Appendix A. Food allergy prevalence questionnaire items used in:

"Egg Allergy in US Children"

Below is the text and corresponding conditional branching/skip logic used to administer questionnaire items via web and computer-assisted telephone interview. Parent-proxy responses to the following questions were coded, weighted, and used for the analyses described in "Egg Allergy in US Children".

QC0.
How many children do you have under the age of 18 in your household?

If QC0=0, go to Demographics (QA9)

[IF QCO>0, display]
Multikids.
We would like to ask some questions about [the child/the two children/up to three children] under the age of 18 in your household.

We would like the parent or legal guardian of these children to answer the questions about food allergies these children may or may not have. Are you the parent or legal guardian of these children?

1. Yes
2. No

[IF MULTIKIDS=2]
NEWADULT.

Please have the parent/legal guardian take over the survey for the next set of questions. Click "Continue" to resume the survey.

Loop through child section question up to three (3) times, once per child.

Loop1Intro.
In the next section, we're going to ask about your children based on who had the most recent birthday. For this first set of questions, please think of your child with the most recent birthday.

Loop2Intro.
Those are all the questions we have about the first child in your household with the most recent birthday.

Next, please think of your child with the next most recent birthday.

Loop3Intro.
Thank you for the information. Now we would like to ask you about one more child in your household.

After the first two children for whom you've already answered questions, please think of your child with the next most recent birthday.

QC1a_n.
How old is your child? If your child is less than 1 year of age please enter 0.

_____Years

[if QC1a_n=0]
QC1b_n.
How old (in months) is your child?

_____Months

QC2_n.
What is your child's gender?

1. Male
2. Female

QC3_n.
What is your child's race/ethnicity?

a. American Indian/Alaska Native
b. Asian
c. Black
d. Hispanic/Latino
e. Native Hawaiian or other Pacific Islander
f. White
g. Other _____

QC4_n.
Has your child ever had a food allergy at any point during [his/her] lifetime?

1. Yes
2. No

QC8_n.
Has your child ever been diagnosed by a doctor with any of the following chronic conditions?

Please select all that apply.

a. Asthma
b. Atopic Dermatitis/Eczema
c. Diabetes
d. Eosinophilic esophagitis (EoE)
e. Food Protein-Induced Enterocolitis Syndrome (FPIES) (Note, this is a very specific and rare allergic condition)
f. Hay Fever/Allergic Rhinitis/Seasonal Allergies
g. Insect sting allergy (please specify_____)
h. Latex Allergy
i. Medication allergy (e.g. to penicillin) (please specify_____)
j. Urticaria/Chronic Hives
k. Other chronic condition (please specify_____)
l. None

QC5_n.
Was your child born in the United States?

1. Yes
2. No

CURRENT FOOD ALLERGY

QCC1_n.
Is your child currently allergic to any foods?

Do not include foods that your child can currently eat without having an allergic reaction.

Please indicate for each food whether your child currently has the allergy or not.

1. Peanut
2. Tree nuts such as almond, cashew, hazelnut, pecan, pistachio and walnut
3. Cow's milk
4. Egg
5. Shellfish such as shrimp, crab, lobster, clam, oyster, mussels or scallop
6. Fin fish or fish product such as anchovies, catfish, cod, halibut, salmon, tuna, or fish sauce
7. Soy
8. Wheat
9. Sesame
10. Coconut
11. Avocado
12. Fruit or berry
13. Green peas
14. Lentils
15. Meat (Please specify if known_____)
16. Spices (Please specify if known_____)
17. Vegetables (Please specify if known_____)
18. Other allergy or additional details about reported allergy (Please describe)
19. Other allergy or additional details about reported allergy (Please describe)
20. Other allergy or additional details about reported allergy (Please describe)
21. Other allergy or additional details about reported allergy (Please describe)
22. Other allergy or additional details about reported allergy (Please describe)

Response options
1. Yes
2. No

[if QCC1_2_n=1]
QCC1a_n.
Which of the following tree nuts is your child currently allergic to?

1. Almond
2. Cashew
3. Hazelnut
4. Pecan
5. Pistachio
6. Walnut
7. Other tree nut (Please specify if known_____)

Response options
1. Yes
2. No

[if QCC1_4_n=1]
QCC1c_n.
Can your child eat baked foods containing egg? (e.g. home-made or store-bought muffins, cakes or other egg-products baked for at least 25 minutes at 350° or greater).

1. Yes
2. No

[if QCC1_5_n=1]
QCC1d_n.
Which of the following shellfish is your child currently allergic to?

1. Shrimp
2. Crab
3. Lobster
4. Mollusk such as clam, oyster, mussels or scallop
5. Other shellfish (Please specify if known_____)

Response options
1. Yes
2. No

[If QCC1_6_n=1]
QCC1e_n.
Which of the following fin fish is your child allergic to?

1. Anchovies
2. Catfish
3. Cod
4. Halibut
5. Salmon
6. Tuna
7. Fish sauce
8. Other (Please specify if known_____)

Response options
1. Yes
2. No

[If QCC1_12_n=1]
QCC1f_n.
Which of the following fruit or berries is your child allergic to?

1. Mango
2. Peach
3. Strawberry
4. Other fruit (Please specify if known_____)

Response options
1. Yes
2. No

START OF SECTION WHICH REPEATS FOR ALL CURRENT ALLERGIES

QCC2_n_x.
How old was your child when [he/she] had [his/her] first reaction to [Current Allergy X]?

If you are unsure, please provide your best guess. If your child was less than 1 year of age please enter 0.

_____Years

[IF QCC2_n_x=0]
QCC3_n_x.
How old (in months) was your child when [he/she] had [his/her] first reaction to [Current Allergy X]?

If you are unsure, please provide your best guess.

_____Months

QCC4_n_x.
Did a doctor diagnose your child's [Current Allergy X] allergy?

1. Yes
2. No
3. I don't remember

[IF QCC4_n_x=1; numbox 0- QC1a_n]
QCC5_n_x.
How old was your child when a doctor first diagnosed [his/her] [Current Allergy X] allergy?

If you are unsure, please provide your best guess. If child was less than 1 year of age please enter 0.

_____Years

[if QCC5_n_x=0]
QCC6_n_x.
How old (in months) was your child when a doctor first diagnosed [his/her] [Current Allergy X] allergy?

If you are unsure, please provide your best guess.

_____Months

[IF QCC4_n_x.=1]
QCC7_n_x.
Was any testing done to confirm your child's [Current Allergy X] allergy diagnosis? If so, please specify.

Please select all that apply.

a. No testing was conducted
b. Skin prick or scratch test for [Current Allergy X] allergy
c. Blood test for [Current Allergy X] allergy (e.g. RAST, ImmunoCAP)
d. Oral food challenge to [Current Allergy X] (i.e. ate [Current Allergy X] under medical supervision)
e. Alternative test for [Current Allergy X] allergy (e.g. NAET) (Please specify if possible _____)
f. I don't remember

QCC9_n_x.

Think back to the most severe allergic reaction to [Current Allergy X] that your child has ever had. What were [his/her] symptoms?

Please select all that apply.

Skin symptoms:

1. Hives
2. Itching
3. Rash
4. Swelling (except lip/tongue swelling—please mark lip/tongue swelling under "Mouth/Throat Symptoms")
5. Other: _____

Mouth/Throat Symptoms

6. Lip/tongue swelling
7. Difficulty swallowing
8. Hoarse voice
9. Itchy mouth
10. Throat tightening
11. Mouth or throat tingling
12. Other: _____

Breathing Symptoms

13. Chest tightening
14. Nasal congestion
15. Repetitive cough
16. Trouble breathing
17. Wheezing
18. Other: _____

Gastrointestinal (GI) Symptoms

19. Belly pain
20. Cramps
21. Diarrhea
22. Nausea
23. Vomiting
24. Other: _____

Cardiovascular/Heart Symptoms

25. Chest pain

26. Rapid heart rate
27. Fainting, dizziness, or feeling light headed
28. Low blood pressure
29. Other: _____

Other Symptoms

30. Anxiety
31. Feeling of impending doom
32. Headache
33. Other: _____

34. Other reaction: _____

QCC10_n_x.

Have you used any of the following medications to treat your child's [Current Allergy X] allergy?

Please select all that apply.

1. Epinephrine auto-injector (e.g. *EpiPen®, Auvi-Q®, Adrenaclick®/Generic*)
2. Antihistamines (e.g. *Benadryl®, Zyrtec®*)
3. Asthma Inhaler (e.g. Albuterol)
4. Steroids - (e.g. Prednisone, Prednisolone)
5. Other medications (Please specify) _____
6. None of the above

END OF SECTION WHICH REPEATS FOR ALL CURRENT ALLERGIES

QC11_n.

Does your child have a current prescription for an epinephrine auto-injector (e.g. EpiPen®, Auvi-Q®, Adrenaclick®/Generic) for [his/her] food [allergy/allergies]?

1. Yes
2. No

OUTGROWN FOOD ALLERGIES

QCO1_n.
Has your child ever "outgrown" any food allergies? (i.e. Has your child ever been allergic to a food that [he/she] can now eat without having an allergic reaction?)

1. Yes
2. No

[IF QCO1_n=1]
QCO2_n.
Which food allergies has your child outgrown?

Do not include foods that your child still cannot eat due to a current allergy.

Please indicate for each food whether your child has outgrown the allergy or not.

1. [QCC1_1>1]Peanut
2. Tree nuts such as almond, cashew, hazelnut, pecan, pistachio and walnut
3. [QCC1_3>1]Cow's milk
4. [QCC1_4>1]Egg
5. Shellfish such as shrimp, crab, lobster, clam, oyster, mussels or scallop
6. Fin fish or fish product such as anchovies, catfish, cod, halibut, salmon, tuna, or fish sauce
7. [QCC1_7>1]Soy
8. [QCC1_8>1]Wheat
9. [QCC1_9>1]Sesame
10. [QCC1_10>1]Coconut
11. [QCC1_11>1]Avocado
12. Fruit or berry
13. [QCC1_13>1]Green peas
14. [QCC1_14>1]Lentils
15. [QCC1_15>1]Meat (Please specify if known_____)
16. [QCC1_16>1]Spices (Please specify if known_____)
17. [QCC1_17>1]Vegetables (Please specify if known_____)
18. [QCC1_18>1]Other allergy or additional details about reported allergy (Please describe)
19. [QCC1_19>1]Other allergy or additional details about reported allergy (Please describe)
20. [QCC1_20>1]Other allergy or additional details about reported allergy (Please describe)
21. [QCC1_21>1]Other allergy or additional details about reported allergy (Please describe)
22. [QCC1_22>1]Other allergy or additional details about reported allergy (Please describe)

Response options
1. Yes
2. No

[If QCO2_4_n=1]
QCO2c_n.
When your child were allergic to egg, were they able to eat baked foods containing egg? (e.g. home- made or store-bought muffins, cakes or other egg-products baked for at least 25 minutes at 350° or greater).

1. Yes
2. No

START OF SECTION WHICH REPEATS FOR OUTGROWN ALLERGIES

QCO3_n_x.
How old was your child when [he/she] had [his/her] first reaction to [Outgrown Allergy X]?

If child was less than 1 year of age please enter 0.

_____Years

[if QCP3_n_x=0].
QCO4_n_x.
How old (in months) was your child when [he/she] had [his/her] first reaction to [Outgrown Allergy X]?

If you are unsure, please provide your best guess.

_____Months

QCO5_n_x.
Did a doctor diagnose your child's [Outgrown Allergy X] allergy?

1. Yes
2. No
3. I don't remember

[IF QCO5_n_x=1]
QCO6_n_x.
How old was your child you when a doctor first diagnosed [his/her] [Outgrown Allergy X]

allergy? If you are unsure, please provide your best guess. If child was less than 1 year of age

please enter 0.

_____Years

[IF QCO6_n_x-0]
QCO7_n_x.
How old (in months) was your child when a doctor first diagnosed [his/her] [Outgrown Allergy X] allergy?

If you are unsure, please provide your best guess.

_____Months

[IF QCO5_n_x=1]
QCO8_n_x.
Was any testing done to confirm your child's [Outgrown Allergy X] allergy diagnosis? If so, please specify.

Please select all that apply.

a. No testing was conducted
b. Skin prick or scratch test for [Outgrown Allergy X] allergy
c. Blood test for [Outgrown Allergy X] allergy (e.g. RAST, ImmunoCAP)
d. Oral food challenge to [Outgrown Allergy X] (i.e. ate [Outgrown Allergy X]under medical supervision)
e. Alternative test for [Outgrown Allergy X] allergy (e.g. NAET) (Please specify if possible_____)
f. I don't remember

QCO9_n_x.
How old was your child when [he/she] first outgrew [his/her] [Outgrown Allergy X] allergy? (i.e. realized [he/she] could eat [Outgrown Allergy X]without having a reaction after becoming allergic)

If you are unsure, please provide your best guess. If your child was less than 1 year of age please enter 0.

_____Years

[IF QCO9_n_x=0]
QCO10_n_x.
How old (in months) was your child [he/she] first outgrew [his/her] allergy? (i.e. realized [he/she] could eat [Outgrown Allergy X] without having a reaction after becoming allergic)

If you are unsure, please provide your best guess.

_____Months

QCO14_n_x.

Think back to the most severe allergic reaction to [Outgrown Allergy X] that your child has ever had. What were [his/her] symptoms?

Please select all that apply. Skin

symptoms:

1. Hives
2. Itching
3. Rash
4. Swelling (except lip/tongue swelling—please mark lip/tongue swelling under "Mouth/Throat Symptoms")
5. Other: _____

Mouth/Throat Symptoms

6. Lip/tongue swelling
7. Difficulty swallowing
8. Hoarse voice
9. Itchy mouth
10. Throat tightening
11. Mouth or throat tingling
12. Other: _____

Breathing Symptoms

13. Chest tightening
14. Nasal congestion
15. Repetitive cough
16. Trouble breathing
17. Wheezing
18. Other: _____

Gastrointestinal (GI) Symptoms

19. Belly pain
20. Cramps
21. Diarrhea
22. Nausea
23. Vomiting
24. Other: _____

Cardiovascular/Heart Symptoms

25. Chest pain
26. Rapid heart rate
27. Fainting, dizziness, or feeling light headed
28. Low blood pressure
29. Other: _____

Other Symptoms

30. Anxiety
31. Feeling of impending doom
32. Headache
33. Other: _____

34. Other reaction: _____

END OF SECTION WHICH REPEATS FOR OUTGROWN ALLERGIES

QC13_n.
In the past 12 months how many times has your child visited a hospital emergency room for [his/her] food [allergy/allergies]?

_____Times

QC14_n.
In your child's lifetime how many times has [he/she] visited a hospital emergency room for [his/her] food [allergy/allergies]?

_____Times

FOOD ALLERGY INDEPENDENT MEASURE—Parent Form

The following four questions are about the chance of something happening to your child because of [his/her] food allergy. Choose one of the answers provided. This is followed by three more questions about your child's food allergy.

How great do you think the chance is that your child…

CEO1_n. Will accidentally eat something to which [he/she] is allergic?
CEO2_n. Will have a severe reaction if [he/she] accidentally eats something to which [he/she] is allergic?
CEO3_n. Will die if [he/she] accidentally eats something to which [he/she] is allergic?
CEO4_n. **Cannot** do the right things for [his/her] allergic reaction (or have the right things done by others) should [he/she] accidentally eat something to which [he/she] is allergic?

0	1	2	3	4	5	7
never (0% chance)	very small chance	small chance	fair chance	big chance	very big chance	always (100% chance)

CIM1_n.
How many products must your child avoid because of [his/her] food allergy?

1. Almost none
2. Very few
3. A few
4. Some
5. Many
6. Very many
7. Almost all

CIM2_n.
Everyone does things with other people, such as: playing with friends, going to a birthday party, visiting, staying over with someone for a meal or eating out.

How much does your child's food allergy affect the things [he/she] does with others?

1. So little we don't actually notice it
2. Very little
3. Little
4. Moderately
5. A good deal
6. A great deal
7. A very great deal