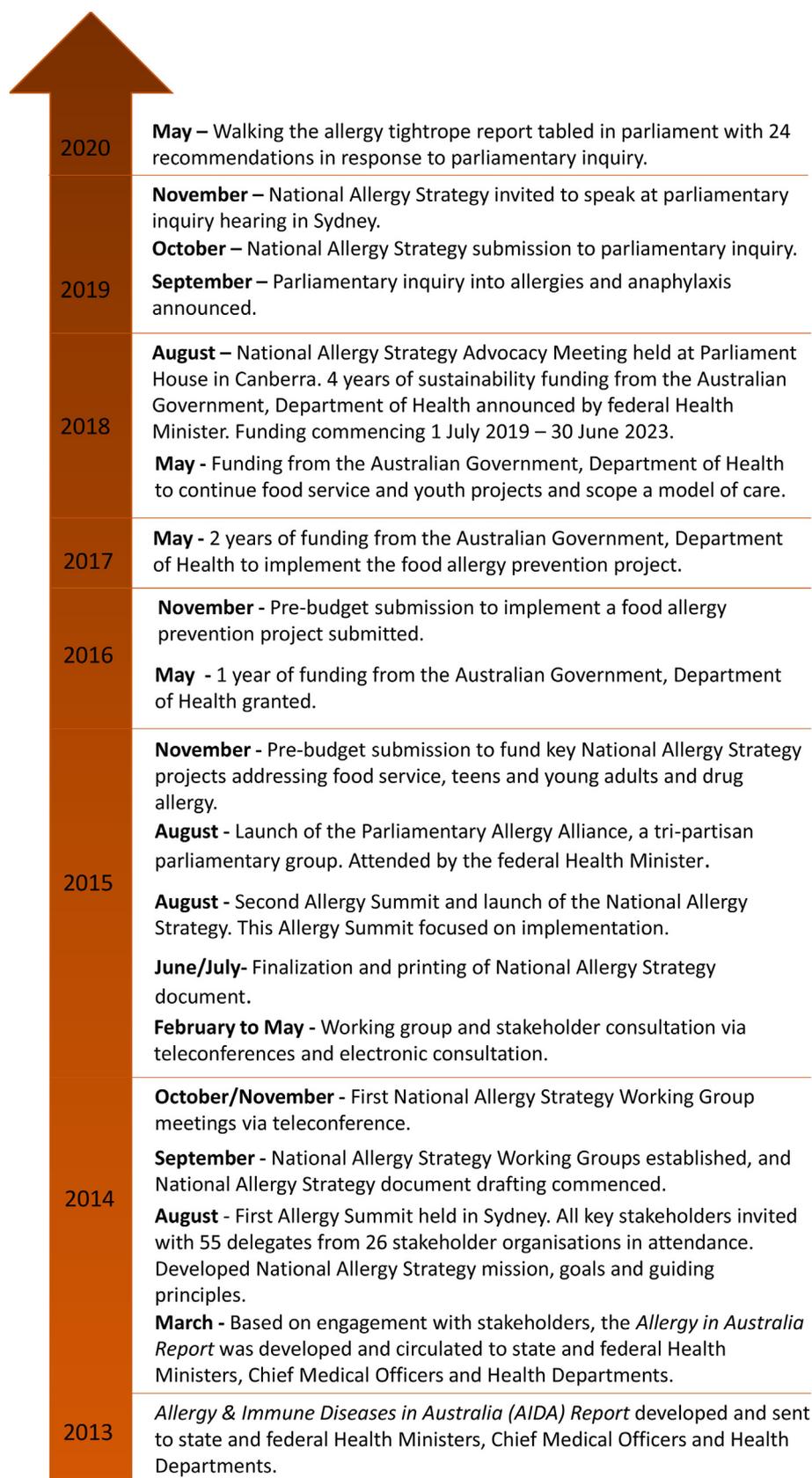


Fig. 1 National Allergy Strategy timeline

Funding timeframe	Project name	Project aims	Project outcomes
<b>July 1, 2016- June 30, 2017</b>	Drug allergy project	<ul style="list-style-type: none"> <li>• Scoping project to prevent drug allergy deaths in hospitals</li> <li>• Scope the development of an allergy database</li> <li>• Scope clinical education requirements</li> </ul>	<ul style="list-style-type: none"> <li>• Engagement with key stakeholders was undertaken</li> <li>• Scoping report provided to the Australian Government Department of Health</li> </ul>
	Youth project	<ul style="list-style-type: none"> <li>• Engage with teens and young adults living with allergies to identify issues</li> <li>• Develop resources based on the outcomes of engagement</li> <li>• Provide a report on the findings and outcomes</li> </ul>	<ul style="list-style-type: none"> <li>• National online survey of teens and young adults aged 12-24 years of age</li> <li>• Development of the 250 K brand</li> <li>• Development of a Youth Advisory Team comprising 14-21 year olds</li> <li>• Development of the 250 K website</li> <li>• Development of 250 K Youth Advisory Team animations</li> <li>• Report provided to the Australian Government Department of Health Website: <a href="http://www.250k.org.au">www.250k.org.au</a></li> </ul>
	Food service project	<ul style="list-style-type: none"> <li>• Engage with key stakeholders in food service and food industry</li> <li>• Develop an online training course</li> <li>• Provide a report on the findings and outcomes</li> </ul>	<ul style="list-style-type: none"> <li>• National food service round table conducted</li> <li>• Development of All about Allergens online training</li> <li>• Development of top line information website for consumers</li> <li>• Development of a resource hub for those who audit food premises</li> <li>• Report provided to the Australian Government Department of Health Websites: All about Allergens online training - <a href="http://www.foodallergytraining.org.au">www.foodallergytraining.org.au</a> Food allergy education - <a href="http://www.foodallergyeducation.org.au">www.foodallergyeducation.org.au</a> Resource hub for auditors - <a href="http://www.foodallergytraining.org.au/ao">www.foodallergytraining.org.au/ao</a></li> </ul>
<b>July 1, 2017- June 30, 2019</b>	Food allergy prevention project	<ul style="list-style-type: none"> <li>• Implement allergy prevention strategies by increasing update of ASCIA infant feeding and allergy prevention guidelines - pilot project</li> </ul>	<ul style="list-style-type: none"> <li>• Development of the Nip allergies in the Bub brand</li> <li>• Development of the Nip allergies in the Bub website</li> <li>• Development of resources to help parents introduce the common food allergens</li> <li>• Development of resources to help optimise eczema management</li> </ul>

(continued)

Funding timeframe	Project name	Project aims	Project outcomes
			<ul style="list-style-type: none"> <li>• Development of Smart Start Allergy, a novel tool to promote the introduction of common food allergens, the Nip allergies in the Bub website and monitor infant allergic reactions</li> <li>• Development of food allergy prevention e-training for health professionals</li> <li>• Development of paediatric atopic dermatitis e-training for health professionals</li> <li>• Establishment of an information service for parents and health professionals - phone and email support provided</li> <li>• Social media campaign conducted targeting parents in pilot state</li> </ul> Website: <a href="http://www.preventallergies.org.au">www.preventallergies.org.au</a>
<b>July 1, 2018- June 30, 2019</b>	Food service project	<ul style="list-style-type: none"> <li>• Develop minimum standards for food allergy content in accredited food hygiene courses</li> </ul>	<ul style="list-style-type: none"> <li>• A face-to-face stakeholder round table was held</li> <li>• Minimum standards for food allergen management content was developed</li> <li>• All about Allergens: The next step for cooks and chefs was developed</li> <li>• All about Allergens: The next step for cooks and chefs in camps was developed</li> </ul> Website: <a href="http://www.foodallergytraining.org.au">www.foodallergytraining.org.au</a>
	250 K youth project	<ul style="list-style-type: none"> <li>• Engage with teens and young adults through social media</li> <li>• Conduct a pilot camp for school aged teens and the Youth Advisory Team</li> </ul>	<ul style="list-style-type: none"> <li>• 250 K social media campaigns were conducted</li> <li>• A 250 K youth camp was conducted</li> </ul>
	Shared care model for allergy	<ul style="list-style-type: none"> <li>• Scope the development of a shared care model for allergy</li> </ul>	<ul style="list-style-type: none"> <li>• Several consultation processes were undertaken to engage with health professionals and consumers</li> <li>• Scoping report provided to the Australian Government Department of Health</li> </ul>
<b>July 1, 2019- June 30, 2020</b>	Food allergy prevention project	<ul style="list-style-type: none"> <li>• Implement allergy prevention strategies by increasing update of ASCIA infant feeding and allergy</li> </ul>	<ul style="list-style-type: none"> <li>• Review and updating of resources to help parents introduce the common food allergens</li> </ul>

(continued)

Funding timeframe	Project name	Project aims	Project outcomes
		prevention guidelines - national implementation project	<ul style="list-style-type: none"> <li>• Additional resources developed</li> <li>• Review and updating of resources to help optimise eczema management</li> <li>• Review and updating of food allergy prevention e-training for health professionals</li> <li>• Review and updating of paediatric atopic dermatitis e-training for health professionals</li> <li>• Continuation of an information service for parents and health professionals - phone and email support provided</li> <li>• National social media campaign conducted targeting parents</li> </ul> Website: <a href="http://www.preventallergies.org.au">www.preventallergies.org.au</a>
<b>July 1, 2019- June 30, 2023</b>	250 K youth project	<ul style="list-style-type: none"> <li>• Conduct a peer mentor program</li> <li>• Engage with teens and young adults via social media</li> <li>• Conduct 250 K youth camps</li> </ul>	<ul style="list-style-type: none"> <li>• A peer mentor program was developed in consultation with Food Allergy Canada and the AllergyPal program</li> <li>• Various social media assets (including animations) were developed and promoted via social media to engage teens and young adults</li> <li>• 250 K youth camps were conducted with some delays due to the COVID19 pandemic</li> <li>• Regular video chats were conducted with both school aged teens and young adults</li> </ul>
	Food service project	<ul style="list-style-type: none"> <li>• Develop a communication strategy</li> <li>• Develop food allergen management training for hospitals</li> <li>• Contribute to the review of accredited food hygiene courses</li> </ul>	<ul style="list-style-type: none"> <li>• A social media campaign was developed and implemented</li> <li>• A food allergy resource hub was developed</li> <li>• All about Allergens for Hospitals was developed</li> <li>• All about Allergens for Schools was developed</li> <li>• All about Allergens for Children's Education and Care was developed</li> <li>• All about Allergens for Cooks and Chefs was updated to be a stand-alone course</li> <li>• All about Allergens for Camps was updated to be a stand-alone course</li> </ul>

(continued)

Funding timeframe	Project name	Project aims	Project outcomes
			<ul style="list-style-type: none"> <li>• Review of accredited food hygiene courses undertaken to include food allergen management</li> <li>• Contributed to review of national legislation regarding food safety</li> </ul> Website: <a href="http://www.foodallergyaware.org.au">www.foodallergyaware.org.au</a>
	Best practice guidelines for anaphylaxis management	<ul style="list-style-type: none"> <li>• Engage with key stakeholders to develop best practice guidelines for anaphylaxis management in schools and children’s education and care (CEC)</li> <li>• Update ASCIA anaphylaxis e-training for schools and CEC</li> <li>• Promote the best practice guidelines to schools and CEC services</li> </ul>	<ul style="list-style-type: none"> <li>• Conducted a face-to-face meeting with key stakeholders in the school and CEC sectors</li> <li>• Development of best practice guidelines for anaphylaxis prevention and management in schools</li> <li>• Updating of ASCIA anaphylaxis e-training for schools and CEC</li> <li>• Development of ASCIA anaphylaxis refresher e-training</li> <li>• Promotion of the best practice guidelines via social media and direct communication with schools and CEC services</li> <li>• Development of the Allergy Aware resource hub</li> </ul> Website: <a href="http://www.allergyaware.org.au">www.allergyaware.org.au</a>
	Engagement with other stakeholders	<ul style="list-style-type: none"> <li>• Engage with the Australian Commission on Safety and Quality in Health Care to assist with the development of an Anaphylaxis Clinical Care Standard</li> <li>• Engage with the Australian Digital Health Agency to provide advice and assistance to improve allergy documentation within My Health Record</li> </ul>	<ul style="list-style-type: none"> <li>• Assisted the Australian Commission on Safety and Quality in Health Care to develop the Acute Anaphylaxis Clinical Care Standard</li> <li>• Engaged with Australian Digital Health Agency to standardise allergy documentation within My Health Record</li> </ul>

**Table 2.** Summary of National Allergy Strategy project funding from the Australian Government Department of Health

an online submission including independent submissions from A&AA and ASCIA; in November 2019, National Allergy Strategy representatives spoke at a parliamentary inquiry hearing in Sydney; in May 2020 the *Walking the allergy tightrope report* containing 24 recommendations, was

tabled in parliament in response to the parliamentary inquiry; in September 2020, the National Allergy Strategy engaged with the federal government advocating for funding for the National Allergy Strategy, ASCIA and A&AA to implement the 24 recommendations. [Table 3](#) provides an

National Allergy Strategy	Advocacy undertaken	Outcomes to date
<p>1. Develop <b>standards of care</b> to improve the health and quality of life of people with allergic diseases</p>	<p>The National Allergy Strategy has:</p> <ul style="list-style-type: none"> <li>• advocated for the development of an Anaphylaxis Clinical Care Standard to improve anaphylaxis recognition, treatment and management in hospitals and the community.</li> <li>• submitted several pre-budget submissions requesting funding for development and implementation of a shared care model for allergy which would address standards of care.</li> <li>• Advocating for improvements to anaphylaxis prevention and management in schools and childcare and improved anaphylaxis management legislation in childcare.</li> </ul>	<ul style="list-style-type: none"> <li>• An Acute Anaphylaxis Clinical Care Standard was developed by the Australian Commission for Safety and Quality in Health Care and released in November 2022.</li> <li>• The National Allergy Strategy received federal government funding to scope a national shared care model for allergic diseases in 2018-19.</li> <li>• The funding announced in the Federal Budget in March 2022 will enable the development of standards of care for all allergic diseases through the shared care model project.</li> <li>• The National Allergy Strategy received federal government funding to develop and implement best practice guidelines for the prevention and management in schools and childcare and a first step to developing minimum standards.</li> <li>• To date there has been no change to legislation with regards to anaphylaxis management in childcare.</li> </ul>
<p>2. Ensure <b>timely access to appropriate healthcare management</b> for people with allergic diseases</p>	<ul style="list-style-type: none"> <li>• The National Allergy Strategy advocated for funding to implement a shared care model for allergic diseases to improve timely access to appropriate healthcare providers.</li> </ul>	<ul style="list-style-type: none"> <li>• The National Allergy Strategy conducted two pilot projects to identify alternative models of care in regional areas in 2017 and 2019.</li> <li>• The National Allergy Strategy received federal government funding to scope a national shared care model for allergic diseases in 2018-19.</li> <li>• Funding was announced in the Federal Budget in March 2022 for the National Allergy Strategy to implement a national shared care model for allergic diseases.</li> </ul>
<p>3. Improve access to best-practice, evidence-based and consistent information, <b>education and training</b> on allergic diseases for health professionals, people with allergic diseases, consumers, carers and the community</p>	<p>The National Allergy Strategy advocated for funding for national standardisation of allergy information and education.</p>	<p>The National Allergy Strategy received federal government funding to:</p> <ul style="list-style-type: none"> <li>• develop nationally standardised food allergen management training for the food service industry.</li> </ul>

(continued)

National Allergy Strategy	Advocacy undertaken	Outcomes to date
		<ul style="list-style-type: none"> <li>• develop and implement nationally standardised best practice guidelines for the prevention and management of anaphylaxis in schools and childcare.</li> <li>• Develop websites for different target audiences (consumers and health professionals) to provide evidence-based, best practice information. These websites provide information about allergy prevention, information specifically for teens and young adults, practical information about managing food allergies and include resource hubs directing people to other evidence-based best-practice resources develop by other credible organizations.</li> <li>• support the review and update of existing ASCIA anaphylaxis e-training for schools and childcare.</li> </ul> <p>As part of the National Allergy Strategy shared care model project funded through the Federal Budget (March 2022):</p> <ul style="list-style-type: none"> <li>• ASCIA will expand provision of evidence-based, best-practice education and training for health professionals.</li> <li>• Allergy &amp; Anaphylaxis Australia will engage with consumers to identify education and resources required and appropriate formats of provision of these resources.</li> </ul>
<p>4. Promote <b>patient-focused research</b> to prevent the development of allergic diseases and improve the health and quality of life of people with allergic diseases</p>	<p>The National Allergy Strategy worked in collaboration with the Centre for Food &amp; Allergy Research and advocated for a national allergy centre of excellence.</p>	<ul style="list-style-type: none"> <li>• Funding was announced in the Federal Budget in March 2022 for the Centre for Food &amp; Allergy Research to establish a National Allergy Centre of Excellence. The National Allergy Strategy will work collaboratively with this organization to ensure effective resource development and evaluation.</li> </ul>
<p>5. Recognition of allergic diseases as a prioritised chronic disease and <b>National Health Priority Area</b></p>	<p>The National Allergy Strategy initially advocated for the allergic diseases to be considered a National Health Priority Area.</p>	<ul style="list-style-type: none"> <li>• To date, allergic diseases are not recognized as a prioritised chronic disease or National Health Priority Area. However,</li> </ul>

(continued)

National Allergy Strategy	Advocacy undertaken	Outcomes to date
	However, in recent years, advocacy has been focused on obtaining funding to progress project work.	federal government funding has facilitated increased awareness about allergic diseases in the Australian community more broadly.

**Table 3.** Progress towards achieving the National Allergy Strategy goals

overview of the National Allergy Strategy goals, the advocacy undertaken to try and achieve the goals and the outcomes to date.

## DISCUSSION

The development of the National Allergy Strategy, a partnership between ASCIA and A&AA, was important in enabling successful advocacy for funding and implementation of important Australia-wide projects.

Kotter’s 8 step Change Management Model has remained a key reference for those aiming to achieve behavior change<sup>29</sup> including in the health setting.<sup>27,30</sup> Kotter’s model is applicable to the advocacy and processes undertaken in the development and implementation of the National Allergy Strategy as illustrated in Table 1. Each step undertaken provided an opportunity to gradually progress the development and implementation of the National Allergy Strategy, while continuing to engage with key stakeholders. While Kotter’s model is designed to be sequential,<sup>29</sup> movement back and forth between steps can be more effective.<sup>26</sup> In the case of the National Allergy Strategy, this was important as governments change both at a state and federal level, as do key stakeholder representatives, hence while some relationships are being maintained, others are being established as the National Allergy Strategy progresses.

Step 1 of Kotter’s model was achieved through the development of the AIDA and Allergy in Australia Reports which provided the evidence base to purport allergy as an important and rapidly increasing health issue. These reports also provided the opportunity for engagement with politicians, an important step in progressing government support for policy change.<sup>31</sup>

While ASCIA and A&AA are well respected organizations in Australia, forming a partnership between these two organizations to become the National Allergy Strategy, has been integral to successful advocacy, obtaining funding, further engaging existing stakeholders as well as new stakeholders and successful implementation of projects (Step 2). Other studies have reported that partnerships in advocacy are important to amplify voices and inspire national governments into action.<sup>32,33</sup> In the case of the National Allergy Strategy, the partnership has facilitated further engagement with consumers, politicians and policy makers and key stakeholder organizations from many sectors such as medical, consumer, food service, food industry and regulatory.

ASCIA’s relationships with industry for annual conferences and unrestricted education grants for education and training since 1999, enabled the provision of unrestricted education grants to fund development of the strategy. In addition, A&AA’s outreach and advocacy since early 2000 and their initiating the establishment of a Parliamentary Allergy Alliance (PAA) was also an important early step (Step 3). Cullerton et al. emphasize the importance of investing in relationships in the context of influencing government nutrition policy and clearly demonstrated that establishing relationships with politicians helped to build trust and provide influence.<sup>31</sup> The launch of the PAA, provided a first opportunity to meet with the federal health minister at the time the National Allergy Strategy was launched which led to the first federal government funding grant.

The National Allergy Strategy has not just invested in political relationships but has considered key stakeholder relationships as critically important (Step 4). Cullerton et al. found that engaging with as many stakeholders as possible to support your cause, helps influence politicians.<sup>29</sup> Engagement with key stakeholders was important

to help progress political influence (Step 5), but it was also considered important to help progress National Allergy Strategy project work. Key stakeholders provided valuable expertise contributing to the development of resources and programs and the implementation process.

A key component of advocacy by the National Allergy Strategy has been to engage with state and federal politicians to discuss funding and provide updates on project progress. Indeed, the advocacy event that led to 4 years of sustainability funding was held to celebrate the National Allergy Strategy achievements based on 3 years of limited funding, although it was timed to coincide with the lead up to a federal election (Step 6).

The *Parliamentary Inquiry into Allergies and Anaphylaxis*<sup>34</sup> was a significant acknowledgement of allergic diseases in Australia. The inquiry enabled both health professionals and consumers to share their experiences regarding allergic diseases and the health system; identify areas for improvement; and where invited, give testimony at public hearings.<sup>35</sup> Following the tabling of the *Walking the Allergy Tightrope Report*<sup>36</sup> containing 24 recommendations based on the Inquiry findings, advocacy continued (Step 7).

The National Allergy Strategy has been successful in achieving four funding grants from the Australian Government Department of Health. This funding has enabled the scoping, development and progression of projects considered urgent for implementation. In March 2022, in response to the recommendations in the *Walking the Allergy Tightrope Report*,<sup>36</sup> the Australian Government announced a \$26.9 million funding commitment for Allergies and Anaphylaxis.<sup>37</sup> This significant investment over a four-year timeframe provides acknowledgement of allergic diseases as a public health issue and enables the work of the National Allergy Strategy to continue and expand (Step 8). Furthermore, this funding will enable many of the National Allergy Strategy goals to be achieved, as while some progress has been made, significant funding is required to develop and implement standards of care and improve access to quality care.

## CONCLUSION

The development of a National Allergy Strategy has been enabled by a strong partnership between the peak medical and patient support organizations, ASCIA and A&AA. The partnership has also helped facilitate engagement with key stakeholders to help advocate for funding and provide guidance and expertise in project implementation and resource development. The National Allergy Strategy has been successful in attracting funding to implement projects and develop resources urgently needed. The National Allergy Strategy is a world first where a partnership between peak medical and consumer bodies with a focus on allergy have attracted significant federal government funding.

### Abbreviations

AIDA, Allergy and Immune Diseases in Australia; A&AA, Allergy & Anaphylaxis Australia; ASCIA, Australasian Society of Clinical Immunology and Allergy; PAA, Parliamentary Allergy Alliance.

### Acknowledgements

The authors would like to acknowledge: the past and current National Allergy Strategy Steering Committee members (Brynn Wainstein, Michaela Lucas, Melanie Wong, Wendy Freeman, Sally Voukelatos, Merryn Netting, Jody Aiken, Karen Wong, William Smith and Katrina Allen); the past and current National Allergy Strategy Project Co-leads (Merryn Netting, Debra Savage, Ingrid Roche, Sally Voukelatos, Kirsten Grinter, Wendy Freeman, William Smith, Karen Wong and Michaela Lucas); and the many stakeholders who participated in the Allergy Summits and on working groups to develop and implement the National Allergy Strategy. The authors would also like to acknowledge the Australian Government Department of Health for the provision of funding to implement the National Allergy Strategy as well as unrestricted funding from industry and private donors which supported the development and implementation of the National Allergy Strategy.

### Funding

The Australian Government Department of Health, unrestricted funding contributions from industry and private donors.

### Availability of data and materials

Data is available upon request.

### Author contributions

The lead author initially drafted the publication and all other authors have contributed substantially to the writing of this publication.

### Ethics approval

Not applicable.

### Consent for publication

All authors consent to this work being published.

### Declaration of competing interest

Ms. Vale reports grants for the National Allergy Strategy from Viatris (formerly Mylan), grants from Seqirus, grants from Stallergenes Greer, grants from Bayer, grants from Nutricia, grants from Nestle Nutrition, grants from Perth Children's Hospital Foundation, grants from GSK, grants from Abbott, grants from DBV Technologies, grants from Abacus dx, grants from Sanofi, grants from Allergy Concepts, grants from Australian Government Department of Health, during the conduct of the study.

Ms Said reports grants for the National Allergy Strategy from Viatris (formerly Mylan), grants from Seqirus, grants from Stallergenes Greer, grants from Bayer, grants from Nutricia, grants from Nestle Nutrition, grants from Perth Children's Hospital Foundation, grants from GSK, grants from Abbott, grants from DBV Technologies, grants from Abacus dx, grants from Sanofi, grants from Allergy Concepts, grants from Australian Government Department of Health, during the conduct of the study.

Ms Smith reports grants for the National Allergy Strategy from Viatris (formerly Mylan), grants from Seqirus, grants from Stallergenes Greer, grants from Bayer, grants from Nutricia, grants from Nestle Nutrition, grants from Perth Children's Hospital Foundation, grants from GSK, grants from Abbott, grants from DBV Technologies, grants from Abacus dx, grants from Sanofi, grants from Allergy Concepts, grants from Australian Government Department of Health, during the conduct of the study.

Dr. Joshi reports grants for the National Allergy Strategy from Viatris (formerly Mylan), grants from Seqirus, grants from Stallergenes Greer, grants from Bayer, grants from Nutricia, grants from Nestle Nutrition, grants from Perth Children's Hospital Foundation, grants from GSK, grants from Abbott, grants from DBV Technologies, grants from Abacus dx, grants from Sanofi, grants from Allergy Concepts, grants from Australian Government Department of Health, during the conduct of the study.

Dr. Loh reports grants for the National Allergy Strategy from Viatris (formerly Mylan), grants from Seqirus, grants from Stallergenes Greer, grants from Bayer, grants from Nutricia, grants from Nestle Nutrition, grants from Perth Children's Hospital Foundation, grants from GSK, grants from Abbott, grants from DBV Technologies, grants from Abacus dx, grants from Sanofi, grants from Allergy Concepts, grants from Australian Government Department of Health, during the conduct of the study.

### Appendix A. Supplementary data

Supplementary data to this article can be found online at <https://doi.org/10.1016/j.waojou.2022.100706>.

### Author details

<sup>a</sup>National Allergy Strategy, Sydney NSW 2000, Australia.

<sup>b</sup>Australasian Society of Clinical Immunology and Allergy (ASCI), Sydney NSW 2000, Australia. <sup>c</sup>Allergy & Anaphylaxis Australia, Sydney NSW 2000, Australia. <sup>d</sup>The University of Western Australia, Perth, Australia. <sup>e</sup>Children's Hospital at Westmead, Westmead NSW 2145, Australia.

<sup>f</sup>Perth Children's Hospital, Perth WA 6000, Australia.

### REFERENCES

1. Pawankar R. Allergic diseases and asthma: a global public health concern and a call to action. *World Allergy Organ J.* 2014. <https://doi.org/10.1186/1939-4551-7-12>.
2. Sánchez-Borges MBL, Muraro AM, Wood RA, et al. The importance of allergic disease in public health: an iCAALL statement. *World Allergy Organ J.* 2018. <https://doi.org/10.1186/s40413-018-0187-2>.
3. Pawankar R, Canonica GW, Holgate ST, Lockey RF, Blaiss M. *The WAO White Book on Allergy Update*; 2013. [www.worldallergy.org/wao-white-book-on-allergy?msclkid=ce1c3da3c6c711ecb605fec794d976aa](http://www.worldallergy.org/wao-white-book-on-allergy?msclkid=ce1c3da3c6c711ecb605fec794d976aa).
4. Nutten S. Atopic dermatitis: global epidemiology and risk factors. *Ann Nutr Metab.* 2015. <https://doi.org/10.1159/000370220>.
5. Prescott S, Nowak-Węgrzyn A. Strategies to prevent or reduce allergic disease. *Ann Nutr Metab.* 2011. <https://doi.org/10.1159/000334150>.
6. Du Toit RG, Sayre PH, Bahnson HT, et al. Randomized trial of peanut consumption in infants at risk for peanut allergy. *N Engl J Med.* 2015. <https://doi.org/10.1056/NEJMoa1414850>.
7. Perkin MR, Logan K, Tseng A, et al. Randomized trial of introduction of allergenic foods in breast-fed infants. *N Engl J Med.* 2016. <https://doi.org/10.1056/NEJMoa1514210>.
8. Perkin MR, Logan K, Marris T, et al. Enquiring about tolerance (EAT) study: feasibility of an early allergenic food introduction regimen. *J Allergy Clin Immunol.* 2016. <https://doi.org/10.1016/j.jaci.2015.12.1322>.
9. Lavery WJ, Assa'ad A. How to prevent food allergy during infancy: what has changed since 2013? *Curr Opin Allergy Clin Immunol.* 2018. <https://doi.org/10.1097/ACI.0000000000000445>.
10. Natsme O, Kabashima S, Nakazato J, et al. Two-step egg introduction for prevention of egg allergy in high-risk infants with eczema (PETIT): a randomized, double-blind, placebo-controlled trial. *Lancet.* 2017. [https://doi.org/10.1016/S0140-6736\(16\)31418-0](https://doi.org/10.1016/S0140-6736(16)31418-0).
11. Hill DA, Spergel JM. The atopic march: critical evidence and clinical relevance. *Ann Allergy Asthma Immunol.* 2018. <https://doi.org/10.1016/j.anai.2017.10.037>.
12. Mullins RJ, Cook M, Douglass J, Mallon D, Smith J, Wong M. *The economic impact of allergic disease in Australia: not to be sneezed at.* ASCIA/Access Economics Report; November 2007. [www.allergy.org.au/content/view/full/324/76/](http://www.allergy.org.au/content/view/full/324/76/).

13. Mullins RJ, Dear KBG, Tang ML. Time trends in Australian hospital anaphylaxis admissions 1998/9 to 2011/12. *J Allergy Clin Immunol*. 2015. <https://doi.org/10.1016/j.jaci.2015.05.009>.
14. Osborne NJ, Koplin JJ, Martin PE, et al. Prevalence of challenge-proven IgE-mediated food allergy using population-based sampling and predetermined challenge criteria in infants. *J Allergy Clin Immunol*. 2011. <https://doi.org/10.1016/j.jaci.2011.01.039>.
15. Liew WK, Williamson E, Tang ML. Anaphylaxis fatalities and admissions in Australia. *J Allergy Clin Immunol*. 2009. <https://doi.org/10.1016/j.jaci.2008.10.049>.
16. Australian Bureau of Statistics. Asthma. <https://www.abs.gov.au/statistics/health/health-conditions-and-risks/asthma/latest-release>. Accessed July 2022.
17. Simunovic M, Erbas B, Boyle J, Baker P, Davies JM. Characteristics of emergency patients admitted to hospital with asthma: a population-based cohort study in Queensland, Australia. *Emerg Med Australas*. 2021 Dec;33(6):1027-1035. <https://doi.org/10.1111/1742-6723.13796>. Epub 2021 May 15. PMID: 33991056.
18. Hahtela T, Valovirta E, Saarinen K, et al. The Finnish Allergy Program 2008-2018: Society-wide proactive program for change of management to mitigate allergy burden. *J Allergy Clin Immunol*. 2021. <https://doi.org/10.1016/j.jaci.2021.03.037>.
19. Hahtela T, von Hertzen L, Makela M, Hannuksela M. Finnish Allergy Programme 2008-2018 time to act and change the course. *Allergy (Copenhagen)*. 2008. <https://doi.org/10.1111/j.1398-9995.2008.01712.x>.
20. Australian Government Department of Health. Department of Health website. [www.health.gov.au/resources/publications/national-preventive-health-strategy-2021-2030](http://www.health.gov.au/resources/publications/national-preventive-health-strategy-2021-2030). Accessed March 2022.
21. Australian Government Department of Health. Department of Health website. [www.health.gov.au/ministers/the-hon-greg-hunt-mp/media/new-10-year-plan-to-support-australians-with-diabetes](http://www.health.gov.au/ministers/the-hon-greg-hunt-mp/media/new-10-year-plan-to-support-australians-with-diabetes). Accessed March 2022.
22. Australian Government Department of Health. Department of Health website. [www.health.gov.au/resources/publications/the-national-strategic-action-plan-for-pain-management?msclkid=8a83cf62c6ca11ecb19935f2f58652e9](http://www.health.gov.au/resources/publications/the-national-strategic-action-plan-for-pain-management?msclkid=8a83cf62c6ca11ecb19935f2f58652e9). Accessed March 2022.
23. Australian Government Department of Health. Department of Health website. [www.health.gov.au/ministers/the-hon-greg-hunt-mp/media/8-million-in-funding-to-support-asthma-patients](http://www.health.gov.au/ministers/the-hon-greg-hunt-mp/media/8-million-in-funding-to-support-asthma-patients). Accessed March 2022.
24. Australian Government Department of Health. Department of Health website. [www.health.gov.au/resources/publications/national-strategic-framework-for-chronic-conditions](http://www.health.gov.au/resources/publications/national-strategic-framework-for-chronic-conditions). Accessed March 2022.
25. Parliament of Australia. Parliament of Australia website. [www.aph.gov.au/About\\_Parliament/Parliamentary\\_Departments/Parliamentary\\_Library/Publications\\_Archive/CIB/cib9900/2000CIB18](http://www.aph.gov.au/About_Parliament/Parliamentary_Departments/Parliamentary_Library/Publications_Archive/CIB/cib9900/2000CIB18). Accessed March 2022.
26. David JL, Thomas SL, Randle M, Daube M. A public health advocacy approach for preventing and reducing gambling related harm. *Aust N Z J Public Health*. 2020. <https://doi.org/10.1111/1753-6405.12949>.
27. Moore M, Yeatman H, Pollard C. Evaluating success in public health advocacy strategies. *Viet Nam J Public Health*. 2013;1(1):66-75.
28. National Allergy Strategy. National Allergy Strategy website. [www.nationalallergystrategy.org.au/about-us/funding](http://www.nationalallergystrategy.org.au/about-us/funding). Accessed March 2022.
29. Appelbaum SH, Habashy S, Malo J-L, Shafiq H. Back to the future: revisiting Kotter's 1996 change model. *J Manag Dev*. 2012. <https://doi.org/10.1108/02621711211253231>.
30. Campbell RJ. Change management in health care. *Health Care Manag*. 2008. <https://doi.org/10.1097/01.hcm.0000285028.79762.a1>.
31. Cullerton K, Donnet T, Lee A, Gallegos D. Effective advocacy strategies for influencing government nutrition policy: a conceptual model. *Int J Behav Nutr Phys Activ*. 2018. <https://doi.org/10.1186/s12966-018-0716-y>.
32. Wittet S, Aylward J, Cowal S, et al. Advocacy, communication, and partnerships: mobilizing for effective, widespread cervical cancer prevention. *Int J Gynecol Obstet*. 2017. <https://doi.org/10.1002/ijgo.12189>.
33. Hubinette M, Dobson S, Regehr G. Not just "for" but "with": health advocacy as a partnership process. *Med Educ*. 2015. <https://doi.org/10.1111/medu.12755>.
34. Parliament of Australia. Parliament of Australia website. [www.aph.gov.au/Parliamentary\\_Business/Committees/House/Health\\_Aged\\_Care\\_and\\_Sport/Allergiesandanaphylaxis](http://www.aph.gov.au/Parliamentary_Business/Committees/House/Health_Aged_Care_and_Sport/Allergiesandanaphylaxis). Accessed March 2022.
35. Parliament of Australia. Parliament of Australia website. [www.aph.gov.au/Parliamentary\\_Business/Committees/House/Health\\_Aged\\_Care\\_and\\_Sport/Allergiesandanaphylaxis/Public\\_Hearings](http://www.aph.gov.au/Parliamentary_Business/Committees/House/Health_Aged_Care_and_Sport/Allergiesandanaphylaxis/Public_Hearings). Accessed March 2022.
36. Parliament of Australia. Parliament of Australia website. [https://www.aph.gov.au/Parliamentary\\_Business/Committees/House/Health\\_Aged\\_Care\\_and\\_Sport/Allergiesandanaphylaxis/Report](https://www.aph.gov.au/Parliamentary_Business/Committees/House/Health_Aged_Care_and_Sport/Allergiesandanaphylaxis/Report). Accessed March 2022.
37. Australian Government Department of Health. Department of Health website. <https://www.health.gov.au/resources/publications/budget-2022-23-allergic-disease-and-anaphylaxis>. Accessed March 2022.