Dietary Risk Assessment in WIC

Background

For over a decade, the FNS has utilized the expertise of the Institute of Medicine (IOM) to provide science-based information to guide program policy decisions. The IOM, at the request of the USDA, has produced two reports related to dietary risk assessment:

- *WIC Nutrition Risk Criteria: A Scientific Assessment* [1]
- *Dietary Risk Assessment in the WIC Program*[2]

The report, *WIC Nutrition Risk Criteria: A Scientific Assessment,* was a review of the scientific basis for nutrition risk criteria used to determine WIC Program eligibility. The IOM Committee acknowledged the importance of dietary assessment as part of the WIC benefits package. It reviewed dietary risk criteria in use at the time of the study such as *inadequate diet*, and explored the use of failure to meet *Dietary Guidelines* as an indicator of nutritional risk. The Committee recommended discontinuation of *inadequate diet,* citing flawed assessment methodology. The report did recommend using *failure to meet Dietary Guidelines*, but indicated research would be needed to develop and validate assessment instruments and establish cutoff points. For children, the Committee felt that applicable criteria would be captured in *failure to meet Dietary Guidelines*. For infants, the report recommended the use of *inappropriate infant feeding practices*, stating that risks from such practices were "well documented" and methods to identify them were acceptable.

To address the unresolved issues related to dietary risk, the USDA, with input from the Risk Identification and Selection Collaborative (RISC), an FNS and National WIC Association (NWA) workgroup, commissioned the IOM to convene an expert committee. The charge to the IOM Committee was to propose a framework to assess dietary risk of WIC applicants based on failure to meet the *Dietary Guidelines* and to recommend specific parameters for its definition as a risk criterion, *failure to meet the Dietary Guidelines.* The resulting report, *Dietary Risk Assessment in the WIC Program*, did not produce the framework. Instead, it offered five findings and a single recommendation based on the findings.

[1] Institute of Medicine; Committee on Scientific Evaluation of WIC Nutrition Risk Criteria. WIC nutrition risk criteria: A scientific assessment. Washington (DC): National Academy Press; 1996.
[2] Institute of Medicine; Committee on Dietary Risk Assessment in the WIC Program. Dietary risk assessment in the WIC program. Washington (DC): National Academy Press; 2002.

Finding 1.
"A dietary risk criterion that uses the WIC applicant's usual intake of the five basic Pyramid food groups as the indicator and the recommended numbers of servings based on energy needs as the cut-off points is consistent with *failure to meet Dietary Guidelines*."

Finding 2.
"Nearly all U.S. women and children usually consume fewer than the recommended number of servings specified by the Food Guide Pyramid and, therefore, would be at dietary risk based on the criterion *failure to meet Dietary Guidelines*."

Finding 3.
"Even research-quality dietary assessment methods are not sufficiently accurate or precise to distinguish an individual's eligibility status using criteria based on the Food Guide Pyramid or on nutrient intake."

Finding 4.
"Physical activity assessment methods are not sufficiently accurate or reliable to distinguish individuals who are ineligible from those who are eligible for WIC services based on the physical activity component of the *Dietary Guidelines.*"

Finding 5.
"Behavioral indicators have weak relationships with dietary or physical activity outcomes of interest. As a result, they hold no promise of distinguishing individuals who are ineligible for WIC from those who are eligible in the category of dietary risk."

Recommendation.
"Presume that all women and children ages 2 to 5 years who meet the eligibility requirements of income, category and residency status also meet the requirement of nutrition risk through the category of dietary risk based on *failure to meet Dietary Guidelines*, where *failure to meet Dietary Guidelines* is defined as consuming fewer than the recommended number of servings from one or more of the five basic food groups (grains, fruits, vegetables, milk products and meats or beans) based on an individual's estimated energy needs."

The IOM report made clear that the intent was ***not*** to affect the current use of other nutrition risk criteria, such as growth issues, iron deficiency, or predisposing medical conditions related to nutrition. Such information is necessary for the priority placement of participants and to individualize nutrition services.

As a result of the IOM Dietary Assessment report, the FNS identified the need to develop comprehensive nutrition assessment guidance to ensure the integrity of the process nationwide and to revise and consolidate WIC dietary risk criteria to include a presumptive criterion for women and children ages 2 to 5 years. These needs have been addressed in the VENA Policy and Guidance and in WIC Policy Memorandum 98-9, Revision 8.

Dietary Assessment is Essential to a WIC Nutrition Assessment

Although the IOM Dietary Assessment report states that traditional dietary assessment methods (such as a 24-hour recall or food frequency questionnaire) are inappropriate for detecting nutritional deficiencies in an individual, it does not recommend elimination of all inquiry about dietary and lifestyle practices. The IOM WIC Nutrition Risk Criteria report affirms the need for dietary assessment, stating that it "focuses attention on food and diet as central to health." Dietary assessment is required to:

- Screen applicants for inappropriate nutrition practices;
- Determine specific concerns of the participant or caregiver related to eating/feeding practices;
- Ascertain participant acceptability and use of WIC foods;
- Obtain information that might explain other identified risk criteria;
- Aid in the critical thinking process; and
- Allow a tailored intervention, including anticipatory guidance for each participant.

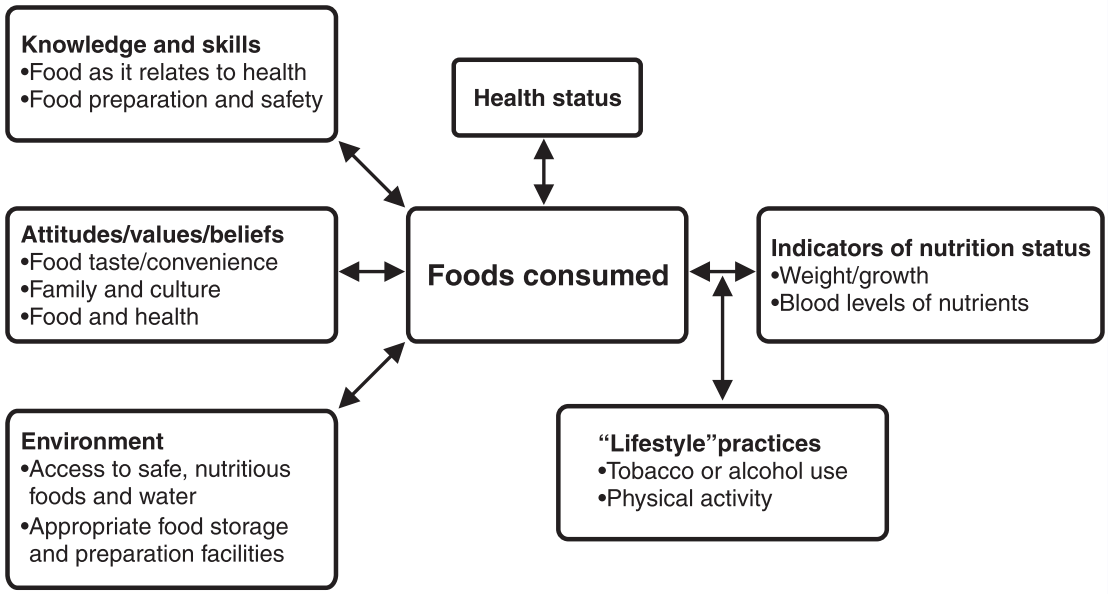
The WIC Program's approach to dietary assessment will be qualitative, not quantitative. WIC personnel may ask about appetite, favorite foods, and cultural food preferences[3] rather than quantify ounces or servings. Such questions will foster positive communication and can serve as a "springboard" for further discussion.

Food choices can have short- and long-term effects on health status. These effects may be seen during the WIC assessment as other nutritional status indicators, such as altered body weight,

[3] For more information about useful dietary assessment questions refer to: Graves DE, Suitor CW. Celebrating diversity: Approaching families through their food. Revised ed. Arlington (VA): National Center for Education in Maternal and Child Health; 1998.

growth pattern, or hemoglobin level. When such conditions are identified, it is logical to look for clues related to foods consumed. For example, an inappropriate infant feeding practice like putting cereal in the bottle could explain an infant's rapid weight gain.

Variables, such as knowledge, attitudes, beliefs, and family and community environment affect food consumption. "Lifestyle" practices, such as alcohol or tobacco use, or lack of routine physical activity, can also affect food choices and nutritional risk indicators. The relationship of these variables to foods consumed and nutritional status indicators that might be identified in the WIC assessment are shown below.



Appendix A, *Relevant WIC Nutrition Assessment Information Tables*, describes the specific information to collect that can identify the variables related to food consumption. Although the elements of information collected within a State agency will be uniform, it is important to personalize the encounter with the participant. WIC staff may explore one or more variables in greater depth, depending on the circumstances of the participant. For example, access to foods or food safety may be emphasized for a homeless participant, while cultural issues may be explored with a recent immigrant.

Presumed and Predisposing Dietary Risk Criteria

In addition to the consolidated risk criteria that identify inappropriate nutrition practices for each WIC participant category, Revision 8 of WIC Policy Memorandum 98-9[4] contained two new allowed dietary risk criteria:

- *Failure to Meet Dietary Guidelines for Americans* (a presumed risk criterion)

- *Dietary Risk Associated with Complementary Feeding Practices* (a predisposing risk criterion)

Failure to meet Dietary Guidelines for Americans (Risk #401) is a presumed dietary risk criterion for women and children ages 2 to 5 years. This criterion is based on the recommendation of the IOM Dietary Assessment report. **This risk criterion may be assigned only to individuals for whom a complete WIC nutrition assessment, including an assessment for Inappropriate Nutrition Practices (#425 for children or #427 for women), has been performed and for whom no other risk(s) are identified.**

Dietary Risk Associated with Complementary Feeding Practices (Risk #428) is a predisposing risk criterion for infants and children 4 through 23 months of age. This criterion is based on a RISC literature review that documents risk to nutritional status associated with complementary feeding. **This criterion may be assigned only to individuals for whom a complete WIC nutrition assessment, including assessment for Inappropriate Nutrition Practices (#411 for infants or #425 for children), has been performed.**

Special Considerations for Infants and Children Less than 2 Years of Age

Infants (birth-12 months) and children less than 2 years of age are extremely vulnerable to the effects of inadequate or inappropriate nutrition. Many factors affect the type, amount, and quality of foods they are offered and consume. While the IOM Dietary Assessment report did not address dietary assessment in this age group, concerns related to the validity of traditional assessment tools may still apply. Despite this concern, it is important to collect dietary information in more detail than for older children (over 2 years of age) and women. Most young infants may consume only breast milk or formula, and older infants, a limited number of complementary foods. Toddlers (1 – 2 years) are likely to be

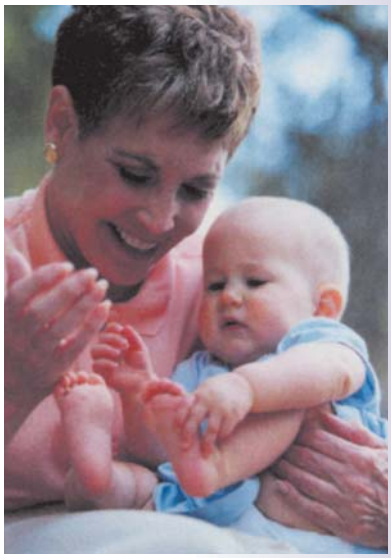
[4] WIC Policy Memorandum 98-9, Revision 8, Nutrition Risk Criteria, March 24, 2005

transitioning to family foods, but, still consume a limited variety of foods. The type of information that might be collected for an infant or toddler includes:

- Frequency, amount, and type of feedings offered
- Complementary foods offered
- Use of supplements
- Allergies or intolerances
- Food preferences or aversions

WIC Policy Memorandum 98-9, specifically risk criteria #411 and #425, and Appendix A, *Relevant WIC Nutrition Assessment Tables*, provide additional detail about the type of dietary information to be collected.

Assessment Instruments



Because of the unique clientele, staffing pattern and other characteristics of each State agency, no single dietary assessment instrument would be valid for all participants. State agencies are responsible for determining what dietary information to collect and the types of questions to use. The first step is for each State agency to determine which risk criteria will be used. Next, Appendix A, *Relevant WIC Nutrition Assessment Information Tables*, should be reviewed for information to collect for each risk criterion. The column "*Suggestions for Further Assessment*" may be especially helpful for information related to risk criteria, such as cultural or economic contributors to a child's growth pattern. The third step is to compile questions that need to be asked to obtain the information. Once the basic questions are determined, Appendix B, *Assessment Questions and Questionnaires*, may be helpful in refining, formatting, and validating them.

The process of assessing dietary and lifestyle practices should be viewed as ongoing. As the science of nutrition risk assessment, information technology, and the needs and demographics of participants change, so must assessment methodologies and instruments.