

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

Evidence from the



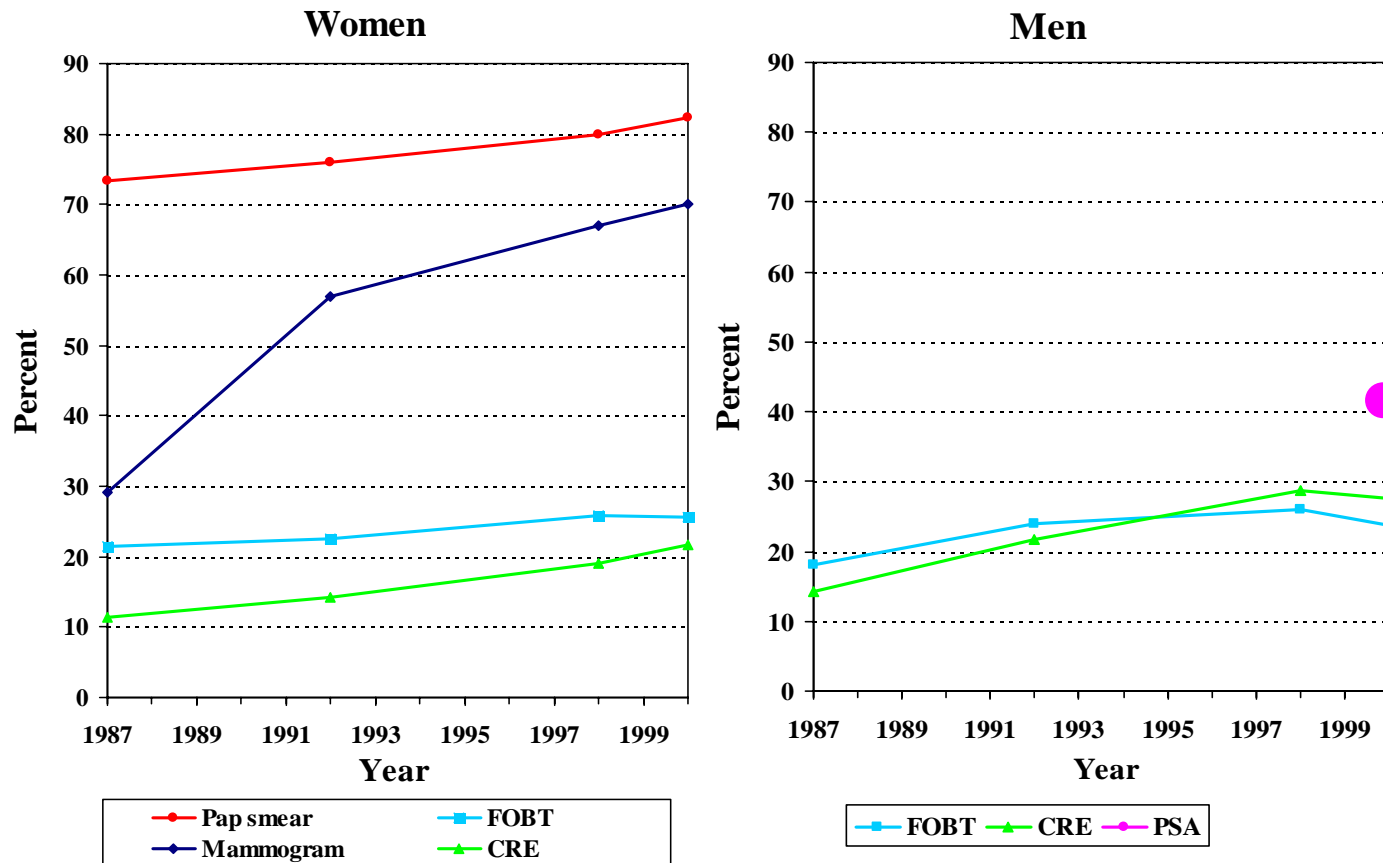
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Screening Uptake

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 Controversy¹

Potential Benefits

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



Potential Harms

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

¹ 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+)

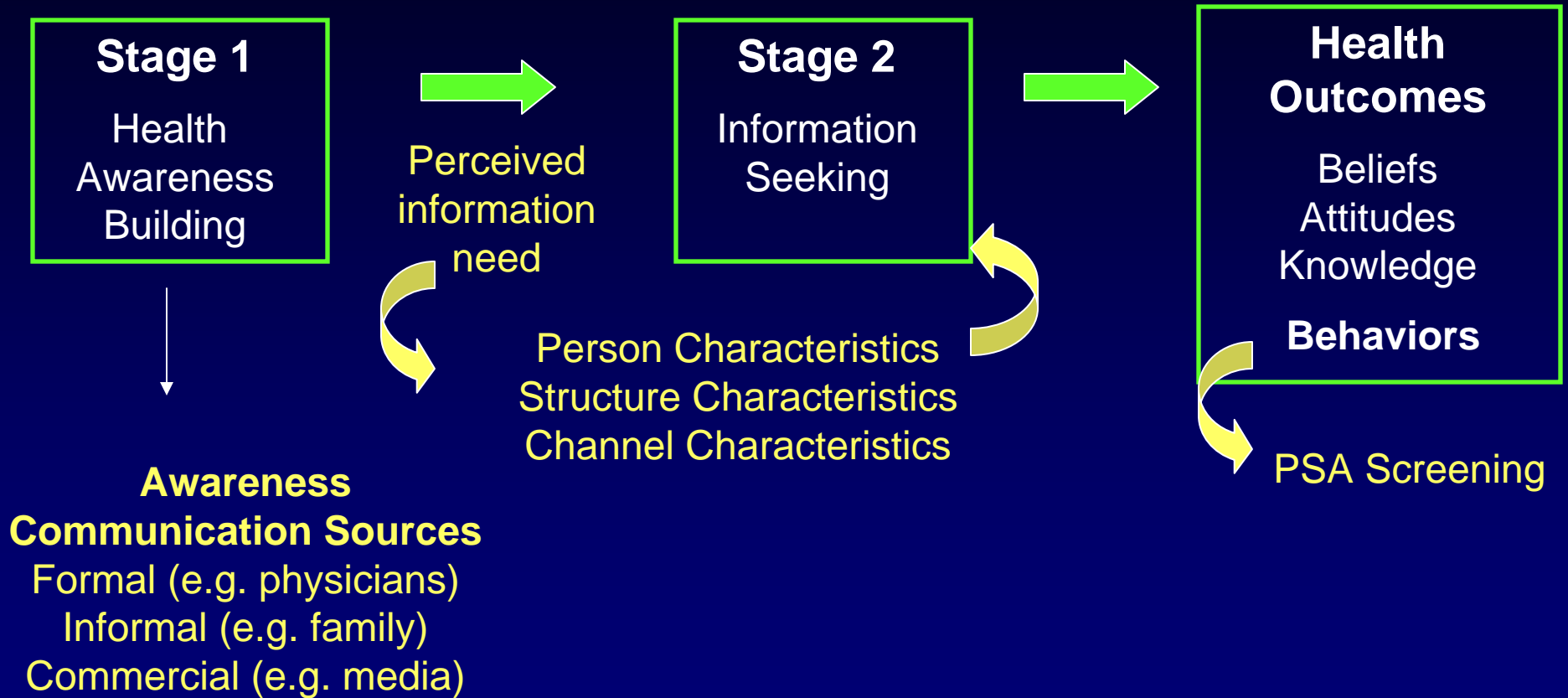
Surveillance and research vehicle

Repeated cyclically to track trends

Slide adapted from HINTS briefing to the NCI director (Hesse, 2003)

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

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	%
Age				
50-64	286	49.7	263	50.3
65-74	155	67.9	64	32.1
75+	74	57.6	52	42.4
Race/Ethnicity				
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	%
Income				
≤25,000	88	37.4	135	62.6
>25,000 to <50,000	146	57.5	105	42.5
≥50,000	234	63.5	114	33.6
Education				
< 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	%
Insurance				
Yes	501	58.3	325	41.7
No	14	17.9	54	82.2
Usual Source of Care				
Yes	439	61.9	239	38.1
No	74	32.8	140	67.2

All χ^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	%
Received Recommendation				
Yes	384	75.9	5	1.6
No	125	24.1	374	98.45

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

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

Logistic Model

Predictors

Age

Race

Education

Insurance

Usual care

Outcome

Ever Had
PSA

Results

	OR	95% CI
Age		
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
Race/Ethnicity		
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
Education		
<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

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

Logistic Model

Predictors

Age

Race

Education

Insurance

Usual care

Information
Attention/Seeking

Explain

Involve

Recommend

Outcome

Ever Had
PSA

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

	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 of Initial Analyses

Age

Involve

Recommend



PSA Screening

Important role of health care providers

Patient involvement in decision making

Logistic Model

Predictors

Age

Race

Education

Insurance

Usual care

Information
Attention/Seeking

Explain

Involve

Outcome

Provider
Recommended
PSA

	OR	95% CI
Age		
50 to 64	1.00	
65 to 74	2.30	1.33-4.00
75 plus	1.46	0.77- 2.76
Race/Ethnicity		
non-Hispanic white	1.00	
non-Hispanic black	1.19	0.54-2.61
Hispanic	0.51	0.22-1.19
non-Hispanic other	0.39	0.12-1.22
Education		
<HS	1.00	
HS	1.51	0.77-2.96
Some College	1.64	0.83-3.22
College Graduate	2.91	1.45-5.82

	OR	95% CI
Health Insurance		
Yes	1.00	
No	0.45	0.14-1.46
Usual Source of Care		
Yes	1.00	
No	0.37	0.22-0.64
Information		
Attention/Seeking	1.23	1.07-1.40
Perceived Provider Behavior		
Explain	0.91	0.63-1.31
Involve	1.16	0.86-1.57

Logistic Model

Predictors

Age

Race

Education

Insurance

Usual care

Information
Attention/Seeking

Outcome

Involvement in
Decisions

	OR	95% CI
Age		
50 to 64	1.00	
65 to 74	0.72	0.45-1.17
75 plus	0.94	0.47- 1.88
Race/Ethnicity		
non-Hispanic white	1.00	
non-Hispanic black	2.29	0.66-7.79
Hispanic	0.40	0.19-0.85
non-Hispanic other	0.99	0.25-4.00
Education		
<HS	1.00	
HS	0.58	0.32-1.05
Some College	0.56	0.24-1.28
College Graduate	1.04	0.58-1.87

	OR	95% CI
Health Insurance		
Yes	1.00	
No	0.32	0.10-1.07
Usual Source of Care		
Yes	1.00	
No	0.38	0.20-0.71
Information		
Attention/Seeking	1.08	0.94-1.25

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