

**APPROACHES TO DIETARY EXPOSURE ASSESSMENTS:
OPPORTUNITIES FOR ENHANCEMENT OF INTERAGENCY COLLABORATION**

**INTERAGENCY RISK ASSESSMENT CONSORTIUM (IRAC)
WORK GROUP PROJECT SUMMARY
11/15/2018**

Purpose

Identify dietary exposure assessment approaches and analytical tools used by U.S. federal agencies and identify potential opportunities for increased collaboration among agencies.

Background

Dietary exposure assessment, an essential component of risk assessment, involves integrating data on nutrient, additive, pesticide, or contaminant levels in foods and data on the consumption of these foods by individuals across an entire population or during specific life stages (usually stratified by age or sex). The approaches and procedures used for dietary exposure assessment may vary among and within U.S. government agencies conducting these assessments. Some of these differences in purpose and goals of these assessments may reflect differences in decision-making contexts (e.g., legal authorities under different statutes). However, there are opportunities for enhanced collaboration, and greater harmonization of these approaches may be possible, when warranted.

A previous IRAC Work Group, “Evaluation of Dietary Assessment Approaches and Needs,” was formed in 2013 with the goal of conducting “a systematic and useful comparison of dietary assessment data sources and analytical tools, to better understand the ways in which agencies integrate dietary assessment in their decision-making process, and to determine whether IRAC members’ dietary assessment needs are currently being met.” The goal of the new Work Group, “Approaches to Dietary Exposure Assessments: Opportunities for Enhancement of Interagency Collaboration,” formed in 2016, was to complete the systematic comparison of dietary assessment data sources and analytical tools used by different U.S. federal agencies for dietary exposure assessment. Specific goals included the following:

- 1) Clarify the various decision-making contexts for which dietary exposure assessments are conducted and used.
- 2) Identify and summarize the different data sets or data sources and how various government agencies use the data to conduct dietary assessments.

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- 3) Identify and summarize the approaches and procedures used for dietary exposure assessment in various agencies.
- 4) Identify and summarize the capabilities of currently available dietary assessment software packages.
- 5) Identify potential opportunities for increased collaboration or sharing among agencies to advance dietary exposure assessment capabilities.

Participants

Agencies participating in the Work Group included the U.S. Environmental Protection Agency (EPA), Food and Drug Administration (FDA), and Department of Agriculture (USDA), specifically:

- EPA Office of Pesticide Programs
- EPA Office of Water
- FDA Center for Food Safety and Applied Nutrition, Office of Analytics and Outreach
- FDA Center for Food Safety and Applied Nutrition, Office of Food Additive Safety
- FDA Center for Veterinary Medicine
- USDA Agricultural Research Service
- USDA Food Safety and Inspection Service

Work Group Activities

Presentations

The Work Group met four times during 2016 to learn about agency approaches to dietary exposure assessment. At each meeting, one or two agencies presented information on data sources and approaches used in assessments to estimate dietary exposures to chemicals.

Findings

The following are the Work Group's major findings:

1. *Dietary exposure assessment approaches vary among agencies based on a variety of factors, including:*
 - Purpose for the assessment
 - Agency regulatory requirements
 - Specific foods in question: (e.g., raw agricultural commodities vs. processed products; meat/poultry vs. other foods)

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- Available data
2. *Strengths of current approaches*
- Current dietary exposure assessment methodologies used by federal agencies are targeted to specific agency needs and requirements and can be modified to some extent based on available data.
 - Using current approaches, agency dietary exposure assessments are systematic, transparent, reproducible, and flexible, and can be conducted quickly to support decision-making.
 - Exposure assessments can be conducted for specific populations, including vulnerable populations such as children and older adults, if such data are needed.
3. *Capabilities and opportunities for cross-agency engagement to enhance development of dietary analyses*
- The best opportunity for cross-agency engagement to further enhance dietary exposure assessment approaches and procedures is through IRAC, via seminars or workshops.
 - Topics for future focus include age groups, recipe sources, and treatment of values below the limit of detection.