



Plain language and patient education: A summary of current research

This is the first in a series of briefs that focus on evaluative research into the use of alternative means of health communication; they include plain language, audiotapes, videotapes, interactive media, and visual images. Searches of the medical and education literatures were conducted as part of a Health Literacy Project that is examining the communication needs of patients with limited literacy or other communication barriers. The guiding question for these searches was: 'What impacts have been documented in relation to the identified target groups?'

The Health Literacy Project is a joint initiative of The Centre for Literacy of Quebec and the Nursing Department of the McGill University Health Centre (MUHC).

Introduction

While health education increasingly relies on print materials, little has been done to ensure that patients can actually understand the information. Relatively little research has examined how health care professionals can provide important health care information to patients with limited literacy or other communication barriers. Research has focussed on:

- how participants receive and understand the information;
- how information and forms can be simplified to improve readability;
- the gap between readability and comprehension; and
- other factors that affect patients' use or disregard of print materials.

The issue of readability is particularly crucial when considering consent forms.

Methodology

This paper reviews 25 research articles and one abstract published in medical and education literatures on the subject of readability and patient understanding. Databases consulted in this search included: Aidsline, CancerLit, ERIC, Medline, PubMed. The studies included in this brief measure the effects of various facets of "readability" and

"understandability," such as simplified messages, lowered reading levels, writing style, the use of illustrated text and clear design concepts. A search for studies that measured the effects of easy-to-read health information on health status yielded no results.

Who was included?

Of the research we reviewed, most focussed on making health materials more readable for the general public. The majority of the studies included people who had completed at least nine years of schooling. While several studies acknowledged the correlation among poverty, lower levels of education and risk of poor health, only five looked specifically at patients with low reading abilities (Bell, Davis 1996, 1998a, 1998b, Michielutte). Most of the studies explicitly excluded people who did not read and write English.

Few researchers consciously studied ethnically or economically diverse populations. One American study discovered that while there was no difference in comprehension between ethnic groups, white participants were more likely to read print materials than African Americans (Dowe).

Findings

The question most studies tried to answer was "What can we change about this material, manual or form so that the average person



can read it more easily?” Researchers were startled to discover a great discrepancy between levels of education and reading level. In many cases, people were unable to understand materials which health professionals believed they “should” have been able to read. This raises questions about the ways in which patients interact with print, how materials can be made more readable, and other factors which could affect how patients interact with print. The results show that although some changes can make print materials more understandable, health professionals must also find other means of communicating with patients.

How do patients receive and understand information?

Given the choice, patients prefer clear materials with some illustrations (Bernardini, Bjorn, Cardinal, Davis 1996). Improving the layout and look of materials can have an impact on how participants react to them. In one study, patients trusted therapists who used clear consent forms more than therapists with unclear forms; they believed that the clear forms were more relevant, even though the two forms included essentially the same information (Wagner). In several studies, texts with illustrations emphasizing key points were better received than solid text (Michielutta, Moll). One study, which has yet to report its findings, posited that culturally-specific material was essential (Pardini) while another showed that patients preferred materials with culturally-sensitive illustrations (Davis 1998a). Some studies acknowledged that many patients simply do not use print as their preferred method to access information (Davis 1998a, Husted).

How can information and forms be made more readable?

Many researchers understood the principles of clear language that should have made health education materials easier to understand. They revised materials by breaking up longer sentences, substituting lay language for professional jargon, using point form, illustrations and white space, and lowering reading levels.

Most studies found that the ideal reading level for print materials was Grade 5 on the Flesch-Kincaid scale (Meade). However, even if a document was technically more readable, people did not necessarily understand more. Several studies found that the print material alone was not enough to ensure that patients were able to read, understand and remember information (Butow, Cardinal, Davis 1998a, Drossaert, Estey 1994, Tymchuk).

Why are “readable” materials not understood? Several studies noted that people with higher levels of education were more likely to understand print materials than people with less education. However, lowering the reading level of a text from, for example, grade 11 to grade 5 did not guarantee that people with grade 12 or even a year of university would understand the information (Cardinal). Several studies sought to understand why materials were so difficult to understand.

They concluded that:

- research is an artificial environment, which could affect how much attention patients give to the task of reading (Bjorn);
- materials which are more readable according to technical measures, such as readability formulas, may still use unfamiliar syntax, vocabulary or points of reference (Estey 1994, Reid);
- patients who need information may be affected by physical factors such as pain or discomfort, or stress caused by illness (Estey 1993); and
- there are significant differences between what patients want to know and what health professionals think they should know (Reid, Davis 1998a).

What factors affect patients’ use or disregard of print materials?

A few studies noted that people understand and remember what is important to them, yet the kinds of information that health professionals believe is important is not the same as the knowledge sought by patients (Reid). Most health education materials are developed with little regard for issues patients feel are important. An American study noted that patient education materials designed for low income, low literate minority women did not include information about cost, while cost was their most pressing question



THE CENTRE FOR LITERACY Research Briefs on Health Communications

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Publisher: The Centre for Literacy, 2003

Thanks to the National Literacy Secretariat, Human Resources Development Canada (HRDC) for funding this publication.

ISBN: 0-9734295-1-8

ISBN [SERIES]: 0-9734295-0-X



(Davis 1998a). In another study, physicians and patients were asked to underline the twenty most important points in the same leaflet. Physicians chose passages which described physiopathology, while patients indicated treatments and prognosis. From this, the study concluded that the most useful materials begin with what patients know and have questions about, rather than with what health professionals feel people should know (Reid).

Local context may be more important than technical elements of the text. A study of cancer patients in Australia (Butow), asked participants to examine five chemotherapy booklets and choose the most relevant and informative. Patients uniformly chose the booklet that reflected none of the principles of clear language. It had no illustrations or photographs and was written in a narrative format. The main difference between this booklet and the others was that it was produced by a local cancer society. Others were written by health care facilities or the national cancer association. Changes to print materials alone cannot address larger issues which more directly affected patients' experiences. A Dutch study examined whether a clear pamphlet about mammography would encourage women to return for follow-up tests after their initial breast screening. Although women read the clear pamphlet more thoroughly than the more complex version, they did not return because the procedure was painful and their interactions with staff were not pleasant. Researchers concluded that the leaflet was "too weak an intervention" to influence women's decision to return (Drossaert). The research showed that it does not matter how print materials are written if other factors are barriers to health care.

Looking ahead

Print materials alone do not help most people understand and remember the content. Some people do not and never will rely on print materials. In light of this, health professionals need to find other ways to provide patients with health information. Several researchers suggested that effective interventions would include more face-to-face interactions with patients, greater use of alternative media (including audio-visual materials) and opportunities for patients to discuss information with health care professionals and other patients. Future research could measure the effectiveness of:

- increasing the amount of time health professionals spend with patients (Tymchuk, Reid)
- supplementing print materials with presentations, instructions, group discussions and video materials (Davis 1996, Reid, Taub, Young);

- training members of specific communities to do outreach and patient education within their community, and to develop culturally-specific materials (Pardini).

Key Findings

- Medical research has not explicitly considered the impact of plain language materials on people with limited literacy.
- Many people cannot understand print materials alone. More interaction with patients is essential. Alternative media may help get the message across.
- Materials should address patients' concerns and questions. Materials based on what health professionals believe patients "should" know are less likely to be understood than materials developed in the community or with patients.

When developing print materials...

- Readability formulas help, but are not enough. Good writing requires excellent organization, clear headings, and an engaging style.
- Rhetorical devices such as repetition, questions, and concrete examples can help people absorb and remember information.
- Materials should aim for a Grade 5 reading level on the Flesch-Kincaid scale. However, readability formulas cannot predict whether patients will understand the material.
- Illustrations and headings can help, but colours can distract or become an additional code that people need to learn to "read."
- Materials should be developed in collaboration with target populations.

Limitations

The literature search for this review was limited to medical and education databases. Only studies with an evaluation component were included. Articles that only described projects were eliminated. Literature on plain language in the communications and legal fields which were not reviewed for this brief could provide some insight into applications in health.



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