

Impact of Health Communication Strategies on Dietary Behaviors Funding Announcement

Purpose

This funding opportunity announcement (FOA) encourages applications for research projects focused on the development of effective communication strategies related to diet and health. These strategies are warranted in an effort to effectively change dietary behaviors (in order to promote a healthier lifestyle). Communication efforts aimed at multiple levels (e.g., at the individual, environment, and policy levels) and across diverse populations are expected for submission. To be appropriate for this FOA, proposed projects should address issues such as improving understanding of new advances or information in the area of dietary intake and health promotion, integrating this new information with the prevailing evidence on the relationship between dietary intake and health, and increasing people's ability to positively change dietary behaviors. It should be noted that in addition to consumption of food and non-alcoholic beverages, moderate alcohol consumption is also considered a dietary behavior. Of considerable concern are: consumer confusion due to conflicting results of studies on moderate alcohol consumption and chronic diseases, how one should balance competing risks and choices about including moderate drinking as part of a healthy diet.

This FOA utilizes two parallel funding mechanisms:

- **PA-08-240** NIH Exploratory/Developmental Grant (R21)
<http://grants.nih.gov/grants/guide/pa-files/PA-08-240.html>
- **PA-08-239** NIH Research Project Grant (R01)
<http://grants.nih.gov/grants/guide/pa-files/PA-08-239.html>

Important Dates

Opening Date: September 16, 2008 (Earliest date submitted to Grants.gov)

Expiration Date: September 8, 2011 (Unless reissued)

Applications must be submitted electronically through Grants.gov

Issuing Organizations

National Cancer Institute (NCI); National Heart, Lung, and Blood Institute (NHLBI); National Institute of Child Health and Human Development (NICHD); National Institute on Alcohol Abuse and Alcoholism (NIAAA); Office of Behavioral and Social Sciences Research (OBSSR); NIH-Office of Disease Prevention (ODP); Office of Dietary Supplements (ODS); U.S. Food and Drug Administration (FDA); Centers for Disease Control and Prevention (CDC)

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Health Promotion Research Branch

<http://dccps.nci.nih.gov/hprb>

Background

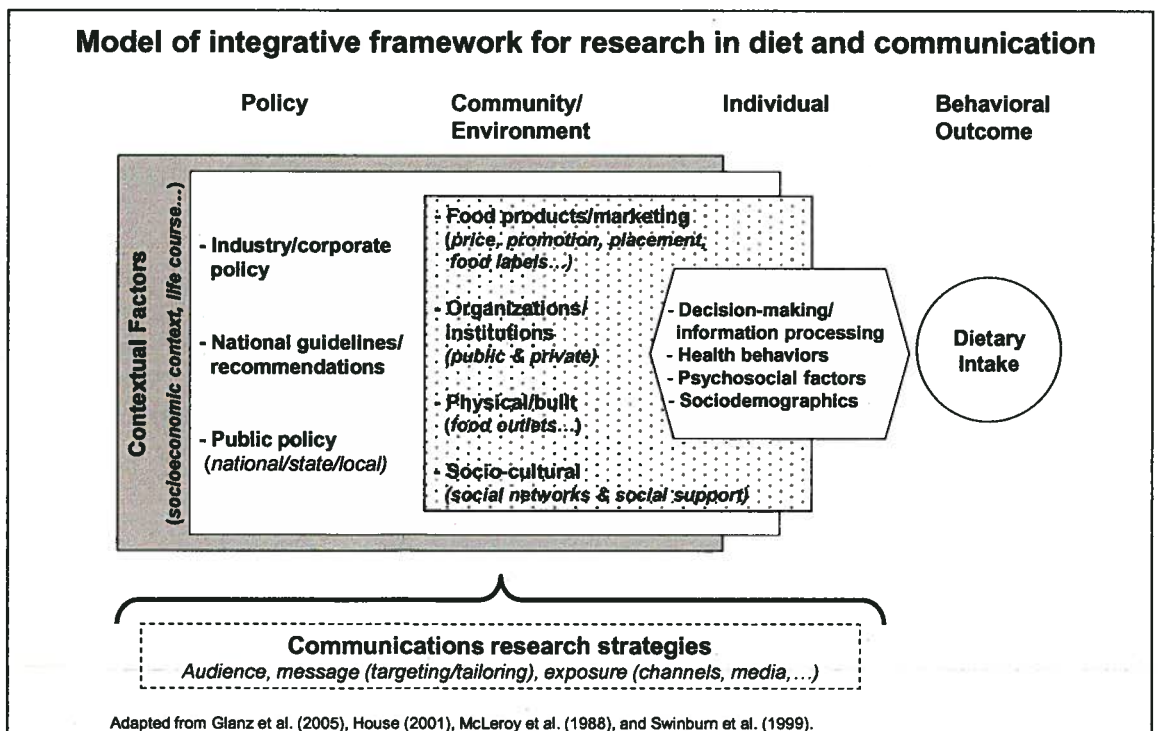
There are several factors that contribute to public confusion regarding dietary messages. Moreover, health communication and nutrition campaigns intended to promote health at the population level, often have little or no impact on actual behavior. Broader public health dietary strategies are quite different in conceptualization and implementation, when compared with individual-level messages. In order to better understand the numerous and intersecting elements that ultimately shape dietary behaviors, more distal factors should be taken into account.

Significance

Few studies have examined how communications strategies influence dietary behaviors at multiple levels. The issue of health-related communication strategies and diet is an ongoing topic of discussion and debate across local, state, and federal government agencies and efforts are needed to overcome dietary misinformation and confusion of the American public.

Specific Research Objectives

Applications submitted in response to this FOA must be focused on the development of communication strategies to change dietary behaviors and must incorporate interdisciplinary approaches to exact the desired change through multiple levels. Researchers are encouraged to use both a social-ecological approach, and integration of other existing or novel behavioral or communication theories and/or models within and between levels, as a conceptual framework for their research.



Funding Opportunity for Improving Diet And Physical Activity Assessment (R01/R21)

Overview

Diet and physical activity are lifestyle and behavioral factors that play a role in the etiology and prevention of many chronic diseases such as cancer and coronary heart disease. Both also play roles in preventing overweight/obesity and in maintaining weight loss. Moreover, longitudinal data on physical activity and dietary intake would be especially helpful in understanding how the physical activity and dietary intake patterns over the lifespan may have an impact on health and functional status in later years and old age. Therefore, diet and physical activity are assessed for both surveillance and epidemiologic/ clinical research purposes.

The measurement of usual dietary intake or physical activity over varying time periods or in the past, by necessity, has relied on self-report instruments. Such reports are cognitively difficult for respondents and are prone to varying degrees of measurement error depending on the time period considered, the ease of the instrument, and the characteristics of the respondents. Understanding and interpretation of instruments and the concepts they address may differ among population subgroups.

Research Objectives

The objective of the Program Announcement (PA) is to promote research to: 1) improve existing instruments that seek to measure dietary intake and physical activity within diverse populations over time; 2) develop or refine new technologies for the measurement of dietary intake or physical activity; 3) improve the statistical and analytical techniques to correct for measurement error in diet and physical activity assessment instruments; 4) develop methods to investigate the multidimensionality of diet and physical activity behavior through pattern analysis; and 5) integrate measurement of diet and physical activity along with the environmental context of such behaviors.

Proposals should be aimed at exploring the optimal combination of objective and self-report measures of physical activity or dietary intake that can capture these behaviors in both general and diverse populations.

Possible topics include, but are not limited to:

- Refine, and test methods of diet or physical activity assessments for use in population surveillance, epidemiological studies, and/or behavioral interventions within general and diverse populations.
- Develop or refine innovative methods to improve respondent self-report of diet or physical activity behavior.
- Conduct validation or testing of existing instruments to assess utility in diverse populations.
- Develop or refine innovative methods to improve underreporting of energy intake among obese and overweight individuals.
- Identify factors leading to misreporting on dietary or physical activity assessment instruments.
- Develop, refine, and test analytic or statistical methods to address measurement errors in the collection of dietary supplement and physical activity data.
- Improve methods for measuring the type or amount of physical activity, the energy cost associated with physical activity, energy intake, and energy balance.
- Improve methods for assessing intake of particular types of food constituents, such as fat subtypes and phytochemicals.
- Validate methods for measuring dietary and/or supplement intake or physical activity using appropriate reference instruments.
- Develop or refine new technologies.
- Conduct cognitive testing of self-reported dietary or physical activity.

Mechanisms of Support

Both the R01 and R21 award mechanisms will be supported by two partner Program Announcements. It is anticipated that the size and duration of each R01 award will vary; the total amount awarded and the number of awards will depend upon the mechanism, numbers, quality, duration, and costs of the applications received. The expected direct costs for individual R01 awards range from \$200,000 to \$650,000. The total project period for an R21 application may not exceed 2 years; direct costs are limited to \$275,000 over a 2-year period, with no more than \$200,000 in direct costs allowed in a single year.

Applicants without extensive preliminary data or who wish to explore the utility of new dietary or physical activity assessment methods are urged to submit applications for this PA using the exploratory/developmental grant (R21) mechanism. Investigators are encouraged to seek continued support after completing an exploratory/developmental grant project through a research project grant (R01). Applicants may wish to coordinate efforts in developing their applications.

Furthermore, applicants proposing to develop new instruments for measuring dietary intake or physical activity are strongly encouraged to build upon existing measures and instruments and to collaborate with other investigators undertaking work in these areas as a means of promoting improved methods or analytic techniques that can be shared among multiple investigators and have utility in a number of research settings.

Application Procedures

Applications submitted for this PA will be assigned to NIH Institutes and Centers (ICs) on the basis of established PHS referral guidelines. Appropriate scientific review groups convened in accordance with the standard NIH peer review procedures will evaluate applications for scientific and technical merit.

Application Submission Dates

<http://grants.nih.gov/grants/funding/submissionschedule.htm>

For the full text of these PAs, visit:

<http://grants.nih.gov/grants/guide/pa-files/PAR-09-224.html> (R01)

<http://grants.nih.gov/grants/guide/pa-files/PAR-09-225.html> (R21)

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Co-Sponsors:

- **National Heart, Lung, and Blood Institute**
- **National Institute on Aging**
- **National Institute of Child Health and Human Development**
- **National Institute of Diabetes and Digestive and Kidney Diseases**
- **National Institute of Nursing Research**
- **Office of Dietary Supplements, National Institutes of Health**

Geographic and Contextual Influences on Energy Balance-Related Health Behaviors (R01/R21)

For the full text of these PAs, visit:

<http://grants.nih.gov/grants/guide/pa-files/PA-08-192.html> (R01)

<http://grants.nih.gov/grants/guide/pa-files/PA-08-193.html> (R21)

Overview

The objective of this Funding Opportunity Announcement (FOA) is to encourage grant applications that propose hypothesis-driven projects exploring associations between the built environment, other contextual features of where people of all ages live and work, and health behaviors related to energy balance. These projects should use population level data from health surveys and other large health studies. It is expected that the proposed projects will be designed to add/include contextual variables at diverse levels of geographic aggregation to such studies on behaviors that affect individual energy balance and thereby health. Subsequent analyses should be aimed at understanding the relative importance of the related health behaviors.

Grant applications will be expected to use population level data from diverse sources for: 1) generation and addition of new geographic information system (GIS) data layers for analysis of contextual variables such as measures of the built and natural environments to existing studies; 2) analyses of existing confidential geographic-based data either on site, at survey data centers, or other projected sites; and/or 3) merging multiple health-related data resources to allow new analyses of associations between contextual variables and energy balance-related health behaviors.

Mechanisms of Support

The R01 and R21 award mechanisms will be supported by this funding opportunity. The total project period for applications using the R01 award mechanism may not exceed 5 years; the dollar amount is unlimited but needs to reflect the needs of the proposed project. R01 applications can be renewed by competing for additional project periods. The

R21 award mechanism may not exceed 2 years; direct costs are limited to \$275,000 over a two-year period, with no more than \$200,000 in direct costs allowed in any single year. The R21 application is not renewable.

Research Objectives

All projects proposed in response to this FOA must focus on exploring the influence of neighborhood characteristics and contextual variables on energy balance-related health behaviors such as diet and physical activity. Applications for projects that include wide-ranging conceptualizations of 'environment' as a mediator and moderator of health outcomes, including those that address interactions between social, psychological, and built environmental variables are encouraged.

Research topics may include, but are not limited to, the following examples:

- Characterize associations between the built environment and physical activity. Explore how these associations are moderated by demographic factors, particularly age, gender, race/ethnicity, and socioeconomic status.
- Explore the differential influences of the built environment and geographic variables on physical activity and food behavior of individuals with disabilities.
- Analyze the relative strength of associations between physical activity and several aspects of the built environment, including neighborhood, socioeconomic status, street connectivity, and land use mix.
- Examine associations between the availability/geographical distribution of food outlets (such as supermarkets/convenience stores, restaurants, bodegas, farmers markets, etc.) and dietary habits of residents.
- Explore how a person's age modulates associations between environmental variables and physical activity or diet.

- Incorporate weather-related variables into studies of energy balance-related behavior.
- Examine the variability of specific environmental indices at multiple spatial scales, and how these indices are associated with determinants of energy balance.
- Apply advances from the GIS and Informatics community to the spatial analysis of energy balance-related health behaviors.
- Explore new data sources that have not been used in public health research concerning energy balance-related health behaviors.
- Incorporate systems thinking-based approaches into the analysis of associations between the environment and energy balance-related health behaviors.
- Examine whether the built environment or other contextual variables are associated with successful weight loss or weight maintenance in observational or intervention studies.

Eligibility Requirements

Diverse educational, public, private, and non-profit organizations are eligible to apply. Refer to the full text of the PAs for additional details.

Review

Applications will be assigned to the NIH Institutes and Centers (ICs) on the basis of established Public Health Service (PHS) referral guidelines. Appropriate scientific review groups convened in accordance with the standard NIH peer review procedures will evaluate applications for scientific and technical merit.

Further Assistance

GrantsInfo

Telephone: (301) 435-0714
Email: GrantsInfo@od.nih.gov

Grant Writing Tip Sheets

http://grants.nih.gov/grants/grant_tips.htm

Application Submission Dates

<http://grants.nih.gov/grants/funding/submissionschedule.htm>

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About the Dietary Research Resources of the Risk Factor Monitoring and Methods Branch Applied Research Program

Introduction

The Risk Factor Monitoring and Methods Branch (RFMMB) is one of three branches in the National Cancer Institute's Applied Research Program. RFMMB contributes to reducing cancer in the US by serving as a critical link between etiologic research on cancer risk factors, such as tobacco, diet, physical activity, sun exposure, and genetics and family history, and the translation of such research into targeted and effective interventions for prevention.

Diet is considered one of the major risk factors for cancer and is therefore a primary area of research within RFMMB. The Branch monitors food and nutrient intakes among the general population and selected subpopulations, and it conducts methodological research to increase the precision of dietary intake estimates by improving data capture and analytic procedures.

All of the following resources are available at <http://riskfactor.cancer.gov/diet>.

Usual Intake Estimation

A new method is available to estimate usual dietary intakes of foods and nutrients. This method can be used for a variety of applications, including estimating:

- The distribution of usual food or nutrient intake for a population or subpopulation
- Individual food or nutrient intake for use in a disease model
- The effects of individual covariates on food or nutrient consumption.

Healthy Eating Index (HEI)-2005

The HEI-2005 has been developed to be consistent with current dietary guidance. Published in November 2007, the HEI-2005 replaces the previous HEI and measures

compliance with the key diet-related recommendations of the 2005 Dietary Guidelines. The psychometric properties of the new index have been evaluated.

NHANES Dietary Web Tutorial

Web-based tutorials aimed at promoting broader and more proficient use of NHANES data have been developed. The tutorials, including one specifically aimed at dietary data, are composed of numerous modules that provide background information to help users understand key concepts; they also take users step-by-step through typical analytic procedures. Relevant NHANES data information, explanations for SAS or SUDAAN programs, and downloadable sample program code are provided to facilitate the learning process. The tutorials are designed for a wide range of NHANES users including those in government, research, education, public health, and medical practice.

Web-based Automated Self-administered 24-hour Dietary Recall (ASA24)

ASA24 uses state-of-the-art automated computer technology, including graphic enhancements, animated characters to guide participants, and audio language/cues to enhance use in low-literacy populations. The food list from which respondents select their intakes for the previous day includes all foods available from USDA's current Food and Nutrient Database for Dietary Studies (FNDDS). Resulting data files include nutrients, foods, pyramid food groups, and HEI estimates. The software includes pictures of foods in multiple portion sizes to help respondents estimate portion size. The software can quickly compute nutrient and food group estimates for each recall day.

Glycemic Index (GI) Values Database

Two files containing GI values for individual foods have been developed. They provide GI values for foods consumed by adults and queried on the Diet History Questionnaire (DHQ) or other Food Frequency Questionnaires (FFQs) used at NCI. The first file is organized by USDA food codes. The second is organized by DHQ food groups that parallel line items on the questionnaire.

Measures of the Food Environment Website

Measurement of the food environment and its effects on dietary behavior is a relatively new, but growing, field of inquiry. This website provides a compilation of articles that include community-level measures of the food environment. Many of the instruments used in the studies are also available on the website. The food environment is defined to include food stores, restaurants, schools, and worksites. The database includes all articles published in English-language, peer-reviewed journals from January 1990 to the present. The website's goal is to enable access to existing measures of the food environment and stimulate the development of the next generation of tools.

Dietary Assessment Calibration/Validation (DACV) Register

The DACV Register contains studies and publications that compare dietary intake estimates from two or more assessment methods, including:

- Food records or diaries
- 24-hour dietary recalls
- Food frequency questionnaires
- Dietary histories
- Observed intakes
- Chemical analyses of duplicate collections of foods consumed
- Biological assessments

Short Dietary Assessment Instruments

Several short dietary assessment instruments and analytical software to process the responses have been developed. Although intake estimates are not as accurate as those from more detailed methods such as 24-hour dietary recalls, these short screeners are useful in situations that do not require assessment of the total diet. They can be used to:

- Characterize a population's mean intakes
- Discriminate among individuals or populations with regard to higher vs. lower intakes
- Examine interrelationships between diet and other variables
- Compare findings from a smaller study to a larger population study.

These instruments include:

- Fruit and Vegetable Intake Screeners
- Percent Energy from Fat Screener
- Multifactor Screeners

Diet History Questionnaire (DHQ)

The DHQ is a FFQ consisting of 124 food items. It also includes portion size and dietary supplement questions. It takes about 1 hour to complete and was designed, based on cognitive research findings, to be easy to use. Data show that it provides reasonable nutrient estimates. Like other FFQs, the DHQ is useful in measuring dietary intakes in large-scale population-based studies in which more detailed methods are not feasible.

Genes, Environment, and Health Initiative (GEI)

NCI and other NIH partners are supporting the research and development of innovative wearable sensors to measure dietary intake. This project is part of the NIH-wide GEI. GEI investigators are using cell phone technology to capture/transmit data, pairing camera/video/audio components with automated processing technology (e.g., image detection, voice recognition), and tailoring web-based software for children.