Association of Community Health Nursing Educators

Teaching Strategy Submission

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Title of Teaching Plan/Strategy: fooddesert_07132010

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Teaching Strategy Submission

1. **Title of Teaching Plan/Strategy**: Assessment of Food Deserts
2. **Date of Submission**: July 13, 2010; re-submitted October 19, 2010
3. **Relevance to Public Health Nursing competencies**: Epidemiology and biostatistics.
   ANA and PHN Scope and Standards of Practice: Assessment
   Standards of Professional Practice: Advocacy
   Quad Council and Council of Linkages Competences: Analytic assessment skills
4. **Topical area**: Epidemiology and Health policy
5. **Learner Level**: Undergraduate and RN-BSN
6. **Learner Setting**: Online or web-based modules, independent study, or classroom
7. **Strategy Type**: Problem-based learning
8. **Learning Goals/Objectives**:
   - Apply epidemiological principles to clarify a community's problem.
   - Identify relevant and appropriate information and data to provide evidence of problem.
   - Identify and analyze federal agencies involved in solution.
   - Discuss social justice and the built environment.
   - Advocate for policy change.

   Additional objectives for clinical use
   - Collect secondary data about community demographics and food accessibility data from *Food Atlas* (USDA).
   - Conduct windshield survey and interviews to generate primary data about food deserts.
   - Effectively communicate a plan of intervention in the community.
9. **Estimated time for the student to complete the activity**: This activity can be completed in a 1-2 hour class period depending on whether students are assigned to bring in some of the needed data prior to class. If it is a part of a clinical community assessment it may take 12 hours or 2 clinical days, including the windshield survey for grocery stores and interviews with community residents on perception of food accessibility.
10. **Strategy overview**: This exercise promotes the application of epidemiological principles to a defined need in a community, specifically food deserts. Food deserts are areas that lack access to affordable nutritious foods (www.cdc.gov/Features/fooddeserts/). The definition of epidemiology is introduced as the distribution and determinants of health, disease, or injury in a population. *Food Atlas* (USDA) provides a spatial overview of accessibility of food using 90 indicators in the database. Students relate and compare data about food accessibility and affordability in the built environment of a known community to the health of that community. They specifically are interested in grocery stores and

health outcomes. They analyze federal policies and programs directed at the problem and consider ways they can advocate for local policy action.

    a. The community boundaries are given and students find demographic and biological statistics to describe the community. For a classroom activity, students would be assigned to collect demographics of the community from the census database prior to class. If county data are to be used, the *Food* Atlas site provides the data. A clinical activity could include a windshield survey to confirm the lack of grocery stores and the number of convenience food stores. Interviews with residents, visits to convenience stores, etc. may also confirm the problem and generate primary data.

    b. The *Food Atlas* (USDA) website provides geographically imaged data about food deserts in the US. The smallest unit of data is the county level. Census data will provide demographics at a smaller level. The county of the community is located and data extracted. Analytical skills are used to consider the multiple determinates of the community's health. Some of the indicators include percent of residents without cars who live more than one mile from a grocery store, number of stores per 1000 people, relative cost of healthy food to non-healthy food, cost of healthy food compared to non-healthy food, available restaurants, fast food places and farmer's markets. Data about health and well-being include obesity, physical activity, diabetes rates, etc. Maps and reports can be generated in class or independently. Counties with similar characteristics can be identified and health outcomes compared.

    c. Federal programs (WIC, Supplemental Nutrition Assistance Program, National School Lunch Program) are examined on their websites and analyzed for their contribution to a solution. Federal agencies that administer these programs are identified and their websites explored to understand part of the structure and process of the US health care system.

    d. Students learn how to influence health policy, initially through awareness of the problem, conducting an assessment and gathering evidence of social injustice related to food deserts, planning an intervention and advocating for change. For example, some students may get involved in bringing farmer's markets to the area. The importance of effective communication is demonstrated in a report submitted for a grade.

11. **Resources Needed**: Computer access
12. **Files**
13. **Website Links**:

http://ers.usda.gov/foodatlas/
http://www.letsmove.gov/
http://factfinder.census.gov/home/saff/main.html?_lang=en
http://www.fns.usda.gov/wic/

http://www.fns.usda.gov/snap/
http://www.fns.usda.gov/cnd/lunch/

14. **Methods for evaluating student learning**: Students working independently submit a report that includes their community's data (demographics and health determinants per the *Food Atlas*.) Classroom activities are evaluated using the pre-class assignment from the census data and a post-class report on the evidence of a food desert. In class discussion is conducted about social justice and food deserts. Reports also include their contribution to policy: community awareness, program solutions, and contacting city planning officials, farmer's market groups, etc. See rubric for clinical evaluation.

15. **Success of teaching strategy**: Students were first introduced to a community lacking grocery stores through a newspaper article. Later we discovered our community was featured in the newspaper as a food desert. We contacted the newspaper journalist and offered to work with her in the research. Each semester students have contributed more to the picture of this particular food desert and its impact on the health of the community. We have participated in the farmer's market and helped with a health promotion activity sponsored by a local advocacy group. Students are bringing a greater awareness of the social injustice represented by food deserts and becoming more aware of multiple health determinants.

16. **References**:

Let's move: America's move to raise a healthier generation of kids. White House Task Force on Childhood Obesity Report to the President, May, 2010. Retrieved from http://www.letsmove.gov/pdf/TFCO_Access_to_Healthy_Affordable_Food.pdf

Brinson, R. (2008, January 27). Lack of grocery stores hinders North Charleston redevelopment. *The Post and Courier.* Retrieved from http://www.postandcourier.com

USDA (June, 2009)   Access to affordable and nutritious food: Measuring and understanding food deserts and their consequences. Retrieved from http://www.ers.usda.gov/Publications/AP/AP036/AP036fm.pdf

Rubric for Clinical Evaluation

Clinical Objective	Evidence	Points
Identify relevant and appropriate information and secondary data about demographics and food accessibility to provide evidence of food desert	Submission of tables including selected data from *Food Atlas*, demographics from *Census*, county morbidity and mortality data from state DHEC databases	20
Conduct windshield survey to generate primary data about food deserts	Windshield survey in narrative format with objective, primary data	15
Conduct interviews to generate primary data about food deserts	Interview with residents or visits to food stores submitted in narrative format showing questions and answers	15
Apply epidemiology to clarify community's problem	Well formulated diagnosis linking data about food desert to a defined health problem in the community (e.g. obesity, colon cancer, etc.)	15
Identify and analyze federal agencies involved in solutions	Access website of a federal or state governmental agency that can play a part in the solution. Report on the agency's structure and processes within the US health care system.	10
Discuss social justice and the built environment	Contribute to shared Excel document: number of supermarkets, convenience stores, fast-food, farmers' markets, parks, walking trails. Contribute to class discussion about findings and disparities in the community's health.	10
Advocate for policy change	Group submission of proposed solution with plan of action.	15
	Total Points	100