# Health Information Technologies & the Poor: Where do we go from here

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#### What is HIT?

Comprehensive management of medical information and its secure exchange between health care consumers and providers

US Department of Health & Human Services



#### Potential of HIT?

- Improve health care quality
- Prevent medical errors
- Increase the efficiency of care provision
- Reduce unnecessary health care costs
- Increase administrative efficiencies
- Decrease paperwork
- Expand access to affordable care
- Improve population health

US DHHS, 2009



## Challenges with these assumptions

- Medical Care in a clinical context
  - Public health versus Medical approaches
- Social context of health care
  - •Social Determinants and health
  - Social Determinants and health communication



## Structural Influence Model of Communication (SIM)

Social Health Health **Mediating/** Communication **Determinants Moderating Outcomes Conditions Outcomes**  Knowledge Socioeconomic Health Beliefs Socio-**Position Demographics**  Health Media Comprehensi Education Use & Exposure Age Gender Information Income Capacity for Race/Ethnicity seekina action Employment Attention Incidence Occupation **Social Networks** Information Health Social Capital **Place** Behaviors **Processing**  Neighborhood Prevention **Social Networks**  Urban versus Screening Resources Treatment rural Survivorship End-of-life care

Communication may play a role in linking SES,

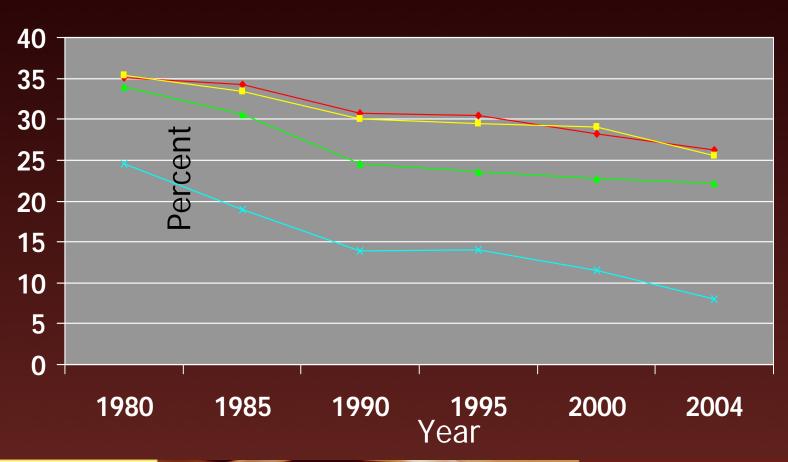
## Health Literacy in the Context of HIT: some challenges for science

- Ensure equity by ensuring access to ALL
  - •Who will be left behind?



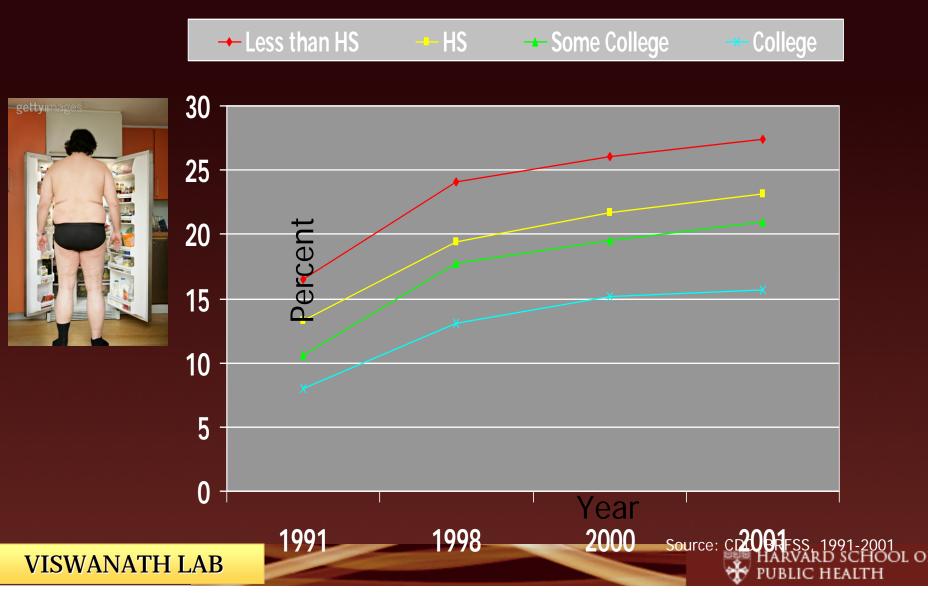
## Cigarette Smoking Among Adults by Education 1980-2004



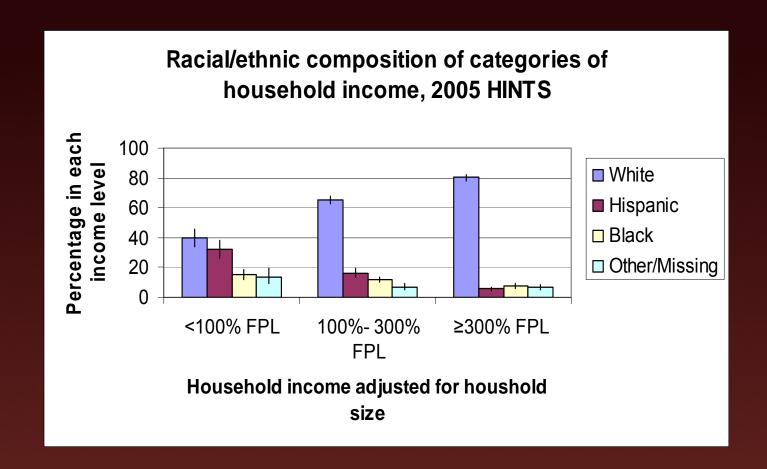


Source: National Health Interview Surveys: 1980, 1985, HARO, AROS QUIO COMP

## Obesity Prevalence by Education Level 1991-2001

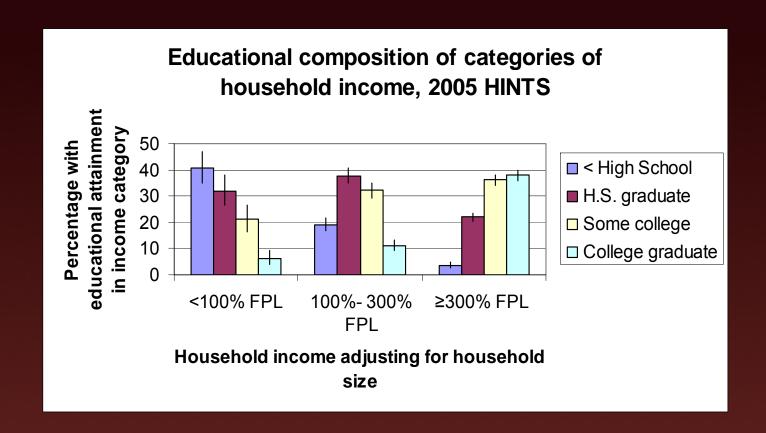


### Who are the poor?





### Who are the poor?





### **Demographics of Internet Users**

	Use the internet
Total Adults	74%
Race/ethnicity	
White, Non-Hispanic	77%
Black, Non-Hispanic	64
Hispanic**	58
Household income	
Less than \$30,000/yr	57%
\$30,000-\$49,999	77
\$50,000-\$74,999	90
\$75,000 +	94
Educational attainment	
Less than High School	35%
High School	67
Some College	85
College +	95
VISWANATH LAB	PUBLIC HEALTH

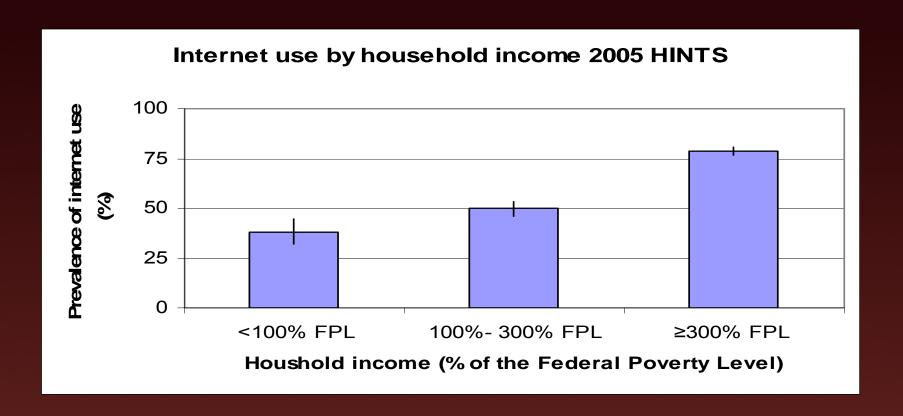
### **Broadband Disparities**

- 25% of low-income Americans, those whose household incomes are \$20,000 annually or less, report having broadband at home in 2008
  - **→ down** from the 28% in 2007
- 43% of African Americans reported home broadband compared with 57% and 56% of Whites and Englishspeaking Hispanics

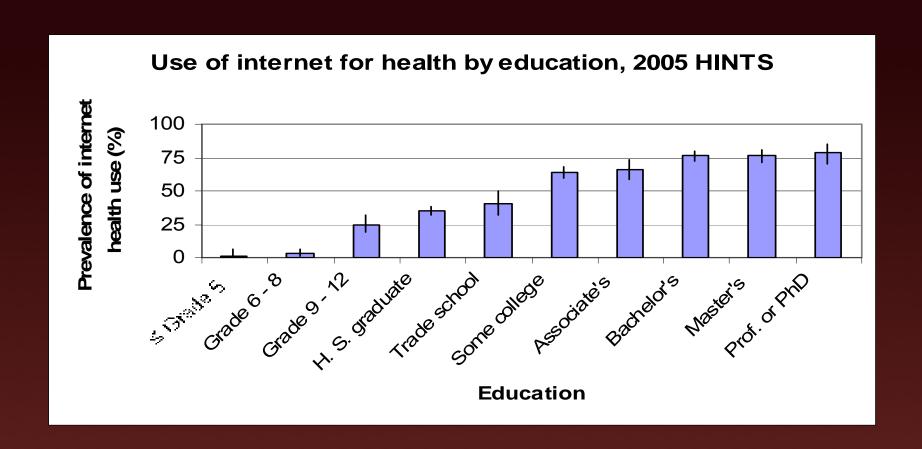
SOURCE: Pew Internet & American Life Project. Horrigan 2008. Home Broadband 2008: Adoption Stalls for low-income Americans even as many broadband users opt for premium services that give them more speed. <a href="http://www.pewinternet.org/pdfs/PIP">http://www.pewinternet.org/pdfs/PIP</a> Broadband 2008.pdf



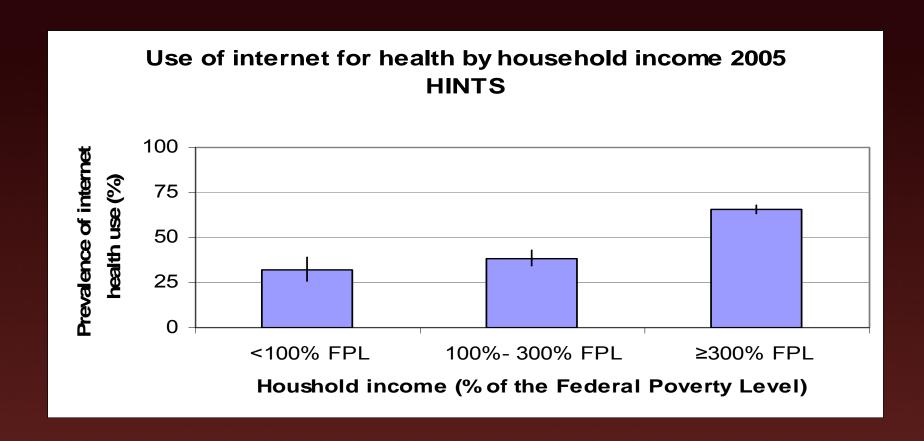
#### Household Income and Internet Use



## Education and Using the Internet for Health Purposes

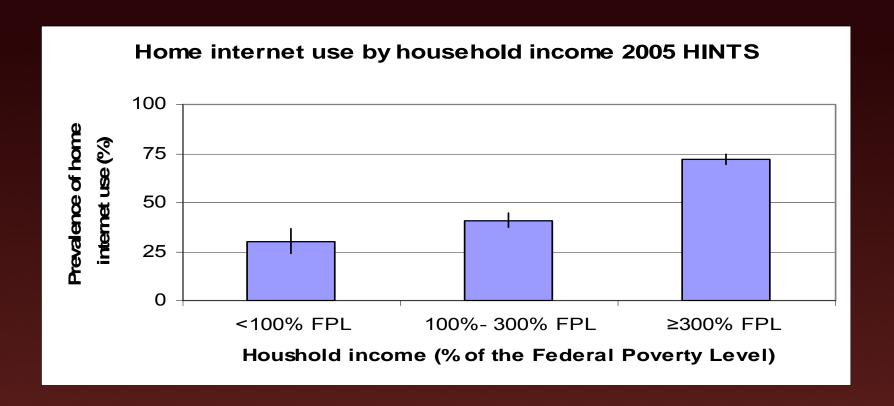


## Household Income and Using the Internet for Health Purposes

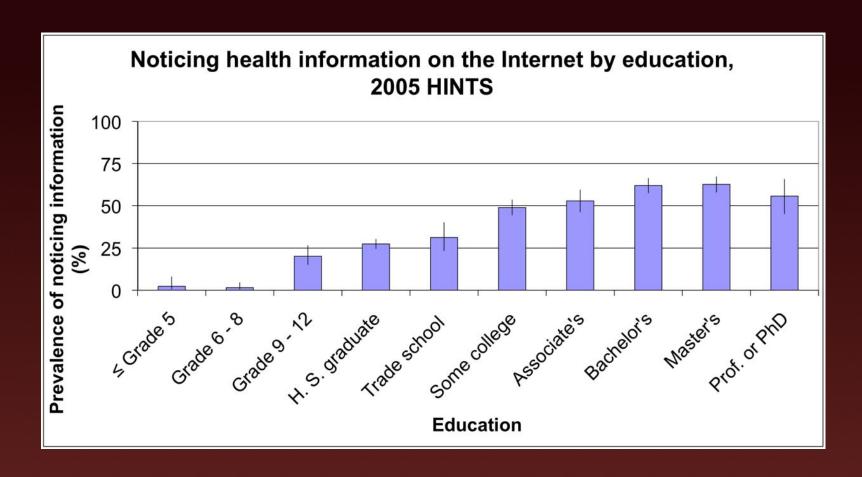




## Household Income and Home Internet Use



## Noticing Health Information on the Internet





Beyond Access:

Organization of

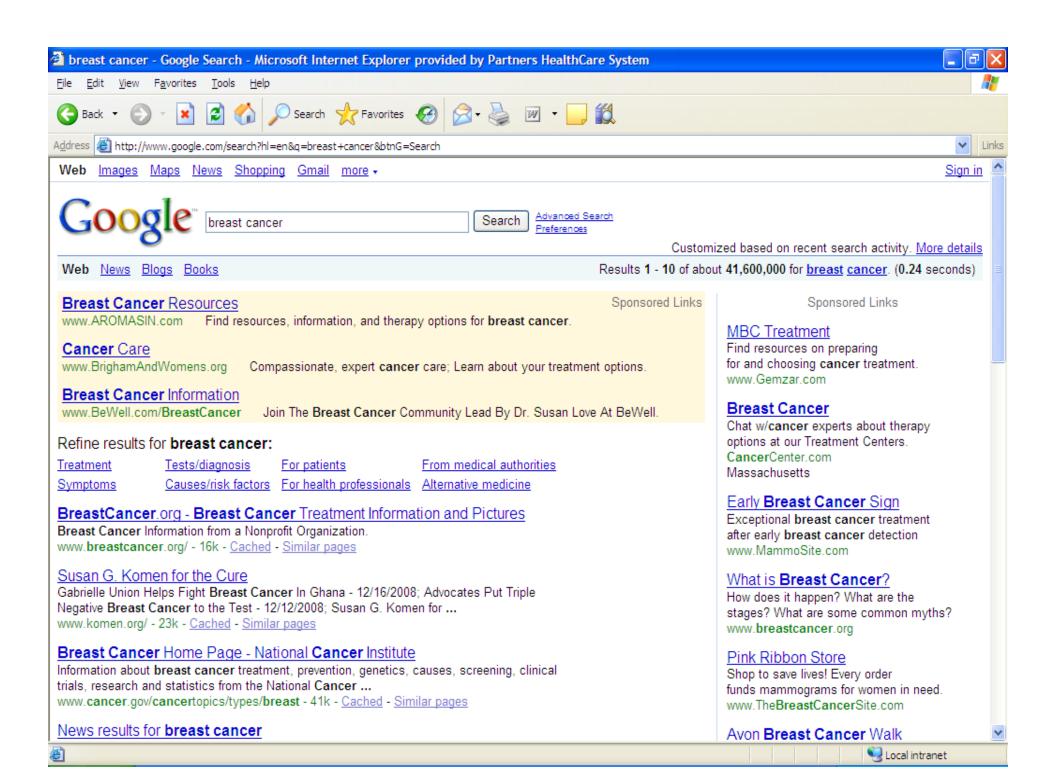
Information

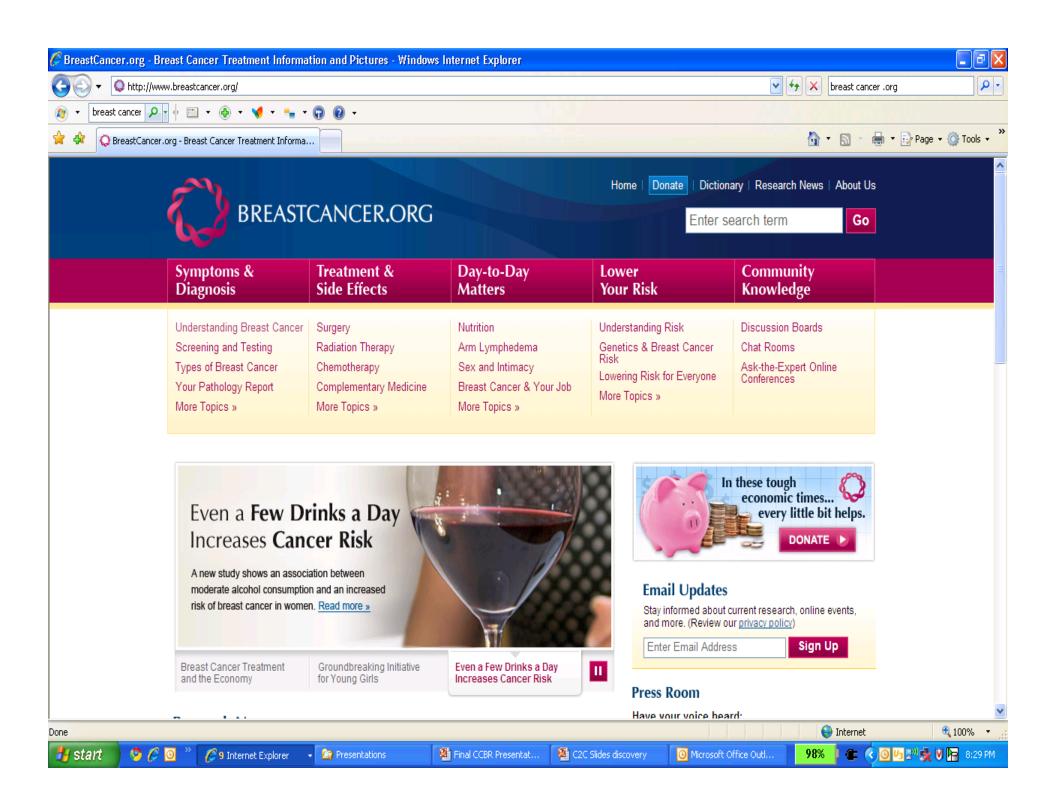




"My desire to be well-informed is currently at odds with my desire to remain sane."

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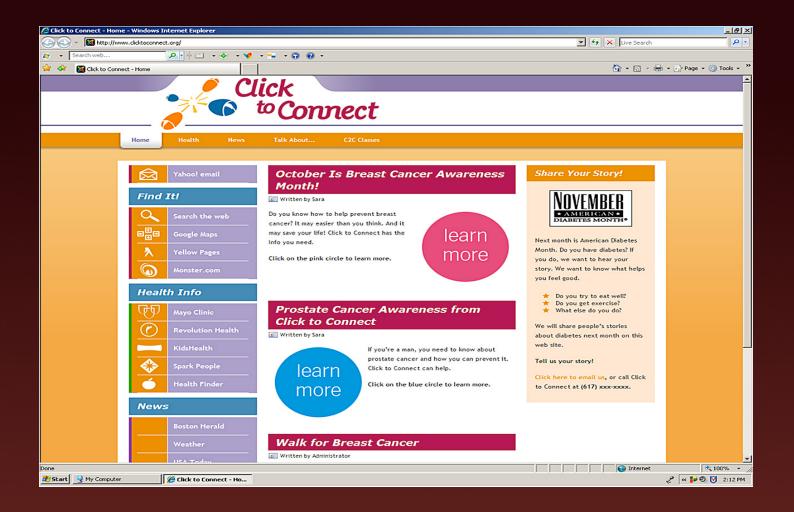




#### Adoptive designs and maintenance Sustainability



#### Web Portal: First Iteration



### Web Portal Post Usability Testing



### Research Questions

- Ask what do we mean by "access"
  - → Static versus dynamic measures
  - → Location of access and use of the Internet
  - → How are these related to proximal and distant determinants of health?
- Social determinants and patient-provider communication
  - → E.g.: end-of-life directives and follow-up between Blacks and Whites



### Research Questions

- How do we organize information for consumption?
  - → What are the patterns of usage of the different groups, especially the underserved?
- Cultural norms and practices and use of technology for health
  - → Privacy
  - → family context
- Extent to which this influences use of HIT



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