Health Literacy, Access to Care, and Patient Satisfaction in a National Sample of Older Americans

Helen Levy, PhD, Univ. of Michigan
Alex Janke, BS, Wayne State Univ.
Background

• Well-established link between low health literacy and poor outcomes
• Many studies rely on samples defined by site of care, managed care plan, or a particular chronic condition
• All of these presuppose a connection to the health care system
• What about the effect of low health literacy on access in the general population?
Data: The Health & Retirement Study

• HRS: A cooperative agreement between NIA and the University of Michigan
• Longitudinal bi-annual study started in 1992
• Nationally representative of Americans ages 51+
• New cohorts added every 6 years
• About 22,000 respondents in 2010
• Topics include health, wealth, work, & cognition
Data: HRS mailer on access to care

- Fall 2011: self-administered mail questionnaire ("mailer") sent to about half the HRS sample
  - 75% response rate
  - Sample for analysis: n=7,166
    - 3,900 ages 65+; 3,266 ages 51-64

- Included questions on access to care and self-assessed health literacy (confidence filling out medical forms)
Plan of analysis

• Outcomes
  – No usual source of care
  – Delayed medical care in past year (& reasons)
  – No doctor visits in past year
  – Difficulty finding a provider (& kind of difficulty)

• Key predictor: low self-assessed health literacy (27% of sample)

• Control variables:
  – Age, race/ethnicity, gender, marital status, health insurance
  – Years of education, general cognitive ability (word recall & serial 7s)
Marginal effect of low health literacy on access outcomes: Near elderly

- Bright bars = statistically significant
- Pale bars = not statistically significant

Bar chart showing:
- No USC (0.145)
- Delayed (0.267)
- No MD visit (0.063)
- Difficulty finding provider (0.085)

Legend:
- No controls
- + demographics, insurance
- + education, cognition
Reasons for delaying medical care, by self-assessed health literacy

- Couldn't get through on phone
- No appointment soon enough
- Wait at office too long
- Not open when I can go
- No transportation
- I am too busy
- Afraid of what I might find out
- Don't believe in doctors
- Dislike going to the doctor
Recap of results just shown

• Low health literacy means more delayed care and more difficulty finding a provider
• No effect on Prob(no medical visit) or Pr(usual source of care), once covariates included
• Reasons for delaying care are different. Low health literacy means
  – > more likely to say no transportation or wait at office is too long
  – > less likely to say they are too busy
Other results (not shown)

• Reasons for difficulty finding a provider also vary with health literacy: low health literacy means
  – > Low health literacy means more likely to say “None close by,” “No appointments”
  – > No gradient in “Could not get referral”, “Not accepting new patients”, “Did not accept insurance”

• Satisfaction with doctors & nurses is lower for patients with low health literacy, who are more likely to say:
  – Doctors & nurses don’t listen carefully
  – Doctors & nurses don’t show respect
  – Doctors & nurses don’t spend enough time
Conclusion

• Patients with low health literacy are more likely to report delaying care or having difficulty finding providers
  – These findings are robust to the inclusion of covariates (including general cognition)

• They also have different reasons for delaying
  – Transportation; long wait

• Satisfaction with providers is lower
  – More complaints about communication
Backup slides start here.
<table>
<thead>
<tr>
<th></th>
<th>HRS 2010 core sample, ages 51+</th>
<th>2010 CPS, ages 51+</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Our participants</td>
<td>Core, No Mailer</td>
</tr>
<tr>
<td>Age</td>
<td>64.281</td>
<td>64.321</td>
</tr>
<tr>
<td>% 65 or Older</td>
<td>0.424*</td>
<td>0.409</td>
</tr>
<tr>
<td>Female</td>
<td>0.544</td>
<td>0.536</td>
</tr>
<tr>
<td>Married</td>
<td>0.678*</td>
<td>0.578</td>
</tr>
<tr>
<td>White, Non-Hispanic</td>
<td>0.82*</td>
<td>0.769</td>
</tr>
<tr>
<td>Black, Non-Hispanic</td>
<td>0.076*</td>
<td>0.114</td>
</tr>
<tr>
<td>Other Race, Non-Hispanic</td>
<td>0.029</td>
<td>0.026</td>
</tr>
<tr>
<td>Hispanic</td>
<td>0.076*</td>
<td>0.091</td>
</tr>
<tr>
<td>Less Than High School</td>
<td>0.135*</td>
<td>0.166</td>
</tr>
<tr>
<td>High School</td>
<td>0.326*</td>
<td>0.295</td>
</tr>
<tr>
<td>Some College</td>
<td>0.242</td>
<td>0.252</td>
</tr>
<tr>
<td>College</td>
<td>0.292</td>
<td>0.283</td>
</tr>
<tr>
<td>Region1</td>
<td>0.162*</td>
<td>0.180</td>
</tr>
<tr>
<td>Region2</td>
<td>0.276*</td>
<td>0.236</td>
</tr>
<tr>
<td>Region3</td>
<td>0.361*</td>
<td>0.378</td>
</tr>
<tr>
<td>Region4</td>
<td>0.200</td>
<td>0.204</td>
</tr>
<tr>
<td>Self-Reported Health Fair/Poor</td>
<td>0.215*</td>
<td>0.269</td>
</tr>
<tr>
<td>Mean Memory Score (0-20)</td>
<td>9.988*</td>
<td>9.412</td>
</tr>
<tr>
<td>Serial Sevens score (0-5)</td>
<td>3.674*</td>
<td>3.419</td>
</tr>
<tr>
<td>Sample N</td>
<td>7,583</td>
<td>14,387</td>
</tr>
</tbody>
</table>

*Indicates mean is significantly different from mean to the right with p<0.05.
Marginal effect of low health literacy on access outcomes: Near elderly

- No controls
- + demographics, insurance
- + education, cognition

- No USC
- Delayed
- No MD visit
- Difficulty finding provider

Values shown in the graph represent the marginal effect of low health literacy on access outcomes for near elderly individuals, with and without various controls.
Fraction who delayed care (ages 55-64)

Usual source of care

Not at all

Confidence filling out medical forms

Usual source of care

No USC
Reasons for difficulty finding a provider

- Did Not Accept Insurance
- No Appointments Available
- Not Accepting New Patients
- None Close By
- Could Not Get Referral
Satisfaction w/doctors & nurses

- Doctors & nurses listen carefully
- Doctors & nurses show respect
- Doctors and nurses spend enough time
- How satisfied overall w/doctors & nurses