From Two-Step Flow to the Internet: The Changing Array of Sources for Genetics Information Seeking

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Background

- Health information of particular interest in information seeking research
- From early 1970’s to mid 1980’s studies showed that interpersonal providers much more important than institutions or the mass media
- Consulting friends and neighbors before print and electronic sources labeled “two-step flow” or the “dual-link model”
- Influential friends, family, acquaintances known as “opinion leaders”
Recent study of working poor showed low regard for personal sources and high media usage.

Accessibility and likelihood of providing information determines source usage levels, not informativeness, credibility, or persuasiveness.

Before wide availability of Internet standard “two-step flow” tradition was the norm for health information sources.

Study in 1998 revealed a shift in health care seeking habits.
In 2003 (UCLA), roughly 91% of Americans recognize the Internet as an “important” source of information.

In 2002 (Pew Study), 62% of Internet users had used it to seek health information.

Also 2002 (Stanford Univ.), more conservative study showed 40% of adult Internet users had utilized it for health-related purposes.

1997 study found that 89% of messages on an online health bulletin board were authored by persons without medical training and 1/3 of advice unconventional.
Background

- Studies in 1996 and 1997 found high levels of interest in genetic testing
  - Predictive testing: 82%-87%
  - Breast cancer: 97%
- 2003 editorial feature in *The New York Times* discussed genome scanning and findings for the individual
Methods

- Telephone survey conducted July to August 2002 by trained interviewers working for University of Kentucky Survey Research Center
- Sample obtained via Waksberg random-digit dialing procedures.
- 41% (882), of 2,454 possible respondents (minus 125 ineligible respondents) agreed to be polled.
- Margin of error: +/- 3.3% at 95% confidence
- Other than African Americans and males, fair representation of adults in Kentucky
Methods

First 3 questions dealt with awareness of cancer “running in their family”, their understanding of genetics, and their level of worry about inheriting cancer.

Second set of 3 questions concerned their 1st, 2nd, and 3rd choice of sources if they were “trying to find information about inherited cancers”.

Last set of 3 questions concerned if they would want or need help finding information about genetic testing, how much they would need, and if they would choose to “have a genetic test to determine your risk for inherited cancer if it was readily available”.
Demographics

- < High School: 5%
- High School: 12%
- Some College: 32%
- Some Graduate Work: 40%
- N/A: 11%
Demographics

- Rural: 36%
- Small Town: 28%
- Suburb: 23%
- City: 13%
Demographics

- Male: 60%
- Female: 40%

- Married: 37%
- "Other": 63%
Findings

Information sources for inherited cancer
- 93% able to identify one source
- 68% able to name at least two
- 34% able to identify three sources

Total of 15 unique sources given

Sources
- Internet (46.5%)
- MD (18.4%)
- Public Library (14.1%)
- Family Member (10.6%)
- Other Medical sources (8.7%)
- Mass Media (1%)
Findings

- Length of time using Internet positively associated with ranking Internet higher (not statistically related to other sources)
- Encouraging that total of 10.5% of respondents thought to call CIS
- Statistically significant relationship between understanding of genetics and the number of sources given (maybe due to monitors/blunters)
- Patients may turn to the Internet before/after seeing a physician, but very few (2-3%) substitute for seeing a doctor
Findings

- Internet not a good source for information
- Nearly half (47%) judged understanding of genetics to be inadequate
- Logistical regression showed that 3 most predictive variables were understanding of genetics, age, and household income
- Regression able to correctly classify 74.7% compared to correct chance classification of 50%
- Wealthier respondents go to Internet first, which is counterintuitive.
Paper’s Discussion

- Popularity of Internet as source is cause for concern
- Dominance of Internet sources a further mutation of two-step flow hypothesis
- Idea that most people turn to friends/family as first source is in doubt (could be due to newness of subject matter)
- Appeal of Internet could be that it allows public to bypass experts
- Questions were “what if” questions, so don’t know what respondents would really do
Paper’s Discussion

- Answers provided could have been “socially acceptable answers”, but doubtful
- Shortage of qualified cancer genetic counselors
- Primary care physicians not prepared to satisfy informational or clinical needs for genetic related questions