

# Differences in Use & Impact of an E-health System Among Breast Cancer Patients

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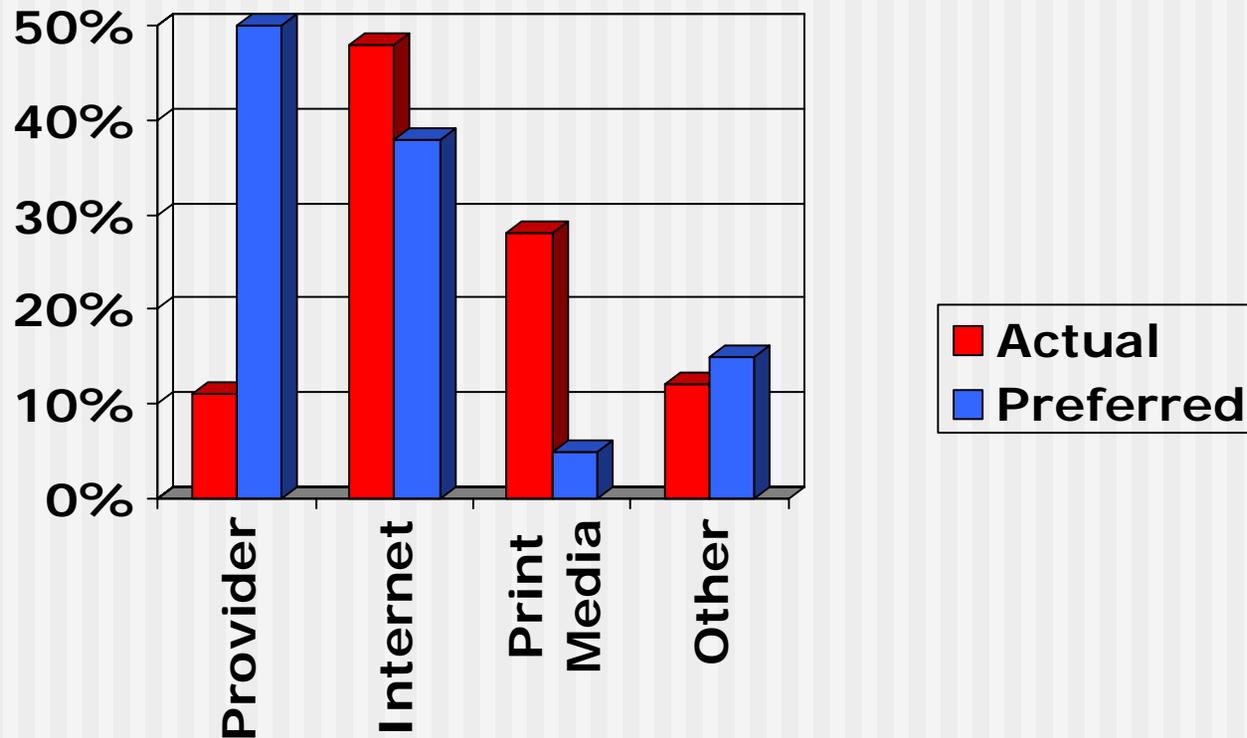
Coalition

# Internet as preferred source of health information

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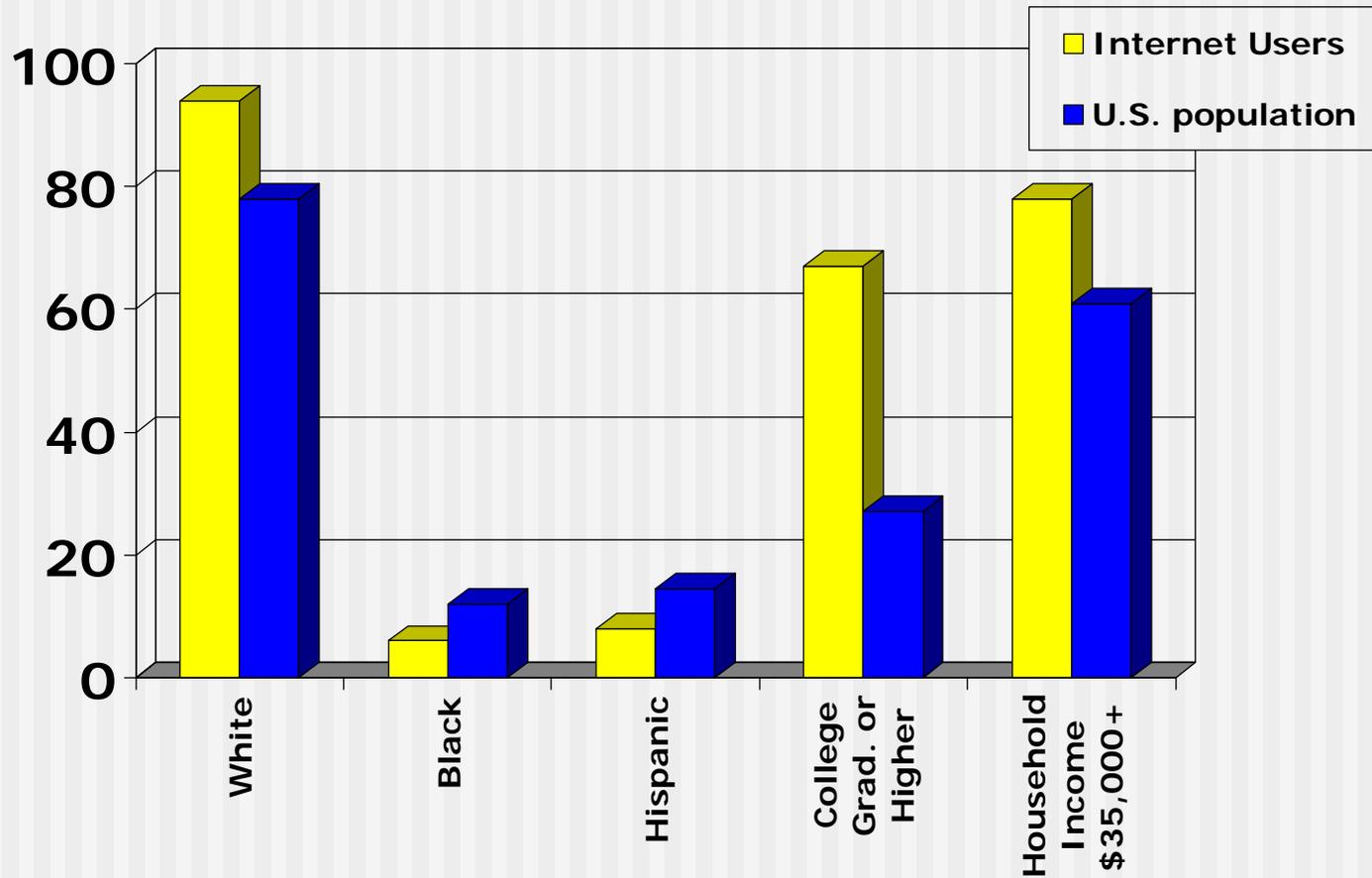
- 132 million Americans are online
- About 64% of online users have searched for health information on the Internet

# Actual vs. Preferred Sources of Cancer Information



Source: Health Information National Trends Survey, Hints Briefs  
<http://hints.cancer.gov>

# Who Suffers from the Digital Divide?



Source: United States General Accounting Office, Telecommunications Characteristics and Choices of Internet Users, February 2001

# Is the Divide Narrowing?

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- Over a 6-month period in 2000:
  - Internet access among those with incomes under \$30,000 grew by 10%
    - (compared to 3% among those with incomes of \$75,000 or higher)
  - Access among those with a high school diploma or less grew by 11%
    - (compared to 6% among college grads.)
  - Gap remains constant between black and white populations (8% growth in both groups)

Source: The Pew Internet & American Life Project, Internet Tracking Report, February 2001

# CHES (Comprehensive Health Enhancement Support System)

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- Developed by the University of Wisconsin-Madison's Center for Health Enhancement Systems Studies, CHES is a computer-based system of integrated services designed to help individuals cope with a health crisis or medical concern.

# Comprehensive Health Enhancement Support System (CHESS)

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- CHESS provides patients & families with:
  - Disease specific information
  - Social support
  - Decision support
  - Skills training

# CHES-Living with Breast Cancer Module

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- Questions and Answers
- Instant Library
- Ask an Expert
- Personal Stories (text & video)
- Resource Guide
- Discussion Groups
- Decision and Conflicts
- Action Planning

# Differences in CHES Use Among Low SES Breast Cancer Patients

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- Compared to their Caucasian counterparts, African American users
  - used social support components less and information components more
  - used support groups more instrumentally (e.g., to discuss treatment vs. day-to-day activities)
  - were less likely to use online support services after 3 months
  - used self-tracking and decision services more

# Possible Reasons for Use Pattern Differences

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- Low SES African American women may be less frequent users of online support groups because they may have:
  - sufficient interpersonal support in their community
  - limited keyboarding skills
  - literacy concerns, and
  - view online groups as mechanism for discussing treatment rather than social support

# Differences in Benefits Among Low SES Users

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- Compared to their Caucasian counterparts, African American users
  - scored higher on social support measures
  - had reduced levels of negative emotions
  - were more likely to overcome perceptions of unmet needs
  - were more likely to become involved in their health care
  - had higher functional well-being and fewer breast cancer concerns

# Implications for Closing the Digital Divide in eHealth Systems

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- African Americans may be more inclined toward an oral tradition of expression; therefore, audio/video systems should be explored
- The penetration rate for mobile phones is higher among blacks (65%) than whites (62%)<sup>2</sup> and many are Internet enabled, making mobile phones a viable delivery platform

2. Fattah H. (2003). America untethered. *American Demographics*, 25, 35-39.

# Implications for Closing the Digital Divide (cont'd)

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- As baby boomers age, seniors will make up a larger proportion of experienced technology users, providing greater opportunity for increasing access to eHealth systems

# Relevant CHES articles

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Gustafson D, Hawkins R, Boberg E, McTavish F, Owens B, Wise M, et al. (2002). *CHES: Ten years of research and development in consumer health informatics for broad populations including the underserved*. International Journal of Medical Informatics, 65(3), 169-177.

McTavish FM, Gustafson DH, Owens BH, Hawkins RP, Pingree S, Wise M, Taylor JO, Apantaku FM. (1995). *CHES: An interactive computer system for women with breast cancer piloted with an underserved population*. J Ambulatory Care Manage., 18(3) 35-41.

Shaw B, Gustafson, DH, Hawkins R, McTavish F, McDowell H, Pingree S, Ballard D. (2006). *How underserved breast cancer patients use and benefit from eHealth programs: Implications for closing the digital divide*. Amer. Behav. Scientist, 8(6) 823-834.