Health Literacy and Health Disparities: Opportunities for Trans-disciplinary Collaboration

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Questions

• How do we raise awareness of health literacy among disparities researchers?
• How can we keep research in disparities and research in health literacy from being conducted in separate silos?
Definitions

• **Health literacy**: “the capacity to obtain, process, and understand basic health information and services needed to make appropriate health decisions”\(^1\)

• **Health disparities**: “Differences in health that occur by gender, race or ethnicity, income or education, disability, living in a rural locality, or sexual orientation.”\(^2\)

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2. Healthy People 2010
Conceptual Model of Health Literacy

INDIVIDUAL CAPACITY
- Reading Fluency
  - Prose
  - Quantitative
  - Document
- Prior Knowledge
  - Vocabulary
  - Conceptual knowledge of health and healthcare

HEALTH-RELATED PRINT LITERACY
Ability to understand written health information

HEALTH-RELATED ORAL LITERACY
Ability to orally communicate about health

Complexity and Difficulty of Printed Messages

Other Factors:
- Culture and Norms
- Barriers to change

New Knowledge, Positive Attitudes, Greater Self-Efficacy, Behavior Change

Improved Health Outcomes

Baker DW JGIM 2006; 21: 878-83
A Framework for Understanding Health Disparities

- Biologic factors
- Cultural factors
- Socioeconomic factors
- Environmental factors
- Health risk behavior
- Access to healthcare
- Quality of healthcare

Health literacy?

Understanding Disparities in Access to and Quality of Health Care

### Barriers
- Personal/Family
  - acceptability
  - cultural
  - language/literacy
  - attitudes, beliefs
  - preferences
  - involvement in care
  - health behavior
  - education/income
- Structural
  - availability
  - appointments
  - how organized
  - transportation
- Financial
  - insurance coverage
  - reimbursement levels
  - public support

### Health Care Processes

#### Use of Services
- Visits
  - primary care
  - specialty
  - emergency
- Procedures
  - preventive
  - diagnostic
  - therapeutic

#### Mediators
- Quality of providers
  - cultural competence
  - communication skills
  - medical knowledge
  - technical skills
  - bias/stereotyping
- Appropriateness of care
- Efficacy of treatment
- Patient adherence

#### Outcomes
- Health Status
  - mortality
  - morbidity
  - well-being
  - functioning
- Equity of Services
- Patient Views of Care
  - experiences
  - satisfaction
  - effective partnership

Cooper LA, Hill MN, and Powe NR. JGIM 2002; 477-486
Evolution of Health Disparities Research

Describing the problem
Understanding mechanisms
Designing interventions
Evaluating outcomes

Evolution of Health Literacy Research
Results: 1 to 20 of 161

1. Barriers to healthcare among Asian Americans.
   Kim W, Keefe RH.
   PMID: 20446176 [PubMed - in process]
   Related citations

2. Sex disparities in attitudes towards intimate partner violence against women in sub-Saharan Africa: a socio-ecological analysis.
   Uthman OA, Lawoko S, Moradi T.
   PMID: 20429902 [PubMed - as supplied by publisher] Free Article
   Related citations

3. Applicability of a video intervention to increase informed decision making for prostate-specific antigen testing.
   Ross L, Ashford AD, Bleechington SJ, Dark T, Erwin DO.
   PMID: 20355352 [PubMed - in process]
   Related citations

   Price-Haywood EG, Roth KG, Shelby K, Cooper LA.
   PMID: 20352566 [PubMed - in process]

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Titles with your search terms:
- Understanding health literacy for strategic health marketing: eHealth [Health Mark Q. 2008]
- Impacting health disparities through community outreach: util [Cancer Control. 2007]

28 free full-text articles in PubMed Central
- Interventions to improve care for patients with Limited Health I [J Clin Outcomes Manag. 2009]
- Challenges to using an electronic personal health record by a la [J Med Internet Res. 2009]
Health Disparities and Health Literacy: Common Themes and Challenges

• **Documented burden and impact** of risk category on access, healthcare quality, and outcomes
  – Across numerous conditions
  – In various populations

• Need for **better measurement of key constructs**

• Need for **better understanding of mechanisms** by which the risk condition (e.g., race, low literacy) influences outcomes

• Potential for **bias or discrimination** to affect persons in risk category

• Need for **effective interventions** in diverse groups
Health Literacy and Health Disparities: Common Intervention Strategies

• **Clinician-patient level**
  – Patient-centered and/or clear communication techniques
  – Overcoming cultural and/or language barriers

• **System-patient level**
  – Clear health education materials and audio-visual aids
  – Self-management support programs
  – Culturally and linguistically tailored clinical environments

• **Community-patient level**
  – Social service referrals
  – Lay health educators
  – Mass media

Contrasting Themes

Health Literacy
• Low health literacy potentially modifiable
• Literacy status not readily apparent
• Internally defined, individually experienced

Health Disparities
• Population assignment usually not modifiable
• Disparity category (e.g., race, gender, age) mostly visible
• Externally defined, socially driven and experienced
Assessing the need for inter-disciplinary collaboration

1. Which fields are included, or excluded, in the investigation?

2. How thoroughly should the researchers exploit the opportunity for interdisciplinary collaboration? For instance, is there a need for a new common vocabulary and new methods to be devised?

3. How important are institutions in facilitating or thwarting the process?

4. How key is the integration of disciplinary perspectives in fashioning a more powerful explanation of the phenomenon in question?

Disciplines with potential contributions to health literacy and health disparities research

- Behavioral science
- Cognitive psychology
- Neuropsychology
- Education and Learning
- Psychometrics
- Economics
- Sociology
- Social work
- Social psychology
- Health professions: Medicine, Nursing, and Dentistry
- Epidemiology
- Biostatistics
- Health, Public, and Social policy
- Economic
- Health services research
- Communications
- Cultural anthropology
- Bioethics
- Organizational behavior
- Speech and language
Barriers to interdisciplinary collaboration

Structural
• Time
• Space
• Funding/Infrastructure

Cognitive
• Awareness
• Relatedness
• Perspective

Adapted from David Richter & Marie C. Paretti. Teaching Interdisciplinary Collaboration: Moving Beyond “Divide and Conquer” Virginia Tech Engineering Communications Center Department of Engineering Education
Overcoming structural barriers

• Create convenient meeting times
  – Special sessions at annual meetings of professional societies attended by researchers in both disciplines
  – Informal networks, social and communal gatherings

• Locate neutral “permanent” spaces
  – Annual Health Literacy Conference
  – Journal sections; special issues, textbooks

• Take advantage of virtual collaboration skills
  – Common server spaces, chats, online groups

• Organize funding priorities by cross-cutting issues

Adapted from David Richter & Marie C. Paretti. Teaching Interdisciplinary Collaboration: Moving Beyond “Divide and Conquer” Virginia Tech Engineering Communications Center Department of Engineering Education
Enhancing awareness

• Create opportunities for disciplinary exposition
  – What do people in your field do?
  – How do you approach measurement, study design?
  – What are your challenges and constraints?
  – Who else works with you?

• Expand language use
  – Metaphors (blends) and analogies (maps)

• Rotate collaborative reporting

Adapted from David Richter & Marie C. Paretti. Teaching Interdisciplinary Collaboration: Moving Beyond “Divide and Conquer” Virginia Tech Engineering Communications Center Department of Engineering Education
Enhancing relatedness and perspective

• Define “problems” and “criteria” collectively
  – Create conversations that bring everyone in
  – Provide research/learning opportunities outside disciplinary boundaries
  – Build measurement constructs and instruments collectively
  – Create common language

• Introduce and apply disciplinary expertise after generating potential solutions

• Foster cross-disciplinary pairings

Adapted from David Richter & Marie C. Paretti. Teaching Interdisciplinary Collaboration: Moving Beyond “Divide and Conquer” Virginia Tech Engineering Communications Center Department of Engineering Education
Health Disparities/Health Literacy: The next NIH Common Fund Program?

- Create research consortia
- Establish inter-disciplinary training initiatives
- Promote interdisciplinary technology and methods
- Multiple PI policy

http://nihroadmap.nih.gov/

The NIH Common Fund supports a series of cross-cutting, trans-NIH research programs, including new programs in the Science of Behavior Change and Global Health
“Roadmap” to collaboration*

• Address important issues not yet addressed through traditional disciplinary approaches – creative, out-of-the-box collaborations
  – Are tests of health literacy valid across populations?
  – Is literacy causally related to health disparities or a marker for some other risk factor not yet identified?
  – Which particular aspects of health literacy are most relevant for different disparity populations?
  – In which settings/context do health literacy and other disparity conditions interact to worsen health?
  – What are the mechanisms by which literacy contributes to disparities?
  – Are links to outcomes present in nationally-representative samples?

*Adapted from Robertson DW et al, BMC Medical Research Methodology 2003; 3:20.
“Roadmap” to collaboration

• Get buy-in from different camps that the interdisciplinary approach is necessary to adequately address research questions

• Anticipate potential communication issues among participants from disparate disciplines
  – Promote frequent communication (electronic and face-to-face meetings) to enhance opportunities for dialogue and information exchange

• Combine empirical and theoretical methodologies to test new models
“Roadmap” to collaboration

• Include a broad range of disciplines
  – Proactive selection
  – Self-selection

• Create a framework to guide the unique interdisciplinary research effort, each participant’s contribution, and training initiatives

• Add appropriate literacy-related measurement to epidemiological studies and nationally representative samples
Conclusions

• Health literacy and health disparities research have evolved in a similar manner
• The two disciplines share themes, challenges, and intervention strategies
• Some differences exist in the extent to which belonging to a literacy or disparity category is modifiable and how it is viewed by others and experienced by the individual
• Inter-disciplinary collaboration will require overcoming structural and cognitive barriers