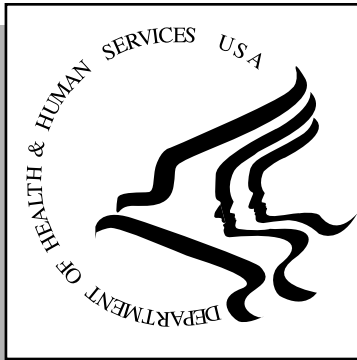
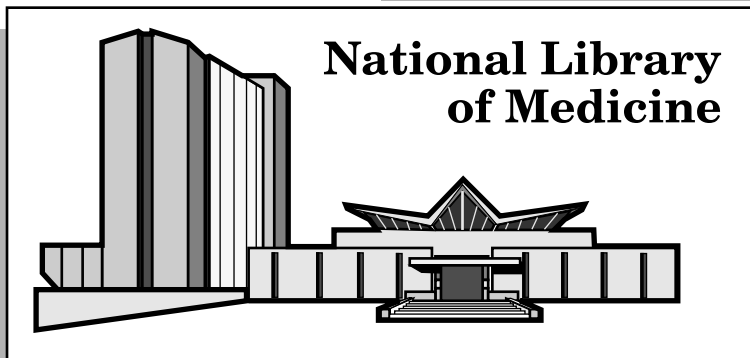


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TABLE OF CONTENTS

	<i>page</i>
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.¹ 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.² Overall, among the 90 million Americans with limited literacy skills, only 15% were born outside the country and 5% reported having a learning disability.¹ 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*.³ 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 Association⁴ 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." In the

largest study of health literacy to date, ⁵ 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 ⁶ 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.

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SAMPLE CITATIONS

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Journal Article:

Authors

Article Title

Baker DW, Parker RM, Williams MV, Clark WS, Nurss J. The relationship of patient reading ability to self-reported health and use of health services. *Am J Public Health* 1997 Jun;87(6):1027-30.

Date Volume Issue Pages

*Abbreviated Journal
Title*

Monograph:

Authors/Editors

Title

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>

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

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