OEHS 6504 Clinical and Behavioral Aspects of Preventive Medicine
3 Credit Hours

Prerequisites

Epidemiology, Biostatistics, and Graduate Student standing. A background in clinical care or health sciences is recommended.

Meeting Time(s) & Location

Please see the schedule for meeting days. Most in-person sessions will occur in the resident's room in the RMCOEH. Significant course components are conducted through Canvas, the University of Utah's learning management system.

Course Description

Course Catalog: "This course utilizes the current recommendations from the U.S. Preventive Services Task Force, but updates it with cutting edge knowledge about evidence-based clinical preventive strategies. The target audience is physicians and PhD candidates. "

Clinical and Behavioral Aspects of Preventive Medicine teaches students to assess and synthesize research evidence to generate clinical practice recommendations. Students completing the course are able to draft and justify clinical practice recommendations. In addition, students are able to recite and outline the reasoning behind clinical prevention recommendations from the U.S. Preventive Services Task Force.

Course Goals and Objectives

Course Goals

By the end of the course students will be able to:

1. Select and justify preventive care strategies

- Determine priorities for delivering clinical preventive services given scarce resources
- Recite the key characteristics of good screening and surveillance systems
- Implement Baye's theorem in clinical settings
- Utilize primary care behavioral change interventions

2. Recite and outline the reasoning behind clinical prevention recommendations from the U.S. Preventive Services Task Force

- Demonstrate understanding of the epidemiology and screening tests for the medical conditions commonly targeted by clinical prevention efforts

3. Formulate and defend a clinical practice recommendation based on a comprehensive evidence review using the methodology developed for the U.S. Preventive Services Task Force

See Course Pages for Objectives by Topics

Resources and Required Texts

Required and recommended resources are posted to Canvas.

Instructors

Hannah Edwards, MD, MPH (Course Director)

Kurt Hegmann, MD, MPH

Instructor Contact Information

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Electronic messaging through Canvas

Office Hours: by appointment

Grading

Evaluation of Enrolled Student Performance

Baye's theorem homework	4%
Article abstraction and rating 1 posts	4%
Article abstraction and rating 2 posts	4%
Topic, analytic framework, key questions posts	4%
Evidence table	8%
Evidence table posts	4%
Peer review of paper drafts	4%
Final paper	12%
Midterm 1	12%
Midterm 2	12%
Final examination	24%
Participation (i.e., online postings beyond minimum requirements, reading all classmates' posts, posting questions/thoughts and responses to the general course discussions)	8%
Total	100%

Full descriptions of each assignment can be found with the assignments in Canvas. Grading criteria for individual assignments can be found in the grading rubrics associated with the assignments in Canvas.

Assignments submitted after the due date and time will be reduced in value by 25% of what would otherwise have been earned. Required assignments submitted more than a week late will not be graded (zero for the assignment).

Determination of Grades

A 93-100%

A- 90-92%

B+87-89%

B 83-86%

B- 80-82%

C+77-79%

C 73-76%

C- 70-72%

Extra Credit Policy

No Extra Credit is provided in the course.

Online/Hybrid Course Components

Online Guidelines

There are unique responsibilities that come with taking a course that has an online component. In an online course, the workload is purposely distributed across the semester so that you can receive continuous formative feedback since you will not see the instructors in a face-to-face class each week. You must stay on top of deadlines and complete your work on time so that you can engage with your peers when the assignment is active. Deadlines for the online forum discussions and assignments will be enforced. Since the course does not meet face-to-face each week (in-class time as in a traditional course), you are expected to use equivalent time for readings, online postings, and assignments.

Electronic or equipment failure:

It is your responsibility to maintain your computer and related equipment in order to participate in the online portion of the course. Equipment failures will not be an acceptable excuse for late or absent assignments.

Instructure Canvas works best in the most recent versions of Firefox, Chrome, Safari, Opera, and Internet Explorer and with the most recent version of the flash plug-in. Be sure to keep your browser and flash player up to date.

Naming conventions and software type:

Files should be named as follows with no spaces in the file name:
(Last name)_(First initial)_(Course number)_(Assignment name with no spaces)_(Year)
Examples: Doe_J_6702_Firefighter_FFD_Presentation_2011 or
Doe_J_6702_FirefighterFFDPresentation_2011

All files that will be shared with the rest of the class, such as presentation handouts, should be submitted as PDF files unless an alternate format is specified for the assignment.

Discussion Forum Participation

This course uses online discussions to help facilitate interaction and idea sharing while developing an online community. For grading purposes, each discussion forum assignment includes two required parts: your initial response and then replies to the postings of peers.

A *response* is defined as your initial discussion board posting that addresses the specific discussion topic, question or prompt. A *reply* is defined as a discussion board posting that comments on a posting of another learner or the instructor. Your initial response for all discussion forums should be long enough to fully meet the expectations of the assignment. There is no minimum word requirement for replies, however an “I agree” will not qualify as a reply. If you refer to the course readings in your posts you do not have to cite and reference those readings. If you integrate sources beyond the course materials, please cite and provide a reference list for those resources to share with your peers.

Please keep in mind that it is easy to misinterpret a poster's intention, and that your intention can be misinterpreted depending on your word choice or completeness. When you respond to posts, please respond first to posts that do not yet have a response.

Students need to adhere to rules of classroom conduct and follow netiquette rules (i.e. not responding in all caps) for all discussion posts.

Communications

Announcements. The announcement feature in Instructure Canvas is used for “broadcast” messages intended for everyone enrolled in the course. If there is an announcement, you will see it when you log into Instructure Canvas. You usually also receive the same message via the Instructure Canvas message system.

Discussions. The discussion board feature in Instructure Canvas will be used for (1) online discussions about specific topics; (2) as a place to post questions and answers between students and faculty about class content; and (3) as a place for students to communicate with each other. The discussion forum is a place for students and instructors to discuss course content and questions about the course in general. Specific questions about a student’s performance in the course (e.g., exam grades, comments on papers, etc.) should be sent directly to the instructor and dealt with privately, rather than in the public forum.

Email. The primary method of teacher-to-student communication for the semester is via course messages. Unless otherwise noted, students may expect a response from the instructor within 48 hours. Please keep a copy of all your emails because e-mails deleted from Canvas cannot be retrieved.

Classroom equivalency and privacy:

Discussion threads, e-mails, and chat rooms are all considered to be equivalent to in-person classrooms, and student behavior within those environments shall conform to the Student Code. Course e-mails, e-journals, and other online course communications are part of the classroom and as such, are University property and subject to GRAMA regulations and the Student Code. Privacy regarding these communications between correspondents must not be assumed. Please be aware that Teachers in Canvas can and may access all Conferences and conference archives generated by students in a course. Teachers can also view all messages sent between students within Canvas.

Instructure Canvas Resources:

Canvas Support: http://guides.instructure.com/
Utah Education Network Canvas Wiki: http://canvaswiki.uen.org/wiki/Category:Student_tutorials
Technology Assisted Curriculum Center: http://www.tacc.utah.edu/

Use of Electronic Devices in Face-to-Face Class Settings

Students are encouraged to use computers and other electronic devices in class for note taking and/or class participation as directed by the instructor. Use of these devices to check e-mail or view websites not related to course content is not allowed during class. Students who use electronic devices for non-course related activities while in class might lose class participation credit. The instructor may direct at any time that any student or the entire class stop using electronic devices in class.

ADA Statement

The University of Utah seeks to provide equal access to its programs, services and activities for people with disabilities. If you will need accommodations in the class, reasonable prior notice needs to be given to the Center for Disability Services, 162 Union Building, 581-5020 (V/TDD). CDS will work with you and the instructor to make arrangements for accommodations.
www.hr.utah.edu/oeo/ada/guide/faculty/

Faculty and Student Responsibilities

All students are expected to maintain professional behavior in the classroom setting according to the Student Code, spelled out in the Student Handbook. Students have specific rights in the classroom as detailed in Article III of the Code. The Code also specifies proscribed conduct (Article XI) that involves cheating on tests, plagiarism, and/or collusion, as well as fraud, theft, etc. Students should read the Code carefully and know they are responsible for the content. According to Faculty Rules and Regulations, it is the faculty responsibility to enforce responsible classroom behaviors, beginning with verbal warnings and progressing to dismissal from class and a failing grade. Students have the right to appeal such action to the Student Behavior Committee.
http://www.regulations.utah.edu/academics/6- 400.html

Student Handbook

http://www.sa.utah.edu/regist/handbook/StudentHandbook.htm

University of Utah Withdrawal Policy

http://www.sa.utah.edu/regist/handbook/withdrawal.htm

Schedule

Please see the course homepage and calendar in Canvas for the course schedule.

Note: This syllabus is not a binding legal contract. It may be modified by the instructor when the student is given reasonable notice of the modification.

Course Summary:

Context and the United States Preventive Services Task Force

Objectives

- Recall the most common preventable causes of disease and death in the U.S. by total population and by age group.
- State the purpose of the USPSTF.
- Outline how the USPSTF selects topics for review.
- Describe the purpose and elements of an Analytic Framework.
- Describe the role of Key Questions in Analytic Frameworks.
- List the six Critical Appraisal Questions used by the USPSTF when evaluating scientific evidence.
- State how the USPSTF interprets the words “Good”, “Fair”, and “Poor” when describing the quality of scientific evidence.
- Describe the meaning of the levels of certainty of net benefit (High, Moderate, and Low) used by the USPSTF.
- Define the grades assigned by the USPSTF: A, B, C, D, and I.
- Recite the USPSTF “A” and “B” level recommendations that are relevant to the Affordable Care Act, including the gender, age, medical, and social factors that are included in each recommendation.

Cancer I: Breast and GYN

Objectives

- List the risk factors for the cancers discussed in class.
- State the effects tobacco has on all types of cancer.
- List the leading causes of cancer mortality in the U.S.
- Articulate the rationale for delaying mammography until 40 versus 50 years old, as well as for cessation in the elderly.
- Compare mortality rates in cervical cancer based on progression of disease and its ramifications for screening.
- Discuss the effectiveness of early detection of ovarian cancer.

Cancer II: Prostate, Colon, others

Objectives

- List the risk factors for the cancers discussed in class.
- State the effects tobacco has on all types of cancer.
- List the leading causes of cancer mortality in the U.S.
- Discuss the effectiveness of early detection in prostate cancer.
- Discuss the effectiveness of early detection in colon cancer.
- State the most effective preventive measure for lung cancer.
- Discuss the trend in skin cancer mortality for the past 50 years.
- Compare the mortality rates of pancreatic cancer in Utah vs. U.S.
- State the primary prevention strategy for reducing risk of pancreatic cancer.
- Discuss the quality of epidemiological evidence for oral cancer screening.

- List the occupational and non-occupational exposures risks for bladder cancer.
- Describe the trend in thyroid cancer in the U.S over the past 50 years.

Women's' Health and Newborns; Vision and Hearing; Environmental

Objectives

Prenatal and Congenital

- Discuss the ethical ramifications of screening for congenital malformations.
- Describe the usefulness and accuracy of ultrasonography in pregnancy.
- Define hypertensive pregnancy disorders and their prevalence.
- Describe the accuracy and effectiveness of intrapartum electronic fetal monitoring.
- List the outcomes indicated by/associated with bacterial vaginosis.
- State why current prevalence rates for Down Syndrome are a probable underestimate.
- List the risks for neural tube defects.
- Identify the pros and cons of Folic Acid supplementation
- Describe the effects of early detection of hemoglobinopathies.
- Identify the benefits of a low detection threshold for phenylketonuria.
- State the benefits of early screening for thyroid disorders in infants.

Vision & Hearing

- List the differences in screening for visual impairment as your population ages
- Describe why preventive vision screening is recommended for preschoolers but not other age groups
- List the risk factors for glaucoma.
- State the prevalence of otitis media in children and its developmental and social ramifications.
- Discuss the relationship between early detection and improved outcomes in newborn hearing screening programs.

Metabolic/Environmental Disorders

- State the prevalence, symptoms and etiology of thyroid disease.
- Discuss the rationale for the USPSTF’s statement on screening for thyroid disorders in adults.
- Discuss the epidemiological evidence for or against iron prophylaxis.
- State the trends in blood lead levels in the past 30+ years and discuss the potential causes.

Bayes' Theorem and Screening/Surveillance

Bayes' Theorem Objectives

- Recite the limitations of screening tests.
- State the characteristics of a good surveillance system.
- List the characteristics of diseases that result in improved surveillance system performance.
- Calculate sensitivity, specificity, positive predictive value, and negative predictive value and interpret them.
- Apply Bayes’ Theorem to a given set of values.
- Predict the utility of a screening tool.

Cardiovascular Disease

Objectives

Cardiovascular Disease

- Describe the prevalence of cardiovascular disease in the U.S. population.
- Describe the effects of physical activity on heart disease.
- Compare the current levels of cardiovascular disease with the Healthy People 2020 goals (specific numbers do not need to be memorized).
- State the current incidence of stroke deaths compared to the Healthy People 2020 goals (specific numbers do not need to be memorized).
- State the relationship between peripheral artery disease and risk factors.
- Qualitatively compare the costs and benefits of screening and treatment for abdominal aortic aneurysm.

Hypertension

- State the risk factors and adverse health effects for hypertension.
- Identify the benefits of early detection of hypertension.
- Describe typical indications for treatment and the nature of treatment at various blood pressures.

Lipids

- Describe lipids and their relationships to diseases.
- List the risk factors for abnormal lipid levels.
- Identify the different risk reduction efforts for abnormal lipids.
- Apply lipid treatment criteria to different clinical scenarios.

Prophylaxis

- Outline the epidemiologically proven risks and benefits of HRT (refer to cancer lectures).
- Explain the main risks and benefits of aspirin therapy.
- State which diseases can adequately be treated with post-exposure prophylaxis (refer to infectious disease and immunization lectures).

Tobacco

Objectives

- Identify the adverse health and economic/social effects of tobacco use
- Identify the components of the USDHHS 5A's approach to tobacco counseling
- Determine best methods of tobacco cessation treatment by patient population type and by individual characteristics and experiences.
- Describe the mechanisms of action and the appropriate uses of tobacco cessation pharmacotherapy

Mental Health Conditions and Substance Abuse
Injury and Violence

Objectives

- Describe the prevalence trends of dementia by age group.
- List the high-risk populations for depression.
- Identify the relationship between depression and suicide.
- Distinguish between the different types of family violence.
- List the different medical problems due to alcohol dependence.
- Identify the populations at highest risk for drug abuse.
- Describe the recent trends in drug/alcohol use by age group.

Clinical Practice Guidelines

Clinical Practice Guidelines Objectives

- Define evidence-based medicine.
- Outline the methodologies employed by the ACOEM Practice Guidelines (APG) to develop clinical practice recommendations.
- Estimate the quality and utility of evidence in articles using APG and USPSTF methods.

Diabetes Mellitus

Objectives

- Define the medical and economic effects of diabetes mellitus.
- Distinguish between the different types of diabetes mellitus
- Identify risk factors for diabetes mellitus
- Discuss the problems with early detection and aggressive/intensive treatment of diabetes mellitus
- Articulate the trend in Type 2 DM to be expected over the next decade, including rationale.

Obesity, Diet, and Exercise

Objectives

- Define the measurement of overweight and obesity in children and adults
- State the prevalence of overweight and obesity in the U.S.
- Identify appropriate nutrition and activity recommendations for cardiovascular health versus those for weight loss, and identify healthy weight management principles.
- Discuss the efficacy of different weight loss techniques.
- Describe who would be a candidate for various weight loss techniques.

Behavior Change

Objectives

- Describe the major elements of the theories of behavioral change presented in course materials.
- List and apply the 5 A’s as described by USPSTF publications
- Apply the Stages of Change Model to behavioral counseling.
- Utilize Motivational Interviewing techniques to help facilitate behavioral change.

Social Determinants of Health

Objectives

- List the social determinants of health discussed in class and the course materials.
- Describe the risk contribution of the social determinants of health relative to “traditional” medical risk factors, like smoking or hypertension.
- Discuss how social determinants of health might be considered or addressed in the design of community and workplace health promotion programs.

Infectious Diseases

Objectives

- Compare and contrast the importance of early detection of treatable, infectious diseases versus treatment on presentation.
- Describe the relationship between age at infection and chronicity of Hepatitis B.
- List the major risk factors for Hepatitis B.
- Identify the high-risk groups for Syphilis, Gonorrhea, Chlamydia, HIV and Herpes Simplex Virus.
- Describe the epidemiological trends for the infectious diseases discussed in class.
- Propose and defend a screening and prevention program for sexually transmitted diseases.
- Qualitatively compare the Healthy People 2020 objectives for gonorrhea with the most recently reported incidence rates.
- Recite the number one bacterial STD in the U.S.
- State the most prevalent STD in the U.S.
- Compare Chlamydia rates in the U.S. and Utah.
- Compare chlamydial and gonococcal conjunctivitis.
- Explain why screening for bacteriuria is recommended in pregnant women.
- Explain why screening programs are recommended for vaccine preventable diseases like Rubella.

Immunizations and Clinical Effectiveness Analysis

Objectives

Immunizations

- List the current immunizations recommended generally for each age group identified in class. (You are not responsible for knowing the pediatric immunization schedule broken down by each visit).
- Discuss the complexities of immunization administration, including the need for social marketing of immunizations
- Describe immunizations' role in infection control in defined populations such as children, adolescents, adults, seniors, and health care workers
- Discuss the social and delivery system issues surrounding Influenza prevention and pandemic planning

Musculoskeletal Disorders

Objectives

- Identify the different potential predictors of hip or vertebral fractures.
- Describe the trend in screening for osteoporosis and prevention by age.

- Describe the trends in arthritis and the different risk factors discussed in class.
- Identify the major risk factors for musculoskeletal pain, including behavioral and psychological risk factors, discussed in class.