Measures Registry User Guide: Food Environment Fact Sheet

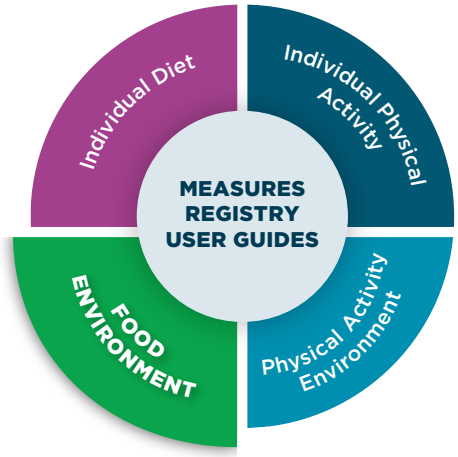
Measurement is a fundamental component of all forms of research and it is certainly true for research on childhood obesity. A top priority for the National Collaborative on Childhood Obesity Research (NCCOR) is to encourage consistent use of high-quality, comparable measures and research methods across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

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

- Make informed decisions when selecting, processing, and interpreting measurement tools for assessing the food environment with an emphasis on environments affecting childhood obesity including neighborhoods, schools, preschools, and other community venues and homes
- Understand the measurement issues that should be considered when selecting and using food environment measures for research and practice purposes

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

IMPROVING HEALTHY EATING BEHAVIORS IN INDEPENDENT NEIGHBORHOOD RESTAURANTS

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 large city health department is working with the local restaurant association to improve healthy eating behaviors within independent neighborhood restaurants. Their goal is to prevent obesity and chronic disease among city residents and promote economic development. The project involves baseline data collection of the availability and prices of healthy options, an intervention to support restaurant owners as they revise their menus, and repeated data collection at the end of the two-year project. Their goal is to identify change in availability and pricing over time and changes in menu item sales.

Considerations

The project partners are interested in working with restaurants to increase healthy food offerings at prices that encourage consumption.

After recruiting independent restaurants that serve populations who are most affected by diet-related chronic diseases, they must train health department and restaurant association staff to collect data about menu offerings (e.g., types of food, serving size, price per serving), contextual factors in the restaurant that may influence decision making (e.g., presence of menu labeling), and analysis of a sample of sales records from before and after the intervention.

Measure Selection

A study team leader visits the NCCOR Measures Registry to identify existing measures that can be used verbatim or adapted for the study. To narrow the choices, the team leader selects the "Food Environment" domain, the "Environmental Observation" measure type, and the "Metro/Urban" context.

The team leader scans the measure names on the list of nearly 100 matches for words that are most relevant to the study purpose (e.g., restaurant, menu, and price). Based on these additional criteria, the team leader clicks "Compare" on the eight most relevant measures. They consider the Food Price Comparison (FPC); Food Price Surveys (FPS); Healthy Food Availability and Pricing Checklist (HFAPC); Marketing and Availability of Healthy Options in Restaurants (MAHOR); Menu Checklist on Healthy Choice Cues (MCHCC); Nutrition Environment Measures Survey—Restaurant (NEMS-R); Price and Availability Indices of Healthy Food (PAIHF); and Restaurant Physical Environment Profile (RPEP).

All eight candidate measures have known validity and reliability, which is important to every project, but only four of the candidate measures make the complete instrument available. Therefore, measures without available instruments are ruled out (FPC, FPS, MCHCC, and PAIHF).

The team leader reviews the four remaining options (HFAPC, MAHOR, NEMS-R, and RPEP) with project partners. Given that the NEMS-R has been widely used, offers a free training, and has demonstrated reliability, it is chosen for this project. However, given limitations in established construct validity, project leaders decide to structure their work so that they can contribute to the field by testing for evidence of construct validity in the relationships between, for example, the sum (price) of individual items compared to a combo meal, prices of healthy entrees compared to regular ones, presence of charge for a shared entrée, or price for smaller portion compared to regular portion and hypothesized sales of "healthy" versus "unhealthy" options.