

“Digital Divide”: Inequities in Internet Access and Health Care Utilization

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APHA Presenter Disclosures

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The following personal financial relationships with commercial interests relevant to this presentation existed during the past 12 months:

No relationships to disclose



Acknowledgements

- The authors are indebted to Deron C. Burton, Jennifer Cadoret, Richard E. Dixon, and Fred Fridinger for their significant contributions to this project.
- This research was supported in part by the appointment of the second author to the Research Participation Program at the Centers for Disease Control and Prevention administered by the Oak Ridge Institute for Science and Education through an interagency agreement between the U.S. Department of Energy and CDC.
- The findings and conclusions in this presentation are those of the authors and do not necessarily represent the views of the US Department of Health and Human Services or the Centers for Disease Control and Prevention.



Internet and Health

- The internet continues to emerge as an important transforming mechanism for medical care and public health.
- However, substantial differences in access to and use of this information resource remain an unresolved challenge.



Inequalities in Internet Access

- Approximately 30% of U.S. adults do not access the internet to acquire health information.



- Expanding internet access has been a focal point of health policy statements such as Healthy People 2010.



Internet Access Assumption

- Underlying this goal is the assumption that increasing internet access is both a *necessary* and *sufficient* means of enabling Americans to access health information and engage in health-promoting activities.



But is Internet Access Sufficient?

- Growing evidence suggests that expanding internet access may be a useful, but *insufficient* step, to connect Americans with critical health information



The “Digital Divide”

- The concept of the “digital divide” conceptualizes health information as a valued resource vulnerable to disparities in access and utility.
- Individuals accessing online health information may experience advantages and benefits in terms of health knowledge and health opportunities.



“Double Digital Divide”

- While the “digital divide” is concerned with the ability of people to access the internet.
- Prominent disparities in how internet health information is acquired, understood, and used are also evident.
- This expanded notion is referred to as the “double digital divide.”



What We Know

- Existing data provide an understanding of:
 - the common sociodemographic factors that characterize inequities in internet access and health care utilization
 - diverse health-related factors that may prompt individuals to seek health information online.



What We Don’t Know

- A clear picture of the associations among health care utilization, internet access, and the use of internet medical information is lacking.



Objective

This study sought to explore the associations among accessing the internet, use of internet medical information, and health care utilization in a representative sample of adults in the Atlanta, Georgia area.



Data Source

- De-identified data from telephone surveys conducted by Scarborough Research in the Atlanta, GA area in 2006 and 2007. from Scarborough Research.
- The sample was comprised of 5,708 adults.
- Data were weighted in all analyses to be representative of Atlanta DMA adults.



Demographics

- Demographics assessed included:
 - Gender
 - Age
 - Race/ethnicity
 - Education
 - Employment
 - Marital status
 - Annual household income.



Internet Medical Information-Seeking Behavior (iMISB)

- A three-level internet medical information-seeking behavior (iMISB) variable was created:
 - not accessing the internet (no access)
 - accessing the internet but not using medical information (no iMISB)
 - accessing the internet and using internet medical information (iMISB) in the past 30 days.



Health Care Utilization

- Health care utilization was assessed across three domains:
 - medical services received and specialists used
 - medications purchased
 - health insurance



Statistical Analysis

- The focal relationships between iMISB and the three domains of health care utilization were then tested using multivariate linear and logistic regression models.
- A respondent sex by iMISB factorial model was parameterized.
- All models were adjusted for the demographics.




Results


- Of the 5,708 adults respondents:
 - 32.9% reported not accessing the internet ($n = 1,879$)
 - 52.9% reported internet access but no iMISB ($n = 3,022$)
 - 14.1% reported iMISB ($n = 807$).



Main Effect Differences Health-Care Utilization Measures Across Internet Medical Information-Seeking Behavior (iMISB)			
	Not Accessing Internet	Accessing Internet, No iMISB	Accessing Internet; iMISB
Services and specialists (<i>M</i>)			
Medical services used	0.88a	0.83a	1.14b
Specialists visited	1.75a	1.89b	2.33c
Medications purchased (<i>M</i>)			
Over the counter	0.97a	0.98a	1.31b
Prescription	0.64b	0.56a	0.62ab
Other	0.49a	0.52a	0.62b




Main Effect Differences Health-Care Utilization Measures Across Internet Medical Information-Seeking Behavior (iMISB)			
	Not Accessing Internet	Accessing Internet, No iMISB	Accessing Internet; iMISB
Health insurance (%)			
Any coverage	76.6a	87.1b	93.1c
Group plan	33.0a	71.7b	77.0b
Medicare	37.6b	9.1a	10.2a
Medicaid	3.1	1.5	0.1




iMISB and Health Care Use

In general, respondents engaging in iMISB reported using more health care services and were more likely to have health insurance, compared to those not accessing the internet and those accessing the internet but not engaging in iMISB.




Online BUT no iMISB

- In addition, over half of respondents reported accessing the internet but were *not* engaging in iMISB.
- This group reported utilizing fewer health services compared to respondents engaging in iMISB.



Discussion

The relationships uncovered here suggest that aspects of health care utilization vary across internet access behaviors and iMISB *independent* of sociodemographic characteristics (e.g., race/ethnicity, income) that are generally depicted as focal to disparities in health, health care, and internet access.



Something More?

- Prior conceptualizations of the digital divide have primarily attributed inequalities in technology access to socioeconomic disparities.
- Our findings illustrate that differences in the relationship between internet access, iMISB, and health care utilization cannot be fully explained by sociodemographic factors and technology access.



Future Research

The findings suggest that expanding our understanding of the health and psychosocial determinants of internet health information use and non-use in diverse populations could be critical to future public health research and policy endeavors.

