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)**

<table>
<thead>
<tr>
<th>Social Determinants</th>
<th>Mediating/Moderating Conditions</th>
<th>Health Communication Outcomes</th>
<th>Health Outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Socioeconomic Position</strong></td>
<td><strong>Socio-Demographics</strong></td>
<td><strong>Health Communication Outcomes</strong></td>
<td><strong>Health Outcomes</strong></td>
</tr>
<tr>
<td>•Education</td>
<td>•Age</td>
<td>•Health Media Use &amp; Exposure</td>
<td>•Knowledge</td>
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<tr>
<td>•Income</td>
<td>•Gender</td>
<td>•Information seeking</td>
<td>•Health Beliefs</td>
</tr>
<tr>
<td>•Employment</td>
<td>•Race/Ethnicity</td>
<td>•Attention</td>
<td>•Comprehension</td>
</tr>
<tr>
<td>•Occupation</td>
<td></td>
<td>•Information Processing</td>
<td>•Capacity for action</td>
</tr>
<tr>
<td><strong>Place</strong></td>
<td><strong>Social Networks</strong></td>
<td></td>
<td>•Incidence</td>
</tr>
<tr>
<td>•Neighborhood</td>
<td>•Social Capital</td>
<td></td>
<td>•Health Behaviors</td>
</tr>
<tr>
<td>•Urban versus rural</td>
<td></td>
<td></td>
<td>•Prevention</td>
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**Communication may play a role in linking SES, resources and health outcomes.**
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

Obesity Prevalence by Education Level 1991-2001

Source: CDC, BRFSS, 1991-2001
Who are the poor?

Racial/ethnic composition of categories of household income, 2005 HINTS

Percentage in each income level

- White
- Hispanic
- Black
- Other/Missing

Household income adjusted for household size

<100% FPL  |  100%- 300% FPL  |  ≥300% FPL
Who are the poor?

Educational composition of categories of household income, 2005 HINTS

Household income adjusting for household size

Percentage with educational attainment in income category

- <100% FPL
- 100% - 300% FPL
- ≥300% FPL

- < High School
- H.S. graduate
- Some college
- College graduate
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
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 English-speaking Hispanics

Household Income and Internet Use

Internet use by household income 2005 HINTS

![Bar chart showing prevalence of internet use by household income level.](chart.png)
Education and Using the Internet for Health Purposes

Use of internet for health by education, 2005 HINTS

Prevalence of internet health use (%)
Household Income and Using the Internet for Health Purposes

Use of internet for health by household income 2005
HINTS

Prevalence of internet health use (%)

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<th>Household income (% of the Federal Poverty Level)</th>
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Household Income and Home Internet Use

Home internet use by household income 2005 HINTS

Prevalence of home internet use (%)

0 25 50 75 100

<100% FPL 100%-300% FPL ≥300% FPL

Household income (% of the Federal Poverty Level)
Noticing Health Information on the Internet

Noticing health information on the Internet by education, 2005 HINTS

Prevalence of noticing information (%)

Education

- Grade 9 - 12
- Trade school
- Some college
- Associate’s
- Bachelor’s
- Master’s
- Prof. or PhD

≤ Grade 5
Beyond Access: Organization of Information
“My desire to be well-informed is currently at odds with my desire to remain sane.”
Adoptive designs and maintenance
Sustainability
Web Portal: First Iteration
Web Portal Post Usability Testing

February is American Heart Month

Heart disease is the number-one killer of people in the United States today. But there are many ways to take control and help keep your heart healthy. Having healthy habits means you will be less likely to have heart disease or a heart attack. Find out what you can do to stay healthy for yourself - and for your valentine!

Click on the "Read more..." button to learn about it.

Cervical Health Awareness

Did you know that cervical cancer is often caused by HPV, a sexually transmitted disease? Did you know that cervical cancer can be prevented - and can be treated? It’s found early enough? Find out what you can do to protect yourself from this disease.

Click on the "Read more..." button to learn about it.

Learn About HIV and AIDS

There are about 38 million people living with HIV - another type of sexually transmitted disease.

VISWANATH LAB
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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