



# Integrating AHRQ Evidence-Based Resources into Course Curricula

## Supplemental Material and References to Accompany the Live Webinar

You may register for the recording at: <http://ce.ahrq.gov/nurses/>

### AHRQ's Mission and Priority Areas of Focus

#### ***Mission***

**Slide #14**

"...To produce evidence to make health care safer, higher quality, more accessible, equitable, and affordable, and to work with HHS and other partners to make sure that the evidence is understood and used."

#### ***Priority Areas of Focus***

**Slide #15**

Four priority areas of focus for AHRQ:

- Improve quality through dissemination and implementation of patient-centered outcomes research (PCOR) findings.
- Make health care safer.
- Increase accessibility by evaluating Affordable Care Act (ACA) coverage expansions.
- Improve health care affordability, efficiency, and cost transparency.

**Source:** AHRQ Profile: <http://www.ahrq.gov/about/index.html>

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#### **Definition of Evidence-Based Clinical Practice**

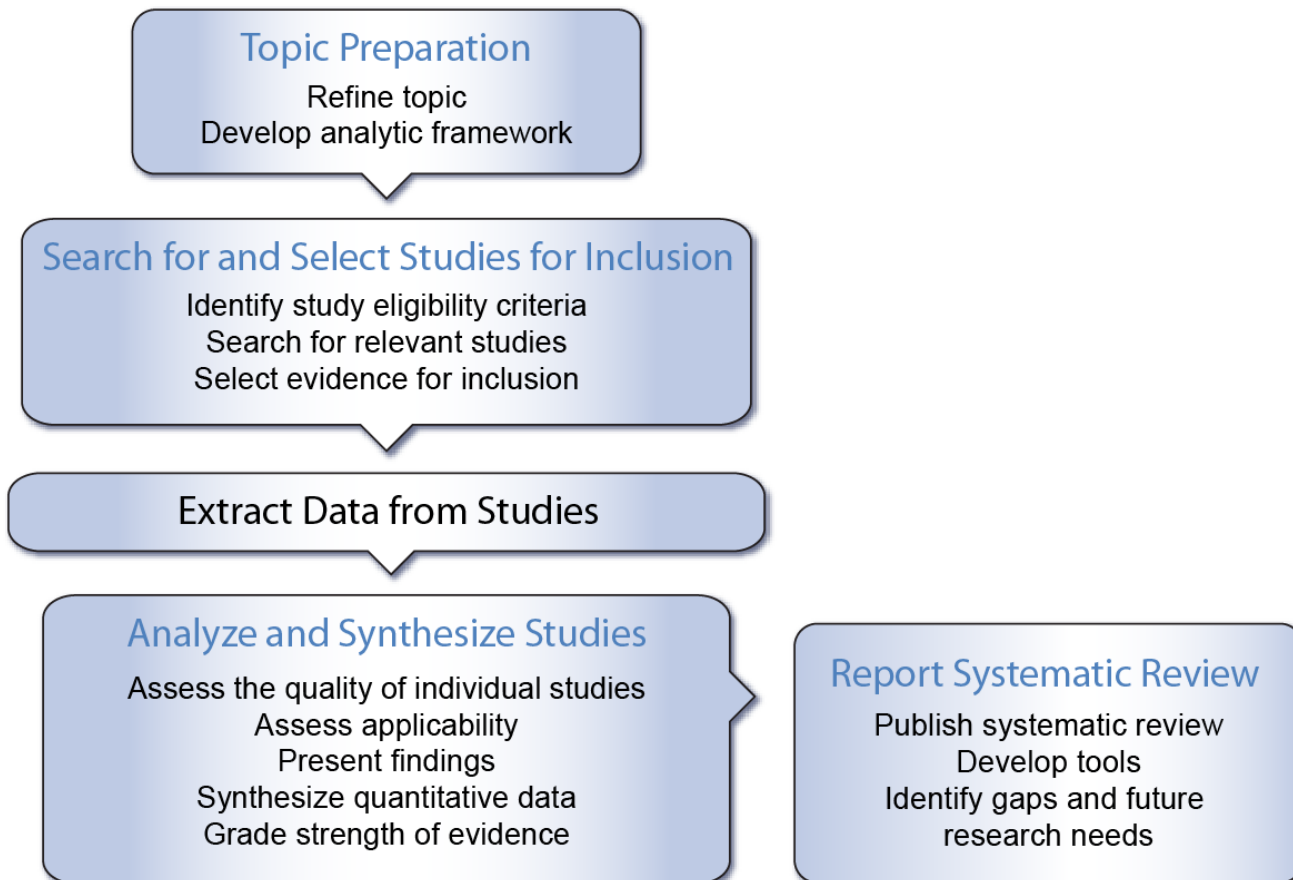
**Slide #19**

"...*Evidence-based clinical practice* is an approach to decisionmaking in which the clinician uses the best evidence available, in consultation with the patient, to decide upon the option which suits that patient best."

**Source:** Muir Gray JA. *Evidence-based Healthcare: How to Make Health Policy and Management Decisions*. London: Churchill Livingstone; 1997.

## Systematic Review Process

Slide #20



A systematic review critically assesses and evaluates all of the research addressing a particular clinical issue.

**Step #1** in the systematic review process is preparing the topic (*Topic Preparation*).

- The topic to be evaluated is identified and fully defined.
- Key questions are formulated.
  - The key questions guide the next steps in the review process in terms of the literature search, inclusion and exclusion criteria for literature, types of data to be extracted, and how the data are synthesized and reported.
- The analytic framework is developed.
  - The analytic framework is an overview of the topic being evaluated and defines any assumptions being made about the intervention and its effect on patients. It establishes a context for the report and clarifies links between intermediate and health outcomes.
  - Components of an analytic framework:
    - Population of interest
    - Intervention
    - Linkages that demonstrate key questions
    - Intermediate outcomes
    - Ultimate health outcomes (including harms)

**Step #2** is the search for and selection of clinical studies for analysis (*Search for and Select Studies for Inclusion*).

- Before searching the literature, selection criteria (also called inclusion and exclusion criteria) established as part of the analytic framework are used to determine which studies will be included in the analysis.
- The literature is searched and studies are selected for evaluation and analysis.
- Strict systematic scientific methods are used to guide the research process to ensure that all of the appropriate studies are included.
- Multiple databases are searched.
  - Data sources include: sources of peer-reviewed published evidence, e.g., PubMed (Medline), Cochrane Database, AIDSLINE, Embase, TOXNET, PsychLIT, CINAHL, evidence-based clinical practice guidelines, etc.

**Step #3** is data extraction (*Extract Data from Studies*).

- This is a very time-consuming step and needs to be carried out methodically and systematically.
- This step requires personnel who are familiar with the content being evaluated and who have knowledge of epidemiologic principles and statistical concepts.

**Step #4** involves analysis and synthesis of the published data (*Analyze and Synthesize Studies*).

- During this step, the strength and quality of the published evidence are graded. The evidence grade guides conclusions and recommendations issued in the review. (Grading of the strength of evidence is done after the quality of the individual articles is rated.)
- Grading the evidence helps users of systematic reviews understand the body of evidence and how much confidence they can have in making decisions based on that evidence.
- Once the research is completed, a draft report is presented to scientific and/or medical experts who review the findings and conclusions for accuracy.

**Step #5** is the reporting or dissemination of the results of the review (*Report Systematic Review*).

- A standard format used for systematic reviews often includes:
  - Abstract and Executive Summary
  - Chapter 1. Introduction
  - Chapter 2. Methods
  - Chapter 3. Results
  - Chapter 4. Discussion
- AHRQ and the USPSTF publish their draft systematic reviews for public comment as a way to ensure that the research process is as transparent as possible.
- Once the systematic review is completed, it is usually published in a peer-reviewed journal. The information is then made publicly available and can be translated into tools and aids to support clinical decision making.

#### **Sources:**

- Methods Guide for Effectiveness and Comparative Effectiveness Reviews. AHRQ Publication No. 10(13)-EHC063-EF. Rockville, MD: Agency for Healthcare Research and Quality. September 2013. (<http://effectivehealthcare.ahrq.gov/index.cfm/search-for-guides-reviews-and-reports/?pageaction=displayproduct&productid=318>)
- The EHC Program Slide Library [scroll down to **Methods Training Materials** and click on **AHRQ Training Modules for the Systematic Reviews Methods Guide**]: <http://effectivehealthcare.ahrq.gov/index.cfm/tools-and-resources/slide-library/#slidetrainingmodules>

**National Guideline Clearinghouse (NGC): <http://www.guideline.gov/> Slides #22-23**

***Institute of Medicine (IOM) Definition of Clinical Practice Guideline (2011)***

“Clinical practice guidelines are statements that include recommendations intended to optimize patient care that are informed by a systematic review of evidence and an assessment of the benefits and harms of alternative care options.”

***NGC Criteria for Guideline Inclusion – Effective June 2014:***

- A. Clinical practice guidelines should include systematically developed statements. Recommendations should optimize patient care by assisting health care practitioners and patients to make informed health care decisions for specific clinical circumstances.
- B. The clinical practice guideline must be produced under the auspices of a medical specialty association; relevant professional society; public or private organization; government agency at the Federal, State, or local level; or health care organization or plan. A clinical practice guideline developed and issued by an individual(s) not officially sponsored or supported by one of the above types of organizations does not meet the inclusion criteria for NGC.
- C. **\*New element for 2014\*** The clinical practice guideline is based on a systematic review of evidence as demonstrated by documentation of each of the following features in the clinical practice guideline or its supporting documents.
  - a. An explicit statement that the clinical practice guideline is based on a systematic review.
  - b. A description of the search strategy that includes a listing of database(s) searched; a summary of search terms used; the specific time period covered by the literature search, including the beginning date (month/year) and end date (month/year); and the date(s) when the literature search was conducted.
  - c. A description of the study selection that includes the number of studies identified, the number of studies included, and a summary of inclusion and exclusion criteria.
  - d. A synthesis of evidence from the selected studies, e.g., a detailed description or evidence tables.
  - e. A summary of the evidence synthesis (see item d above) included in the guideline that relates the evidence to the recommendations, e.g., a descriptive summary or summary tables.

*NOTE: The NGC includes systematic reviews that identify specific gaps in the evidence base for some of the guideline recommendations.*
- D. **\*New element for 2014\*** The clinical practice guideline or its supporting documents contain an assessment of the benefits and harms of recommended care and alternative care options.
- E. The full-text guideline is available in English to the public upon request (for free or for a fee). Upon submission of the guideline to the NGC, it must also be noted whether the systematic review or other supporting documents are available in English to the public upon request (for free or for a fee).
- F. The guideline must have been developed, reviewed, or revised within the past 5 years, as evidenced by appropriate documentation (e.g., the systematic review or detailed description of methodology).

**Source:** NGC Inclusion Criteria: <http://www.guideline.gov/about/inclusion-criteria.aspx>

## **Effective Health Care (EHC) Program:**

**Slides #25-27**

<http://effectivehealthcare.ahrq.gov/>

1. **Research Reviews** are comprehensive reports evaluating studies of head-to-head comparisons of different types of health care interventions. The EHC Program produces two types of Research Reviews—comparative effectiveness and effectiveness reviews, and technical briefs.
  - **Comparative effectiveness and effectiveness reviews** outline the effectiveness, or the benefits and harms, of different treatment options.

**Examples:**

    - Update of Comparative Effectiveness of Lipid-Modifying Agents
    - Otitis Media With Effusion: Comparative Effectiveness of Treatments
  - **Technical briefs** explain what is known or not known about new or emerging health care tests or treatments. They may be developed when there is insufficient published evidence to complete a full comparative effectiveness review.

**Examples:**

    - Whole Body Vibration Therapy for Osteoporosis
    - Multidisciplinary Pain Programs for Chronic Noncancer Pain
2. **Original Research Reports** are the second category of reports produced by the EHC Program. These reports are based on clinical research and studies that use health care databases and other scientific resources and approaches to explore the practical questions about the effectiveness (benefits and harms) of certain treatments.

**Examples:**

  - ADHD Medications and Risk of Serious Coronary Heart Disease in Young and Middle-Aged Adults
  - Research on the Comparative Management of Uterine Fibroid Disease
  - Comparative Effectiveness and Safety of New Therapies for Glucose Control in Diabetes Mellitus
3. **Research Summaries** are the third category of reports. They are short summaries written in plain language and tailored to a specific audience (clinicians, consumers, or policymakers).
  - These summaries include information appropriate for the targeted audience.
  - For example, background information on health conditions and treatments may be available for consumers, while information about the strength of the evidence behind a report's conclusions will be provided for clinicians and policymakers.

**Examples:**

    - **For Consumers:**
      - Allergy Shots and Allergy Drops for Adults and Children
      - Having a Breast Biopsy: A Guide for Women and Their Families
      - Treating Prostate Cancer: A Guide for Men With Localized Prostate Cancer
      - Therapies for Children With Autism Spectrum Disorders: A Review of the Research for Parents and Caregivers
    - **For Clinicians:**
      - Gestational Diabetes
      - Caring for Women During and After Pregnancy
      - Managing Chronic Gastroesophageal Reflux Disease
      - Analgesics for Osteoarthritis

**Source:** What Is the Effective Health Care Program: <http://www.effectivehealthcare.ahrq.gov/index.cfm/what-is-the-effective-health-care-program1/>

## Other EHC Resources:

- The **EHC Program Library** has many helpful offerings, including the following:
  - **Patient Decision Aids** are available online and as downloadable brochures. They are written in consumer-friendly language and are designed for patients with certain conditions to help them think about what is important to them when talking with their clinician about treatment options.
  - **CE Activities** are available for various types of clinicians. They are offered by different accrediting bodies for various types of clinicians. All of the CE programs are free to the public and all offer CE credits and certificates so long as the participant meets the eligibility criteria and fulfills the program requirements, which includes a post-presentation evaluation and posttest.
  - The **EHC Slide Library** contains prepared talks and PowerPoint slide presentations for educating clinicians, researchers, and other health professionals in training. Each talk contains speaker notes, references, and keywords to find slides on a similar topic. Individual talks can be downloaded or the Slide Library can be searched to find appropriate slides to assemble a custom presentation.
  - The **Research Resources** page provides support materials for researchers involved in writing systematic reviews and those conducting original research. Items found on this page include guidance documents and reports about research methods and study design, information about software and analytical tools, and information about priorities for new research in these areas.
  - **EHC Program Webcasts** are free to the public and are intended to “bring methodologists, researchers, and clinicians together to discuss research findings and impact on future research needs.”
    - **Examples:**
      - What Works to Prevent Obesity in Children? A Comparative Effectiveness Review and Meta-Analysis (September 2013)
      - Using Deliberative Methods to Engage the Public – Facilitating a Deliberative Session (June 2013)
      - What Works for Depression? An Evidence-based Comparison of Treatment Options (April 2013)

**Source:** Tools and Resources: <http://www.effectivehealthcare.ahrq.gov/index.cfm/what-is-the-effective-health-care-program1/>

## U.S. Preventive Services Task Force (USPSTF) – Process for Development of Recommendations

\*Topic selection

\*Work plan development

Evidence-based Practice Center (EPC) completes systematic evidence review

EPC draft report reviewed by Task Force, Federal partners and outside experts

Evidence is evaluated and graded (A, B, C, or D or an I statement)  
Assessment of balance of benefits and harms  
Draft recommendation statement developed by the Task Force

\*Draft report and Task Force recommendation(s) posted for public review  
and comment

Evidence report and Task Force recommendation(s) finalized

Evidence report and recommendation(s) are published  
and disseminated

\*Opportunity for public review and comment

1. The first step is **Topic Selection**.
  - a. Topics can be nominated by anyone, including the general public. They may also come from organizations, Evidence-based Practice Centers (EPCs), and Task Force members.
  - b. Nominated topics may be new topics that have never been considered before, or a request may be submitted to the Task Force to review and reconsider an existing recommendation.
  - c. Typically, review and update of Task Force recommendations occurs at least every 5 years in an effort to keep them current. However, existing topics may be nominated for reconsideration more often for several reasons, including the publication of new research evidence after the release of a recommendation, changes in the public health burden of a particular condition, or the development of new screening tests.
2. Once the topic is selected, the next step is to develop the **Work Plan**.
  - a. A “Topic Team” is appointed, consisting of members of the Task Force as the topic “leads,” some members of the AHRQ staff (including a Medical Officer), and evidence review team members, including a lead investigator.
  - b. The Task Force does not perform primary research. Instead, they partner with the same **EPCs** that produce comparative effectiveness reports for the EHC Program.
  - c. Together, these three small groups—the topic leads from the Task Force, the staff from AHRQ, and the staff from the EPCs—work together to develop the Work Plan for the topic.
  - d. The Work Plan usually consists of items such as the literature search strategy, the analytic framework, key questions to be addressed, and the timeline for completion.
3. Work Plans for new topics are sent out for **peer review** to a limited number of experts for feedback and comment. During this time of peer review, the general public is invited to review and provide input, the second time in the process that the public is invited to participate.
4. Once the Work Plan is finalized, the EPC conducts a **systematic review** of the evidence on the topic, focusing on answering the key questions listed in the Work Plan. They create a draft report and submit it to the Task Force for review.
  - a. At this point, the Task Force members of the team review the draft report, carefully evaluating, synthesizing, and grading the available evidence to develop specific recommendations.
  - b. As part of their review, the Task Force makes a determination about the **balance of benefits and harms** of the particular diagnostic test or treatment.
  - c. As each of the recommendations are developed, they are assigned with a **letter grade** of A, B, C, or D, or an I statement based on the strength of the evidence and on the balance of benefits and harms of the preventive service.
5. While the Task Force is reviewing and working on their recommendations, the draft report is **sent out for review again to several content matter experts** in the field, as well as to multiple Federal agencies that partner with the Task Force, such as CMS, FDA, CDC, etc.
  - a. The draft report and **draft recommendations are also posted online** for public review and comment. This is the third time in the process that public comment is solicited.
6. All of the feedback, including that from the experts, the Federal agencies, and the public, is collected and reviewed by the Task Force, and **final revisions are completed**.
7. The final step in the process is the **publication and dissemination** of the findings of the systematic review and the resulting Task Force recommendations. Usually, the systematic review and the subsequent recommendation(s) from the Task Force are published in a peer-reviewed journal.

**Source:** U.S. Preventive Services Task Force (USPSTF) Procedure Manual, *Section 1: Overview of U.S. Preventive Services Task Force Structure and Processes*:

<http://www.uspreventiveservicestaskforce.org/uspstf08/methods/procmanual1.htm>



**U.S. Preventive Services Task Force (USPSTF):**

**Slide #33**

<http://www.uspreventiveservicestaskforce.org/>

**USPSTF Grades and Levels of Certainty:** <http://www.uspreventiveservicestaskforce.org/uspstf/grades.htm>

“The USPSTF updated its definition of and suggestions for practice for the grade C recommendation. This new definition applies to USPSTF recommendations voted on after July 2012. Describing the strength of a recommendation is an important part of communicating its importance to clinicians and other users. Although most of the grade definitions have evolved since the USPSTF first began, none has changed more noticeably than the definition of a C recommendation, which has undergone three major revisions since 1998. Despite these revisions, the essence of the C recommendation has remained consistent: at the population level, the balance of benefits and harms is very close, and the magnitude of net benefit is small. Given this small net benefit, the USPSTF has either not made a recommendation “for or against routinely” providing the service (1998), recommended “against routinely” providing the service (2007), or recommended “selectively” providing the service (2012). Grade C recommendations are particularly sensitive to patient values and circumstances. Determining whether or not the service should be offered or provided to an individual patient will typically require an informed conversation between the clinician and patient.”

**Grade Definitions (After July 2012)**

Grade	Definition	Suggestions for Practice
<b>A</b>	<b>The USPSTF recommends the service. There is high certainty that the net benefit is substantial.</b>	<b>Offer or provide this service.</b>
<b>B</b>	<b>The USPSTF recommends the service. There is high certainty that the net benefit is moderate or there is moderate certainty that the net benefit is moderate to substantial.</b>	<b>Offer or provide this service.</b>
<b>C</b>	<b>The USPSTF recommends selectively offering or providing this service to individual patients based on professional judgment and patient preferences. There is at least moderate certainty that the net benefit is small.</b>	<b>Offer or provide this service for selected patients depending on individual circumstances.</b>
<b>D</b>	<b>The USPSTF recommends against the service. There is moderate or high certainty that the service has no net benefit or that the harms outweigh the benefits.</b>	<b>Discourage the use of this service.</b>
<b>I Statement</b>	<b>The USPSTF concludes that the current evidence is insufficient to assess the balance of benefits and harms of the service. Evidence is lacking, or poor-quality, or conflicting, and the balance of benefits and harms cannot be determined.</b>	<b>Read the clinical considerations section of USPSTF Recommendation Statement. If the service is offered, patients should understand the uncertainty about the balance of benefits and harms.</b>

## U.S. Preventive Services Task Force (USPSTF) (cont'd)

### Levels of Certainty Regarding Net Benefit

Level of Certainty	Description
High	<p>The available evidence usually includes consistent results from well-designed, well-conducted studies in representative primary care populations. These studies assess the effects of the preventive service on health outcomes. This conclusion is therefore unlikely to be strongly affected by the results of future studies.</p>
Moderate	<p>The available evidence is sufficient to determine the effects of the preventive service on health outcomes, but confidence in the estimate is constrained by such factors as:</p> <ul style="list-style-type: none"> <li>• The number, size, or quality of individual studies.</li> <li>• Inconsistency of findings across individual studies.</li> <li>• Limited generalizability of findings to routine primary care practice.</li> <li>• Lack of coherence in the chain of evidence.</li> </ul> <p>As more information becomes available, the magnitude or direction of the observed effect could change, and this change may be large enough to alter the conclusion.</p>
Low	<p>The available evidence is insufficient to assess effects on health outcomes. Evidence is insufficient because of:</p> <ul style="list-style-type: none"> <li>• The limited number or size of studies.</li> <li>• Important flaws in study design or methods.</li> <li>• Inconsistency of findings across individual studies.</li> <li>• Gaps in the chain of evidence.</li> <li>• Findings not generalizable to routine primary care practice.</li> <li>• Lack of information on important health outcomes.</li> </ul> <p>More information may allow estimation of effects on health outcomes.</p>

## Finding and Using Task Force (USPSTF) Recommendations:

Slide #34

- **USPSTF website**
  - Home page: <http://www.uspreventiveservicestaskforce.org/index.html>
    - **Recommendations:**  
<http://www.uspreventiveservicestaskforce.org/recommendations.htm>
- **Electronic Preventive Service Selector (ePSS)**
  - Available online and as a mobile application for handheld devices or smart phone:  
<http://epss.ahrq.gov/PDA/index.jsp>.
  - Two other ways to access the ePSS tool:
    - From the **USPSTF home page**, scroll down and look for the AHRQ ePSS icon on the right side of the page (<http://www.uspreventiveservicestaskforce.org/index.html>).
    - From the **AHRQ home page** (<http://www.ahrq.gov/>), place your cursor over the **For Professionals** tab, from the **Search Professional Resources** menu on the far right, select **Electronic Preventive Services Selector** (<http://epss.ahrq.gov/PDA/index.jsp>).
- **Consumer Tool**
  - MyHealthFinder – two ways to access:
    - Home page: <http://www.healthfinder.gov/>
    - From USPSTF home page: <http://www.uspreventiveservicestaskforce.org/index.html>
      - Scroll down and look for the MyHealthFinder box on the right side toward the bottom of the page.

## **Strategies for Introducing EB Information into Curricula**

Slides #38-42

The following excerpt was taken from: **Implementing U.S. Preventive Services Task Force (USPSTF) Recommendations: Technical Assistance Document:**

<http://www.ahrq.gov/policymakers/measurement/quality-by-state/impuspstf.html>

### **Framework for Implementation**

Health professions programs have several avenues for teaching preventive services. The common avenues identified include:

- Classroom/didactic
- Preclinical
- Clinical/preceptorship
- Continuing medical education (CME)

#### ***Classroom/Didactic***

Prevention education can be easily incorporated in the didactic portion of health professions education. This is usually in the form of case studies for students to review, student assignments, and questions included in tests. The duration and intensity of prevention education varies for each program based on the resources available and aims of the course.

#### ***Preclinical***

Opportunities exist to incorporate prevention education in the preclinical portion of health professions education. The preclinical period usually focuses on basic and clinical science foundational courses and may also include courses to educate students about patient care, professionalism, and other key competencies required of health professionals.

#### ***Clinical/Preceptorship***

Health professions students observe and interact with patients in preceptors' offices during their clinical years of education. Preceptors could set an example for students through their use of USPSTF recommendations in patient care.

#### ***Continuing Education (CME and CE)***

Some health professions programs may develop and deliver CME courses to health professionals in their institutions and community. These courses present an opportunity to reinforce preventive services.

## Case Studies

### Case Study #1

### Slides #44-49

A 62-year-old man comes to the clinic for his annual physical. His current weight is within normal limits but he was diagnosed with type 2 diabetes 4 years ago. Until now, he has not required any medications but he recently had a free blood sugar screening at a health fair and was told his blood sugar was 147. In addition to the diabetes, he has a history of hypertension that is well controlled with daily medication. He has been married for 40 years and the relationship is monogamous. He reports that he had a colonoscopy at age 50 but has not had another since then. He began smoking as a young man but quit about 25 years ago and has experienced no apparent negative effects. He drinks occasionally but only in social situations.

**Question #1:** What preventive services would be appropriate for this patient?

**Answer:** Using the ePSS (<http://epss.ahrq.gov/ePSS/GetResults.do?new=true>) tool to search USPSTF recommendations and eliminating those recommendations that do not apply based on the patient's history, six relevant A or B recommendations remain.

Grade	Title
A	<b>Aspirin to Prevent CVD:</b> Men age 45-79 years to prevent myocardial infarctions
A	<b>Colorectal Cancer:</b> Screening – adults, beginning at age 50 years and continuing until age 75 years
A	<b>High Blood Pressure:</b> Screening – adults age 18 years and older
A	<b>Lipid Disorders in Adults:</b> Screening – men age 35 years and older
B	<b>Healthy Diet:</b> Counseling – adults with hyperlipidemia and other risk factors for CVD
B	<b>Obesity:</b> Screening for and management of – all adults

**Patient Questions:** During his exam, the patient's provider recommends lab work to check the patient's blood sugar due to his elevated blood sugar reading at the health screening. The provider wants to determine whether the patient needs diabetes medications. The patient is asked to return to the clinic after his lab results are available to discuss his test results and options for further treatment if needed. Oral medications were mentioned during their discussion and the patient asks for more information about the medications he might need in the future.

**Answer:** A search of the EHC Research Reviews, Summaries, and Reports on the AHRQ website (<http://effectivehealthcare.ahrq.gov/search-for-guides-reviews-and-reports/?category=9&search=&productTypes=3&methodCategory=&language=1&searchButton=Search>) reveals a comparative effectiveness report regarding diabetes medications titled *Oral Diabetes Medications for Adults With Type 2 Diabetes: An Update*. A companion Consumer Summary and Clinician Summary are available, along with the full comparative effectiveness report (<http://effectivehealthcare.ahrq.gov/search-for-guides-reviews-and-reports/?pageaction=displayproduct&productid=645>).

The full report is based on a systematic review of more than 100 clinical studies and provides conclusions about the comparative effectiveness, benefits, and adverse effects of the available single-drug and two-drug combinations of medications for adults with type 2 diabetes. Information addressing the benefits and side effects of each drug are included in the full report and the Consumer Summary.

## Case Study #2

A young couple comes to the clinic with their infant son for a routine 2-month checkup. They are of African descent and new to this country, reporting that the baby was born outside the U.S. The infant is doing well, growing normally, and appears to be well nourished. The mother is breastfeeding and reports no feeding difficulties. When questioned about what types of newborn screening tests were done in the country where the baby was born, the parents were unsure.

**Question #1:** What newborn screening and preventive services would be appropriate for this infant?

**Answer:** Using the ePSS (<http://epss.ahrq.gov/ePSS/GetResults.do?new=true>) tool and eliminating those recommendations that do not apply based on the patient's age, two recommendations with grades A or B remain. (Age 0 is used to obtain newborn recommendations in the ePSS tool.)

Grade	Title
A*	Sickle Cell Disease: Screening – newborns
B*	Hearing Loss in Newborns: Universal Screening – newborns

**Parent's Questions:** The physical exam of the patient reveals one undescended testicle, which is a new finding. The parents wonder what the implications are for this condition and ask for information about long-term effects and treatment options for the future.

**Answer:** A search of the EHC Research Reviews, Summaries, and Reports on the AHRQ website (<http://www.effectivehealthcare.ahrq.gov/search-for-guides-reviews-and-reports/?category=85&search=&methodCategory=&language=1&searchButton=Search>) reveals a comparative effectiveness report entitled *Evaluation and Treatment of Cryptorchidism*.

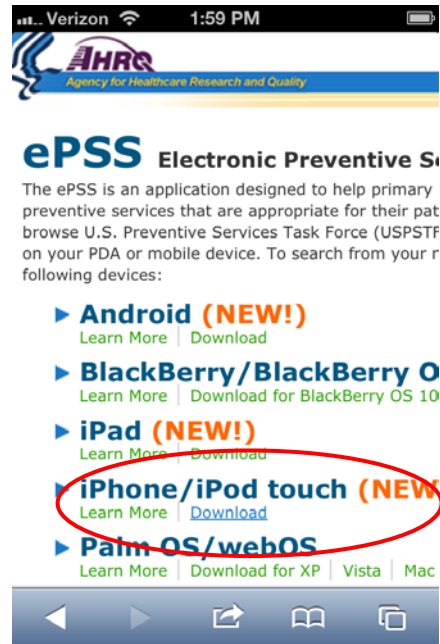
A companion Consumer Summary and Clinician Summary are available, along with the full comparative effectiveness report (<http://www.effectivehealthcare.ahrq.gov/search-for-guides-reviews-and-reports/?pageaction=displayproduct&productid=1352>). This report focuses primarily on surgical correction of the problem, but the parents were cautioned that this problem can correct itself on its own over time and that surgery is not generally considered necessary until infants are at least 6 months old.


Questions about the handout? Please contact us via e-mail at [educationservices@hayesinc.com](mailto:educationservices@hayesinc.com) or via phone at 267-498-7926.

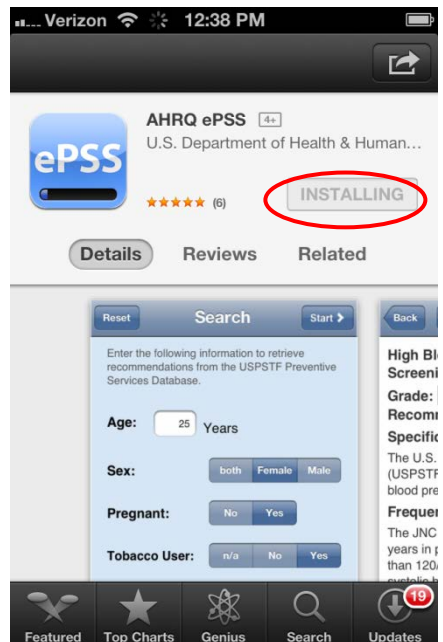
## APPENDIX I

### Downloading the EPSS app onto an iPhone:

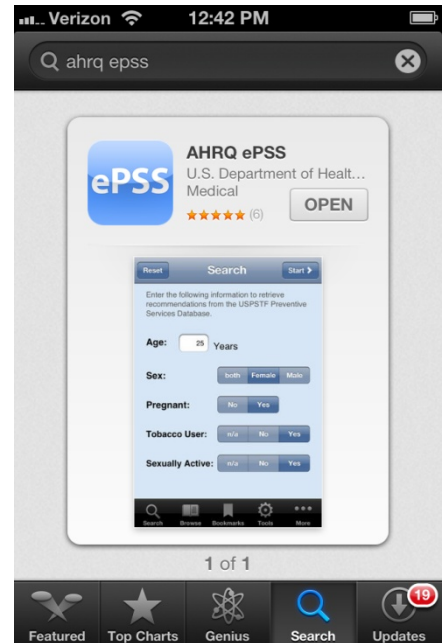
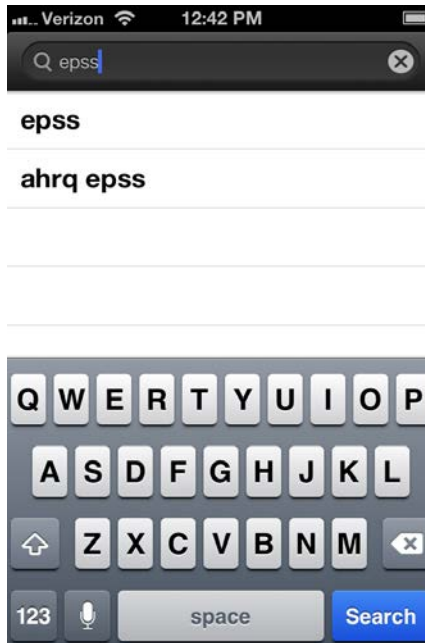
1. Using your web browser, go to the ePSS homepage: <http://epss.ahrq.gov/PDA/index.jsp>. Select Download under the iPhone/iTouch entry.



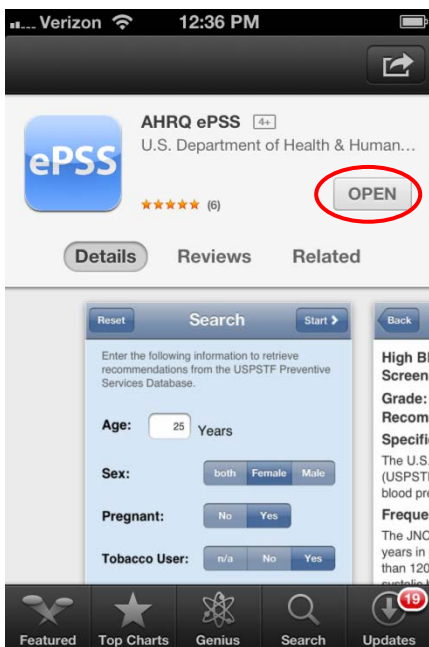
2. You'll be taken to this screen. Select the download icon .



3. You can also find the ePSS app in the iTunes App Store.

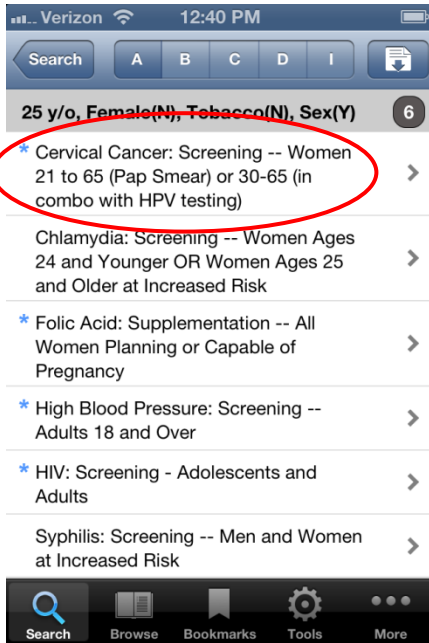


4. Once the app is downloaded onto the iPhone, select OPEN to begin using the app.

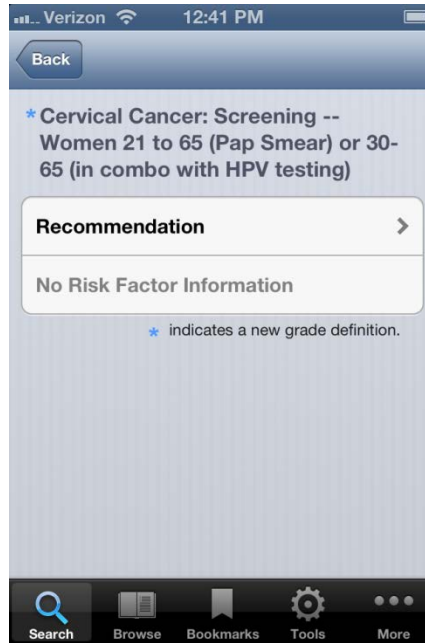




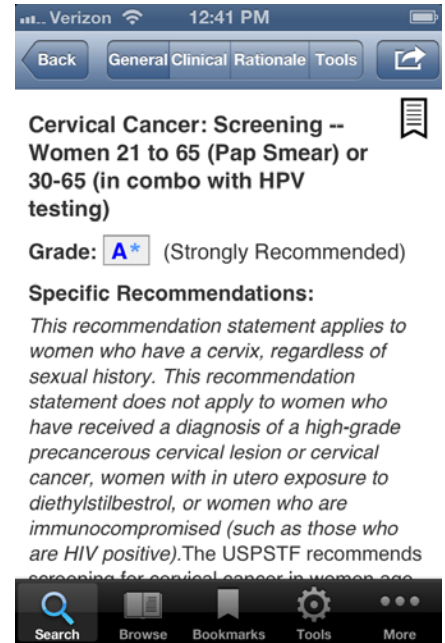
### Search results



### Individual recommendation

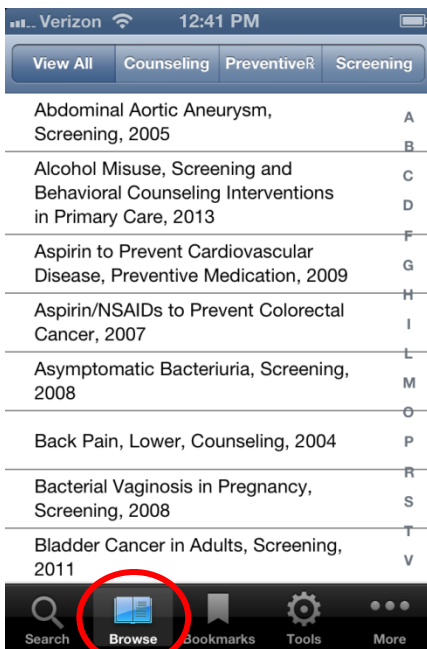


### Full text of recommendation

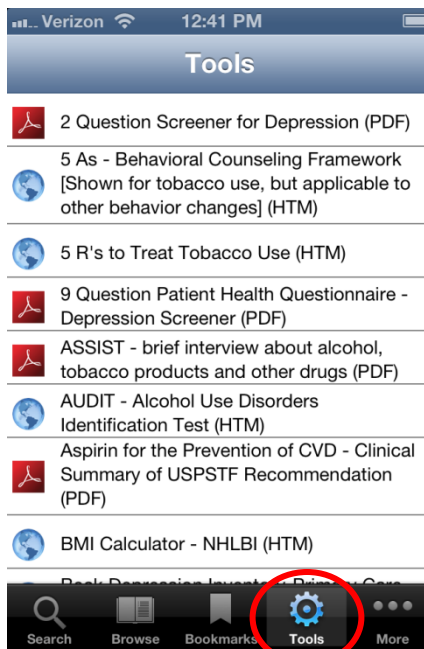


5. Other features are available using the menu at the bottom of the screen.

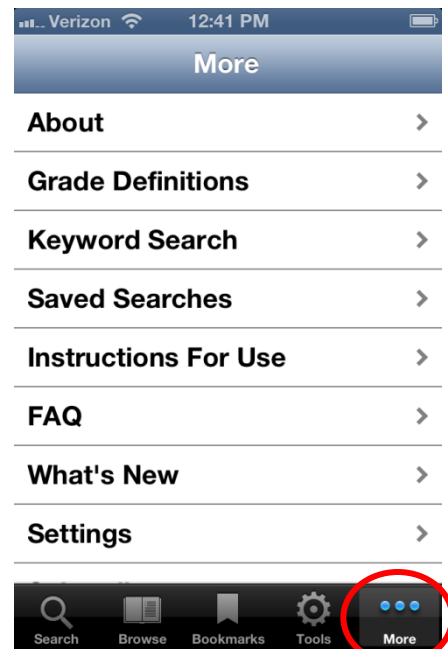
### Browse recommendations



### Tools



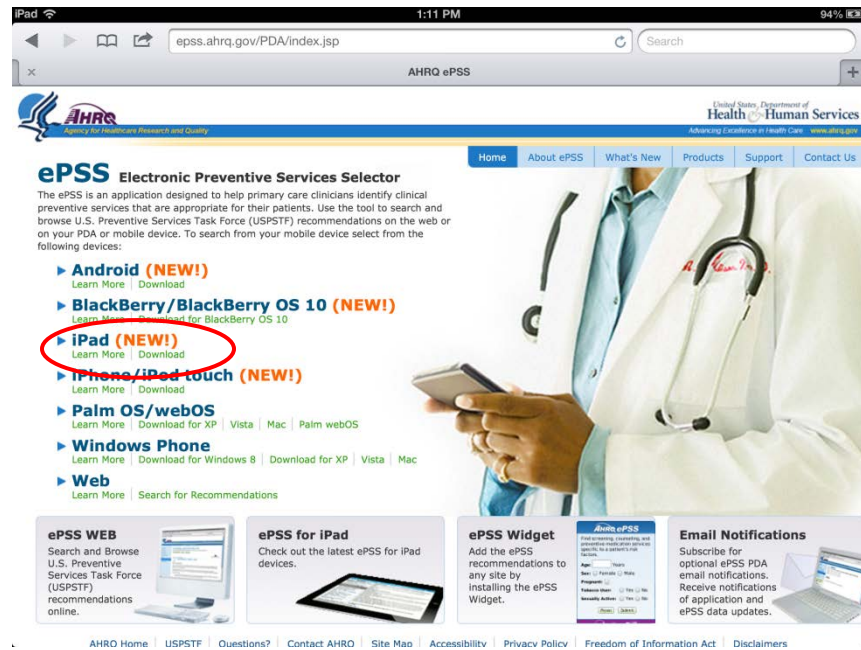
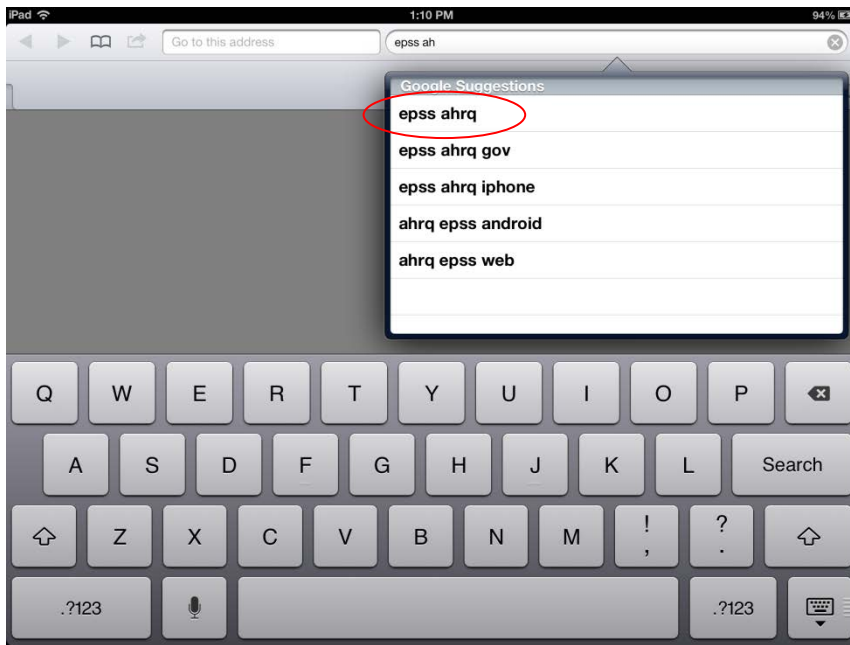
### More features



## APPENDIX II

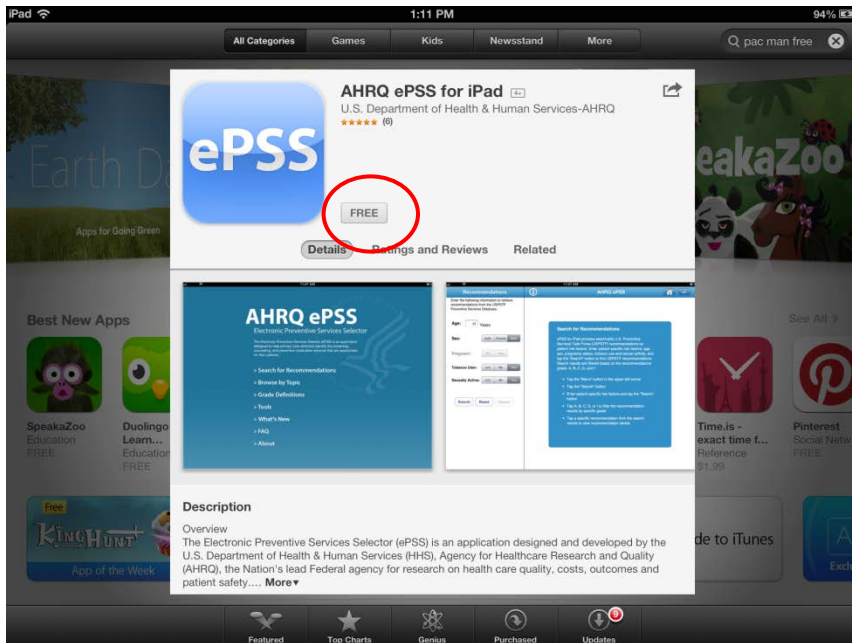
### Downloading the EPSS app onto an iPad:

1. Open a web browser on the iPad and search for the ePSS homepage: <http://epss.ahrq.gov/PDA/index.jsp>. Select Download under the iPad entry.

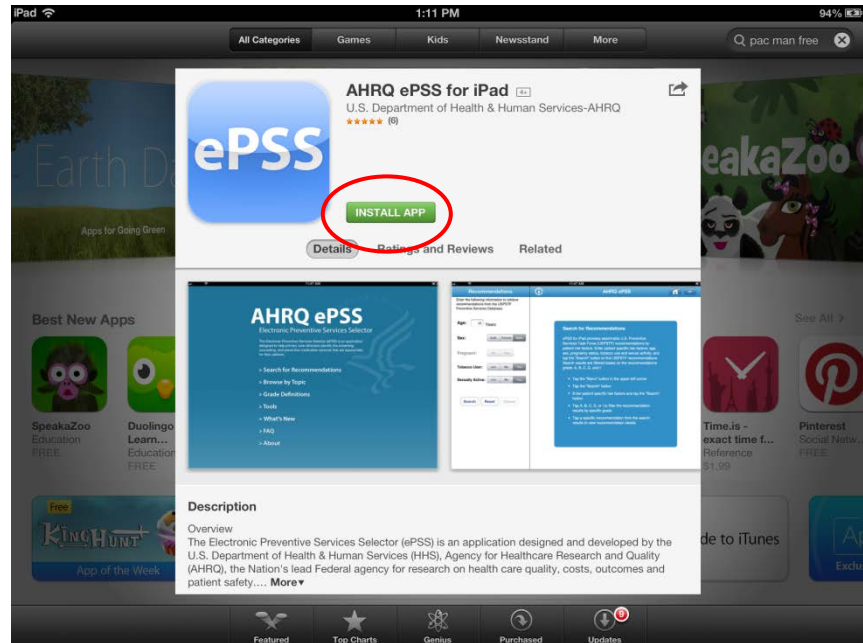


2. Select the app using the FREE button (A) and then select INSTALL APP (B).

A.

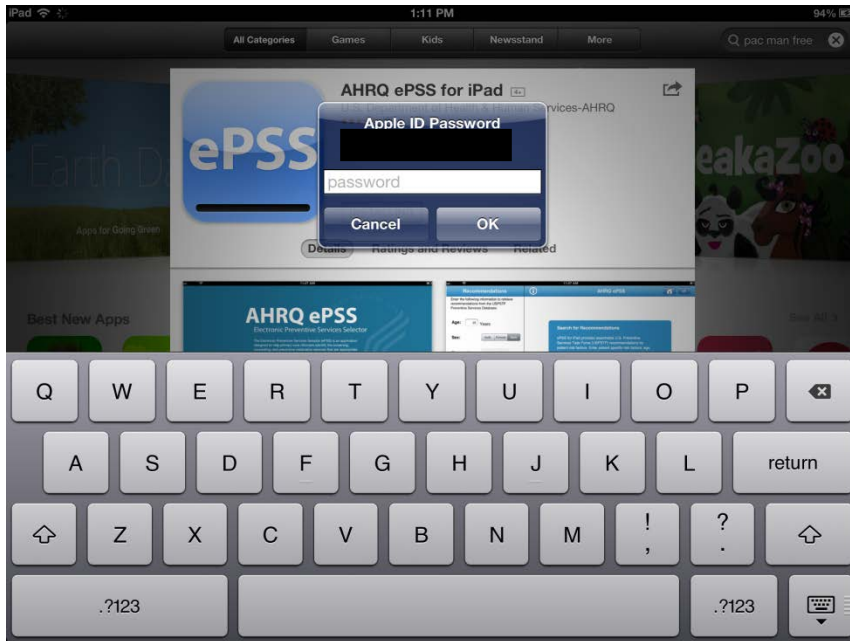


B.



3. You will be required to provide your Apple password to install the app (A). Then the app will begin the download and installation process (B).

A.

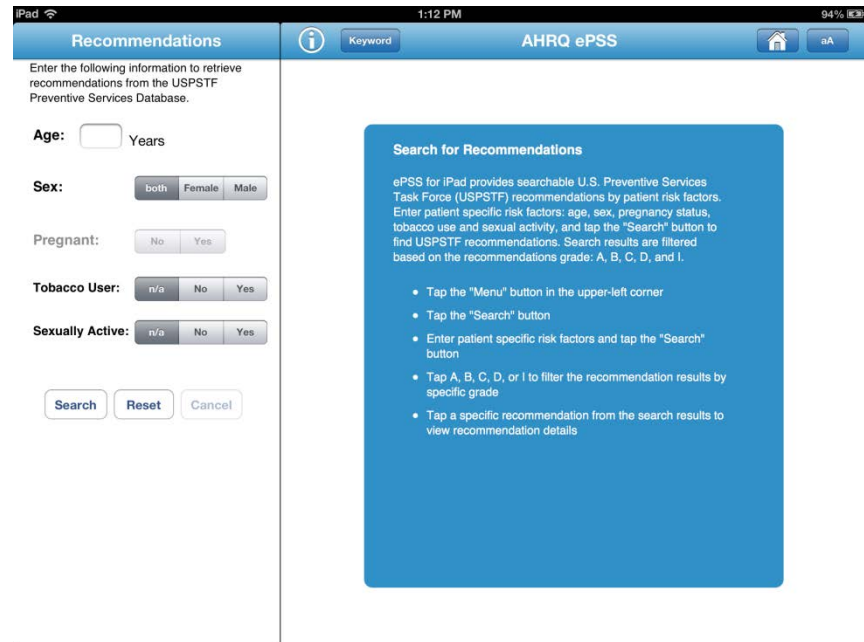
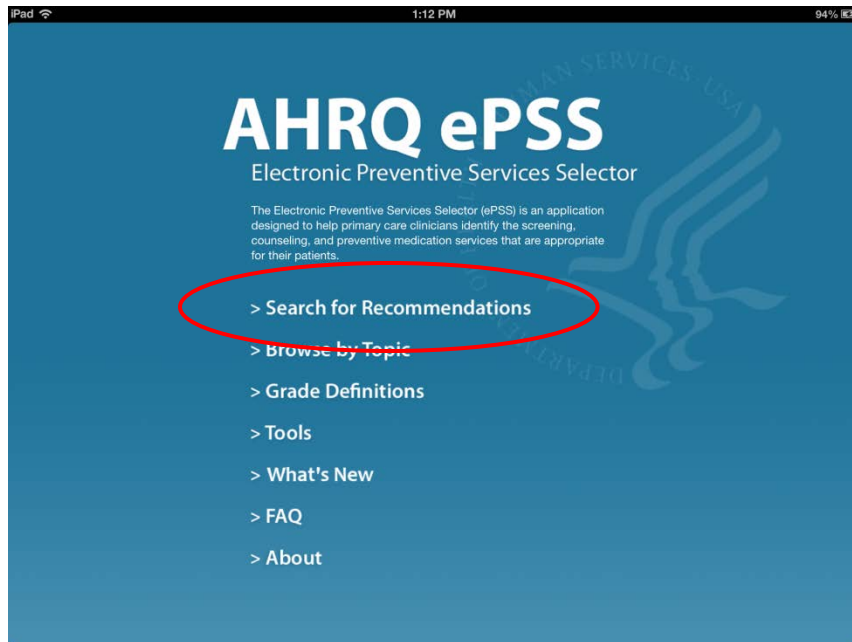


B.

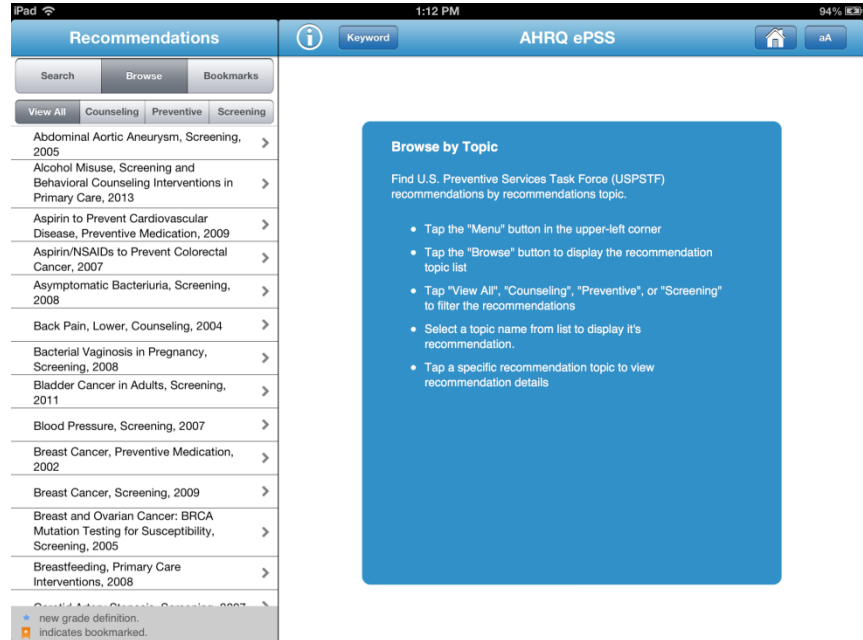
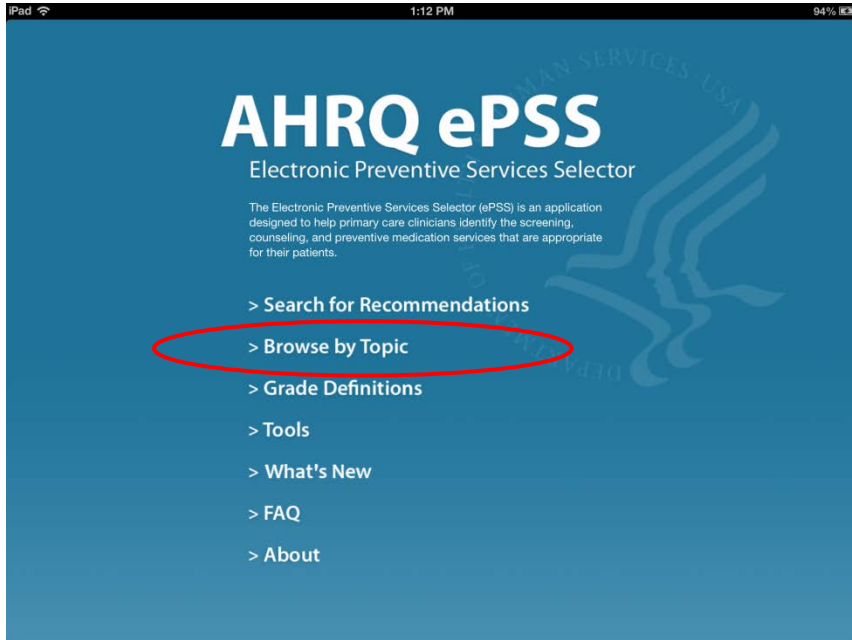


4. Once the app is downloaded, you will land on this page. You can begin to use the ePSS tool by selecting any of the functions on this page.

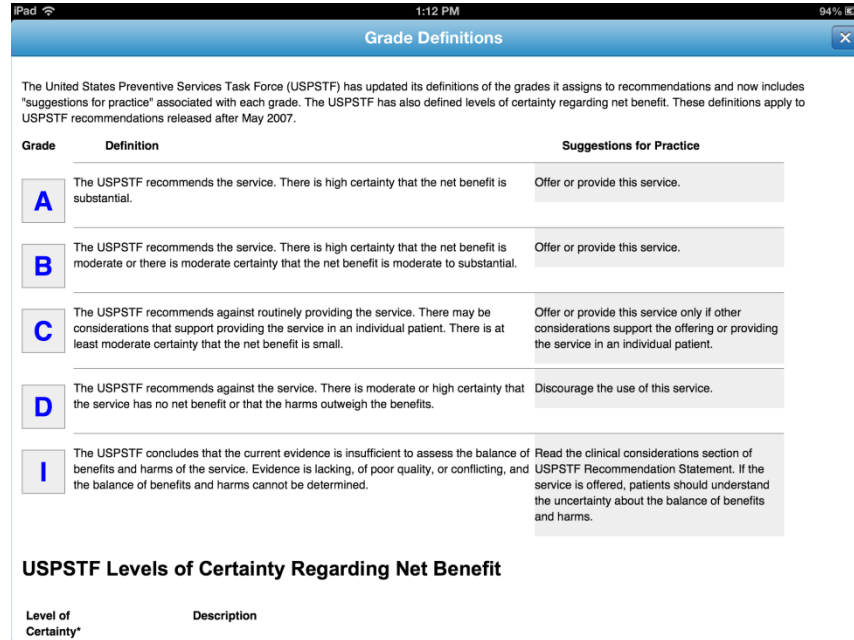
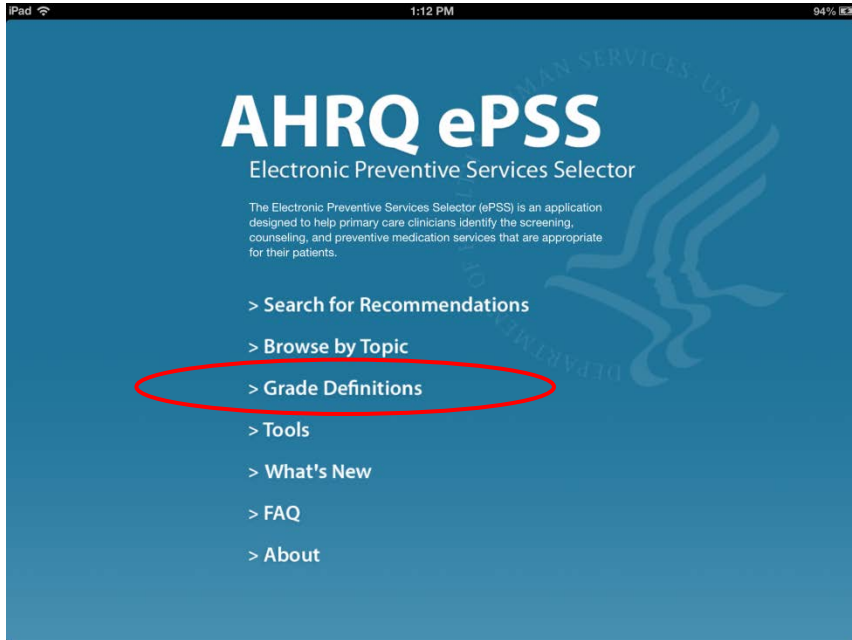
### Search for Recommendations



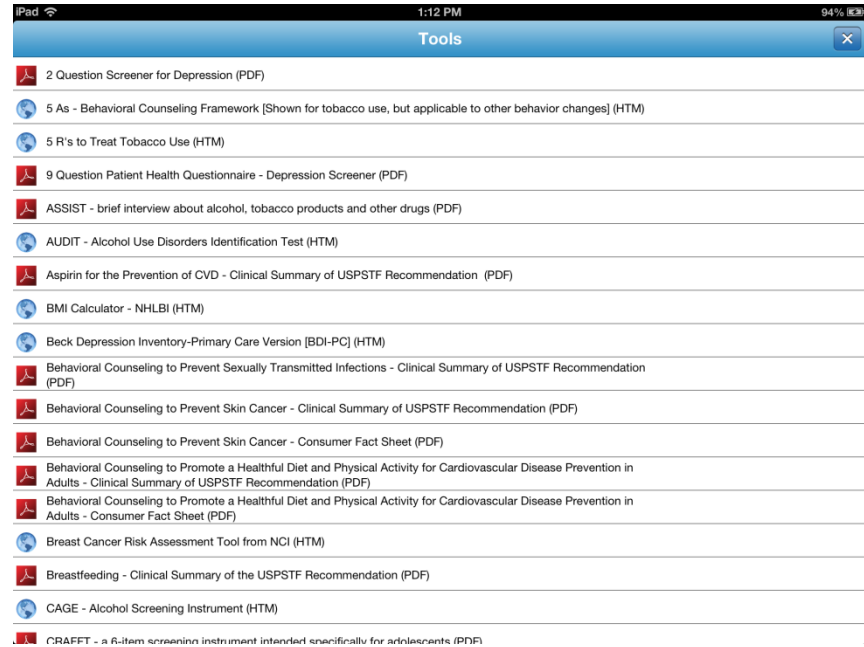
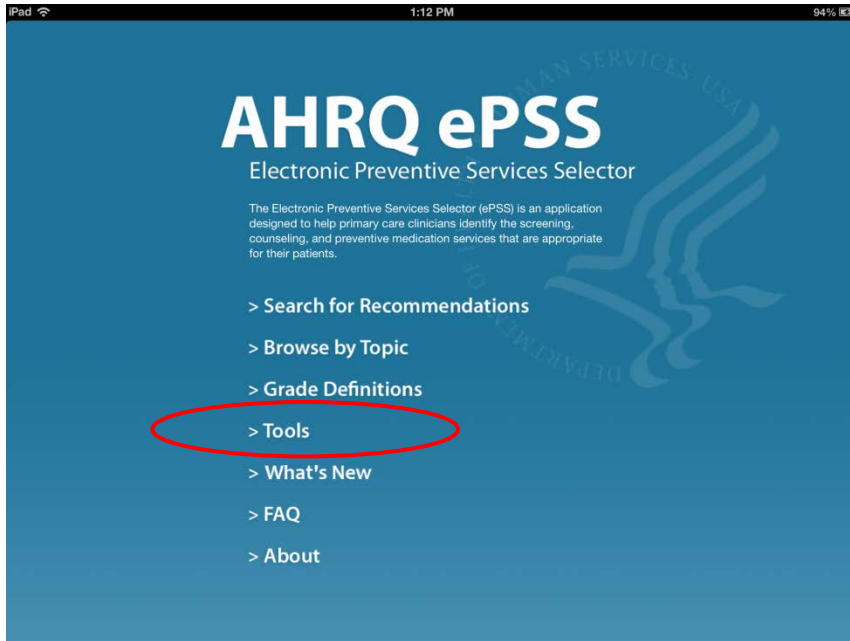
## Browse by Topic



## Grade Definitions

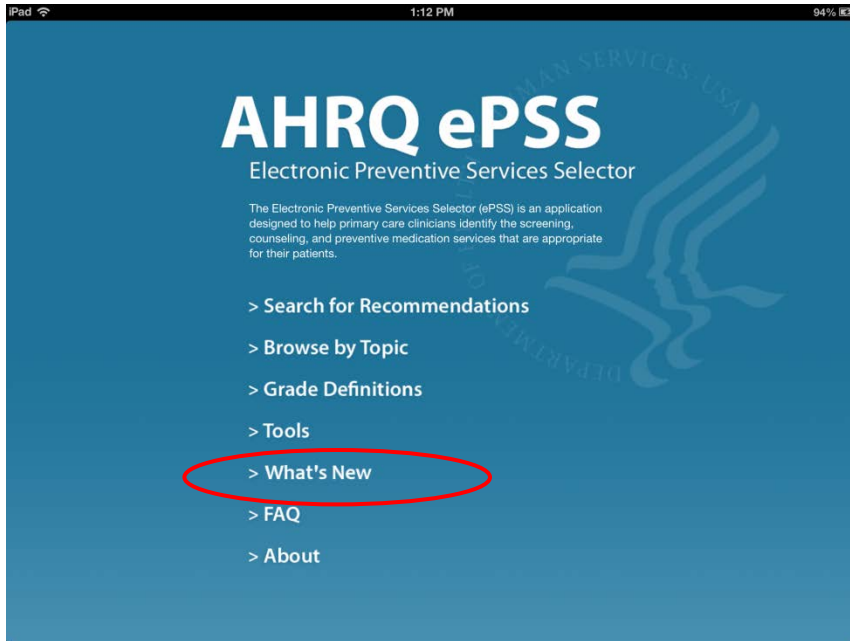


## Tools





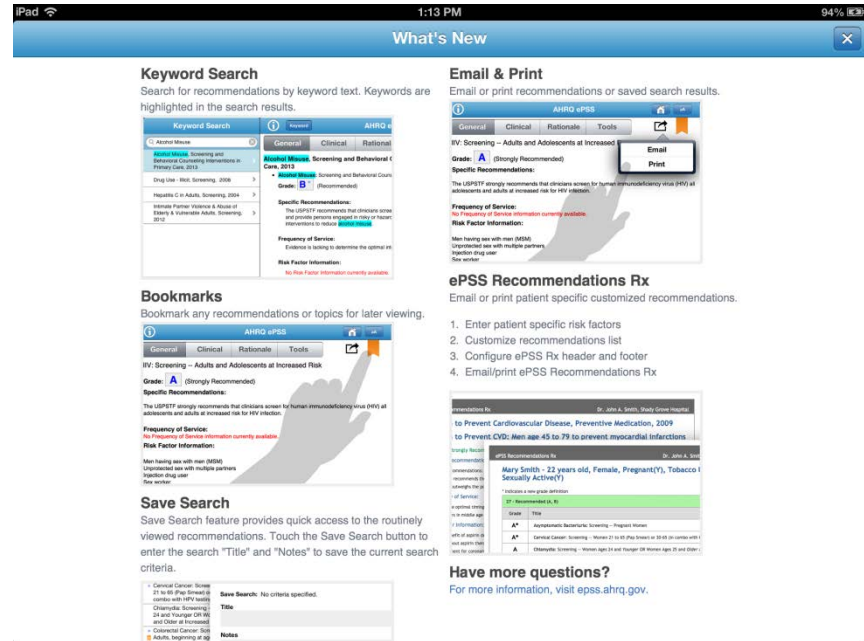
## What's New



**AHRQ ePSS**  
Electronic Preventive Services Selector

The Electronic Preventive Services Selector (ePSS) is an application designed to help primary care clinicians identify the screening, counseling, and preventive medication services that are appropriate for their patients.

- > Search for Recommendations
- > Browse by Topic
- > Grade Definitions
- > Tools
- > **What's New**
- > FAQ
- > About



**Keyword Search**  
Search for recommendations by keyword text. Keywords are highlighted in the search results.

**Bookmarks**  
Bookmark any recommendations or topics for later viewing.

**Save Search**  
Save Search feature provides quick access to the routinely viewed recommendations. Touch the Save Search button to enter the search "Title" and "Notes" to save the current search criteria.

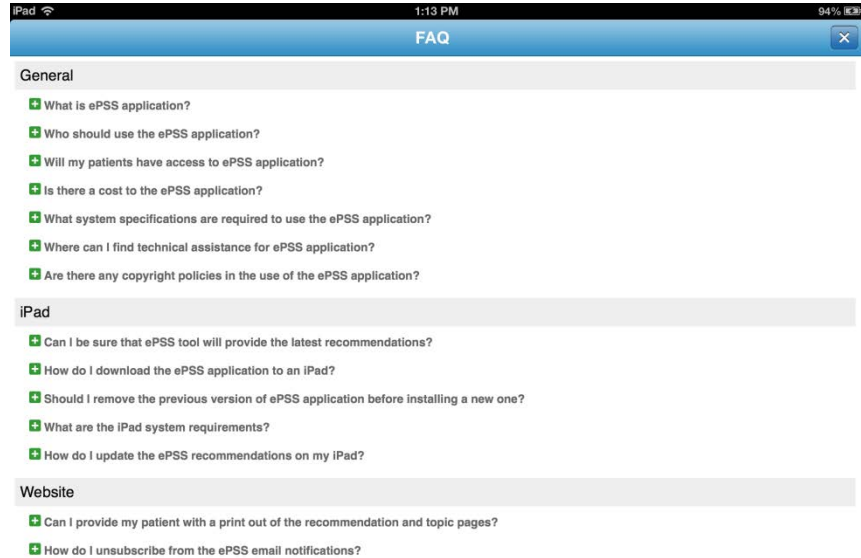
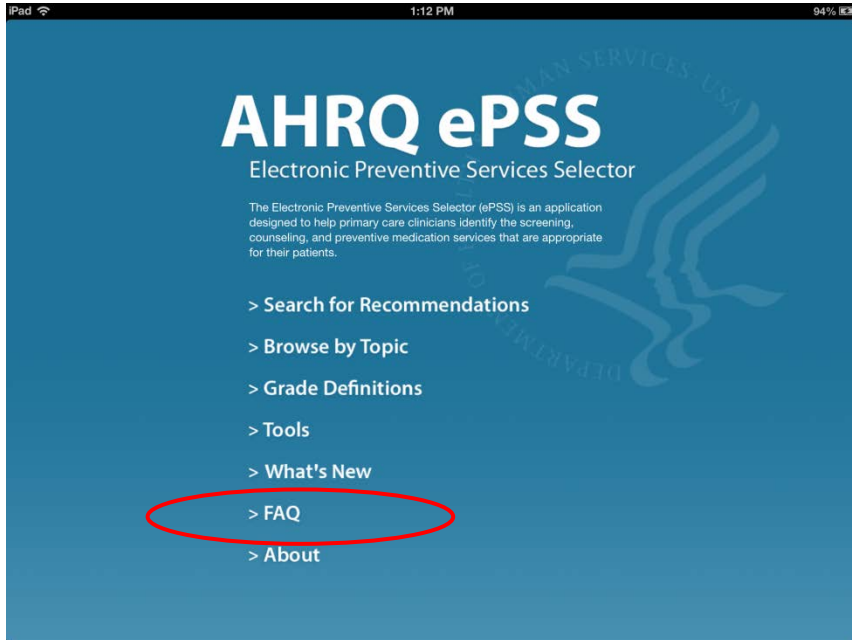
**Email & Print**  
Email or print recommendations or saved search results.

**ePSS Recommendations Rx**  
Email or print patient specific customized recommendations.

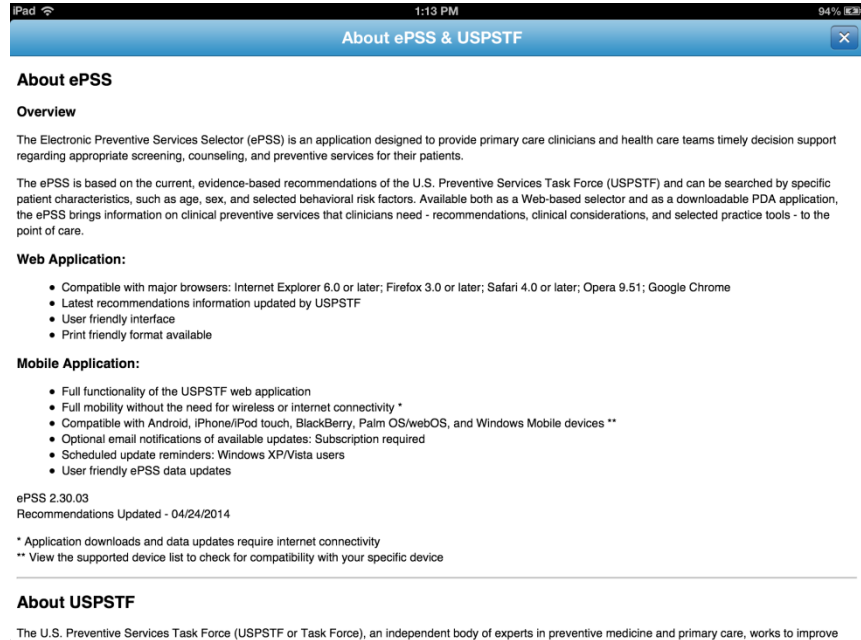
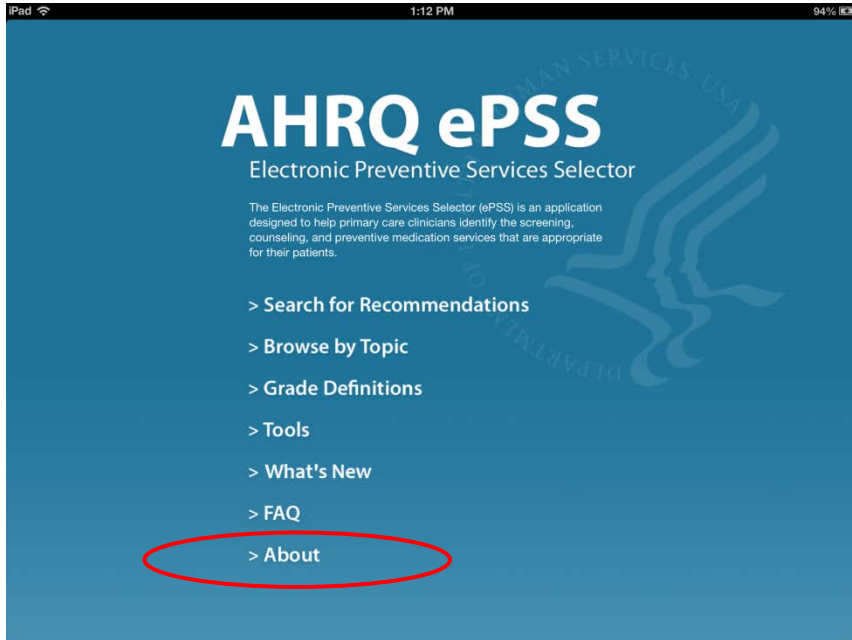
1. Enter patient specific risk factors
2. Customize recommendations list
3. Configure ePSS Rx header and footer
4. Email/print ePSS Recommendations Rx

**Have more questions?**  
For more information, visit [epss.ahrq.gov](http://epss.ahrq.gov).

## FAQs



## About



# Integrating AHRQ Evidence-Based Resources Into Course Curricula

May 21, 2014



U.S. Department of Health and Human Services

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Agency for Healthcare Research and Quality  
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## Integrating AHRQ Evidence-Based Resources Into Course Curricula


**Richard Ricciardi, PhD, NP**  
**Susan A. Levine, MS, DVM, PhD**  
**Sharon Constans, RN, MSN – Presenter**

## Recorded Version



U.S. Department of Health and Human Services

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**AHRQ**  
– <http://ce.ahrq.gov/nurses/>

**American Association of Nurse Practitioners**  
– <http://www.aanp.org/>

**National Organization of Nurse Practitioner  
Faculties**  
– <http://www.nonpf.org/>

2



## Disclosures

- This Webinar has been funded and developed by the Agency for Healthcare Research and Quality (AHRQ); there has been no outside commercial support.
- Presenter(s)/staff have no conflicts of interest or relevant financial relationships to disclose.

3



## Requirements for Successful Completion, CE

- Be present for the entire Webinar.
- Complete an online evaluation.
- Pass the posttest with a grade of 80% or higher.
- Complete and submit the evaluation/posttest within 30 days of the Webinar.
- Questions?
  - ▶ Email us: [educationservices@hayesinc.com](mailto:educationservices@hayesinc.com)
  - ▶ Call us: 267-498-7926


May 21, 2014



## Designation and Accreditation Statements

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- This program is approved for 1.0 contact hour of continuing education.
- The program was planned in accordance with AANP CE Standards and Policies and AANP Commercial Support Standard.

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## Integrating AHRQ Evidence-Based Resources Into Course Curricula

**Richard Ricciardi, PhD, NP**  
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# Integrating AHRQ Evidence-Based Resources Into Course Curricula

May 21, 2014



**Sheila Melander, PhD, ACNP, FAANP, FCCM**  
**President**  
**National Organization for Nurse Practitioner**  
**Faculties (NONPF)**



**Richard Ricciardi, PhD, NP, FAANP**  
**Center for Primary Care, Prevention, and Clinical**  
**Partnerships – AHRQ**

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## AHRQ's New Mission

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To produce evidence to make health care safer, higher quality, more accessible, equitable, and affordable, and to work with HHS and other partners to make sure that the evidence is understood and used.



## AHRQ's Priority Areas of Focus

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- Improve health care quality by accelerating implementation of Patient Centered Outcomes Research.
- Make health care safer.
- Increase accessibility by evaluating Affordable Care Act coverage expansions.
- Improve health care affordability, efficiency, and cost transparency.



# Integrating AHRQ Evidence-Based Resources Into Course Curricula

May 21, 2014



**Presenter:**

**Sharon Constans, RN, MSN**

**Managing Editor, Search & Summary – Hayes, Inc.**

**Director, Hayes CARE – Hayes, Inc.**

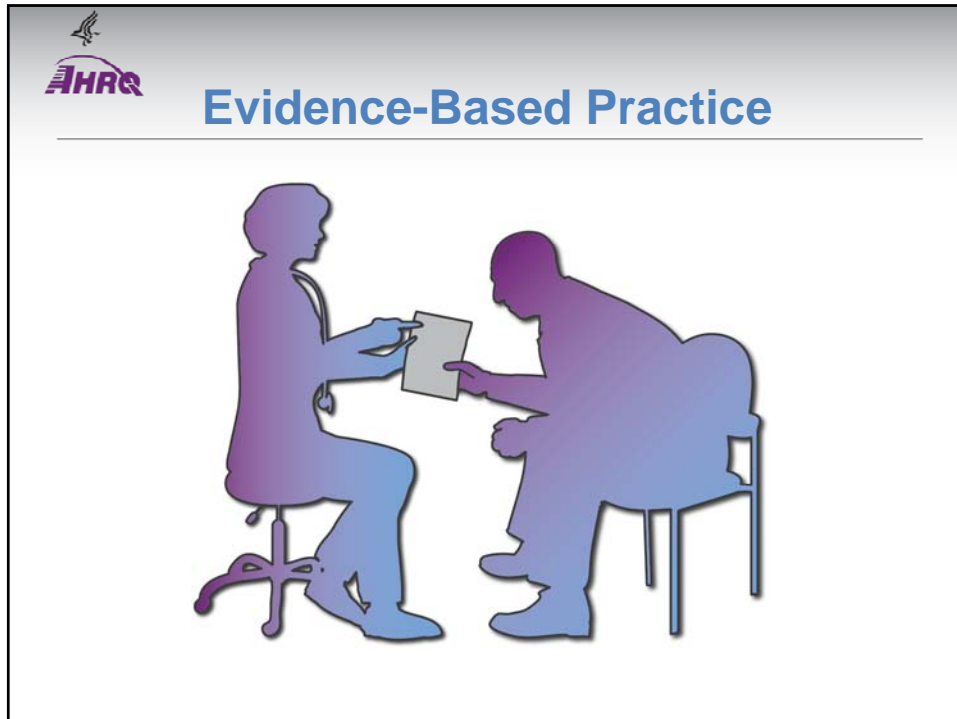


## Webinar Objectives

At the end of this presentation, participants will be able to:

- ▶ List the evidence-based resources available on the AHRQ website, including those available through the Effective Health Care (EHC) Program.
- ▶ Locate the resources available on the U.S. Preventive Services Task Force (USPSTF) website, including the Electronic Preventive Services Selector (ePSS) tool.
- ▶ Demonstrate how to download the ePSS application to a PDA or mobile device.
- ▶ Explain how the EHC Program resources, the USPSTF recommendations, and the ePSS tool can be integrated into the Nurse Practitioner (NP) and Advanced Practice Registered Nurse (APRN) educational processes.

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The image shows a slide with the AHRQ logo in the top left corner. The title "What Is Evidence-Based Practice?" is centered at the top in a blue font. Below the title is a horizontal line.

**“Evidence-based clinical practice is an approach to decisionmaking in which the clinician uses the best evidence available, in consultation with the patient, to decide upon the option which suits that patient best.”**

Muir Gray JA. *Evidence-based Healthcare: How to Make Health Policy and Management Decisions*. London: Churchill Livingstone; 1997.



## Evidence for Health Care

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### Systematic reviews

- ▶ Considered the “gold standard” for EBP
  - *Methods Guide for Effectiveness and Comparative Effectiveness Reviews*: <http://effectivehealthcare.ahrq.gov/index.cfm/search-for-guides-reviews-and-reports/?pageaction=displayproduct&productid=318>
  - Training Modules: <http://effectivehealthcare.ahrq.gov/index.cfm/tools-and-resources/slide-library/#slidetrainingmodules>
- ▶ Foundation for comparative effectiveness research

### Comparative effectiveness research

- ▶ Effectiveness, benefits, and harms
- ▶ Used to inform health care decisions



## AHRQ Resources for EBP

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### Key Resources for Nurse Educators:


National Guideline Clearinghouse (NGC)

Effective Health Care (EHC) Program

U.S. Preventive Services Task Force (USPSTF)  
Electronic Preventive Services Selector  
(ePSS) tool

# Integrating AHRQ Evidence-Based Resources Into Course Curricula

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## National Guideline Clearinghouse (NGC)

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### What is the NGC?

Public online database: [www.guideline.gov](http://www.guideline.gov)


Updated weekly

Includes only evidence-based guidelines

- ▶ Inclusion criteria changing in June 2014 – systematic reviews, benefits, and harms

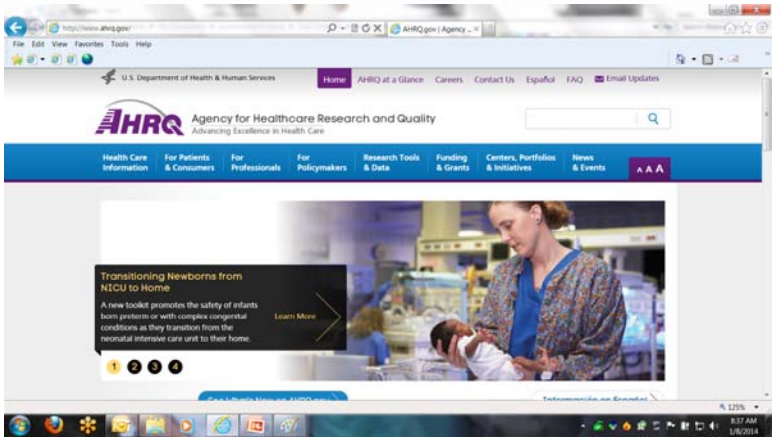
Other features Of NGC

- ▶ Guideline Syntheses
- ▶ Guideline Matrix
- ▶ Compare Guidelines



## Navigating the NGC Web Site

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## AHRQ Resources for EBP

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### **Key Resources for Nurse Clinicians:**

National Guideline Clearinghouse (NGC)

Effective Health Care (EHC) Program

U.S. Preventive Services Task Force (USPSTF)  
Electronic Preventive Services Selector  
(ePSS) tool



## Effective Health Care (EHC) Program

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Created in 2003 – Medicare Prescription Drug, Improvement, and Modernization Act (MMA)

Provides funding for comparative effectiveness and effectiveness research

- ▶ Evidence-based Practice Centers (EPC)
- ▶ Rigorous synthesis and analyses of the scientific literature
- ▶ Committed to transparency of the review process – draft reports posted online for public review and comment

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## EHC Products for Clinicians

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### Research Reviews

- ▶ Comparative effectiveness/effectiveness reviews – benefits and harms
- ▶ Technical briefs (new and emerging tests or treatments)

### Original Research Reports


- ▶ Based on clinical research
- ▶ Explore benefits and harms

### Research Summaries

- ▶ Short, plain-language summaries for consumers
- ▶ Summaries for clinicians and policymakers

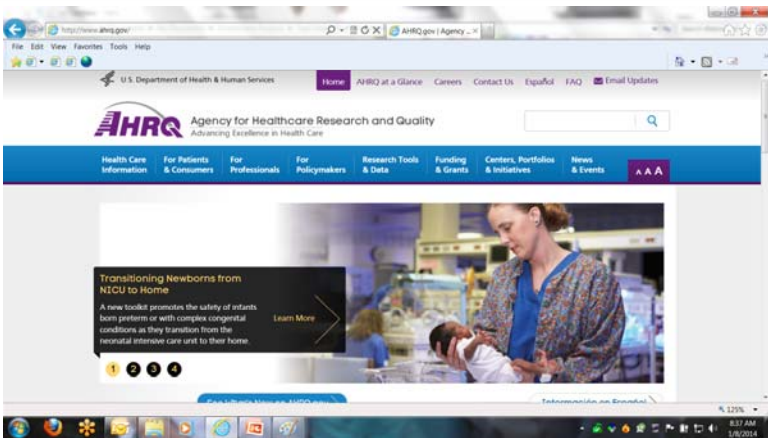
### EHC Program Library

- Patient Decision Aids
- CE Activities
- Slide Library
- Research Resources
- EHC Program Webcasts



## Navigating the EHC Program Website

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The screenshot displays the AHRQ website interface. At the top, there is a navigation bar with links for Home, AHRQ at a Glance, Careers, Contact Us, Español, FAQ, and Email Updates. Below this is the AHRQ logo and the text 'Agency for Healthcare Research and Quality' with the tagline 'Advancing Excellence in Health Care'. A search bar is located to the right of the logo. A secondary navigation bar includes categories: Health Care Information, For Patients & Consumers, For Professionals, For Policymakers, Research Tools & Data, Funding & Grants, Centers, Portfolio & Initiatives, and News & Events. The main content area features a featured article titled 'Transitioning Newborns from NICU to Home' with a 'Learn More' button. The article text reads: 'A new toolkit promotes the safety of infants born preterm or with complex congenital conditions as they transition from the neonatal intensive care unit to their home.' The bottom of the screenshot shows a Windows taskbar with the time 8:27 AM and date 1/8/2014.

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## AHRQ Resources for EBP

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### **Key Resources for Nurse Clinicians:**

National Guideline Clearinghouse (NGC)

Effective Health Care (EHC) Program

U.S. Preventive Services Task Force (USPSTF)  
Electronic Preventive Services Selector  
(ePSS) tool



## U.S. Preventive Services Task Force (USPSTF)

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### ***What is the USPSTF?***

Created in 1984 by the U.S. Public Health Service

Supported by AHRQ since 1998

**Purpose:** To improve the health of all Americans  
by developing evidence-based  
recommendations about clinical preventive  
services.

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## Task Force Panel

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**Independent, volunteer** panel of national experts

- ▶ **Not** Federal employees
- ▶ **No** regulatory authority
- ▶ 4-year terms, with possibility of 1-2 year extension
- ▶ Rigorous protocol for assessing and managing COI

**Responsible for** reviewing evidence and making recommendations for preventive services.



## Task Force Recommendations

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**Task Force recommendations are:**

Based on a rigorous review of the peer-reviewed evidence (systematic reviews)

Intended for use in the **primary care setting**

- ▶ For individuals with no signs or symptoms of the specific disease or condition related to the recommendation, *AND*
- ▶ Only for services offered in the primary care setting or services referred by a primary care clinician.






## USPSTF Recommendation Development

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**Key Points:**

- ▶ Topics can be nominated by anyone—public, organizations, TF members, EPC members, etc.
- ▶ The TF does not perform primary research.
- ▶ Includes an assessment of the balance of harms and benefits of the preventive service.
- ▶ Grades are assigned (A, B, C, D, or I statement).
- ▶ 3 opportunities for public review and comment.




## USPSTF Grade Definitions

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Grade	Definition	Suggestions for Practice
A	The USPSTF recommends the service. There is high certainty that the net benefit is substantial.	Offer or provide this service.
B	The USPSTF recommends the service. There is high certainty that the net benefit is moderate or there is moderate certainty that the net benefit is moderate to substantial.	Offer or provide this service.
C	The USPSTF recommends selectively offering or providing this service to individual patients based on professional judgment and patient preferences. There is at least moderate certainty that the net benefit is small.	Offer or provide this service for selected patients depending on individual circumstances.
D	The USPSTF recommends against the service. There is moderate or high certainty that the service has no net benefit or that the harms outweigh the benefits.	Discourage the use of this service.
I Statement	The USPSTF concludes that the current evidence is insufficient to assess the balance of benefits and harms of the service. Evidence is lacking, or poor-quality, or conflicting, and the balance of benefits and harms cannot be determined.	Read the clinical considerations section of USPSTF Recommendation Statement. If the service is offered, patients should understand the uncertainty about the balance of benefits and harms.

# Integrating AHRQ Evidence-Based Resources Into Course Curricula

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The screenshot shows the homepage of the U.S. Preventive Services Task Force (USPSTF) website. The page features a teal header with the USPSTF logo and the text "U.S. Preventive Services Task Force". Below the header, there is a navigation menu with links for "USPSTF Home", "Resource Links", and "E-mail Updates". The main content area is divided into several sections: "About the USPSTF", "Methods and Processes", "Recommendations", "Opportunity for Public Comment", "Nominate a New USPSTF Member", "Nominate a Recommendation Statement Topic", "Special Populations", and "Tools for Primary Care Practice". A "Highlights" section on the right side of the page lists a "Recommendation Statement: Screening for Gestational Diabetes Mellitus (January 2014)". A "Sign up for USPSTF updates" button is also visible. The website is displayed in a browser window with the address bar showing "http://www.uspreventiveservicestaskforce.org".




## ePSS for Mobile Devices

ePSS app available for:  
Android, Blackberry, iPad, iPhone/iPod Touch, Palm, and Windows phone

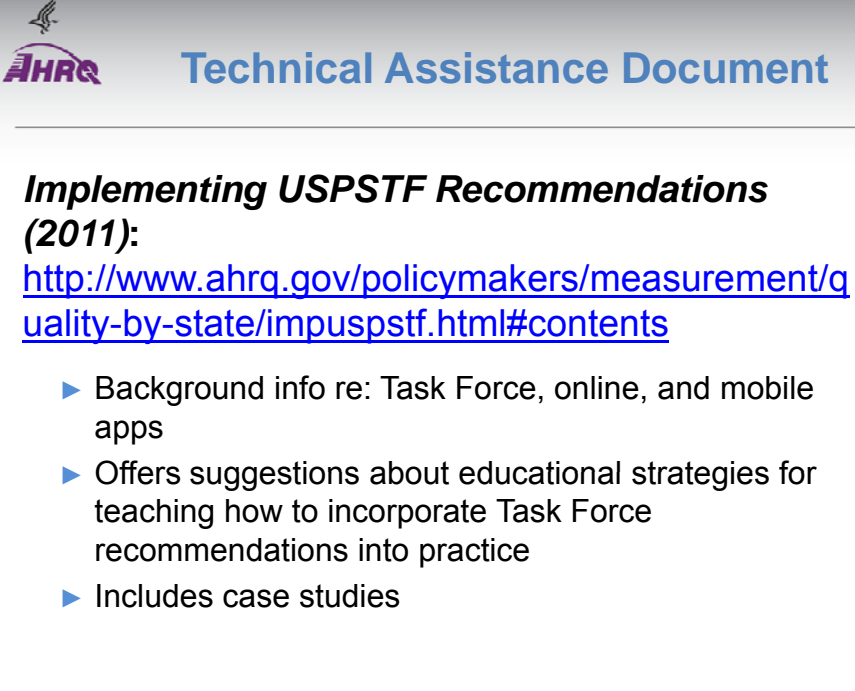
Recent enhancements

- ▶ Keyword searchability with the keywords highlighted
- ▶ Ability to bookmark recommendations or topics for later use
- ▶ Save search feature
- ▶ Automatic update of ePSS data and software when connected to wireless network
- ▶ Ability to e-mail recommendations
- ▶ Ability to print recommendations or saved searches

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The screenshot shows the AHRQ ePSS website interface. At the top left is the AHRQ logo. The main heading is "ePSS Electronic Preventive Services Selector". Below this, there is a list of download options for various mobile devices, each with a "Learn More" and "Download" link. The options are: Android (NEW!), BlackBerry/BlackBerry OS 10 (NEW!), iPad (NEW!), iPhone/iPod touch (NEW!), Palm OS/webOS, Windows Phone, and Web. To the right of the list is an image of a tablet displaying the ePSS application. At the bottom of the page, there are links for "ePSS WEB", "ePSS for iPad", "ePSS Widget", and "Email Notifications".




The screenshot shows the AHRQ Technical Assistance Document page. At the top left is the AHRQ logo. The main heading is "Technical Assistance Document". Below this, the document title is "Implementing USPSTF Recommendations (2011):". A blue hyperlink is provided: <http://www.ahrq.gov/policymakers/measurement/quality-by-state/impuspstf.html#contents>. Below the link is a list of three bullet points:


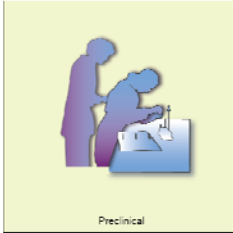
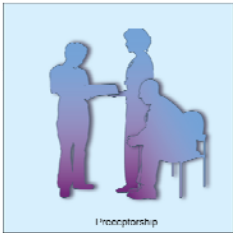

- ▶ Background info re: Task Force, online, and mobile apps
- ▶ Offers suggestions about educational strategies for teaching how to incorporate Task Force recommendations into practice
- ▶ Includes case studies


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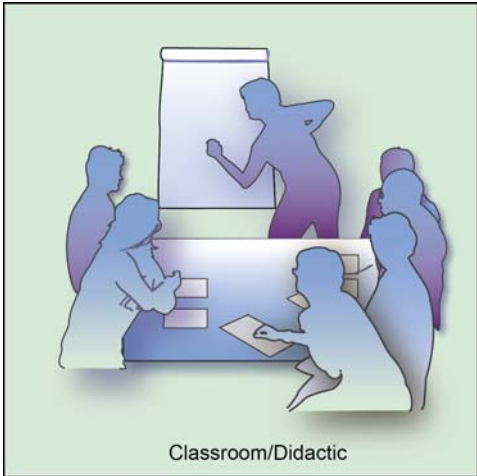
 **Strategies for Introducing EB Information into Curricula**

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 Classroom/Didactic	 Preclinical
 Fellowship	 Continuing Education

 **Strategies – Classroom/Didactic**

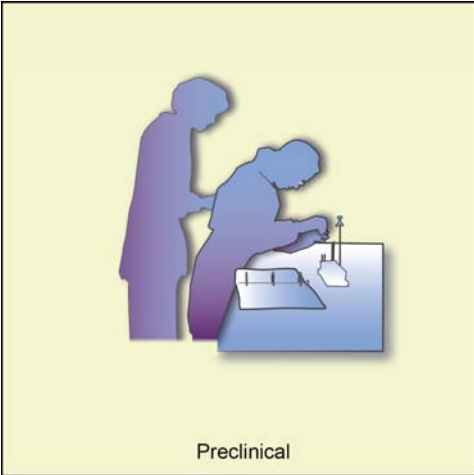
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Classroom/Didactic


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 **Strategies – Preclinical**

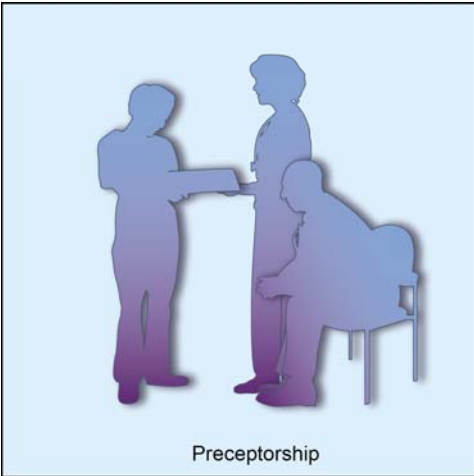
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Preclinical

 **Strategies – Preceptorship**

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Preceptorship

 **Strategies – Continuing Education**

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Continuing Education

 **Clinical Decision Making with EHC and USPSTF Resources**

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**Case Study**

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## Case Study


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**Patient Info:**

- 62-year-old man
- Diagnosed with type 2 diabetes 4 years ago, current weight WNL
  - ▶ Recent blood sugar = 147
- History of hypertension, well controlled with daily medication
- Married for 40 years and the relationship is monogamous
- Smoked as a young man but quit about 25 years ago
- Drinks occasionally in social situations

**Question:**

What preventive services would be appropriate for this patient?






## Case Study – ePSS Search


Grade	Title
A*	<b>Aspirin to Prevent CVD:</b> Men age 45 to 79 years to prevent myocardial infarctions
A*	<b>Colorectal Cancer:</b> Screening – adults, beginning at age 50 years and continuing until age 75 years
A*	<b>HIV:</b> Screening – adolescents and adults
A*	<b>High Blood Pressure:</b> Screening – adults age 18 years and older
A	<b>Lipid Disorders in Adults:</b> Screening – men age 35 years and older
A	<b>Syphilis:</b> Screening – men and women at increased risk
B*	<b>Alcohol Misuse:</b> Screening and behavioral counseling interventions in primary care – adults
B*	<b>Depression:</b> Screening – adults age 18 years and older – when staff-assisted depression care supports are in place
B	<b>Healthy Diet:</b> Counseling – adults with hyperlipidemia and other risk factors for CVD
B*	<b>Hepatitis C Virus Infection:</b> Screening – adults at high risk and adults born from 1945 to 1965
B*	<b>Obesity:</b> Screening for and management of – all adults
B*	<b>Sexually Transmitted Infections:</b> Behavioral counseling – sexually active adolescents and adults at increased risk
B*	<b>Type 2 Diabetes Mellitus:</b> Screening men and women – sustained BP 135/80+

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 **Case Study – A & B Recommendations**

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Grade	Title
A*	<b>Aspirin to Prevent CVD:</b> Men age 45-79 years to prevent myocardial infarctions
A*	<b>Colorectal Cancer:</b> Screening – adults, beginning at age 50 years and continuing until age 75 years
A*	<b>High Blood Pressure:</b> Screening – adults age 18 years and older
A	<b>Lipid Disorders in Adults:</b> Screening – men age 35 years and older
B	<b>Healthy Diet:</b> Counseling – adults with hyperlipidemia and other risk factors for CVD
B*	<b>Obesity:</b> Screening for and management of – all adults

 **Case Study – Patient's Questions**


---

**Provider suggests:**

- Reevaluate diabetes due to increased blood sugar
- Discuss treatment options at future clinic visit after diagnostics
  - ▶ ? Begin on oral medications and/or insulin therapy

**Patient's questions:**

- What medications might be prescribed for me?
- Where can I get information about them?





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**AHRQ Case Study – EHC Search**

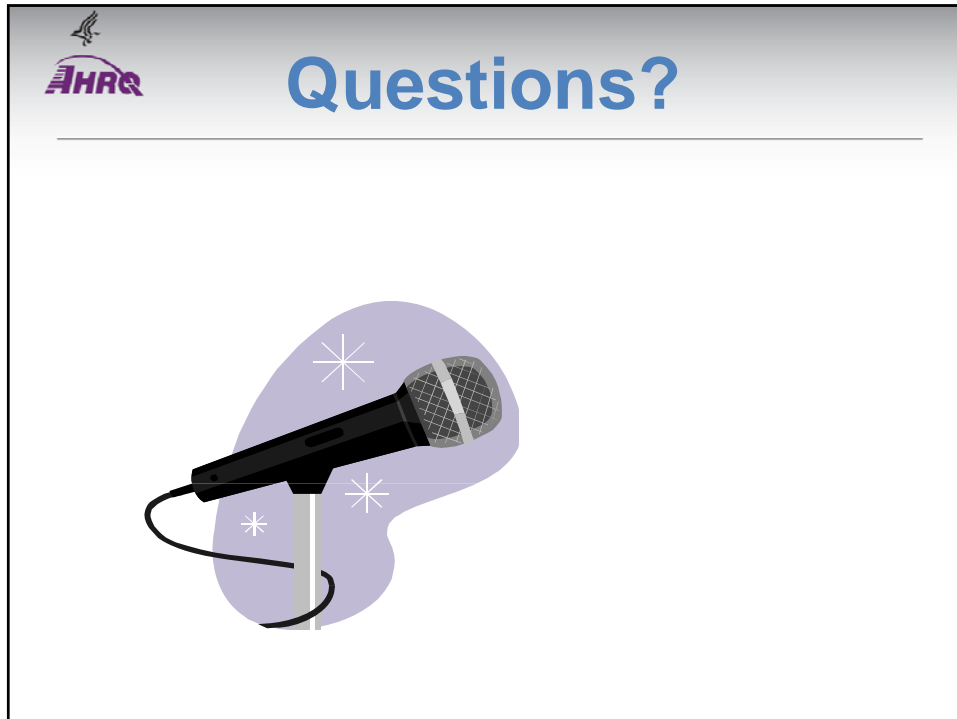
The screenshot shows the AHRQ Effective Health Care Program search interface. The search criteria are "Diabetes" (Condition) and "medication" (Keyword). The results list several items, with the following ones circled in red:

- Medication Therapy Management (Research Synthesis—last modified Jul. 24, 2013)
- Comparative Effectiveness and Safety of Oral Diabetes Medications for Adults With Type 2 Diabetes: An Update of the 2007 Report (Research Synthesis—last modified Mar. 15, 2011)
- Effectiveness and Safety of Bariatric Surgery in Patients with Type II Diabetes Mellitus and in Patients at Risk for Gestational Diabetes: A Retrospective Cohort Study for the DEcIDE Research Network (Original Research—last modified Jul. 30, 2010)

**AHRQ Case Study – Consumer Summary**

The screenshot shows the consumer summary page for "Medicines for Type 2 Diabetes: A Review of the Research for Adults". The following elements are circled in red:

- View PDF (PDF) 338 KB
- Download Audio (MP3) 8.1 MB
- Published Product for this Topic Slide Presentation Aug. 13, 2013
- CME Activity: Management of an Adult With Type 2 Diabetes With Antidiabetic Medications: A Case Scenario Nov. 24, 2013
- CME Activity: Comparing Medicines for Type 2 Diabetes Nov. 24, 2013
- Research Protocol (Update) Apr. 5, 2010
- Clinician Summary Jun. 30, 2011



The slide has a light blue gradient header. In the top left corner is the AHRQ logo. To the right of the logo, the word 'Wrap-Up' is written in a bold, blue font. A thin horizontal line is positioned below the title. The main body of the slide is white and contains a bulleted list of requirements for obtaining credit. Below the list, the text 'Willing to participate in a case study?' is displayed.

- To obtain credit:
  - ▶ Complete an online evaluation.
  - ▶ Pass the posttest with a grade of 80% or higher.
  - ▶ Complete and submit the evaluation/posttest within 30 days of the Webinar.

Willing to participate in a case study?



## Wrap-up

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Link to Continuing Education Credits:

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