



What Works: Evidence-based Clinical Preventive Services



Joy Melnikow, MD, MPH

Center for Healthcare Policy and Research

University of California, Davis



Overview

- Brief introduction to US Preventive Services Task Force (USPSTF)
- USPSTF in the health care reform bill
- Evaluation of preventive services - isn't prevention always good?
- Examples: Screening/early detection
 - What works/what doesn't?



The U.S. Preventive Services Task Force

- Established in 1984
- Independent panel of nationally known, non-federal experts in primary care and evidence-based medicine
- Extensive vetting for conflict-of-interest



The U.S. Preventive Services Task Force (cont.)

- Charged by Congress to
 - Review the scientific evidence for clinical preventive services
 - Develop evidence-based recommendations for the health care community
 - Focus on primary care settings



2009 USPSTF Members

Bruce N. (Ned) Calonge, M.D., M.P.H. (Chair)

Diana B. Petitti, M.D., M.P.H. (Vice Chair)*

Susan Curry, Ph.D.

Thomas G. DeWitt, M.D.*

Allen J. Dietrich, M.D.

Kimberly D. Gregory, M.D., M.P.H.

David Grossman, M.D., M.P.H.

George Isham, M.D., M.S.

Michael LeFevre, M.D., M.S.P.H.

Rosanne Leipzig, M.D., Ph.D.

Lucy N. Marion, Ph.D., R.N.*

Joy Melnikow, M.D., M.P.H.

Bernadette Melnyk, Ph.D., R.N

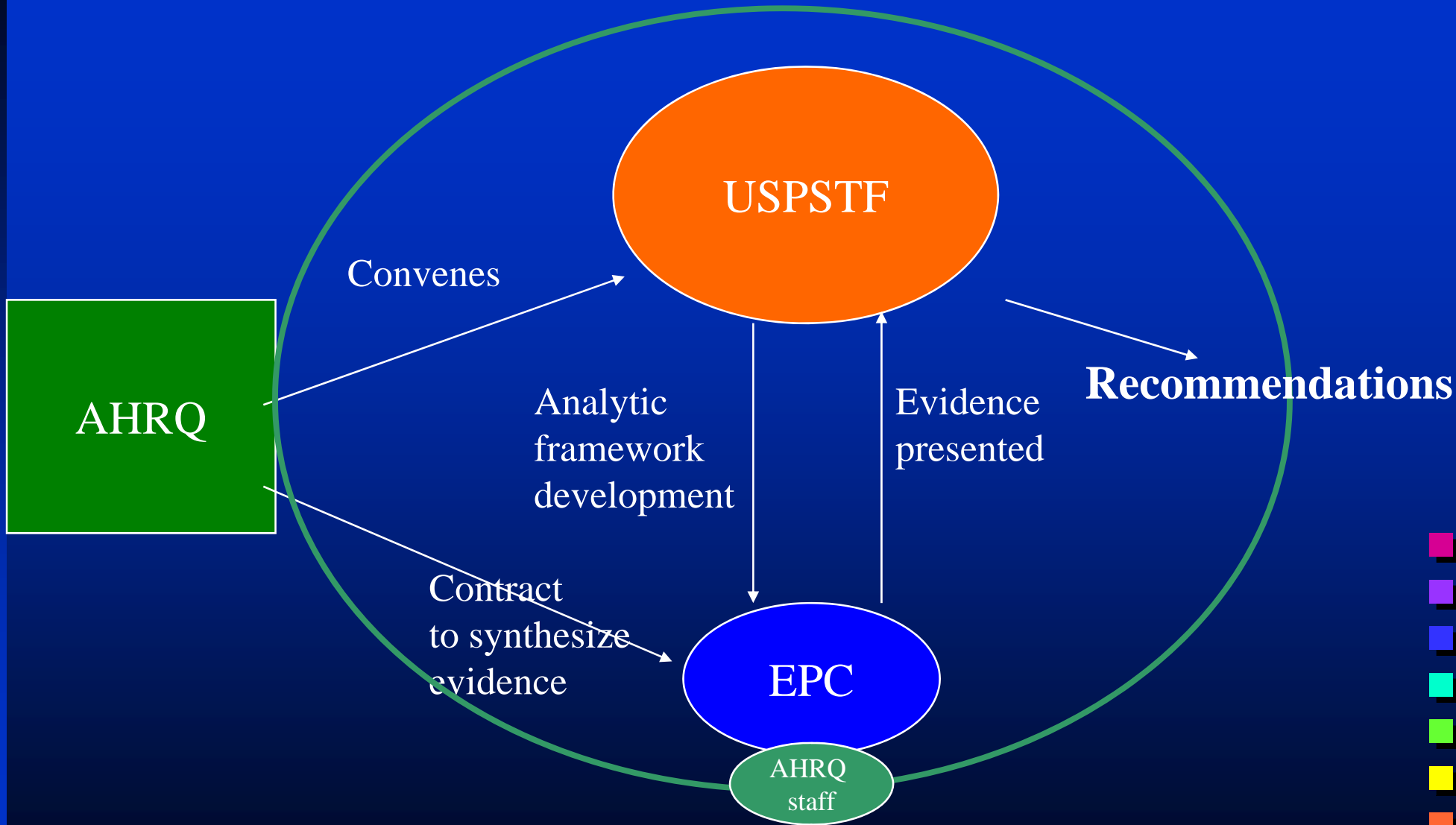
Wanda Nicholson, M.D., M.P.H., M.B.A

J. Sanford (Sandy) Schwartz, M.D.

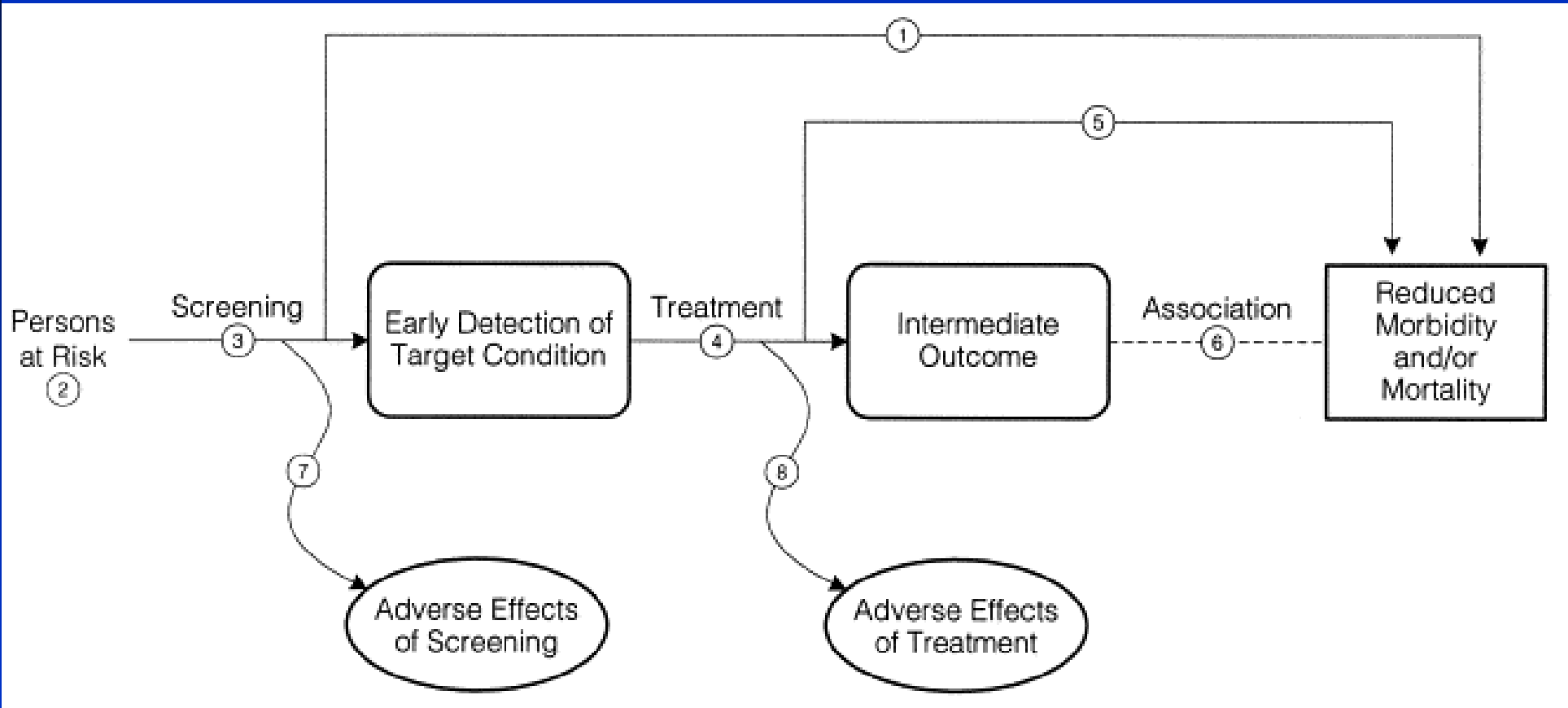
Timothy Wilt, M.D., M.P.H.

*Rotated off the USPSTF 12/2009





Analytic Framework on Screening for a Disease: What Evidence Do We Seek?



Evidence Evaluated at Three Levels

- Quality of each individual study
- Quality and strength of evidence across each key question
- Strength of evidence across the entire analytic framework - i.e., linking the left side of the framework to the right side



USPSTF Recommendations

- Is the strength of the available evidence sufficient to make a reliable assessment of the balance of benefits and harms?
- If yes - then TF makes recommendation
- If no - “I” statement
 - Common reasons:
 - Lack of evidence on clinical outcomes
 - Poor quality of existing studies
 - Good quality studies with conflicting results



Grades of Recommendation

Certainty of net benefit	Magnitude of net benefit			
	Substantial	Moderate	Small	Zero/Negative
High	A	B	C	D
Moderate	B	B	C	D
Low	I - Insufficient Evidence			



Grades of Recommendation (2)

Certainty of net benefit	Magnitude of net benefit			
	Substantial	Moderate	Small	Zero/Negative
High	A	B	C	D
Moderate	B	B	C	D
Low	I - Insufficient Evidence			



USPSTF

in the Health Care Reform Bill

- “...review the scientific evidence related to the effectiveness, appropriateness, and **cost-effectiveness** of clinical preventive services for the purpose of developing recommendations for the health care community, and updating previous clinical preventive recommendations, to be published in the Guide to Clinical Preventive Services”



USPSTF

in the Health Care Reform Bill (2)

- Mandates 100% coverage with no co-pay for all preventive services recommended with a grade of A or B by the USPSTF
- Provides that the Secretary of HHS may:
 - Modify the coverage of preventive services provided it is “consistent with USPSTF recommendations”
 - Provide that no payment is made for “a preventive service that has not received a grade of A,B, C or I from the Task Force”



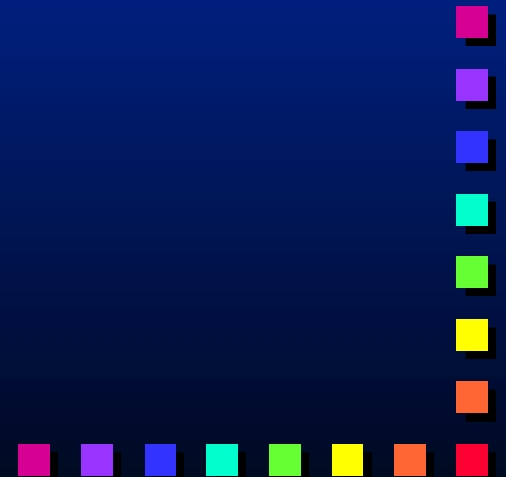
USPSTF in the Health Care Reform Bill (3)

- The mammography exception:
“... the current recommendations of the United States Preventive Service Task Force regarding breast cancer screening, mammography, and prevention shall ... be considered the most current *other than those issued in or around November 2009.*”

[italics added]

Screening/Early Detection: A down side?

- Why does the USPSTF apply such rigorous standards of evidence?
- What are the possible outcomes of screening for asymptomatic disease?
- Can screening be harmful?



Why Does the USPSTF Apply Such Rigorous Standards of Evidence?

- Making population-based recommendations for healthy people without complaints
 - Most will not have the disease being sought
 - Adverse effects may occur to previously healthy people
- Finding disease early is not always better
- All screening/early detection programs use health care resources



Possible Outcomes of Screening

- Negative test, no disease (true negative)
 - ?Reassuring?
 - ?Screening fatigue?
- Negative test, disease present (false negative)



Possible Outcomes of Screening (2)

- Positive test, no disease (false positive)
 - Further testing
 - Anxiety
 - Possible adverse effects of diagnostic tests and/or unnecessary treatment
- Positive test, disease present (true positive)
 - Treating early stage disease-- better outcome
 - Treating early stage disease—same outcome (but longer time living with diagnosis)



Adverse Effects of Screening

- Test itself
 - Colonoscopy - perforation (rare) (A to age 75)
 - CT scan for coronary artery disease (radiation) (D/I for high risk)
- Confirmatory testing
 - Prostate cancer screening - prostate biopsy
 - Ovarian cancer screening - abdominal surgery (D)
- No change in outcome from screening/early treatment
 - Pancreatic cancer (D)
 - Prostate cancer screening over age 75 (D)
 - Colon cancer screening over age 85 (D)

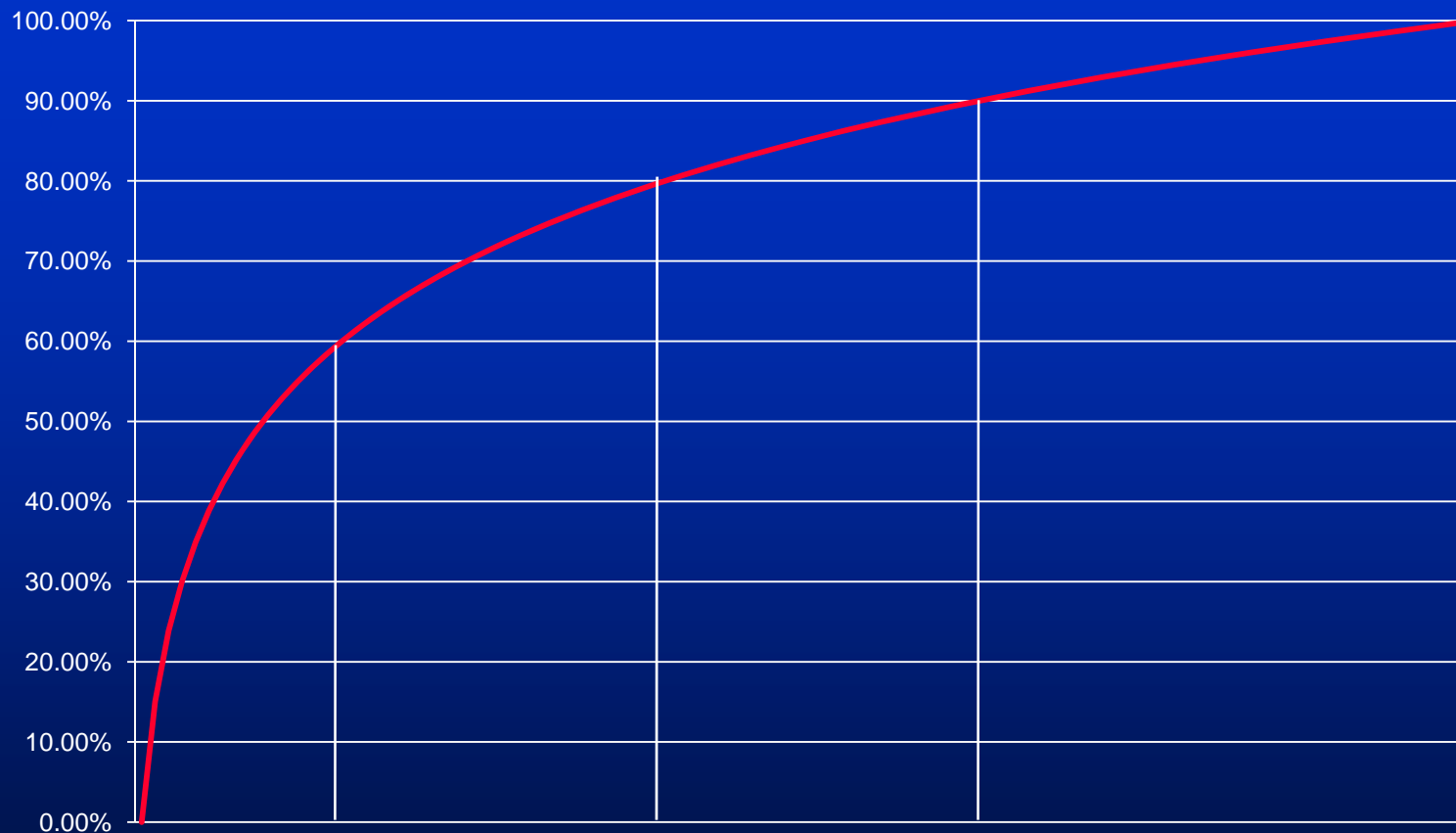


What Works?

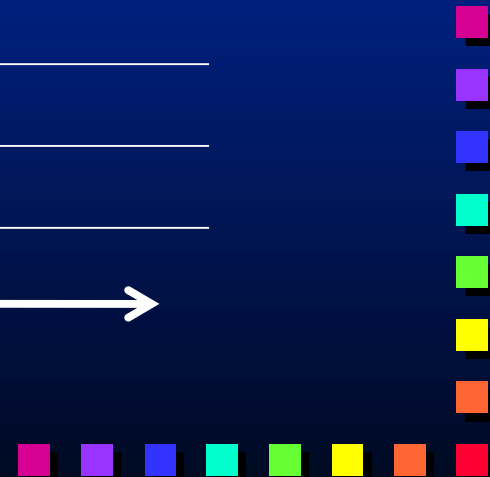
- Consider
 - Test characteristics
 - Harms/risks from testing
 - Harms from disease
 - Availability of effective treatment
 - Evidence that treating in the asymptomatic phase is better
 - Population risk, short and long term impacts, life expectancy, quality of life
 - Resources for screening, diagnosis and treatment (not part of USPSTF model)



Proportion of deaths from disease averted

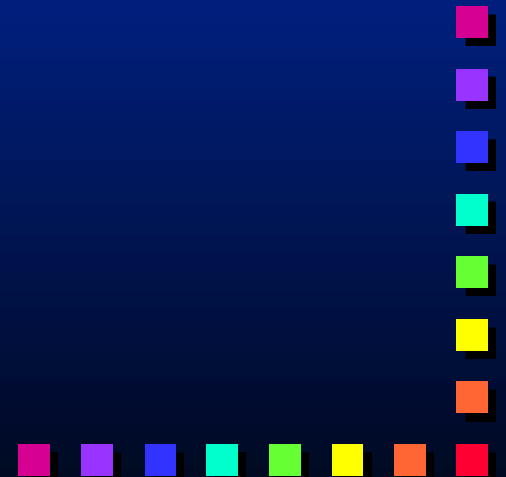


Increasing use of medical service/resources →



What Works? (2)

- Screening for cervical cancer (Pap smears) in sexually active adult women (with a cervix) up to age 65 (A)
- Screening for high blood pressure in adults 18 and older (A)
- Screening for colorectal cancer
 - Age 50-75 (A)
 - Not age 85+ (D)



What Works? (3)

- Screening for bacteriuria in pregnant women (A)
- Screening for depression (**when support programs available**) (B)
- Many more:
<http://www.ahrq.gov/clinic/uspstfix.htm>

The Future - Evidence-based Clinical Preventive Services

- USPSTF now has a role in determining coverage
- Political pressure is likely to be intense
 - Advocacy groups
 - Financial interests
- Independent, evidence-based review will be more important than ever



Questions?

