Health Literacy

January 1990 through October 1999

479 Citations

Prepared by

Catherine R. Selden, M.L.S., National Library of Medicine
Marcia Zorn, M.A., M.L.S., National Library of Medicine
Scott Ratzan, M.D., M.P.A., M.A., Journal of Health Communication,
   Academy for Educational Development
Ruth M. Parker, M.D., Emory University School of Medicine

2000 February

U.S. DEPARTMENT OF HEALTH
AND HUMAN SERVICES
Public Health Service
National Institutes of Health

National Library of Medicine
Reference Section
8600 Rockville Pike
Bethesda, Maryland 20894
SERIES NOTE

Each bibliography in the Current Bibliographies in Medicine (CBM) series covers a distinct subject area of biomedicine and is intended to fulfill a current awareness function. Citations are usually derived from searching a variety of online databases. NLM databases utilized include MEDLINE®, AVLINE®, BIOETHICSLINE®, CANCERLIT®, CATLINE®, HEALTHSTAR™, POPLINE™ and TOXLINE®. The only criterion for the inclusion of a particular published work is its relevance to the topic being presented; the format, ownership, or location of the material is not considered.

Other publications in the Current Bibliographies in Medicine series are available at no cost to anyone with Internet access through the Library's World Wide Web site at http://www.nlm.nih.gov/pubs/resources.html

Comments and suggestions on this series may be addressed to:

Karen Patrias, Editor
Current Bibliographies in Medicine
Reference Section
National Library of Medicine
Bethesda, MD 20894
Phone: 301-496-6097
Fax: 301-402-1384
Internet: ref@nlm.nih.gov

PUBMED™ and INTERNET GRATEFUL MED©

To make online searching easier and more efficient, the Library offers two user-friendly interfaces to its databases. Both PubMed and Internet Grateful Med are available from the World Wide Web. The user with Internet access need only point a compatible Web browser to the NLM Web site http://www.nlm.nih.gov. No other software at the user end is required. Searching through either PubMed or Internet Grateful Med is free-of-charge. Further information on both PubMed and Internet Grateful Med may be found at the NLM Web site given above.

For those users without access to the World Wide Web, please contact the Library's Customer Service Desk at 1-888-FINDNLM (301-594-5983 international) or e-mail custserv@nlm.nih.gov for information on alternative ways to search.

Use of funds for printing this periodical has been approved by the Director of the Office of Management and Budget through September 30, 2000.
TABLE OF CONTENTS

page

Introduction v
Sample Citations viii

BACKGROUND 1

STRATEGIES IN HEALTH LITERACY
  Theoretical Constructs 3
  Applied Communication Strategies
    Media 4
    Negotiation/Policy 5

TACTICS
  New Interventions 5
  Educational Programs 6
  Readability Indices 9
  Special Populations 10
  Client Communication 12
  Disease/Content Specific (e.g., diabetes, tobacco) 12

IDEAS
  Theory 14
  Measurement Techniques 15
  Communicating Risk 16
  Cross-Cultural/Cultural Competency 17
  International Experiences 18

INTERNET RESOURCES 20

APPENDIX: Readability 21
INTRODUCTION

As we enter the twenty-first century, medical discovery is advancing at a rate unequaled in any previous time, yet Americans have not kept pace in adopting ideal health behaviors to live longer, better lives. It took over twenty-five years and a major long-term initiative by the National Heart, Lung, and Blood Institute to get many individuals in this country to know their blood pressure level and seek appropriate treatment. Numerous efforts to eliminate smoking have achieved only moderate success, and many Americans avoid getting appropriate medical check-ups for breast, colorectal, and cervical cancer even though doing so might help them live longer. Is the problem that people do not know, do not want to know, or just do not care? Perhaps one answer is that they are unable to understand and process the health information available to them.

Americans are reportedly more educated today than at any time in our history. According to the 1993 National Adult Literacy Survey (NALS), the average educational attainment of US adults is above the twelfth grade level. However, educational level does not necessarily translate into a corresponding level of reading or comprehension. Twenty-two percent of the 13,600 adults surveyed for the NALS struggle with such tasks as locating the expiration date on a driver's license or determining the location of a meeting on a form. Another fifty million Americans have only marginal literacy skills, as they have difficulty locating an intersection on a street map and identifying and entering background information on a social security application. Inadequate literacy is especially common among the elderly, with nearly half scoring in the lowest skill level. Unfortunately, despite our increasing education, average reading skills of adults in the United States are between the eighth and ninth grade levels. Overall, among the 90 million Americans with limited literacy skills, only 15% were born outside the country and 5% reported having a learning disability. Literacy is also content and setting specific. An individual may have adequate understanding of material with familiar content, but struggle to comprehend information with unfamiliar vocabulary and concepts.

What is health literacy? The term was first used in a 1974 paper titled Health education as social policy. In discussing health education as a policy issue affecting the health care system, the educational system, and mass communication, the author calls for minimum standards for "health literacy" for all school grade levels. This early use of the term shows there is a link between health literacy and health education. Failures in health education have certainly contributed to poor health literacy, but the roots of the health literacy problems in this country are not just in the history of our system of education. Health literacy problems have grown as patients are asked to assume more responsibility for self-care in a complex health care system. Patients' health literacy, then, can be thought of as the currency needed to negotiate this complex system.

Appropriate health literacy is also essential to health promotion, particularly as we address issues of primary prevention. A health literate individual is more apt to know how to answer the question "How do I keep myself well?" Adequate health literacy maybe of even greater importance in secondary prevention, as ineffective communication between health providers and patients can result in medical errors due to misinformation about medications and self-care instructions.

A 1999 report of the Council of Scientific Affairs of the American Medical Association refers to functional health literacy as "the ability to read and comprehend prescription bottles, appointment slips, and the other essential health-related materials required to successfully function as a patient."
largest study of health literacy to date, one third of English-speaking patients at two public hospitals were unable to read basic health materials. Forty-two percent of patients could not comprehend directions for taking medication on an empty stomach, 26% were unable to understand information on an appointment slip, 43% did not understand the rights and responsibilities section of a Medicaid application, and 60% did not understand a standard informed consent document. A recent study of community-dwelling Medicare managed care patients in four cities found that 34% of the English speaking and 54% of the Spanish speaking patients had inadequate or marginal health literacy.

With the proliferation of new media, health information is becoming voluminous. Unfortunately health information is also more fragmented and confusing due to its many different formats and its duplication in multiple locations. Educational multimedia products, electronic communication, advanced networking technologies, and distance learning are expanding and hold promise for increasing health literacy. Some people can use multimedia to learn interactively what they might not have learned with traditional print or oral instruction alone.

This bibliography has been compiled to help define and describe the evidence base for advancing health literacy programs by examining theories, strategies, and tactics in the published literature. For purposes of the bibliography and to further the study of health literacy, we have defined health literacy as "the degree to which individuals have the capacity to obtain, process, and understand basic health information and services needed to make appropriate health decisions." In compiling this bibliography a variety of government-sponsored and commercially available databases as well as the Internet were searched for candidate material published within the past ten years. In addition, a number of health education and health communication journals were manually searched. Using these sources over 3500 citations were retrieved. Those references in which health literacy contributed to the definition stated above or evaluated tactics/strategies to further health literacy were selected. These references were then arranged into four broad subject categories: Background; Strategies in Health Literacy; Tactics; and Ideas. In addition, there is a section of Internet Resources. This list is not meant to be all inclusive, but rather is intended to provide representative government and private sites which will lead the user to additional information. Finally, we have added an Appendix of citations on Readability. Generally, items in foreign languages, letters to the editor, editorials, and book chapters were eliminated. In addition, references focused on communicating with special needs populations, e.g., visually/hearing impaired and psychiatric patients, were eliminated. Most references dealing with the physician-patient relationship and truth telling were eliminated also.

The attainment of health literacy for our nation's citizens is a task of great magnitude. At this point we have only limited knowledge about which learning strategies and tactics are the most viable. We hope that this bibliography will provide a foundation for future work in health literacy and challenge others to add their efforts to it.

Scott. C. Ratzan, M.D., M.P.A., M.A.
Journal of Health Communication
Academy for Educational Development

Ruth M. Parker, M.D.
Emory University School of Medicine

The compilers wish to thank Mary Ryan, Dora Smith, and Karen Patrias of the National Library of Medicine for their editorial and production assistance.
References:


SAMPLE CITATIONS

Citations in this bibliographic series are formatted according to the rules established for *Index Medicus®*. Sample journal and monograph citations appear below. For journal articles written in a foreign language, the English translation of the title is placed in brackets; for monographs, the title is given in the original language. In both cases the language of publication is shown by a three letter abbreviation appearing at the end of the citation.

**Journal Article:**

<table>
<thead>
<tr>
<th>Authors</th>
<th>Article Title</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Date</th>
<th>Volume</th>
<th>Issue</th>
<th>Pages</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Abbreviated Journal Title</th>
</tr>
</thead>
</table>

**Monograph:**

<table>
<thead>
<tr>
<th>Authors/Editors</th>
<th>Title</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Date</th>
<th>Total No. of Pages</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Place of Publication</th>
<th>Publisher</th>
</tr>
</thead>
</table>

*For details of the formats used for references, see the following publication:

BACKGROUND

AMC Cancer Research Center; Centers for Disease Control and Prevention (US). Beyond the brochure: alternative approaches to effective health communication. Denver (CO): The Center; 1994. 74 p. Available from:  
http://www.cdc.gov/cancer/publica.htm


Beitz JM. Education for health promotion and disease prevention: convince them, don't confuse them. Ostomy Wound Manage 1998 Mar;44(3A Suppl):71S-76S; discussion 77S.


http://www.ed.gov/offices/OVAE/bib98.html


http://www.msubillings.edu/fac/hanson/mahperd/sld001.htm  PowerPoint Presentation.

Health communication and literacy: an annotated bibliography [monograph on the Internet]. Montreal: Center for Literacy; [modified 1999 Jun 25; cited 2000 Jan 19].  Available from:


Marwick C. Patients’ lack of literacy may contribute to billions of dollars in higher hospital costs [news]. JAMA 1997 Sep 24;278(12):971-2.


Weiss BD. Identifying and communicating with patients who have poor literacy skills [editorial]. Fam Med 1993 Jun;25(6):369-70.


---

**STRATEGIES IN HEALTH LITERACY**

**Theoretical Constructs**


Applied Communication Strategies

Media


Negotiation/Policy


TACTICS

New Interventions


Mandl KD, Katz SB, Kohane IS. Social equity and access to the World Wide Web and E-mail: implications for


Educational Programs

Adult Literacy and Basic Skills Unit. Making it happen: improving basic skills within the Health Service. London: The Unit; 1994 Mar.


Corrarino JE, Walsh PJ, Anselmo D. A program to educate woman who test positive for the hepatitis B virus during the perinatal period. MCN Am J Matern Child Nurs 1999 May-Jun;24(3):151-5.


Section 9, Health/Physical Education.


Readability Indices


Special Populations


Communicating with older people. Nurs Stand 1997 Jan 8;11(16):48-54; quiz 55-6.


Hosey GM, Freeman WL, Stracqualursi F, Gohdes D. Designing and evaluating diabetes education material


Murphy PW, Davis TC. When low literacy blocks compliance. RN 1997 Oct;60(10):58-63; quiz 64.


**Client Communication**


**Disease/Content Specific (e.g., diabetes, tobacco)**


Larson I, Schumacher HR. Comparison of literacy level of patients in a VA arthritis center with the reading


Parker RM, Williams MV, Baker DW, Nurss JR. Literacy and contraception: exploring the link. Obstet Gynecol 1996 Sep;88(3 Suppl):72S-77S.


IDEAS

Theory


Measurement Techniques


**Communicating Risk**


Cross-Cultural/Cultural Competency


International Experiences


Gordon D. MDs’ failure to use plain language can lead to the courtroom. CMAJ 1996 Oct 15;155(8):1152-4.


Najera Aguilar P, Lazcano Ponce EC, de Ruiz PA, Ramirez Sanchez T, Cantoral Uriza L, Hernandez


INTERNET RESOURCES

DATABASES
Use search function to locate specific health resources.

LISTSERV

ORGANIZATIONS
See Project 2061 and EHR programs.


APPENDIX: Readability


Gannon K. Should OTCs be mandated to carry more readable labels? Drug Top 1993 Jul 5;137:34.


Hochhauser M. Writing, reading and understanding research consent forms. Appl Clin Trials 1997 May;6:66-8, 70.


It's on paper. but do they understand it? Simple testing gets written handouts on target. Hosp Case Manage 1999 Apr;7(4):75-6, 80.


Petterson T. How readable are the hospital information leaflets available to elderly patients? Age Ageing 1994 Jan;23(1):14-6.


