

Beyond Knowledge Gaps: Confronting the Issue of *Communication Inequalities* and Health Disparities



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Health-Related News Stories Increasing

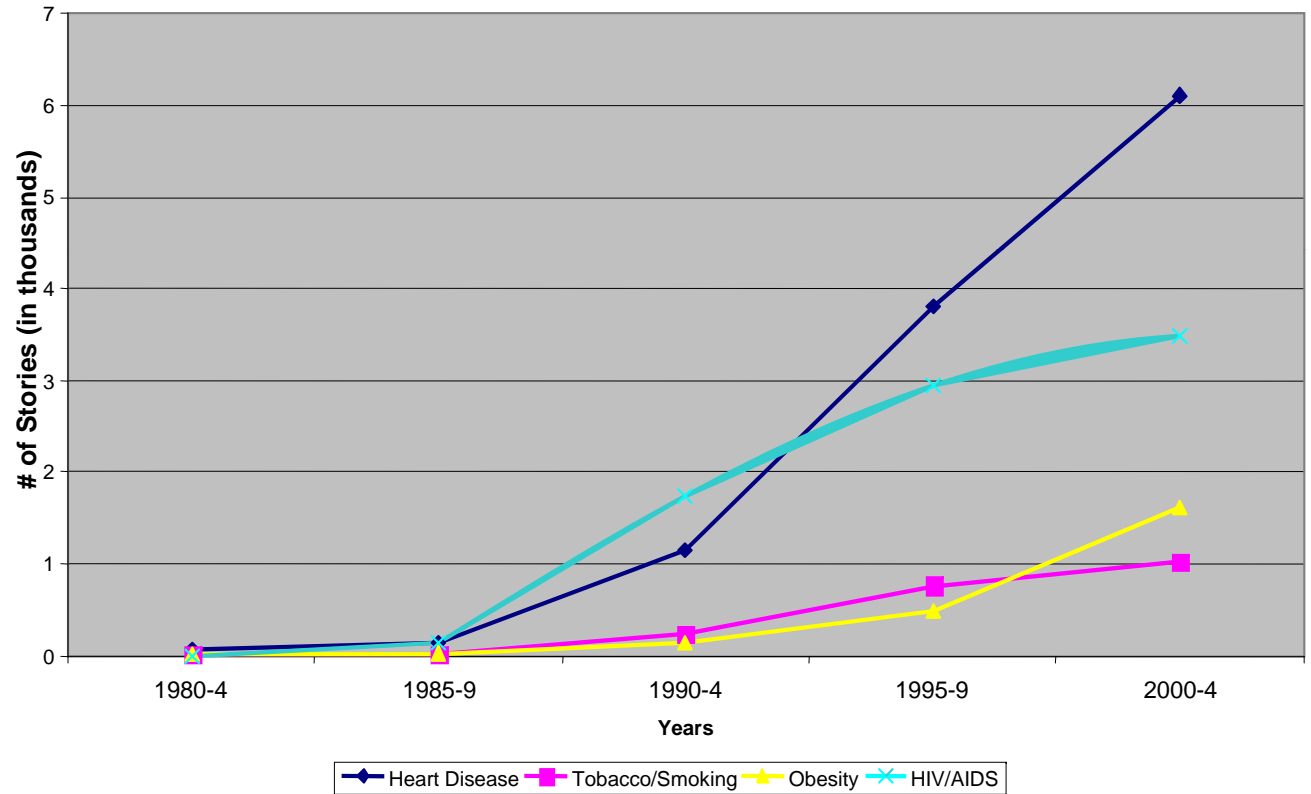
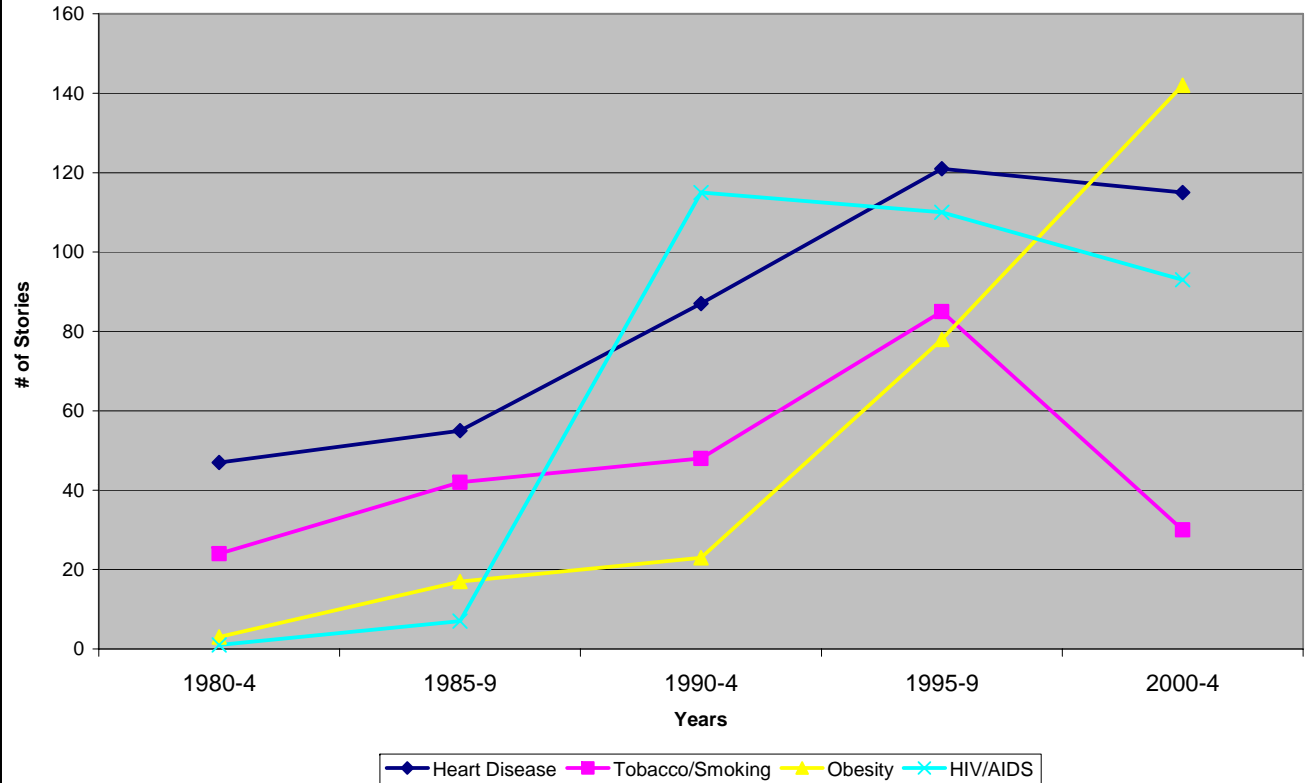


FIGURE: Ethnic print coverage of leading health issues.



Figure 1.
National TV News Coverage of Leading Health Issues

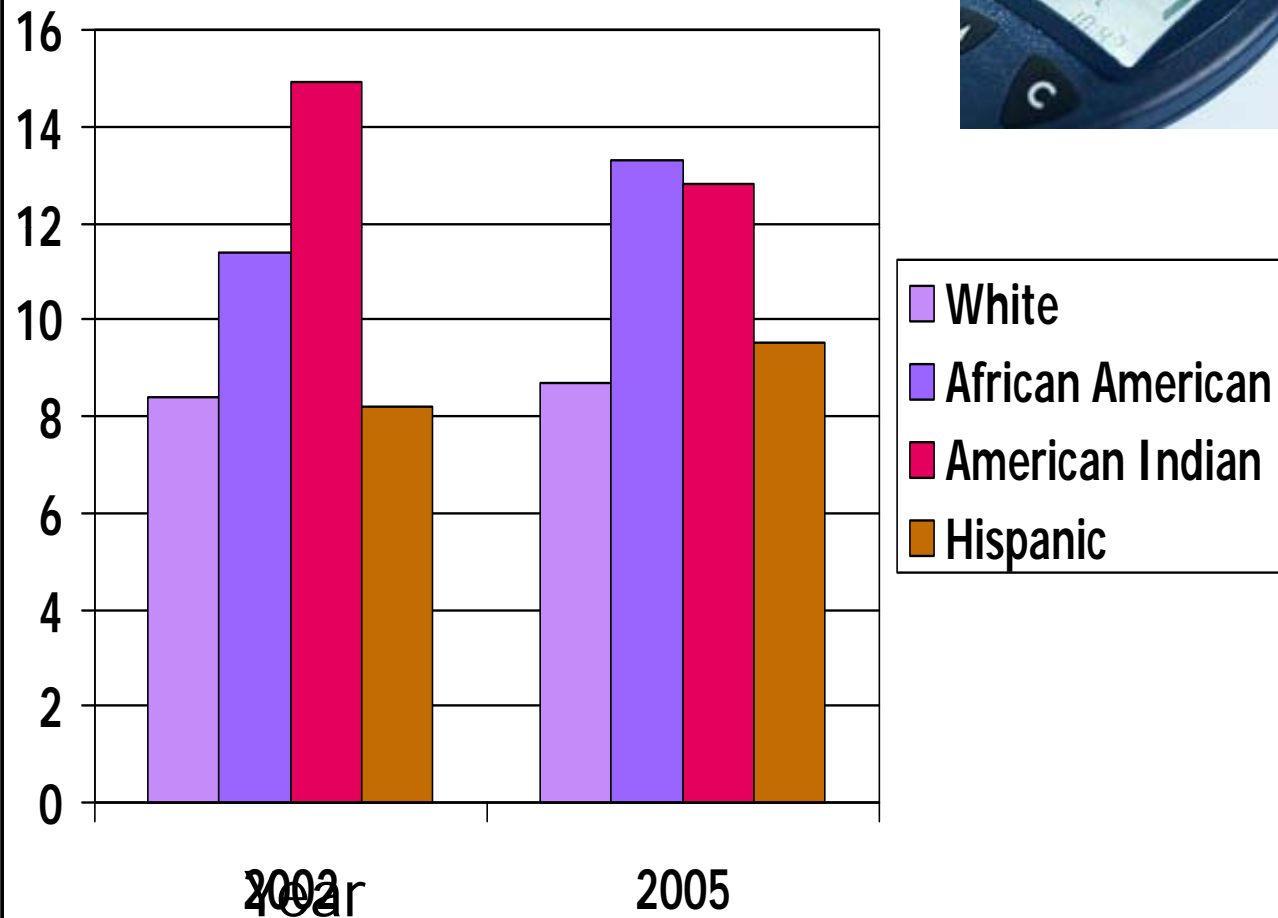


Profound Health Disparities Exist

- Higher incidence rates:
 - Black males are more likely to develop any type of cancer than White males
- Higher death rates:
 - Black women are more likely to die from breast cancer than White women.
 - Cardiovascular disease



Estimated Prevalence of Diabetes in Adults (>20yrs.) by Race/Ethnicity 2002 and 2005

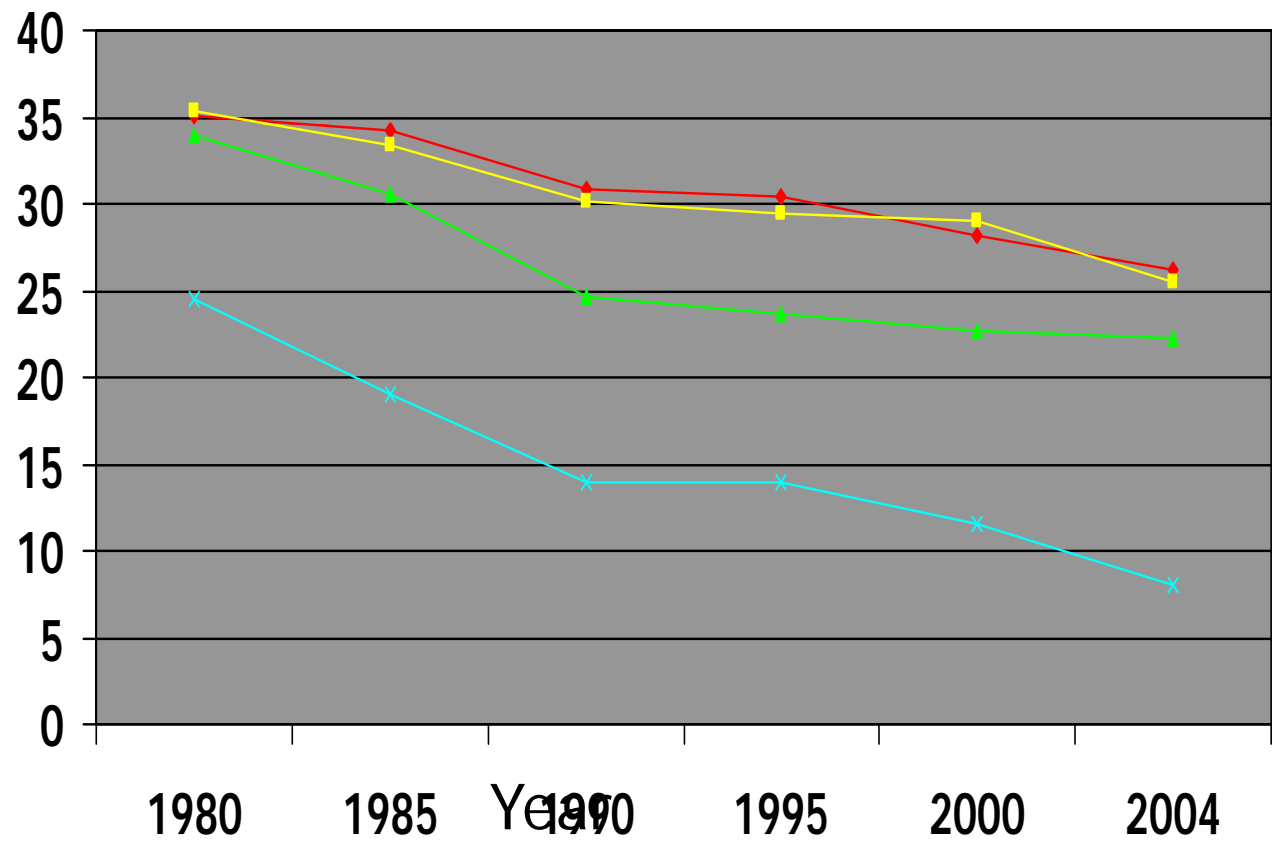


Source: American Diabetes Association available at <http://www.diabetes.org/diabetes-statistics/prevalence.jsp>

Cigarette Smoking Among Adults by Education 1980-2004



◆ less than 12
 ◆ 12
 ▲ 13-15
 ✕ 16 or more



Source: National Health Interview Surveys: 1980, 1985, 1990, 1995, 2000, 2004.

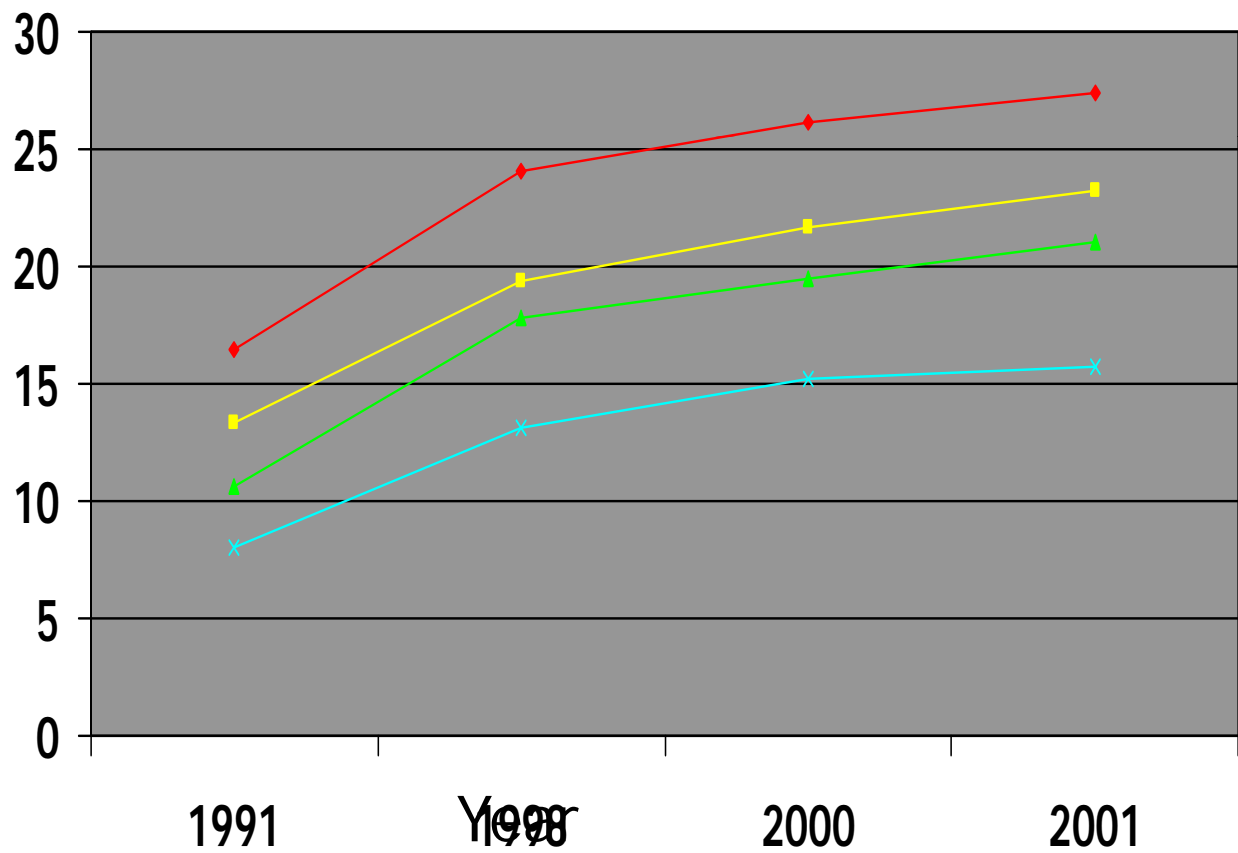
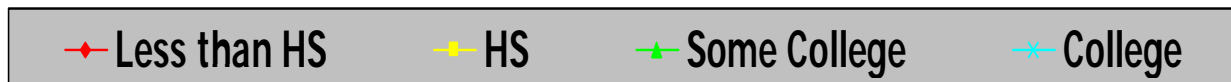


Percent



Percent

Obesity Prevalence Education Level 1991 2001



Source: CDC, BRFSS, 1991-2001

Why do these disparities exist?

- Social determinants:
 - Social cohesion
 - Social class
 - SES
 - Social networks
 - Neighborhood conditions
 - Social policies



Multilevel Approach to Epidemiology

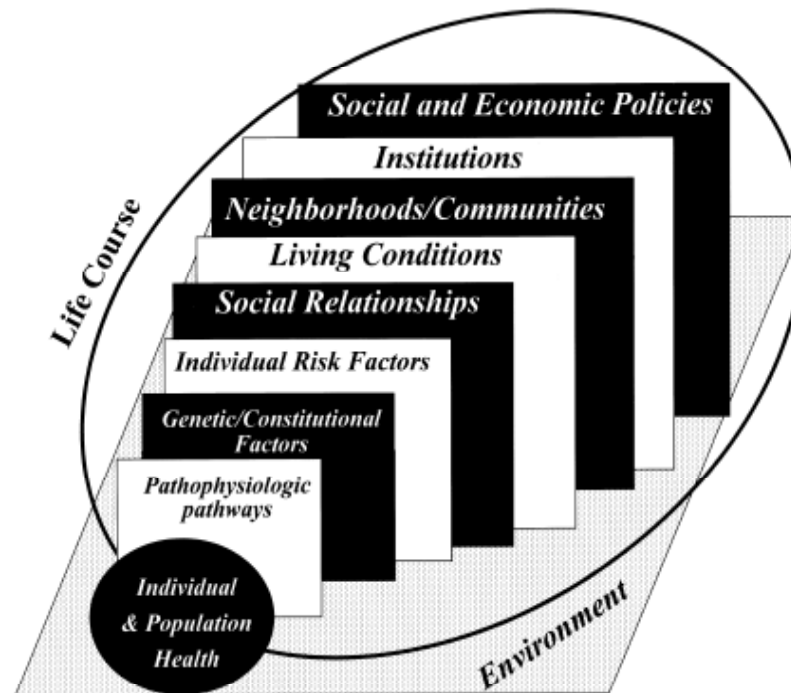


Figure: Adopted from Kaplan (2004).

What links social determinants with health outcomes?

Communication is one potential thread linking proximal to distant factors and their outcomes to health



Multilevel Approach to Epidemiology

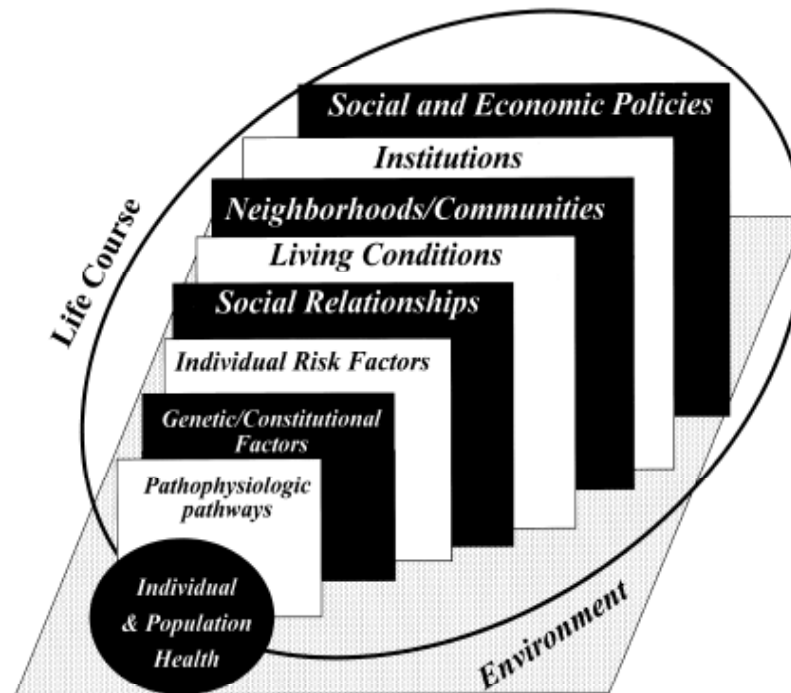


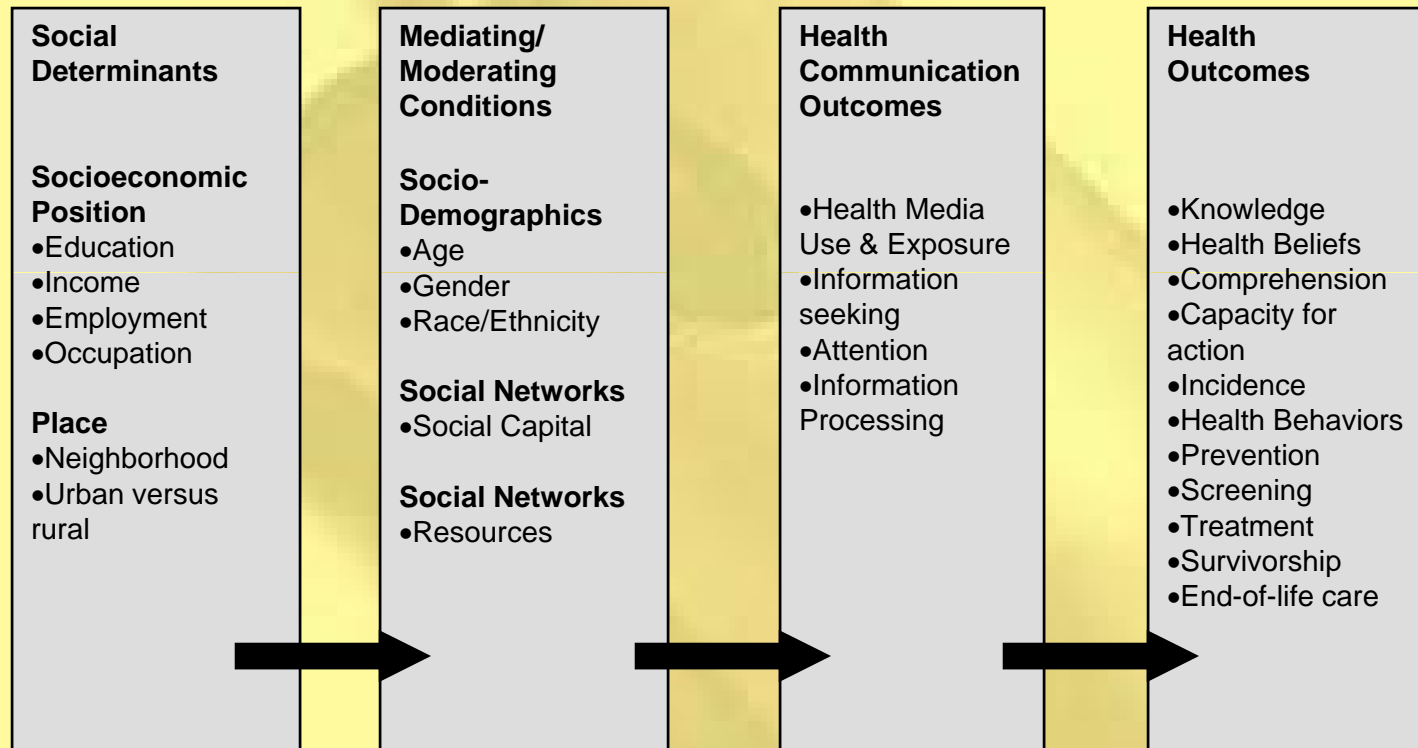
Figure: Adopted from Kaplan (2004).

Functions of Communication in Health

- *Informational*: acquire knowledge
- *Instrumental*: enables action
- *Social control*: defines social norms
- *Communal*: access to social capital



Structural Influence Model of Communication (SIM)



Communication may play a role in linking SES, resources and health outcomes.



SES and Public Health Communication

-SES within the SIM model-

- Education: efficacy and knowledge to navigate health systems
- Income: resources to access media services
- Occupation: social networks



Communication Inequality

Differences among social classes in the generation, manipulation, and distribution of information at the group level and differences in access to and ability to take advantage of information at the individual level.

Dimensions of communication inequality

■ At the societal level

- Differences in the generation, manipulation and distribution of information among social groups.
- Capacity to act on information





Dimensions of communication inequality

■ At the individual level

Differences in:

- Access to and use of information channels
- Attention to health content
- Seeking Information
- Recall, knowledge and comprehension
- Capacity to act on information

Recent Work

SES, Race and Ethnicity are associated with

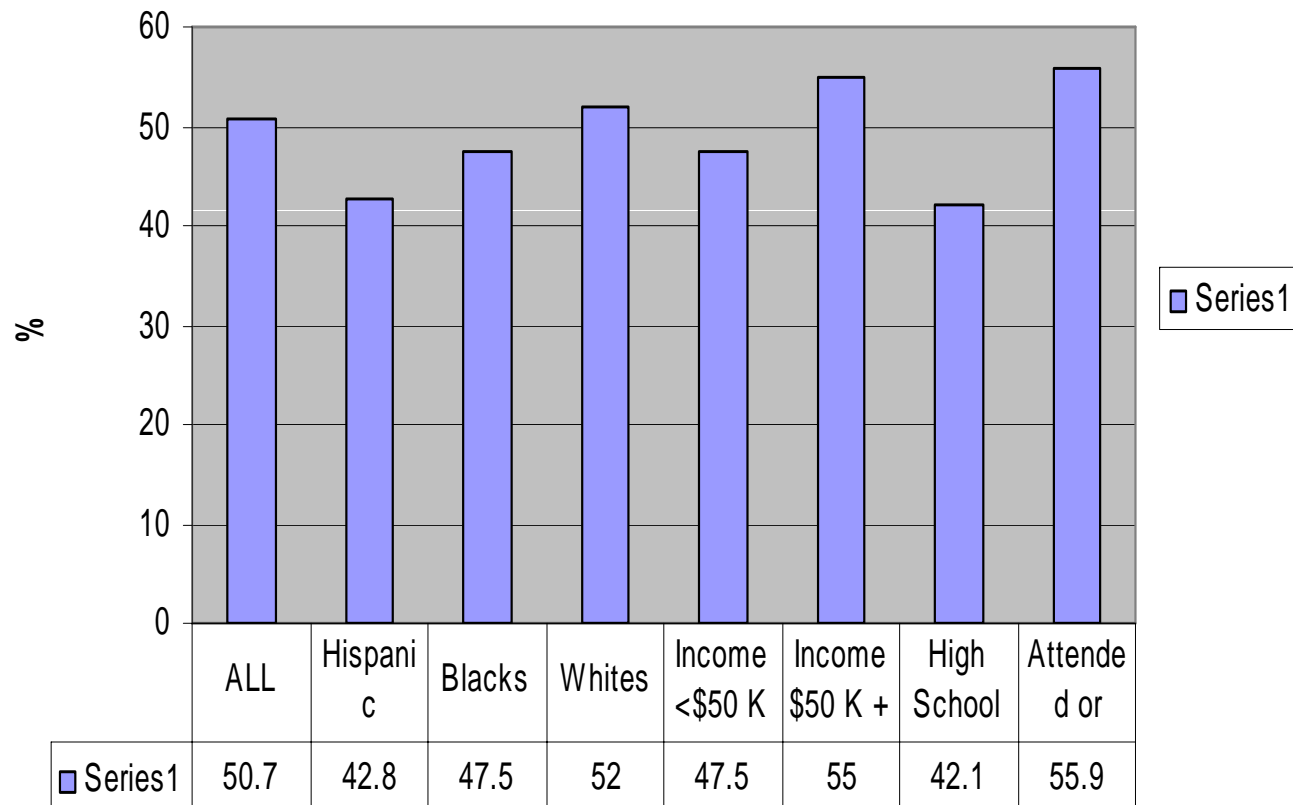
- subscription to cable or satellite TV and the Internet
- daily readership of newspapers
- Attention to health content in different media
- Differential time with different media
- *Knowledge gaps in health*

(Viswanath, 2005; Viswanath, 2006; Viswanath et al., 2006; Ramanadhan & Viswanath, 2006)





Percentage of Respondents who went "online" to look for Health Information in the United States*



Access to Information Services among Different SES and Racial Ethnic Groups

Percent Report Access to		
	Cable/Satellite %	Internet %
Education (n=6,149)		
HS or Less	77.17	38.17
Some College Plus	83.25	80.64
Income (n=6,149)		
<\$24,999	70.91	35.52
\$25,000 - \$49,999	79.20	62.69
\$50,000+	89.53	87.64
Employment Status (n=6,131)		
Employed	82.03	73.52
Not Employed	78.70	47.36
Race (n=5,666)		
White	82.56	66.02
African-American	77.30	55.81
Ethnicity (n=5,666)		
Non-Hispanic	81.72	66.42
Hispanic	77.08	44.94

Note: For all ethnicity assessments, multi-racial persons were excluded from the analysis. Data from HINTS.





Major Media and their Audience Demographics in the United States*

	Total Pop (1,000)	TV Viewing %	Prime Time TV viewing %	Cable Viewing %	Radio Listening %	Newspaper Reading %
Total	206,900	94.3	83.3	76.6	84.2	79.8
ETHNICITY						
White	179,897	94.1	83.2	77.6	84.6	79.8
Black	24,218	96.4	86.0	71.4	84.0	83.4
Asian	5,366	90.5	75.7	68.3	78.5	69.8
Other	3,419	92.4	78.8	72.3	78.3	75.0
Spanish Speaking	25,792	94.4	81.4	69.9	85.9	64.7
EDUCATION						
Not high school graduate	34,784	94.0	81.3	64.7	74.0	61.7
High School graduate	66,320	95.4	85.4	78.3	83.0	79.8
Attended College	56,111	94.2	83.0	79.2	88.2	83.8
College Graduate	49,685	92.9	82.0	79.5	88.7	88.1
EMPLOYED						
Full Time	110,707	93.6	82.5	79.5	91.0	81.8
Part Time	21,788	93.1	81.3	76.4	88.8	80.5
Not Employed	74,405	95.6	84.9	72.3	72.9	75.7
HOUSEHOLD INCOME						
Less than \$10,000	12,433	91.3	78.7	55.3	69.1	63.3
\$10,000 - \$19,999	21,824	95.8	84.4	63.5	73.4	69.4
\$20,000 - \$29,999	23,868	94.3	83.3	68.2	79.0	74.2
\$35,000 - \$34,999	11,797	94.4	83.6	70.4	79.8	75.5
\$30,000 - \$39,999	11,209	95.3	83.9	73.5	83.1	78.5
\$40,000 - \$49,000	20,895	94.6	83.4	76.6	87.6	81.0
\$50,000 +	104,874	94.1	83.4	84.7	89.4	85.7

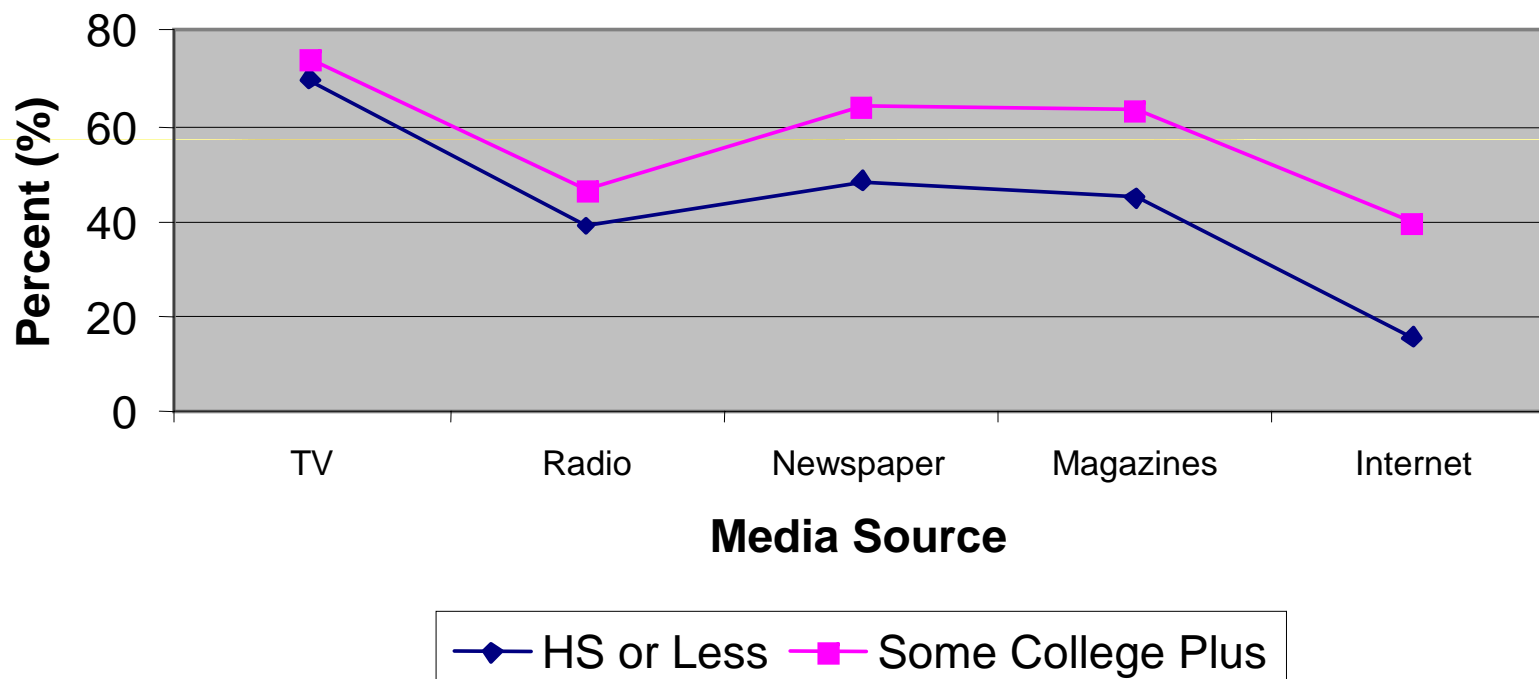
*United States Bureau of Census, Statistical Abstract of the United States, 2004-5, available at <http://www.census.gov/prod/2004pubs/04statab/infocomm.pdf>



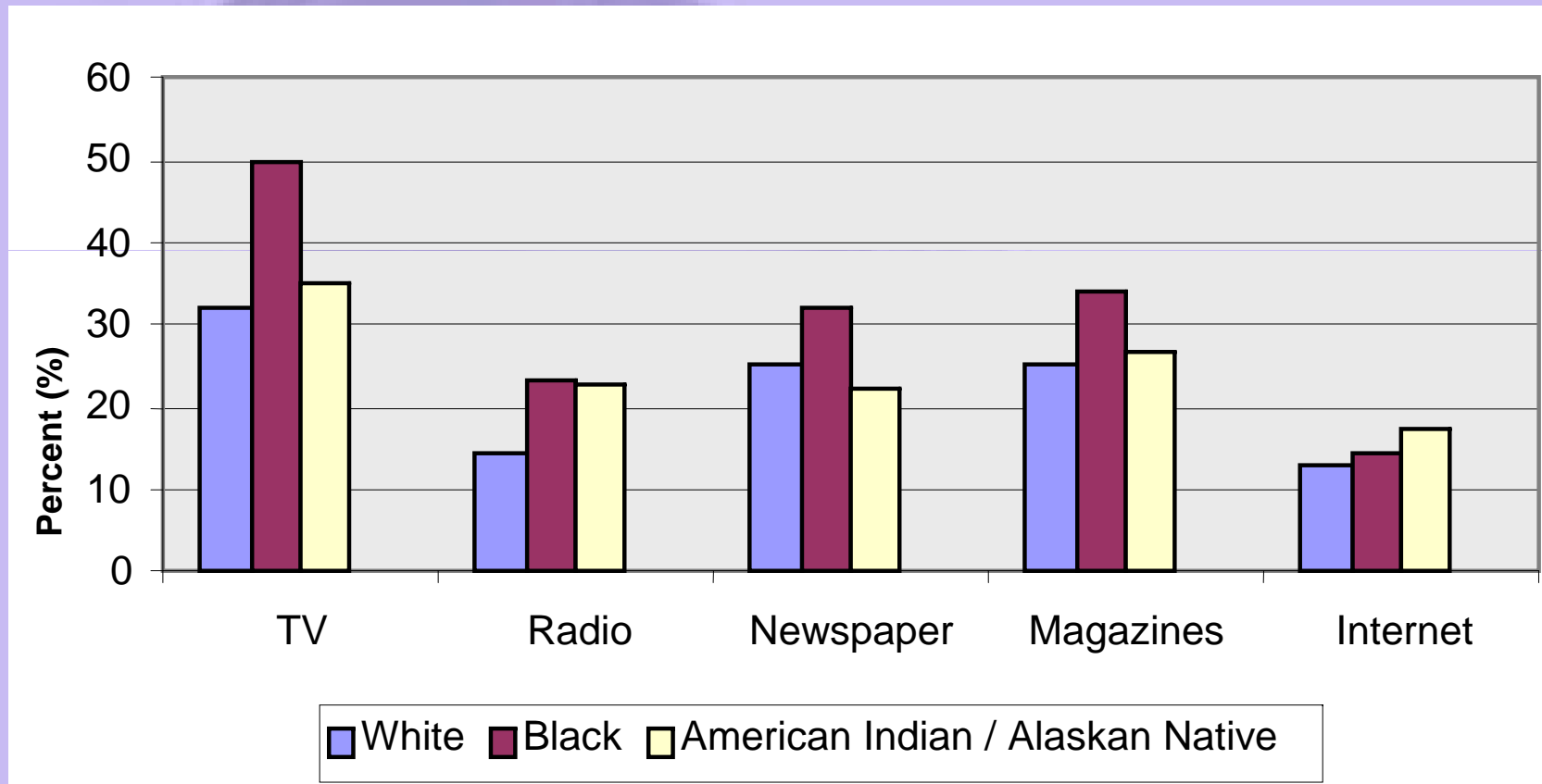
Inequality in Attention to Health Information

- Education and income positively influence degree of attention to media
- No difference in self-reported attention to media by race or ethnicity
- Differences in attention to media by language

Percent paying “A lot/Some” attention to health information on various media, by education (HINTS)



Attention paid to health information on mass media outlets (HINTS)





Inequality in Comprehension and Knowledge of Health Information

- Confusion due to plethora of information at each stage
 - Prevention
 - Diagnosis
 - Treatment
 - Navigation of health system
 - Change over life course
- 38% of HINTS respondents < high school education reported “too many recommendations” to follow for cancer prevention
- Knowledge gap

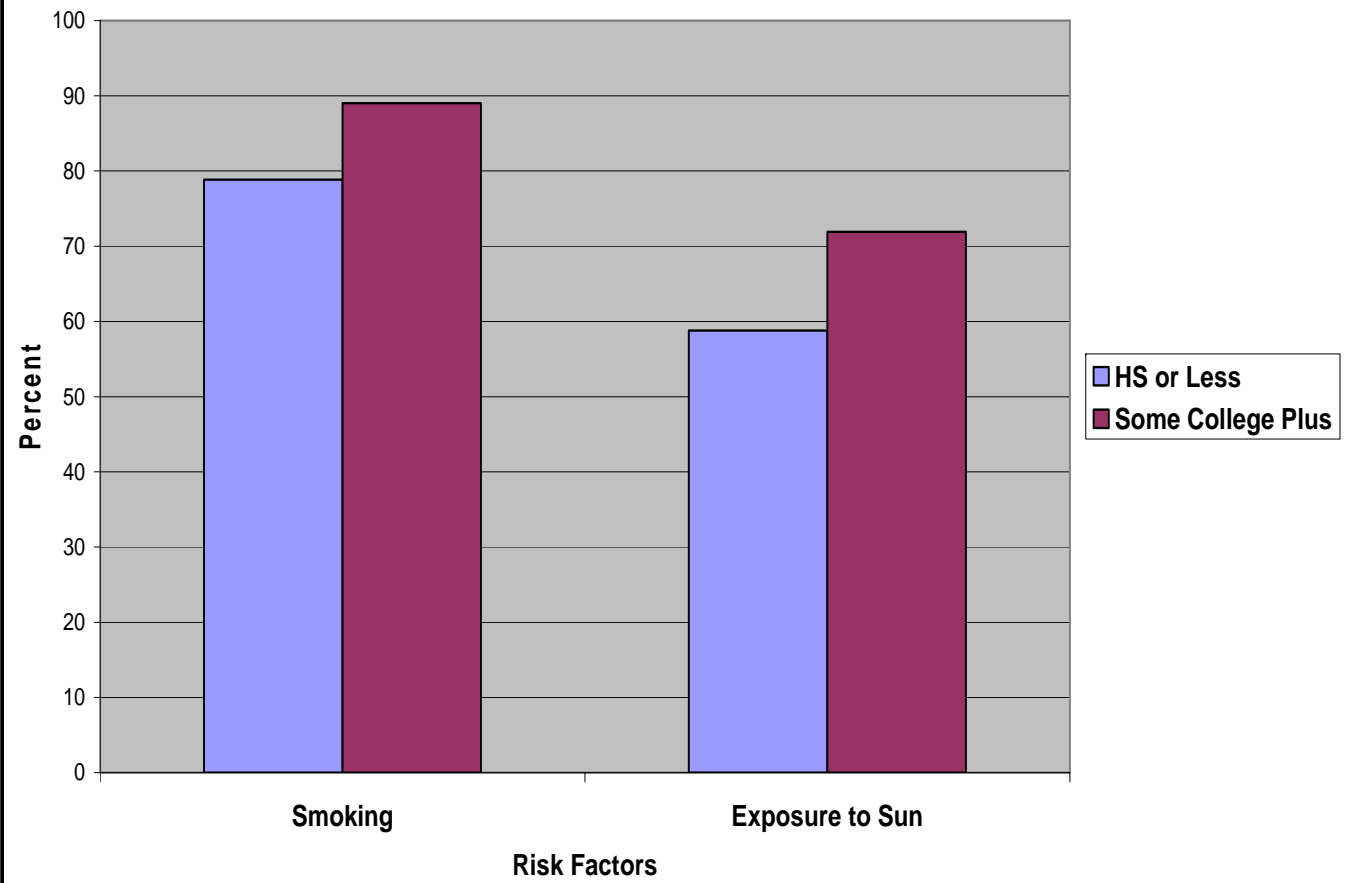


The Knowledge Gap Hypothesis

- Increasing flow of information into a social system is more likely to benefit groups of higher socioeconomic status (SES) than those of lower SES groups,
 - thus widening the already existing gaps in information rather than narrowing them
 - (Tichenor, Donohue & Olien, 1980).

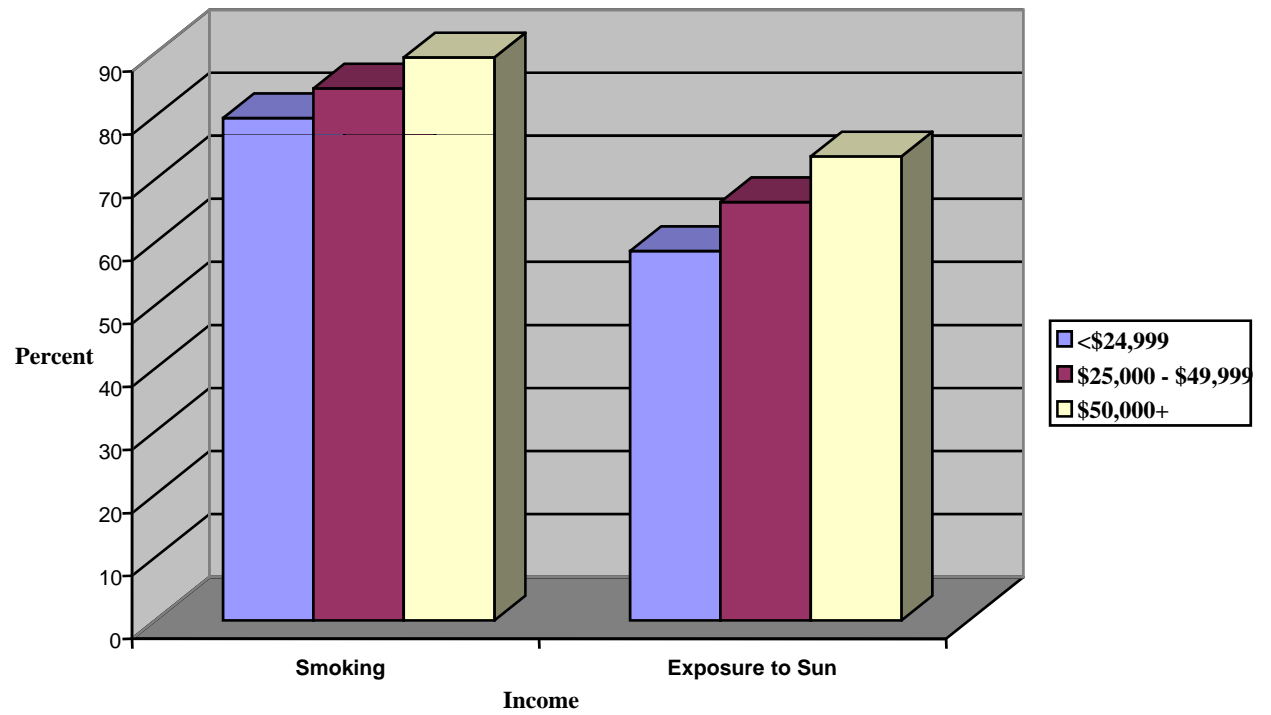


Figure 9.
Percent saying that their chances of cancer increase by "a lot or some"
with exposure by Education





Percent saying that their chances of cancer increase by "a lot or some" with exposure by
Income



Education and Cancer Myths: Breast Cancer



	<i>Education-4 Categories</i>					
	Less Than High School Graduate	High School Graduate	Some College or Tech School	College Graduate or More Education	Total	
Does being hit in the breast increase your chance of cancer? *(Only asked to women)	A lot	30.20%	21.30%	13.90%	7.80%	17.30%
	A little	35.00%	29.70%	30.40%	26.00%	29.80%
	Not at all	14.60%	24.30%	29.70%	42.60%	28.80%
	No opinion	20.20%	24.70%	26.00%	23.60%	24.10%



Inequality in capacity to act on health in



- Action is subject to opportunity structure and built environment
- Examples from Energy balance
 - Access to green space (Sallis et al., 2002)
 - Availability of grocery stores (Block et al., 2004, Moore et al., 2006)
 - Neighborhood disorder (King et al., 2002, Perkins et al., 1993)



Implications for Inequalities Research

- Will disparities disappear with technological advances?
- What is the capacity of people and social groups to use information?



Communication Inequality & Public Health: The Future

- Communication inequality is one important determinant of health disparities
- A role for HINTS in measuring and documenting inequalities!

**It is important to put
Communication Inequalities and
Health Disparities front and
center on the public agenda**



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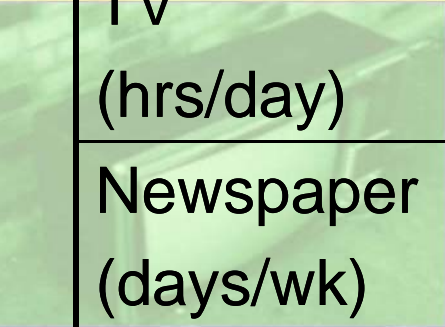



Inequality in access to and use of information channels: Language barriers:

3-40% non-English speakers in the United States



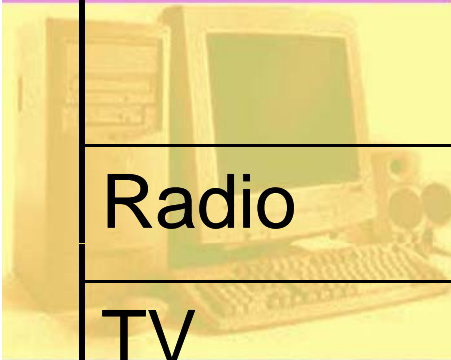
Media exposure and language of interview, weighted




	English-responding	Spanish-responding	P-value
Radio (hrs/day)	3.0	2.1	<.001
TV (hrs/day)	3.2	2.9	<.001
Newspaper (days/wk)	2.8	1.1	<.001
Magazines	1.5	1.0	.001
<i>Clayman, Viswanath, Hesse, Arora (2004)</i>			



Info sources credibility ratings and language of interview, weighted



	English-responding	Spanish-responding	P-value
Radio	2.46	2.61	.07
TV	3.03	2.99	ns
Internet	2.83	2.24	<.001
Newspaper	2.70	2.43	.002
Magazines	2.75	2.47	.001



(range 1-4, with 4 being highest)

Clayman, Viswanath, Hesse, Arora (2004)



Implications for inequality research

- Does the increasing sophistication in using and operating the new technologies likely to leave certain groups at a disadvantage?

