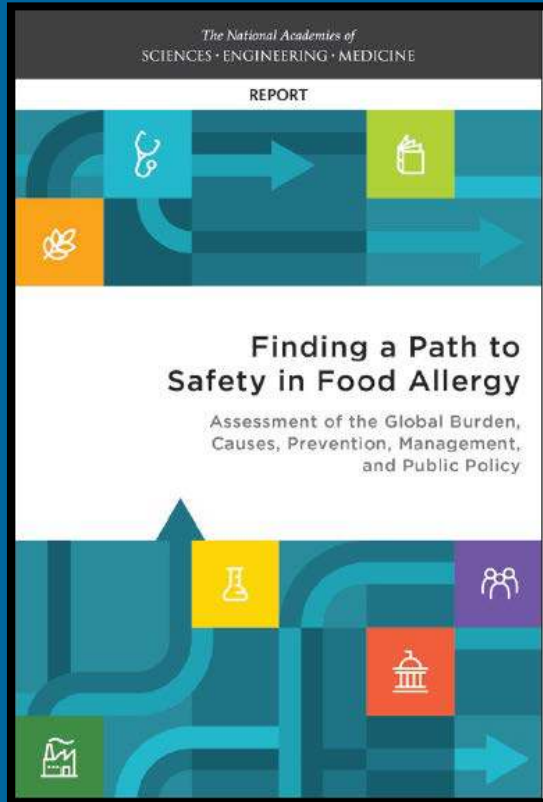


The National Academies of
SCIENCES • ENGINEERING • MEDICINE



Finding a Path to
Safety in Food Allergy
Highlights of the Consensus Report

Disclosure

- Report of The National Academies of Sciences
- This activity was supported by Federal Sponsors:
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The Asthma and Allergy Foundation of America, the Egg Nutrition Center, Food Allergy Research and Education, the International Life Sciences Institute North America, the International Tree Nut Council Nutrition Research & Education Foundation, the National Dairy Council, the National Peanut Board, and the Seafood Industry Research Fund
- No Stallings Disclosures



Report Committee

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- **Anna Maria Siega-Riz**, University of Virginia
- **Xiaobin Wang**, Johns Hopkins University

Why a Study on Food Allergies?

Knowledge gaps in several areas:

- ***Prevalence***: what is the prevalence of food allergy and is it rising?
- ***Diagnosis***: is there a best test for diagnosis?
- ***Prevention***: what are the risk factors for food allergies?
- ***Management***: what is the role of healthcare providers? Food industry? Individuals? Others?

Sponsors

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Seafood Industry Research Fund

The National Academies Study Process



Statement of Task

The committee will examine critical issues related to food allergy.....and

- bring together leading investigators from relevant fields, clinicians, and parents; and to develop a framework for future work; and**
- recommend actions to be implemented by both government and non-government agencies**

Statement of Task

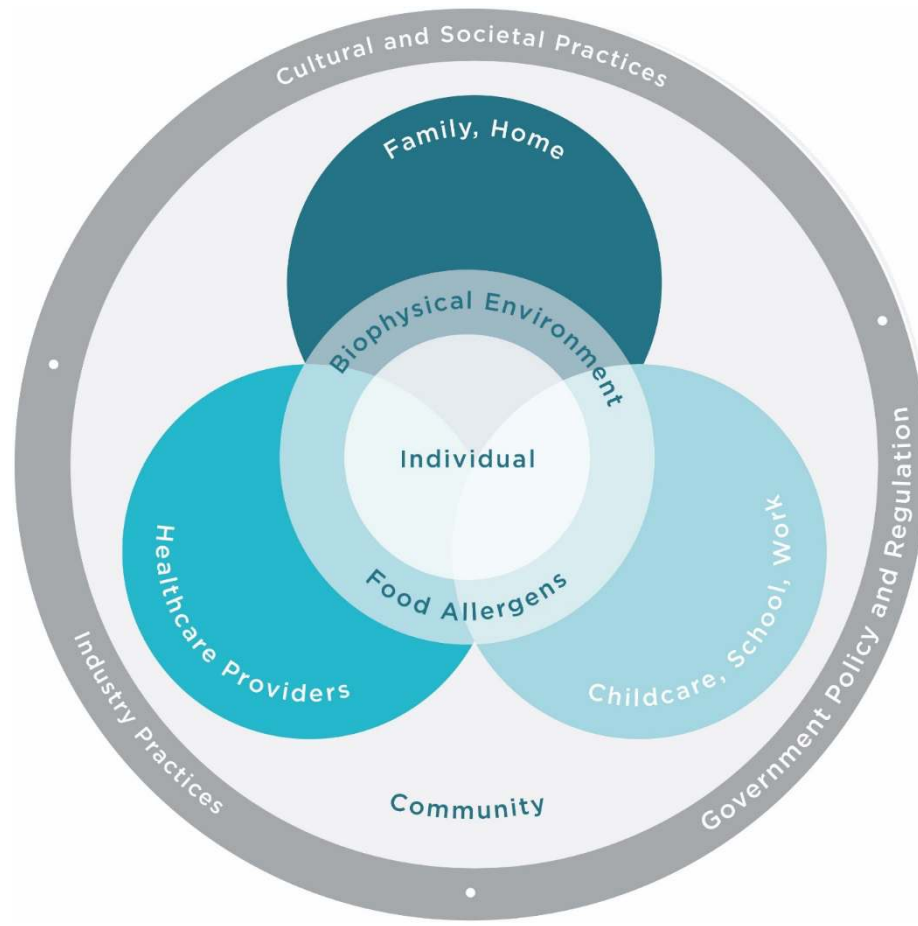
Critical food allergy issues to address:

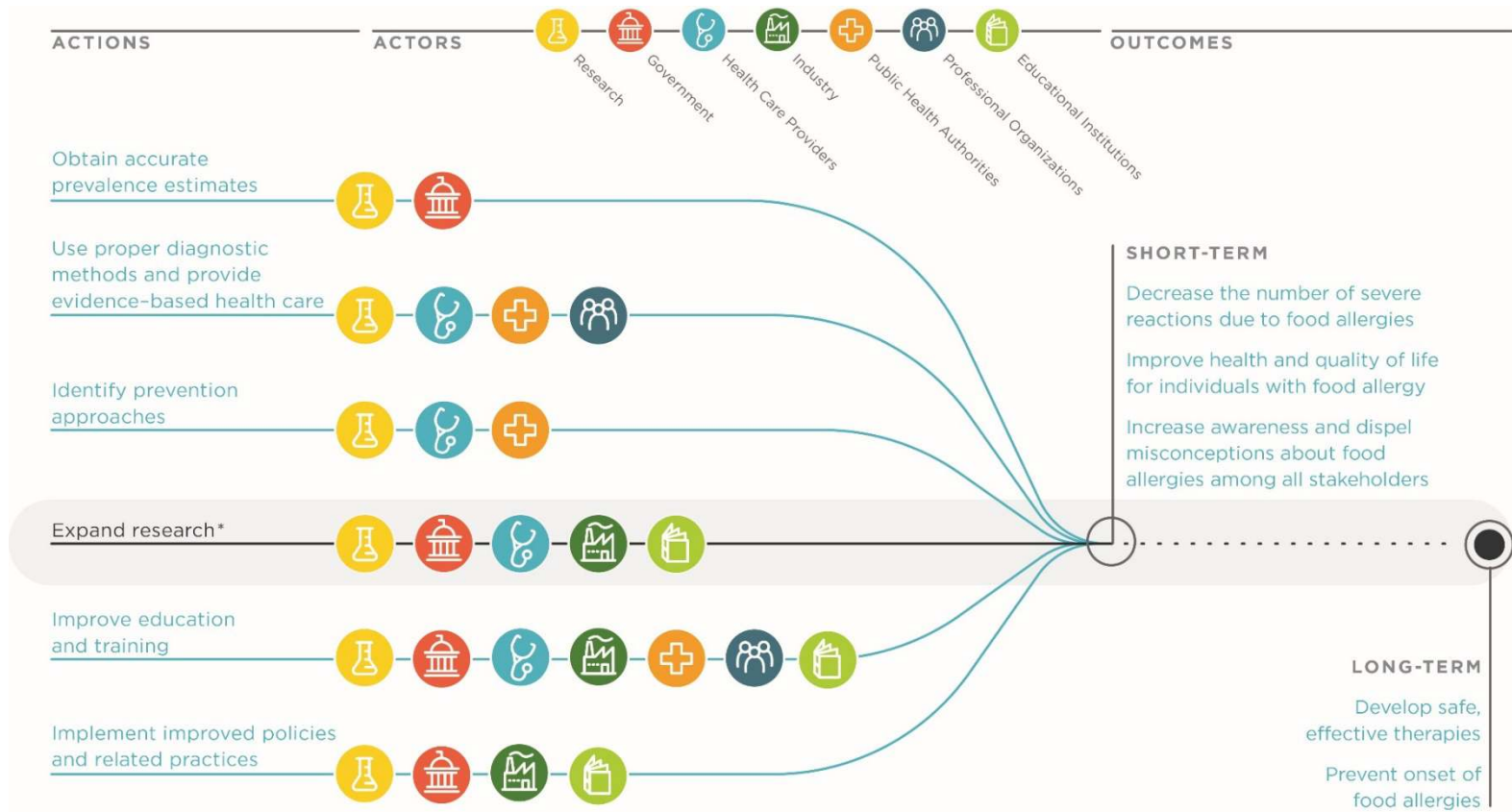
- Prevalence
- Diagnosis and prognosis
- Early determinants
- Create safe environments for people with food allergy
- Research gaps

What is a Food Allergy?

Adverse health effect arising from a specific immune response that occurs reproducibly on exposure to a given food

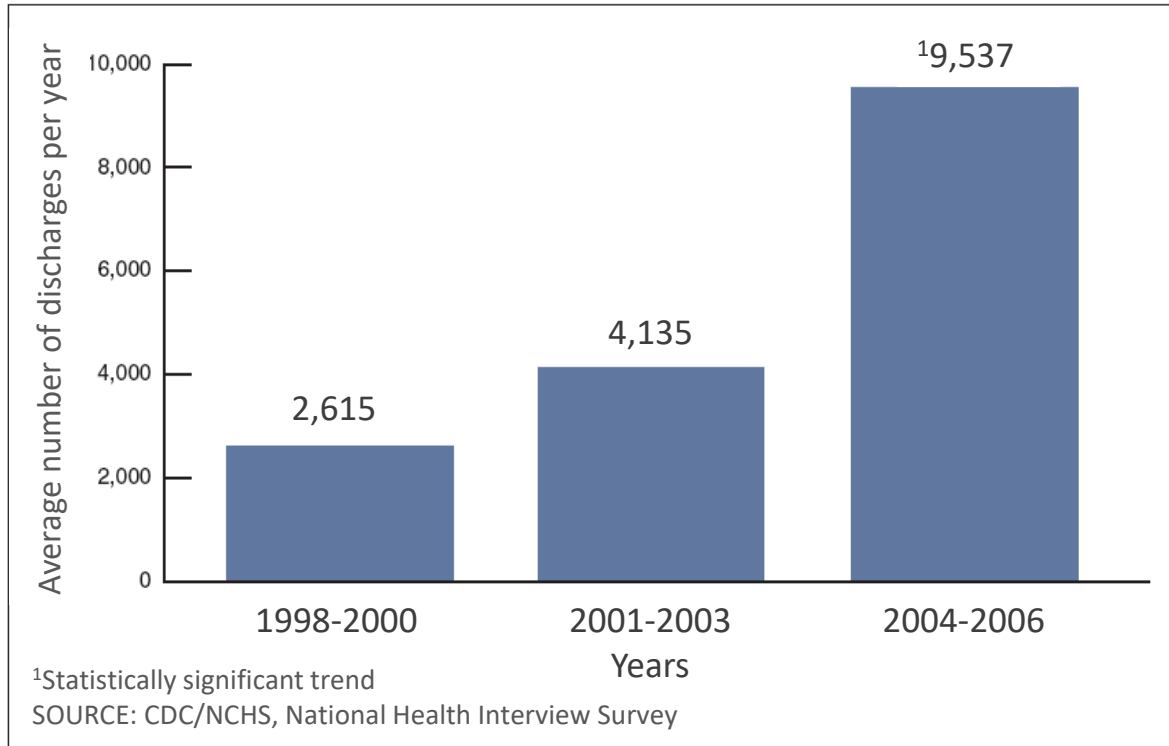
- **IgE-mediated food allergy is the focus of this report**
- **Common IgE-mediated reaction characteristics**
 - **Immediate to 2 hour onset of reaction**
 - **Small amount of food allergen required for reaction**
 - **Typical symptoms: urticaria, angioedema, vomiting, diarrhea, oral itching, anaphylaxis**





PREVALENCE

Figure 4. Average number of hospital discharges per year among children under age 18 years with any diagnosis related to food allergy: United States, 1998-2006



The committee recommends that

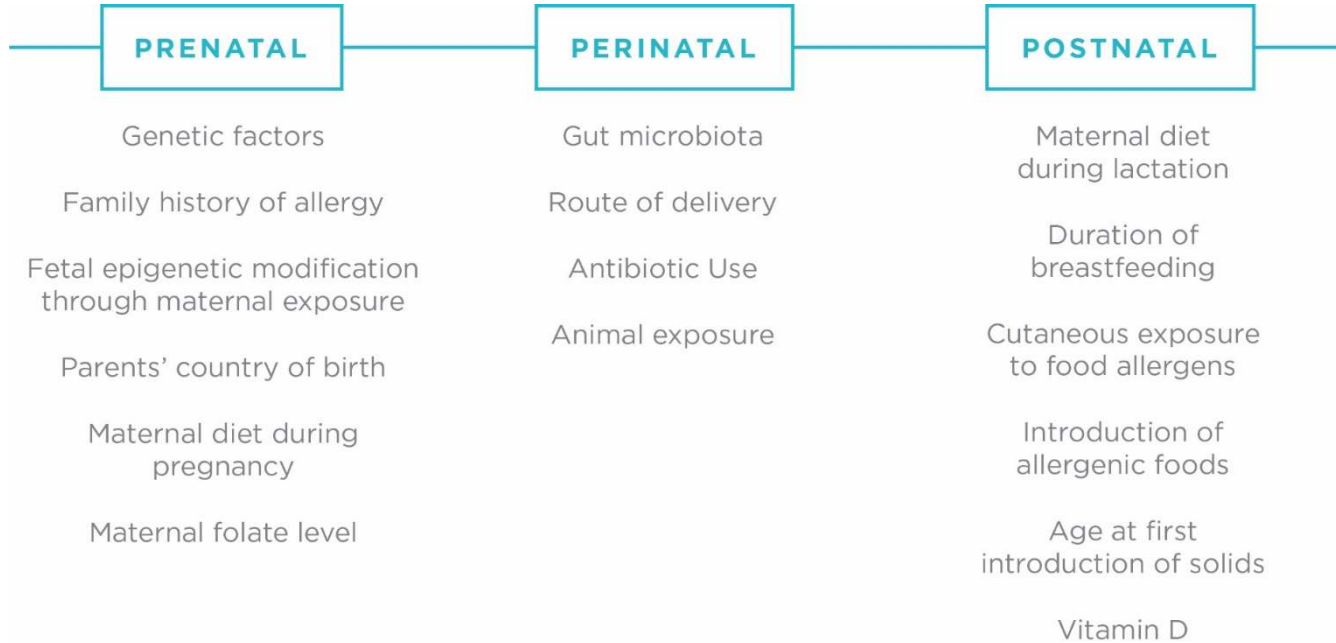
- **The Centers for Disease Control and Prevention obtain prevalence estimates on food allergy in a systematic and statistically sound manner in:**
 - **a sufficiently large population**
 - **both children and adults**
 - **groups defined by race, ethnicity, and socio-economic status to determine differences in diagnosis and prevalence within these groups**

DIAGNOSIS AND PROGNOSIS

The committee recommends that

- **physicians use evidence-based, standardized procedures as the basis for food allergy diagnosis and avoid non-standardized and unproven procedures**
- **when food allergy is suspected, a patient should be evaluated by a physician who has the training and experience to select and interpret appropriate diagnostic tests**

PREVENTION



The committee recommends that

- **public health authorities and clinical practice guidelines include consistent, clear, and evidence-based advice for families and health care providers including dietitians, about the potential benefits of introducing allergenic foods in the first year of life**

EDUCATION AND TRAINING

FOR PUBLIC HEALTH AUTHORITIES, HEALTH CARE PROVIDERS, AND PATIENTS AND CAREGIVERS

The committee recommends that

- **the Centers for Disease Control and Prevention work with other public health authorities to plan and initiate a **public health campaign** to increase awareness and empathy as well as to dispel misconceptions about food allergy**

FOR PUBLIC HEALTH AUTHORITIES, HEALTH CARE PROVIDERS, AND PATIENTS AND CAREGIVERS

The committee recommends that

- **public health authorities regularly update guidelines on diagnosis, prevention, and management of food allergy based on strong scientific evidence, as emerging scientific data become available**

FOR PUBLIC HEALTH AUTHORITIES, HEALTH CARE PROVIDERS, AND PATIENTS AND CAREGIVERS

The committee recommends that

- **health care providers counsel patients and their caregivers on food allergy following the most recent food allergy guidelines and emphasizing the need to take age-appropriate responsibility for managing their food allergy**
- **counseling is particularly important for those at high risk of food allergy and severe food allergy reactions, such as adolescents, young adults, and those with both food allergy and asthma**

FOR PUBLIC HEALTH AUTHORITIES, HEALTH CARE PROVIDERS, AND PATIENTS AND CAREGIVERS

The committee recommends that

- **health care providers and others use intramuscular epinephrine (adrenaline) in all infants, children, and adults as a first line of emergency management for episodes of food allergy anaphylaxis.**
- **The Food and Drug Administration evaluate the need for, and, if indicated, industry should develop an auto-injector with 0.075 mg epinephrine specifically designed for use in infants**

FOR PUBLIC HEALTH AUTHORITIES, HEALTH CARE PROVIDERS, AND THEIR PATIENTS AND CAREGIVERS

The committee recommends that

- **medical schools as well as residency and fellowship programs and other relevant schools include training for health care providers on:**
 - **management of food allergy and anaphylaxis**
 - **approaches to counseling patients and their caregivers**

The committee recommends that:

- **organizations, such as the American Red Cross or the National Safety Council, that provide **emergency training** to the general public and to first responders and first aid personnel in various professions and workplaces, include food allergy and anaphylaxis management in their curricula**

FOR FOOD INDUSTRY PERSONNEL

The committee recommends that

- **food industry leaders** provide the necessary resources for integrating food allergy training into existing general food safety and customer service training for employees at all levels and stages in the food industry

IMPROVE POLICIES AND PREVENTION OF SEVERE REACTIONS

The committee recommends that

- the **Codex Alimentarius Commission** and public health authorities in individual countries decide on a periodic basis about which allergenic foods should be included in their **priority lists** based on scientific and clinical evidence of regional prevalence and severity of food allergies as well as allergen potency

The committee recommends that:

- the Food and Drug Administration makes its decisions about **labeling exemptions for ingredients** derived from priority allergenic sources based on a quantitative risk assessment framework

The committee recommends that:

- ...the food manufacturing industry, the Food and Drug Administration (FDA), and the U.S. Department of Agriculture (USDA) work cooperatively to replace the **Precautionary Allergen Labeling system** for low-level allergen contaminants with a new risk-based labeling approach, such as the VITAL program used in Australia and New Zealand

The committee recommends that:

- ...all state, local, and tribal governmental agencies adopt the **2013** Food and Drug Administration **Food Code**, which includes provisions for food establishments on preventing food allergy reactions

POLICIES AT SPECIFIC SETTINGS (E.G. SCHOOLS, EARLY CARE AND EDUCATION FACILITIES AND AIRLINES)

The committee recommends that

- **relevant federal agencies convene a special task force to establish and implement policy guidelines to:**
 - **assure emergency epinephrine capabilities are in place in public venues**
 - **provide standardized food allergy and anaphylaxis first aid training to appropriate staff**
 - **implement education standards for responding to and managing food allergy emergencies**

POLICIES AT SPECIFIC SETTINGS (E.G. SCHOOLS, EARLY CARE AND EDUCATION FACILITIES AND AIRLINES)

The committee recommends that

- **the FDA continue to work together with other relevant federal, state, and local agencies to develop and implement **labeling policies** specific to allergenic ingredients in packaged and prepared foods that are distributed through **airlines** and other **public venues, including schools and early care and education facilities****

RESEARCH PRIORITIES

Key Peanut Allergy Publications

- **LEAP Trial**
1RCT of early allergen introduction to prevent allergy
Du Toit et.al., N Engl J Med 2015; 372:803-813
- **LEAP-On Study**
Du Toit et.al. N Engl J Med 2016; 374:1435-1443
- **Continued Oral Tolerance**
Perkin et.al. N Engl J Med 2016; 374:1733-1743



Guidelines for the Prevention of Peanut Allergy in the US.

Addendum by Expert Panel to 2010

Togias et.al. Ann Allergy Asthma Immunol 2016

[http://www.jacionline.org/article/S0091-6749\(16\)31222-2/abstract](http://www.jacionline.org/article/S0091-6749(16)31222-2/abstract)



Severity-Based Recommendations

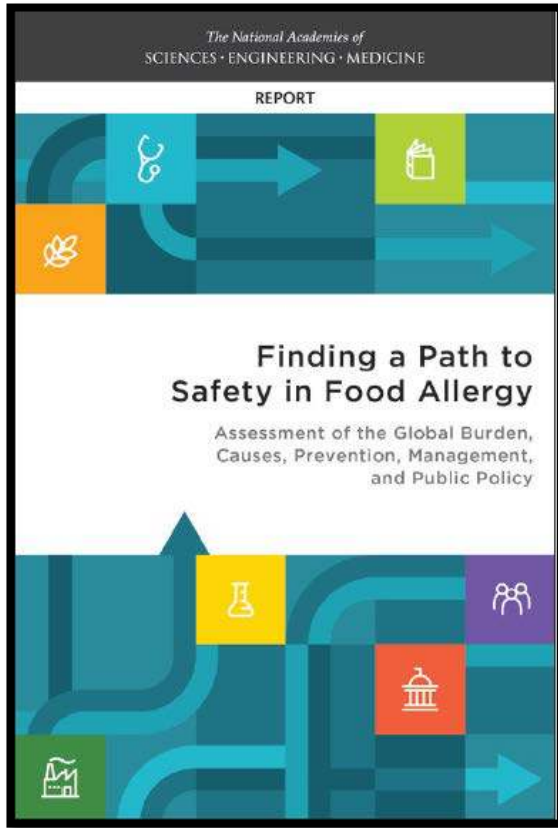
- **Severe eczema, allergy or both**
Intro at 4-6 months with testing and observation
- **Mild to moderate eczema**
Intro around 6 months at home
- **No eczema or food allergy**
Intro with family preferences and cultural practices



Key Takeaways

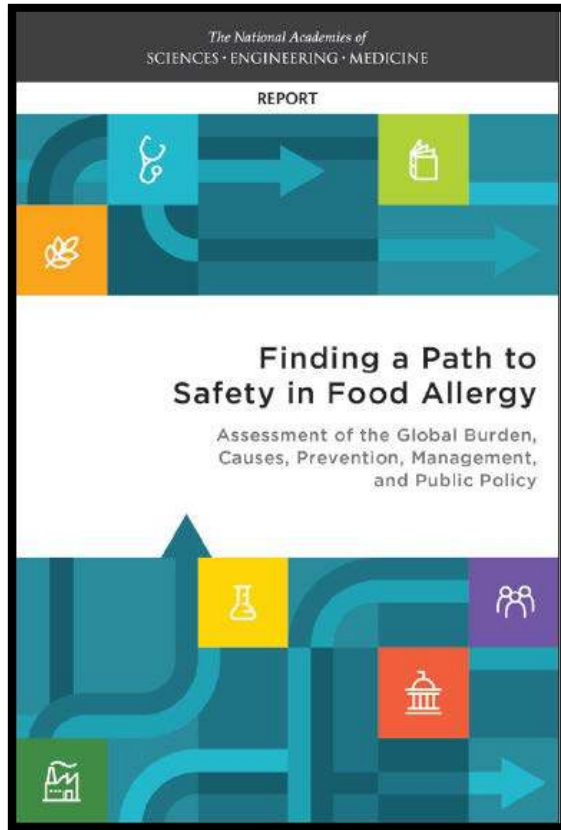
- **Rapidly emerging food allergy science**
- **Changes in knowledge and behavior of medical care teams and families/patients/consumers**
- **Role for all stakeholders**





Download the report and other materials at www.nationalacademies.org/FoodAllergies

For more information contact moria@nas.edu



Finding a Path to Safety in Food Allergy Report Highlights

<http://nationalacademies.org/hmd/reports/2016/finding-a-path-to-safety-in-food-allergy.aspx>