

# Men's Use of Prostate Specific Antigen (PSA) Screening

Evidence from the



Lila J. Finney Rutten, PhD, MPH    Cancer Prevention Fellowship Program  
Division of Cancer Prevention  
National Cancer Institute (NCI), MD, USA

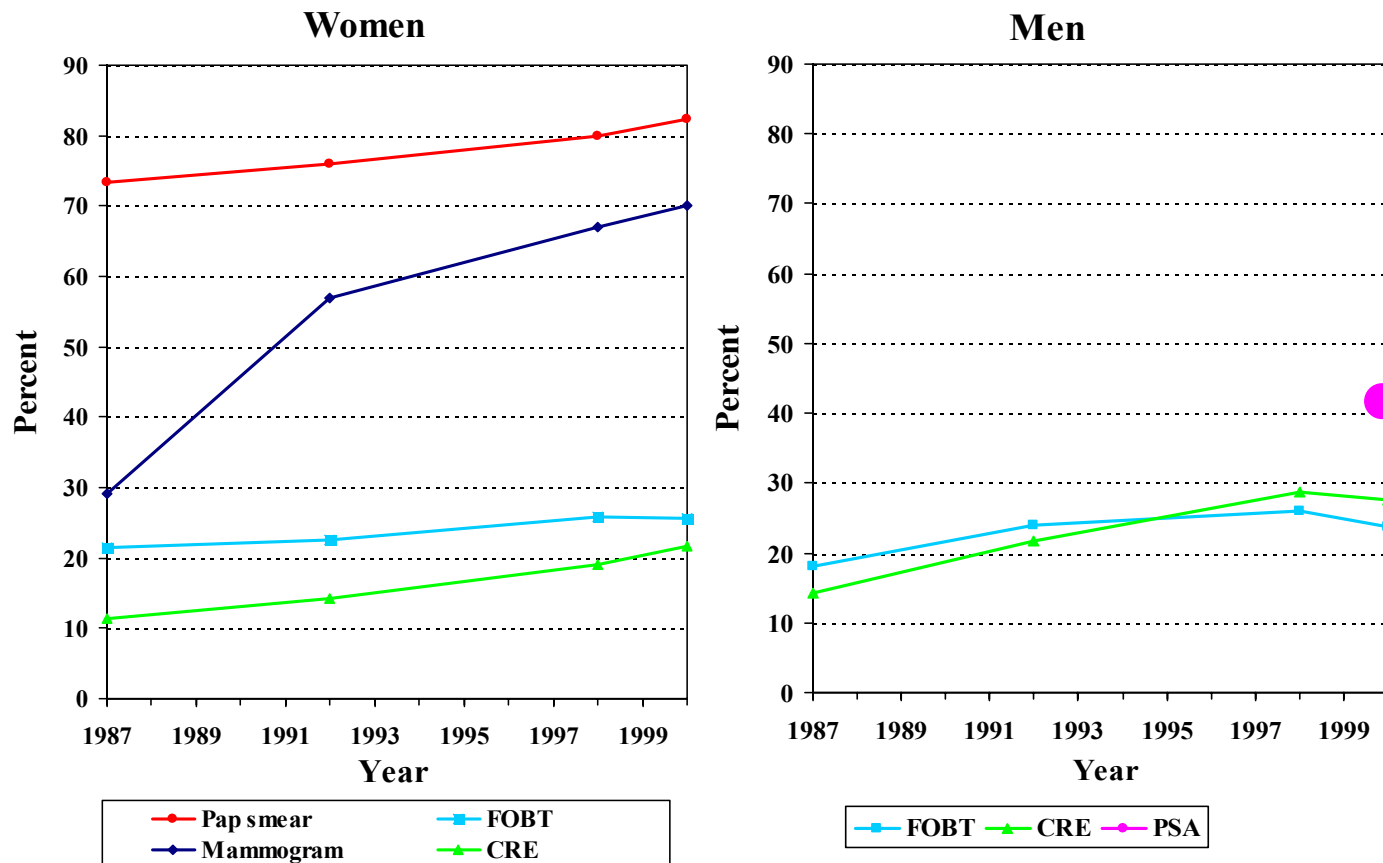
Helen I Meissner, PhD, ScM  
Barbara K Rimer, DrPH  
Nancy Breen, PhD

NCI, MD, USA  
UNC at Chapel Hill, NC, USA  
NCI, MD, USA



# Screening Uptake

Recent Use of Cancer Screening Tests: 1987, 1992, 1998, 2000



Source: NHIS. Percentages are standardized to the 2000 Projected U.S. Population by 5-year age groups.

**PAP smear:** Within the last 3 years, age 25+. **Mammogram:** Within the last 2 years, age 40+. **FOBT:** Fecal Occult Blood Test within the last year, age 50+. **CRE:** Colorectal endoscopy within the last 3 years, age 50+. **PSA:** Prostate Specific Antigen test within the past year, age 50+.

Source: Swan J et al, *Cancer*, 2003

# PSA Screening Controversy<sup>1</sup>

## Potential Benefits



## Potential Harms

- Early detection
- Treatment may be effective
- May contribute to the declining mortality; insufficient evidence

- False positives
- Diagnosis of clinically insignificant cancers
- Treatment side effects

<sup>1</sup> Slide adapted from Sharing the Decision: Screening for Prostate Cancer (CDC)

# Evidence to Support Screening

## US Preventive Services Task Force review of evidence

### On-going randomized controlled trials

- ❑ European Randomized Study of Screening for Prostate Cancer
- ❑ U.S. National Cancer Institute Prostate, Lung, Colorectal and Ovarian Trial

# **Screening Recommendations**

**U.S. Preventive Services Task Force**

**American Cancer Society**

**American Academy of Family Physicians**

**American College of Physicians/American  
Society of Internal Medicine**

**American College of Preventive Medicine**

**American Medical Association**

# Medical Decision Making

Patient understanding and decision making

Models of medical decision making

- ❑ Shared Decision Making (SDM)
- ❑ Informed Decision Making (IDM)



# IDM and SDM

**Understand the disease**

**Comprehend available clinical services**

- risks & benefits
- limitations & uncertainties
- alternatives

**Consider personal preferences**

**Preferred level of participation in decision-making**

**Decision consistent with personal preferences**

**IDM: Any  
intervention in  
communities  
or healthcare  
systems  
intended to  
promote  
informed  
decisions**

**SDM: informed decision  
making interventions in  
clinical settings in which  
both patients and  
providers express  
preferences and  
participate in decision  
making**



# Study Objectives

1. PSA use among US men
2. PSA use among subgroups
3. Association between PSA use and factors relevant to SDM/IDM:
  - ❑ Health information attention/seeking
  - ❑ Perceptions of provider behavior
    - explain
    - involve
    - recommend

# Data Source



**Computer-Assisted Telephone Interview**

**Random Digit Dial (RDD)**

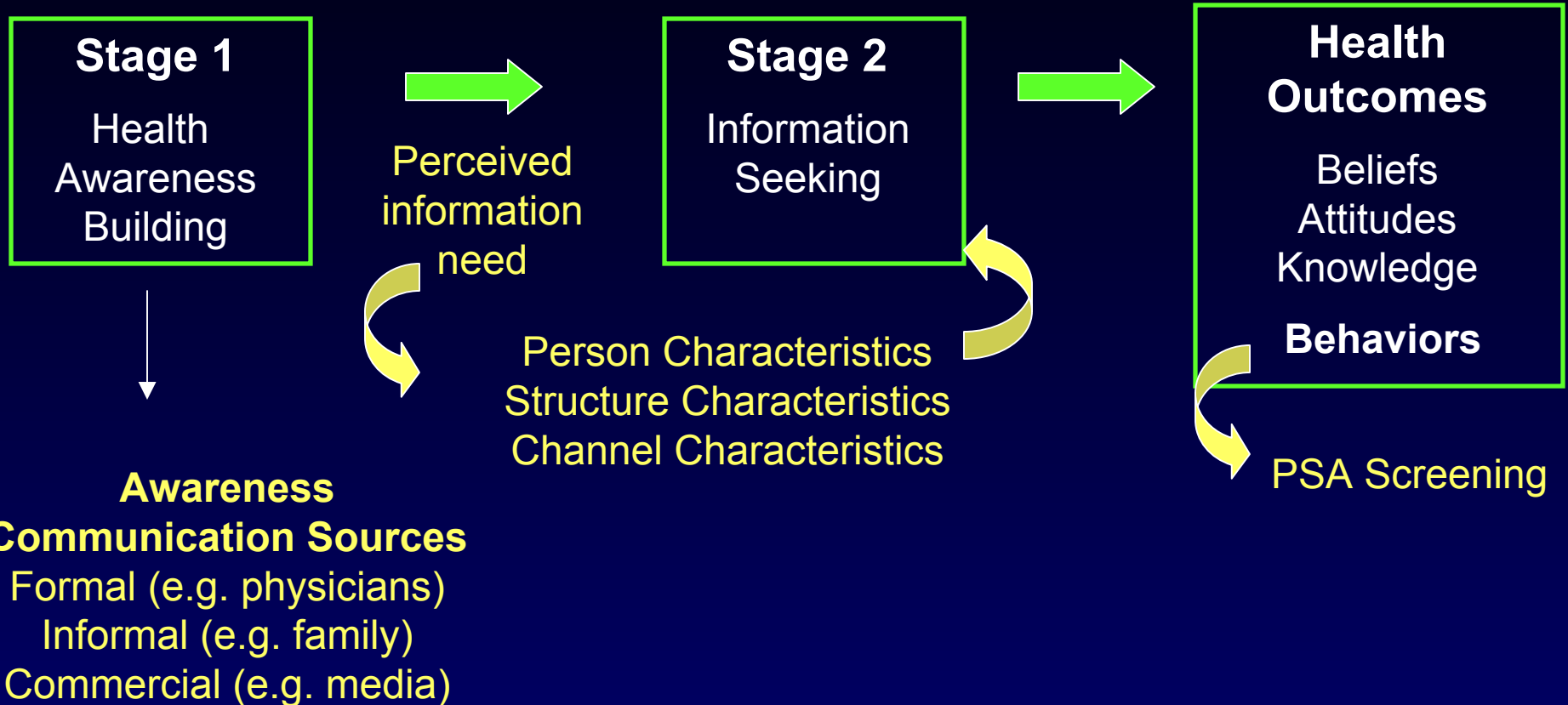
**National probability sample of adult population (18+)**

**Surveillance and research vehicle**

**Repeated cyclically to track trends**

# Conceptual Framework

## Consumer-Oriented Health Communication



# Sample Characteristics

**Sub-Sample (n=927)**

**Men**

**Aged 50+**

**No history of prostate cancer**

**Complete Interview**

# Survey Content

**Prostate  
Screening**

**Ever had PSA**

**Demographics**

**Education  
Age**

**Race/ethnicity  
Income**

**Health Care  
Access**

**Health insurance  
Usual source of care**

# Survey Content (communication)

**Perceived  
Provider  
Behavior**

**Explain clearly  
Involve in decisions  
Recommend PSA**

**Global**

**SDM**

**Information  
Attend/Seek**

**Attend to health/medical  
information: TV**

**Radio  
Newspapers  
Magazines  
Internet**

**IDM**

**Sought cancer information**

# Analysis

## SUDAAN

### Bivariate analyses

- ❑ Crosstabulations and Chi-Square
- ❑ Correlation

### Multivariate analyses

- ❑ Logistic regression

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### Sociodemographics

Health care access



PSA Screening

Information attend/seek (IDM)

Perceived Provider Behavior (SDM)

Explain  
Involve  
Recommend

# Sociodemographic Characteristics

	Ever Had PSA		Never Had PSA	
	N	%	N	%
<b>Age</b>				
50-64	286	49.7	263	50.3
65-74	155	67.9	64	32.1
75+	74	57.6	52	42.4
<b>Race/Ethnicity</b>				
White, non-Hispanic	426	58.7	274	41.3
Black, non-Hispanic	44	52.0	37	48.0
Hispanic	18	26.4	41	73.6
Non-Hispanic Other	12	34.2	20	65.7



# Sociodemographic Characteristics

	Ever Had PSA		Never Had PSA	
	N	%	N	%
<b>Income</b>				
<u>&lt;25,000</u>	88	37.4	135	62.6
>25,000 to <50,000	146	57.5	105	42.5
<u>≥50,000</u>	234	63.5	114	33.6
<b>Education</b>				
< High school	41	38.9	81	61.1
High school graduate	122	48.9	128	51.1
Some college	114	57.0	80	43.0
College graduate	238	72.3	89	27.7

# Health Care Access

	Ever Had PSA		Never Had PSA	
	N	%	N	%
<b>Insurance</b>				
Yes	501	58.3	325	41.7
No	14	17.9	54	82.2
<b>Usual Source of Care</b>				
Yes	439	61.9	239	38.1
No	74	32.8	140	67.2

All  $\chi^2$  for crosstabs of ever/never had PSA with sociodemographic and health care access variables significant at  $p < 0.01$ .

# Communication

	Ever Had PSA		Never Had PSA	
	N	%	N	%
<b>Received Recommendation</b>				
<b>Yes</b>	<b>384</b>	<b>75.9</b>	<b>5</b>	<b>1.6</b>
<b>No</b>	<b>125</b>	<b>24.1</b>	<b>374</b>	<b>98.45</b>

$\chi^2 (1)=603.2, p<.0001$

	N	r	p-value
<b>Perceived Provider Behavior</b>			
<b>Explain</b>	<b>748</b>	<b>.05</b>	<b>0.17</b>
<b>Involve</b>	<b>746</b>	<b>.13</b>	<b>0.0004</b>
<b>Information</b>			
<b>Attend/Seek</b>	<b>884</b>	<b>.23</b>	<b>0.0000</b>

# Logistic Model

**Predictors**

**Age**

**Race**

**Education**

**Insurance**

**Usual care**

**Outcome**

**Ever Had  
PSA**



# Results

	<b>OR</b>	<b>95% CI</b>
<b>Age</b>		
50 to 64	1.00	1.00-1.00
65 to 74	2.53	1.49-4.31
75 plus	1.50	0.84-2.68
<b>Race/Ethnicity</b>		
White, non-Hispanic	1.00	1.00-1.00
Black, non-Hispanic	0.94	0.47-1.87
Hispanic	0.51	0.21-1.24
Other, non-Hispanic	0.38	0.14-1.03
<b>Education</b>		
<HS	1.00	1.00-1.00
HS	1.78	0.94-3.40
Some College	2.41	1.22-4.77
College Graduate	5.01	2.53- 9.90

# Results

	<b>OR</b>	<b>95% CI</b>
<b>Health Insurance</b>		
<b>Yes</b>	<b>1.00</b>	<b>1.00-1.00</b>
<b>No</b>	<b>0.32</b>	<b>0.12-0.88</b>
<b>Usual Source of Care</b>		
<b>Yes</b>	<b>1.00</b>	<b>1.00-1.00</b>
<b>No</b>	<b>0.35</b>	<b>0.22-0.54</b>

# Logistic Model

## Predictors

Age

Race

Education

Insurance

Usual care

Information  
Attention/Seeking

Explain

Involve

Recommend

## Outcome

Ever Had  
PSA

	<b>OR</b>	<b>95% CI</b>
<b>Age</b>		
50 to 64	<b>1.00</b>	
65 to 74	<b>2.60</b>	<b>1.19-5.66</b>
75 plus	<b>2.12</b>	<b>0.74- 6.13</b>
<b>Race/Ethnicity</b>		
non-Hispanic white	<b>1.00</b>	
non-Hispanic black	<b>0.57</b>	<b>0.17-1.86</b>
Hispanic	<b>0.65</b>	<b>0.07-5.76</b>
non-Hispanic other	<b>0.26</b>	<b>0.06-1.18</b>
<b>Education</b>		
<HS	<b>1.00</b>	
HS	<b>1.59</b>	<b>0.39-6.48</b>
Some College	<b>2.19</b>	<b>0.42-11.32</b>
College Graduate	<b>4.47</b>	<b>0.99-20.29</b>



**OR****95% CI****Health Insurance****Yes****1.00****No****0.18****0.01-2.68****Usual Source of Care****Yes****1.00****No****0.64****0.29-1.38****Information****Attention/Seeking****1.03****0.84-1.27****Perceived Provider Behavior****Explain****0.65****0.38-1.12****Involve****1.76****1.02-3.03****Recommend****236.25****70.53-791.38**

# Summary

Age

Involve

Recommend



PSA Screening

Important role of health care providers

Patient involvement in decision making

# Conclusions

- ❑ HINTS provides a unique opportunity to explore the relationship of communication variables with PSA screening
- ❑ The controversy surrounding PSA screening underscores the importance of IDM and SDM
- ❑ Many questions about patient and provider responsibility and accountability for screening decisions remain