

# Evidence and communication; understanding and communicating recommendations on mammography screening

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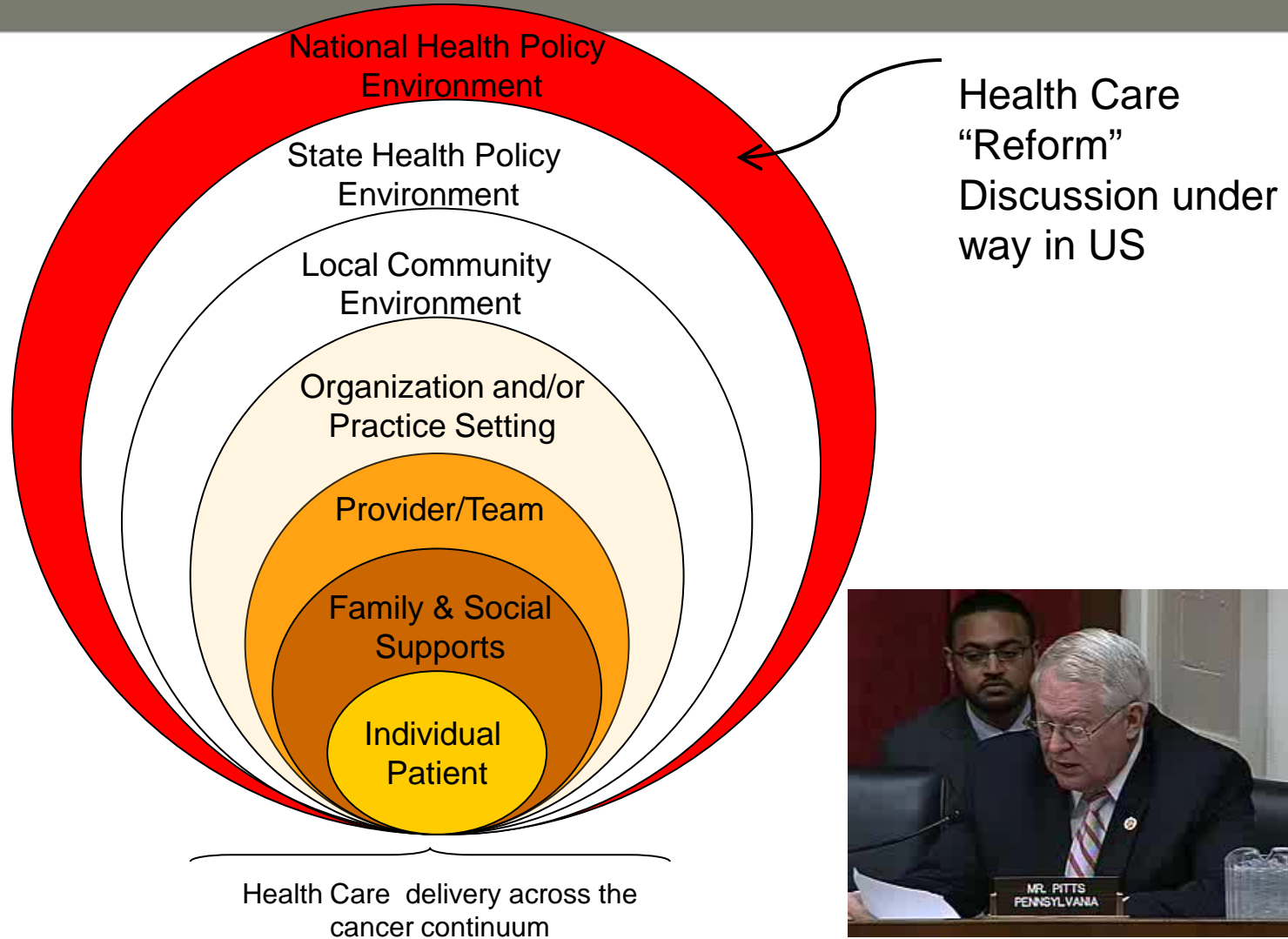
# Summary

- The US context for screening is changing
- The experience of the USPSTF points to the challenge of communication surrounding screening
- Communicating screening's purpose, potential and limitations are an area for research
  - Because we have trouble now
  - Because it will be more complicated in the future

# In the US recommendations are just recommendations

- Many groups make them
  - Specialty societies
    - (eg. American College of Surgeons, American College of Radiology, American College of Physicians)
  - Expert panels
    - American Cancer Society
  - Consensus panels
    - International consensus conference on...
  - Specially constituted bodies
    - US Preventive Services Task Force

# Health care and recommendations are made in the context of a complex environment



-Screening moved into the spotlight in October ...

-“American medicine has overpromised when it comes to screening”

-Otis Brawley,  
ACS

-And then things heated up again in November



-So there has been lots of media discussion....

-And some of it was accurate ...which?

-Did the USPSTF recommendations say don't screen women ages 40-49?

-Radical departure?

## The recommendations were neither new or radical: 2007 American College of Physicians

- *Recommendation 1: In women 40 to 49 years of age, clinicians should periodically perform individualized assessment of risk for breast cancer to help guide decisions about screening mammography.*
- *Recommendation 2: Clinicians should inform women 40 to 49 years of age about the potential benefits and harms of screening mammography.*

# The U.S. Preventive Services Task Force revisited screening because it was time...

## The Guide to Clinical Preventive Services

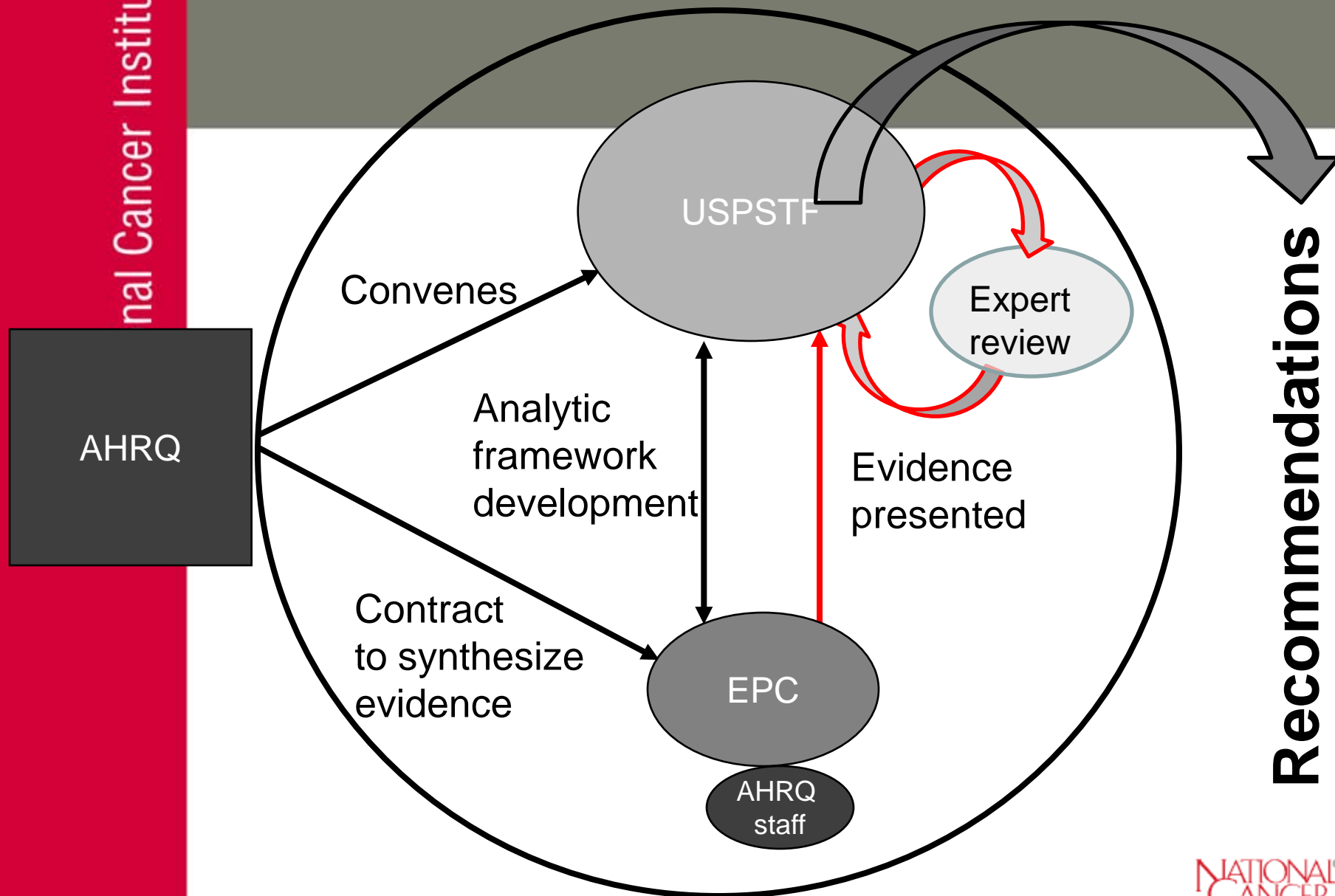
2008

Recommendations of the U.S.  
Preventive Services Task Force



- They review recommendations every 5 years or as new evidence dictates
- The USPSTF is an independent panel of experts
  - in primary care and prevention
  - they systematically review the evidence regarding the effectiveness of clinical preventive services
  - They make recommendations
  - First convened 1984
  - Sponsored by AHRQ since 1998

# USPSTF structure & function



Source: M LeFevre MD, 11/2009 – U Missouri, Columbia



# The USPSTF recommendations depend upon value judgments

- First do no harm
  - 1/8 in women will get breast cancer in their lifetime
    - Primary care physicians take care of all 8
    - 88% of women will not get breast cancer in their life time (7/8)
- Balance of benefits and harms
  - Benefits: 15% reduction in breast cancer mortality
  - Harms: False +, Biopsy, overdiagnosis

# 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			

**Adapated from From Michael Lefvre MD, MPH  
Univ. of Mo., Family Medicine**

# 2009 Systematic Review

- 1a. Does screening with mammography (film and digital) or MRI decrease breast cancer mortality among women aged 40-49 and over the age of 70?
  - 1b. Does CBE screening decrease breast cancer mortality? Alone or with mammography?
  - 1c. Does BSE practice decrease breast cancer mortality?
- 2a. What are the adverse effects associated with screening with mammography (film and digital) and MRI?
  - 2b. What are the adverse effects associated with CBE?
  - 2c. What are the adverse effects associated with BSE?
- Two key sources of new information since 2002
  - Age Trial
  - Models of screening impact

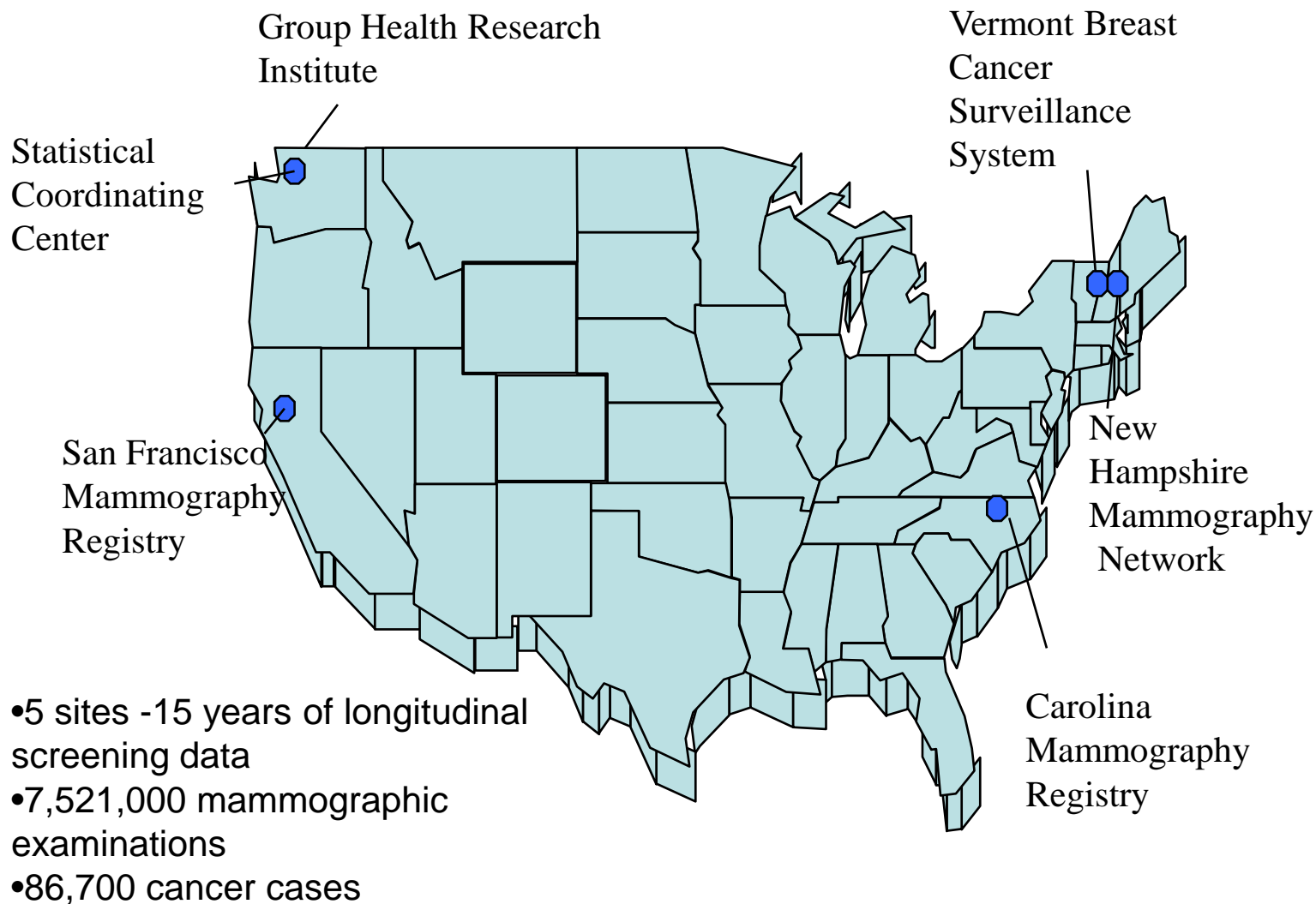
# The Age Trial was specifically designed to address screening among women ages 40-49

- Randomized trial
- 80% probability of finding a 20% mortality difference
  - 65,000 intervention
  - 130,000 controls
- Annual mammography
- 10 years of follow-up

## But there were problems

- Less than expected enrollment
  - 53,884 intervention
  - 106,956 controls
- Treatment improved
- RR 0.83 (95% CI 0.66-1.04)

# Data was also obtained from the Breast Cancer Surveillance Consortium



# Harms 1

- False positive testing
  - Estimates vary
    - Tests requiring additional evaluation
      - 5-10% of screened women (breast)
    - Evaluation that result in biopsy
      - 60-75% of biopsied women (breast)
- Cumulative false positive
  - 21-49% after 10 years of mammography\*

\*Nelson 2009

Source: M LeFevre MD, 11/2009 – U Missouri, Columbia

# USPSTF Conclusion from models

- 81% of the benefit from annual screening is obtained by biennial screening



# What they said

- The Task Force now recommends against *routine* screening of women aged 40 to 49. (C recommendation).
- The Task Force now recommends screening mammography every two years for all women aged 50 to 74. (B recommendation)
  - Annals of Internal Medicine 11/17/2009



# What they meant...

About screening among women ages 40-49

- The decision to start regular, biennial screening mammography before the age of 50 years should be an individual one and take patient context into account, including the patient's values regarding specific benefits and harms.

Grade: C recommendation.

# And how they clarified it

- "So, what does this mean if you are a woman in your 40s?"
- *You should talk to your doctor* and make an informed decision about whether mammography is right for you based on your family history, general health, and personal values."
  - Diana Petitti, MD, MPH  
Vice Chair, U.S. Preventive Services Task Force  
November 19, 2009

# Summary

- The USPSTF was analysis rather than communication focused ...
  - Screening mammography has a real benefit
    - And real limitations...
  - Both must be discussed and are relatively simple
    - Genetic and proteomic testing is on the rise
- More communication research is needed
  - The meaning of screening
  - The interpretation of risk & benefits
  - How providers & programmes best present options
- ICSN – Designing print materials

# References

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