

Measures Registry User Guide: Individual Diet Fact Sheet

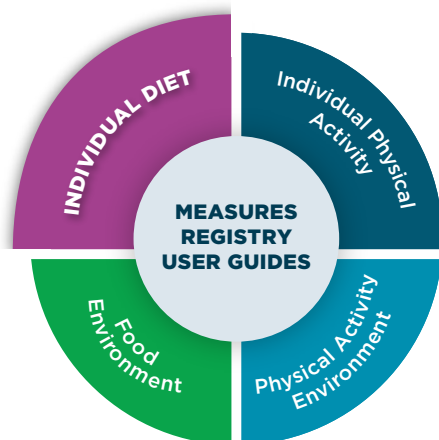
Measurement is a fundamental component of all forms of research and it is certainly true for research on childhood obesity. A top priority for the National Collaborative on Childhood Obesity Research (NCCOR) is to encourage consistent use of high-quality, comparable measures and research methods across childhood obesity prevention and research.

NCCOR's [Measures Registry](#)—a free, online repository of articles about measures—helps achieve this aim. It is widely recognized as a key resource that gives researchers and practitioners access to detailed information on measures in one easy-to-search location. The Registry's measures focus on four domains that can influence childhood obesity on a population level (see Figure below).

Even with this resource, however, it can be challenging for users to choose the most appropriate measures for their work. To address this need, NCCOR developed the Measures Registry User Guides designed to:

- Provide an overview of measurement
- Describe general principles of measurement selection
- Present case studies that walk users through the process of using the Measures Registry to select appropriate measures
- Direct researchers and practitioners to additional resources and sources of useful information

Figure: NCCOR Measures Registry User Guides



NCCOR: WORKING TOGETHER TO REVERSE CHILDHOOD OBESITY

NCCOR is a partnership of the four leading funders of childhood obesity research: The Centers for Disease Control and Prevention (CDC), the National Institutes of Health (NIH), the Robert Wood Johnson Foundation (RWJF), and the U.S. Department of Agriculture (USDA). These four leaders joined forces in 2008 to continually assess the needs in childhood obesity research, develop joint projects to address gaps and make strategic advancements, and work together to generate fresh and synergetic ideas to reduce childhood obesity. For more information about NCCOR, visit www.nccor.org.

Overview of the Individual Diet Measures Registry User Guide

The goal of this User Guide is to help researchers and practitioners

- Make effective use of the Individual Diet domain within the Measures Registry and complementary resources
- Select the best possible measures to conduct population surveillance of dietary behavior
- Assess dietary determinants of disease and health outcomes
- Evaluate policy and program interventions
- Consider salient issues related to administration of measures, data analysis, and interpretation and reporting of the resulting data

The Measures Registry User Guides are available at www.nccor.org/mruserguides. An informational webinar describing the Individual Diet and Food Environment Guides is available at www.nccor.org/archived-webinars/mruserguides.

CASE STUDY **EXAMINING IMPLICATIONS OF MODIFICATIONS TO FOODS OFFERED FOR SALE IN VENDING MACHINES WITHIN AN INSTITUTION**

The following case study has been designed to illustrate considerations influencing the selection of the most appropriate measure(s) for a given study based on the research aim/question, study design, and other characteristics. (See the full User Guide for additional case studies.)

Background

A project team wishes to assess intake of sugar-sweetened beverages and alternatives before and after changes to vending machine policies in an institution, such as a school, university, workplace, or recreation center. This is an intervention study involving swapping out of energy-dense choices within vending machines for more nutrient-dense options, including replacing sodas and energy drinks with water. Given a systems perspective, the intent may be to capture intake across settings to allow the project team to account for trade-off effects. For example, reduced consumption of sugary beverages at school may be offset by increased consumption in other settings.

Considerations

The dietary behavior of interest could be conceptualized narrowly as intake of snacks and beverages, or broadly as the total diet. This would enable characterization of how the intervention relates to changes (if any) in sugar intake overall or diet quality more holistically. For example, reductions in soda consumption may be offset by increases in intake of juice or possibly in other foods or beverages.

In addition, intake could be conceptualized either as quantitative estimates, requiring querying amounts consumed, or frequency of consumption of energy-dense snacks and beverages.

Depending on the target population within the institution of interest, investigators will need to consider whether self-reporting is possible. This will affect which measures can be selected. For example, self-administration is not possible for younger children.

Measure Selection

If the project team chooses a narrower focus, screeners could be used, which would reduce team and respondent burden but increase bias. This bias is less of an issue for items like sugar-sweetened beverages than for other dietary components (e.g., sugars, fruits, and vegetables) that are distributed throughout many contributing food and beverage sources. Screeners may be difficult for children, depending on cognitive abilities, to average intake over a long period of time.

If the team chooses a broader focus, a more comprehensive tool, such as 24-hour dietary recalls, food records, or food frequency questionnaire, is needed as such a tool allows interrogation of different aspects of the diet.

In this project, dietary intake is the outcome, and the study design is an intervention. As a result, respondents could potentially report differently after the intervention due to exposure to the intervention itself. However, given the environmental focus of the intervention (as opposed to nutrition education or counseling about reducing intake of energy-dense foods), this is unlikely unless the intervention is accompanied by an intensive marketing campaign. Nonetheless, the project team could complement the intake data with sales data from the vending machines. However, these data would be limited to the single setting within which the vending machines were modified, not to changes in consumption behaviors more broadly.