

Subcommittee 3:

Diet and Physical Activity Behavior Change



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Scope

- Dietary/physical activity (PA) behaviors
 - Motivators/facilitators/barriers
 - Recommended dietary and PA behaviors
 - Interventions to help people improve adherence to dietary and PA recommendations
 - Models of individual and small group dietary and lifestyle behavior change interventions:
 - Behavior change strategies and intervention characteristics
 - Innovations in modes of intervention for individual dietary and lifestyle behavior change

Scope

Contextual Factors

Acculturation

Household Food
Insecurity

Behaviors

Family Shared Meals

Eating Out

Food and Menu Labeling

Sedentary Behavior

Self-monitoring

Sleep Patterns

Outcomes

Diet, Physical
Activity

Weight/
anthropometry
outcomes

Chronic disease risk/
biomarkers

Key Topic Areas

- Presented in July
 - Acculturation
 - Mobile Health
- Presented in September
 - Household Food Insecurity
 - Family Shared Meals
 - Eating Out
 - Sedentary Behavior
 - Self-monitoring
 - Sleep Patterns
- Presenting in November
 - **Food and Menu Labeling**

Invited Experts and Consultants

Invited Experts

Individuals invited by the SC, usually on a one time basis, to provide their expertise to inform the SC's work. Invited experts do not participate in decisions at the SC level.

Consultant SC Members

Individuals sought by the SC to participate in SC discussions and decisions on an ongoing basis but are not members of the full DGAC. Like DGAC members, consultants complete training and have been reviewed and cleared through a formal process within the Federal government.

Experts and Consultants

Invited Experts (Sept to Nov 2014)

- Marie-Pierre St-Onge, PhD, FAHA
 - Assistant Professor
 - New York Obesity Research Center
 - Institute of Human Nutrition
 - College of Physicians & Surgeons, Columbia University

Consultant SC Members

- Michael G. Perri, PhD, ABPP
 - Dean, College of Public Health and Health Professions
 - The Robert G. Frank Endowed Professor of Clinical and Health Psychology University of Florida

Questions Addressed Today

1. What is the effect of use of food and menu labels on measures of food selection and dietary intake in U.S. population groups?
2. What is the effect of use of food and menu labels on body weight across population groups?

NEL Systematic Review

Food and Menu Labeling

Topic Lead
Steve Clinton



Food and menu labels can provide information that improves an individual's food selection and potentially improve body weight outcomes.

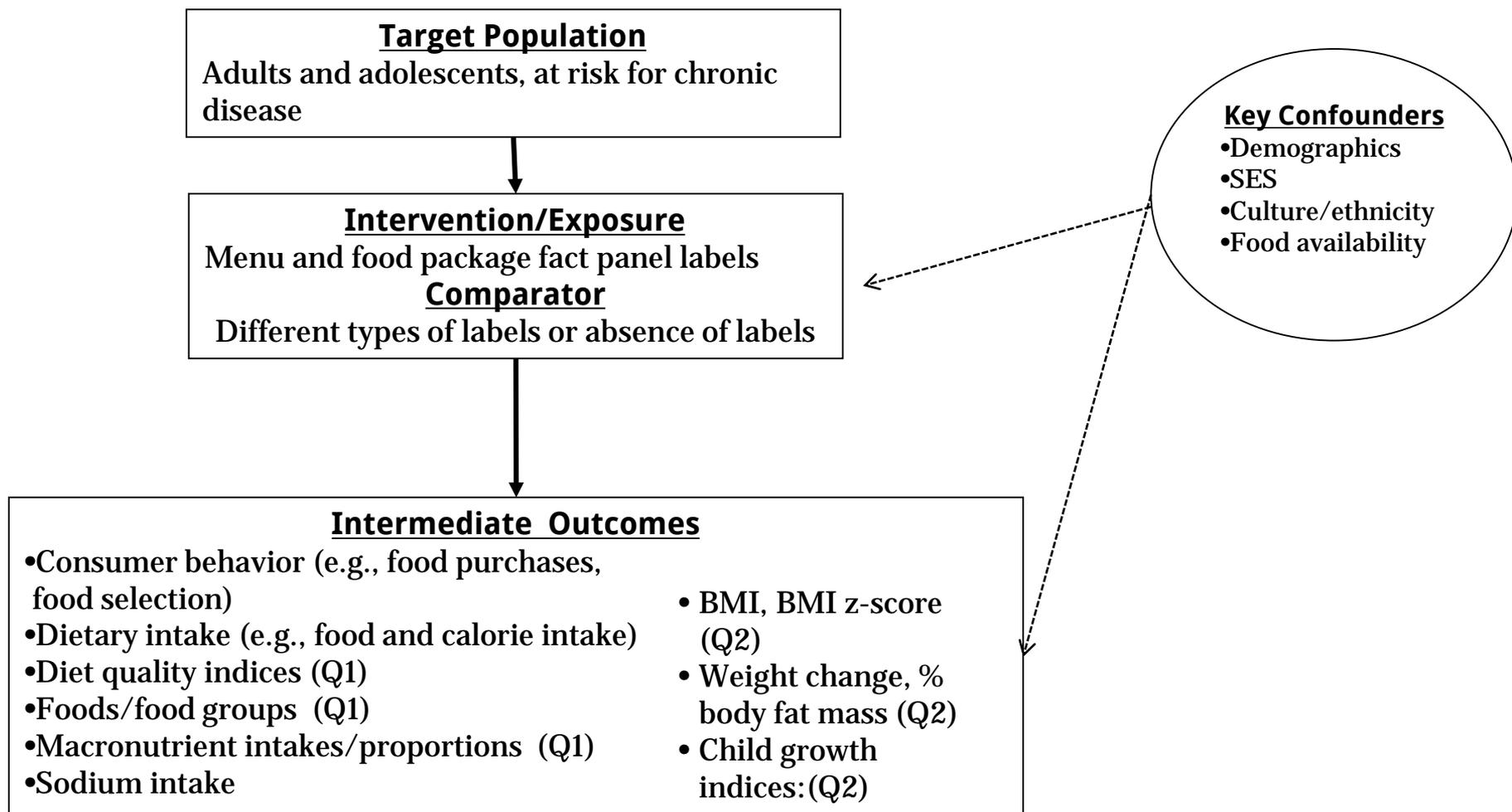
Interventions providing nutrition information through food and menu labels may impact food selection and dietary intake.

Food and Menu Labeling Questions

1. What is the effect of use of food and menu labels on measures of food selection and dietary intake in U.S. population groups?
2. What is the effect of use of food and menu labels on body weight across population groups?

NEL Systematic Review

Analytical Framework: Food and Menu Labeling



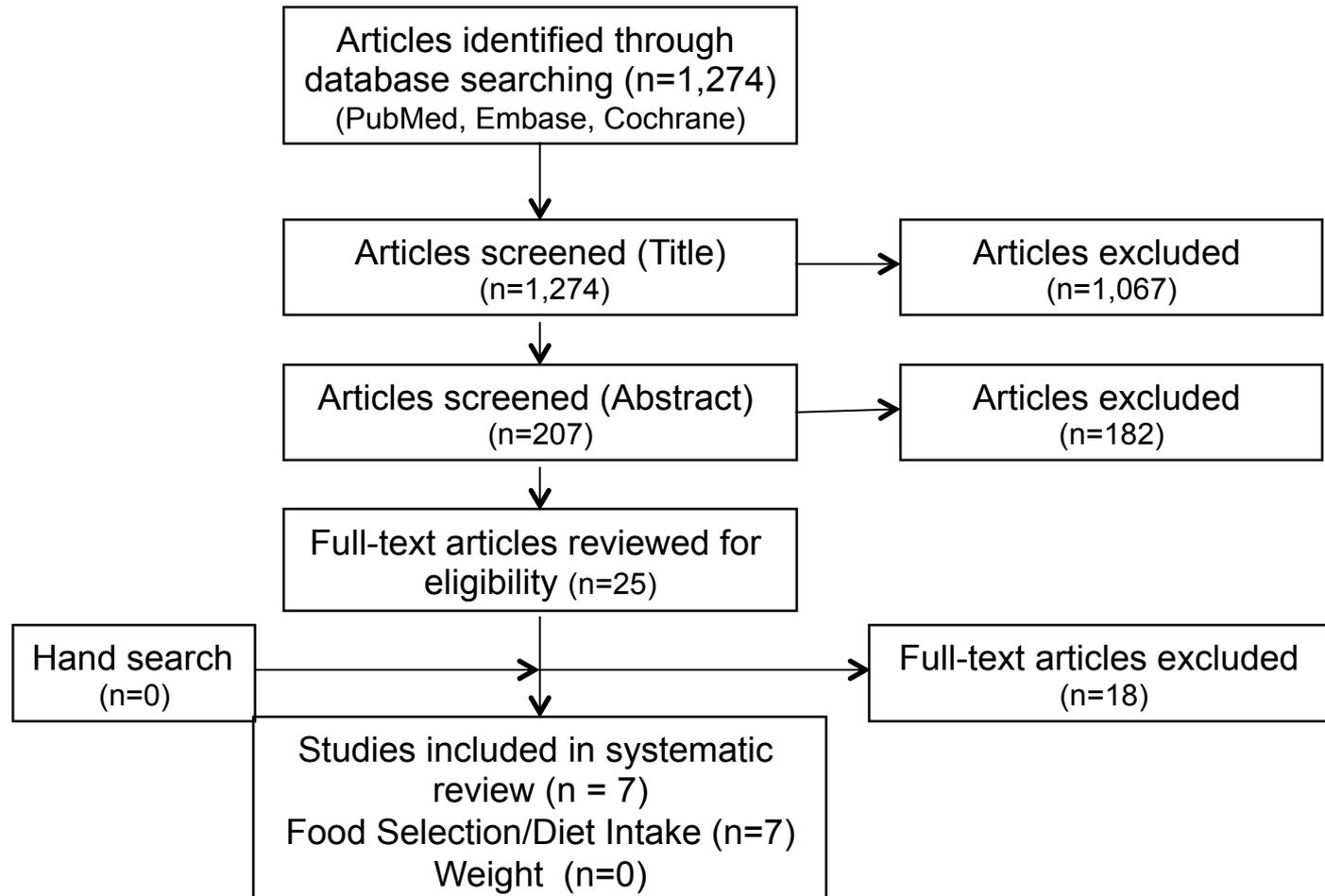
Key Definitions: *Menu and Nutrition Fact Panel labels*

Food and Menu Labeling

Literature Search: Inclusion/Exclusion Criteria

- Peer-reviewed articles published in English between January 2004 – September 2014
- Human subjects – adolescents and adults
- Healthy or with elevated chronic disease risk (excluded studies with all subjects diagnosed with disease)
- Studies conducted in the U.S.
- RCTs with ≥ 30 subjects per arm and dropout rate $<20\%$
- Intervention: menu and Nutrition Fact Panel labels
- Outcomes: food selection, dietary intake, body weight

Food and Menu Labeling Literature Search Results



Food and Menu Labeling

Description of the Evidence

- Seven randomized, controlled trials (RCTs)
 - Assessed effect of restaurant menu calorie labeling on food selection
 - Conducted in one test session
 - 4 measured menu selection, but did not provide food
 - 3 assessed menu order and calorie consumption
 - 2 studies measured calorie intake for the remainder of the day
- N = 99 to 802 subjects
 - Predominately Caucasian, female adults with some college education

Food and Menu Labeling

Draft Key Findings

- Seven RCTs were included in this body of evidence that compared menu calorie labeling on food selection; three of the seven measured calorie consumption.
- One study found that a menu with calorie labels and calories with recommended daily caloric intake resulted in the selection and consumption of fewer calories at a test meal.
- Two studies examining physical activity equivalents as a component of calorie labeling found a decrease in the calorie content of selected food items.

Food and Menu Labeling

Draft Key Findings Continued

- Two studies found no association between calorie information and food selection.
- One study that examined the effect of calorie labeling and value pricing (structuring product prices such that the per unit cost decreases as portion size increases) showed no association between calorie labeling and food selection or consumption.
- Methodological complexities of laboratory studies limit generalizability to free living populations.

Food and Menu Labeling

Draft Limitations

- No studies were conducted in actual restaurant setting limiting the external validity of the findings
- Only three studies measured food intake
- Some studies included pricing, others did not
- Short study duration (all studies had only one test session)
- No studies assessed weight outcomes

Food and Menu Labeling

Draft Conclusion Statement

Limited and inconsistent evidence does not support an association between menu calorie labels and food selection or consumption under laboratory conditions.

DGAC Grade: Limited

Food and Menu Labeling

Draft Research Recommendations

1. Conduct randomized clinical trials in free-living populations on types of menu labeling that are specific to various food outlets.
2. Test the effects of different combinations of information on menu labels on diet and weight-related outcomes.
3. Design studies to control for critical confounders, such as price of labeled meals and study participant characteristics when testing the effectiveness of food and menu labels.
4. Conduct studies with longitudinal follow-up to assess the impact of labeling on overall caloric intake and energy expenditure, diet quality, and weight related outcomes.
5. Determine how current food labeling strategies used in free-living populations can be tested and validated in laboratory settings.

Food and Menu Labeling

1. What is the effect of use of food and menu labels on measures of food selection and dietary intake in U.S. population groups?
2. What is the effect of use of food and menu labels on body weight across population groups?

Discussion

Reminder: DGAC members, please state your name before speaking.

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