

**TERMINATION REPORT: NC 1028
OCTOBER 1, 2006 – SEPTEMBER 30, 2011**

TITLE: *Promoting healthful eating to prevent excessive weight gain in young adults*

OVERVIEW:

The long-term goal of the NC1028 project is to develop a sustainable intervention to reduce the risk of weight gain in young adults. NC1028 community-based participatory research is grounded in the transtheoretical model for behavior change and guided by the PRECEDE-PROCEED model, in which young adults guide our work by identifying and prioritizing problems of significance to them. Two major research grants have been procured to design and implement web-based interventions to address the project's goal. Over the past five years, the NC1028 multi-state research group has expanded and currently comprises 15 universities:

Alabama: Tuskegee University, Beatrice Phillips, PI
Florida: University of Florida, Karla Shelnett, PI
Indiana: Purdue University, Onikia Esters, PI
Kansas: Kansas State University, Tanda Kidd, PI
Maine: University of Maine, Adrienne White, PI
Michigan: Michigan State University, Sharon Hoerr, PI
Nebraska: University of Nebraska, Lisa Franzen-Castle, PI
New Hampshire: University of New Hampshire, Gale Carey, PI
New Jersey: Rutgers University, Carol Byrd-Bredbenner, PI
New York: Syracuse University, Tanya Horacek, PI
North Carolina: East Carolina University, Sarah Colby, PI
Rhode Island: University of Rhode Island, Geoffrey Greene, PI
South Dakota: South Dakota State University, Kendra Kattelman, PI
West Virginia: West Virginia University, Melissa Olfert, PI
Wisconsin: University of Wisconsin, Susan Nitzke, PI

PROJECT OBJECTIVES:

- (1) Enhance researchers' skills in participatory research techniques and to build partnerships among researchers, extension and outreach educators, and populations of young adults to develop cooperative intervention programs.
- (2) Use participatory research techniques to assess, prioritize, and connect (a) young adults' quality of life issues and needs, (b) young adults' perceived health issues, and the behavioral and environmental health determinants, (c) young adults' specific predisposing, reinforcing, and enabling factors determining their health and quality of life.
- (3) Address needs identified in Objective 2 by compiling and evaluating evidence-based methods and material for promoting healthful eating and/or prevention of weight gain.
- (4) Develop community-based applications that can be refined and evaluated in future projects.

ACCOMPLISHMENTS:

- 1) Regular communication and good organization has insured that NC1028 members remain well-connected and effective (**Objective 1**). This was accomplished by:

- a. *Monthly NC1028 teleconferences*: The chair would set an agenda for the teleconferences, secretary would take minutes, and action items were assigned.
 - b. *Annual NC1028 meetings*: Two to three day conferences were held for face-to-face meetings, with availability to phone conference for members unable to attend.
 - c. *Web site*: A vibrant and well-maintained web site hosted by the University of Wisconsin with links to Administrative Structure and Partners, Committees, Participatory Research Information, Training Manuals, Archives, and Publications Tracking System.
 - d. *Campus Coordinator*: A campus research coordinator was designated at each university (typically a doctoral student), along with a PI.
 - e. *Training*: Training manuals on CBPR, the Transtheoretical Model for Behavior Change, and protocols for each research project were available on the web site and phone/on-line trainings were conducted by multi-state experts in the field.
- 2) Research conducted over this 5-year period was funded by two NRI grants (**Objectives 2,3, 4**). The first was “Behavior change for obesity prevention in young adults” or WebHealth (Grant 2005-35215-154121541) and the second was “Development of a randomized trial guided by the process of PRECEDE-PROCEED for the prevention of excessive weight gain in communities of young adults” or YEAH (Young adults Eating and Active for Health) (Grant 2009-55215-05460). Findings from the WebHealth research were integral to the development and design of the YEAH project.
 - 3) Focus Groups are critical for community-based participatory research, and each university conducted focus groups (on-line or in person) to determine problems and priorities affecting young adults’ quality of life. Focus group findings drove the development of lessons for WebHealth and YEAH (**Objective 2**).
 - 4) WebHealth (in progress during this five-year period) was conducted at 8 universities with 1,689 students (**Objectives 2,3,4**). It comprised a 10 lesson on-line nutrition and physical activity intervention using a Health at Every Size approach. Fruit and vegetable intake and physical activity were assessed at baseline, 3-months post-intervention, and 15-month post-intervention. Findings revealed that the intervention did not reduce weight gain or cardiorespiratory fitness, but did reduce the rate of decline in physical activity and increased fruit and vegetable intake by 0.9 cups at 3-months post-intervention and by 0.5 cups at 15-months post-intervention. Lessons learned, which informed the YEAH project, were “more fun, less test” in the lessons, the need for individually-tailored lessons, and a booster is needed to sustain the WebHealth-driven increase in fruit and vegetable consumption.
 - 5) Environmental Audits were conducted on all campuses (**Objectives 2,3**). These assessed the walkability/ bikeability of the campus; the characteristics of buildings, vending, signage, policies and recreations facilities that either support or deter obesity prevention efforts; the availability of healthful foods on or near campus (NEMS-R: Nutrition Environment Measures Survey Revised)
 - 6) Health behavior surveys (BEKS: Behavior Environment and Knowledge Survey, and BECS: Behavior Environment Changeability Survey) were conducted at all campuses (**Objectives 2,3**).
 - 7) Lessons for YEAH were developed with input from the Stress Management Committee, Instrument Committee, and Recruitment and Retention Committee (**Objectives 2,3**). The

web program consisted of 19 mini-modules developed using the ARCS (A Real life, Creative, Skills-based curriculum) focusing on healthful eating, physical activity in daily living, strategies to cope with stress through time management, appropriate sleep, and balancing friends and other distracters in college life such as alcohol. Participants are encouraged to set weekly goals to consume target levels of fruits and vegetables, participate in 30 minutes of physical activity each day, and cope with stress most days of the week. One state (ME) tailored the intervention to meet the needs of low income, low literacy young adults in Job Corp.

- 8) Pilot-testing of the lessons developed for YEAH was conducted on a subset of campuses, and formative evaluation as well as Instructional Materials Motivation Survey (IMMS) were used to make changes to the intervention before it was implemented (**Objective 4**).
- 9) YEAH baseline testing using the 10-week web-based intervention was conducted beginning January 2011, and 1 year follow-up is in progress (**Objective 4**).

OVERALL IMPACTS:

The NC1028 project has integrated the community-based participatory research process into the development of programs whose goals are to prevent weight gain and improve quality of life in young adults. The WebHealth project successfully informed the YEAH project¹, which will continue to be implemented under under NC 1193.

Please see annual reports for 2006-2011 for a complete listing of publications and presentations

¹WebHealth, YEAH, and associate spin-off projects drew \$5M in major grants and other small grants, led to over 70 publications, 14 doctoral theses, 40 Masters theses, facilitated professional development for its members (1 promotion to associate professor, 5 promotions to full professor, and 6 selected as department chair/head, program director or associate dean), and produced dozens of presentations at venues such as SNE, ADA, AAAS, APHA, EB, ISBNPA, NASULGC, International Congress of Behavioral Medicine, and International Congress of Obesity .