

## **HEART HEALTHY NUTRITION EDUCATION PROGRAM**

Program Justification. Wyoming is classified as a rural/frontier state. Because of its vast land mass and limited population many counties within the state are classified as medically underserved areas or populations (State of Wyoming Department of Health [WDH], 2007). Rural-residing residents are less likely to participate in health-promoting behaviors such as utilizing preventive screening services (WDH, 2007). Barriers to adopting health promoting behaviors in rural areas include lack of health insurance, limited access to regular health care services, limited finances, structural barriers (e.g. transportation, convenient hours), and limited number of health care providers. According to the Centers for Disease Control and Prevention (CDC) the two leading causes of death and disability in Wyoming are heart disease (24% of all deaths) and stroke (7% of deaths), both of which are preventable and treatable through lifestyle interventions (CDC, 2007).

A goal of Healthy People 2010 is to “Increase the quality, availability, and effectiveness of educational and community-based programs designed to prevent disease and improve health and quality of life” (U.S. Department of Health and Human Services [DHHS], 2000). In order to address this goal, the State of Wyoming Department of Health’s Heart Disease and Stroke Prevention (HDSP) program has created a Wyoming State Plan for Heart Disease and Stroke Prevention 2008-2010 (WDH, 2008). One goal is to increase the number of Wyoming residents electing to live a healthier lifestyle (WDH, 2008). Defined objectives to achieving this goal include increasing the number of adults participating in 150 minutes of activity weekly and choosing to eat produce daily (WDH, 2008). Another state goal is to focus on ways to reduce disparities and other issues and improve access to health care related disparities of people affected by heart disease, stroke and peripheral artery disease (WDH, 2008). An identified objective to meet this goal is to make available culturally sensitive resources for providers and communities throughout the state relating to CVD (WDH, 2008). The University of Wyoming Cooperative Extension Service’s (UWCES) Nutrition and Food Safety (NFS) program is in a unique position to assist the HDSP efforts in addressing CVD prevention. NFS Educators are present throughout the state and are able to provide education to those without health insurance and/or those residing in communities without sufficient access to CVD nutrition programming.

Program Development. Community-based programs are designed to reach people outside of the traditional health care environment and serve as the foundation to health promotion and improved quality of life (DHHS,

2000). Effective community health programs are those developed using Social Marketing theory, which entails the conducting of needs and preference assessments prior to the development and implementation of programming. The information obtained from the needs and preference assessments in conjunction with observational assessments and Census data can be used to formulate program plans that are of greatest importance and need to the target audience.

An on-going Nutrition and Food Safety (NFS) needs and preference survey was conducted by the Carbon and Albany County UWCES NFS Educator (Francis). The results were tabulated from surveys collected between December 2006 to October 2007 and were analyzed using Excel 2007 with descriptive statistics.

The survey used a convenience sample of Carbon (n=31) and Albany (n=28) County residents who were primarily middle age (mean age: 48 years) females (n=50). The printed survey contained eight-questions addressing: general demographic information; NFS programming usage and interest; scheduling preferences and nutrition-related health conditions. Distribution methods included mass mailings (n=100), health fairs (n=11), and NFS education programs (n=37). The response rate was relatively low at 12% (59 out of 493 potential respondents). The leading four reported nutrition topics of interest were healthy eating (n=24), fruits and vegetables (n=23), heart healthy diet (n=23), and low-fat cooking (n=20). The majority (31 out of 52, 59.6%) reported being affected by or having a family member with a diagnosed nutrition-related health condition. The leading diagnosed nutrition-related health conditions were overweight/obese (n=18), hypertension (n=12), and hypercholesterolemia (n=12). These results identified a preference for heart healthy diet-focused nutrition programming as reflected by nutrition topics of interest. This is further supported by the identified need subsequent to the number of people with CVD risk factors (overweight/obese, high blood pressure and high cholesterol). Despite the low response rate, the needs assessment results support the 2000 CDC report regarding CVD risk factors for Wyoming (CDC, 2007).

A need for a heart healthy nutrition class was identified using the information obtained by the NFS survey, 2000 Wyoming Census data, and the Wyoming Department of Health (CDC, 2007, WDH, 2008). The goal of the Eat to Your Heart's Content program is to provide heart healthy nutrition education using the curriculum created for the NEWS (Nutrition Education With Seniors) You can Use program developed by Francis and others (Francis, Taylor & Strickland, 2004). The NEWS program demonstrated improvement in quality of life measures including morale and self efficacy regarding the ability to: choose healthy foods, follow general nutrition principles and

practice, and follow special dietary regimens (Francis, Taylor, & Haldeman, 2006). The NEWS program also showed significant improvement in nutritional status and BMI, reduced intakes of: trans fat, cholesterol, energy, carbohydrate, and sodium and an increase in fiber consumption (Francis & Taylor, 2006).

Purpose of Program. The purpose of the Eat to Your Heart's Content program is to "Wyoming-ize" the developed curriculum and pilot test it in Carbon and Albany Counties through UWCES. The target audience is adults (18 years and older) residing in Carbon or Albany Counties. The objectives are to increase: familiarity with heart healthy eating practices and the number of self-reported heart healthy nutrition practices. Both of which, relate to the aforementioned HDSP objectives.

Project Plan. Since the original curriculum was developed for older women in the South, focus groups will be conducted using a convenience sample of community volunteers (e.g. area residents and local health care providers) to discuss heart healthy nutrition concerns specific to Wyoming. Focus group recommendations will be used to "Wyoming-ize" the Eat to Your Heart's Content curriculum. In doing so, the program materials will be culturally appropriate. The program is anticipated to be six weekly sessions with discussion, cooking and taste-testing components but may be changed if focus groups advise against this approach. The class size will remain relatively small (10-15 people) to allow for rapport building to reduce attrition. A small charge will also be incorporated into the program to supplement the cost of educational materials and food. The cost will be discussed with focus groups to be sure it is not too little or excessive. Finally, to maintain consistency between classes during the pilot test period, Francis will refrain from modifying teaching techniques.

**Project Timeline:**

*Spring 2008:*

- Submit program application to University of Wyoming Institutional Review Board for Human Subjects
- Recruit focus group participants

*Summer 2008:*

- Conduct focus groups with community volunteers in Carbon and Albany Counties
- Revise curriculum to target needs/preferences identified during focus groups

*Fall 2008-Spring 2009:*

- Begin implementing Eat to Your Heart's Content program (Goal: 50 Total participants)
- Compile progress report for NEAFCS

*Summer 2009:*

- Compile assessment data to determine program impact
- Compose final report for NEAFCS

Fall 2009:

- Revise program according to evaluations
- Implement in other counties with an NFS Educator

Budget. The Healthy Lifestyles Education grant is needed to pay the educational materials production costs. The educational materials will be produced, in color, by the Carbon County UWCES office for an estimated \$20 per participant. If funding is provided by HDSB it will be used to buy the MealMarkers™ healthy choice flip charts, to print the evaluation materials, and to produce promotional materials (e.g. posters, flyers, press releases). The MealMarkers™ booklets will be tailor-made for UWCES. The books will remain in the custody of Carbon and Albany County UWCES and will be loaned to participants for the duration of the program. Each participant will be asked to sign a lease agreement stating that if the booklet is not returned the participant will be charged. Participation fees will pay for a portion of the educational materials production costs as well as food costs. The below budget is based on five programs with 10 participants (total participants=50).

SUPPLY ITEM		County Funds	HDSB <sup>A</sup>	Participants	NEAFCS Grant
Educational Materials	\$20/person			\$500.00	\$500
Evaluation/Assessment Materials	\$10/person	\$500.00			
Food Cost	\$30/person	\$1000.00		\$500.00	
Promotional Materials	\$10/program		\$50		
Participant Fee	\$20/person (\$1000 total)				
MealMarkers™	\$9/each		\$450		
<b>TOTAL (% contributed)</b>		<b>\$1500 (42.9%)</b>	<b>\$500 (14.3%)</b>	<b>\$1000 (28.6%)</b>	<b>\$500 (14.3%)</b>

<sup>A</sup>= Funding request has been submitted but a decision will not be made until Fall 2008.

Grant Management. Grant funds will be distributed by Francis. A separate checking account for NFS programming has been established in Carbon County. The grant funds and participant fees will be deposited into this account and used accordingly. Withdrawals from this account require two signatures, Francis and an office assistant, to ensure appropriate use.

Ability to Complete Project. Francis designed the original NEWS program. Given her expertise in social marketing which encompasses program design, implementation, evaluation and revision, there is minimal concern the project will not be completed as scheduled. The potential barriers to program completion include limited number of participants and high attrition rates. Recruitment of focus group participants has begun (n=18). Additionally, Francis will collaborate with other health care providers (e.g. local hospitals and private practices),

media outlets (e.g. local newspaper and radio), and use the *Nutrition Nibbles* NFS newsletter to advertise and recruit. To reduce attrition, the program is being revised to address the identified needs and preferences of the target audience. Additionally, the class size will be kept small to allow for rapport-building between participants and Francis. Finally, the class will be scheduled on a day and time that is convenient to the majority of participants. The small class size and scheduling strategy may also help to reduce attrition.

Evaluation Tools. Participants will complete a user-friendly healthy choices tracking flip chart. This dry-erase booklet created by MealMarkers™ will enable participants to track his/her intakes of fruits, vegetables, beverages (milk and water), and physical activity. These identified behaviors relate directly to the HDSP State plan. During each weekly class, Francis will record the daily intakes, erase the books, and return them to the participants. Additionally, a familiarity questionnaire outlining the heart healthy diet guidelines will be administered pre- and post-program. At the close of the program, participants will be asked to complete an evaluation inquiring after class design (e.g. duration, subject matter), reported dietary changes (perceived positive and negative changes), received education materials and any outside nutrition education they may have received.

NEAFCS Reporting. A progress report will be composed for NEAFCS during Spring 2009. This will discuss the current number of participants who have completed the program and the corresponding collected results. It is projected that 50 people will be able to complete the program by Summer 2009. At this time a finalized report outlining attrition, outcomes and evaluation comments will be compiled and submitted to NEAFCS.

#### **References:**

Centers for Disease Control and Prevention (2007). Chronic diseases: the leading causes of death, Wyoming. Available at: <http://www.cdc.gov/nccdphp/publications/factsheets/ChronicDisease/wyoming.htm>  
Accessed on: October 21, 2007

Francis, S.L. & Taylor, M.L. (2007). Dietitian-led in-home nutrition program improves nutritional status and dietary practices in elder women. *Journal of the American Dietetic Association*, 107(8), suppl 3: A-14. Oral presentation given at the 2007 Food and Nutrition Conference and Expo (FNCE), American Dietetic Association, Philadelphia, PA.

Francis, S.L., Taylor, M.L., & Haldeman, L.M. (2007). Nutrition education improves morale and self-efficacy in elder women. *Journal of Nutrition Education and Behavior*, 39 (4S), S114. Poster presentation given at the Society for Nutrition Education's 40<sup>th</sup> Annual Conference, Chicago, IL.

Francis, S.L., Taylor, M.L., Strickland, A.W. (2004). Needs and preference assessment for an in-home nutrition education program using social marketing theory. *Journal of Nutrition for the Elderly*, 24(2), 73-92.

State of Wyoming Department of Health (2007). Health disparity state plan. Cheyenne, WY: Wyoming Office of Multicultural Health Community and Rural Health Division, Wyoming Department of Health.

State of Wyoming Department of Health (2008). Wyoming state plan for heart disease and stroke prevention, 2008-2010. Available at: <http://www.health.wyo.gov/phsd/heartdisease/stateplan.html>  
Accessed on: February 21, 2008.

U.S. Department of Health and Human Services. Healthy People 2010. 2<sup>nd</sup> ed. With understanding and Improving Health and Objectives for Improving Health. 2 vols. Washington, DC: U.S. Government Printing Office, November 2000.