Interprofessional Introduction to Prevention
Session Schedule

REMINDER: Complete pre-work

Week 2 August 31, 2011

Session plan:
1:00 - 3:00  Team-Based Learning Exercise

Objectives: By the completion of this session, each student will be able to:

A. Define and identify examples of primary, secondary, and tertiary prevention.
B. List and describe the four types of preventive interventions: screening, counseling, immunization, and chemoprophylaxis.
C. Explain principles of effective screening tests.
D. Discuss criteria for successful preventive interventions, e.g. effectiveness, benefits and harms, barriers, cost, acceptance by community.
E. Identify specific preventive interventions such as diet, exercise, smoking cessation.
F. Describe the U.S. Preventive Services Task Force (USPSTF) methodology and structure of recommendations.
G. Access and utilize the U.S. Healthy People Agenda and USPSTF recommendations.

TEAMS 1-13  Team-Based Learning  Kaprielian and Ross
PA Building – 800 S Duke St

TEAMS 14-27  Team-Based Learning  Sheline and Polito
SOM Amphitheater – Duke South

TEAMS 28-40  Team-Based Learning  Figuers and Melcher
TC at DPT – 2200 Erwin Square

ALL TEAMS 3:00 – 5:00  Team Project Work
Work on project with team (may stay in assigned room or use another location of your choosing)
Interprofessional Introduction to Prevention
Readiness Assessment
Week 2  Fall 2011

1. Which of the following is an example of a primary prevention strategy?
   a. Screening tests
   b. Treatment of disease
   c. **Vaccination**
   d. Early detection of disease

2. Given the following 2 x 2 table, which of the following statements is true?

<table>
<thead>
<tr>
<th>Test Result</th>
<th>positive</th>
<th>negative</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disease present</td>
<td>9</td>
<td>1</td>
</tr>
<tr>
<td>Disease absent</td>
<td>16</td>
<td>74</td>
</tr>
<tr>
<td></td>
<td>25</td>
<td>75</td>
</tr>
</tbody>
</table>

   a. The Negative Predictive Value of a negative result is 90%
   b. The Positive Predictive Value of a positive result is 36%
   c. The sensitivity of the test is 73%
   d. The specificity of the test is 67%
   e. None of the above

3. Which of the following is an example of tertiary prevention?
   a. Tight control of glucose in diabetes
   b. Screening mammograms
   c. Rubella vaccination
   d. Medications to prevent malaria
   e. Amputation of gangrenous limbs

4. The definition of chemoprophylaxis is:
   a. Preventing cancer to avoid need for chemotherapy
   b. Using chemical antiseptics to prevent the spread of infectious agents
   c. Treating disease with medications to prevent complications (e.g., diabetes)
   d. Taking vitamins to prevent nutritional deficiency
   e. Using medications to prevent acquisition of disease (e.g., malaria)

5. Interventions designed to postpone or prevent development of the symptomatic clinical phase of a disease define what level of prevention?
   a. Primary Prevention
   b. **Secondary Prevention**
   c. Tertiary Prevention
   d. Quarternary Prevention
   e. None of the above

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6. If 100 people who do not have a given disease are given a screening test for that disease and 34 of them test positive, what is the specificity of that test?
   a. 6%
   b. 16%
   c. 34%
   d. 66%
   e. 84%

7. Which of the following epidemiologic concepts identifies the number of new cases of a disease in a population?
   a. Positive Predictive Value
   b. Negative Predictive Value
   c. Prevalence
   d. Incidence
   e. Frequency

8. If there are an estimated 16,500 known patients with a given disease in a specific population of 1,250,000 Americans, what is the prevalence?
   a. 16.5%
   b. 8.2%
   c. 4.1%
   d. 2.6%
   e. 1.3%

9. A “D” recommendation by the USPSTF means that the Task Force recommendation on the preventive intervention is:
   a. For routine use
   b. Against routine use
   c. For use in selected populations only
   d. Neither for or against
   e. Insufficient evidence to make a recommendation

10. Given the criteria for successful preventive interventions of effectiveness, risk-benefit ratio, barriers, cost, and acceptance, which of the following preventive interventions BEST meets the criteria?
    a. Colonoscopy
    b. Mammography
    c. Rubella immunization
    d. Prostate specific antigen
    e. Blood pressure screening
1) Mrs. Martinez is a 50 year old female who presents for a routine annual check-up. She has not received health care in over 3 years because of a lapse in insurance; she now wants to “make sure everything is okay.” She is very busy with job and family responsibilities, caring for 3 children and her aging parents, so time for health care is limited even now that she has insurance. She does most of the cooking for her family, and gets very little exercise.

Her family history is notable for diabetes in two of her four siblings; all of them are somewhat overweight. Her mother died of breast cancer 2 years ago, at age 72.

Considering the USPSTF guidelines and her personal risks, which of the following would you recommend as the MOST important preventive intervention for her NOW?
   a. Pap smear
   b. Mammogram
   c. Glucose testing
   d. Counseling on physical activity
   e. Counseling on weight management

2) Each year, one-third to one-half of the population age 65 and over experience falls. Moreover, half of the elderly people who experience falls do so repeatedly. Falls are the leading cause of injury in older adults. Deterioration of balance is a major cause for falls. Balance screenings can be helpful to determine risk factors for falling. With proper education and balance re-training programs, medical research has shown that falls are not a normal part of aging and can be prevented to a significant degree.

You are setting up a balance-and-falls screening program at the Kings Court Retirement Village and want to select the “best” tests for your screening protocol. Your initial research reveals the following possibilities:

<table>
<thead>
<tr>
<th>Test</th>
<th>Sensitivity</th>
<th>Specificity</th>
<th>Time Required</th>
</tr>
</thead>
<tbody>
<tr>
<td>Get up &amp; go (&gt;16 sec)</td>
<td>54%</td>
<td>74%</td>
<td>2 minutes</td>
</tr>
<tr>
<td>Gait speed (&lt;=0.7 m/sec)</td>
<td>83%</td>
<td>58%</td>
<td>≤ 1 minutes</td>
</tr>
<tr>
<td>Tinetti Balance Test (score ≤ 36)</td>
<td>70%</td>
<td>52%</td>
<td>5 minutes</td>
</tr>
</tbody>
</table>

Given the above and any additional information you can locate, which test would you recommend?

   a. Get up & go
   b. Gait speed
   c. Tinetti
   d. Other?
3) DE is a 51-year-old male alcoholic who is obese, smokes a pack of cigarettes a day, and eats at McDonalds at least once per day because of the “Dollar Menu” items. DE reports, “I can eat at McDonalds for less than I can make the food.” DE reluctantly comes to you after a visit to the Emergency Department (ED) where he was evaluated for a possible heart attack. He actually cancelled his appointment with you twice as he does not like change and does not like trying new things. Your group’s task is to “optimize” his lifestyle. Which behavioral change would initially be MOST beneficial to DE first?
   a. Have DE stop smoking.
   b. Change DE’s diet; no McDonald’s food, less salt, less fat, more fiber, fruits and vegetables, etc.
   c. Rehabilitate DE for his alcoholism.
   d. Increase his physical activity.
   e. Have him evaluated for depression.

4) PM is a 28 year old married mother of two who has come to see you secondary to severe pain in her right wrist. She is right hand dominant so PM’s inability to use her right hand secondary to wrist pain has created some real problems for her. Upon examination you note pinpoint tenderness in the region of the lateral right wrist and several black and blue areas on both arms and the side of her neck. X-ray reveals a recent fracture of the right scaphoid bone and old fractures of the right distal forearm bones. PM is quiet, speaks little and avoids eye contact. When you ask PM what happened she reports that she slipped and fell when coming in the kitchen door. You suspect PM has been/is being abused but she denies it and then says she has to leave. What is the best way to assist PM at this time?
   a. Call the police and let them handle the situation.
   b. Give her contact information for a women’s “safe shelter.”
   c. Locate PM’s husband and talk with him in a separate room to see if he knows what has happened.
   d. Tell PM you are concerned about her, want to help her, suspect that she has been beaten and by law you have to contact law enforcement officials.
Interprofessional Introduction to Prevention
Session Schedule

REMINDER: Complete pre-work

Week 3: September 7, 2011

Session plan:
1:00 – 3:00 Team-Based Learning Exercise

Objectives: By the completion of this session, each student will be able to:

Goal 1: Demonstrate understanding and apply basic principles of prevention for individuals, groups, and populations across the lifespan.
   D. Discuss the role and proper use of health risk assessment tools.
   E. Discuss determinants of health and disease (e.g. genetic, behavioral, socioeconomic, environmental, health care access and quality).
   F. Discuss criteria for successful preventive interventions, e.g. effectiveness, benefits and harms, barriers, cost, acceptance by community.
   K. Discuss the cost and risk-benefit analysis of preventive interventions.

Goal 2: Analyze health promotion and disease prevention service needs for a population or community.
   A. Discuss sources of data (e.g. vital statistics, active and passive public health surveillance).
   C. Discuss cultural influences on individuals and communities (e.g. health status, health services, health beliefs).
   D. Identify problems best addressed on a population level.
   F. Utilize evidence-based recommendations for community preventive services.

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ALL TEAMS
3:00 – 5:00 Team Project Work
Work on project with team (may stay in assigned room or use another location of your choosing)

Updated 8/19/2011 web only
11. When meeting with a community member, if you are not sure you understand what is being said, which of the following is the best way to proceed?
   a. Continually ask the member to repeat themselves
   b. Ask another community member to “interpret” what the first individual is saying
   c. Paraphrase the individual, asking “I think you are telling me (this), am I right?”
   d. Tell the member, “I’m sorry, but I just do not understand you at all.”
   e. Request another meeting with more people to help clarify.

12. You attend a community discussion about childhood obesity. The meeting begins with a group prayer; you consider yourself an atheist. Which of the following is the appropriate reaction?
   a. Speak your mind at the end of the prayer
   b. Leave the room to ensure the group’s privacy
   c. Lecture the community about the separation of Church and State
   d. Attend meetings only with groups whose customs you share
   e. Participate silently as a show of respect for local customs

13. When meeting members of a new community for the first time, you should address them by their first name, to convey a sense of friendliness.
   a. True
   b. False

14. Which of the following is an example of a health clinic providing culturally-appropriate care?
   a. The providers’ race and gender mirror the clinic’s patient population.
   b. The clinic is only open during normal business hours.
   c. Evening hours are available on Wednesdays, when most community members attend church services.
   d. Patients must pay up front so that the clinic may remain financially viable
   e. None of the above

15. Which of the following is an example of an informal community gatekeeper?
   a. The Mayor of the community
   b. The Pastor at a local church
   c. The president of the neighborhood association
   d. The oldest living community resident
   e. Chairman of the local school board

16. What is one reason that Duke does not administer free clinic programs in Durham utilizing providers-in-training?
   a. It violates the Duke Mission Statement
   b. It costs too much money
   c. Some community members might consider this second-class care
   d. The federal government is providing sufficient healthcare for the underserved of Durham
   e. Providers-in-training are not ready to see “real” patients
17. Which of the following groups of people could be defined as a community?
   a. Seniors who reside in an assisted-living facility
   b. Students and staff of a local middle school
   c. People who work together in one location
   d. Members of a garden club who advocate for a shared vegetable patch
   e. All of the above

18. Which of the following would be an appropriate method for giving a community member
    the results of his or her screening test?
   a. Providing a handout in English.
   b. Having a medically unsophisticated lay person call the community member on the phone.
   c. Arranging a group meeting and giving out all the results to the community group at once.
   d. Inviting the community member to sit with a trained educator who can explain what the
      results mean in language appropriate to the patient.
   e. It is not necessary to provide individual members of the community with their results.

19. The “built and natural environment” of a community includes factors such as safe parks,
    affordable housing, clean air and water, and public art. This corresponds to which of the
    following community health clusters?
   a. Place
   b. People
   c. Equitable opportunities
   d. Healthcare services
   e. Health inequities

20. Providing non-healthcare-related ancillary services at a community clinic would likely have
    which of the following effects on the delivery of healthcare?
   a. Make it less efficient
   b. Make it more costly
   c. Create a community bond among patients
   d. Decrease likelihood of compliance
   e. Offend patients by not taking healthcare seriously
1. Stroke is the third leading cause of death in the United States. Numerous risk factors for stroke have been identified in Durham. Within Durham there is a high incidence of obesity, tobacco use, diabetes, diets high in fried foods, lack of exercise, and lack of citizen/individual knowledge about stroke and cardiovascular disease.

Your team is charged with designing an intervention to reduce stroke incidence in Durham. The community has identified the following options as things they would support. Which of the following would you recommend as your FIRST intervention? Be prepared to justify your answer.

- Work with restaurants and other food outlets in town to reduce the sodium content of what they serve.
- Create neighborhood walking campaigns to increase physical activity.
- Implement regular blood pressure screening at area shopping centers.
- Implement a local tax of $1.00 per pack on cigarettes.
- Start an education program at local churches about the risk factors for stroke and means to reduce them.

2. Childhood obesity is a national epidemic. Over the past 30 years the prevalence of childhood obesity has increased to between 12 and 17 percent of the child and adolescent population in the United States. The cause for obesity and overweight in children is the same as for adults: consuming too many calories and burning too few. Children who spend more time inside the house watching television, surfing the Internet, and playing video games are at increased risk for being overweight or obese. There are numerous health related consequences of childhood obesity, including cardiovascular disease, asthma, sleep apnea, Type 2 diabetes, musculoskeletal impairments, and psychosocial risks.

After meeting with community leaders in Durham, the consensus of the community, the community leaders and your group is to focus your first prevention efforts on improving childhood obesity rates/decreasing the number of overweight or obese children in Durham. Which of the following strategies would you choose to recruit obese/overweight children into your program?

- Work with school health officials who have identified at risk children; obese or overweight children.
- Ask local pediatricians for referrals of obese and overweight children.
- Mail information about childhood obesity and community programs to decrease weight/obesity, to homes and rely on parents to refer their children.
- Work with local churches and church leaders to refer at risk children to programs to decrease obesity.
- Hold educational programs about childhood obesity and the benefits of losing weight at local video arcades, neighborhood centers, malls, and churches and recruit from those who attend.
3. You wish to screen for sexually transmitted diseases in adults and are discussing developing a partnership with a local homeless shelter to begin your outreach. The Director of the shelter is insisting that his lay staff be involved in all aspects of the screening as they are familiar with most of the individuals who will want to be screened. He states that many individuals who would come to be screened have trust issues with “white coats” and insists that the largest number of individuals will come for screening if his staff is involved in all aspects of the screen. He says that if his staff cannot oversee all aspects of the screen that will be a “deal breaker.” How would you deal with this situation?
   a. Develop a compromise where the staff can “appropriately” assist with the screen. This may include greeting individuals and giving directions where they should go, distributing information pamphlets, etc.
   b. Permit the staff to be present during all aspects of the screening process. After all you will get a larger number of people.
   c. Tell the director you will go somewhere else to conduct your screen.
   d. Tell the Director that no staff can assist with the screening process in anyway.
   e. Other (specify______________________________________)

4. Over six million people around the world die from cancer each year. There is overwhelming evidence that lifestyle factors impact cancer risk and that positive, population-wide changes can significantly reduce the cancer burden. Current epidemiologic evidence links behavioral factors to a variety of malignancies, including the most common cancers diagnosed in the developed world – lung, colorectal, prostate, and breast cancer. Owing to the tremendous impact of modifiable factors on risk, especially for the most prevalent cancers, it has been estimated that 50 percent of cancer is preventable. However, to bring about dramatic reductions in cancer incidence, widespread lifestyle changes are necessary. African Americans are more likely to be diagnosed with colon cancer than any other group of individuals. Some of the non-modifiable risk factors for colon cancer are age and genetics (family history). Some of the modifiable risk factors are weight, diet, alcohol use, tobacco use, and physical activity. You have been asked to develop a colon cancer education program for a local racially diverse group, which is composed primarily of African Americans, who are obese and have sedentary jobs or responsibilities. About which of the following would you want to first educate these individuals?
   a. Genetics
   b. Diet & alcohol
   c. Screening techniques
   d. Varieties of colon cancers

5. Type II Diabetes Mellitus is a subclass of diabetes. Previously called non-insulin dependent diabetes mellitus, this is no longer considered a disease exclusively found in adults. Type II diabetes is associated with obesity, family history of diabetes, history of gestational diabetes, impaired glucose metabolism, physical inactivity, and race/ethnicity. African Americans, Hispanic/Latino Americans, American Indians, and some Asian Americans and Native Hawaiians or Other Pacific Islanders are at particularly high risk for type II diabetes and its complications. At the request of the Durham East End Church Alliance, you have been asked to develop a strategy to decrease the prevalence of individuals with diabetes mellitus in Durham. Which of the following would you initiate first?
   a. Set-up a screening station to screen individuals for diabetes mellitus
   b. Meet with community leaders to develop a plan for identifying individuals with or who are at risk for diabetes mellitus and also a strategy for “the next step” for individuals who test positive for diabetes mellitus
   c. Begin community educational classes on the health risks associated with diabetes mellitus.
   d. Initiate nutritional counseling with obese individuals
   e. Encourage increased physical activity in individuals who are overweight, obese or who appear to be under active.
Interprofessional Introduction to Prevention
Session Schedule

Week 4: September 14, 2011      Armory - Downtown

Session plan:

Objectives: By the completion of this session, each student will be able to:

Goal 1: Demonstrate understanding and apply basic **principles of prevention** for individuals, groups, and populations across the lifespan.
   E. Discuss determinants of health and disease (e.g. genetic, behavioral, socioeconomic, environmental, health care access and quality).
   G. Identify specific preventive interventions such as diet, exercise, smoking cessation.
   J. Assess prevention recommendations from other organizations, (e.g. Heart Association, Cancer Society)
   K. Discuss the cost and risk-benefit analysis of preventive interventions.

Goal 2: Analyze health promotion and disease prevention service needs for a population or community.
   B. Use health status data to identify needs.
   E. Propose population-based interventions.
   F. Utilize evidence-based recommendations for community preventive services.
   G. Describe health demographics of Durham County.

Goal 3: Demonstrate skills and attitudes for interprofessional teamwork
   A. Recognize the training and scope of practice of physicians, physician assistants, and physical therapists.
   B. Effectively communicate with health professions peers.

<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
<th>Presenter(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1:00</td>
<td>Team Meetings and Set Up</td>
<td></td>
</tr>
<tr>
<td>1:30</td>
<td>Electronic Poster Presentations</td>
<td></td>
</tr>
<tr>
<td>3:30</td>
<td>Break and prepare for exam</td>
<td></td>
</tr>
<tr>
<td>4:00</td>
<td>Closure</td>
<td>Victoria S, Kaprielian, MD, FAAFP</td>
</tr>
<tr>
<td></td>
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<td>Carol Figuers, PT, EdD</td>
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<tr>
<td></td>
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<td>Antoinette Polito, MHS, PA-C</td>
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<tr>
<td>4:15</td>
<td>Final Exam</td>
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