



# US Preventive Services Task Force

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# US Preventive Services Task Force

- **Independent** panel of experts in primary care and prevention, multidisciplinary
- Systematically reviews evidence for clinical preventive services implemented in a primary care setting
- Makes recommendations on clinical preventive services in populations **without recognized signs or symptoms of illness**
- AHRQ is mandated to convene and support USPSTF
- Scientific support from Evidence-Based Practice Centers
- Liaisons from primary care subspecialty societies and federal agencies



# Target Audiences

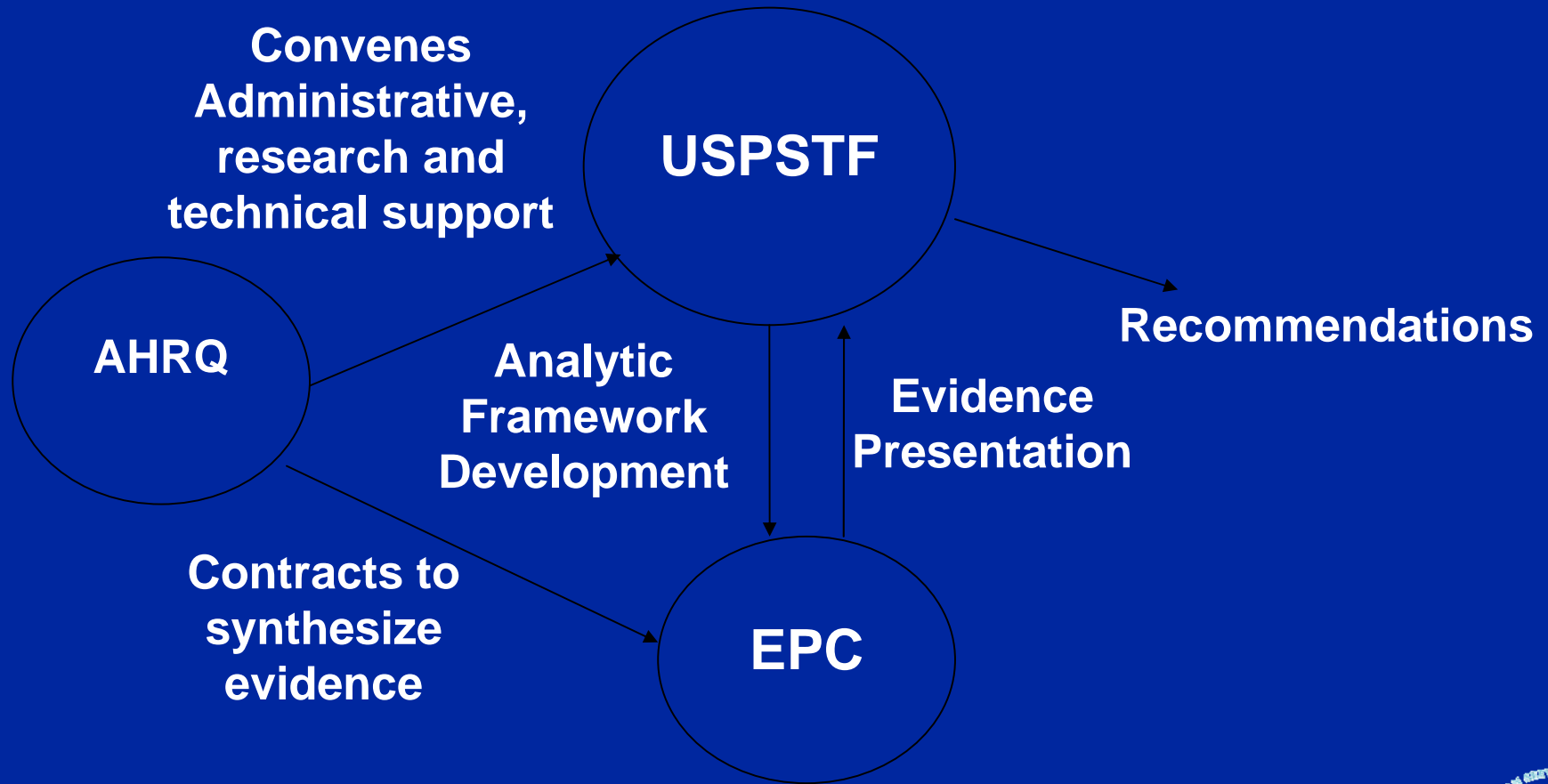
- Primary Care Clinicians and the Systems in which they function (including other clinicians)
- Academicians and Researchers
- Quality Improvement Professionals and makers of tools that affect primary care practice
- Health Care Policymakers and System Leaders
- Employers and other Healthcare Purchasers
- Members of the Public

# History of the Task Forces



- 1976 - Canadian Task Force on PHE
- 1984 - USPSTF established by PHS
- 1996 – Community Task Force
- 1998 - 3rd USPSTF reconvened by AHRQ
- 2001 - Standing USPSTF Task Force

# Structure of USPSTF



# Task Force Activities

- Provide **evidence-based** scientific reviews of preventive health services for use in **primary healthcare delivery settings**
- Age- and risk-factor specific recommendations for **routine** practice
- Primary and Secondary Prevention Recommendations:
  - Screening tests
  - Counseling
  - Preventive medications



# Recommendations Released in 2007 and 2008

- ASA/NSAIDs to Prevent Colorectal CA
- Chlamydia: Screening
- Carotid Artery Stenosis: Screening
- HTN in Adults
- Lipid Disorders in Children
- Motor Vehicle Occupant Injuries: Counseling
- Sickle Cell Disease in Newborns: Screening
- Prostate Cancer
- Asymptomatic Bacteruria: Screening
- BV in Pregnancy
- Congenital Hypothyroidism
- COPD Screening
- Diabetes Type II: Screening
- Gestational DM: Screening
- Newborn Hearing: Screening
- PKU: Screening
- Adult Lipids: Screening



# USPSTF Topics in Progress

- ASA to prevent CVD
- Breast CA – screening & PM
- Breastfeeding
- Cervical CA screening
- Colorectal cancer screening
- CHD – risk factor screening
- Dementia
- Depression screening
- Falls in the Elderly
- Oral cancer screening
- Tobacco counseling
- Hepatitis B screening
- Folic Acid for NTD Prevention
- Hyperbilirubinemia – newborn screening
- Lung Cancer
- Multivitamins and supplements
- Obesity
- Osteoporosis – Screening
- Physical Activity
- Skin cancer – Screening
- STI – counseling
- Vision in Older Adults





# What's new?

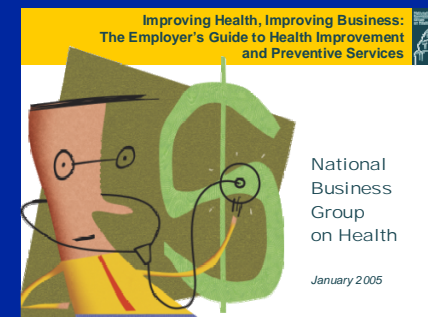
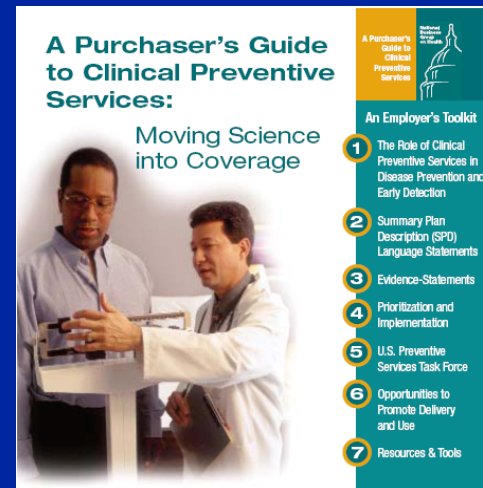
- Updating previous recommendations
- Addressing geriatric and child health recommendations
- Federal Register notice for new topic nominations
- Implementation –
  - Tools
    - Pocket guide
    - PDA
    - Website
- New recommendation statement format

# Examples of USPSTF Resources

- Annual Pocket Guide to Clinical Preventive Services
- One-page clinical summary of RS
- Adult Preventive Services timeline
- ePSS
- Publication of Recommendations in academic journals – *Annals of Internal Medicine*, *Pediatrics*
- Partnerships with professional societies, ePocrates, Medscape
- Patient brochures

# Employers and Policy Makers

- *A Purchaser's Guide to Clinical Preventive Services – with the National Business Group on Health (NBGH) and CDC*
- *Employer's Guide to Health Improvement and Preventive Services – with NBGH and Robert Wood Johnson Foundation*



[www.preventiveservices.ahrq.gov](http://www.preventiveservices.ahrq.gov)

Please visit our booth in the  
**mAHRQ**et Place Café for  
examples of USPSTF resources

Please also attend:

Session #66 USPSTF Making a Difference in  
Clinical Care – Tues, Sept. 9th 10-1130 AM





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Health Care*

# Evidence and the USPSTF

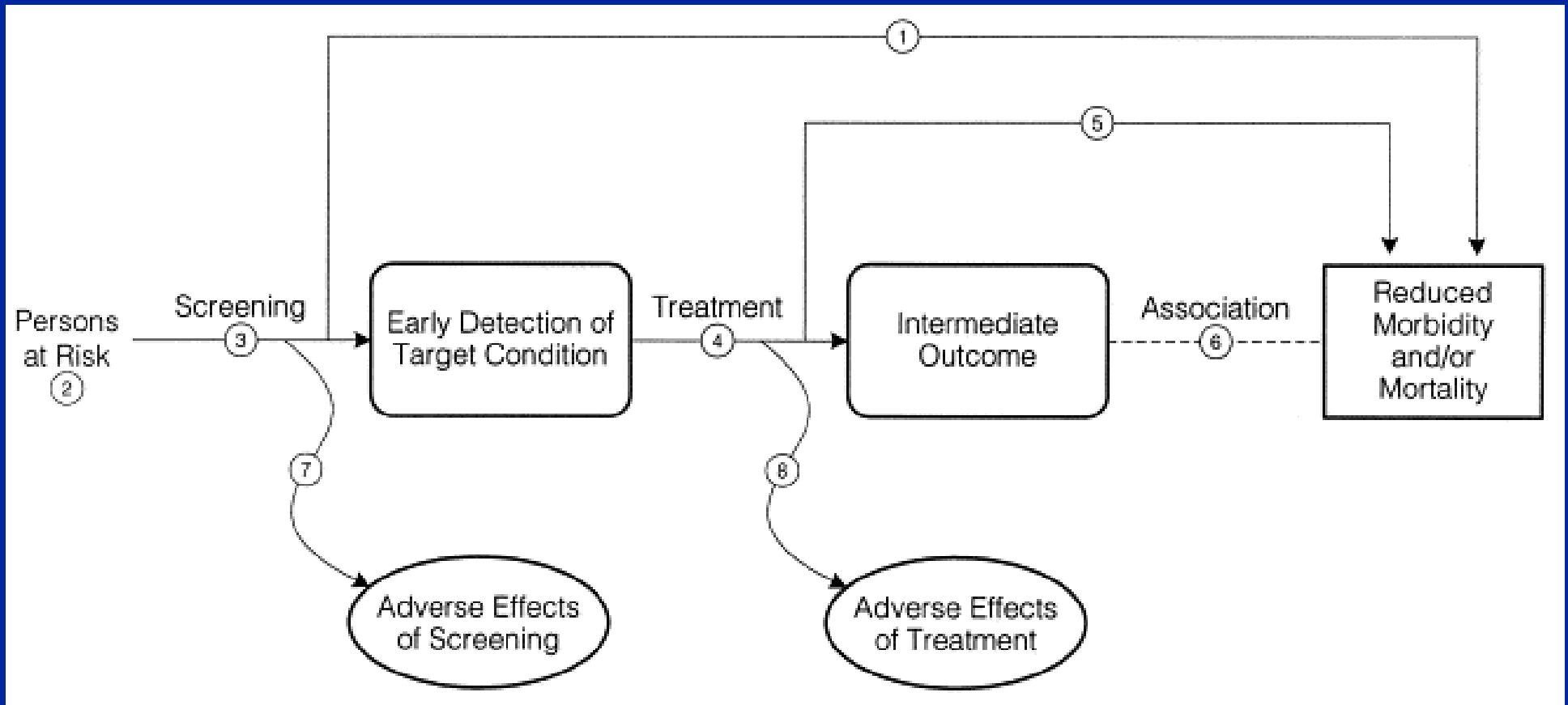


# Steps in the Recommendation Development Process

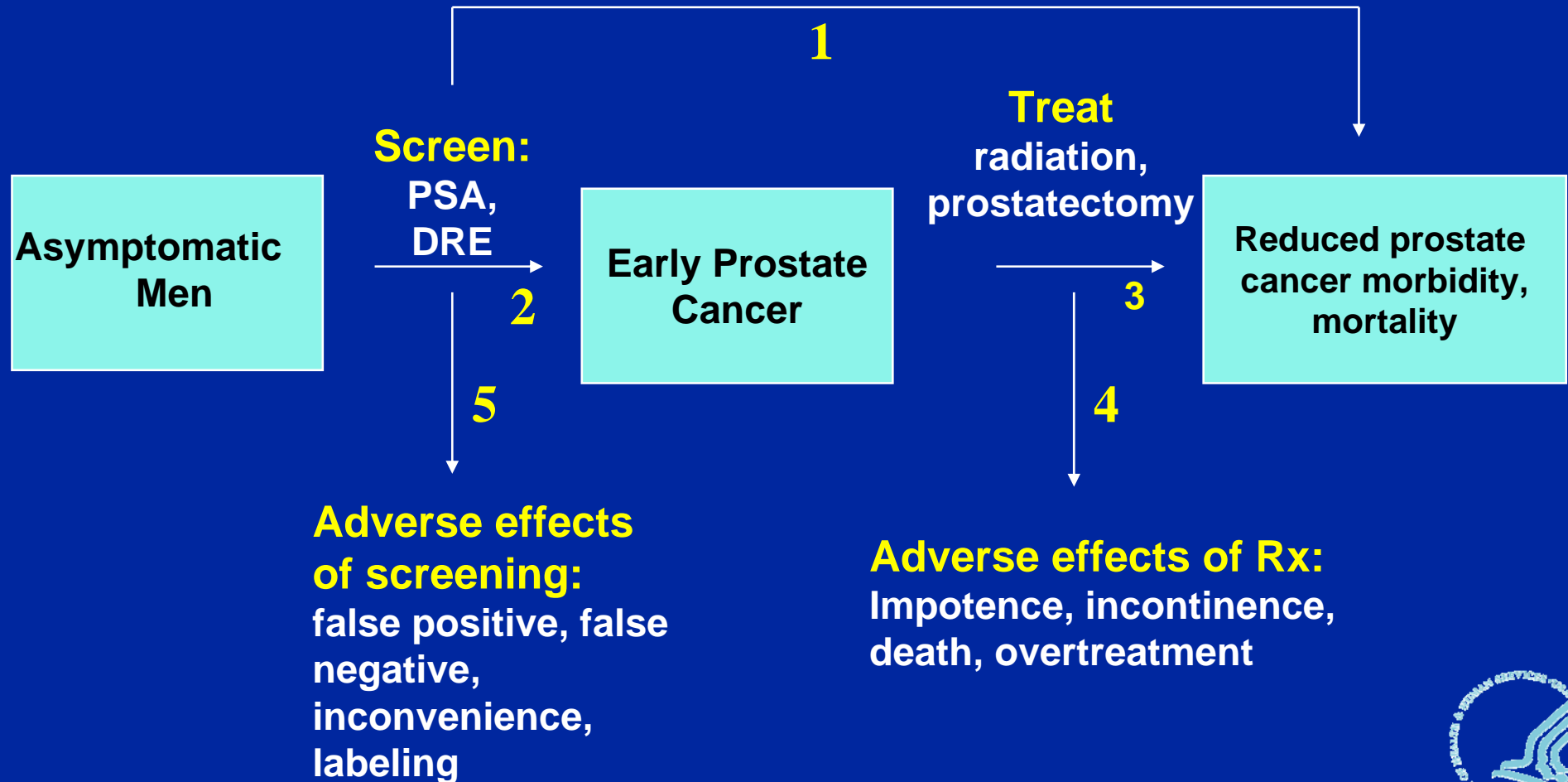
1. Define questions and outcomes of interest using analytic framework
2. Define and retrieve relevant evidence
3. Evaluate QUALITY of individual studies
4. Synthesize and judge strength of overall evidence and draw conclusion about CERTAINTY
5. Determine balance of benefits and harms
6. Link recommendation to magnitude and certainty of net benefits



# Step 1: Analytic Framework on Screening for a Disease



# Example: Analytic Framework for Prostate Cancer Screening





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# Step 2: Define & Retrieve Relevant Evidence

- Create inclusion/exclusion criteria based on the key questions from the analytic framework
  - Interventions (eg screening, counseling, meds)
  - Outcomes
  - Populations
  - Setting (generalizable to primary care)
  - Time period
  - Types of studies
- Sources of evidence
  - PubMed, Cochrane, other database searches
  - “Reference mining”
  - Hand searching topic-relevant specialty journals
  - Recommendations from experts



# Steps in the Recommendation Development Process

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# Step 3: Evaluate Quality of Individual Studies

## ■ Good:

- Evaluates relevant available screening tests
- Uses a credible reference standard
- Interprets reference standard independently of screening test
- Large sample size, ~ 100 broad spectrum patients

## ■ Fair:

- Evaluates relevant available screening tests
- Uses reasonable although not best standard;
- Interprets reference standard independent of screening test;
- Moderate sample size, ~ 50-100 “medium” spectrum patients

## ■ Poor: Has fatal flaw such as:

- Uses inappropriate reference standard
- Screening test improperly administered
- Biased ascertainment of reference standard
- Very small sample size or very narrow selected spectrum of patients.



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# Step 4: Synthesize and Judge Strength of Overall Evidence

- Evidence reports
  - Evidence tables summarizing studies
  - Narrative discussing overall strength of evidence
- Meta-analysis
- Modeling
  - Decision analysis
  - Projected outcomes table
- Systematic reviews from others

# Critical Appraisal Questions

- Do the studies have the appropriate research design to answer the key question?
- To what extent are the existing studies high quality?
- To what extent are the results of the studies generalizable (or “applicable”) to the general US primary care population and situation?
- How many studies have been conducted that address the key question? How large are the studies?
- How consistent/coherent are the results of the studies?
- Are there additional factors that assist us in drawing conclusions about the certainty of the evidence? (e.g., presence or absence of dose-response effects; fit within a biologic model)

# Step 4: Synthesize & Judge Strength of Evidence for Each Key Question

**Convincing:** Well-designed, well-conducted studies in representative populations that directly assess effects on health outcomes

**Adequate:** Evidence sufficient to determine effects on health outcomes, but limited by number, quality, or consistency of studies, generalizability to routine practice, or indirect nature of the evidence.

**Inadequate:** Insufficient evidence to determine effect on health outcomes due to limited number or power of studies, important flaws in their design or conduct, gaps in the chain of evidence, or lack of information on important health outcomes





## Step 4: Synthesize and Judge Strength of Overall Evidence: Certainty

- **Definition:** The U.S. Preventive Services Task Force defines certainty as “likelihood that the USPSTF assessment of the net benefit of a preventive service is correct”. The net benefit is defined as benefit minus harm of the preventive service as implemented in a general, primary care population. The USPSTF assigns a certainty level based on the nature of the overall evidence available to assess the net benefit of a preventive service.



# Levels of Certainty: High, Moderate, or Low

- **High:** This conclusion is unlikely to be strongly affected by the results of future studies.
- **Moderate:** 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.
- **Low:** The available evidence is insufficient to



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# Step 5: Determine Balance of Benefits and Harms

## Estimate Magnitude of Net Benefit

Benefits of Service – Harms of Service = Net Benefit

4 categories of Net Benefit:

**Zero/Negative**

**Small**

**Moderate**

**Substantial**



# Estimating Benefits: Projected Outcomes Table (COPD)

	<u>NHANES I</u>	<u>EPC pooled analysis</u>	
	Number / 10,000 with FEV1<50% predicted	Number of patients prevented from having $\geq 1$ COPD exacerbation	Number needed to screen (NNS)
Current smoker	207	12	833
Previous smoker	216	13	960
Never smoker	95	5	2000
Age 40-49	80	4	2500
Age 50-59	260	15	667
Age 60-69	370	22	455
Age 70-74	420	25	400

# Estimating Harms: Issues

- Harms of prevention are real but hard to quantify
- Include psychological and physical consequences of false-positives, false-negatives, “labeling,” overtreatment of “pseudodisease”
- Opportunity costs
  - Time and effort required by patients and the health care system (may be substantial)
- Magnitude and duration of harm subjective, hard to compare to benefits
  - NNH for well-defined harms (eg GI bleeds from ASA)



## Assessing Magnitude of Net Benefit

- No explicit criteria for magnitude
- *Substantial benefit* : impact on high burden or major effect on uncommon outcome
- Problems: requires evidence on harms and common metric for benefit and harms
- Always requires judgment

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# Step 6: Link recommendation to net benefits: **USPSTF** **Grades of Recommendations**

Certainty of Net Benefit	Magnitude of Net Benefit			
	Substantial	Moderate	Small	Zero/negative
High	A	B	C	D
Moderate	B	B	C	D
Low	Insufficient			

# Step 6: Link recommendation to net benefits: USPSTF Wording of Recommendations

Grade	Grade Definition	Suggestion 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 against routinely providing the service. There may be considerations that support providing the service in an individual patient. There is moderate or high certainty that the net benefit is small.</b>	<b>Offer or provide this service only if there are other considerations that support offering or providing the service in an individual patient.</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</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, of poor quality, or conflicting, and the balance of benefits and harms cannot be determined.</b>	<b>Read “Clinical Considerations” section of USPSTF Recommendation Statement. If offered the service, patients should understand the uncertainty about the balance of benefits and harms.</b>

## ■ Diana's Slides



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# Questions?

