### 2020 DIETARY GUIDELINES ADVISORY COMMITTEE

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PUBLIC MEETING

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FRIDAY
MARCH 29, 2019
DAY 2 OF 2

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The Advisory Group met in the Jefferson Auditorium at the headquarters of the U.S. Department of Agriculture, 1400 Independence Avenue, Washington, DC, at 8:30 a.m., Barbara Schneeman, Chair, presiding. The meeting allowed for public viewing, both in-person and by Web.

PRESENT

BARBARA SCHNEEMAN, PhD, Chair
RONALD KLEINMAN, MD, Vice Chair
JAMY ARD, MD
REGAN BAILEY, PhD, MPH, RD
LYDIA BAZZANO, MD, PhD
CAROL BOUSHEY, PhD, MPH, RDN
TERESA DAVIS, PhD
KATHRYN DEWEY, PhD
STEVEN HEYMSFIELD, MD
HEATHER LEIDY, PhD
RICHARD MATTES, PhD, MPH, RD
ELIZABETH MAYER-DAVIS, PhD, RD
NOVOTNY, PhD, RDN, LD
JOAN SABATÉ, MD, DrPH
LINDA SNETSELAAR, PhD, RD
JAMIE STANG, PhD, MPH, RDN

ELSIE TAVERAS, MD, MPH

LINDA VAN HORN, PhD, RDN, LD

ALSO PRESENT


JACKIE HAVEN, MS, RD, USDA

COLETTE RIHANE, MS, RD, USDA

EVE STOODY, PhD, USDA, Designated Federal Officer

RICHARD OLSON, MD, HHS

JANET de JESUS, MS, RD, HHS

JULIE OBBAGY, PhD, RD, USDA

TUSAREBECCA PANNUCCI, PhD, MPH, RD, USDA

DAVID KLURFELD, PhD, USDA, Co-Executive Secretary

ERIC DECKER, PhD, University of Massachusetts,

     Amherst

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1          P-R-O-C-E-E-D-I-N-G-S

2                                    (8:34 a.m.)

3                    DR. STOODY:  Good morning.  My name is

4     Eve Stoody and I'm the designated federal officer

5     to the 2020 Dietary Guidelines Advisory Committee

6     and also lead nutritionist for Nutrition Guidance

7     at USDA's Center for Nutrition Policy and

8     Promotion.

9                    Thank you again for your interest in

10    the Dietary Guidelines for Americans.  We want to

11    welcome you to Day 2 of the first meeting of the

12    2020 Dietary Guidelines Advisory Committee.

13                    And just to start off, similar to

14    yesterday, if you weren't here yesterday, for

15    those of you here in person, you have a badge and

16    if you'll just keep that badge on.  In order to

17    go through the halls of this building, you need

18    to have either that sticker or a formal USDA

19    badge.  So please just hang on to that so

20    security knows that you're a part of this group.

21                    Also, there are badges that have a

22    blue dot to indicate staff.  And if you need

1   anything at any time throughout the day, please

2   feel free to ask somebody with the blue dot and

3   they will be sure to help you for find someone

4   who can.

5           And if you're looking for

6   refreshments, the cafeteria is down Wing 3.

7           So for this morning's agenda, we're

8   going to begin by having Janet de Jesus join us

9   to talk about the topics and scientific questions

10   to be examined by the committee. Then, Dr.

11   TusaRebecca Pannucci will discuss the state of

12   the current American diet. And we are pleased to

13   have a guest speaker join us today, Dr. Eric

14   Decker, who will talk about Implementing Guidance

15   in the Real World - A Food Science Perspective.

16           We will also have today a fair amount

17   of time for committee discussion. That will be

18   around the topics and questions, about the

19   subcommittee organization, and also talk about

20   steps for moving ahead and what will occur after

21   this public meeting.

22           The agenda for this meeting is

1    available at dietaryguidelines.gov.  We will also

2    post the recording of this meeting, as well as

3    the slides from this meeting after the meeting.

4    And we will send out a listerv notification when

5    those materials are posted.

6              For the record, 18 of our 20 members

7    are here with us today.  Dr. Taveras is able to

8    join us today and we are happy to have her here.

9    We welcome her to the meeting and to the

10   committee.

11             Drs. Donovan and Naimi were not able

12   to be here today but they are going to tune in as

13   they are able.

14             Please note that this is a meeting of

15   the committee that is open to the public.  If any

16   member of the public would like to submit

17   comments to the committee, you are welcome to do

18   so at any time.  The written comment public

19   period is now open and you can access it at

20   dietaryguidelines.gov.  And there will be the

21   opportunity for oral comments to the committee at

22   two public meetings, the first opportunity at our

1  July meeting, which we will talk about a little

2  more at the end of the day.

3          Now just as we begin today, if we can

4  ask the committee members if you have questions

5  or discussion during the deliberations today, if

6  you will, identify your name.  We are still

7  learning voices and that will help everyone to

8  follow along in the process.

9          Our first speaker today is Janet de

10 Jesus, Nutrition Advisor at the HHS Office of

11 Disease Prevention and Health Promotion or ODPHP.

12 In addition to working on the development of the

13 Dietary Guidelines, she participates in other

14 cross-cutting nutrition activities across the

15 federal government.

16         She joined ODPHP from the National

17 Heart, Lung, and Blood Institute at the National

18 Institutes of Health, where she participated in

19 systematic evidence reviews in the development of

20 clinical practice guidelines for the prevention

21 and treatment of cardiovascular risk factors

22 across the life span.

1           She will walk through discussion today

2    of the topics and supporting scientific questions

3    that are the departments are asking the committee

4    to examine.

5           Please join me in welcoming Janet de

6    Jesus.

7           MS. DE JESUS:  Good morning.  It is my

8    pleasure to be here at this distinguished

9    committee.  So as Eve mentioned, I am going to

10   walk through the process for the topic in

11   question identification.  So this is a new step

12   in the process for the 2025 Dietary Guidelines

13   for Americans that the department has decided on.

14   So we added this step, really, to be more

15   transparent and deliberate in this process.

16          So we first proposed topics and

17   questions, and posted them online for public

18   comment, and then they were refined with agency

19   input.

20          Okay, some of you may have heard, as

21   you can imagine, the topics and questions that we

22   can examine is immense.  So we applied criteria

1    to narrow it down to decide on which topics and

2    questions to cover and the criteria is listed on

3    the slide.

4            So federal nutritionists, including

5    scientists from USDA, and HHS, and across the

6    federal government form the initial list of the

7    topics and questions, based on the needs of

8    federal nutrition programs and initiatives.

9            So next, the departments, USDA and

10   HHS, posted the topics and scientific questions

11   for public comment.  So this was February 28th

12   through March 30th that the public comment period

13   was open.  We received 12,000 comments.  At the

14   same time, federal agencies provided input on

15   this initial list.

16           So I am going to review the criteria

17   that was also put out when we released the draft

18   topics and questions.  So the first was

19   relevance.  We wanted to make sure that the

20   topics and questions really fit within the scope

21   of the Dietary Guidelines.  The focus of the

22   Dietary Guidelines is food-based recommendations.

1      So an example of a topic that doesn't fit within

2      this scope is clinical guidelines, so clinical

3      treatment, such as diabetes, that is covered by

4      our other agencies at NIH and CDC.  So it is not

5      -- the purpose is not for treatment of specific

6      diseases and conditions but more prevention.

7              So the topics were also reviewed for

8      importance.  Topics should have new relevant data

9      that represent an area of substantial public

10     health concern or a knowledge gap.

11             Potential federal impact was another

12     important factor.  So we looked at the

13     probability that the guidance would be used to

14     inform federal food and nutrition policies and

15     programs.

16             And finally, the last criteria.  We

17     wanted to make sure that there wasn't duplication

18     and covered by another government program.  So

19     for example, as I mentioned, disease treatment is

20     well covered by our colleagues at NIH, CDC.  Food

21     safety is another example that USDA, CDC, and FDA

22     cover and provide guidance on for the public.

1          So following this review, we posted

2     the final topics and questions online.  So the

3     main topics were similar.  They just reflected

4     the priorities and I will summarize these topics

5     today.

6          At the same time we released the

7     topics and questions, we also put a call out for

8     nominations for the committee.  So this new step

9     in establishing topics and questions we hope that

10    would drive the expertise of the committee when

11    they were nominated.

12         Okay, so this is just the summary

13    slide and I will really get into the details.

14         So as I mentioned, following all the

15    review, we refined the topics and these are the

16    major -- the main topics.  So the main difference

17    in the initial list and the revised final list is

18    that we expanded the topics across the life

19    stage, not just for specific stages.

20         We took into consideration the

21    comments that we received and the four criteria

22    that I outlined.  And we also expanded some of

1       the outcomes that we received -- that we received

2       comments on.  So some of those are under

3       cognitive health and gestational weight gain.  We

4       also expanded the questions on dietary fats,

5       added sugars, frequency of eating, and alcoholic

6       beverages.

7                   Okay.  So for full transparency, all

8       of the lists are available on

9       dietaryguidelines.gov.  The original list that we

10      posted is still available there and we have two

11      lists that you can see.

12                  So the first list is List A.  So this

13      is organized by life stage.  So this follows the

14      format that we originally posted in February.  It

15      makes it easy to see what has changed.  So you

16      can see that topics continue to reflect an

17      overall view of what we eat and drink to prevent

18      disease and keep people healthy.

19                  So List B is actually what we're

20      asking the committee to work from.  It's a more

21      streamlined version.  It was reorganized to

22      reduce redundancy and better reflect how

1   departments are asking the committee to review

2   the evidence.

3            It is not totally organized by life

4   stage but we ask the committee, as much as

5   possible, if the evidence is available, to speak

6   to life stage in your report.

7            So today I will be discussing the

8   streamlined version: List B.

9            Okay, so the first topic is reviewing

10  the current dietary intake and nutrients of

11  public health concern.

12           So for each stage of life, the

13  following will be described -- we are asking that

14  the following be described and evaluated:

15  current dietary patterns in beverage consumption;

16  current intake of food groups and nutrients;

17  nutrients of public health concern; and the

18  prevalence of nutrition-related health chronic

19  disease.  So this is where the Data Analysis

20  Crosscutting Subcommittee will come in.

21           So with this data, how does dietary

22  intake, particularly dietary patterns, track

1  across the life stages from introduction of foods

2  into childhood and through adulthood.

3  So our big crosscutting question.

4  Dietary patterns, looking at the relationship

5  between dietary patterns, such as: Dietary

6  Guidelines-related patterns; Mediterranean-style;

7  Dietary Approaches to Stop Hypertension (DASH);

8  vegetarian/vegan; low carb; high fat are consumed

9  at each life stage.  So these are just examples.

10  And looking at the following outcomes,

11  as you can see, we have a long list of outcomes

12  here.  Looking at growth, body composition, risk

13  of overweight and obesity, risk of cardiovascular

14  disease, Type 2 diabetes, cancer, looking at bone

15  health outcomes, neurocognitive health,

16  sarcopenia specific for older adults, and all-

17  cause mortality.

18  So in addition to this, this is a very

19  broad question, we are asking that the dietary

20  pattern questions consider quantities,

21  proportions, varieties, and combinations of foods

22  and nutrients when examining these relationships.

1    So studies that examine a specific food group but

2    control for other aspects of the dietary pattern

3    will also be considered.

4         Okay, so this is a specific dietary

5    pattern question for pregnancy and lactation

6    populations.  So looking at the relationship of

7    dietary patterns consumed during pregnancy and

8    the risk of gestational diabetes, hypertension

9    disorders, gestational age at birth, so that's

10   for the infant, birthweight, and standardized

11   gestational age and sex, looking at weight gain

12   during pregnancy and micronutrient status of the

13   mother.

14        Also what is the relationship between

15   dietary patterns consumed during lactation, human

16   milk composition and quantity, infant development

17   milestones, including neurocognitive development,

18   and postpartum weight loss.

19        Okay, continuing on with dietary

20   patterns, we really want to examine other changes

21   needed to the USDA dietary patterns based on the

22   relationships identified.  If nutrients are not

1    met in these patterns, is there evidence to

2    support supplementation or consumption of

3    fortified foods to meet nutrition adequacy?

4            And this is where food pattern

5    modeling comes in.  So as you can see, we are

6    utilizing all of our evidence review methods, so

7    our systematic review, our data analysis, and our

8    food pattern modeling.

9            Okay, moving on to beverages, as you

10   know we consume a variety of beverages, so it's

11   really important to look at the health impact of

12   the beverages that we consume.

13           So the first question:  the

14   relationship between beverage consumption such as

15   -- and these are just examples -- cow's milk,

16   milk alternatives, water, fruit juice, sugar-

17   sweetened beverages, beverages with high-

18   intensity sweeteners, caffeinated beverages, and

19   alcohol during relevant stages of life.

20           And the outcomes are:  achieving

21   nutrient and food group recommendations, growth,

22   body size and composition, risk of overweight and

1    obesity.  And for alcohol only, we are interested

2    in the types of cancer, risk of cardiovascular

3    mortality, neurocognitive health, and all-cause

4    mortality.

5             So continuing on with beverages

6    specific for pregnancy and lactation:  What is

7    the relationship between beverage consumption

8    during pregnancy and achieving nutrient food

9    group recommendations, gestational weight gain,

10   birth weight standardized for gestational age and

11   sex?

12            During lactation, achieving nutrient

13   and food group recommendations.  Again, as you

14   can hear, these are repetitive across the

15   questions and some of the outcomes:  human milk

16   composition and quantity, postpartum weight loss.

17   And for alcohol only, infant development

18   milestones and neurocognitive development.

19            Okay, so getting into more specifics

20   in the dietary pattern.  Take a look at added

21   sugar consumption at each stage of life and

22   achieving nutrient and food group

1     recommendations, growth, body size, risk of

2     overweight and obesity, risk of cardiovascular

3     disease and Type 2 diabetes.

4               Okay, types of dietary fats:  What is

5     the relationship between types of dietary fats

6     (such as saturated fat; omega-3, omega-6

7     polyunsaturated, and monounsaturated) consumed at

8     each stage of life.  And we are asking you to

9     examine the source, amount, and replacement of

10    dietary fat.

11              Looking at neurocognitive development,

12    birth through 18 years old:  neurocognitive

13    health for adults, risk of cardiovascular

14    disease, certain types of cancer, and all-cause

15    mortality.

16              Moving on to seafood:  examining the

17    relationship between seafood consumption during

18    pregnancy and lactation and neurocognitive

19    development of the infant, examining the

20    relationship between seafood consumption during

21    childhood and adolescent (up to 18 years old),

22    and neurocognitive development; and risk of

1    cardiovascular disease.

2              And moving on to a behavioral

3    question:  examining the relationship between

4    frequency of eating (such as meals per day,

5    snacking, fasting) at each stage of life.

6              And looking at the outcomes of

7    achieving nutrient and food group

8    recommendations:  growth, body size, risk of

9    overweight and obesity, risk of cardiovascular

10   disease, Type 2 diabetes, and all-cause

11   mortality.

12             So given the emphasis on infants and

13   toddlers, we have some very specific questions,

14   since this is the first time we are examining

15   this population.  So for infants and toddlers --

16   really looking at healthy, full-term infants, we

17   have the following topics and questions.

18             So the first topic is recommendation

19   of duration of exclusive human milk and/or infant

20   formula feeding.  And the specific question is

21   looking at the relationship between the duration

22   of exclusive human milk or infant formula

1  consumption and growth, and body size

2  composition, food allergies and atopic allergic

3  diseases, longer term health outcomes,

4  micronutrient status, and development milestones,

5  including neurocognitive development.

6  Additionally, the frequency and volume

7  of human milk and/or infant formula feeding and

8  the relationship between frequency and volume of

9  the consumption and micronutrient status, growth

10  size, body composition.

11  And finally, a look at supplements.

12  So the relationship between specific nutrients

13  from supplements and/or fortified foods consumed

14  during infancy and toddlerhood and the nutrient

15  status, growth, composition, body composition,

16  and bone health.

17  Okay, continuing on with infants and

18  toddlers, looking at the relationship of

19  complementary feeding and the timing of

20  introduction, types, and amounts, and

21  micronutrient status, growth and body size,

22  developmental milestones, food allergy, and

1  atopic diseases, and bone health.

2  So we have a very -- we have a

3  definition of complementary feeding because we

4  received a lot of questions.  So complementary

5  feeding is defined here as when the infant starts

6  adding foods during the feeding period,

7  transitioning from like about six months or five,

8  transitioning from sole infant formula or breast

9  milk to complementary foods, all the way through

10  24 months.  So it's not just that first year but

11  it continues through 24 months any of the diet.

12  And dietary patterns will also be examined in

13  this complementary foods and beverages period.

14  So can the USDA food patterns be

15  established based on the relationships

16  identified?  As we discussed yesterday, there are

17  no patterns for this age group.  And if so, how

18  well do these food patterns variations meet

19  nutrient recommendations for infants and

20  toddlers?  So, you are really starting from the

21  beginning with these dietary patterns.

22  Okay, some specific questions for

1  pregnancy and lactation.  The first one on

2  dietary supplements, examining the relationship

3  between specific nutrients from supplements

4  and/or fortified foods consumed during pregnancy

5  and lactation, and micronutrient status, risk of

6  gestational diabetes, and hypertensive disorders,

7  human milk composition and quantity, and

8  developmental milestones, including

9  neurocognitive development for the infant.

10  Additionally, looking at maternal diet

11  during pregnancy and lactation and the risk of

12  infant and childhood food allergies and atopic

13  diseases.

14  Okay, so as I mentioned before with

15  the criteria of duplication, there are a lot of

16  topics that are addressed across the federal

17  government that aren't addressed here but we just

18  wanted to give some of the examples that aren't

19  included on the review list that are addressed

20  through other federal guidance.

21  So for example, as I mentioned, USDA,

22  FDA, and CDC regularly update food safety

1    information and disseminate this to consumers and

2    professionals.  Additionally, guidance on health

3    risk of excessive alcohol use, such as binge

4    drinking, is included in programs led by CDC and

5    NIH.

6         Gestational weight gain guidance is

7    provided by recommendations from the National

8    Academies and disseminated by federal agencies.

9         And as you may know, the 2018 Physical

10   Activity Guidelines were recently released by

11   HHS.  So physical activity is well covered by the

12   federal government.

13         And finally, Dietary Reference Intake,

14   such as the recently released sodium-potassium

15   DRI.

16         So the entire process for topic and

17   question identification is available online at

18   dietaryguidelines.gov.  So you will find the

19   process that we used to establish this, the

20   initial list, and the final list, and you can

21   keep up with the progress of the committee.

22         So the next step on the topics and

1  questions is for the committee to work with the

2  evidence, the NESR Team, and the Data Analysis

3  and Food Pattern Modeling Team, and specifically

4  to refine the protocols.  So they will giving you

5  a draft protocol, and you can really help refine

6  that, and make sure that it is asking exactly all

7  of the right questions, inclusion criteria,

8  outcomes, et cetera.  So we really look forward

9  to working with you on that process.

10  So I'm happy to take some questions,

11  if you have any.  And just to add that this

12  afternoon there is going to be opportunity for

13  discussion (broader) on the topics and questions

14  that Dr. Schneeman is going to lead.

15  CHAIR SCHNEEMAN:  Among the committee

16  members, if you have questions, just remember to

17  say your name before.  This is Barbara Schneeman.

18  Just remember to say your name.

19  MEMBER MAYER-DAVIS:  This is Beth

20  Mayer-Davis.

21  So if in the process of doing the work

22  over this next year, if a new question arises,

1       something new comes out in the literature, or for

2       whatever reason another questions arises, I'm

3       assuming that we can discuss that and include

4       that.  Is that the case?

5                    MS. DE JESUS:  As far as the evidence

6       review process, we ask that the committee really

7       focus on the topics and questions that are

8       provided.

9                    I mean if you have suggestions in the

10      protocols to really help make those better, that

11      is perfectly appropriate.  But if it is really

12      like outside the scope, I mean you are welcome to

13      discuss any of these topics in the scientific

14      report; there just won't be like the scientific

15      evidence review behind that because we have a

16      very large scope.  So we really had to limit with

17      the time that you have.

18                   CHAIR SCHNEEMAN:  This is Barbara.  I

19      think it will be important, though, to capture

20      those if, in the process of the review, you

21      identify a significant issue that needs to be

22      addressed.  That's something where in the report

1      we can make sure the Secretaries are aware of

2      that.

3              So don't lose of track of them.

4              MS. DE JESUS:  Absolutely.  Yes, if

5      we're missing something, like please.  It can be

6      noted.

7              MEMBER HEYMSFIELD:  Steve Heymsfield.

8      Maybe I'm just thinking out loud and I'm really

9      seeing some of this for the first time but it

10     seems to me that there's a grid.  There's the

11     life stages and then there are these different

12     questions.

13             And I guess as someone who writes a

14     lot, I'm trying to think of how you integrate all

15     this information because our tasks are fairly

16     focused, right, for each of our topic areas.  It

17     must be a real challenge to put all this

18     together.  Am I right?

19             MS. DE JESUS:  Yes.  So that's, as we

20     discussed yesterday, really how to put it all

21     together in your scientific report and that will

22     really take some crosscutting work with the

1     committee to decide how best to present this

2     across the life span within the topics.

3                So it's a good point. Thank you.

4                MEMBER ARD: Jamy Ard.

5                So the life stages that have been laid

6     out, if I understand correctly, are birth to 24,

7     2 to 18, 19 to 64, and then 65 and over. Is that

8     correct?

9                MS. DE JESUS: Yes.

10               MEMBER ARD: So in my way of thinking,

11     some of those life stages have very different

12     groups within them. So do we, as a committee,

13     have the liberty, or the luxury, or the challenge

14     of sort of refining some of how we think about

15     those life stages? A menopausal woman or a

16     perimenopausal woman will be very different than

17     a 25- to 35-year-old woman in reproductive years.

18                So what is our guidance there?

19               MS. DE JESUS: Right, as the

20     committee, based on evidence, I mean you are

21     welcome to provide more information on subgroups,

22     so different populations, different age groups.

1          So if you really have evidence on a

2     specific age group in the lifespan, you are

3     welcome to.  We just gave like broad age groups.

4          So as you know, the DRIs are really

5     cut up into much smaller age groups as well.  So

6     definitely, we would love to hear if there is

7     information on that.

8          Thank you.  That's a good point.

9          MEMBER MAYER-DAVIS:  It's Beth Mayer-

10     Davis again.

11          So thinking about subgroups, something

12     that has been on my mind just over the last day

13     or so is issues around health equity and thinking

14     particularly about vulnerable populations and you

15     can think about that in any number of ways.  So

16     is that an example of the kinds of subgroups that

17     we might pay attention to within each of the

18     various topics and questions?  Is that an

19     expectation or, from my perspective, a hope?

20          MS. DE JESUS:  Yes, so within these

21     questions if there are outcomes in that

22     subpopulation, like absolutely report on that.

1                    Thank you.

2                    MEMBER STANG:  Jamie Stang.

3                    I have a question about the timing of

4      the overall modeling and data analysis compared

5      to the other reviews because it seems like you

6      almost need those reviews to inform some of what

7      is going to go on with the modeling and the data

8      analysis.  Is that correct or are they going on

9      simultaneously?

10                   MS. DE JESUS:  So the data analysis

11     has already begun, as TusaRebecca presented

12     yesterday and she is going to present some today.

13     So you will have a lot of the data analysis up

14     front.

15                   The food pattern modeling is actually

16     informed by the committee.  So it's kind of

17     driven by the evidence.  So what is the evidence

18     telling us?  You know what do we want to model

19     utilizing the existing food patterns that we

20     have?

21                   So it's really a crosscutting.  So

22     data analysis and food pattern modelings

1    definitely are crosscutting across all of the

2    subcommittees.

3              Great.  Terrific.  Thank you very

4    much.

5              Okay.  So now I'm going to introduce

6    our next speaker, Dr. TusaRebecca Pannucci, who

7    joined the Center for Nutrition Policy and

8    Promotion in 2015 as the lead nutritionist for

9    Nutrition Economic Analysis Team, she led a

10   multidisciplinary team conducting analysis for

11   the USDA food patterns, Healthy Eating Index, the

12   USDA food plans, and expenditures on children by

13   families.  She will be supporting the work of the

14   2020 Advisory Committee and the Working Group on

15   Data Analysis and Food Pattern Modeling, which

16   she will be discussing today.

17             So join me in welcoming Dr. Pannucci.

18             DR. PANNUCCI:  Good morning.  So it is

19   my pleasure to talk to you today about a

20   selection of analyses that describe the current

21   dietary intakes in America.

22             The 2015-2020 Dietary Guidelines,

1       which included recommendations for ages 2-plus,

2       will be used as a metric for which I am going to

3       compare some data about dietary intakes today.

4       So of course, moving forward, we will be

5       discussing the birth to 24 population but today,

6       my focus will be on the population that was

7       relevant for the 2015-2020 Dietary Guidelines,

8       ages 2-plus.

9               Yesterday I emphasized the interagency

10      collaborations that make this data analysis

11      possible.  So again, I will mention that federal

12      scientists at the USDA Center for Nutrition

13      Policy and Promotion, the Center for Disease

14      Control and Prevention, Ag Research Service, and

15      the National Cancer Institute are all important

16      players in the data collection, data nutrient

17      analysis, the supporting data bases that we use

18      that make it possible to do this analysis, the

19      development of analytic methods, and of course

20      the data analysis that I am going to share today.

21              So today I am going to be going over

22      some of the methods for dietary data collection,

1    which we went over yesterday but I will remind

2    everybody again today, the levels or tiers of

3    dietary intake data that we can examine.  Then, I

4    will share where we are with overall diet quality

5    using the Healthy Eating Index or HEI.  I'm going

6    to discuss data based on food group intakes,

7    distribution of food group intakes, and food

8    category sources of calories and food groups.

9              So by the end, I hope that we will

10   paint a picture of the understanding of where

11   Americans stand compared to the 2015-2020 Dietary

12   Guidelines for Americans food group

13   recommendations.

14             The data I'm sharing come from the

15   National Health and Examination -- National

16   Health and Nutrition Examination Survey, which is

17   supported by the National Center for Health

18   Statistics of the Centers for Disease Control and

19   Prevention.  The goal of NHANES is to provide

20   U.S. population-based estimates for health

21   conditions, awareness of treatment and control of

22   selected diseases, environmental exposures, and

1      today, we will be discussing nutrition status and

2      especially dietary behaviors.

3                  Also, a reminder that NHANES uses a

4      complex sampling design and constructs sample

5      weights that are used in the analyses that I am

6      presenting today that make it nationally

7      representative.  A reminder, again, that this is

8      looking at civilian non-institutionalized

9      individuals in our population and that there are

10     oversampled groups that help us with better

11     estimates for some of these subgroups that some

12     of you keep mentioning.

13                 So remember that NHANES data

14     collection is unique because it includes

15     interviews as well as physical exams that,

16     together, provide a host of information about our

17     population.  The demographic data and the dietary

18     data can be combined so that we can look at some

19     of those subgroups.

20                 So today's presentation, again,

21     focuses on the dietary data.  So let's quickly

22     review again the data collection methods.

1             The dietary portion of NHANES, the

2 What We Eat in America portion, is the interview

3 administered 24-hour dietary recall developed by

4 the USDA called the Automated Multiple-Pass

5 Method or AMPM. As a reminder, again, this

6 includes a quick list where participants are

7 asked to recall everything that they ate and

8 drank in the previous 24 hours. The forgotten

9 foods list includes an opportunity for them to

10 review the quick list and add anything they might

11 have forgotten, using standardized lists of nine

12 food categories that probe their memory.

13             Then, they are asked to apply a time

14 and day -- a time of day to each eating occasion

15 and name that eating occasion. That might also

16 prompt memories of other things that they

17 consumed throughout the day.

18             During the detail cycle, they report

19 the portion sizes consumed, any additions to the

20 foods that they consumed, and it provides another

21 opportunity for review and any omitted foods to

22 be added.

1          Finally, the trained interviewer goes

2     through the final probe asking for anything else

3     consumed, even in small amounts throughout the

4     day.  This is designed to help participants

5     recall their diet in great detail.

6          What We Eat in America, again, is

7     supported by these databases that make the

8     analysis I am going to share today possible.  The

9     Food and Nutrient Database for Dietary Studies or

10    FNDDS provides the nutrient values for about

11    9,000 foods and beverages, including energy and

12    64 nutrients.

13         The FPED or Food Patterns Equivalents

14    Database takes those foods in FNDDS and

15    disaggregates them into their food group

16    components, things like cup equivalents of

17    vegetables, fruits, dairy foods; ounce

18    equivalents of grains, protein foods; and

19    teaspoon equivalents of added sugars.  It is

20    really this database that gives us the unique

21    opportunity to compare food group intakes to the

22    recommendations in the Dietary Guidelines for

1    Americans.

2              Lastly, I am going to be showing some

3    data that utilizes the What We Eat in America

4    Food Categories.  This exists to apply analysis

5    to foods and beverages as consumed in the

6    American diet.  There are about 150 unique food

7    categories and I am going to try to make these

8    databases come to life.

9              We are going to use peanut butter and

10   jelly sandwich as our example.  Classic.  So

11   somebody in NHANES might report a peanut butter

12   and jelly sandwich with regular peanut butter and

13   regular jelly on whole wheat bread.  We are going

14   to say that the sandwich is about 140 grams.

15             I'm just going to present some

16   selected data, not all the information.  But the

17   FNDDS is where we would find out that such a

18   sandwich would have about 402 calories, 14 grams

19   of protein, 8.7 grams of monounsaturated fatty

20   acids, and 304 milligrams of potassium.

21             The FPED database lets us know the

22   foods in our food.  So let us know that that

1   sandwich contributes two-ounce equivalents of

2   nuts and seeds, 12.7 grams of oils, 1.3 ounce

3   equivalents of whole grains, and 3.75 teaspoon

4   equivalents of added sugars.  You can see how

5   these tiers of data are adding to the information

6   that we can look at.

7             And finally, the What We Eat in

8   America Food Category.  This sandwich falls in

9   the mixed dish category under sandwiches,

10  specifically, peanut butter sandwiches.

11            So now that we have an understanding

12  of the type of data we have, the tiers of dietary

13  data that we can look at, let's look to see how

14  we're doing.  We are going to do that by using

15  the Healthy Eating Index.

16            So the Healthy Eating Index is an

17  analytic tool that we use to compare a set of

18  foods to the key recommendations in the Dietary

19  Guidelines for Americans.  It's a unique tool

20  that can be applied to any set of foods but today

21  we specifically are going to be applying this to

22  population-level diets.

1         So the following slides will report

2    the latest version of the HEI, the HEI 2015,

3    which aligns with the Dietary -- the 2015-2020

4    Dietary Guidelines for Americans.

5         HEI scores do not align with the

6    Dietary Guidelines.  The average score in America

7    is 59 out of a total possible 100 points.  This

8    does not mean that 59 percent of Americans are

9    meeting the Dietary Guidelines, a common

10   misperception.  This means that, on average,

11   diets of Americans are not meeting the Dietary

12   Guidelines, a score of 59 out of a possible 100.

13        We can look on the left there, how we

14   changed over time.  There has been a little bit

15   of improvement but things have been fairly static

16   across the past ten years.  We can also look

17   across age groups.  The youngest and oldest age

18   groups shown here, ages 2 to 5 and ages 65 plus,

19   tend to do the best with scores of 61 for the

20   littles and a score of 64 out of 100 for ages 65

21   plus.  Ages 6 to 11 receive a score of 52 out of

22   100, as do the age 12 to 17.

1          So knowing that diet quality in

2     relation to the 2015-2020 Dietary Guidelines is

3     poor, what is contributing to the score?  Why

4     don't we unpack this a little bit with the data

5     that we have available?

6          We'll first start by looking at

7     average food group intakes compared to the

8     recommendations.  So the following data include,

9     again, average food group intakes compared to the

10    Dietary Guidelines recommendations.  These data

11    are published by our colleagues at the USDA Ag

12    Research Service and are already available

13    online.  And then we will be comparing to the

14    USDA U.S. Health Eating Style Food Pattern that

15    was published as part of the 2015-2020 Dietary

16    Guidelines for Americans.

17          In these figures, we're looking at

18    average daily vegetable intake compared to

19    recommended intake.  There is a lot on this slide

20    so I am just going to walk us all through it a

21    little bit here.

22          Along the bottom we have age groups

1  starting with the youngest, 2 to 5, 6 to 11, 12

2  to 19, 20 to 29, 30 to 39, and so on to the far

3  right is 70-plus.  And then the blue bars show

4  the range of recommended intakes from the calorie

5  levels that could be assigned to those age groups

6  in cup equivalents of vegetables and the orange

7  dots indicate average intakes for that age group

8  compared to the blue bars.

9        You can see that for all age groups,

10 average daily vegetable intake falls short of the

11 range of recommended intakes.

12       We'll look again for fruit.  The same

13 situation.  The bars represent the cup

14 equivalents and the recommended range of intakes

15 and the orange dots represent average intake.

16       You can see that across all age

17 groups, except for ages 2 to 5 -- so sorry.  Ages

18 2 to 5 falls within the recommended intakes.  And

19 then beyond that, intakes hover just under one

20 cup equivalent, for the most part, per day.

21       Here we show average total grain

22 intake.  So this is showing whole grains as well

1    as refined grains combined, total grain intakes.

2    And we see that for most age groups the intakes

3    fall within the bars for men.  For women, some of

4    the average intakes fall below the bars.

5              Here we have average daily dairy

6    intake.  Remember that dairy includes cow's milk

7    as well as cheese, and yogurt, and calcium-

8    fortified soy beverage.  And we see an

9    interesting pattern here, where as the age groups

10   increase, intakes tend to decrease.

11             For ages 2 to 5, the average intake is

12   just shy of two cup equivalents per day.  For the

13   other age groups, average intakes for men fall

14   between a little over one cup equivalent to

15   around two cup equivalents and for women,

16   starting around age 20 adult women are consuming

17   somewhere around 1.25 cup equivalents a day.

18             Here we see average daily protein

19   foods intake compared to recommended intakes.  So

20   for men we see that, starting with young adult

21   men, ages 20 to 29 and throughout ages 60 to 69,

22   the average intakes are above the recommended

1    intake bars.  For women, they generally fall

2    within the recommended intake bars.

3             All right, so we have seen how average

4    food group intakes compared to the

5    recommendations in the 2015-2020 Guidelines but

6    we might wonder how have they changed over time.

7    Our colleagues, again at Ag Research Service,

8    published a nice piece looking at this comparing

9    food group intakes from 2003-4 to 2015-16.  The

10   reference is shown here.  This work was done by

11   Shanty Bowman and colleagues and published in

12   November of last year.

13            All right, we are going to go through

14   each main food group again.  So let me orient you

15   to this slide and then most of the rest are

16   similar.  Again, we have age groups, a little bit

17   more compact age groups.  Along the bottom, ages

18   2 to 5, 6 to 100, 12 to 19, and then all adults

19   over 20 and the total population there on the far

20   right.

21            In the green on this slide -- there

22   will be other colors on other slides but in the

1  green on this slide to the left bars, those are

2  data from 2003-2004 and in the blue bars, those

3  are data from 2015-2016.  There have been no

4  significant changes in vegetable intake between

5  these two time periods.

6              These came out as almost purple.

7  There have been no significant changes in fruit

8  intakes between 2003-2004 and 2015-2016.

9  Depending on where you are looking, they are

10  either purple or navy blue, representing data

11  from 2003-2004 or kind of the orange color

12  representing data from 2015-16.  Again here we

13  see that intakes hover right around one cup

14  equivalent of total fruit per day.  That includes

15  whole fruit, as well as 100 percent fruit juice.

16              All right, well this next slide is a

17  little bit different.  Before I showed you total

18  grains altogether but here, I am showing a slide

19  that includes whole grains as well as total

20  grains.

21              So we are looking at the intake of

22  whole grains in blue at the bottom of the bars,

1   refined grains in orange, and the two together

2   represent total grain intake by age group, from

3   youngest on the left to oldest adults on the

4   right, and the total population on the far right.

5            The darker bars or the more opaque

6   bars represent data from 2003-2004 and then the

7   more translucent bars represent the data from

8   2015-2016.  For adults, and then that translates

9   to the total population, there has been a

10  significant -- a statistically-significant

11  decrease in total grain intake.  But interesting,

12  there is a statistically-significant increase in

13  whole grain intake across the age groups,

14  although we could see that those blue bars do not

15  represent half of the total bar and the

16  recommendation is that half of grains are whole

17  grains.

18           All right, dairy foods, again, which

19  includes cow's milk, cheese, yogurt, and calcium-

20  fortified soy beverage, we see that for the very

21  youngest children ages 2 to 5, that there was a

22  statistically-significant decrease of total dairy

1    intake but across the other age groups and total

2    population, there is no statistically-significant

3    difference between the two time points.

4           For total protein intakes, adolescents

5    have a statistically-significant reduction in

6    total protein food intake between 2003-2004 and

7    2015-16.  But for the total population and for

8    most age groups, the intakes are almost

9    identical.

10           All right, last little bit tricky

11    slide, this is like the whole grain slide but

12    this one describes the percent of calories from

13    solid fats and added sugars.  There was a

14    substantial and significant decrease between

15    2003-4 and 2015-16.

16           Again, in this slide, added sugars --

17    there's a little bit of color here.  Make sure I

18    have the colors right here.  Added sugars in the

19    blue on the bottom of the bars and solid fats in

20    the green on the top of the bars.  There is a

21    statistically-significant reduction in total

22    percent of calories from these two elements, as

1        well as a statistically-significant reduction in

2        each as an individual component of the diet.

3                    Again, in 2015 there was a

4        quantitative limit of ten percent of calories

5        from added sugars and from saturated fat.  So if

6        we look at added sugars in the blue bars, we

7        still see the intakes, as a percent of calories,

8        exceed that quantitative limit of ten percent,

9        where the intakes here are shown as ranging from

10       12 percent to 15 percent of calories in the diet.

11                   All right so we have looked at average

12       intakes compared to recommendations.  We looked

13       at change over time but what percent of the

14       population is falling short of these

15       recommendations?

16                   Here, we are using food group intake

17       distributions.  This analysis was done by

18       colleagues at the National Cancer Institute and

19       represent two cycles of NHANES data 2013-2016.

20                   For each of the main food groups, in

21       the dark green bars going towards the left of the

22       slide, the percent of the population that falls

1  short of the recommended intake.  On the lime

2  green bars to the right of the slide is the

3  percent of the population that either meets or

4  exceeds those recommended intakes.

5           We see that for total vegetables,

6  about 90 percent of the population falls short of

7  the recommendation.  For fruit, it is about 80

8  percent of the population falls short of the

9  recommendation; for dairy, again, it's close to

10  90 percent of the population; for total grains,

11  41 percent of the population; and for total

12  protein foods, about 40 percent of the population

13  have intakes below the recommended.  And this is

14  -- I should have mentioned this is the

15  recommendations being compared are the food

16  patterns published in the 2015-2020 Dietary

17  Guidelines.

18           All right.  So what are the food

19  sources for these food groups or for energy or

20  calories?  So we are going to look at food

21  category sources of food groups and energy.

22           So the next series of figures

1  illustrate where, as these food categories --

2  remember the peanut butter sandwich example --

3  Americans are getting energy, calories, and then

4  vegetables.  These data were also produced by

5  colleagues at the National Cancer Institute.

6  I will remind you about the What We

7  Eat Food Categories that are developed by our

8  colleagues at Ag Research Service.  So the main

9  categories are shown on the left, things like

10  milk and dairy as a category, as opposed to a

11  food group.  We need to keep those different.

12  But we will unpack mixed dishes because people

13  often wonder gosh, what is in mixed dishes.

14  So then there are subcategories,

15  including meat, poultry, and seafood-mixed

16  dishes, grain-based mixed dishes, Asian and

17  Mexican mixed dishes, pizza, sandwiches, and

18  soups.  Within sandwiches, we can drill down even

19  more to burgers and frankfurter sandwiches,

20  chicken and turkey sandwiches, egg or breakfast

21  sandwiches, other sandwiches, cheese, and then

22  peanut butter and jelly sandwiches.  So a lot of

1   -- again, there are about 150 unique categories.

2              All right, the next slide has a lot to

3   look at so we will take it slow.  So here I am

4   showing the main food category sources of

5   calories or energy.  So how are foods or what

6   foods are contributing to energy intake?  So by

7   combining the FNDDS and What We Eat in America

8   Food Category data sources, we can examine the

9   distribution of energy intake across the major

10  food categories.

11             In this figure we have ages 2-plus, so

12  the total population, and then the age categories

13  ranging from youngest, 2- to 5-year-olds, 6 to

14  11, 12 to 19, 20 to 24, and so on to 71-plus.

15  All right, let's use this pointer to our

16  advantage here.

17             So this color of green on the bottom

18  is mixed dishes.  The lime green is snacks and

19  sweets.  The lighter blue is beverages not

20  including milk or 100 percent fruit juice.  This

21  blue, this lighter blue -- wait a minute --

22  darker blue is the protein foods.  This darker

1   orange is the grains.  The lighter yellow is the

2   vegetables.  And then we have dairy in what

3   appears to be a grayish color here.  Fruits and

4   fruit juices, 100 percent fruit juices, and then

5   condiments.

6           A majority of the calories are being

7   consumed as mixed dishes and this is nice because

8   you can kind of see across the age groups how the

9   distributions shift.  Again, mixed dishes include

10  grain-based mixed dishes or casseroles, where I

11  grew up; Asian and Mexican mixed dishes; pizza,

12  sandwiches, soups, things like that.

13          So mixed dishes, along with snacks and

14  sweets in the lime green, and beverages other

15  than milk and 100 percent fruit juice make up

16  nearly 60 percent of calories for most of the age

17  groups except for the small children.

18          We can look at this with a little more

19  specificity.  So what are the top ten subcategory

20  sources of intake?  A similar slide here but now

21  we're looking at more specific food categories.

22  So in this case, the blue is the burgers and

1    sandwiches.  The orange is desserts and sweet

2    snacks.  This gray is rice, pasta, and other

3    grain-based mixed dishes.  The yellow is sugar-

4    sweetened and diet beverages.  The blue is chips,

5    crackers, and savory snacks.  This little green

6    line here is vegetables, including beans and peas

7    not starchy vegetables.  The purple is pizza,

8    higher fat milks and yogurts, breakfast cereals

9    and bars, and poultry not including deli and

10   mixed dishes.

11          So we can see with a little bit more

12   specificity the food categories that are the top

13   ten sources of contributing to energy in the

14   American diet.  And again, it is nice to see

15   across the age groups how those shift from one

16   age group to the next.

17          So that was looking at energy or

18   calorie sources.  We talked about vegetables and

19   vegetable intakes fall short of the recommended

20   intakes.  But where are Americans getting their

21   vegetables?

22          So we can look at the top ten

1   subcategory sources of vegetables.  Again, these

2   are categories, not food groups.  So vegetables

3   is the food group.  Categories is how the foods

4   are consumed.

5              And again, the age groups across the

6   bottom.  In the green we've got vegetables,

7   basically vegetables on their own; starchy

8   vegetables in orange; burgers and sandwiches,

9   including tacos and burritos in gray -- you can

10  see how that changes from one age group to the

11  next; rice, pasta, and other grain-based mixed

12  dishes; chips, crackers, savory snacks; meat,

13  poultry, seafood mixed dishes; purple is pizza;

14  condiments and gravies in this kind of brown

15  color; and then we have soups and eggs.  So you

16  can see that those are the top ten subcategory

17  sources of vegetables in the American diet.

18             So these are a selection of data.  Of

19  course, there are a lot of data that I described

20  yesterday that are available to examine dietary

21  intakes of Americans.  I chose to focus on food

22  groups that can be compared to the

1    recommendations in the 2015-2020 Dietary

2    Guidelines for Americans.

3            Our common goal is to improve the

4    health of our nation.  That's why we are all

5    here; the staff to support you and you are

6    committed to the work that you are doing.  We

7    know that everything we eat and drink matters.

8    We still fall short of eating according to the

9    Dietary Guidelines.  Circling back to the Healthy

10   Eating Index scores, we see that Americans' diets

11   do not align with the 2015-2020 Dietary

12   Guidelines.  Data also show that moving towards

13   the Dietary Guidelines matters.  There is reduced

14   risk for diet-related chronic disease and major

15   economic benefits.

16           So I hope that this has helped you

17   understand the state of the American diet with

18   this selection of data.  And I am happy to take a

19   few minutes to answer any questions.

20           CHAIR SCHNEEMAN:  Linda, do you want

21   to -- just to remind the committee, say your name

22   and then the question.

1          MEMBER VAN HORN:  Linda Van Horn.

2     Thank you so much.  That is so full of

3     information, I'm sure we could talk all day about

4     this set slides alone.

5          DR. PANNUCCI:  We probably could.

6          MEMBER VAN HORN:  But again, I am

7     struck with how valuable it is to be able to look

8     at the little kids and realizing that those

9     school-aged years are when everything seems to be

10    at their worst.  It is an opportunity I think,

11    especially again with our new category of B-24

12    and going forward to really emphasize the

13    opportunity to initiate those healthier eating

14    patterns starting early on and then preserving

15    those over time.

16          And I'm not sure, as a group, how we

17    can do that but it would just seem to me that if

18    there was a theme or an emphasis or something

19    that we could do about that, it clearly means

20    educating the adults who are caring for those

21    children but pushing that thought further as far

22    as maintaining those healthier eating patterns as

1       they get older.

2                   DR. PANNUCCI:  Thank you.

3                   VICE CHAIR KLEINMAN:  Ron Kleinman.

4       That was a great talk, TusaRebecca.

5                   So in the food composition table,

6       there's 9,000 foods.  Do those include infants?

7                   DR. PANNUCCI:  There is data on baby

8       foods, as well as infant formulas.

9                   VICE CHAIR KLEINMAN:  Great.  And how

10      about human milk?

11                  DR. PANNUCCI:  The data for human milk

12      would have to be imputed.

13                  VICE CHAIR KLEINMAN:  Okay but we can

14      do that?  I mean -- and then the Healthy Eating

15      Index, that doesn't go down, does it, into the

16      birth to 24?

17                  DR. PANNUCCI:  The Health Eating Index

18      applies to the ages 2-plus at this point because

19      it reflects the dietary patterns that were

20      designed for those age groups.

21                  VICE CHAIR KLEINMAN:  Yes.

22                  DR. PANNUCCI:  So the HEI 2015 is

1      based on the key recommendations of the Dietary

2      Guidelines -- or the key recommendations of the

3      2015-2020 Dietary Guidelines and the scoring

4      reflects a density basis of the patterns that are

5      applicable to 2-plus, since B-24 wasn't included

6      in that addition of the guidelines.

7                    VICE CHAIR KLEINMAN:  Yes, so to some

8      degree I guess we may be developing a Healthy

9      Eating Index.  Is that --

10                   DR. PANNUCCI:  So the Healthy Eating

11     Index is developed through a collaboration --

12     CNPP, as well as the National Cancer Institute.

13     And that's something that occurs after the

14     Dietary Guidelines are released.

15                   So traditionally, the HEI has been

16     published about three years after the guidelines

17     are released but work starts right away in that

18     development and evaluation process.

19                   VICE CHAIR KLEINMAN:  Yes, so what we

20     will be doing is influencing that, if we do our

21     work well.

22                   DR. PANNUCCI:  Yes, there was a -- if

1    we -- yes, that is right.  The key

2    recommendations for that birth to 24 population

3    could be translated in something akin to a Health

4    Eating Index for that population.

5              VICE CHAIR KLEINMAN:  All right.  And

6    then this isn't specific to what you've just told

7    us but, as a general question, what are the

8    outcomes that we haven't thought about -- that I

9    haven't seen listed here is bone health.  Is that

10   -- I don't know if this is a question for you or

11   for Eve, or for someone else, but is it in there?

12             DR. PANNUCCI:  It's in the topics.

13   Yes, there are some questions.

14             VICE CHAIR KLEINMAN:  It's there.

15   Great because that is very crosscutting,

16   certainly something we would want to talk about.

17             DR. PANNUCCI:  Yes, and I spoke of

18   food group intakes but, of course, there will be

19   nutrient intakes to examine from food and

20   beverage alone, as well as food and beverage from

21   -- food and beverage as well as dietary

22   supplements.  So that will be something the

1    committee will want to examine as well.

2             VICE CHAIR KLEINMAN:  Thank you.

3             DR. PANNUCCI:  Thank you.

4             MEMBER BAILEY:  This is just a quick

5    question.  Regan Bailey.

6             I love the slides where you have the

7    dots for the average and the bars for the

8    recommended range.  I'm wondering for the work of

9    the Food Pattern Modeling Committee if we

10   couldn't combine four survey years for that to

11   increase the precision of estimates.

12            DR. PANNUCCI: We could.

13            MEMBER BAILEY:  And while we don't

14   have recommended ranges for birth to 24 months,

15   if we couldn't just have a dot to see where they

16   are currently at.

17            DR. PANNUCCI:  Yes, that's something

18   that we can talk about as part of the data

19   analysis in the Food Pattern Modeling

20   Subcommittee.

21            MEMBER BAILEY:  Thank you.

22            MEMBER TAVERAS:  Hi, Elsie Taveras.

1    So a couple of questions.

2              Do you have information to identify if

3    there is a sample of pregnant or lactating women?

4              DR. PANNUCCI:  We do, yes.

5              MEMBER TAVERAS:  Do you have a sense

6    of the sample of size of that?

7              DR. PANNUCCI:  I meant to tuck that

8    away because I was asked that yesterday and I

9    still don't remember.

10             MEMBER TAVERAS:  And then --

11             DR. PANNUCCI:  I noted it and --

12   thanks -- 30 to 50 per two-year group.  So it is

13   a small sample size.  We'll have some challenges

14   around that.

15             VICE CHAIR KLEINMAN:  I think you

16   mentioned 200.

17             MEMBER BAILEY:  If you combine all the

18   survey years.

19             CHAIR SCHNEEMAN:  So Regan, if you

20   could say that into the mike.  It's mainly

21   getting it on the transcript.

22             MEMBER BAILEY:  Sorry.  So there's

1       about 20 to 50 in any survey year.  In 1999

2       through 2006, pregnant and lactating women were

3       oversampled.  So there is a higher sample size in

4       those age groups.  But even combining 1999

5       through 2014, there is about 1200 to 1500.  So

6       about 1200 with complete dietary data.

7                   MEMBER TAVERAS:  Thank you.

8                   And the other question I had was:  Is

9       there any level of detail of diet in some of the

10      categories that you mentioned in surveillance of

11      children in WIC or through other nutrition --

12                  DR. PANNUCCI:  We can look at program

13      participation.

14                  MEMBER TAVERAS:  So other nutrition

15      surveillance systems for example like the

16      Pediatric --

17                  DR. PANNUCCI:  Even with NHANES, there

18      is an ability to identify some levels of program

19      participation.  So that's something, again, we

20      could talk about which subgroups that we want to

21      dive into.  We were talking about vulnerable

22      populations and how you might want to examine

1  that.

2  MEMBER TAVERAS:  Thank you.

3  MEMBER VAN HORN:  Sorry, another

4  question.

5  DR. PANNUCCI:  Sure, Linda.

6  MEMBER VAN HORN:  Linda Van Horn.

7  The other question sort of tagging

8  onto that is it was encouraging to see that there

9  were improvements in terms of reduction in sugar

10  and solid fat intake.  And I was just wondering

11  if it was possible to determine where the sources

12  of those are.

13  DR. PANNUCCI:  Yes, we can dig down

14  into that and determine where that is coming

15  from.

16  MEMBER VAN HORN:  Oh, that's great.

17  And then the second question is

18  related to the fact that, again, it is

19  encouraging to see there are segments of the

20  population that are exceeding the recommended

21  amounts of fruits, and vegetables, and other

22  things of that sort.  I just wondered if there

1    have been any attempts to analyze those

2    populations that are meeting or exceeding some of

3    those recommendations to determine not only what

4    the HEI is for them but also how it relates to

5    their own health-related criteria.  In other

6    words, the winners.  We like to look at --

7              DR. PANNUCCI:  How are the winners

8    actually doing well?

9              CHAIR SCHNEEMAN:  This is Barbara

10   Schneeman.  If I could add to that question, with

11   the HEI we are looking at the single number for

12   the total population and it might be interesting

13   to know the distribution and then, to your

14   question, what is related to where you are in

15   that distribution.

16             DR. PANNUCCI:  Yes, and the

17   distribution at the top end of the distribution

18   -- oh, shoot.  Now I can't remember what the 95th

19   percentile is.  I have that in another

20   presentation.  We have that distribution intake

21   data.  And I am thinking to the Dietary Patterns

22   Methods Project, which of course Dr. Boushey is

1    very familiar with, where we could look at even

2    quartiles of diet quality scores but the highest

3    quartile does not have a perfect score but we do

4    see that there is a reduced risk for chronic

5    disease mortality, as an example.  And some of

6    those publications would allow you to look at

7    kind of if we call those the winners, as you

8    said, then what are the component scores for HEI

9    and things like that.

10             MEMBER BOUSHEY:  This is Carol

11   Boushey.  And I'll just follow-up.

12             Thank you, TusaRebecca for pointing

13   that out.  That is being addressed by activity

14   with the Dietary Patterns Methods Project,

15   however, the sample is not NHANES.

16             DR. PANNUCCI:  Right.

17             MEMBER BOUSHEY: So that is one of the

18   cautions.  You know a lot of this is NHANES and

19   so that sample comes from three major cohorts

20   that are actually doing exploration of the top

21   and in what's happening.  So good insight.

22             DR. PANNUCCI:  Yes but we could do

1      something similar in NHANES.

2                MEMBER BOUSHEY:  Yes, and you could

3      then and use the same modeling, too.

4                DR. PANNUCCI:  Yes, thank you, Linda.

5                MEMBER NOVOTNY:  Rachel Novotny.

6                Hearkening back a little bit to

7      Elsie's question about the food assistance groups

8      and knowing that you also work with the Thrifty

9      Food Plan, I think it's great that you are able

10     to put together these different data sets but it

11     makes me wonder if one is able to put prices on

12     these food plans or, alternatively, if you could

13     share with us the latest Thrifty Food Plan and

14     how that may be shifting.  I think there's going

15     to be a lot of interest in the cost associated

16     with --

17                DR. PANNUCCI:  That's something we can

18     have a discussion around, cost, but I think it

19     would be outside of the scope of the questions

20     and topics that have been outlined.  But of

21     course, that is follow-up work that happens on my

22     team.

1          CHAIR SCHNEEMAN:  Again, even though

2     we may identify things outside the scope, if it

3     becomes important in our discussion at the

4     committee level, then we need to think about how

5     do we incorporate it into the report, even though

6     we may not be making a recommendation about it.

7          MEMBER MATTES:  Rick Mattes.

8          So to what degree can you manipulate

9     the categorizations that you have there?  So for

10    example, we drink some fruits and vegetables.  So

11    that would fall into the beverage category --

12         DR. PANNUCCI:  Uh-huh.

13         MEMBER MATTES:  -- even though we call

14    them -- and beverages are often snacks but you

15    differentiated beverages from snacks.  If we want

16    to start changing the boundaries to understand --

17         DR. PANNUCCI:  When it comes to

18    nomenclature and the way we think about

19    nomenclature, you've brought up a good point.  So

20    in NHANES in the time and occasion step,

21    participants self-identify what they call that

22    eating occasion.

1            So we can look at data based on how

2    people identify an eating occasion.  So what

3    foods are contributing to the eating occasion

4    that participants have identified as a snack?

5            The categories that I was showing

6    today are the What We Eat in America Food

7    Categories that have been defined and there is

8    one of those categories called snacks and sweets,

9    and then it drills down further.  I think it will

10   help to see that full list of 150 food

11   categories, to look at it from that element, and

12   then separately to look at an element of the

13   eating occasion labels that people self-identify

14   and what you might want to look at within those

15   self-identified eating occasions and keep those

16   two concepts a little bit -- I suppose you could

17   look at it combined but also self-identified

18   snacks is different from the category snacks and

19   sweets.  So it's been defined in the What We Eat

20   in America Food Categories.

21            Does that answer your question?

22            MEMBER MATTES:  Yes, we'll have to

1    talk about that more.

2          DR. PANNUCCI:  Yes, there's a lot --

3    there are a lot of things that are going to be

4    fun to talk about.  Short answer, yes.

5          MEMBER HEYMSFIELD:  I had a question.

6    Steve Heymsfield.

7          The source data for the Healthy Eating

8    Index is the NHANES questionnaires you described?

9          DR. PANNUCCI:  The -- we -- the --

10    sorry.  The Healthy Eating Index calculation is

11    on the NHANES 24-hour recall data.

12          MEMBER HEYMSFIELD:  Right.  Okay.

13          DR. PANNUCCI:  Yes, so the same group

14    of people that contributed to that HEI score,

15    that population also contributed to the average

16    intake and the food category intake data that you

17    saw today.

18          MEMBER HEYMSFIELD:  So I know that

19    there is I guess a SAS program that runs these

20    analyses.

21          DR. PANNUCCI:  That's right.

22          MEMBER HEYMSFIELD:  Is there an

1  individual user interface on the web where

2  someone could calculate their Health Eating

3  Index?

4           DR. PANNUCCI:  There is work around

5  that.  There are people who are interested in

6  that.  We could have another larger conversation

7  around that idea and how people would react to

8  that and things like that.

9           But right now, it's generally used for

10 populations or for other groups of foods.  We can

11 apply it to menus.  We can apply it to the food

12 supply.  We could apply it to -- there is

13 interesting work where they've applied it to

14 foods available at a food pantry, things like

15 that.

16           So it's applied in a lot of different

17 ways and I would be happy to share more on that.

18           MEMBER HEYMSFIELD:  I guess I want to

19 work towards 100.  You know I don't know where I

20 stand right now.

21           DR. PANNUCCI:  We all want to work

22 towards 100, I am sure.

1          MEMBER BAZZANO:  Lydia Bazzano from

2     Tulane.

3          So I guess I'm a little bit confused

4     with I guess the same distinction in terms of

5     what is a vegetable.  And I think also for people

6     who may be confused about how is it that eggs are

7     in the top ten subcategory of vegetables.

8          DR. PANNUCCI:  Okay.

9          MEMBER BAZZANO:  Just so that you can

10    explain that to everyone.

11         DR. PANNUCCI:  Yes, I'd be happy to.

12         So eggs is not a category of

13    vegetables, rather, the way people eat eggs.  You

14    can imagine an omelet contains vegetables.  So

15    people are getting their vegetables through egg

16    like an omelet.

17         So it's one of the top ten ways that

18    people get their vegetables.  It is not a

19    category of vegetables.

20         Categories of vegetables in the food

21    groups would be things like dark green vegetables

22    but it is a little -- it's a distinction.  We

1       have food groups and subcategories for some of

2       those food groups.  The What We Eat in America

3       Food Categories are categories as foods are

4       consumed.  So sandwich is not a subcategory of

5       grains, rather a sandwich is a source of total

6       grains in the American diet.

7                 Does that help?

8                 MEMBER BAZZANO:  That does, a lot.

9       Thank you and I'm sure it helps others.

10                DR. PANNUCCI:  Because that would be

11      confusing if you were wondering how eggs are a

12      category.  Eggs are not categories as a

13      vegetables.  Eggs are a source of vegetables when

14      vegetables are added to something like an omelet.

15                MEMBER BAZZANO:  I do have a follow-up

16      question, though --

17                DR. PANNUCCI:  Okay.

18                MEMBER BAZZANO:  -- about the veg

19      alone and starchy veg.  So I'm assuming starchy

20      veg is mostly potato-based.

21                DR. PANNUCCI:  Potatoes, corn, things

22      like that.

1          MEMBER BAZZANO:  Okay and veg alone --

2          DR. PANNUCCI:  Would be the other veg

3    like -- of course now I'm drawing a blank like

4    that's something I should know.

5          MEMBER BAZZANO:  Like broccoli?

6          DR. PANNUCCI:  Green beans, broccoli,

7    tomatoes, vegetables that are not starchy.  And

8    again, those are not subcategories of vegetables

9    but, rather, those are the What We Eat in America

10   categories, although there are starchy vegetables

11   as a subcategory.  This gets quite confusing if

12   we talk in circles.

13         MEMBER BAZZANO:  Got it.  Thank you.

14         DR. PANNUCCI:  Sure.

15         CHAIR SCHNEEMAN:  So this is Barbara

16   Schneeman, if I could follow up on that.  So you

17   can present us data, though, of within the actual

18   sources of vegetables --

19         DR. PANNUCCI:  Yes.

20         CHAIR SCHNEEMAN:  -- how they

21   distribute across the different categories.

22         DR. PANNUCCI:  We can do both.  We can

1  look at intakes of vegetables and their subgroups

2  as an example and we could look at what are the

3  sources of dark green vegetables as categories.

4  MEMBER ARD:  So Jamy Ard.

5  From an energy balance standpoint, if

6  take a look at the average food group intakes

7  compared to recommendations, and if we were to

8  say well, we move everyone up to the

9  recommendations, then we would expect people to

10  just gain weight, right, because we are just

11  adding calories.  No one is meeting the

12  recommendations.

13  So the question is:  What are the food

14  groups that we are overconsuming.  I mean you

15  showed there is a decrease in solid fats and

16  added sugars but if you had a comparable set of

17  food groups that we are overconsuming so we would

18  be able to understand what the displacement needs

19  to be.

20  DR. PANNUCCI:  Sure.  There is an

21  interesting analysis that has been done that we

22  can also discuss thinking about the nutrient-

1   dense forms of foods.  So forms of foods that are

2   prepared in their most nutrient-dense forms would

3   be those with the least amounts of sodium, added

4   sugars, and saturated fat.  But if we look at

5   typical intakes within the food groups, then we

6   know that Americans are not always making the

7   most nutrient-dense choices.  So even an average

8   intake of vegetables doesn't mean it is the

9   average intake of the most nutrient-dense forms

10  of vegetables.

11          And so looking at that analyses, I

12  believe, if I remember correctly, the last time

13  that analyses was done was published in 2010 and

14  we really saw that within those food groups like

15  vegetables or fruits, we can see what the

16  nutrient profile would be in the food patterns

17  versus what the nutrient profile is of typical

18  choices of Americans and look at the difference.

19  I think it is that kind of analysis that would

20  answer your question.

21          CHAIR SCHNEEMAN:  So other questions,

22  at this point, from the committee?

1                 MEMBER SABATE:  Joan Sabate.

2                 DR. PANNUCCI:  Yes.

3                 MEMBER SABATE:  I wanted to follow a

4        question that you mentioned.  It looks like,

5        other than protein foods and grains in some

6        categories were low in the foods that you have

7        presented and, at the same time, there is good

8        news that solid fats and added sugars there is a

9        time frame to decrease.

10                So the goods news seems like the

11       Dietary Guidelines from previous editions do have

12       an impact.  The bad news is that all these

13       difference in energy probably comes from foods

14       that are not categorized in a clear way.  I mean

15       they are not the measure of food groups as we

16       understand.  By that I mean you know the fruits,

17       the vegetables, the legumes, the so on and so

18       forth.  So probably the excess of energy, because

19       overall in America we have obesity, so basically

20       that may come from beverages, from ultra-

21       processed foods, from alcohol, and excess of fats

22       and sugars.

1           I mean I just would like to know if

2     there is a way that indeed quantify these because

3     that will be useful for us as far as making

4     recommendations.

5           DR. PANNUCCI:  Again, I think the

6     typical choices analyses will help to enlighten

7     us related to both of your questions.

8           Heather.

9           MEMBER LEIDY:  Heather Leidy.  Just

10    two quick questions.

11          In more philosophical, I guess,

12    nature, how long does it take for guidelines to

13    elicit change that is observed statistically?

14          So my question I guess is related to

15    Healthy Eating Index.  We know what Americans are

16    eating now and we were talking about it in the

17    context of the 2015 Dietary Guidelines but there

18    is a time there at which those things come out

19    where it actually has a practical change and I

20    don't know how that actually works in the realm

21    of -- I'm sure in the past there has been a

22    nutrient of concern that we have been able to

**1** target and then you can see a change over x

**2** number of years.  I don't know if that is the

**3** case or not.

**4** Please add some context around the

**5** time at which the guidelines come out versus how

**6** we can track that effectively and what that time

**7** frame would look like.

**8** DR. PANNUCCI:  That's an interesting

**9** question.  I think it would take a little bit

**10** more discussion but what comes to mind related to

**11** NHANES is that within the questionnaire there are

**12** questions about familiarity with MyPlate.  It

**13** previously, the Food Guide Pyramid was that

**14** question and now it's been changed to familiarity

**15** with MyPlate.  So there has been some analyses to

**16** look at those who are familiar with MyPlate and

**17** difference in their diet quality scores.  And

**18** those who are familiar with MyPlate or those who

**19** tried to follow MyPlate, that is another

**20** question.  Their HEI scores are higher than those

**21** who are not familiar with MyPlate.

**22** That doesn't directly answer your

1  question but trying to point out that there is

2  data -- there is data in the questionnaire

3  portion of NHANES that does address familiarity

4  with the Dietary Guidelines.

5           Another thing about the Healthy Eating

6  Index, we are often careful to say that we are

7  describing how diets do or do not align with the

8  Dietary Guidelines, not projecting on people

9  whether they are trying to follow the Dietary

10  Guidelines.  So that's another distinction,

11  trying to understand whether or not people are

12  even trying to versus how their diets do or don't

13  align.

14           MEMBER LEIDY:  And then just a follow-

15  up question along those lines.  Oh, I'm sorry.

16           CHAIR SCHNEEMAN:  I just wanted to do

17  a follow-up question from that because I believe

18  in the Dietary Guidelines process, things like

19  added sugars and solid fats have always been

20  there but I think it was maybe around 2005 that

21  solid fats/added sugars was really identified as

22  a category that could be used in thinking about

1    the food pattern.

2              And I'm wondering if any data suggests

3    tracking from that point gets to your question,

4    in terms of how long does it take to really get

5    an awareness that leads to behavior change.

6              DR. PANNUCCI:  Yes, I think those are

7    questions that can be further discussed and

8    thought about within the scope of the topics and

9    questions that have been identified.

10              Thank you, Heather.

11              CHAIR SCHNEEMAN:  Other questions?

12    Great.

13              This has been a wonderful discussion

14    and very useful data.  I'm sure we're going to

15    have a lot more questions for you.

16              DR. PANNUCCI:  I'm sure.  Fantastic.

17    Thank you.

18              CHAIR SCHNEEMAN:  Thank you.

19              MS. DE JESUS:  That was an excellent

20    discussion.  Thank you, Dr. Pannucci and

21    committee.

22              So we are delighted to have a guest

1       speaker with us today.  Dr. Erick Decker is a

2       professor at the University of Massachusetts

3       Amherst and Director of its Industry Strategic

4       Research Alliance.  He has lent his expertise in

5       food science in numerous leadership positions,

6       including the Food and Nutrition Science

7       Solutions Task Force in the Institute of Food

8       Technologists in the National Academies of

9       Sciences Sodium and Potassium DRI Committee,

10      which recently concluded its work.

11              Dr. Decker is joining us today to

12      provide perspective on implications that the

13      Dietary Guidelines for Americans have in the real

14      world of providing foods that can help consumers

15      eat closer to the recommendations.

16              So please join me in welcoming Dr.

17      Eric Decker.

18              DR. DECKER:  Good morning, everyone,

19      and thank you for the invitation.

20              So I will just go through my

21      disclosures real quickly.  I serve on a couple of

22      advisory boards, Cranberry Institute and Sensient

1  Technologies, where I do a lot of evaluation of

2  their research programs.  I also do some

3  consulting work throughout the industry.  Most of

4  these are on rancidity solutions.  My expertise

5  is in lipid oxidation and free radical chemistry.

6  I am, obviously, an employee of UMass and I get

7  research support from the Agriculture and Food

8  Research Initiative, which is part of USDA, as

9  well as some industry groups like ASM -- DSM.

10  So I wanted to just kind of start off

11  a little bit about just talking about what some

12  of the drivers are for food purchase choices

13  amongst consumers.  And you know we all hope that

14  nutrition is the main driver but, unfortunately,

15  there's a few other factors that go in there and

16  one of those major ones is value, which I define

17  not only as cost but why you would buy something

18  you might feel like you pay a little bit more

19  because of certain values.

20  And then convenience is also a big

21  driver, as I will show you shortly.  More

22  recently, sustainability has become part of that

1   mixture but the one big and most important driver

2   for food purchases is really taste.  And you are

3   not going to eat food -- you know people will go

4   to a restaurant and if it doesn't taste good,

5   that restaurant will be out of business very

6   shortly.  So taste is one of the main things that

7   are driving how we make foods.

8           So in terms of convenience, if you

9   look back over a century ago, we were spending

10  about half of our time getting food onto the

11  table.  And this has dropped dramatically and

12  seems to drop almost every year.  It is down to

13  about 37 minutes to do all food preparation.  And

14  that amount of preparation time actually

15  decreases as you make more money because you can

16  buy certain foods and make it easier to get it on

17  the table quickly.  And this is really being

18  driven by the changes in what is going on with

19  dual working families, commuting times, family

20  demands, need for quality time, as people are

21  spending less and less time in the kitchen.

22          The food industry has tried to deliver

1    this in many, many ways.  This is a list of all

2    different kinds of things, some of which are new,

3    some of which have been around for a long time

4    but these are really food products that help you

5    get dinner on the table more quickly.

6         The other part of the equation here

7    then is value.  And really a remarkable thing

8    that has happened in the U.S. is how we have been

9    able, over the last century, to really decrease

10   how much of our disposable income is spent on

11   food.  And we've gone from over 20 percent to

12   down less than ten percent currently.

13        A couple takeaways here is that this

14   food away from home tends to keep creeping up and

15   up and it's almost -- we're spending almost the

16   same amount of money on food outside of the

17   household as inside of the household.

18        And then the other things is, one of

19   the last questions is, is really what is the --

20   how do we look at this in terms of how much money

21   people have to spend on food.  And mean household

22   disposable income levels now are only $31,000 for

1  a household and these calculate out to be less

2  than $100 per week that people spend on food.

3  So the food industry is one of the

4  reasons that the amount of money that we spend on

5  food has decreased quite dramatically.  And this

6  is first -- several different factors but one is

7  that they can go out and they actually contract

8  with a farmer and they can get a really good

9  price on the raw material to make that food.

10  If you ever go into a food processing

11  plant and talk to a plant manager, one of their

12  main concerns is how much electricity they are

13  using in their plant.  So they are constantly

14  trying to drive down and become more energy

15  efficient.  When you have a big food plant, you

16  create a lot of byproduct.  And because you have

17  a large amount of byproduct, you can find a

18  market for that byproduct.  So the cheese

19  industry and whey is a great example of this,

20  where whey proteins are now more valuable than

21  casein, as you have been able to convert that

22  waste product into a valuable resource that helps

1    keep costs down.

2              And then finally lots of technologies

3    around food processing operation packaging

4    ingredients to maximize shelf life.  So the

5    longer we can keep the food, the less often we

6    have to replace that food.

7              And just to give you a little snapshot

8    of this, we do this -- I do this exercise with

9    one of my classes, where we go through making

10   tomato paste and we do that from making it at

11   home and all the steps that you would actually go

12   through.  And if you do that at home, it's going

13   to cost you about $10 a pound but if you go into

14   the grocery store, it is going to cost you about

15   $2 a pound.

16             So I think one of the things that I

17   think about is it really likely to try to get a

18   consumer to adapt a diet that is going to require

19   them to spend more time cooking, to pay more for

20   foods, and to sacrifice taste.  And so to me, the

21   more realistic goal is to provide a healthy,

22   convenient, affordable, sustainable, and great-

1    tasting food supply that is accessible to

2    everybody.

3              So one of the things I want to talk a

4    little bit about is kind of the difficulties of

5    translating nutritional recommendations to

6    actually change the food supply.  And we have

7    seen quite often that we end up with unintended

8    consequences as you say let's get this ingredient

9    out and then what that ingredient actually is

10    replaced with.

11              And a lot of people don't think this

12    but the food industry actually does react quite

13    quickly to policy changes.  And you know we've

14    seen this.  The industry is big and it can do

15    this very fast.  And if it feels like it gets a

16    marketing advantage, it will do this.  And we

17    will see things like I'm sure most of us remember

18    the no cholesterol craze where almost everything

19    in the store seemed to say no cholesterol, even

20    stuff that never had cholesterol in it from the

21    beginning.

22              And then I think the other side is

1    this rule of substitution.  If you're going to

2    make a recommendation to take something about,

3    you need to think about what's going to go back

4    in its place.  And a good example of this is the

5    low fat food craze, where basically food

6    companies had to make the quality of the food the

7    same and when they took the fat out, they had to

8    put something in to keep the quality and that

9    substitute ingredient ended up being

10   carbohydrates.

11            So there are unexpected consequences

12   and being a fat chemist, I would like to use this

13   as an example that back in the '20s we were using

14   mostly animal-derived fats of butter, lard,

15   tallow.  Then the first nutritional

16   recommendations came out on cholesterol and so

17   the food industry responded by taking out those

18   animal fats and replacing those primarily with

19   tropical oils.  Then the recommendations said no,

20   it's not the cholesterol; it's the saturated fat.

21            And so the tropical oils were taken

22   out and were replaced with hydrogenated fats.

1      And then the recommendation was no, it's the

2      trans fatty acids.  So now hydrogenated fats have

3      been removed and I don't know how many of you

4      realize it, but these are being now replaced

5      primarily with high oleic vegetable oils.  So we

6      are going to change the unsaturated fatty acid

7      profile of our diet.

8           So the real challenge is how do we

9      actually change the food supply in a way that it

10     positively impacts health.  And the thing that I

11     always talk to people about is that it doesn't

12     matter how nutritious a food is; if that's not

13     incorporated into a daily diet, it's not going to

14     change health.  So we have got to figure out how

15     to get healthy foods into the diet every day.

16           So I want to talk about a couple,

17     three different examples of foods and food

18     components that serve some challenges.  And I

19     want to just use this.  This is kind of old data

20     from USDA ERS but it just gives you an idea of

21     how people in the vegetable category are making

22     choices.

1        So you see if you look at the top five

2    most purchased vegetables, you see things like

3    potato being at the top of the list.  Well,

4    that's partially because potato has a lot of

5    value.  It is very cheap.  It fills you up and

6    people like it.

7        Tomato follows that and you can see

8    tomato is quite a bit more expensive but people

9    are probably buying that because they like tomato

10    because tomato is really versatile and you find

11    it in sauces, you find it in many, many different

12    places.

13        Then you look at onion third.  Well

14    why is onion added?  It's only pretty much added

15    for taste.  You're not adding it for nutrients.

16        Then you find things like corn, which

17    again, more expensive but probably accepted more.

18    And also there are food processing operations

19    which can make frozen corn, canned corn, which

20    have pretty high acceptability.

21        So then I picked out asparagus because

22    that's my favorite vegetable.  I said why aren't

1  people eating more asparagus?  So when I looked

2  at asparagus, it's 66 cents a serving.  So now

3  you can see where value becomes a big important

4  part and this isn't in the top five probably

5  because it is very expensive.

6              And then you look at the other side,

7  you know eat more kale, right?  And kale falls in

8  that category up here with the corn and the

9  tomatoes but kale is last of all the vegetables

10  in terms of purchases.  And again, probably

11  driven a lot by taste and people just don't like

12  this vegetable and maybe some by convenience

13  because this is not an easy vegetable to prepare.

14              So some of the challenges then to

15  delivering more vegetables is they are short

16  shelf life.  So a lot of them aren't going to

17  last very long.  That means you are going to need

18  to shop for vegetables more often.  That is going

19  to drive up that convenience factor.  It is going

20  to take you longer to shop and prepare for that

21  food.

22              Preparation time, again, a convenience

1 issue. You have got to wash them, you have got

2 to peel them, you have got to seed them. Some of

3 them you need to juice them, portion them, and

4 cook them.

5 So there are technology solutions and

6 we see these in the grocery store all the time.

7 One is the ability to pre-wash and package

8 vegetables. So all those bagged salads you come

9 across in the store, that's not a regular plastic

10 bag. That is actually a bag that creates a

11 controlled atmosphere that allows that lettuce to

12 last a lot longer. So if you think about it at

13 home, if you chopped up that lettuce and put it

14 in your refrigerator, it would be brown in a day

15 but this controlled atmosphere changes the

16 respiration of the vegetable and allows it to

17 last longer.

18 Then we have preservation techniques,

19 things like freezing, which is hundreds of years

20 old now that can create products that will last a

21 long time. They won't spoil. They will be very

22 convenient. Pull them out of the freezer and you

1 can eat them right away. But the downside of

2 this is that that freezing does change the

3 texture and the quality and some people don't

4 like those frozen vegetables.

5 And then of course, you know the magic

6 of the baby carrot, just taking a big carrot and

7 industrially making it into a little carrot with

8 no peel makes it much, much easier to incorporate

9 this into your daily diet.

10 But the downside of this is the cost.

11 All these kind of convenience operations that you

12 would have in fruits and vegetables tend to drive

13 up costs, compared to the raw material, the

14 original raw material but their popularity is

15 huge. And I can go to the grocery store now and

16 you've got this huge section of bagged lettuce

17 and it's pretty hard to find the true head of

18 lettuce, the original intact head of lettuce.

19 You know they are there but they are not nearly

20 as possible -- as popular as they used to be.

21 Another challenge with fruits and

22 vegetables is safety. Fruits and vegetables are

1    now the highest food safety risk category.  This

2    is for a bunch of different reasons.  You can go

3    back in history and you can look the first E.

4    coli outbreaks actually occurred in apple cider

5    before we pasteurized it and that was mainly

6    because they were using dropped apples and there

7    was deer that were getting into the orchards and

8    contaminating it.  So most of these are enteric

9    bacteria.  So these are bacteria that only live

10    in the G.I. tract.  So if you have contamination

11    with these organisms, it means you have fecal

12    matter of some sort that is on the food product.

13    Most recently is romaine lettuce

14    recalls that happened and this was contaminated

15    irrigation water.  We had some outbreaks with

16    salmonella in cantaloupe and it was because they

17    used the wrong kind of handling machines that

18    they couldn't be properly washed.  Then the

19    highest risk food safety risk is sprouts.  And

20    some of the biggest outbreaks we've had have been

21    around bean sprouts and this is because it is

22    very hard to decontaminate the seeds and the

1    seeds actually carry the microorganisms.  And

2    then the way sprouts are grown, high

3    temperatures, high moisture, it is just a perfect

4    environment for microbial growth.

5              Recently, the Food Safety

6    Modernization Act is becoming implemented and

7    that will handle a lot of this.  And it's really

8    a lot of that is to move the control of food

9    safety all the way back to the farm; whereas,

10   before it was mostly once it left the farm that

11   we dealt with food safety.

12             So the other problem that you have

13   with fruits and vegetables is the inability to

14   control those microorganisms and the most common

15   way we do that is through heat.  And you know so

16   you actually see that meat products have actually

17   improved food safety quite a bit but they have a

18   luxury in that most of those meat products are

19   cooked and you can kill the bacteria.  And we

20   just can't do that for most of our fruits and

21   vegetables because texture changes, flavor

22   changes.  You know kale is a great example.  It

1    is a totally different taste from raw to cooked

2    and so you are going to change flavor, you are

3    going to change texture, and then these are going

4    to often be unacceptable.

5              So there are a bunch of new

6    technologies that are coming out:  high pressure

7    technologies, these all are what they call non-

8    thermal, so they don't involve high temperatures;

9    ultraviolet technologies that can be used on a

10   lot of fruit juices; and then pulse electrical

11   field, which is the newest and not really that

12   much commercially-implemented at this point.

13             The high pressure is a good example,

14   all that guacamole that you can get in the store

15   now.  You know here is you think about guacamole,

16   this is a pretty intensive food that you need to

17   prepare but now because of this high pressure

18   processing, you can make that in industrial

19   settings and have a very, very high-quality

20   product that is acceptable by a lot of people.

21             The second example I want to talk

22   about is solid fat.  So very interesting data

1    that solid fat consumption is starting to be

2    decreased.  Solid fat is very important in a lot

3    of different products.  It builds structure into

4    the product.  It prevents migration of fat out of

5    the product.  And then also just more highly

6    saturated fat sources are much more stable

7    against oxidation than unsaturated.

8            So there are technology now to make

9    solid fats that are high in unsaturated fatty

10   acids.  So a lot of the fat that is now being

11   made -- that is being used for products such as

12   baked goods and things like that that need solid

13   fat is produced by an interesterification

14   technique, where you can make the fat solid with

15   high amounts of unsaturated fatty acids in it.

16           But the problem is when these

17   unsaturated fatty acid levels go up, now the risk

18   of oxidation increases.  And so you can do

19   things.  You can try to package the food in a way

20   to get oxygen away from it to stabilize it.  You

21   can use a whole series of different kinds of

22   antioxidants.  And as I mentioned before, one of

1   the reasons the high oleic vegetable oils are

2   becoming so popular is because they are much,

3   much more stable.

4               The problem is a lot of these

5   antioxidants are phasing out.  There's a whole

6   bunch of synthetic antioxidants that work

7   terrifically that have horrible names and nobody

8   wants them in their foods.  But there are natural

9   equivalents but even those you don't see because

10  of clean label trends and because of organic

11  trends.  And so I'm biased in this because I can

12  smell rancidity from a hundred yards away but

13  there are a lot more rancid food products that I

14  am coming across in the grocery stores,

15  especially on the organic side.

16              So just to put this a little bit in

17  relevance, if we give oleic acid an oxidative

18  stability of one, when we add the second double

19  bond to linoleic acid, that oxidation rate goes

20  up ten times and then we end up adding additional

21  reaction centers as we get more unsaturation.  So

22  you see up here with EPA, the omega-3 fatty acid

1    is going to oxidize 40 times faster than that

2    oleic acid.

3              And a couple years ago and close to my

4    hometown, there was actually an incidence where a

5    guy was using linseed oil.  So linseed oil is

6    from flax and this is used to finish furniture.

7    And he cleaned up all the linseed oil with

8    newspapers, put it in his garage on a nice hot

9    day.  The reaction of the oxidation was so fast,

10   the newspapers spontaneously combusted and burned

11   down his house.  So these reactions are very,

12   very fast and hard to control.

13             And most recently when you start to

14   look at the products that are in these rancid

15   fats, and this is work of Guodong Zhang in our

16   department and he has got a mouse model on

17   inflammatory bowel disease that when you put this

18   in an animal with a challenged gut, these

19   oxidation products both increase inflammation and

20   also increase incidence of colon cancer.  So this

21   is something that could be a problem as we push

22   more and more unsaturation into the food without

1 adequately protecting that oil that goes into the

2 food.

3 So the last one I will talk about will

4 be sodium, since I've spent a lot of time on

5 sodium in the last year. I think the talk before

6 was great to see that some of these numbers -- I

7 think the big challenge is like we keep making

8 recommendations and making recommendations and

9 the needle doesn't move at all. And sodium is a

10 great example of this.

11 The Dietary Guidelines have been

12 around for 40 years. The first Dietary

13 Guidelines says decrease sodium and here we are

14 40 years later eating the exact same amount of

15 sodium we ate then.

16 So there's a lot of challenges around

17 sodium because sodium is -- most people think

18 they are just putting sodium in there to make it

19 taste good but that's not really true because

20 sodium impacts protein functionality. It impacts

21 the ability to ferment foods. It controls water

22 in that food and it acts as a preservative. So

1    there's a lot of different roles that you have in

2    there.

3              Because of these roles, it's really

4    hard to just say let's take salt and let's take

5    sodium out of everything across the board; let's

6    just do a ten percent reduction across the board.

7    And the reason that it is very hard to do this is

8    that there just isn't technology to replace that

9    sodium and produce the same food with the same

10   quality.

11             So in some ways the recommendations

12   would be, I think, easier to implement if we

13   could really focus those recommendations on where

14   are the foods that we can actually achieve this

15   and still get that food that tastes great and has

16   the proper value and convenience that we need.

17             So if there's anybody from the dairy

18   industry here, I apologize because I'm going to

19   pick on cheese in this section.  This is the top

20   ten sources of sodium in the diet.  And you can

21   see that cheese is in, what, one, two, three,

22   four, five, six, seven of these categories.

1          So obviously, cheese is something that

2     is delivering lots of sodium into the diet but

3     the problem is is that of all the products, salt

4     plays the most roles in cheese.  It controls the

5     fermentation, so it lets the lactic acid bacteria

6     grow and prevents any pathogens, which help

7     prevent any pathogens from growing at that time.

8     It helps take water out of the cheese curd.  It

9     makes the casein more functional so it can

10    aggregate and form the textures that we expect in

11    cheese.  It acts as a preservative because it

12    lowers water activity.  And then, of course, it

13    also give salty flavor.

14          So if we took the salt out of the

15    cheese, what we're going to see is we're going to

16    lose some of that salty flavor, which everybody

17    loves, but we are also going to change

18    fermentation.  And the fermentation process

19    produces a lot of the flavors that we expect in

20    cheese.  So there's something like 300 different

21    kinds of cheese in France alone and all of those

22    have different fermentation patterns.  And if you

1  start taking the salt out, you are going to

2  change the flavor of those cheese, not just from

3  the salty side but from the fermentation flavors.

4           You are going to change shelf life

5  because these aren't going to last nearly as

6  long.  A good example of this is stuff called

7  squeaky cheese, which is fresh cheese curds.  The

8  cheese curds occur before the salting of the

9  cheese and they last like a week before they are

10  going to spoil.

11           It will potentially change safety

12  because you're going to have a lower salt

13  environment where pathogens can grow and then

14  you're also going to change texture because you

15  are going to change enzyme activity.  You're

16  going to change fermentation pathways and you're

17  going to get differences in creaminess,

18  elasticity, melting properties.

19           So with cheese, it's really hard to

20  say let's just knock ten percent of sodium out of

21  all cheeses because you're not going to be able

22  to make a lot of those cheese products without

1 that salt and there's no technology right now to

2 do that.

3 But we could try to target and say

4 let's look at the products where we could try to

5 get sodium out and those would be the products

6 where sodium is really there mostly as a function

7 of flavor.  Now processed foods have a lot of

8 sodium in it.  One of the reasons for that is a

9 lot of the sodium diffuses into the center of the

10 food and so when we eat that food, we actually

11 swallow the sodium before we ever taste it.  So

12 to get to the same sodium salty taste, you have

13 to add more sodium in there.

14 Now if you go back a hundred years,

15 even, you'll start to see that there's a lot of

16 culinary practices where you can add different

17 kinds of ingredients to get umami flavors, which

18 can help you decrease the amount of salt.  So

19 using seaweed and mushrooms in soup.  I mean all

20 ramen soups, this is the fundamental recipe to

21 make ramen broth, pastas with parmigiana,

22 anchovies with vegetables, and tomato paste in

1   sauces and stews.

2               These all actually have a common

3   thread by how they enhance flavor and produce

4   umami and this is the evil food ingredient

5   glutamate, which we eat every day at very high

6   levels.  And so when you go look at these

7   ingredients, you see that they are just naturally

8   very high in glutamate.  So they are actually

9   producing an umami flavor that is very similar to

10  what you would get -- probably almost identical

11  to what you would get from MSG.

12              Unfortunately, even though the science

13  says glutamic acid or MSG is not harmful, this

14  has not been accepted by many health

15  professionals and certainly not by consumers.  So

16  if you go to the website and look up MSG, you

17  would think you'd drop dead the day you ate some

18  of this stuff.  But this just isn't true and here

19  you really have a technology and a tool that you

20  could drop sodium levels by 30 percent in some

21  food products by using a little bit of MSG.

22              So in conclusion, dietary

1    recommendations, in my opinion, are going to be

2    very unlikely unless they can be incorporated

3    into the foods that will be included into a daily

4    diet.  And that -- sorry -- that ability to

5    incorporate a food into a daily diet has got to

6    have the matrices to say it's got to taste good;

7    it's got to be at the right price and value; and

8    it's got to be convenient because that's just the

9    reality of where we are today in how people are

10   going to be incorporating these foods into their

11   daily diet.

12          So the industry can and does react to

13   nutritional recommendations and can improve the

14   healthy profile of the food supply but it will

15   only do that if they can make these foods in a

16   form that are acceptable by consumers because the

17   company will go out of business if it's not

18   accepted by the consumer.

19          And it could be that instead of making

20   broad-based recommendations on how to make foods

21   healthier or how to remove things from foods, it

22   might be much more effective if you could focus

1    those on where the technology exists to replace

2    them in a way that that food still has the taste,

3    value, and convenience that is expected.

4    So the bottom line is you know

5    certainly going forward, as the populations swell

6    and we need more food on the table, but even

7    today, we need to think about really using

8    science to figure out how to best change the food

9    supply and make the food supply healthier so

10   consumers accept those healthy food products.

11   And I think the last presentation, one

12   of my takeaways from the last presentation is

13   hamburgers are a great vehicle to deliver

14   vegetables.  So you know it's just the reality

15   that this is -- you know how do we figure out how

16   to get people to eat more vegetables.

17   So thank you very much.

18   CHAIR SCHNEEMAN:  So we will take some

19   time to see if there are some questions from the

20   committee.  Yes, please.

21   MEMBER BAZZANO:  Well in terms of salt

22   reduction, I did notice that you didn't mention

1      the top breads and rolls, the top source.  And I

2      do know other countries have made progress in

3      working with industry to decrease some of that.

4                    DR. DECKER:  Yes, so with the 20

5      minutes I had, I could have done that same graph

6      with bread, pizza, sandwiches, bread, right?  So

7      here's an example where the reason that they need

8      salt in bread is to actually slow down the

9      fermentation.  And so there are attempts now to

10     change yeast genetics so that they have the

11     proper fermentation rates without that salt.  So

12     there are technology changes but you're still

13     going to change flavor of that product.

14                    So you will find low-salt breads.  For

15     that matter, you'll find a low-salt product in

16     almost every category of food in the supermarket

17     but the reality is, nobody buys it.

18                    CHAIR SCHNEEMAN:  So related to

19     sodium, you use glutamate as an example where

20     sodium could be reduced.  But isn't it often in a

21     form where you have sodium -- monosodium

22     glutamate?  So does it actually result in a

1       reduction of sodium or just a reduction of salt

2       use?

3                   DR. DECKER:  So MSG works by having

4       salt and MSG in combination.  It enhances -- it

5       is a flavor enhancer.  So the glutamate is not

6       creating flavor.  It's just making the flavor of

7       the salt stronger.

8                   So even though there is sodium on the

9       MSG, you put so little in that you can reduce the

10      total sodium level in some products by as high as

11      30 percent.

12                  MEMBER MATTES:  Rick Mattes.

13                  I would ask you if you would just

14      expand a little bit more on the concept of the

15      degree to which the food industry drives

16      preferences versus they respond to things.  And

17      it's an important point because subtle

18      recommendations from this committee could drive

19      the food industry to make changes which may have

20      unintended consequences.

21                  There's really an important message in

22      what you were saying there that I think we have

1   to keep in mind as we go forward.

2          DR. DECKER:  So you know the foods

3   that are going to be produced in the reformulated

4   a lot of times is going to be driven by marketing

5   and marketing is all going to be around a

6   competitive advantage.  So if they feel the

7   nutritional recommendation can give them a

8   marketing advantage, they are going to change the

9   formulation.

10          So I think this was a perfect example

11   in changing dietary fats because we saw those,

12   every one of those labels, no cholesterol, low in

13   saturated fat, no hydrogenated fat, no trans

14   fats.  Those are all competitive advantages and

15   reasons why that is why the food industry is

16   going to change those formulations.

17          MEMBER DEWEY:  Kay Dewey.  Thank you

18   very much.

19          Two questions.  First, you mentioned

20   interesterification as a relatively new process

21   for solid fats using more unsaturated fats.  And

22   I'm just wondering are there any potentially

1  adverse consequences of that?  We got burned by

2  trans fats in a previous effort to supposedly

3  improve the fat supply.  So I'm just curious

4  about that.

5          And the second question is we saw in

6  the previous presentation that intakes of

7  vegetables and fruits were sort of going in the

8  wrong direction over time.  And I'm wondering, of

9  the factors you mentioned, taste, value, and

10 convenience, which of those do you think are the

11 major drivers of vegetable and fruit consumption

12 that we should really focus on?

13         DR. DECKER:  So hydrogenation is a

14 chemical process by which you attempt to remove

15 the double bonds from fatty acids.  The problem

16 with hydrogenation is it's not a 100 percent

17 efficient reaction so you tend to get some back

18 reaction that occurs where the double bond

19 reforms.  When the double bond reforms, the

20 natural configuration is cis but it reforms.  It

21 ends up forming about 50/50 cis and trans.  So

22 that is where the trans came from in that case.

1               Interesterification is not a chemical

2      modification of the fat.  Interesterification is

3      just a rearrangement of the fatty acids, the same

4      exact fatty acids on the glycerol backbone.  So

5      in other words, you could take a very highly

6      unsaturated fat and a small amount of saturated

7      fat, interesterify them, and put a saturated fat

8      say on every triglyceride molecule.  And this

9      changes the melting profile.

10              But the advantage of this is you can

11     create some very high-melting fat in there that

12     will crystalize and entrap the liquid fat.  And

13     so you've seen this.  It's different processes in

14     margarines and spreads but you know you'll see a

15     margarine that could be 80 percent unsaturated

16     because the liquid oil is entrapped by the solid

17     fat.  And this is kind of the same principle that

18     you would have for interesterification, where a

19     small amount of saturated fat can entrap and

20     change the functionality of the unsaturated fat

21     to allow you to put it in to something like a

22     baked good that will give you the same properties

1    as that -- the lard we used to use a hundred

2    years ago.

3              You know that's really a hard one

4    because it is just so multifaceted.  You know if

5    you're really going to eat fresh fruits and

6    vegetables every day, it's hard to do that in

7    weekly shopping, which is what we do in the U.S.

8    So the convenience side of that is really hard.

9    The value side of that is hard.  You know fresh

10   fruits and vegetables are expensive so a lot of

11   people won't incorporate them.

12             And then the reality is is the flavor

13   is a big issue, right?  Everybody likes broccoli

14   better if you put some cheese on it.  You know so

15   the flavor is also an inhibitor of a lot of

16   people just don't like vegetables.  It's the same

17   thing with seafood.  Seafood is way too

18   expensive.  It spoils fast.  And there's just a

19   large population that hates seafood and will

20   never eat seafood.

21             So all of those categories I think

22   make it the reason that it's hard to get people

1   to eat more vegetables, at least.  Maybe fruits

2   isn't so much that same issue but certainly with

3   vegetables, I think that is the challenge.

4              MEMBER TAVERAS:  In your second slide,

5   you gave the distribution of kind of the value

6   that we place on certain things with taste

7   driving that.  But one of the things I was

8   wondering about:  Is there any information about

9   how sustainability and environmental impact of

10  foods are starting to change potentially those

11  trends?  And is there any indication that value

12  is being more placed on environmental impacts and

13  climate impacts on some of the choices that

14  Americans are making in their diet?

15             DR. DECKER:  So that's why I used the

16  term value and not cost because certain people

17  will buy something if they see some other value

18  in it.  And sustainability could be a value that

19  is important to them and they would spend more

20  money on a product that they figured had more

21  sustainability.

22             So I think that trend is growing and

1      probably the place it is growing the most is on

2      the packaging side is how to make packaging more

3      sustainable, how to decrease packaging, how to

4      decrease packaging waste, how to make packaging

5      recyclable, food packaging recyclable.  So I do

6      think that's a driver but it's a relatively new

7      one.  The other four have been around for a long

8      time.

9                    MEMBER TAVERAS:  And is there any way

10     of tracking the trends towards that?  So if

11     someone is making choices and the driving of food

12     choices and purchases, do we have any national

13     data on trends of that being of greater

14     importance, climate and environmental impact on

15     the choice of what foods are being purchased?

16                    DR. DECKER:  So IFIC has an annual

17     report and they do these surveys every year.  So

18     there is a lot of data on that.

19                    MEMBER TAVERAS:  Thank you.

20                    MEMBER MATTES:  Thank you.  Rick

21     Mattes.

22                    Can you comment on the NOVA

1 classification of foods?  This is a point of view

2 about convenience and ultra-processing food that

3 has influenced the dietary guidelines in Canada

4 most recently.  What are the trends?  Can you

5 expand on that for our consideration?

6 DR. DECKER:  So the problem with just

7 saying processed foods are bad for you is there

8 is a lot of different ways we process foods and

9 they are not the same.

10 In my mind, I would have a hard time

11 going to the grocery store and finding a food

12 that is not processed, even fresh fruits and

13 vegetables.  Everything is processed to some

14 extent.

15 So to make broad categorizations like

16 that does not deliver a message that helps the

17 consumer decide what is healthy and what is not

18 healthy.  And the problem is is a lot of those

19 things like the NOVA, they haven't really defined

20 what ultra-processed foods are.  And so I don't

21 even -- you know I couldn't tell you the

22 difference between a processed food and an ultra-

1  processed food.

2  So I don't really think -- you know if

3  you want to talk about a food that is really

4  highly processed that you might not want to make

5  a recommendation against, it would be white wine.

6  Lots of processing steps.  Lots of science that

7  goes into making that white wine.  So I am not

8  sure that there's more processing in white wine

9  than there is in soda or the other way around.

10  MEMBER SABATE:  Joan Sabate.

11  I think you make a good review for us

12  of the importance of the food industry and how

13  every one of us take advantage of some of the

14  conveniences.

15  On your first slide that you said the

16  drivers for food purchase, you didn't mention

17  health.  This committee I think is making the

18  connection between food and health.  So do you

19  have any data that you would like to share as far

20  as how the importance of health to the American

21  consumer is a driver for purchase of any kind of

22  food?

1           DR. DECKER:  So the first slide the

2    first circle I had was nutrition.  So that's the

3    health component.

4           Generally, the order in which these

5    come is taste is first, value is second, then

6    over the years, convenience and nutrition have

7    bounced around but they are usually pretty

8    similar.  And then sustainability is quite a bit

9    below that.

10          MEMBER SABATE:  I think nutrition may

11   be a subcategory of health because now there is a

12   movement, as you know, in the slow food, and

13   cooking, and all these things that besides, I

14   would say, taste reasons I mean is also based on

15   the importance of health, prevention of diseases.

16          And I don't know if this has been in

17   a way tracked and how relevant it is for the

18   American public I mean all these social trends

19   that, at least according to the media, seems very

20   relevant.  But, at least personally, I lack the

21   statistical component of that, as far as how

22   relevant it is.

1           DR. DECKER:  I mean I guess to me if

2    I think about how do foods impact health, I think

3    about the components of those foods, the

4    nutrients of those foods, and what they do to

5    impact health.

6           VICE CHAIR KLEINMAN:  Eric, Ron

7    Kleinman.  Nice to see you.  Thank you for your

8    talk.

9           I know we only gave you 20 minutes and

10   you covered an awful lot in those 20 minutes.

11   One area you didn't cover is sweetness, and added

12   sugars, and use of non-nutritive sweeteners.  Do

13   you want to say just a few words about how the

14   industry sees this?

15          DR. DECKER:  You know so again, why

16   are they there?  It's the taste side, right?  And

17   it's an interesting thing in this country I think

18   I know most of you have traveled the world and I

19   think our foods are sweeter than anywhere else in

20   the world, especially our desserts.  We just, for

21   whatever reason, we love sweet food.

22          There are some technological tools to

1    take away.  I mean non-nutritive sweeteners and

2    aspartame has been around for 40 years and

3    everybody and their brother has tried to show

4    that it is unhealthy and I think generally have

5    been largely unsuccessful to show that there's

6    problems except -- you know I think one of the

7    things to think about, all food additives.  You

8    could have small subsets of the population that

9    do have sensitivities to these.

10            I'll bring back the white wine

11   example.  Most of the time if you buy a bottle of

12   white wine, it is going to say contains sulfites.

13   And there is a small subset of the population

14   that is sensitive to those subsets and have to

15   avoid that food product.

16            But I think now especially there are

17   a lot of non-nutritive sweeteners that are out

18   there that have the ability to decrease our sugar

19   consumption.  It's probably better now than it

20   was 40 years ago where we only had one.  And so

21   we were eating a lot of one.  And anytime you eat

22   a lot of one, the toxicological risk gets higher.

1       We now have five or six and those are spread out.

2       So you are not going to eat any one in as high

3       concentrations as we once did.

4              I think even on the other side, you

5       know high fructose corn syrup, you another one of

6       those hated ingredients but fructose is sweeter

7       than sucrose.  And so you could use fructose in

8       applications to drive the total sugar number down

9       because you could achieve the sweetness that you

10      want at a lower sugar concentration.

11             And then I think what we don't see

12      that much now you see in a few products is we

13      don't see people doing blends of non-nutritive

14      sweeteners and sugars because they certainly

15      don't taste the same.  And people have tried to

16      blend the non-nutritive sweeteners to get closer

17      to what sucrose tastes like and it's a hard

18      achievement.  But sometimes if you do a blend,

19      you can get the flavor that you want from the

20      actual sugar but reduce the caloric intake from

21      the non-nutritive sweetener.

22             On an unrelated topic -- well kind of

1  related topic, it's kind of the same thing with

2  meat.  We've been doing a lot of research in our

3  department to actually blend vegetables into

4  meat.  And there is one group of people that are

5  trying to make 100 percent vegetable meat

6  analogues but you can put like mushrooms into a

7  hamburger at 50 percent of the total weight and

8  people can't tell the difference.

9          So there are ways I think.  You don't

10  have to go all the way to the extreme.  We can

11  meet somewhere in-between and change dietary

12  patterns and also maybe increase the vegetables

13  since we now know hamburgers are a great delivery

14  source of vegetables.

15          CHAIR SCHNEEMAN:  We have one more

16  question.

17          MEMBER ARD:  It's red but it's

18  working.  Jamy Ard.

19          So this discussion reminds me of some

20  of the conversations we had around the National

21  Academy Study where we talked about the potential

22  -- or not the potential need but a very clear

1   need for inclusion of food science and technology

2   in this type of setting in the Dietary

3   Guidelines.  And I don't know if we are making a

4   running list of like what our next set of

5   recommendations or questions might be for future

6   committees but I think all of the things that you

7   have in the conclusion slide are empirically

8   testable.

9        I really think like the nutritional

10  recommendation might be more effective if focused

11  on foods where the tools exist to maintain these

12  different things.  I mean to me, that is a very

13  strong statement and could be really impactful

14  because I also think about it from a subgroup

15  perspective.  I think about it across the life

16  stage perspective.  Different socioeconomic

17  groups may value convenience and value more than

18  taste, food-insecure individuals, et cetera, et

19  cetera.

20       So to me, I don't know if we're making

21  a running list but I would throw this on the list

22  with also the adjunct that having some more

1    incorporation of food science in this

2    deliberative group to be able to really sort of

3    take the step beyond saying okay, here's what we

4    should do and here's how we should do it.

5    Because otherwise, I think we'll see the same

6    slides that TusaRebecca put up, we'll see that

7    for you know the next 20 years.

8            CHAIR SCHNEEMAN:  Well thank you

9    again, Eric --

10            DR. DECKER:  Sure thing.

11            CHAIR SCHNEEMAN:  -- for a great

12    presentation and stimulating an excellent

13    discussion amongst the committee.  So please join

14    me in thanking Eric.

15            MS. DE JESUS:  Thank you, Dr. Decker.

16    So we have a well-earned break.  This has been a

17    great morning.

18            So we will reconvene at 11:00.  Thank

19    you.

20            (Whereupon, the above-entitled matter

21    went off the record at 10:42 a.m. and resumed at

22    11:02 a.m.)

1          DR. STOODY:  Thank you.  So this next

2     discussion will actually be discussion among the

3     committee and that will be facilitated by Drs.

4     Schneeman and Kleinman.

5          CHAIR SCHNEEMAN:  And I am going to

6     just sit with the committee to do this

7     discussion.

8          So the first thing we want to talk

9     about before the lunch break is the

10    subcommittees' structure and membership that the

11    committee will be using.  And just the bullets on

12    this slide are important for everyone to

13    understand that the purpose of the subcommittees

14    is to review the evidence and provide advice to

15    the parent committee.  And I will remind you

16    again, under the FACA provision, the

17    subcommittees are not the decision-making body

18    but they do function as a working group to bring

19    issues back to the parent committee so that the

20    decision-making of how we are going conclude and

21    make recommendations will be done by the full

22    committee.  But just to get the work done, we

1  have to use subcommittees as working groups.

2  So there are six topic-area

3  subcommittees and then we have one crosscutting

4  working group as well.  And in structuring the

5  subcommittees, we varied the size based on the

6  expected workload for each of those committees.

7  So particularly in the new areas, we anticipate

8  that there will be a significant workload for

9  those subcommittees.  And generally we have tried

10  to target it so that members serve on no more

11  than two subcommittees.

12  So this is the structure.  It may be

13  difficult to read but you have the slide in your

14  notebooks.  So you see across the top the six

15  subcommittees:  Dietary Patterns, Pregnancy and

16  Lactation, Birth to 24 Months, Beverages and

17  Added Sugars, Dietary Fats and Seafood, and

18  Frequency of Eating.

19  And then the crosscutting subgroup is

20  Data Analysis and Food Pattern Modeling.  That is

21  for crosscutting issues.

22  And we've identified a chair.  We've

1    proposed a chair and a membership for each of

2    those subcommittees.  And I guess just so people

3    who are here as observers can know what is on the

4    slide, if you can't read it very well, so the

5    chair for Dietary Patterns will be Carol Boushey;

6    Sharon Donovan is proposed for Pregnancy and

7    Lactation; Kay Dewey for Birth to 24 Months;

8    Elizabeth Mayer-Davis for Beverages and Added

9    Sugars; Linda Snetselaar for Dietary Fats and

10   Seafood; Steven Heymsfield for Frequency of

11   Eating; and Regan Bailey for the Data Analysis

12   and Food Pattern Modeling.

13            And then we have for each of the

14   subcommittees, Dr. Kleinman or myself will be

15   there just as a contact point.  We felt it was

16   important just to maintain the continuity of the

17   work and, as the issues come forward, to help

18   then facilitate the discussion at the committee

19   level for deliberation and decision-making if one

20   of us functions with each of the subcommittees.

21            And then I'm not going to read out the

22   membership for each of the subcommittees but I

1    would now open it to the committee, if you have

2    questions.  And certainly, we can ask some

3    general questions about the subcommittee

4    structure.  And so in some cases, we may need to

5    call on Eve to talk about how they will actually

6    function but also, if you have any questions

7    about the composition or membership of those

8    subcommittees.

9              MEMBER BAILEY:  As the proposed chair

10   for the Food Pattern Modeling and Data Analysis

11   crosscutting group, I am wondering.  It looks

12   like a member of each of the other subcommittees

13   is represented except for Frequency of Eating.  I

14   think it might be beneficial that we have

15   somebody from each of the committees function on

16   that committee but I understand that might also

17   put some people into more than the recommended

18   committees.  But just for your consideration.

19              Regan Bailey -- sorry.

20              CHAIR SCHNEEMAN:  Okay, I understand

21   your point.  And I'm the Chair/Vice Chair

22   Representative for that particular -- so I wind

1      up -- well, no, you [referring to Dr. Kleinman]

2      are the Frequency of Eating.

3                     So yes, let us look at that and see if

4      there is a way we can adjust or if we count on

5      the staff to also help carry forward any issues

6      that come up in the Frequency of Eating Subgroup.

7                     Eve, did you want to comment on that?

8                     DR. STOODY:  No.

9                     CHAIR SCHNEEMAN:  Okay.

10                    MEMBER BAZZANO:  This is Lydia

11     Bazzano.

12                    So is the membership set in stone?  Is

13     it flexible?  I'm just curious.

14                    CHAIR SCHNEEMAN:  I think this is our

15     opportunity to --

16                    MEMBER BAZZANO:  This is our

17     opportunity.  Got it.

18                    CHAIR SCHNEEMAN:  -- if we got it

19     wrong or if there are other things we really need

20     to be thinking about.  Just keep in mind some of

21     those other conditions of not wanting to overload

22     one committee member with more than two.

1          MEMBER DEWEY:  Just to follow-up on

2     that, when there is a certain life stage being

3     discussed within some of the other subcommittees,

4     let's say Birth to 24 Months, there are some

5     questions well, in all of these topic areas, but

6     for example, for the Food Pattern Modeling group,

7     there are some questions related to whether we

8     can establish a dietary pattern for that age

9     group.  And that's a fundamental question.

10          So I'm wondering whether when the

11     subcommittees have conference calls, would there

12     be opportunities when on that particular day

13     they're going to talk about that, could there be

14     additional people from some of the other

15     subcommittees participating just for those

16     questions?

17          CHAIR SCHNEEMAN:  I think -- I know

18     that one of the things we will need to look out

19     for is to make sure that we're always below a

20     quorum.  But we can facilitate -- when it's

21     important that that input be exchanged, I think

22     we can facilitate that.

1        I think, Regan, you were going to

2    follow up.

3        MEMBER BAILEY:  I was just going to

4    propose if I move from Fats and Seafood to

5    Frequency of Eating, that would fix the problem I

6    identified, as one proposed.  Then I would be in

7    that as a subcommittee member for your

8    consideration.

9        CHAIR SCHNEEMAN:  That may be a harder

10   one to consider because we have to make sure that

11   there's enough people on the Fats and Seafood.

12   So yes, we -- let us kind of -- it's basically

13   making sure we have good balance across.

14       MEMBER SABATE:  Yes, could either you

15   or the chair of that Analysis Food Pattern

16   Modeling, what is the specific purpose of this

17   committee and how this relates to the other six

18   subcommittees?

19       CHAIR SCHNEEMAN:  Eve, we haven't

20   looked at questions that are assigned to each of

21   the subgroups yet.  And I'm wondering if we

22   should try to do that before the lunch break,

1  just so people understand how the workload is

2  being distributed amongst the subgroups.

3          Is that possible, do you think?

4          DR. STOODY:  So yes, the questions are

5  at the end divided by subcommittee.  And again,

6  that's proposed.  It's just looking at the topics

7  and questions and then grouping them based on

8  those topic areas.

9          So for the public, they have a Word

10 document that has just the topics and questions

11 that Janet reviewed divided into these different

12 subcategories.

13         CHAIR SCHNEEMAN:  So we are in such a

14 cozy place, I can't turn my notebook.  So if you

15 look in your notebook, it is actually -- if you

16 go in front of the tab that says USDA and HHS

17 staff -- it doesn't have a page -- oh, it's page

18 -- no, that's a date.  Just before that tab.

19         Yes, so there you will see it shows

20 the Food Pattern Modeling and Data Analysis

21 Subcommittee, the data analysis questions that --

22 right -- oh, that's the Pregnancy and Lactation

1    Subcommittee.  Yes.

2              So for each life stage, the following

3    will be described or evaluated:  current dietary

4    patterns, current intakes of food groups and

5    nutrients, nutrients and public health concern,

6    prevalence of nutrition-related chronic disease.

7    How does the dietary intake, particularly dietary

8    patterns -- you can see the list of questions.

9              So there's questions about current

10   dietary intake and nutrients, which is part of

11   our task, beverages, added sugars, frequency of

12   eating, and then food pattern modeling questions

13   around dietary patterns, and infants and toddlers

14   from birth to 24 months.

15              Okay?  Okay.

16              So other questions/comments?

17              MEMBER MAYER-DAVIS:  Beth Mayer-Davis.

18              So we've mentioned a couple of times

19   that there is some overlap in some of the

20   questions and I don't know if this is an

21   appropriate time to make a suggestion or maybe

22   talk about what the process would be to sort that

1  out in the interest of efficiency.  Okay, why

2  not?

3              So for Beverages and Added Sugars

4  Subcommittee, questions 2 through 5 talk about

5  relationship of beverage consumption, either

6  during pregnancy or during lactation, with

7  respect to different outcomes.  And so the

8  question is whether that set would be better

9  placed in the subgroup that is addressing

10  pregnancy and lactation so that the beverage

11  consumption could be considered as part of the

12  rest of the dietary issues for that population.

13              So that's one suggestion of just

14  moving a chunk of questions from one place to the

15  other, which is not exactly because I am trying

16  to get out of some work here but it just seemed

17  like that might be a more efficient way to go

18  with that.  So, just a suggestion.

19              CHAIR SCHNEEMAN:  Carol, you have to

20  make sure your comments are such that they go on

21  the record.  It is a public meeting.

22              MEMBER BOUSHEY:  Yes, this is Carol

1    Boushey.  We probably should hide the microphone

2    from Carol Boushey.  But what we were talking

3    about here is that particular question has very

4    little data; thus, that will be their easiest

5    task to handle.  Thank you.

6             CHAIR SCHNEEMAN:  Well I think what

7    you pointed to is the dilemma that you face in

8    creating the subgroups because the questions do

9    cut across the life span.

10            So I am going to propose that we go

11   forward maybe and include Dr. Dewey's suggestion

12   that, as needed, we can bring someone from the

13   other subcommittee onto the call so there is at

14   least that opportunity for exchange of

15   information, as long as we stay below the quorum

16   level.

17            And then I think as we keep moving

18   forward, we will adapt.  And we can always, at

19   some point, if we need to, we can have a call

20   with the subcommittee chairs just to check in and

21   make sure that you are confident that you are

22   able to keep moving the work forward.

1        Other questions?

2             So we want to move to introduce some

3    topics that we need more consideration from the

4    committee to help guide the work of the

5    subcommittees.  And I think Julie is going to

6    give us an introduction of that.  So you will get

7    the introduction and then you'll be able to

8    digest it over lunch.

9             DR. OBBAGY:  So if you started to look

10   at the questions and you heard Janet's

11   presentation this morning, you probably noticed

12   that many of the questions address the same

13   outcomes in relation to a different aspect of

14   diet.  And in many instances, those questions are

15   addressed in different subcommittees.

16             And so we have highlighted two here

17   today for your discussion:  neurocognitive-

18   related outcomes and cancer-related outcomes,

19   which are two topic areas that we have not

20   addressed very frequently in NESR systematic

21   reviews in the past.  And so I think there would

22   be some benefit to having some discussion amongst

1    the full committee around what outcomes you might

2    consider in those categories.

3                So there are ten, as is noted on the

4    slide, ten questions address the relationship

5    between diet and neurocognitive-related outcomes

6    across the life span.  Three questions address

7    cancer as an outcome.

8                So if you go to the next slide,

9    there's a few sort of guiding principles to think

10   about as you consider which intermediate and

11   long-term health outcomes might be most relevant

12   for neurocognitive and cancer-related reviews.

13   And I think the discussion really would recommend

14   focusing on whether -- and you'll see as I go

15   into the next few slides whether additional

16   outcomes are warranted or are there some outcomes

17   that are -- have been considered previously that

18   may no longer be relevant to consider, always

19   keeping in mind that the outcomes that are

20   included in the NESR systematic reviews used from

21   the Guidelines really need to be those of very

22   high public health significance, which either

1    promote population health or well-being or reduce

2    significant burden of avoidable disease.

3              They may include endpoint outcomes as

4    well as intermediate outcomes.  So it relates to

5    a question that came up yesterday but, generally,

6    for many outcomes, validated biomarkers are

7    included but emerging biomarkers are typically

8    excluded.

9              So those are some sort of discussion

10   questions to keep in mind and then some guiding

11   principles to think about as you might suggest

12   outcomes to consider.

13             Now the next two slides, we have just

14   compiled some of the outcomes in these particular

15   areas that have been considered in previous

16   reviews done by NESR.  So for example,

17   developmental milestones was addressed in one of

18   our Pregnancy and Birth to 24 Months reviews,

19   which Kay actually was a part of that.  And so

20   you can see which outcomes were considered as

21   part of that for the very young age group,

22   although there is a question mark there.  So I

1    think the applicable age ranges for some of these

2    outcomes are something you might consider

3    discussing as well.

4         The neurocognitive development from

5    birth to 18 years of age, those are some of the

6    types of outcomes that we considered when doing a

7    recent review in the Pregnancy and Birth to 24

8    Months Project.

9         And then finally in 2015, the

10   committee did look at a few questions in relation

11   to dietary patterns and the outcomes you see

12   listed on the slide.  So neurocognitive-related

13   outcomes is a very, very broad area.  And for

14   Pregnancy and Birth to 24 Months, in particular,

15   we really cast a wide net.  But I think we would

16   certainly appreciate your input and discussion

17   around this outcome in particular to try to

18   really hone in on those that might be of greatest

19   public health significance in relation to the

20   questions you are addressing.

21        And then when it comes to cancer, in

22   2015 the Advisory Committee did do a systematic

1   review or a series of systematic reviews on

2   dietary patterns in relation to the four cancers

3   you see listed on the screen.  The committee did

4   discuss which ones to select and review and they

5   settled on these four because they represent the

6   four most common cancers in the United States.

7   According to the most current data, these are

8   still the four most current -- or most prevalent

9   cancers in the U.S. but I think it's also sort of

10  up for discussion as to which set of cancers --

11  whether the most common?  Are there other diet-

12  related cancers you might want to put on the

13  list?  Are there some here you might take off the

14  list?

15          So I think this is sort of to tee up

16  a discussion about some of these outcomes that I

17  think are crosscutting in nature and it would be

18  nice to have some consistency around.

19          CHAIR SCHNEEMAN:  So I am wondering

20  if, since cancer was a part of it, do you have

21  information from the scientific review that was

22  done with the last committee of sort of where

1    they -- more in terms of the nature of the

2    evidence that they had available and the specific

3    inclusions they might have made?

4              DR. OBBAGY:  Yes, so there were

5    conclusions drawn.  I believe they were in sort

6    of that strong-moderate range of strength of

7    evidence around breast cancer and colorectal

8    cancer in relation to some dietary patterns.

9    There was a limited body of evidence to draw a

10   conclusion around dietary patterns and lung

11   cancer.  And the conclusion statement for

12   prostate cancer indicated that there wasn't

13   enough evidence to draw a conclusion.  So a grade

14   wasn't assigned.

15             So that's sort of the spectrum that

16   was in the evidence at the time.

17             VICE CHAIR KLEINMAN:  Just to continue

18   on that theme, have you reviewed the cancers that

19   are common in childhood and looked to see whether

20   there are relationships there?  And I am thinking

21   about acute lymphatic leukemia, neuroblastoma,

22   osteosarcoma.

1          DR. OBBAGY:  Yes, so as part of the

2     Pregnancy and Birth to 24 Months Projects, there

3     was a group of experts that looked at a series of

4     questions on human milk consumption.  And one of

5     the outcomes they looked at in that review was

6     leukemia.

7          VICE CHAIR KLEINMAN:  Yes, I wondered

8     if it went beyond that, the human milk

9     relationship to diet relationship in those ages.

10          DR. OBBAGY:  Yes, so that cancer was

11     considered in the project as well.

12          VICE CHAIR KLEINMAN:  Okay.

13          MEMBER BAZZANO:  Are we having a

14     discussion about outcomes right now?

15          VICE CHAIR KLEINMAN:  We seem to be.

16          MEMBER BAZZANO:  This is Lydia

17     Bazzano.  If you could, go back one slide to the

18     neurocognitive outcomes.

19          It is interesting that you have birth

20     to 18 years here and you have a number of

21     outcomes here that you don't include in the 18

22     years and older.  For instance, I see anxiety in

1   there and it's not included in the 18 years and

2   older.  And if you're going to measure depression

3   or look at that, I think you also need to

4   consider if there is any data on an outcome like

5   anxiety.

6             And then also, some of these other

7   important things like working memory, for

8   instance, maybe impaired long before dementia or

9   mild cognitive impairment begins.  So I think

10   that some of those may be useful in the

11   neurocognitive health for 18 years and older

12   individuals as well.

13             CHAIR SCHNEEMAN:  Mainly I wanted to

14   be sure if we needed to clarify anything with the

15   USDA staff about where we were that we could do

16   that now.  I think, given the time, I think we

17   should plan for the discussion after lunch.

18             But no, I think anything you say now

19   is part of the discussion.  So if there were any

20   -- we have two or three minutes.

21             MEMBER MAYER-DAVIS:  This is Beth

22   Mayer-Davis.  So this is an outcome question,

1      although not neurocognitive or cancer.  So just

2      briefly, many of the question sets relate to the

3      outcome of cardiovascular disease.  So I'm

4      assuming that it's a question.  Is there a

5      definition of what exactly is included in

6      cardiovascular disease, with the interest of

7      making sure that across subgroups we are looking

8      at the same outcomes?

9                CHAIR SCHNEEMAN:  That's a good point.

10     We will want to make sure that we are looking at

11     the same outcomes.  And that will be a place

12     where I think the staff and the protocols that

13     they are developing will help us with that.

14                Also to be sure that when it comes to

15     biomarkers, that we are looking at the same

16     biomarkers that are validated for the disease.

17                MEMBER VAN HORN:  And just to that

18     point, I was wondering about stroke, which

19     clearly would also potentially be considered as

20     neurocognitive issues and whether it is included

21     in cardiovascular or somewhere else.

22                CHAIR SCHNEEMAN:  Okay.  So I think it

1  would work best if we adjourn for lunch, at this

2  point, and then we are going to reconvene at

3  12:45.  And as you can tell, we are trying to be

4  very prompt with our reconvene times.

5  So I hope you enjoy the lunch and we

6  will see you in a bit.

7  (Whereupon, the above-entitled matter

8  went off the record at 11:26 a.m. and resumed at

9  12:45 p.m.)

10  DR. STOODY:  So welcome back.  I hope

11  everybody had a great lunch.  Before we get back

12  to the committee's discussion, we did want to

13  just respond to the question that was raised

14  about the outcomes to be considered within some

15  of the outcomes like cardiovascular disease, body

16  weight, type 2 diabetes.  Those are also

17  crosscutting outcomes across a number of

18  questions in the subcommittees but the NESR has

19  done a lot of work in those topic areas in the

20  past, so we have more of a foundation.

21  So as Janet noted, the next step is

22  the NESR is pulling together draft protocols to

1   bring to the subcommittees for the subcommittees

2   to respond to.  So we kind of already have a base

3   for like cardiovascular disease to bring to you

4   all.

5               For the outcomes like neurocognitive

6   health, as well as cancer, those are ones that we

7   just don't have as much foundational work.  So we

8   thought it would be good to have that discussion

9   here today.  Now when those protocols come to

10   you, you obviously have the option to revise any

11   of the outcomes but these are ones we just needed

12   a little bit more foundational discussion.

13              CHAIR SCHNEEMAN:  And I know some of

14   that information will be posted on the website.

15   So if you could maybe let people know when that

16   would be posted.

17              DR. STOODY:  Absolutely.  So, thank

18   you.

19              So at dietaryguidelines.gov, we walked

20   through this yesterday and I will talk a little

21   bit more about this in the closing remarks, but

22   there is a section on dietaryguidelines.gov under

1     Work under Way and it is under the review of the

2     Science Section and there is a list of all of the

3     questions, systematic review questions, as well

4     as data analysis, and food pattern modeling

5     questions.  Once a month, we will update those.

6              So if there is a protocol that comes

7     to the subcommittee that the subcommittee has

8     discussed, once a month we will do kind of an

9     update so the public can see that draft protocol,

10    where it is.  And then in the next month, if

11    there have been revisions, we will update it and

12    note the revisions to that protocol.

13             So the public can follow along in this

14    process, once a month with our monthly updates.

15             CHAIR SCHNEEMAN:  Great, thank you.

16             So we are going move then to the

17    discussion of the neurocognitive outcomes and I

18    have asked Dr. Kleinman to lead that discussion.

19             VICE CHAIR KLEINMAN:  Thanks, Barbara.

20             So I thought perhaps we could start

21    with the neurocognitive outcomes from the 2020

22    Guidelines, and these are up here now, and begin

1    to sort of look at it in that framework, meaning

2    are these still appropriate for the work that we

3    are going to be doing.  Try to fill in the

4    question marks around age.  And are there

5    additional ones that we want to add to this or

6    are some of these not appropriate for the current

7    work?

8                    So I'd like to turn this over to you

9    for your thoughts on it and we will start with

10   the first one, developmental milestones.  I think

11   also that it is important to acknowledge that

12   neurocognitive outcomes are a pretty large set of

13   domains and that they are not easy to measure at

14   all ages, so just keeping that in mind.

15                   MEMBER DEWEY:  Yes, this is Kay Dewey.

16                   For the Birth to Two Years, I'm

17   wondering if we should consider visual acuity as

18   an indicator because it has been measured in a

19   number of studies and it's related to omega-3

20   fatty acid status.

21                   MEMBER BAILEY:  This is Regan Bailey,

22   just following up on that.  I wrote that down and

1    also visual evoked potential, consider them

2    together.

3                    VICE CHAIR KLEINMAN:  Yes, I had that

4    on my list, too.  And we could potentially just

5    put that in retina development or visual function

6    development, I guess, and that will bring all of

7    the ways we measure that, including evoked

8    potentials, as well as the less accurate ones.

9                    Okay, other thoughts?

10                    The question mark there, birth to

11   question years, so in part I think that relates

12   to the tests that we have available to measure

13   cognitive development and age or stage are

14   mentioned there, as well as the Bailey scores.

15   And they do have definitive time periods.  Bailey

16   scores, I think, go up to four and a half, age

17   four and a half.  And the age and stage is a

18   little bit longer.  I think it is around six

19   years, five and a half to six years.

20                    So any thoughts about that?  Linda.

21                    MEMBER VAN HORN:  Not specifically

22   about that but in some of the work we are doing

1 currently with development assets and

2 vulnerabilities around children, and there is

3 some work, I don't know exactly about the scores

4 or the titles of the scores but I know at

5 Northwestern, anyway, there is a strong

6 department that is working on this and it relates

7 to executive function and other behavioral

8 characteristics that are initiated as early as

9 age two. So that is a growing field and that is

10 about all I can say about it.

11 VICE CHAIR KLEINMAN: So I think we

12 would be safe using current measures, ASQ and

13 Bayley scores if we say birth to two years

14 because that is well within the scope of those

15 tests and they are pretty commonly used in the

16 literature.

17 Is there any further thoughts about

18 that?

19 MEMBER DEWEY: This is Kay Dewey

20 again.

21 I just want to make sure that language

22 development is included in people's concept of

1    the developmental indices there because language

2    development during the first two years is a

3    really useful outcome.  Do you think that is more

4    under communication?

5              Oh, receptive and expressive.  They

6    are included within the Bayley but just so we are

7    clear that language development is a part of that

8    domain.

9              VICE CHAIR KLEINMAN:  Okay, then why

10   don't we go from birth to 18 years and talk about

11   that a little bit?

12             One condition that is very prevalent

13   now is attention deficit disorder.  And so I

14   don't know whether that is picked up under

15   executive functioning or whether we need to

16   explicitly ask for that but I wondered about your

17   thoughts.

18             And we could also talk about autism

19   spectrum disorder, since that is also frequently

20   now, rightly or wrongly, tied to nutrition and

21   diet.  So I just put that out there for some more

22   conversation.

1          Anybody want to converse?

2          MEMBER DEWEY:  I agree with you.  I

3    think those domains are really important.

4          There is one listed there called

5    neurological development, which to me is not

6    well-defined.  And I would say that what you

7    described could be called neurobehavioral

8    development.

9          I think we should be pretty inclusive

10   on this list.

11         VICE CHAIR KLEINMAN:  Yes, it seems

12   like we have good agreement on that.  Why don't

13   we recommend that we scratch neurological

14   development?  It meant nothing to me, either, and

15   we are so specific about these other domains, I

16   don't think we're going to lose anything by

17   taking that out.  But let's be explicit about ASD

18   and ADHD, whether they fall into -- as

19   subcategories underneath neurobehavioral

20   development.  We should be able to capture that.

21   Good.

22         And then we move into neurocognitive

1 health 18 years and beyond.  So the first thought

2 was that Alzheimer's disease is a sub-type of

3 dementia.  And so I think it can be explicit but

4 it ought to be specified under dementia.

5 And I don't know who mentioned stroke

6 but I remember hearing that a little while ago.

7 Oh, Linda.  So I think we would want to include

8 all causes of dementia, Alzheimer's disease,

9 stroke, hypertension, and other vascular issues

10 that lead to compromise that way.

11 And someone mentioned working memory

12 earlier.  So do we want to put that on there

13 specifically, in addition to dementia, or is

14 there a way that we can describe that so that

15 when they search, that will come up?

16 MEMBER BAZZANO:  Well, there are any

17 number of the adult cognitive scales that are

18 used to describe relative cognitive function.  So

19 there is -- it's usually some type of combined

20 battery that includes working memory, among

21 others.  There is a paper on which ones are the

22 most commonly used tests.

1          I'm just surprised that there is no

2     testing in there but there is testing in the

3     birth to 18 years.  That is what I was wondering

4     about because it doesn't get anything

5     subclinical.  It only gets you've got dementia,

6     you've got one of these specific things.

7          So is cognitive impairment broad

8     enough to cover those things?

9          MEMBER BAILEY:  So this is Regan.

10          Are you suggesting we put in indicator

11     tests, like the Mini-Mental or the Hopkins Verbal

12     Fluency, those types of things?

13          I think if we want to be specific,

14     like we are in the younger age groups, that makes

15     a lot of sense.

16          MEMBER BAZZANO:  Yes, and I was

17     confused by the cognitive impairment because

18     there is a specific diagnosis, mild cognitive

19     impairment.  So it's not that -- it's not listed

20     as that here and it's also not listed as the

21     test.  So I wasn't sure.

22          MEMBER BAILEY:  Yes, cognitive

1  function would encompass all of that.

2  VICE CHAIR KLEINMAN:  I think

3  cognitive function sounds very good and we could

4  extend that to say cognitive function, as

5  determined by standardized testing.  And then

6  perhaps we could add, e.g., and several of those

7  that you've brought up.

8  So can you just tell us a couple so

9  we've got those in the record and then they'll

10  come back to us?

11  MEMBER BAZZANO:  The Mini-Mental

12  status that Dr. Bailey mentioned.

13  MEMBER BAILEY:  The Hopkins Verbal

14  Fluency.  There's the one where you name so many

15  animals.

16  MEMBER BAZZANO:  That's the Boston

17  Naming Test I think.  There are a wide variety.

18  MEMBER BAILEY:  It's ironic that I

19  can't remember them.

20  (Laughter.)

21  VICE CHAIR KLEINMAN:  I was going to

22  say I'd comment but I think I flunked the last

1      one.

2                    Okay, so I think that's definitely

3      getting --

4                    MEMBER BAILEY:  Digit Substitution

5      Test, the DSST.  I know all the acronyms.  The

6      DSST.

7                    MEMBER LEIDY:  Just a real quick

8      point, we don't list the tests up in the birth to

9      18 years as well.  So I'm just wondering, when

10     you look at it, isn't executive function,

11     couldn't that also be down below with

12     neurocognitive health?  Because they are actually

13     assessing similar components in terms of working

14     memory, planning, goal-directed behavior and

15     within that, you have a lot of those cognitive

16     performance tests that are within that.

17                   VICE CHAIR KLEINMAN:  Yes, so maybe

18     that's another place where we would say cognitive

19     functioning in that first bullet, and then there

20     would be a sub-bullet under -- no -- e.g.,

21     academic performance, I.Q., comma, executive

22     functioning and these other domains.  So that

1    ought to be, I think, folded into those

2    parentheses.

3              MEMBER LEIDY:  Well, I just feel like

4    whatever is in the second one with birth to 18

5    could also be put down with 18 and older to keep

6    it consistent.

7              VICE CHAIR KLEINMAN:  Okay.

8              MEMBER LEIDY:  Because a lot of those

9    outcomes, the indices you would want to put them

10   in the other one below.

11             VICE CHAIR KLEINMAN:  Yes, that makes

12   sense.  So let's change both of those.

13             MEMBER LEIDY:  Just for consistency,

14   I think.

15             VICE CHAIR KLEINMAN:  Yes.  Yes, let's

16   change both in both of those categories, birth to

17   18 and then 18-plus.  Let's make it cognitive

18   functioning and give some examples of the testing

19   that can be done for that.

20             And then underneath it, expand working

21   memory, executive function, academic performance,

22   I.Q., and et cetera.  Great.

1              MEMBER SABATE:  Joan Sabate.

2              I have a semantic comment here.  I

3    think on the second group is related to the

4    cognitive development.  However, in the third

5    one, it is preservation of these.  That's why

6    they use the word health.

7              So this is more related I think to the

8    increasing in whatever functions were required

9    and the third one is the preservation.

10             That's why I am saying is cognitive

11   development in the third category probably is not

12   the best semantics because in the third category,

13   it is talking about clinical entities, not the

14   development.

15             VICE CHAIR KLEINMAN:  So how would you

16   --

17             MEMBER SABATE:  So probably --

18             VICE CHAIR KLEINMAN:  Yes.

19             MEMBER SABATE:  -- besides the

20   clinical entities, I am making another comment.

21             Probably the most common in the third

22   category is the age-related cognitive decline.

1　　So we don't have to wait until a clinical entity

2　　appears to see there is a connection.  It is the

3　　preservation of the condition, whatever it is,

4　　that probably is also relevant.

5　　　　　　　　VICE CHAIR KLEINMAN:  So how would we

6　　say that?  Instead of cognitive impairment, say

7　　preservation of cognitive function or

8　　preservation of cognitive health?

9　　　　　　　　MEMBER SABATE:  That could be a way to

10　　say that.

11　　　　　　　　VICE CHAIR KLEINMAN:  Okay, I think

12　　that's a good point.

13　　　　　　　　CHAIR SCHNEEMAN:  So I'm wondering if

14　　a way to get at your question is you're looking

15　　at risk for impairment.  I think you're looking

16　　at risk for impairment.  So you're trying to get

17　　ahead of the clinical sign and say are there

18　　things that tell me you are now increasing risk

19　　for impairment.  Is that what you're trying to

20　　get at?

21　　　　　　　　MEMBER SABATE:  I mixed two concepts.

22　　I think the cognitive development that was

1    proposed to put here I said the first concept is

2    probably not the best way to do so because on the

3    third paragraph, on the third category, it is not

4    the development.  By development is typically

5    associated with growing, increasing.  On the

6    third one it is more related to preservation or

7    less deterioration.  That's the first, correct.

8              CHAIR SCHNEEMAN:  Yes, that's why I

9    was introducing the concept of risk sort of in

10   that third area.

11             MEMBER SABATE:  Yes.  And in the third

12   area, the typical thing that happens with age is

13   age-related cognitive decline.  So the

14   preservation of the condition, assessing the risk

15   of increasing the decline or accelerating the

16   decline is probably the outcome that we try to

17   measure here.

18             CHAIR SCHNEEMAN:  Right.

19             VICE CHAIR KLEINMAN:  So we actually,

20   perhaps, should just say that, preservation of

21   neurocognitive health as the title of that

22   outcome.  And then we can change cognitive

1    impairment to cognitive functioning and do what

2    we talked about with dementia, Alzheimer's and

3    the other causes of dementia at that age.

4              Does that make it better?  Okay.

5              All right.  So with that, review

6    questions that address neurocognitive-related

7    outcomes, do you want to go through these

8    questions or, now that we have these outcomes

9    specified, should we leave it to each of the

10   working groups to take these outcomes and match

11   them to their categories?

12             And I'm counting the nodding around

13   the table and I think I'm getting consensus.  So

14   anybody who disagrees with doing it that way?

15             CHAIR SCHNEEMAN:  Yes, and I would

16   like to just double-check with the staff.  You

17   can now ask us questions, if something we've said

18   is not clear.  So is it clear what we've agreed

19   to?  Okay, great.

20             VICE CHAIR KLEINMAN:  All right.  I

21   hate to say this but I think we've done it.  All

22   right.  Thank you all.

1      So we are going to move on to cancer.

2      CHAIR SCHNEEMAN:  Yes, we can move on

3      to the cancer.  And as we heard earlier that

4      these are the four most common cancers.  They

5      were what we looked at with the 2015-2020 Dietary

6      Guidelines and they remain the most common.

7      So I think what the staff is asking

8      us:  Do we have the right cancers here?  Are we

9      missing something?  Does something no longer

10     belong on the list?  And so that's what we want

11     the input from the committee on.

12     Carol.

13     MEMBER BOUSHEY:  This is Carl Boushey.

14     And with the increase in ectopic fat,

15     I was thinking we may want to look at liver and

16     pancreatic cancer.

17     VICE CHAIR KLEINMAN:  Yes, I think

18     liver is an excellent idea.  That is probably the

19     most directly-related to body composition and

20     body composition is pretty directly related to

21     diet.  And so that seems to definitely belong on

22     there.

1          I had raised earlier the relationship

2     of childhood cancers and diet.  And I think it

3     was Eve or somebody who mentioned that ALL and

4     human milk or breastfeeding is being looked at in

5     the B to 24.

6          But how about those other cancers that

7     are common in childhood or are the common cancers

8     in childhood, as opposed to these, which are the

9     common cancers in adult years?  And I was

10    specifically thinking about leukemias but, in

11    addition, lymphoma, neuroblastoma, bone tumors,

12    osteosarcoma.  So could we just group those as

13    the relationship between diet and cancers that

14    are the most common in childhood and leave it at

15    that, so at least there is some work to do on

16    that -- some review to do on that?  Okay.

17          All right, so there's consensus for

18    that, too.  So, we'll plan on that.

19          CHAIR SCHNEEMAN:  And of the four that

20    have been listed, do those stay on the list or is

21    there any sense that we don't need to continue?

22          I think what we heard from Julie

1  earlier is that with prostate cancer I think

2  there was just no evidence.  With lung cancer, it

3  was limited evidence.  So keep them on?

4          Is anyone thinking -- does anyone

5  think we should take them off the list?  Let me

6  ask the question that way.

7          So we've made the list longer.

8          VICE CHAIR KLEINMAN:  And again, I

9  think what we don't know is if the literature has

10  come along over the last few years that now

11  perhaps ships the prostate back or one of them in

12  the other direction.  So we probably want to err

13  in gathering more information.

14          Linda.

15          MEMBER VAN HORN:  Just one comment

16  about all of this in the sense that, at least

17  from most of the major overviews of cancer

18  literature, at least from my point of view, it so

19  relates to the development of obesity.

20          And so you know I think as we go

21  forward it is possible that we should recognize

22  that it's that connection, regardless of what the

1   diet composition is it's the energy balance

2   issues that really promotes cancer development in

3   so many ways.  And so, you know, attempting to

4   try to keep that in the back of our heads as we

5   look at these various dietary factors, you know

6   the energy balance question certainly needs to be

7   included.

8               CHAIR SCHNEEMAN:  So that sounds like

9   something that the subcommittee will be wanting

10  to look at.  Is there evidence around the energy

11  balance issue related to the cancers that we've

12  identified?

13              MEMBER BOUSHEY:  Hi, this is Carol

14  Boushey.

15              And really to lay over that is diet

16  quality you know because you can consume 2,000

17  calories and it can be in high diet quality 2,000

18  calories and it can be the lowest diet quality at

19  2,000 kilocalories.  So it is something that we

20  really, I think, need to put into the mix, since

21  that is really our task is dietary guidelines.

22              But I don't want us to lose sight of

1    that as part of this picture that you painted

2    out.

3            MEMBER BAZZANO:  Lydia Bazzano.

4            So I do have one question.  We were

5    talking about colorectal cancer and then we also

6    are mentioning now liver.  Are we thinking that

7    maybe we should consider it as a system, the GI

8    system?  I mean like this is just a question.

9    Yes, colorectal is the most common cancer but

10   others also have associations with certain

11   things.

12           VICE CHAIR KLEINMAN:  I consider

13   myself a recovering gastroenterologist, so I will

14   -- so I think that if we say it that way, that we

15   lose the emphasis on the ones that most make a

16   difference to the population.  And by putting

17   liver in there, we can draw that relationship to

18   obesity because it is one-to-one.

19           And if we do all of G.I. cancers, we

20   bring in heredity cancers.  An awful lot of G.I.

21   cancer is due to polyps, which are hereditary, or

22   syndromes and so on.  So I think in this case we

1 are probably better off being discrete, but just

2 my thinking about it.

3 MEMBER NOVOTNY: Rachel Novotny.

4 So I guess this gets back I think to

5 Heather's question from earlier that really all

6 of -- most of the outcomes we are going to be

7 looking at have an obesity relationship. And so

8 maybe just to note that in the analysis we will,

9 at some point, consider the role of obesity in

10 the modeling. The details of that I don't know

11 that we need to talk about right now but I would

12 think that that would be true with most of our

13 outcomes.

14 MEMBER DEWEY: Just to respond a

15 little bit to your comment, Ron, in the Beverages

16 Subcommittee, there are several questions about

17 alcohol consumption and certain types of cancer.

18 And I just wonder if stomach or any of the others

19 might be -- I don't know enough about this

20 subject. I just wanted to bring it up that

21 alcohol is highlighted in some of the questions.

22 VICE CHAIR KLEINMAN: And so was a

1    thought toward being more inclusive about G.I.

2    cancer.

3              Yes, I guess in that particular case

4    but I would make it specific for alcohol and G.I.

5    cancers.  So I think there to be more focused

6    because we are focusing on one particular toxin

7    or potential toxin.  That seems to make a lot of

8    sense to me.

9              So if everyone agrees, then, in the

10   beverage -- under the beverage topic, we would

11   specifically relate alcohol and broaden the

12   category to G.I. cancers and that would include

13   esophageal, stomach, and lower tract cancers.

14             And I was -- when Rachel -- you must

15   have been reading my mind because as Linda was

16   talking, I was thinking exactly the same thing,

17   that obesity really underpins just about every

18   health outcome that we are talking about here.

19   So we want that probably to be a common thread

20   also.

21             And as we're thinking about this

22   developmentally, that's clearly an important area

1       that is going to come up.  So perhaps if we're

2       thinking about crosscutting themes, that one

3       ought to be in the background all the time.

4                   CHAIR SCHNEEMAN:  Do we have other

5       comments from the committee?

6                   So let me just -- are you guys good

7       for where we are?  Do you have any questions for

8       any of the committee members to how to proceed?

9                   Okay, great.

10                  MEMBER ARD:  I have one.

11                  CHAIR SCHNEEMAN:  Sure.

12                  MEMBER ARD:  Jamy Ard.

13                  So on these cancer outcomes, I know

14      for everything else we are talking about, risk

15      and sort of incidence for cancer are we also

16      going to be thinking about mortality outcomes

17      related to cancer?  Because for example, breast

18      cancer, women who gain weight during treatment

19      have increased risk of mortality and recurrence.

20      So those are some important sort of

21      considerations.  It's not just the dietary

22      pattern in the risk of the disease but it may

1     also be -- I mean what we care about a lot for

2     cancer, obviously, is mortality.

3                    CHAIR SCHNEEMAN:  Right.

4                    MEMBER ARD:  And so would we include

5     or think about outcomes related to death from

6     cancer?

7                    MEMBER TAVERAS:  This is Elsie

8     Taveras.

9                    Or more generally survivorship and

10    that's actually a very good point.  I wonder if

11    that is within the scope.  Particularly I think

12    also with pediatric malignancies is that there is

13    an emerging literature on cancer survivorship and

14    diet.  So I think that would be good to include,

15    if it is within the scope.

16                   CHAIR SCHNEEMAN:  I think the one

17    place that we have to be a little cautious of is

18    you know we've heard repeatedly that we are not

19    looking at clinical guidelines.  So I appreciate

20    what Jamy was getting at but I would think of

21    mortality from cancer as one of the outcomes that

22    would be picked up through the systematic

1    reviews.  But as soon as we start getting into

2    how do you manage a patient with cancer, I think

3    that starts to get into a different question.

4             And we just -- it's not that we can't

5    look at that literature.  I think we just have to

6    be careful -- this microphone doesn't like me --

7    we just have to be careful that we don't sort of

8    trip over and start looking at clinical

9    guidelines, clinical practice for treating.

10            MEMBER BOUSHEY:  This is Carol

11   Boushey.

12            And just a pragmatic comment exactly

13   to what you were saying.  If we were doing

14   systematic reviews, the greatest number of

15   publications would be with mortality and then

16   there is now growing in survival and certainly

17   that would be a path to consider also.

18            MEMBER SABATE:  In response to this,

19   I think the survival issue is perhaps outside of

20   the scope of this committee because I think the

21   scope of this committee is still craft dietary

22   guidelines for the general population, not for

1          the disease population, in general, although I

2          mean it could be with some prevalent issues like

3          obesity or hypertension.  But I think particular

4          dietary advice I mean for people with a specific

5          disease I think is outside the scope of this

6          committee.

7                    CHAIR SCHNEEMAN:  Other comments?

8                    Again, Julie or Eve, do you have any

9          questions for the committee that you would like

10         to ask?  Okay, great.

11                   So I think that's -- is that the end

12         of our formal agenda?  Wow, okay.

13                   So I know Eve has some comments.  I'd

14         like to just see if the committee -- and I know

15         people have flights, so we are going to start

16         losing people.

17                   So Kay, I'm going to catch you first,

18         before you walk out the door.  Just it was very

19         helpful yesterday just to have the committee's

20         perceptions, questions, and comments, not that

21         we're going to get responses to everything right

22         now, but it would be useful if we could do that

1   again.

2              So before we lose everyone, I would

3   like to do that.

4              MEMBER DEWEY:   Thank you, Barbara.

5   Kay Dewey.

6              So actually the one point I wanted to

7   raise, I had a very useful lunchtime conversation

8   around some of the practical issues for the B to

9   24 Subcommittee.  And as I brought up earlier,

10  there are some questions for the other

11  subcommittees and we want to work closely with

12  those on them.

13             But in particular, on our list of

14  questions in sort of the middle group, there are

15  several outcomes, including body composition and

16  growth, and bone health, and nutrient status but

17  not developmental outcomes.  And this has to do

18  with four nutrients:  iron, vitamin D, omega-3,

19  and vitamin B-12.  And we saw in another

20  subcommittee for the Fats and Seafood that the

21  relationship between various types of dietary

22  fats and neurodevelopmental outcomes was part of

1      that at every stage of the life cycle.

2                  So we just wanted to sort of flag

3      that.  That's something that is very, very

4      appropriate to one of the areas that we need to

5      also explore.

6                  So it's just a general issue that,

7      hopefully, the subcommittees can sort of discuss

8      amongst themselves that maybe some questions will

9      get kind of handled over here and others over

10     there, depending on the life stage that is in

11     question.

12                 So that was the main thing I wanted to

13     bring up.

14                 MEMBER BAZZANO:  Lydia Bazzano.  So in

15     terms of the dietary patterns, I did have a

16     question that was related to the questions as

17     listed here.  On the Dietary Pattern

18     Subcommittee, the list of dietary patterns

19     includes Mediterranean style, Dietary Approaches

20     to Stop Hypertension, DASH, vegetarian/vegan, low

21     carbohydrate diets, comma, and high-fat diets.

22     And I am wondering if they are separate -- those

1     are two separate things or what kind of high-fat

2     diets are we talking about?  That's usually a low

3     carbohydrate diet so I just didn't know if that

4     was two separate things.  So I'm just wondering.

5                     CHAIR SCHNEEMAN:  Yes, so we'll just

6     collect the questions and then we can maybe, as

7     part of the closing, we can have those addressed.

8                     MEMBER MATTES:  I guess I'd raise two

9     issues or questions to keep in mind.  Again, when

10    we talk about patterns, dietary patterns, we've

11    put an emphasis on foods and nutrients but I

12    think we really have to talk about temporal

13    patterns as well.  We have eating frequency as

14    one of our big questions and I think we have to

15    integrate across those.

16                    The other is I fully endorse the idea

17    of having obesity as sort of a covariate in

18    everything that we do but does that raise then

19    the question of should we be thinking about

20    macronutrients, specifically, in each of these

21    roles or is it just obesity?

22                    CHAIR SCHNEEMAN:  We're going to go

1    around.  You'll get another turn.

2                MEMBER NOVOTNY:  I'm Rachel Novotny.

3                The thing I've been thinking most

4    about is in most of the questions, as phrased,

5    combine -- well, let me back up.

6                Coming from the perspective of not

7    having the birth to 24 months in the Dietary

8    Guidelines, I think we've been very food-focused,

9    which is the main point.  But going now to the B

10   to 24 age group, most of the questions treat

11   breastfeeding and formula feeding equivalently.

12   And I think it's going to be really important

13   that we find some ways to look separately at the

14   outcomes that involve breastfeeding separate from

15   those of formula feeding.

16               I think NHANES has them combined so

17   that probably won't be our source.  We'll

18   probably need to look to other literature.  But I

19   think it is a really critical piece of what this

20   next phase should include.

21               MEMBER VAN HORN:  And I would go along

22   with Rick and what I said earlier.  I do think

1    prevention of obesity is a key factor for

2    everything that we're discussing and really does

3    need to be infiltrated across all of these

4    questions, as far as a number one public health

5    benefit that would be derived by, potentially in

6    regard to what Carol was saying, a higher quality

7    diet and regardless of exactly what the

8    macronutrient composition is, since we all are

9    aware that the emphasis on healthy fats are good

10   for you and all of that, I think there is huge

11   confusion out there in regard to low fat, high

12   fat, carbs, whatever.  And so to try to be able

13   to distinguish exactly what is being recommended

14   and why I think would be valuable.

15            I also think the only other comment I

16   would make based on what Rachel was just saying

17   is the opportunity also to look at pregnant women

18   and breastmilk quality and their diet

19   relationships does also introduce another whole

20   new topic area that is under-studied and if there

21   are data out there that would help to promote a

22   type of diet during pregnancy that is in fact

1  beneficial for childhood/infant development, I

2  think this would be a wonderful time to start

3  that search.

4          MEMBER TAVERAS:  So Elsie Taveras.

5          Linda asked one of the questions I

6  had, which was really the question of looking at

7  dietary.  So we, under the Pregnancy and

8  Lactation Subcommittee, there are a number of

9  questions on dietary patterns consumed during

10 pregnancy with pregnancy outcomes but not with

11 infant outcomes.  And that is something that

12 Linda just mentioned, which I think would be

13 important to expand a bit on some of the infant

14 outcomes of pregnancy dietary patterns.

15         I had two other questions and they

16 relate to a potential expansion of what we are --

17 what is under each of the subcommittees which

18 could be answered later.  One of my questions was

19 under the Subcommittee of Frequency of Eating.

20 And I wondered if timing of eating -- and I think

21 the question came up yesterday of kind of

22 circadian-aligned or circadian-misaligned timing

1    of eating is going to be addressed there.  And

2    again, I don't need an answer now but I thought

3    that timing, in particular, in addition to

4    frequency might be important.

5              And then the other question I had

6    under the Birth to 24 Months Subcommittee was a

7    question about complementary feeding.  And again,

8    the questions relate to the relationship between

9    complementary feeding and a number of outcomes

10   but I wondered how much we are going to drill

11   down to the questions about composition and

12   sequencing of introduction of different foods.

13   It does expand quite a bit that section of the

14   subcommittee's questions but something also that

15   I was wondering as I looked at the complementary

16   feeding questions.

17             VICE CHAIR KLEINMAN:  Just on the

18   complementary foods, it just reminded me that the

19   definition that, was it Julie -- yes -- mentioned

20   where you expand all across childhood up to age

21   18 -- did I misunderstand?  You didn't.  Two

22   years, okay.  Because it is much more narrowly

1     understood and in fact it is really only in that

2     first -- second six months of life or second

3     eight months of life that typically we talk about

4     complementary feeding.  And it is really intended

5     as a complement to the single food that an infant

6     starts off on and then the diet broadens.

7               So if it was up to me, I would

8     probably restrict it down to let's say ages four

9     months to one year for complementary feeding and

10    then not think about it after that.

11               Thank you.

12               MEMBER SNETSELAAR:  This is kind of a

13    logistics question.  We've kind of brought up a

14    variety of concepts that are related to

15    crosscutting issues.  And I just want to be sure

16    that, as a committee chair, I keep that in mind

17    and I'm sure the wonderful people I will be

18    working with will help me with that but several

19    have been brought up and I know they can relate

20    to the subcommittee that I am a part of.

21               So just making sure maybe there is a

22    mechanism in place for that.

1          MEMBER SABATE:  I have a question for

2  consideration.

3          In several dietary guidelines of other

4  countries, they are now seriously considering the

5  issues of sustainability.  I know a little bit

6  what happened five years ago.  Nevertheless, as

7  you know, I mean food consumption is a measure

8  driver of the food system and the food system has

9  an impact not only on the health of the

10  population but the health of the planet.  And it

11  is necessary a healthy planet to continue

12  producing food.

13          So given the relevance of this issue,

14  I wonder if, despite what happened five years

15  ago, I mean if you, as a scientist, consider that

16  that is relevant, I mean to at least put on the

17  table and give some consideration, despite the

18  outcome that may happen in two years.

19          But I say, as a scientist, I mean I

20  think we have the responsibility to think

21  seriously about this issue and probably again try

22  to incorporate into our recommendations.

1          CHAIR SCHNEEMAN:  We're going to keep

2     going.  And things that we can comment on, we

3     will, but others -- many of the topics being

4     raised I think go into thinking about how we

5     structure the work.

6          MEMBER DAVIS:  This is Teresa Davis.

7          So under the Birth to 24 Months group,

8     we have looking at the relationship between

9     specific nutrients from supplements and bone

10    health and looking at the relationship between

11    complementary feeding and bone health because we

12    are well aware the importance of building bone

13    during early life.  So basically, we can stave

14    off osteoporosis and osteopenia later in life but

15    I think we need to also remember that building

16    muscle in early life is important in staving off

17    sarcopenia.

18          So I think you know we need to keep

19    that in mind, particularly when we are looking at

20    body composition.  And so when we look at body

21    composition, we think of lean mass, and fat mass,

22    and so forth but it is not only just lean mass

1  but the function of the lean mass, the muscle as

2  well.

3  MEMBER LEIDY:  This is Heather Leidy.

4  The same thing.  I just wanted to

5  reiterate that and I think that when we're

6  thinking about sarcopenia or the progression or

7  the prevention of muscle health, what that looks

8  like, whether it is functionality or even the

9  quality of the muscle.  We get that with body

10  composition from a total lean mass but it doesn't

11  mean that the quality of the muscle is healthy.

12  And so I think, if it is possible

13  within our realm of looking at that, because it

14  is body composition is across the board but you

15  don't really see -- we see bone health but we

16  don't see that with muscle health, which is a

17  critical component.

18  And then another comment to what Rick

19  had said, too, in terms of you know a lot of

20  these different areas there are some

21  macronutrient questions that could be teased out

22  very easily, whether it is with beverages or

1    eating frequency.  And I don't know if the

2    committee has the ability to do that.  It is a

3    direct sub-question around the global question.

4    If that is the case, though, I guess my question

5    is, is that something that the committee as a

6    whole within each subcommittee would want to

7    tackle because it is -- I think the concern that

8    I have is that if we do it in, for example,

9    beverages as an example, that's maybe well and

10    good but then if it's not translated then across

11    the other topics, it's going to seem awkward that

12    maybe one topic is talking about macronutrients

13    and the other ones aren't.

14          So I just don't know if that is a

15    discussion for the committee in terms of if we

16    think it is relevant within some of these to

17    focus on macronutrients, to have that

18    conversation.  I know for beverages or eating

19    frequency, some of those components may end up

20    driving that.  So whether that ends up gong in

21    the systematic review or not, I think it's a

22    relevant topic.

1          Just a concern.

2          MEMBER STANG:  Jamie Stang.

3          One comment about lactation I think.

4    I know we are going to be looking at quantity and

5    quality -- or quantity and composition of human

6    milk but making sure that we have a consistent

7    way of capturing mixed feeding and intensity of

8    lactation because the literature can be a mess

9    and we need to make sure that we do that

10   thoughtfully.

11          And then a question that I apologize

12   for not bringing up earlier but it just occurred

13   to me, we didn't discuss cancer recurrence.  And

14   I know that there is kind of that fine line

15   between the disease state and not but whether or

16   not that is something that we would want to

17   consider within our cancer questions.

18          MEMBER BOUSHEY:  Carol Boushey.

19          And I don't really have a lot to add.

20   I've really appreciated the comments up to this

21   point and I'm sure the others will be really

22   great, too.  But I want to respond to Rick's

1    comment.  He brought up this idea of frequency of

2    eating and he said I hope that's temporal

3    patterns, too.  And then we also heard timing of

4    eating.

5                And maybe I missed the memo but that's

6    what I thought frequency of eating was.  And I'm

7    on that committee.  So I will work to make sure

8    that is blended in there.  Thank you.

9                MEMBER BAILEY:  Regan Bailey.

10               Just building on that, one of the

11   things that I wrote down specific for that

12   committee is what is an eating occasion.  So it

13   is very difficult to define what is a snack, what

14   is a meal.  In NHANES, it is participant-defined

15   but in other trials, it may be different.  So we

16   will need to standardize the language in working

17   under that topic area.

18               And I think it's great that we talked

19   about the important influence of obesity as a

20   crosscutting issue across a lot of these

21   committees but there are other factors like blood

22   pressure, physical activity, educational

1    attainment that will greatly influence

2    neurocognitive questions that we have.  So we

3    might want to also consider those within that

4    lens, as well.

5              MEMBER ARD:  Jamy Ard.

6              So I'm going to sort of pick up on the

7    obesity thing a little bit and ask or talk out

8    loud about the idea of framing it more from an

9    energy balance standpoint and having a unifying

10   sort of approach across the subcommittees in

11   terms of dietary patterns or various exposures in

12   the context of an energy balance in being able to

13   think about obesity is the consequence of energy

14   and balance.

15             And so if we look at a dietary pattern

16   in that state versus someone who may be consuming

17   the same dietary pattern but in an excess calorie

18   state, that may have different implications.  And

19   so in our literature, we need to be able to

20   clearly help people understand that have a

21   consistent framework across the groups because

22   those macronutrient profiles and so forth will --

1       the implications of that will vary based on

2       energy balance state.

3                   MEMBER MAYER-DAVIS:  It's Beth Mayer-

4       Davis.

5                   So just picking up on this a little

6       bit, I actually do think it's really important if

7       we could think through our overall approach

8       relative to obesity because obesity is actually a

9       mediator with regard to diet and not all of the

10      other outcomes we are speaking of but many of

11      them -- most of them.

12                  So I'm imagining and you know when you

13      think about this from a public health perspective

14      and the percent of the population, including

15      young children, adolescents throughout the life

16      cycle -- let me stop short.  Dealing with

17      sarcopenia is another issue.  But this is such a

18      major public health problem and it has been for

19      so long and I'm thinking that if we can think

20      about this overall frame not six months from now,

21      but whenever we are thinking about writing, but

22      sooner than that because it might help our

1       thinking in terms of coherence, both within and

2       across the subcommittees.

3               And I have a -- this is much less

4       interesting but you know as a practical issue, I

5       just don't know if today we are going to do a

6       little bit of conversation about logistics and

7       what sort of the process, the expectations, you

8       know how do we move forward in terms of

9       subcommittees getting activated and you know that

10      kind of stuff.  We're going to do that later?

11      Okay.

12              CHAIR SCHNEEMAN:  I think Eve will

13      speak to that.

14              MEMBER MAYER-DAVIS:  She'll give us

15      marching orders?

16              CHAIR SCHNEEMAN:  Yes.

17              MEMBER MAYER-DAVIS:  Good.  Okay.

18              MEMBER HEYMSFIELD:  Steve Heymsfield.

19      I had a few questions.

20              One is I am chair of the Frequency of

21      Eating group and has there been something on that

22      written already?  Are we building on something or

1  is this a new topic?

2             You might be able to answer that.  No.

3  Okay, so it's starting from zero.  Okay.  All

4  right.

5             And a few other minor things.  To the

6  extent that the food patterns are evaluated using

7  new cutting-edge techniques like artificial

8  intelligence, deep learning, I think all of those

9  techniques are coming online very fast and I was

10  just wondering to the extent they will be used

11  moving forward.

12             And I was wondering about the

13  boundaries of our evaluations.  Do we include

14  antibiotics in foods, hormones, chemical

15  disrupters, and things like that that often

16  travel with food?

17             CHAIR SCHNEEMAN:  I mean I think those

18  are good clarifying questions.

19             MEMBER HEYMSFIELD:  Yes, and ultra-

20  processed food versus and so on.  All of those

21  questions I think are very topical.

22             CHAIR SCHNEEMAN:  Yes.

1          VICE CHAIR KLEINMAN:  So I will throw

2    in one last minute grenade here, a small one, and

3    ask another crosscutting issue that is very

4    important in public health is food insecurity and

5    it crosscuts this issue of time of eating,

6    frequency of eating, quality of diet, significant

7    health consequences of it, behavioral as well as

8    physical.  And so I don't know whether I'm

9    pushing for systematic reviews on this but I know

10   that the least I think that we should do is to

11   make sure that that appears in our discussion as

12   often as we can.  And it's not in an effort to

13   balance the discussion about obesity.  It's

14   really in addition to this issue of obesity so

15   that it doesn't get lost.

16          CHAIR SCHNEEMAN:  Great.  Well, these

17   are excellent issues to have brought forward.

18   And I think some of them will be addressed as the

19   work groups start putting their work together and

20   start working with the staff but we will be able

21   to sort out how do these various things fit in or

22   cut across the work groups.

1            But I think some of them we can ask

2    Eve and maybe Julie to help clarify.  So why

3    don't you all -- and Janet, yes?

4            And I was trying to identify things

5    that I thought could be questions clarified in

6    this format.  I think I've captured a lot of the

7    issues, if I can read my own handwriting.  You

8    know for example, one of the questions was about

9    how do we interpret the question on low

10   carbohydrate/high-fat diets.  I mean that is a

11   simple question about the question itself.  How

12   are we interpreting that?

13           MS. DE JESUS:  I think, in general, we

14   are looking at any dietary pattern evidence that

15   is available.  So I mean low carbohydrate could

16   be high-fat or some people do higher proteins.

17   So there is really different variations.  So we

18   are kind of open to whatever different types of

19   macronutrient patterns that are found.

20           CHAIR SCHNEEMAN:  Well and maybe while

21   you are there, you could address the questions

22   that kind of came up about looking at the

1  macronutrients versus the foods and how you see

2  that playing out in the various questions.

3           MS. DE JESUS:  Right.  So I think that

4  will, again, come in the dietary pattern

5  evidence, so where the evidence is available on

6  those outcomes.  We will definitely take a look.

7           CHAIR SCHNEEMAN:  Okay, great.

8           And I think there were some questions

9  about infant outcomes in looking at pregnant

10  women.  So is that something we can address now,

11  as far as --

12           MS. DE JESUS:  Sure.  Let me see.

13           So I believe there was a question on

14  -- there was on a milk composition, which is in

15  here, on the mother's diet and breast milk

16  composition.

17           And what was the other infant outcome?

18           CHAIR SCHNEEMAN:  Yes, the other one

19  was it seemed like a lot of the outcomes were for

20  pregnancy and you were asking what about infant

21  outcomes based on dietary intake during

22  pregnancy.

1          MS. DE JESUS:  So we have -- yes, I

2    mean we're welcome to add, if we don't have the

3    outcomes that you are looking for.  We do have

4    birth weight, gestational age, sex but we can

5    work on this in the protocol stage, definitely,

6    because we know that is an important output.

7          CHAIR SCHNEEMAN:  Okay.  And then

8    there was a question about the time period that

9    was selected for the complementary feeding --

10          MS. DE JESUS:  Right.

11          CHAIR SCHNEEMAN:  -- going all the way

12    to two years.

13          MS. DE JESUS:  Right.

14          CHAIR SCHNEEMAN:  So is that something

15    that you want the subcommittee to look at, that

16    time period?

17          MS. DE JESUS:  Yes, and I think the

18    thought was that some women nurse past 12 months,

19    so there's not really a -- and I know some go

20    past 24 months as well.  But definitely, the

21    subcommittee can take that on if they want to

22    refine it.

1           CHAIR SCHNEEMAN:  Okay, great.

2           And we had the question about

3   introducing new topics, such as sustainability,

4   that aren't part of the topics and questions.

5   And I don't know whether, Janet, you want to

6   address that or Eve, do you want to address that?

7           MS. DE JESUS:  Yes, it's similar to

8   what we've said before.  You know we've kind of

9   laid out the major topics but if there is

10  something that you would like to address in the

11  report, the committee is welcome to do that.

12          CHAIR SCHNEEMAN:  Right but it might

13  be that we've identified something as important

14  for the future --

15          MS. DE JESUS:  Right.  Right.

16          CHAIR SCHNEEMAN:  -- or something that

17  we would like the Secretaries to consider.

18          MS. DE JESUS:  Absolutely.

19          CHAIR SCHNEEMAN:  Okay.

20          DR. STOODY:  Yes and just to add, the

21  committee is asked to limit its review of the

22  evidence to the topics and questions that were

1    identified by the departments that had the public

2    and federal agency input.  So the systematic

3    review support, the Food Pattern Modeling, all of

4    those pieces, limiting the review of evidence to

5    those topics and questions.

6            But yes, to your point, is there, what

7    we've discussed before, you know places in the

8    report to speak to things that are also important

9    to consider.

10           CHAIR SCHNEEMAN:  Right.

11           DR. STOODY:  That other topics can be

12   relevant there.

13           CHAIR SCHNEEMAN:  Okay and certainly

14   within this committee, I don't think we have the

15   expertise directly but that's another thing we

16   can think about.

17           I think the cancer recurrence, that

18   might be, again, we have to be careful to not dip

19   into clinical guidelines and clinical practice.

20           And then Steve asked a set of very

21   focused questions right at the end and we know

22   frequency of eating is new.  What about

1      techniques, newer techniques around food

2      patterns?  And what about some of the other

3      factors that show up in foods?  How should we be

4      thinking about those issues?

5                  MS. DE JESUS:  So I think there was --

6      so whatever is available in the evidence, as far

7      as I think the techniques for measuring food

8      intake, I mean if that is a technique that is

9      used in the evidence you know, definitely.

10                 MEMBER HEYMSFIELD:  I was thinking

11     more of the analysis methods --

12                 MS. DE JESUS:  The analysis, yes.

13                 MEMBER HEYMSFIELD:  -- like deep

14     learning, artificial intelligence is coming

15     online very, very fast.

16                 MS. DE JESUS:  Right.  Now that's

17     extremely interesting.  That's probably on the

18     like the methodology side, which would be outside

19     the scope but very interesting.  And you know

20     happy to -- you can touch on it in the report --

21                 MEMBER HEYMSFIELD:  Yes.

22                 MS. DE JESUS:  -- and research gaps or

1  you can list it there.

2  CHAIR SCHNEEMAN: So are there some

3  other questions that I didn't bring up that you

4  all captured in your notes that you thought we

5  could address at this level?

6  DR. OBBAGY: I heard a number of

7  people mention factors that are going to be

8  important confounders, mediators, moderators,

9  covariates, that sort of thing, and certainly

10 part of our systematic review process will be to

11 have a very thorough discussion up front about

12 all of those different factors, many of which

13 you've mentioned here, and others that we need to

14 really take into consideration as we start to dig

15 into the evidence and really evaluate it.

16 So all of those kinds of things that

17 got mentioned I think are very important to the

18 process.

19 CHAIR SCHNEEMAN: And we didn't

20 address the last question about some of these

21 other factors in foods, such as antibiotics, what

22 all did you list?

1          MEMBER HEYMSFIELD:  Chemical

2   disruptors, hormones.

3          CHAIR SCHNEEMAN:  Yes.

4          MS. DE JESUS:  That's probably out of

5   scope but I mean for the systematic review.

6          CHAIR SCHNEEMAN:  Yes, I think in

7   general, those are food safety issues --

8          MS. DE JESUS:  Yes.

9          CHAIR SCHNEEMAN:  -- which --

10          MS. DE JESUS:  Out of our lane.

11          CHAIR SCHNEEMAN:  Yes.

12          MS. DE JESUS:  Yes.

13          CHAIR SCHNEEMAN:  We're going to have

14   a robust other items in the report.

15          MS. DE JESUS:  It's going to be big.

16          CHAIR SCHNEEMAN:  So were there any

17   other items that you had identified that we -- I

18   think some of these will have to be addressed as

19   the subcommittee looks at the protocol and begins

20   to refine that but some that I thought we could

21   deal with here, we might as well.

22          DR. STOODY:  I will add one final

1  comment to Dr. Bazzano's question about the types

2  of dietary patterns.  I think the intent -- when

3  you see the protocols, you'll see that the

4  systematic review protocol, it casts a wide net.

5  And we found in doing reviews over time that the

6  labels are really tricky, you know if it's low

7  carb or high fat.  I mean what does that really

8  mean?  And so in those reviews it's often you are

9  getting into the foods and beverages, or the

10  macronutrient composition, or those different

11  elements.

12            So I think it's we listed a list of

13  potential dietary patterns to consider but I

14  think it's casting a wide net, and then looking

15  at the evidence base to identify those that are

16  the relevant ones to include.  And yes, it is the

17  labels.  I mean it is hard to define just with

18  the label of the pattern.

19            So I think that will kind of flesh out

20  more, once you see the protocol.

21            CHAIR SCHNEEMAN:  Great.  Thank you

22  all for addressing those questions.

1             So Eve, I will turn it back to you for

2      the wrap-up.

3             DR. STOODY:  Excellent.  Okay, so

4      thank you.  I want to start off by just again

5      saying thank you to the committee.  When we

6      wrapped up yesterday, a colleague of mine said I

7      hope they come back.  So thank you for coming

8      back.

9             (Laughter.)

10            DR. STOODY:  I know that we've made a

11      big ask.  It is -- you know this is a lot of

12      work.  And several of you have been here before

13      or your colleagues have told you it's a lot of

14      work.  So we just want to thank you again.

15            I hope that you've seen, over the

16      course of the last two days, that you are not on

17      this alone.  You know you have a lot of support

18      who can help you and help you to accomplish your

19      goals.

20            In terms of immediate next steps, each

21      of the subcommittees has specific subcommittee

22      staff who will assist you in literally logistics,

1  you know getting calls on the books and things

2  like that.

3          If you haven't met your respective --

4  the staff are going to meet their respective

5  subcommittee chairs.  If that hasn't happened

6  yet, let's do that after the meeting, just touch

7  base to make sure you have that connection.

8          So immediately we would like to begin

9  those subcommittee discussions.  So our staff

10  will help you to set up -- work with you, the

11  subcommittee chair, and then subsequently, the

12  subcommittee members to set up those calls and

13  help with logistics.  And we'll just get the ball

14  rolling pretty immediately.

15          And as has been discussed, what will

16  happen is a discussion around the questions that

17  are identified for each of the subcommittees.

18  One of the things that will happen, I think it

19  will kind of vary, but bringing up former

20  systematic reviews that have been done by the

21  Nutrition Evidence Systematic Review Team that

22  relate to these topics and questions, and also

1      bringing forward draft protocols.

2                And so those protocols will be brought

3      to the subcommittees to refine, review, adapt,

4      but you will start with something.  It is not a

5      blank protocol.  We will provide something that

6      you then react to, and refine, and make the

7      subcommittee's.  So that will be -- those are

8      kind of the immediate next steps.

9                Now, thanks everyone for being here.

10     Meeting 1 is done.  We have four more public

11     meetings and I presented these yesterday but if

12     you weren't able to be here, these are the dates

13     for the remaining four meetings and we hope that

14     you can schedule and plan to be there.

15                The next meeting is in July and we

16     hope to see you there.  That will have an

17     opportunity for oral comments to the committee

18     and there will be more information about that, as

19     we get closer to that meeting.  And again, the

20     second and the fourth meetings will have that

21     opportunity for public comment -- oral public

22     comment to the committee.

1           Registration for those meetings,

2      again, will be announced at our website and then

3      through our LISTSERV.

4           And just one final note, again for

5      those who were not here yesterday, the fifth

6      meeting we have scheduled for March.  We have

7      asked for the committees to submit its report in

8      May.  So that last meeting is really the

9      discussion bringing all the final deliberations,

10     findings to that last meeting but there is some

11     time after that to finish the report and submit

12     it in May.

13          Okay, so as the subcommittees conduct

14     their work, so from now until July, there will be

15     the opportunity for the public to follow along.

16          As we've noted now several times,

17     dietaryguidelines.gov is a great go-to source for

18     information on what's happening in the process.

19     Two key pieces there is that there will be

20     monthly updates around the subcommittees' work.

21     So there will be brief subcommittee updates,

22     giving you an update on what has been happening

1 over the course of the month.  And that will also

2 be the time that we will update the protocols for

3 the different scientific questions.

4            So again, if you go to

5 dietaryguidelines.gov, the way to follow that is

6 to go to Work Under Way and then to the Review of

7 Science Section within that.  And here you can

8 see the link for the topics and questions to be

9 examined by the committee.  And that's where we

10 see that list of questions.

11            And you can follow along, see which

12 ones are still to come.  If there is not

13 something there, it just hasn't been addressed by

14 the subcommittee -- the committee yet.

15            And then developing the plan,

16 implementing the plan, and having a draft

17 conclusion.

18            And again, we encourage you to follow

19 along and stay engaged.  There is at the bottom

20 of dietaryguidelines.gov a link to sign up for

21 our LISTSERV and that is a great way.  We

22 definitely will continue to send out

1    notifications as to what is happening and so that

2    you can follow along.

3                Now in addition to thanking the

4    committee, I do want to acknowledge that there

5    are a lot of staff involved in helping to make

6    this happen.

7                You've heard a number of these

8    individuals identified supporting the review of

9    the evidence phase.  So we have a Systematic

10   Review Team.  We have teams devoted to food

11   pattern modeling and data analysis.  There are

12   also a lot of other people engaged who will be

13   helping you with public comments, who help with

14   the website, who kind of help with the other

15   elements that are involved in the committee's

16   work.  And we just want to give a huge thank you.

17               Part of that also includes making

18   meetings like this happen.  And you know, we

19   don't have meeting planners.  We have

20   nutritionists who become meeting planners.  And

21   so I do want to just give a quick shout out to

22   Colette Rihane and Jean Altman, who really did

1    led up the logistics for making this meeting

2    happen.

3             So overall, just thank you and these

4    are people who have helped us to get to this

5    point, people who are going to help us to get to

6    the next meeting, and beyond.  So just thanks for

7    that.

8             And again, just acknowledging that

9    there is really -- this is something that both

10    departments, USDA and HHS -- you know, it is very

11    important.  And we appreciate your time and the

12    dedication of the staff as well.

13             So with that, unless there are any

14    final questions or comments --

15             CHAIR SCHNEEMAN:  I would just make a

16    comment that yes, I like having that tick-off on

17    the first meeting and I do want to express my

18    appreciation to the committee members for being

19    here, for raising questions, for bringing forward

20    issues so that we can, in fact, do our work and

21    make sure we come to the point where we are

22    making recommendations that are useful to the

1  government.

2          And a big thank you to the staff.  I

3  think they've made our time very easy and really

4  facilitated this process.  So, thank you very

5  much.  Thank you for the presentations and thank

6  you for everything to put it all together.

7          VICE CHAIR KLEINMAN:  Ditto.

8          DR. STOODY:  Well thank you.  And

9  thanks to everyone who joined both in-person and

10  online.

11          And again, we will have meeting

12  materials posted in the next couple of weeks and

13  we look forward to seeing you in July.

14          Thank you.

15          (Whereupon, the above-entitled matter

16  went off the record at 1:57 p.m.)

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Advisory Committee Meeting

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Place: Washington, DC

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_____
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