Ecological Perspective of Health Behavior
Breast Cancer Study

Instructions:
• Get together with 1-2 other students
• Elect one person to record your ideas (on last page – see grid)
• Read the following information
• Think about the health problem discussed here in terms of the ecological framework
• Be prepared to think creatively about intervention strategies at different ecological levels
• Turn in one copy of your group’s ideas

Increasing Mammography Rates among Women with Physical Disabilities Ages 40 and Older

Background Information:

Breast Cancer - General
• Breast cancer is the most commonly diagnosed cancer among women
• It is estimated that 2006 will see 212,920 new cases of invasive breast cancer, and 40,970 deaths due to breast cancer among US women
• Although men can develop breast cancer, their risk is relatively low (about 1,720 new cases are estimated for 2006)
• Incidence and mortality rates for breast cancer steadily increase with age
• Numerous studies show that early detection measures save lives and increase treatment options
• ACS recommends that women aged 40 and older have an annual mammogram and an annual clinical breast exam by a health care professional
• Mammography is a valuable early detection tool because it can identify breast cancer at an early stage, usually before physical symptoms develop
• Some reasons for women NOT being screened as recommended include: being older, living in rural and southern locations, possessing lower education and income levels, being underinsured (or on public insurance).

Breast Cancer – Women with Disabilities
(Compiled from: US Census Bureau – 2000, CDC, and other relevant articles)
• Over 20-25% of US women live with at least one disability
• More than 25 million women are limited by disabling conditions, 38% are categorized as “Physical disabilities”
• Women with disabilities have at least the same, if not a higher risk as other women for developing breast cancer (Welner, 1998).
• Although findings are mixed, studies have found that women with physical disabilities are less likely (than other women) to receive mammograms as recommended (Shootman, et al, 2003)
• In addition to the reasons for women (in general) not being screened, factors specific to women with disabilities include: having severe physical limitations, and needing accessible health care facilities and medical equipment (e.g., height adjustable tables and mammography machines) (Nosek at al., 1997; Shootman et al, 2003; Schopp et al, 2002)
• Some provider-related factors include: the lack of training to work and communicate with women with disabilities, the sole focus on the woman’s disability – and not preventive screening, the perception that women with disabilities do not need to be screened – and so don’t need a screening referral (CROWD Reports; Thierry, 2000)
Factors from Research and Health Behavior Theory

For the purposes of this exercise, brainstorm possible interventions designed to increase mammography screening by women with physical disabilities aged 40 and older in (primarily rural) North Central Florida.

Good public health professionals understand that previous research and health behavior theory can assist in designing interventions. Since you (possibly) have not read all of the background research on mammograms or are not an expert on all health behavior theory, please keep in mind the following ideas.

**Research**
Research has shown that several factors may pose as barriers for women (disabled or not) obtaining mammograms. These include the following:
- Lack of recommendation by a woman’s physician
- Belief that mammograms are not necessary in the absence of symptoms
- Concern or anxiety about pain and radiation during a mammogram
- Lack of access/transportation to services
- Fears about finding cancer
- Lack of health care insurance, cost of the mammogram

For women with disabilities, additional social and environmental factors may include – the lack of:
- Accessible Transportation
- Accessible facilities
- Accessible mammography machines
- Doctors trained to work (and communicate) with women with disabilities
- Staff trained to work with women with disabilities
- Health care facilities that enable doctors to take extra time with patients with disabilities
- Health care facilities that see women who are on underinsured or on public assistance

**Theory**
There are many theories that are used to design health behavior interventions, most of which are not mutually exclusive. Aspects of several theories/models, including PRECEDE, the Health Belief Model, Social Support and Social Network perspectives, the Transtheoretical Model and Organizational Change have been combined to produce the following theory-based perspectives on mammography behavior – for all women, whether or not they live with a disability:

1. Several factors might influence mammogram behavior. These include:
   - How susceptible a woman believes she is to breast cancer
   - How severe a woman believes breast cancer to be
   - What a woman perceives are the benefits and costs of getting a mammogram
   - Conditions that are related to the health care system, such as type and number of providers, agencies’ attitudes about preventive services, and adequacy of insurance
   - Encouragement for mammograms from family, friends, or relevant peer groups or role models

2. Before a woman will decide to get a mammogram, she needs a **cue to action**, or something that reminds or prompts her to go for the screening.
3. Behavioral change often happens in stages. A woman must first consider getting a mammogram, then take steps to set up an appointment and arrange transportation to the clinic, then actually go to the appointment, and then finally make arrangements for future appointments (regular re-screening). Keep in mind that each of these steps may require specific interventions themselves – and that different women may currently be in different stages of this process.

4. In order to sustain individual behavior change over time, programs that prompt the changes must be integrated into a health or other community organization. To help facilitate this, it is important to have an internal champion of your intervention at the organization and to keep the mission of the organization in mind when designing your intervention.

**Small Group Exercise**

At this point, everyone should understand the importance of designing interventions that try to influence behavior on multiple levels. You have been asked to design interventions to increase mammography screening by women living with physical disabilities (ages 40 and older) in primarily rural North Central Florida. Brainstorm one intervention for each of the four levels of the ecological model – individual, organization, community, and population.

As a team, use the following questions to guide your intervention development – and to fill in the diagram at the end of this exercise. Be creative!

***Before you begin, please elect a recorder who will write your ideas in the attached chart – and turn in one group copy to Dr. Pruett

**Step one: Choose a level for intervention**
- Do you want to focus on the individual, organization, community, or population level?

**Step two: Identify level-specific factors**
- What factors are specifically related to mammogram rates at this level?
- What aspects of this level might increase or decrease the likelihood of women living with disabilities getting mammograms?
- Which of these factors can be improved upon or altered by feasible interventions in order to facilitate mammogram screening?

**Step three: Design an Intervention**
- Who is your target audience for this level of intervention? (Remember, depending on your level of intervention, your target audience might differ. Possible audiences include women with disabilities, family members, care-givers, health care providers, health care facilities, legislators, etc.)
- What is your intervention site? (Again, sites for intervention can range – possibilities include a doctor’s office, a church, the mass media, etc.)
- How exactly would you communicate information to your target audience?
- What other key community people or organizations could help you in designing and implementing your intervention?
- Specifically, what do you hope to accomplish, and how?

**Step four: Repeat Steps 1-3 for another level**
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<thead>
<tr>
<th>Factors</th>
<th>Intervention</th>
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<td><strong>Individual</strong></td>
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<td><strong>Organization</strong></td>
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<tr>
<td><strong>Community</strong></td>
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<td><strong>Policy/Population</strong></td>
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