THE HEALTH LITERACY ENVIRONMENT OF HOSPITALS AND HEALTH CENTERS

Rima E. Rudd ■ Jennie E. Anderson

Partners for Action:
Making Your Healthcare Facility Literacy-Friendly

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Rima E. Rudd
Principal Investigator, Health Literacy Studies
Harvard School of Public Health
National Center for the Study of Adult Learning and Literacy

Jennie E. Anderson
Coordinator, Health Literacy Studies
Harvard School of Public Health
National Center for the Study of Adult Learning and Literacy

Health Literacy Studies (HLS) is located in the Department of Society, Human Development, and Health at the Harvard School of Public Health. HLS is a research program linked to the National Center for the Study of Adult Learning and Literacy (NCSALL). The members of the HLS team are engaged in a variety of research and implementation studies focused on communication and literacy skills to explore the pathways from education to health outcomes, to determine literacy-related barriers to a variety of health services and care, and to identify skills needed to access care, manage chronic diseases, and participate in disease prevention activities. HLS' work is based in community, public health, healthcare, and adult education settings. HLS' goal is to help reduce health disparities.

Harvard School of Public Health
Department of Society, Human Development, & Health
Rima E. Rudd, Sc.D.
Health Literacy Studies
677 Huntington Avenue
Boston, MA 02115
healthliteracy@hsph.harvard.edu
(617) 432-1135

The Health Literacy Environment of Hospitals and Health Centers can be found online at www.ncsall.net and at www.hsph.harvard.edu/healthliteracy.

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Health and Adult Literacy and Learning Initiative, Harvard School of Public Health

Patients' ability to understand health and medical issues and directions is related to the clarity of the communication.

-Communicating Health: Priorities & Strategies for Progress
U.S. Department of Health and Human Services, 2003

Health literacy emerges when the expectations, preferences, and skills of individuals seeking health information and services meet the expectations, preferences, and skills of those providing information and services.

-Health Literacy: A Prescription to End Confusion
Institute of Medicine, 2004

Health literacy is the currency of success for improving emergency preparedness, eliminating health disparities, and preventing disease.

-U.S. Surgeon General Dr. Richard Carmona, 2004

Preface

Research indicates that increased awareness of and sensitivity to health literacy can enhance patients' learning, increase appointment keeping and compliance with regimens, improve patient safety, and remove barriers to accessing care. We ask you to consider the literacy demands of a hospital or health center.

The *health literacy environment* of a healthcare facility represents the expectations, preferences, and skills of those providing health information and services. Some of these demands are in the form of physical aspects of the hospital or health center, such as signs and postings. At the same time, access to and navigation of health services involves the use of a broader range of print materials such as applications, rights and responsibilities postings, payment calculations, medical history forms, directives, information booklets, and consent forms. In addition, the oral exchange in discussions with providers is of critical importance. Healthcare workers often use the language of their discipline, and words may get in the way of clear communication.

The Institute of Medicine (IOM) Committee on Health Literacy suggests that over 90 million U.S. adults do not have the literacy skills to access and use U.S. health systems. While the majority of U.S. adults can and do read, about half of U.S. adults have difficulty using commonly found print materials such as the dose charts on an over-the-counter medicine to accomplish everyday tasks such as determining how much medicine to give a child. Over 500 peer reviewed articles in public health and medical journals indicate a mismatch between the reading grade level of health materials and the average reading skills of U.S. adults. In addition, findings from the International Adult Literacy & Lifeskills Survey conducted in 2003 indicate that across industrialized nations, healthcare systems are becoming increasingly complex.

This guide and the review tools found within it offer an approach for analyzing literacy-related barriers to healthcare access and navigation. We designed this guide to assist chief executive officers, presidents, program directors, administrators, and healthcare workers at hospitals or health centers to consider the health literacy environment of their healthcare facilities and to analyze ways to reduce demands, to better serve their patients and staff and ultimately to increase revenue.

If you choose to undertake such a review, findings could spark discussions and help shape strategies to eliminate literacy barriers and enhance health literacy.

Rima E. Rudd & Jennie E. Anderson
Health Literacy Studies, Harvard School of Public Health
National Center for the Study of Adult Learning and Literacy

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We also thank Jon Crispin for his photographs, and Amy Lucid Inezian, Armand Inezian, and Marcus Dahmen for editorial assistance. We acknowledge the creativity and foundation work of TinVan Diep, Kelly Bruce, and Susan Koch-Weser.

[1] Literacy Alberta (formerly Alberta Association for Adult Literacy),"The Literacy Audit Kit". Developed by Susan Devins and Anne Scott in 1997. For more info on the complete kit please email office@literacyalberta.ca or visit www.literacyalberta.ca

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I

Introduction

Reports from the U.S. Department of Health and Human Services (HHS) and the Institute of Medicine (IOM) use the following definition of health literacy:

> ***The degree to which individuals have the capacity to obtain, process and understand basic health information and services needed to make appropriate health decisions.***

At the same time, however, both the HHS report *Communicating Health: Priorities and Strategies for Progress* and the IOM report *Health Literacy: A Prescription to End Confusion* propose an expanded understanding of the term so that both the skills of individuals and the demands of health systems are considered. The health literacy environment of a healthcare facility represents the demand side of the equation suggested by the IOM – the expectations, preferences, and skills of those providing health information and services. The purpose of this guide is to enhance communication and, at the same time, help reduce the literacy demands patients face in hospitals and health centers.

This guide focuses on key activities and tasks undertaken by both visitors and patients when they enter a healthcare facility. Patients and visitors will need to find their way to and around your facility, locate departments and offices, make use of materials given to them, fill out needed forms and questionnaires, as well as speak to staff. They will be expected to apply literacy skills to the tasks at hand.

Focus of this Guide

Section II contains the *Health Literacy Environment Review,* a tool designed to help you consider a broad range of issues and identify existing strengths and potential barriers. Findings will enable you and your team to discuss priorities and next steps for an institution-based health literacy initiative. Such initiatives are recommended by both the Institute of Medicine Committee on Health Literacy and by the Health Literacy and Patient Safety Working Group (2005-2006) of the Joint Commission on Accreditation of Healthcare Organizations.

Section III provides suggestions for interpretation of findings and for planning. This section contains recommendations drawn from the field of health literacy. Section IV contains additional background information on health literacy, as well as resources that you may find helpful as you move forward with your health literacy initiatives.

The guide concludes with two appendices. Appendix I, *Partners for Action Examples*, includes examples of partnerships formed between healthcare facilities and other community based organizations and agencies to improve health literacy. Appendix II, *Needs Assessment Tools,* contains a number of activities that can help prepare you for the *Health Literacy Environment Review.* You may choose to do all activities, or several of them, depending on your priorities, needs, and time. Activities in this section will enable members of your team to identify existing literacy-related strengths and limitations, and set the foundation for further analyses.

For example, the **telephone assessment** will provide you with a sense of the first impression people might have of your healthcare facility. The **walking interview** will help you gain insight into physical characteristics of your healthcare facility that enhance or diminish one's ability to find one's way. The **materials assessment tools** will help you understand components of print materials that can make reading easy or challenging. The suggested workshop will be valuable to any staff members who wish to learn how to assess materials. This may also be of particular interest for human subjects training.

The **oral exchange assessment** draws on patients' experiences and impressions of communication issues. The **current technology assessment** will provide you with a mechanism to assess where and how existing technology (televisions, telephones, computers, and kiosks) are currently being used within your healthcare facility. The findings for each of these activities could be used to complete the review ratings found in the *Health Literacy Environment Review.*

Potential Users of this Guide

Ideally, the CEO or president of a hospital or health center is the best person to take the lead on heading up the activities provided in this guide and to charge committees and/or individuals with the authority to carry out these activities.

The reviewers suggest people (by role) who could complete the ***Health Literacy Environment Review*** and the needs assessment activities (located in Appendix II)**. These include**: Community Vice President, Director of Community Affairs, Community Resource Director, Clinic Administrator, General Medicine Clinic Medical Director, Program Director, Program Manager, Education Director, Quality Improvement Director, faculty physicians or other faculty members (with interest), Business Manager, Director of Nursing, Nurse Manager, residents (with interest), Patient Safety Committee members, and some medical assistants.

The reviewers recommend key decision makers (by role) who could carry out a **post-review analysis. These include:** Executive or Senior Vice President, Associate Dean for Clinical Affairs, Chairs of Department, Practice Manager, General Medicine Clinic Medical Director, Clinic Director, Clinical Leadership Teams, Patient Safety Director, Business Administrator, Residency Director, select faculty members with expertise, Director of Nursing, Nurse Manager, and Administrative/ Clinical Staff.

Various healthcare facilities have approached health literacy activities differently—some have formed teams within their healthcare facility and others have formed partnerships with outside organizations such as adult education centers, libraries, and academic institutions. Whether your facility works independently or with an outside agency, we hope this guide enables you to identify and to begin eliminating literacy barriers within your healthcare facility.

We recommend that you begin the review process described in this guide by identifying key decision makers within your healthcare facility. Documented and articulated institutional policies covering print and oral exchange are critical in light of what we know about adult literacy in the U.S. Research indicates that increased awareness of and sensitivity to health literacy can enhance learning, increase appointment keeping and compliance with regimens, improve patient safety, remove access barriers, and reduce costs. Policies, protocols, and procedures are the cornerstones of efficient and consistent operation of any facility.

You will want to identify individuals who are best able to complete the review, those who are best able to consider the findings, and those who are best able to set and implement new policies, protocols, and procedures. They may not be all the same people. We provide you with a form on the following pages to help you identify key decision makers within your healthcare facility.

Key Personnel for Review & Planning Form

Please identify the people whose responsibility it is to…

1. Conduct new staff and volunteer orientation

_____ _____

_____ _____

2. Train staff and volunteers how to answer the telephone

_____ _____

_____ _____

3. Train staff and volunteers at the welcome or help desk

_____ _____

_____ _____

4. Offer professional development seminars

_____ _____

_____ _____

5. Develop patient orientation materials unique to your facility
   (such as welcome brochures, information booklets, and patients' rights & responsibilities postings)

_____ _____

_____ _____

6. Develop forms that patients fill out that are unique to your facility
   (such as intake forms, health insurance forms, and medical history forms)

_____ _____

_____ _____

Please continue onto next page→

7. Develop patient education materials unique to your facility
   (such as disease and medicine descriptions)

_____ _____

_____ _____

8. Develop community relations materials unique to your facility
   (such as mailings and promotional materials)

_____ _____

_____ _____

9. Develop maps and signs

_____ _____

_____ _____

10. Oversee Institutional Review Board (IRB) reviews

_____ _____

_____ _____

11. Develop and review informed consent materials

_____ _____

_____ _____

12. Set policies and protocols within departments/divisions

_____ _____

_____ _____

13. Oversee institutional policies and protocols

_____ _____

_____ _____

II
Health Literacy Environment Review

The *Health Literacy Environment Review* includes ratings for the following components:

1. Navigation
2. Print Communication
3. Oral Exchange
4. Technology
5. Policies & Protocols
6. Summary

Note: Many of the questions in this review tool are subjective; however, we have included them in an effort to raise awareness about these environmental components.

We acknowledge the fine work of Literacy Alberta (formerly Alberta Association for Adult Literacy) and note that, with their permission, we have incorporated the structure and some content from "The Literacy Audit Kit"[2]. Additionally, we thank and acknowledge the foundation work of Len and Ceci Doak[3] and the work of Jeanne McGee[4].

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[2] Literacy Alberta (formerly Alberta Association for Adult Literacy),"The Literacy Audit Kit". Developed by Susan Devins and Anne Scott in 1997. For more info on the complete kit please e-mail office@literacyalberta.ca or visit www.literacyalberta.ca.

[3] Doak, L., Doak, C., & Root, J. (1996) *Teaching patients with low literacy skills* (2nd ed). Philadelphia, PA: J.B. Lippincott Company. This is no longer in print but it is available on our Web site free of charge at www.hsph.harvard.edu/healthliteracy.

[4] U.S. Department of Health and Human Services. (1999) *Writing and designing print materials for beneficiaries: A guide for state Medicaid agencies* (HCFA Publication No. 10145). Baltimore, MD: Author: Jeanne McGee.

Part 1: Navigation Rating

Please check the ONE response that most accurately describes your hospital or health center today using the following rating scale:

1. **This is something that is not done.**
2. **This is done, but needs some improvements.**
3. **This is done well.**

A. Telephone System

	1	2	3
1. When a phone call is answered (either by person or an automated phone system), there is an option to hear information in a language other than English.	☐	☐	☐
2. If there is an automated phone system, there is an option to speak with an operator or help desk.	☐	☐	☐
3. If there is an automated phone system, there is an option to repeat menu items.	☐	☐	☐
4. Information is offered (either by person or an automated phone system) with plain, everyday words.	☐	☐	☐

B. Entrance

	1	2	3
5. The healthcare facility's name is clearly displayed on the outside of the building.	☐	☐	☐
6. All entry signs are visible from the street.	☐	☐	☐
7. The signs use plain, everyday words such as "Walk-In" rather than formal words such as "Ambulatory Care".	☐	☐	☐

C. Lobby

	1	2	3
8. There is a map in the lobby.	☐	☐	☐
9. The map includes a key.	☐	☐	☐
10. The map shows the present location with a "you are here" and/or a star or symbol.	☐	☐	☐
11. Handheld maps are available for people to take with them.	☐	☐	☐
12. There is a welcome or information desk.	☐	☐	☐
13. A sign indicates the welcome or information desk.	☐	☐	☐

Part 1: Navigation Rating *(continued)*

Please check the ONE response that most accurately describes your hospital or health center today using the following rating scale:

1. **This is something that is not done.**
2. **This is done, but needs some improvements.**
3. **This is done well.**

D. Staff Assistance

	1	2	3
14. Staff or volunteers are available at or near the main entrance to help visitors.	☐	☐	☐
15. Multilingual staff or volunteers are available at or near the main entrance to help visitors.	☐	☐	☐
16. Staff or volunteers are present at the welcome or information desk.	☐	☐	☐
17. Multilingual staff or volunteers are available at the welcome or information desk.	☐	☐	☐
18. Staff or volunteers wear identification such as a button, uniform, or nametag.	☐	☐	☐

E. Hallways: Navigation Ease

	1	2	3
19. Maps are posted at various locations around the facility.	☐	☐	☐
20. Words used for locations on signs throughout the facility remain consistent (i.e. the "Cafeteria" is always referred to as "Cafeteria", not as "Café" or "Restaurant").	☐	☐	☐
21. Consistent symbols/graphics are used on signs throughout the facility.	☐	☐	☐
22. Overhead signs use large, clearly visible lettering.	☐	☐	☐
23. Wall (eye level) signs use large, clearly visible lettering.	☐	☐	☐
24. Signs are written in English and in the primary languages of the populations being served (i.e., if most of the patients speak English and Spanish, signs are written in English and Spanish).	☐	☐	☐
25. Color codes are used consistently on the walls or floors throughout the facility to mark paths to and from various sections of the facility.	☐	☐	☐

Part 1: Navigation Rating *(continued)*

Please check the ONE response that most accurately describes your hospital or health center today using the following rating scale:

1. **This is something that is not done.**
2. **This is done, but needs some improvements.**
3. **This is done well.**

F. Service and Specialty Areas (Medical Records, Pharmacy, MRI, etc.)

	1	2	3
26. The name of the clinic/service area is clearly posted.	☐	☐	☐
27. Sign-in procedures are clearly indicated.	☐	☐	☐
28. Staff offer help for completing any needed paperwork.	☐	☐	☐
29. Materials provided to patients have been assessed for their reading grade level (8th grade or below).	☐	☐	☐
30. Materials provided to patients have been assessed for their cultural appropriateness.	☐	☐	☐
31. Materials provided to patients are written in the primary languages of the populations being served.	☐	☐	☐

Part 1: Navigation Rating Summary

Calculating Your Navigation Score			
Response	**Tally**	**Multiply**	**Score**
1. **This is something that is not done.**		**x 1 =**	
2. **This is done, but needs some improvements.**		**x 2 =**	
3. **This is done well.**		**x 3 =**	
		TOTAL SCORE =	

Interpreting Your Navigation Score	
Score Range	**Next Steps**
0-30	**Begin a focused initiative to eliminate literacy-related barriers.**
31-61	**Augment efforts to eliminate literacy-related barriers.**
62-93	**Continue to monitor and eliminate literacy-related barriers.**

Part 2: Print Communication Rating

Type of material being assessed (please check one):

- ☐ Community relations
- ☐ Patient/client orientation
- ☐ Forms patients fill out
- ☐ Follow up notifications
- ☐ Patient education materials
- ☐ Legal materials
- ☐ Discharge preparation

Purpose of the material being assessed (please check one):

- ☐ Deliver information (e.g., patient education about asthma)
- ☐ Provide directions (e.g., directions for using a peak flow meter)
- ☐ Collect information (e.g., a health history form)

Please check the ONE response that most accurately describes the print material using the following rating scale:

1. **This is something that is not done.**
2. **This is done, but needs some improvements.**
3. **This is done well.**

A. Writing Style

	1	2	3
1. The material emphasizes and summarizes the main points.	☐	☐	☐
2. The information is grouped into meaningful sections.	☐	☐	☐
3. The material is written in the active voice and in a conversational style.	☐	☐	☐
4. The material uses devices to engage and involve the reader, such as question and answer format, true-or-false, stories, or dialogues.	☐	☐	☐
5. The words and sentences are generally short, simple, and direct.	☐	☐	☐
6. If medical terms (such as "dosage" or "monitoring") are used, they are clearly explained with helpful examples.	☐	☐	☐
7. The reading grade level is that of the average U.S. adult (8th grade or below).	☐	☐	☐
8. Translations use plain, everyday words, and short sentences.	☐	☐	☐

Part 2: Print Communication Rating *(continued)*

Please check the ONE response that most accurately describes the print material your hospital or health center uses, using the following rating scale:

1. **This is something that is not done.**
2. **This is done, but needs some improvements.**
3. **This is done well.**

B. Organization and Design

	1	2	3
9. The material uses headings, subheadings, or other devices to signal what is coming next.	☐	☐	☐
10. The labels for sections, headings, and subheadings are clear.	☐	☐	☐
11. The material looks uncluttered, with generous margins and plenty of white space.	☐	☐	☐
12. The graphic design uses devices such as contrast, bullets, and indentation to signal the main points and make the text easy to skim.	☐	☐	☐
13. The material uses bullets effectively (size, shape, spacing, and color.)	☐	☐	☐
14. Explanatory illustrations, diagrams, tables, charts, and graphs are clearly labeled and placed near the text that introduces them.	☐	☐	☐

C. Type Style, Size of Print, and Contrast with Paper

	1	2	3
15. The font size is 12-point or greater.	☐	☐	☐
16. The text uses CAPITAL letters only when needed grammatically.	☐	☐	☐
17. The text avoids splitting words across two lines.	☐	☐	☐
18. There is contrast between the printed text and the paper.	☐	☐	☐
19. The print does not overlay pictures or designs.	☐	☐	☐

Part 2: Print Communication Rating *(continued)*

Please check the ONE response that most accurately describes the print material your hospital or health center uses, using the following rating scale:

1. **This is something that is not done.**
2. **This is done, but needs some improvements.**
3. **This is done well.**

D. Photographs, Illustrations, Symbols, and Diversity

	1	2	3
20. The material uses photos, illustrations, symbols, patterns, and other visuals to reinforce key messages.	☐	☐	☐
21. The material avoids using cartoons, humor, and caricature, which may be understood as offensive.	☐	☐	☐
22. The people and activities shown in photos or illustrations are contemporary.	☐	☐	☐
23. The people and activities shown in photos or illustrations are representative (in their demographics, physical appearance, behavior, and cultural elements) of the intended audience of the materials.	☐	☐	☐
24. The material shows awareness of and respect for diversity, and uses culturally appropriate words and examples.	☐	☐	☐

Part 2: Print Communication Rating Summary

Calculating Your Print Communication Score			
Response	**Tally**	**Multiply**	**Score**
1. **This is something that is not done.**		**x 1 =**	
2. **This is done, but needs some improvements.**		**x 2 =**	
3. **This is done well.**		**x 3 =**	
		TOTAL SCORE =	

Interpreting Your Print Communication Score	
Score Range	**Next Steps**
0-23	**Begin a focused initiative to eliminate literacy-related barriers.**
24-47	**Augment efforts to eliminate literacy-related barriers.**
48-72	**Continue to monitor and eliminate literacy-related barriers.**

Part 3: Oral Exchange Rating

Please check the ONE response that most accurately describes staff oral communication skills at your hospital or health center today using the following rating scale:

1. **This is something that is not done.**
2. **This is done, but needs some improvements.**
3. **This is done well.**

Oral Exchange

	1	2	3
1. Staff offers everyone help (i.e., filling out forms, getting directions) regardless of appearance.	☐	☐	☐
2. Multilingual staff are available to help people.	☐	☐	☐
3. Staff uses sentences that are short, direct, and use plain, everyday words.	☐	☐	☐
4. Staff adjusts the pace of their speech when they work with people for whom English is a second language.	☐	☐	☐
5. Staff checks in with patients by asking "Am I being clear?" rather than "Do you understand?"	☐	☐	☐
6. Staff asks patients if they have any questions.	☐	☐	☐
7. Staff uses audio and/or videotapes when such materials are available.	☐	☐	☐
8. Translation services are available or can be called in with short notice.	☐	☐	☐

Part 3: Oral Exchange Rating Summary

Calculating Your Oral Exchange Score			
Response	**Tally**	**Multiply**	**Score**
1. **This is something that is not done.**		**x 1 =**	
2. **This is done, but needs some improvements.**		**x 2 =**	
3. **This is done well.**		**x 3 =**	
		TOTAL SCORE =	

Interpreting Your Oral Exchange Score	
Score Range	**Next Steps**
0-8	**Begin a focused initiative to eliminate literacy-related barriers.**
9-16	**Augment efforts to eliminate literacy-related barriers.**
17-24	**Continue to monitor and eliminate literacy-related barriers.**

Part 4: Technology Rating

Please check the ONE response that most accurately describes the current technology your hospital or health center uses, using the following rating scale:

1. **This is something that is not done.**
2. **This is done, but needs some improvements.**
3. **This is done well.**

Technology	1	2	3
Televisions			
1. Televisions are available to patients in one or more locations (i.e., waiting areas, testing sites, pharmacy).	☐	☐	☐
2. Televisions are equipped for DVD or VCR use.	☐	☐	☐
3. Televisions are used for orientation purposes.	☐	☐	☐
4. Televisions are used for educational purposes.	☐	☐	☐
Telephones			
5. House telephones are available to patients in one or more locations (i.e., hallways, waiting areas, testing sites, pharmacy).	☐	☐	☐
6. House telephones offer directions to people throughout the facility.	☐	☐	☐
7. House telephones offer links to translation services.	☐	☐	☐
Computers			
8. Computers are available to patients in one or more locations (i.e., waiting areas, testing sites, pharmacy, resource rooms).	☐	☐	☐
9. Computers are programmed for orientation purposes.	☐	☐	☐
10. Computers are programmed for educational purposes.	☐	☐	☐
11. Computers have Internet connections.	☐	☐	☐
12. Computers have headsets connected to them.	☐	☐	☐
13. Exam rooms have computers where providers can show patients parts of their electronic medical records.	☐	☐	☐
14. Providers can print out specific patient education materials.	☐	☐	☐
Kiosks			
15. Kiosks are available to patients in one or more locations (i.e., waiting areas, testing sites, pharmacy, resource rooms).	☐	☐	☐
16. Kiosks are programmed for orientation purposes.	☐	☐	☐
17. Kiosks are programmed for educational purposes.	☐	☐	☐
18. Kiosks have headsets connected to them.	☐	☐	☐

Part 4: Technology Rating Summary

Calculating Your Technology Score			
Response	**Tally**	**Multiply**	**Score**
1. **This is something that is not done.**		**x 1 =**	
2. **This is done, but needs some improvements.**		**x 2 =**	
3. **This is done well.**		**x 3 =**	
		TOTAL SCORE =	

Interpreting Your Technology Score	
Score Range	**Next Steps**
0-17	**Begin a focused initiative to eliminate literacy-related barriers.**
18-35	**Augment efforts to eliminate literacy-related barriers.**
36-54	**Continue to monitor and eliminate literacy-related barriers.**

Part 5: Policies & Protocols Rating

Please check the ONE response that most accurately describes the policies and protocols at your hospital or health center today, using the following rating scale:

1. **This is something that is not done.**
2. **This is done, but needs some improvements.**
3. **This is done well.**

A. Use of Print

	1	2	3
1. All print materials for public display use plain, everyday words and phrases.	☐	☐	☐
2. All print materials for patients are written at a reading grade level of 8 or below.	☐	☐	☐
3. All new print materials are piloted with members of the intended audience.	☐	☐	☐
4. All patients have an opportunity to ask questions about policies and protocols.	☐	☐	☐

B. Oral Exchange

	1	2	3
5. All staff and volunteers use plain, everyday words and phrases in all discussions with patients.	☐	☐	☐
6. Staff trained in translations services are available.	☐	☐	☐
7. Protocols prohibit the use of children or untrained staff or volunteers as medical translators.	☐	☐	☐
8. All translators use plain, everyday words and phrases.	☐	☐	☐

Part 5: Policies & Protocols Rating *(continued)*

Please check the ONE response that most accurately describes the policies and protocols at your hospital or health center today, using the following rating scale:

1. **This is something that is not done.**
2. **This is done, but needs some improvements.**
3. **This is done well.**

C. Staff Orientation

	1	2	3
9. The facility holds an orientation program for all staff and volunteers who may interact with patients. All staff and volunteers include:			
a. Administrative staff (support staff, coordinator)	☐	☐	☐
b. Intake staff	☐	☐	☐
c. Discharge coordinator	☐	☐	☐
d. Nursing (RNs, LPNs)	☐	☐	☐
e. Medical (MDs, NPs, PAs, DOs, DMD)	☐	☐	☐
f. Pharmacy (pharmacists, educators, technicians)	☐	☐	☐
g. Allied health professionals (social workers , physical therapists, occupational therapists, educators, medical assistants, x-ray technicians)	☐	☐	☐
h. Translation service staff	☐	☐	☐
i. Telephone and help desk staff	☐	☐	☐
j. Custodial staff	☐	☐	☐
k. Volunteers	☐	☐	☐
10. Orientation for all staff and volunteers includes a description of the physical layout and design of the facility.	☐	☐	☐
11. Orientation for all staff and volunteers includes a discussion about literacy issues.	☐	☐	☐
12. Orientation for all staff and volunteers includes information about the patient population (cultures, languages and other demographics).	☐	☐	☐

Part 5: Policies & Protocols Rating (*continued*)

Please check the ONE response that most accurately describes the policies and protocols at your hospital or health center today, using the following rating scale:

1. **This is something that is not done.**
2. **This is done, but needs some improvements.**
3. **This is done well.**

D. Staff Skills Building (print communication and oral exchange)

	1	2	3
13. The facility offers on-site training or workshops about health literacy issues related to print communication for all relevant staff and volunteers.	☐	☐	☐
14. The facility offers on-site training or workshops about health literacy issues related to oral exchange for all relevant staff and volunteers.	☐	☐	☐
15. The facility offers on-site training or workshops about how to use existing and new technologies (i.e., exam room computers, use of electronic medical records) for all relevant staff and volunteers.	☐	☐	☐
16. The facility offers CME credit courses related to health literacy and communication for all professional staff.	☐	☐	☐
17. The facility offers employees adult education and English for Speakers of Other Languages (ESOL) courses to build literacy skills.	☐	☐	☐
18. All staff know about adult literacy resources in the community. If asked, they could tell a patient or fellow employee where to get help to improve literacy skills.	☐	☐	☐
19. The facility has a resource room available to all staff and volunteers with DVDs, booklets, Web sites, etc. about health literacy issues.	☐	☐	☐

Part 5: Policies & Protocols Rating Summary

Calculating Your Policies & Protocols Score			
Response	**Tally**	**Multiply**	**Score**
1. **This is something that is not done.**		**x 1 =**	
2. **This is done, but needs some improvements.**		**x 2 =**	
3. **This is done well.**		**x 3 =**	
		TOTAL SCORE =	

Interpreting Your Policies & Protocols Score	
Score Range	**Next Steps**
0-18	**Begin a focused initiative to eliminate literacy-related barriers.**
19-37	**Augment efforts to eliminate literacy-related barriers.**
38-57	**Continue to monitor and eliminate literacy-related barriers.**

Part 6: Summary Sheet for Review & Analysis

Calculating Your Overall Score for the Health Literacy Environment Review	
Section of Review	**Score for Section**
1. Navigation	
2. Print Communication	
3. Oral Exchange	
4. Technology	
5. Policies & Protocols	
TOTAL =	

Interpreting Your Overall Score for the Health Literacy Environment Review	
Score Range	**Next Steps**
0-100	**Begin a focused initiative to eliminate literacy-related barriers.**
101-200	**Augment efforts to eliminate literacy-related barriers.**
201-300	**Continue to monitor and eliminate literacy-related barriers.**

Part 6: Summary Sheet for Review & Analysis *(continued)*

Institution-Based Health Literacy Initiative

Strengths

_____

_____

_____

Weaknesses

_____

_____

_____

Priority/Start Point

_____

_____

_____

Key Staff Involved in Institution-Based Health Literacy Initiative

_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

III

Action Plan

This section of the guide focuses on the findings from the *Health Literacy Environment Review* and provides recommendations for improving the literacy environment of a facility. First, however, it is important to note that it is unlikely that any institution can eliminate all literacy barriers. Some, such as signage, may be too costly to change. Some, such as the use of professional jargon, represent a cultural change that may only happen over time. Others, such as patient education materials, may only change if and when better materials become available. Some, such as discharge preparation information, can be modified immediately.

An action plan for a health literacy initiative must be specific to a healthcare facility, and reflect priorities as well as cost considerations. Small improvements can make a difference. The following is the section outline:

Options for Reducing Literacy-Related Barriers

- Navigation
- Print Communication
- Oral Exchange
- Technology
- Policies & Protocols

Navigation

Navigation tools such as maps, signs, and staff are often available in healthcare facilities to help people find their way to and around the facility. However, these tools are only useful for patients when they are easily accessible and understandable. In the following pages, we provide you with recommendations for increasing the visibility and readability of navigation tools in your healthcare facility based on the following key areas:

- Telephone
- Entrance
- Lobby
- Guidance
- Maps and Signs

Recommendations for Telephone Improvement

The telephone is often the first contact a person has with a healthcare facility. This initial interaction can shape a person's impressions of that healthcare facility.

An *automated telephone system* can be improved with the following adjustments:

- Provide patients with the option to speak with a person.
- Provide patients with the option to repeat menu items.
- Use clear and simple language.
- Use a conversational tone.
- Use a slow pace.
- Provide patients with directions to the healthcare facility using multiple forms of transportation, including public transportation.

A *person* who answers the telephone can be offered a training program that provides protocols and opportunities for practicing to:

- Speak at a slow and relaxed pace.
- Maintain a friendly conversational tone.
- Use plain, everyday words and phrases.
- Answer common questions, such as directions to the healthcare facility using multiple forms of transportation including public transportation.

Recommendations for Entrance Improvement

People may encounter problems locating a healthcare facility for the first time when the facility does not have visible signs on the outside of the buildings. This can be particularly challenging when a healthcare facility has multiple entrances that are not all clearly labeled with signs.

The entrance to the healthcare facility can…

- Display the facility's name clearly on the outside of the building, so patients can recognize they are in the right place.
- Provide entry signs that are visible from the street.
- Use signs with plain, everyday words such as "Walk-In" rather than medical words such as "Ambulatory Care" or "Outpatient Services".

Recommendations for Lobby Improvement

People can often feel intimidated in facilities such as hospitals and health centers. A welcome sign and information desk can help patients feel a sense of welcome.

The lobby of a healthcare facility can…

- Provide a sign with words of welcome.
- Provide a large wall map with a key and an indication of present location, such as a statement of 'you are here' or a star.
- Provide patients with a welcome or information desk, with a sign indicating its purpose.
- Provide artwork that reflects various cultural groups, or photographs of the local area or people.

Recommendations for Guidance Improvement

People often respond warmly when assistance, such as help with directions, is available to them.

A healthcare facility can have staff members and volunteers who …

- Are available at or near the main entrance to help visitors.
- Wear identification such as a button, uniform, or tag.
- Provide patients with customized handheld maps (with a highlighted pathway or destination point).

Recommendations for Map and Sign Improvement

National surveys of adult literacy skills indicate that many people have difficulty using maps and signs. Therefore, it is important for healthcare facilities to use simple and clear maps and signs so that their patients can more readily use them. The placement of signs is also important. For example, it is easy for people to walk past flat signs, such as wall signs. When wall signs are combined with other signs, such as overhead signs or signs jutting from the wall, it is often easier for people to notice them.

The maps in the facility center can…

- Be posted at various locations around the facility.
- Include a key.
- Indicate present location with a "you are here" and/or a star.
- Use colors when the color codes on the maps reflect colors on the walls or floors of the healthcare facility.

The signs in the facility can…

- Use consistent symbols/graphics.
- Use consistent words (i.e., "Cafeteria" is always referred to as "Cafeteria", not "Café" or "Restaurant").
- Use large, clearly visible lettering on overhead signs.
- Use large, clearly visible lettering on wall signs (eye level signs).
- Use common words and graphics.
- Indicate each service or clinic site with a sign (i.e., "Medical Records").

Resources on Navigating Healthcare Facilities

Rudd, R.E. (2004). Navigating hospitals: Literacy barriers. *Literacy Harvest, 11*(1), 19 24.

Rudd, R.E., Renzulli, D., Pereira, A., & Daltroy, L. (2005). Literacy demands in healthcare settings: The patient perspective. In J.E. Schwartzberg, J.B. VanGeest, & C.C. Wang (Eds.), *Understanding health literacy: Implications for medicine and public health* (pp. 69-84). Chicago, IL: American Medical Association.

Print Communication

Patients are often inundated with materials (that focus on community relations, patient orientation, follow-up, patient education, legal materials, forms patients fill out, and discharge preparation information) when they go to a healthcare facility. These materials are only helpful for patients when they are written at the appropriate average reading grade level (~grade 8 or below) and have a simple layout and design. The following pages include recommendations for:

- Creating Materials
- Assessing Materials

Recommendations for Creating Materials

When staff members develop new materials, they should consider the following:

1. Use plain language

Plain language is defined as a clear, simple, and conversational words and style. Plain language materials present information in a format that considers reading ease based on the organization and style of the text. Recommendations include:

Organization

- Open by addressing issues that are of greatest interest to the reader (this requires pilot testing).
- Group information into meaningful sections with clear headings.
- Emphasize and summarize main points.

Style

- Use everyday words (e.g., use instead of utilize).
- Explain terms and offer examples.
- Avoid long and complex sentences.
- Write in the active voice.
- Engage the reader by referencing a shared context, or by using a question and answer format, true or false, stories, or dialogues.
- Link information to trusted sources.
- Limit text to most important concepts, and avoid extra information.

2. Apply layout and design elements that make reading easy

The design of a material can make reading easier or more difficult. Recommendations include the following:

Type and Spacing

- Use a readable type style—a footed font (serif) in 12-point size.
- Use appropriate spaces between lines—generally 1.2 to 1.5 spacing.
- Provide good contrast between the paper and the text.
- Do not print words on shaded or patterned background.
- Use upper and lower case and avoid all CAPITAL LETTERS.
- Include ample white space on the page.

Margins and Lines

- Use large margins (at least 1 inch on each side).
- Leave the right margin jagged (do not fully justify text).
- Do not split words across two lines.

Overall Design

- Be consistent.
- Avoid clutter.
- Provide a guide for finding key information.
- Clearly label all illustrations and charts:
  - → Offer explanations.
  - → Make legends clear.
  - → Place charts as close as possible to explanatory text.
  - → Avoid wrapping text around illustrations.
- Use consistent and easily recognized headings.
- Signal main points with bold font or highlights.

3. Use rigorous methods to develop materials

Avoid developing materials casually or informally. Be sure the purpose and proposed use of the materials is identified. All materials should be tested with members of the intended audience to 1) check for proposed use, value, and shared meaning, and to 2) test the organization, layout, and design. Recommendations include:

- Review all materials, and use a consistent checklist. We provide you with a few sample checklists on **pages 41-43.**
- Engage members of the intended audience in the development and review process.
- Re-work the materials based on reviews.
- Pilot materials with members of the intended audience.
- Re-work materials based on pilot test findings and suggestions.

Recommendations for Assessing Materials

Many tools (such as the SMOG, FRY, and the Flesch-Kincaid) are available to help assess the reading grade level of print materials. Most of these tools have been used extensively in the education field and have been well-tested. In addition, there are several tools available to help us conduct broader assessments of written health materials. We provide several of these tools on **pages 129-142** of this guide.

Conduct reading grade level assessments

Assessments of the reading grade level of text offer some insight into the level of difficulty of print materials. Most reading grade level scores focus on the length of sentences and the vocabulary (generally assessed by number of syllables in words) in a text. Recommendations for improving reading grade levels include:

- **Avoid using long sentences**
  Long sentences often contain phrases set aside by commas, multiple ideas, and/or lists. Poor readers often read slowly. They have problems with long sentences because they can lose the main idea partway through the sentence.

- **Avoid using long multi-syllabic words**
  Multi-syllabic words are considered an indicator of vocabulary difficulty (e.g., *medication* for *medicine*). Poor readers often need to sound out words, and longer words present a bigger challenge. Vocabulary development requires background knowledge and exposure.

Resources for Creating and Assessing Print Materials

A 15 Step Process for Creating Materials

(from Health Literacy Studies)

1. Determine the intended audience for the materials.

2. Determine the need for the materials under consideration.

3. Determine the potential use of the materials. Ask:
   - *How will the potential audience use the materials?*
   - *What will the readers do after reading the materials?*
   - *Do the materials prepare the readers to take recommended action?*

   NOTE: Be prepared to stop the project if this material is available elsewhere in adequate form, or if the material is of no perceived use to the intended audience.

4. Develop a distribution and evaluation plan.
   - Consider who will distribute the materials. Studies indicate that when a doctor gives materials to a patient, the patient is more likely to use them than when materials are simply made available.
   - Develop a small evaluation study to determine actual use and outcomes. Questions of interest might include: *Did you read this material? Was it helpful for activity X? Did you share this material with others?*

5. Divide the information into logical 'chunks' or sections, and provide a heading for each section.

6. Check all medical and scientific information with experts.

7. Determine the order of information. Have the writer (or writing team) work closely with members of the intended audience. Ask the writing partners the following questions:
   a. *What topic is most important to you?*
   b. *What information is missing?*

Instructions continue onto next page→

8. Prepare a 1st draft of the text in the order of interest to readers.

9. Check the words in the text.
   - Be sure the materials use everyday words
   - Avoid jargon
   - Provide a glossary of medical or scientific words, if needed.

10. Check the sentences in the text to be sure that each sentence conveys one idea.
    - If a sentence is too long, break it up into two or three sentences.
    - Avoid clauses that add information to a sentence. If the information is important, it deserves its own sentence.
    - Avoid sentences that include lists. Instead, use bulleted lists when needed.

11. Conduct a SMOG assessment. Re-examine words and long sentences for needed re-writing.

12. Review the 2nd draft with members of the intended audience and an adult educator. Ask the reviewers to think of a neighbor, friend, relative, or student, as appropriate. Ask: *Where would this person face some problems? What should be changed to make the information clearer to this person? How would this person use this material?*

NOTE: Be prepared to stop the production process if this material is of no perceived use to the intended audience.

13. Re-write the text and prepare the 3rd draft with layout, design and visuals, as needed.
    - Use a 12 point clear font.
    - Include plenty of white space.
    - Highlight headings.
    - Use graphics that highlight a theme and/or provide a needed illustration.
    - Provide a glossary of terms, if needed.

14. Pilot test with members of the intended audience. Ask: *Would you pick this up? Do you think that this material was developed for people like you? What would make this more appealing?* Make necessary changes.

15. Print materials; distribute as planned; evaluate use and outcome

CDC's Checklist for Easy-to-Read Print Materials

(from CDC's *Simply Put, 2nd ed., 1999)*

- ☐ Have you limited your messages to 3-4 per document (or section)? Have you left out information that is "nice to know" but not necessary?
- ☐ Is the most important information at the beginning of the document, and repeated at the end?
- ☐ Have you identified action steps or desired behaviors for your audience?
- ☐ Is information presented in an order that is logical to your audience?
- ☐ Is information chunked, using headings and subheadings? Do lists include bullets?
- ☐ Is the language culturally appropriate? And the visuals?
- ☐ Have you eliminated as much jargon and technical language as possible? Is technical or scientific language explained?
- ☐ Have you used concrete nouns, active voice, and short words and sentences? Is the style conversational?
- ☐ Is the cover attractive to your target audience? Does it include your main message?
- ☐ Are your visuals simple and instructive rather than decorative? Do they help explain the messages found in the text?
- ☐ Are your visuals placed near related text? Do they include captions?
- ☐ Does your document have lots of white space? Are margins at least ½ inch?
- ☐ Is the print large enough (at least 12 point) and does it have serifs?
- ☐ Have you used bold, underlining, and text boxes to highlight information? And avoided using all capital letters?
- ☐ Is text justified on the left only? Did you use columns?

Resources for Creating and Assessing Print Materials *(continued)*

Simply Put. **Centers for Disease Control and Prevention (CDC).**
This guide helps you translate technical and scientific language into information that captures and holds the interest of your intended audience. It provides tips for writing simply, using visuals, and organizing information for easy recall and understanding. *Simply Put* is available at http://www.cdc.gov/od/oc/simpput.pdf.

Teaching Patients with Low Literacy Skills, Second Edition. **(1996). Authors: Doak, Doak and Root. Philadelphia, PA: J.B. Lippincott Company.**
This 'classic' is for health educators and healthcare providers who wish to improve communication with adults who have limited literacy skills. The book covers a wide range of topics, including educational theories, how to test for literacy skills, how to assess the suitability of materials, and how to create easily understood visuals. The authors discuss how to test and revise health education materials. The book includes directions for using the Fry formula, a copy of the REALM, and a copy of the Suitability Assessment of Materials (SAM). The SAM, an assessment tool, was created by Doak and Doak. This is no longer in print but it is available on our Web site free of charge at www.hsph.harvard.edu/healthliteracy.

Making Health Communication Programs Work: A Planner's Guide. **(1989). U.S. Department of Health and Human Services, Public Health Service, National Institutes of Health and Office of Cancer Communications, National Cancer Institute.**
This guide has become a standard reference and is often referred to as the 'pink book'. In it, the Office of Cancer Communications sets out key principles for each stage of communication program development. The section on developing and pretesting materials includes considerations for message construction, tips for developing public service announcements (PSAs), and methods for pretesting. It offers practical steps for evaluating communication programs. Appendices include the SMOG formula, a focus group moderator's guide, and helpful resources on designing a public service announcement. The guide is available at http://www.cancer.gov/pinkbook.

Clear and to the Point: Guidelines for Using Plain Language at NIH. **National Institutes for Health.**

This summary provides guidelines and useful examples of how to write in plain language, engage readers, display information, and evaluate materials. *Clear and to the Point* is available at http://execsec.od.nih.gov/plainlang/guidelines/index.html

Clear & Simple: Developing Effective Print Materials for Low Literate Readers. **(1994). National Institutes of Health, National Cancer Institute.**

This guide outlines a process for developing materials with and for people with limited literacy skills. The guide contains five sections. Each section highlights specific considerations for materials development: defining the target audience, conducting audience research, developing a concept for the product, developing content and visuals, and pretesting and revising materials. Clear & Simple is concise and easy to use, with key information presented in bulleted lists. It contains many illustrations and offers real world examples. The guide includes a list of low-literacy publications and software and is available at http://www.nci.nih.gov/cancerinformation/clearandsimple.

The Right to Understand: Linking Literacy to Health and Safety Training**. (1994). Authors: Szudy and Arroyo. Labor Occupational Health Program, University of California at Berkeley.**

This manual is designed to help safety and health trainers meet the needs of workers with limited literacy skills. However, it offers clear and focused tips and processes for the development of any materials. Contents include sections on how to develop easy-to-read materials, how to evaluate materials, and how to conduct trainings for people with a wide range of literacy skills. The 'How To' section includes writing, design, and illustration tips. The 'Evaluation' section provides a quick checklist, instructions on using the Fry formula, a guide to field testing materials, sample questions for focus groups, and many case studies on field testing. For more information go to http://socrates.berkeley.edu/~lohp/Publications/Literacy_And_Safety_Training/literacy_and_safety_training.html.

***Creating Plain Language Forms for Seniors: A Guide for the Public, Private and Not-for-Profit Sectors.* (1998). National Literacy and Health Program and the Canadian Public Health Association.**
This guide, developed with attention to the needs of seniors, offers clear guidelines for creating forms in plain language. However, the many tips offered can be applied to all health-related forms. The guide includes a section on how to use clear verbal communication with patients who need help filling in forms. The guide also includes sections on the benefits of plain language, forms as barriers, and a Plain Language Forms Tool Kit. Appendices include a glossary of plain words, and instructions on how to use the SMOG. For more information, contact the Canadian Public Health Association at www.cpha.ca.

***Beyond the Brochure: Alternative Approaches to Effective Health Communication.* (1994). AMC Cancer Research Center and Centers for Disease Control and Prevention.**
Beyond the Brochure was developed by the AMC Cancer Institute in the mid 1990s. The goal of the writers is to help readers consider multi-media education materials. This guide presents innovative interventions and strategies to reach the audience. The guidebook begins with a section on audience assessment and participatory processes. The section on pretesting materials includes basic guidelines for discussion guide development. This publication is available at no cost at www.cdc.gov/cancer/nbccedp. Click on 'Resources and Publications'.

Resources for Creating and Assessing Web sites

Bobby: www.cast.org/bobby

Bobby is a free Web-based service to help identify and repair significant barriers to access. Bobby was created by the Center for Applied Special Technology (CAST). To use Bobby, you simply enter the URL of the Web site you want tested and click Submit. Bobby limits the number of pages it will check, but you can test an entire set by downloading a version of Bobby.

The Children's Partnership: www.childrenspartnership.org

The Children's Partnership (TCP) is a national non-profit organization that informs leaders and the public about the needs of America's children. TCP recently published a report titled "Online Content for Low-Income and Underserved Americans: The Digital Divide's New Frontier." The report examines and makes recommendations about Internet content for underserved Americans, including those with limited literacy skills. The full report is available on TCP's Web site.

Jakob Neilsen's site: www.useit.com

This site provides tips for the design of Web pages, including information on writing for the Web and guidelines for improving usability of the Web for people with disabilities.

The Trace Center, a resource on Web design: www.trace.wisc.edu/world/Web

This site is focused on usability and access. It includes information on: Web site guidelines, Web access tools, resources on disability and Web use, forums for discussing accessibility issues, and organizations addressing Web access issues.

Web site Usability: A Designer's Guide. (1999). Authors: J. Spool. T. Scanlon, W. Schroeder, et al. San Francisco, CA: Morgan Kaufmann Publishers.

This guide offers practical advice for the design of Web pages, and includes a chapter on readability and page layout. The authors provide a guide for calculating the Fog Index and suggest ways to scan Web pages. For more information, contact Morgan Kaufmann Publishers at www.mkp.com.

Oral Exchange

Clear communication between patients and hospital or health center staff is essential. Staff members need to communicate well with patients during encounters such as phone inquiries, help desk questions, intake procedures, medical examination discussions, consent procedures, and discharge preparation information. This section provides several suggestions for improving oral exchange.

Recommendations for Oral Exchange Improvement

We suggest that staff members follow these recommendations to ease the burden on patients:

- Ask patients how they learn best (reading, listening).
- Match teaching approaches to learning styles.
- Present a reasonable amount of information at one time.
- Avoid using organizational jargon or specialized words.
- Encourage questions.
- Assume the burden of clear communication by asking if the information or directions were clearly presented. For example, say, "Am I clear?" instead of, "Do you understand?"
- When appropriate, ask patients to repeat key points as though they were telling what they learned to a family member or friend. This approach enables the staff member to fill in missing information.
- Discuss key points of DVD/videos if materials were used in preparing a patient for a test or surgery.

Resources Related to Oral Exchange

Institute of Medicine (IOM). (2004). *Health literacy: A prescription to end confusion*. Washington, DC: The National Academies Press.

Roter, D. (2005). Health literacy and the patient-provider relationship. In J.G. Schwartzberg, J.B. VanGeest, & C.C. Wang (Eds). *Understanding health literacy; implications for medicine and public health.* (pp 87-100). Washington, DC: American Medical Association Press.

U.S. Department of Health and Human Services (HHS). (2003). *Communicating health: Priorities and strategies for progress—Action plans to achieve the health communication objectives in Healthy People 2010*. Washington, DC: U.S. Government Printing Office.

Weiss, B.D. (2003). *Health literacy: a manual for clinicians.* Chicago: American Medical Association Press.

Technology

While numerous healthcare facilities use technology for the delivery and collection of health information from patients, most facilities are not yet using their existing technology to its full capacity. Consider the **location** as well as the **use** of patient-facing technologies in your hospital or health center.

In this section, we offer examples from the field in order to spark new ideas for augmenting the use of existing technologies in your facility. The recommendations focus on the following key areas:

- Televisions
- Telephones
- Computers
- Kiosks

Recommendations for Television Improvement

Televisions are useful for orienting and educating patients, especially while they are waiting for their appointments. This waiting period offers an opportunity to orient people to the facility and to services provided and can also offer education about particular health issues.

Televisions can be located in…

- Lobbies and other waiting areas.
- Testing sites.
- Resource rooms, learning centers, family rooms, and libraries.
- Pharmacies.

Televisions can be connected with DVD players/VCRs to….

- Play orientation videos/DVDs about the hospital or health center.
- Play preparation videos/DVDs for tests and surgeries.
- Play general educational videos/DVDs.

Recommendations for Telephone Improvement

House telephones can connect patients with staff or volunteers for help with directions, translations services, or filling out forms. All house telephone should be identified with a clear and visible sign.

House telephones can be located in…

- Hallways.
- Lobbies and other waiting areas.
- Resource rooms, learning centers, and libraries.
- Pharmacies.

House telephones can connect people with a person who can…

- Speak multiple languages or who can link them to translation services.
- Provide clear and simple directions to all locations and services throughout the facility.
- Help patients fill out forms such as health history forms.

Telephones can be used to remind patients about upcoming appointments and any needed preparation for tests or surgeries. Studies show that reminding patients about their appointments can reduce no-show rates. In addition, reminder phone calls help ensure that patients come prepared for tests or surgeries.

- Call patients to remind them about their appointments a day or two before their scheduled visits.
- Call patients who are coming in for a test or surgery that requires preparation and ask the following: What are you doing today to prepare for your test (or surgery)? What will you do tomorrow to prepare?

Recommendations for Computer Improvement

Computers can be used to provide patients with information and to collect information from them.

Computers can be located in…

- Lobbies and other waiting areas.
- Resource rooms, learning centers, and libraries.
- Pharmacies.

Computers can include programs that can…

- Provide patients with orientation materials.
- Provide patients with preparation information for tests and surgeries.
- Provide patients with educational materials.
- Collect health history information from patients.
- Bring patients through a basic screening process.
- Enable providers to share parts of medical records with patients.
- Connect to the Internet (ideally to trusted information sites).
- Be geared towards patients with average or limited literacy skills.
- Have audio components.

Computers can also…

- Have headsets connected to them.
- Have some indication of where to find help/assistance.
- Have touch-screens.

Recommendations for Kiosk Improvement

"Kiosks", also known as a "healthcare kiosks" or "self-service kiosks", consist of free-standing computer consoles and can be used to answer questions, provide information, and enter data. Since kiosks contain computers, many of the recommendations we make for computers overlap with our recommendations for kiosks.

Kiosks can be located in…

- Lobbies and other waiting areas
- Resource rooms, learning centers, and libraries
- Pharmacies

Kiosks can include computer programs that can…

- Provide patients with orientation information.
- Provide patients with preparation information for tests and surgeries.
- Provide patients with educational materials.
- Collect health history information from patients.
- Bring people through a basic screening process.
- Enable providers to share parts of electronic medical records with patients.
- Be geared towards patients with average or more limited literacy skills.
- Have programs that have audio components.

Kiosks can also…

- Have headsets connected to them.
- Have some indication of where to find help/assistance.
- Have touch-screens.

Policies & Protocols

Change can be difficult for people and for institutions – it often disrupts the normal course of events and daily activities. Change can be facilitated when people being asked to make a change are part of a problem solving effort. Clearly defined policies and protocols help support action.

Policies reflect organizational needs and priorities. The recommendations offered in this section are only general examples.

Recommendations for Policy & Protocol Improvement

The following suggestions can promote health literacy and ease the burden on patients:

Policies & Protocols for Print Materials

- Use plain, everyday words and phrases in all print materials.
- Write all print materials for patients at a grade level of 8 or below.
- Consider which materials are important to translate into another language.
- Pilot all new materials with members of the intended audience.
- Apply these protocols to:
  - → Community relations (mailings and promotional materials)
  - → Patient orientation (welcome information and patients' rights &
  - → Responsibilities)
  - → Follow-up notifications (test results, appointment reminders, and billing)
  - → Patient education materials (disease and medicine descriptions)
  - → Legal materials (informed consent forms)
  - → Forms patients fill out (medical history forms)
  - → Discharge preparation information

Policies & Protocols for Oral Exchange

- Train and encourage staff, volunteers, and translators to use plain, everyday words and phrases in all discussions with patients.
- Train and encourage translators to use plain, everyday words and phrases.
- Provide patients with opportunities to ask questions about protocols and policies.

Policies & Protocols for Staff and Volunteer Orientation

- Develop and hold orientation programs.
  - → Include a description during the orientation of all staff and volunteers of the physical layout and design of the healthcare facility.
  - → Include a discussion during the orientation of all staff and volunteers about literacy issues.
  - → Include information during the orientation of all staff and volunteers about patient population characteristics (cultures, languages, and other demographics).

- Tailor orientation programs for different groups of staff. Be sure to include:
  - → Administrative staff (support staff, program coordinator)
  - → Intake staff
  - → Discharge coordinator
  - → Nursing (RNs, LPNs)
  - → Medical (MDs, NPs, PAs, DOs, DMDs)
  - → Pharmacy (pharmacists, educators, technicians)
  - → Allied health professionals (social workers , physical therapists,
  - → occupational therapists, educators, medical assistants, x-ray technicians)
  - → Translation service staff
  - → Telephone services staff
  - → Custodial staff
  - → Volunteers

Policies & Protocols for Staff Skills Building

- Offer on-site trainings or workshops about health literacy issues related to oral exchange and print communication for all relevant staff and volunteers.
- Offer CME credit courses related to health literacy and communication for all represented professional staff.
- Offer adult education courses to build literacy skills for employees.
- Inform all staff about the adult literacy resources in the community. If asked, staff could tell a patient where to get help to improve literacy skills.
- Provide staff and volunteers with a resource room with DVDs, booklets, Web sites, etc. about health literacy issues.
- Focus skill building on use of available technologies (i.e., exam room computers, use of electronic medical records).

Resource

Institute of Medicine (IOM). (2004). *Health literacy: A prescription to end confusion*. Washington, DC: The National Academies Press.

IV

Background & Resources

This section of the guide provides background information on health and literacy as well as a list of current resources.

Background Information on Health and Literacy

Overview

The published findings from the 1992 National Adult Literacy Survey (NALS) and the 2003 National Assessment of Adult Literacy (NAAL) generated headlines of shock and dismay. Indeed, findings indicate that about half of U.S. adults do not have the reading, writing, and math skills commonly assumed. As a result, they are not able to use, with accuracy and consistency, available print materials for everyday activities such as those related to health and safety, finance, or civic engagement. An analysis of health literacy among U.S. adults indicates that half of U.S. adults would be expected to have a great deal of difficulty successfully performing a broad range of health-related activities.

The field of inquiry known as *health literacy* focuses on critical communication issues in the health fields as well as on explorations of links between literacy skills and health outcomes. The Institute of Medicine (IOM) report *Health Literacy: A Prescription to End Confusion* suggests that health literacy be considered an interaction between social demands and the skills of individuals. The IOM committee concluded that more than 90 million U.S. adults may lack the needed literacy skills to effectively use the U.S. health system (IOM, 2004). The Agency for Healthcare Research and Quality (AHRQ) 2004 evidence report *Literacy and Health Outcomes* concludes that low literacy, as measured by poor reading skills, is associated with a range of adverse health outcomes (Berkman et al., 2004). Health literacy is on the national agenda as researchers continue to explore the links between literacy skills and health outcomes, as well as monitor and measure the match between health workers' expectations and patients' skills.

Demands and Expectations

More than 600 studies published in public health, medical, dental, and mental health journals are focused on the match or mismatch between health-related materials and messages and the skills of the intended audience. The written materials under study have included informed consent materials, patient education booklets, insurance packages, medical directives, public health messages, and reports, addressing a wide array of health issues and representing a broad scope of health disciplines. In general, findings indicate that unnecessary use of scientific terms, professional jargon, complex sentences, poorly organized text, faulty assumptions about background information, and other measured text characteristics hamper communication efforts. Study findings indicate a troublesome mismatch between the reading grade level of health materials (one measure of demand) and the average reading skills of U.S. adults.

Literacy Skills of U.S. Adults

Most studies calculate average reading skills at about the 8th grade level. However, educators do not associate literacy with reading alone, but instead envision and measure a constellation of related skills that include reading, writing, basic mathematical calculations, oral speech, and speech comprehension. The National Literacy Act of 1991 proposed that *functional literacy* is:

> The ability to read, write, and speak and compute and solve problems at levels of proficiency necessary to function on the job and in society, to achieve one's goals, and develop one's knowledge and potential.

In the early 1990s, this definition of functional literacy was accepted by the U.S. and other industrialized nations as the foundation for examinations of adult literacy skills. Throughout the 1990s, three literacy components—reading, writing, and mathematical calculations— were measured in 22 industrialized nations (Kirsch, 2001). Oral language skills had been assessed as part of an earlier and smaller survey but were not assessed in the 1990s, in part because of time constraints, machinery, and because of a perceived burden on survey participants who were all interviewed in home settings. The 2003 literacy assessment survey contained an oral language component captured on computers. Initial analyses of the 2003 data were provided in December 2005 and analyses of oral skills are forthcoming. The national and

international examinations of adults' literacy skills focused on adults' ability to use print materials to accomplish everyday tasks. The survey developers drew materials from six domains of adult activities in order to represent literacy activities of everyday life. These included text materials related to: home and family, health and safety, community and citizenship, consumer economics, work, and leisure and recreation.

Participants were asked to undertake tasks associated with materials focusing on these six areas. For example, participants were given a label from an over-the-counter pediatric medicine and were asked to use the materials to determine how much medicine to give a child of a specified age and weight.

The 1993 NALS report and the 2005 NAAL report provide literacy proficiency scores for three types of print materials:

- **Prose Literacy:** measures of proficiency focused on tasks involving continuous texts with full sentences in paragraph format.
- **Document Literacy**: measures of proficiency focused on tasks involving texts formatted as lists, charts, and graphs.
- **Quantitative Literacy:** measures of proficiency focused on tasks involving text with numbers requiring the application of basic mathematical processes (addition, subtraction, multiplication, and division).

All of the existing large-scale surveys of adult literacy skills are based on materials consisting of prose, and documents, as well as both continuous and non-continuous texts requiring one or more arithmetic operations. The tasks associated with the materials include finding information and identifying or constructing responses from the available information. Materials and tasks for these surveys are calibrated for level of complexity and difficulty. The assessments consider both the difficulty of the text and the complexity of the task. A simple text is generally short and without distracting information. A simple task involves locating a word or sentence, or performing a clearly defined mathematical process. More complex tasks involve locating several pieces of information, comparing or contrasting information provided, interpreting meaning, or responding to an inquiry by finding and using information in a text. Proficiency was assessed based on accuracy and consistency (Kirsch, 2001).

Findings were reported in 1993 by score level and in quintile groupings, averaged for various population groups, and analyzed through a wide range of critical variables such as educational background, country of origin, and economic status. In addition to assessing participants' literacy skills, the NALS gathered extensive background information on demographic and socioeconomic characteristics and on literacy practices (Kirsch, Jungeblut, Jenkins, & Kolstad, 1993).

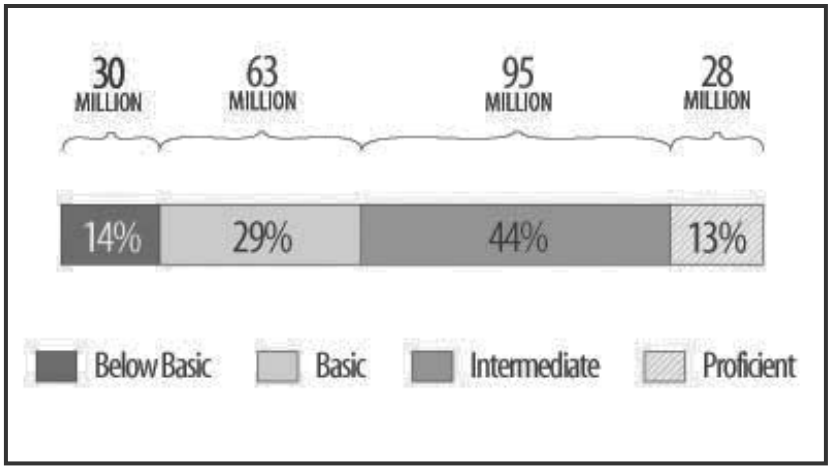
NALS scores ranged from 0 to 500. The scores in 1993 indicate that 22% of U.S. adults fall into the lowest skill category. NALS level 1 represents scores of 0 to 225 and signifies very limited abilities to use text. People scoring between 0 and 175 are considered unable to use English language text. However, more than half of adults at this level can generally perform simple and routine tasks using brief and uncomplicated texts and documents. For example, adults at NALS Level 1 can generally locate a piece of information in a news story or on a simple form such as a social security card. An additional 27% of U.S. adults score in NALS Level 2 with scores ranging from 226 to 275. These adults can, with accuracy and consistency, locate information in somewhat more complex text and make low-level inferences using print materials. The 49% of adults who score in these two lowest levels can locate information but are generally not able, with accuracy and consistency, to find and integrate two related pieces of information, to use long or dense materials, or to determine appropriate arithmetic operations based on information provided.

Scores below 275 indicate a limited ability to use print materials with accuracy and consistency. Working adults have stronger literacy skills than those who are not employed or have retired. As would be expected, literacy skills are stronger amongst U.S.-born adults than they are for those who have immigrated to the United States from non-English speaking countries. Those with higher incomes are more likely to have stronger skills than are those without resources or who are living in poverty. European-Americans (whites) have stronger literacy proficiencies than do minority population groups such as Hispanics and African-Americans. Educators and economists note that the challenges of industrialized societies require high-level literacy skills (in the range of 275 and above). NALS findings indicate that average scores for U.S. adults in 1992 were 273 for prose, 267 for document, and 274 for quantitative literacy scores.

The 2005 analysis of the 2003 National Assessment of Adult Literacy (NAAL) modified the reporting of performance levels to more closely reflect educational categories of need (below basic, basic, intermediate, and proficient). The below basic level includes skills necessary to perform no more than the most simple and concrete literacy skills. Basic skills are those necessary to perform simple and everyday literacy activities. Intermediate skills are those necessary to perform moderately challenging literacy activities. Proficient skills are those necessary to perform more complex and challenging literacy activities.

Overall, literacy is the lowest for adults who did not complete high school (Kutner, Greenberg, & Baer, 2005). The following graph illustrates the range of scores.

Findings from the 2003 National Assessment of Adult Literacy

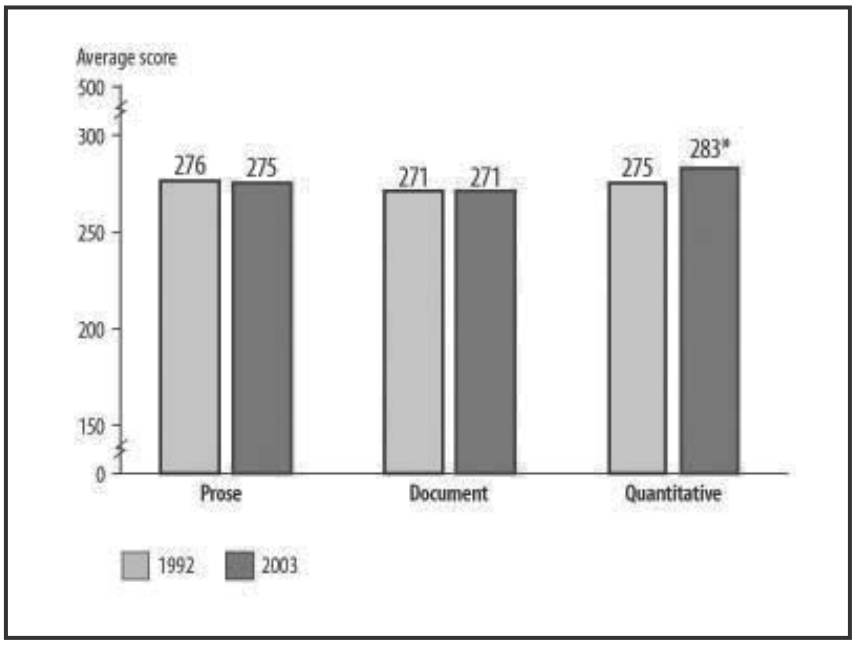


SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, 2003 National Assessment of Adult Literacy.

The graph on the following page, offers a comparison of findings from the 1992 and the 2003 data. The 1992 data was modified to reflect the new categories and a reconfigured measure of accuracy. Findings indicate little change over time. Although the educational attainment of U.S. adults increased between 1992 and 2003, prose literacy decreased for all levels of educational attainment. As was true in 1992, literacy was lowest for adults who did not complete high school (Kutner et al, 2005).

Overall, findings from the national surveys indicate that a vast majority of U.S. adults can read and do report reading. However, the average literacy scores for adults in the U.S. indicate limited ability to use print materials found in everyday life to accomplish everyday tasks.

Average Scores of U.S. Adults for Prose, Document, and Quantitative Literacy Comparison of Findings from the 1992 NALS and the 2003 NAAL



*Significantly different from 1992.
NOTE: Adults are defined as people 16 years of age and older living in households or prisons. Adults who could not be interviewed due to language spoken or cognitive or mental disabilities (3 percent in 2003 and 4 percent in 1992) are excluded from this figure
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, 1992 National Adult Literacy Survey and 2003 National Assessment of Adult Literacy.

Health Literacy Skills of U.S. Adults

A baseline for the health literacy skills of U.S. adults was established in 2004 by researchers at the Harvard School of Public Health and the Educational Testing Services. *Literacy and Health in America* (Rudd, Kirsch, & Yamamoto, 2004) reports on an analysis of health-related items drawn from the large-scale surveys of adult literacy skills, all of which adopted the functional definition of literacy as noted above. A new scale, the Health Activities Literacy Scale (HALS) was constructed through an examination of all items from all large-scale surveys conducted before 2003 to identify and code health-related materials and tasks. These surveys include

the assessment of the nation's young population (Kirsch & Jungeblut, 1986), the assessment of unemployed and economically disadvantaged adults (Kirsch, Jungeblut, & Campbell, 1992), the National Adult Literacy Survey (Kirsch et al., 1993), and the International Adult Literacy Surveys (Organization for Economic Co-Operation and Development, 1995, 2000).

The HALS, consisting of 191 items, represents a range of health activities for health promotion, health protection, disease prevention, care and maintenance, and systems navigation. Scores were linked to the NALS database, which includes information on the literacy proficiencies of a sample of 26,091 adults aged 16 and older as well as supplemental samples from 12 states yielding state representative samples (Kirsch et al., 1993).

HALS findings indicate that large percentages of at-risk groups in this country do not have adequate skills to meet many of the health-related demands they are likely to encounter. Findings indicate that the distribution of health-related literacy is not independent of general literacy skills at a population or subpopulation level. While there is clearly some unique procedural and declarative knowledge that is needed to function in health contexts, those with more general literacy skills will also be more likely to have stronger health literacy skills. Consequently, large numbers of adults would be expected to have a great deal of difficulty successfully performing a broad range of health-related literacy activities found in the U.S.

The designers of the 2003 NAAL worked closely with the U.S. Department of Health and Human Services to include additional health-related items on the 2003 adult literacy survey instrument so that a separate report could focus on health literacy skills of U.S. adults. New stimulus materials were included as were 28 health literacy tasks designed to elicit respondents' skills for locating and understanding health-related information and services. These tasks focused on clinical, prevention, and navigation domains. This change represents a purposive inclusion of health literacy skills. Findings, in a September 2006 report titled, The Health Literacy of America's Adults, are based on performance for these 28 tasks. The report states that the majority of U.S. adults do have skills necessary to perform *moderately challenging* health literacy activities.

The average health literacy scores were 248 for women and 242 for men. Adults in the oldest age group, 65 and older, had lower average health literacy scores (214) than adults in younger age groups (scores range from 244 to 256). The average health literacy score increased with each higher level of educational attainment. Those with less than a high school degree/GED certificate had an average health literacy score of 184. High school graduates/GED certificate had an average health literacy score of 232. Those with a 4-year college degree had an average health literacy score of 280.

Findings from the 1992 NALS and from the 2003 NAAL indicate that a significant number of U.S. adults have low level literacy skills that constrain their participation in society and in the economy. The early analysis of health literacy skills based on data from 1992 and the more recent analysis of 2006, based on a purposive sample of health items, indicate that U.S. adults have health literacy skills that constrain or compromise their participation in health-related activities.

> **Note:** A direct comparison of findings from the 1992 and 2003 surveys is difficult because of changes in the structure of the analysis. First, 3% of the population was not included in the NAAL analysis (those who could not communicate in either English or Spanish or who had a mental disability). Next, NAAL tasks were mapped to a point on the scale where an adult would have a 67% probability of doing the task correctly while NALS tasks were mapped to a point on the scale where an adult would have an 80% probability of doing the task correctly.

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Additional Resources: Health and Literacy

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APPENDICES

Appendix I: *Partners for Action Examples*

Appendix II: *Needs Assessment Tools*

Appendix I: Partners for Action Examples

Although health literacy is among the top 20 items on the national agenda, it is still a new or unfamiliar topic for many people, even for those within the healthcare field. Awareness raising activities can take many forms, and each can help the staff of your healthcare facility become more knowledgeable about and more invested in health literacy discussions, research, and change.

A health literacy initiative can begin with any number of activities and could include one or more of the following activities:

- Presentations
- Tours
- Workshops
- Community Outreach
- Ongoing Collaboration

Many of these activities can be carried out within a healthcare facility with existing staff and through links to continuing education. At the same time, professional development activities such as presentations and workshops can help build skills but can also provide excellent opportunities for networking with other agencies and for forming partnerships. Staff responsible for health communications or marketing activities within your healthcare facility may want to be involved in planning partnership work.

A number of potential partners could provide presentations or overviews of literacy skills and their relationship to health outcomes. For example, state or city directors of adult education may be able to provide an overview of the literacy skills of U.S. adults based on the findings of the 1992 National Adult Literacy Survey (NALS) and the 2003 National Assessment of Adult Literacy (NAAL). Adult educators can provide an overview of the literacy skills of adults in the neighborhoods your hospital or health center serves. Adult education classes may provide a venue for pilot testing materials. Librarians can offer an important perspective on access to information, as well as on use of library-based computers, and patients' Internet needs. Social service providers such as case managers or program advocates may provide additional insight into patients' needs and the literacy barriers they encounter as they make decisions about health insurance coverage, complete forms, or make sense of letters, bills, and follow-up information.

Strategy for Action

The Joint Commission on Accreditation of Healthcare Organizations (JCAHO) is linking health literacy to patient safety. The Institute of Medicine's (IOM) report, *Health Literacy: A Prescription to End Confusion*, recommends that healthcare systems:

- Engage patients in the development of health communications.
- Explore creative approaches to communicate health information.
- Establish methods for creating health information content in appropriate and clear language.
- Include cultural and linguistic competency as an essential measure of quality of care.

Some institutions are linking health literacy action to costs. For example, savings not often considered are related to costs incurred when the burdensome structure, format, and language used in forms as well as in mailed letters and test results necessitate staffing to help people understand, manage, and respond appropriately. Action within your healthcare facility could serve both patient and institutional needs and interests. On the following pages, we provide you with case examples of partnerships from the field and include details of the activities carried out through these partnerships including presentations, tours, workshops, community outreach, and ongoing collaborations.

We thank Emily Zobel Kontos and Sarah Oppenheimer, who conducted interviews and developed the cases for this section.

Presentations

Health literacy topics of interest can vary. However, you will find information within this guide that offers a focus on health literacy of U.S. adults, health literacy research findings, health literacy research opportunities, and best practice options for working with adults who have average or limited literacy skills. Initial health literacy activities can begin at any number of levels including:

- Health Literacy Grand Rounds
- Health Literacy Presentation or Forum
- Professional Continuing Education Programs

Consider engaging potential partners in health literacy work by inviting staff of educational and social service agencies and community volunteers to help plan a health literacy forum. Set aside time during the forum for interdisciplinary networking. You may also be in a position to encourage or support monthly workgroup meetings as an opportunity for cross-sector communication and action.

EXAMPLE

LOCATION: Morgantown, West Virginia

PARTNERS

- Department of Family Medicine, West Virginia University School of Medicine
- Harvard School of Public Health

ACTIVITY

- Health Literacy Grand Rounds came to West Virginia University School of Medicine

We provide more details about this case on the next page.

HARVARD SCHOOL OF PUBLIC HEALTH FACULTY DELIVERS GRAND ROUNDS AT WEST VIRGINIA UNIVERSITY SCHOOL OF MEDICINE

BACKGROUND

As part of a residency-training grant initiative at West Virginia University School of Medicine, the principal investigator invited a health literacy expert from the Harvard School of Public Health to present a Family Medicine Grand Rounds on health literacy and on links between literacy and health outcomes. Attendance was "required" for some residents and "highly recommended" for others because the presentation met criteria for competencies that are required of all residency programs for accreditation.

ACTIONS TAKEN

Of the 330 residents/fellows who were in training at West Virginia University School of Medicine at the time, 33 (10%) attended the presentation. In addition to residents, approximately 70 faculty, staff, or students from a cross-section of health science disciplines and roles (nurses, allied health, dentistry, community medicine, librarians and others) attended. The Grand Rounds presentation stimulated interest and helped focus attention on the curriculum development process underway to improve communication with patients with low literacy.

Faculty members at West Virginia continue to apply what they learned during the health literacy Grand Rounds. In follow up discussions, a faculty member shared a story about drawing pictograms as he talked with a patient; another created a unique identification system for prescription bottles for a patient. Faculty members now ask their residents and students, "*Are you sure that the patient understands?*" The clinic operations chief plans to conduct an assessment of the clinic registration process to reduce barriers to access, and asked that the registration personnel are prepared to consistently offer assistance to all patients filling out forms.

LESSON LEARNED

- A one-time presentation can make a difference in the sensitivity and awareness of literacy issues in this clinical environment.

Tours

Health centers and hospitals are work places for people from various fields, including medicine, nursing, pharmacy, laboratory sciences, and the service industry. The structures of the buildings are shaped by a scientific and medical logic that is not necessarily intuitive to those not trained in these fields. In addition, the language used by the people working within the facility and the written words used in the various postings and materials are often not the words of everyday speech (Rudd, Renzulli, Pereira, & Daltroy, 2005). A walking tour of a hospital or health center that pairs a staff member with someone new to the facility can offer insights not easily gathered by staff or volunteers within the facility.

EXAMPLE

LOCATION: Harlem, New York

PARTNERS

- Harlem Hospital
- Mid-Manhattan Adult Learning Center
- New York City Mayor's office
- Literacy Assistance Center of New York City

ACTIVITY

- Harlem Hospital staff came to the Mid-Manhattan Adult Learning Center
- Mid-Manhattan Adult Learning Center students took tours of Harlem Hospital

We provide more details about this case on the next page.

MID-MANHATTAN ADULT LEARNING CENTER STUDENTS TOUR HARLEM HOSPITAL

BACKGROUND

Several adult education students from the Mid-Manhattan Adult Learning Center reported negative experiences at hospitals and that they kept away from health facilities as a result. Many of the students were confused about the physical layout of hospitals and wanted to understand more. Additionally, some students expressed an interest in pursuing careers in healthcare. Teachers from the Mid-Manhattan Adult Learning Center contacted Harlem Hospital. The medical director of Harlem Hospital was instrumental in engaging with the adult literacy program and formed this partnership.

ACTIONS TAKEN

The medical director of Harlem Hospital arranged for several of the department heads at the hospital to visit the Mid-Manhattan Adult Learning Center. The heads of the pharmacy, emergency room, and managed care came to three different classes and spoke with the students about how to navigate services. Students asked many questions. As a follow up to these classroom discussions, Harlem Hospital hosted a program at the hospital for students from the Mid-Manhattan Adult Learning Center, their friends and family, and members of the community. Staff from many departments, including maternity and emergency, presented an overview of their services. This forum was covered by the media and was noted in print and local television news. The director of the emergency department, who had worked all night, was present the next morning to give students a tour of the department. Students developed a short video. The students were incredibly appreciative and told their fellow students what they saw. This presentation was also videotaped and was widely viewed.

LESSONS LEARNED

- Leadership from the top is important in forming partnerships.
- The partnership enhanced the reputation of Harlem Hospital within the community.

Workshops

A health literacy workshop provides an opportunity to offer information on current issues in health literacy, potential areas for programmatic change, and for research studies. A presentation may be tailored to coincide with current institutional projects or areas of concern. Hands-on workshop ideas may focus on development of plain language materials, use of assessment tools, or the development of research protocols.

You may wish to begin health literacy work through a focus on print materials. Well over 500 studies published in public health and medical journals over the past three decades indicate that the level of difficulty of health materials (measured in terms of reading level) generally exceeds the reading ability of the people for whom they were designed (Rudd, Moeykens, & Colton, 1999; Rudd, Colton, & Schact, 2000; Rudd, Anderson, Nath, & Oppenheimer, in press). A fully developed workshop plan is included in this guide as an example of a type of workshop that could be offered to staff responsible for creating or assessing forms, follow up letters, or educational materials.

EXAMPLE

LOCATION: Boston, Massachusetts

PARTNERS

- Massachusetts General Hospital's (MGH) Library System
- University of New England's Health Literacy Center

ACTIVITY

- Plain language workshop came to MGH

We provide more details about this case on the next page.

PLAIN LANGUAGE COMES TO MASSACHUSETTS GENERAL HOSPITAL

BACKGROUND

The director of one of Massachusetts General Hospital's (MGH) patient libraries was interested in how the library system at MGH could begin to address health literacy issues. She was concerned that the resources in MGH's patient libraries and the health education materials that the MGH produced were not meeting the needs of their patients. She brought her concerns to the multidisciplinary patient education committee at MGH. The committee decided they first needed to better understand what health literacy was before they could address the issue. A health literacy expert was asked to speak. As a follow up, a plain language expert at the University of New England's Health Literacy Center was invited to organize a workshop. The MGH patient education committee members enrolled in the workshop in order to increase their understanding of health literacy and the use of plain language in materials development.

ACTIONS TAKEN

After attending the health literacy workshop, some members of the patient education committee developed a subcommittee that meets monthly to discuss issues of plain language. Committee members frequently bring materials they are developing to the meetings so they can receive feedback and suggestions. The plain language subcommittee has also developed tip sheets for all hospital employees focused on how to use plain language and improve their communication. Additionally, the plain language subcommittee invites guest lecturers throughout the year to speak to the staff about the importance of health literacy and plain language communication.

LESSONS LEARNED

- Health literacy awareness building is important, and so is maintaining momentum.

Ongoing Collaborations

Ongoing collaborations between hospitals, health centers, and libraries can enhance community access to resources, bring libraries into medical settings, and bring valuable information from medical settings into the community. Resource librarians have moved from a focus on helping clients use resource books to helping clients access information on Web sites. In addition, it is important to incorporate the voice of the community. Consequently, written materials, including announcements and letters of invitation, as well as oral presentations, should be carefully crafted to reflect everyday words and phrases. You may want to consider the role your healthcare facility plays in the community and how health literacy considerations may support this role.

EXAMPLE #1 (OF 2)

LOCATION: Des Moines, Iowa

PARTNERS

- New Readers of Iowa
- Iowa Health System (IHS)

ACTIVITIES

- Collaborative
  - Development of 10 organizational teams at IHS each with a New Readers of Iowa member.
  - Several materials review, revision, and development projects.

We provide more details about this case and another case on the following pages.

THE DEVELOPMENT OF THE NEW READERS OF IOWA / IOWA HEALTH SYSTEM (IHS) COLLABORATIVE

"I think the bottom line is that neither of us can be successful alone. We need each other's minds and experiences."- Archie Willard, New Readers of Iowa

BACKGROUND

In 2003, the New Readers of Iowa, an advocacy group that focuses on raising awareness around adult education and literacy, decided to center its 13th annual conference on health literacy. New Readers of Iowa wanted the medical sector's perspective on health and literacy, and contacted the Iowa Health System (IHS). Thus, the New Readers of Iowa/IHS Collaborative began. Since its inception, the New Readers of Iowa/IHS Collaborative has addressed many issues related to health and literacy including patient safety, disease prevention and screening, and access to healthcare coverage. The group meets twice a year – once for a planning meeting and again at the annual conference. The dialogue continues throughout the year with e-mail and phone discussions.

ACTIONS TAKEN

IHS has facilitated the formation of ten organizational teams based in hospitals, outpatient clinics, and one call center. They are dedicated to testing and improving health literacy strategies. At least one New Readers of Iowa member is a part of each organizational team, providing first-hand insights into adult learning and health literacy and ensuring a balance between the medical sector's input and that of an adult who has limited literacy skills. The New Readers of Iowa/IHS Collaborative has also initiated several materials review, revision, and development projects. These projects engage New Readers of Iowa to advise IHS hospitals and clinics on their patient materials. This collaborative work has led to changes in hospital informed consent forms and patient education sheets. In addition, the collaborative has provided awareness-raising among healthcare staff and led to formal trainings.

LESSONS LEARNED

- Communication between partners is critical.
- Relationships should be sustained.

On the following page we provide you with a second case example related to ongoing collaborations:

EXAMPLE #2 (OF 2)

LOCATION: Queens, New York

PARTNERS

- Queens Health Network (QHN)
- Queens Borough Public Library (QBPL)

ACTIVITIES

- QHN brought health information to QBPL.
- QBPL brought an understanding of the population of Queens to QHN.

INFORMATION EXCHANGE BETWEEN THE QUEENS HEALTH NETWORK AND QUEENS BOROUGH PUBLIC LIBRARY

BACKGROUND

The Queens Health Network (QHN), comprised of 23 institutions, was having a difficult time delivering health information to their diverse patient population, speaking over 127 languages. In order to better serve their patients, the executive director of the QHN wanted to improve communication, increase available resources, and improve the network's information technology. As a first step, the executive directors of the QHN and the Queens Borough Public Library (QBPL) developed working groups to address the initial concerns of both the library and hospital staff. The three main areas of interest were identified as prevention, disease management, and overall community improvement.

ACTIONS TAKEN

The partnership between QHN and QBPL brought health information to the library system and brought a deep understanding of the population of Queens to the QHN. Some examples of this partnership include:

- The QHN hosts health screenings, health fairs, and specific health workshops at the library branches.
- The libraries advertise the health clinics and hospitals, distribute information on screening and early detection of disease, and help with immediate dissemination of important health information.
- The adult educators at the library work with the QHN doctors to help them identify and use plain language materials. Doctors are invited to visit, observe, and/or present in adult education classes.

LESSONS LEARNED

- Leadership from the top of both partners is critical.
- Common interests and goals form the foundation for work.

References for Partners for Action Examples

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Appendix II: Needs Assessment Tools

The needs assessment activities in this section are designed to offer insight into literacy-related demands and barriers. These activities can set the foundation for the *Health Literacy Environment Review:*

Navigation Activities

- ☐ Telephone Assessment
- ☐ Walking Interview Activity

Print Communication Activities

- ☐ Materials Assessment Workshop
- ☐ Materials Assessment Tools

Oral Exchange Activity

- ☐ Oral Exchange Survey

Technology Activity

- ☐ Current Technology Assessment

Findings from these pre-review activities will help inform the *Health Literacy Environment Review.*

Navigation: Telephone Assessment

First contact with a hospital or health center is often over the telephone. A telephone call can determine a person's first impressions of a healthcare facility. This section of health literacy navigation focuses on this important first encounter.

For this telephone assessment activity, we suggest that you ask 2-3 people of different professional levels (i.e., a nurse, clerk, technician) to independently call the main telephone number of your healthcare facility. You may want to replicate this process for frequently called departments such as labs, radiology, or medical records. Each person should attempt to get directions to the facility from an agreed-upon starting point and request directions via public transportation. The starting point should be a neighborhood or landmark within the general area where the healthcare facility's patients either live or work.

Each caller should complete the *Telephone Assessment Form,* found on the following page. This form focuses on the following key elements:

- Option for live communication
- Speed
- Success (related to purpose of the call)

Once 2-3 people have each called the main number of your healthcare facility and filled out the *Telephone Assessment Form,* please complete **Part 1, Section A** of the *Health Literacy Environment Review*, located on **page 9**. As noted above, you may wish to replicate this activity for frequently called departments as well as the main number.

Telephone Assessment Form

Date: _____Your name: _____
Facility you are calling: _____
Telephone number of facility you are calling: _____
Location you want directions from: _____

Start of call

a. Time phone was answered: _____
b. Telephone answered by: ☐ Automated system ☐ Person

End of call

a. Time call ended: _____
b. Last interaction I had was with: ☐ Automated system ☐ Person

Automated System

1. Is there an option for another language?
   ☐ Yes--If yes, which: _____
   ☐ No

2. Number of menu options before you reach a person?
   ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐
   1 2 3 4 5 6 7 No option

3. Number of menu options for directions to the hospital or health center?
   ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐
   1 2 3 4 5 6 7 No option

4. Is there an option to repeat menus?
   ☐ Yes
   ☐ No

5. What is the speed of the menu options?
   ☐ Very fast
   ☐ Fast
   ☐ Slow
   ☐ Very slow

6. Was the call successful? (Were you able to get what you needed?)
   ☐ Yes
   ☐ No

Reaching a Person

1. Does the person speak a language in addition to English?
   ☐ Yes--If yes, which: _____
   ☐ No

2. What is the tone of the person's voice?
   ☐ Warm/ welcoming
   ☐ Neutral
   ☐ Cold/standoffish

3. What is the speed of the person's speech?
   ☐ Very fast
   ☐ Fast
   ☐ Slow
   ☐ Very slow

4. Was the call successful? (Were you able to get what you needed?)
   ☐ Yes
   ☐ No

Please continue onto next page→

Comments about the Phone System and Getting Help with Directions:

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

Rating: These findings reflect the impression we want patients to have of our healthcare facility.

Agree	**1**	**2**	**3**	**4**	**5**	**6**	**Disagree**

Navigation: Walking Interview Activity

People entering a healthcare facility for the first time can often see details of the environment that people working within the facility may no longer notice. As a result, newcomers can offer insights to those for whom the workplace has become routine. This section of health literacy navigation focuses on an assessment of the literacy environment.

The *Walking Interview* is an activity that involves locating and finding one's way around a healthcare facility. The *Walking Interview* will help identify what is helpful for people and what gets in the way as they try to navigate a healthcare facility.

The *Walking Interview* activity offers opportunities for the staff of healthcare facilities to identify barriers as well as aids for navigation of facilities. This section includes the following information about the *Walking Interview:*

- Overview and Preparation
- Walking Interview Activity

Once you have completed the *Walking Interview* activity, please complete **Part 1**, **Sections B, C, D, E, and F** of the *Health Literacy Environment Assessment* located on **pages 9-12.**

Walking Interview: Overview & Preparation

Overview

The *Walking Interview* is an activity that involves locating and finding one's way around a healthcare facility. The *Walking Interview* will help identify what is helpful for people and what gets in the way as they try to navigate a facility. It is critically important that the W*alking Interview* not interfere with the day-to-day activities of workers or visitors, and therefore ought to be scheduled with this in mind.

The *Walking Interview* involves:

- A **note taker**: the person who takes notes and asks questions.
- An **informant**: the person who tries to find his/her way to public spaces within the facility such as the waiting areas, hallways, or pharmacy.

Note taker *(the person taking notes and asking questions)*

The best note taker is someone who works within the hospital or health center. If possible, the note taker should first participate in a preparation exercise on the use of the *Walking Interview* guide. This can be done without outside assistance. For example, the note taker should review the *Walking Interview* guide and walk through the area of the proposed tour in advance. Next, two or more note takers should practice conducting walking tours with each other to become familiar with the *Walking Interview* process. If this is not possible, note takers should lead a series of tours with colleagues and/or friends and relatives.

The **note taker** should…

- ☐ Carry a letter of explanation from the facility.
- ☐ Carry a clipboard and the *Walking Interview* guide.
- ☐ Review the rating schema with the informant.
- ☐ Let the informant take the lead on navigating the facility.
- ☐ Ask the informant to talk aloud about his/her feelings, observations, and decisions as you walk together to a specific destination (recommendations of locations are provided in the guide). If necessary, use 'why' prompts such as: *"Why did you stop here?"*, *"Why did you decide to turn left?"*
- ☐ Record or take notes of informant's comments.

Informant *(the person finding his/her way to public locations within the hospital)*

The best informant is a person not familiar with the facility. Examples of potential informants include:

- Registration person at healthcare facility
- Volunteer from information desk at healthcare facility
- Someone from finance or billing department of healthcare facility
- Adult educators
- English for Speakers of Other Languages (ESOL) educators
- Adult learners/new readers
- Community librarians

The **informant** should…

- ☐ Try to find his/her way to the locations identified.
- ☐ Speak out loud about what tools (signs, maps, people, etc.) he/she is using to make decisions about where to go next.
  - *"I am now taking a right-hand turn because the sign says 'Medical Records' and points to the right."*
  - *"I'm not sure where to turn here, so I will ask the man standing over there."*
- ☐ Pause during the walk and share his/her comments with the note taker.

Set-Up

In advance of conducting the *Walking Interview,* the note taker should:

- ☐ Pick a location and time to meet his/her informant. Examples of good locations for a note taker and informant to meet are provided in the *Walking Interview* guide.

Walking Interview: Phone Script or Letter from the Note Taker to the Informant

Focus: *Invitation, Brief Overview, and Appointment*

My name is ___(*your name*)___. I am working with the ___*(sponsoring organization)* . We are trying to understand how people find their way around our ___(*hospital or health center*)___. We want to know what is helpful and what gets in the way.

I would like to find out what you think of __(*name of facility where the tour will occur*)___. This interview is unusual. I think you will enjoy it. We call it a "Walking Interview."

I would like to go with you to / meet you at _(*name of facility where the tour will occur*)__. Once we are there, I would like to walk around with you and hear about how you see things, especially what makes it easy or hard for you to find a specific place. I will be using a tape recorder to keep a record of your comments and reactions. I will also be writing down some notes as we go through the tour. We will not go to a doctor's office or any other part of the healthcare facility where patients are seen. We will spend our time at the entrance, in the lobby, in the cafeteria (if there is one), and walking from the lobby to a place such as an arthritis center or the pharmacy.

This "Walking Interview" will take about one hour.

- ☐ We will pay you _____*(amount)*___ for your time and travel costs.
- ☐ What time of day is best for you?_____
- ☐ What day of the week works for you?_____
- ☐ Can we set a meeting time for _____*(date)*_____ at __*(time)*_____?
- ☐ Can we meet at ____*(specific location in or near the facility)*_____?

Walking Interview: Discussion and Response Tips

1. Statement: **I get lost all the time. I won't be a good person for this.**
   Response: *Actually, you would be perfect. You would be able to tell us what needs to be changed so that people do not get lost.*

2. Statement: **I've never been to that health center or hospital.**
   Response: *Wonderful. We want people who have never been there.*

3. Statement: **I don't have any problems finding my way around that place.**
   Response: *Great, we would like to learn about what makes it easy for you. That will help us figure out what changes will make it easier for other people. We also want to learn how you find your way around so we can teach other people the same skills.*

Walking Interview Guide

Background Information

1) Date: _____

2) Note taker *(please check all that apply):*

- ☐ Healthcare facility staff
- ☐ Adult educator
- ☐ Other _____

3) Informant *(please check all that apply):*

- ☐ Healthcare facility staff
- ☐ Adult educator
- ☐ Adult learner/new reader
- ☐ Member of community
- ☐ Other _____

4) Facility for Tour

a) Name: _____

b) Location: _____

c) Prepared in advance:

- ☐ Permission letter from the facility
- ☐ Tour meeting time: _____
- ☐ Tour meeting place: _____

NOTE: If possible, try to arrange to meet near but not at the healthcare facility such as at a bus or subway stop or exit from the parking garage. This way you can walk to the healthcare facility with your informant. If you cannot "travel" to the hospital with your informant, meet just inside the main entrance to the healthcare facility and then step back outside together.

Before You Begin the Tour

You, the note taker, should take a moment before you begin the tour to explain that you will be asking the informant to explore certain public areas of the healthcare facility, and that you would like him/her to talk aloud about what tools (such as people, signs, maps) he/she is using to make decisions about where to go next.

Tell your informant that at certain points during the tour you will ask him/her specific questions but that there are no "right or wrong" answers to these questions.

Let your informant know that you will ask him/her to rate his/her experiences several times throughout the tour. Explain that you will ask him/her to select a number that best reflects how your informant feels. Use the chart below to discuss the rating tool.

Informant Rating Guidelines					
1	**2**	**3**	**4**	**5**	**6**
Very hard to navigate • Don't know where to begin • Feel like giving up • Unable to find destination		**Somewhat hard to navigate** • Feel confused and may need to ask for help • May need to retrace some steps		**Easy to navigate** • No problems • Find destination with ease	

Part A: Main Entry

This part of the *Walking Interview* focuses on finding the main entrance to the healthcare facility. Once you have reached the main entrance, take time to ask your informant the key question below. You may want to use some of the suggested prompts to encourage conversation.

- Next, ask your informant if he/she has any additional observations or concerns.
- Finally, ask your informant to rate his/her overall experience in finding the main entrance to this facility.

Key Question 1: *Tell me about your experience finding the main entrance.*

Additional Prompts:

- *How did you find the main entrance? What were your cues?*
- *What do you think about the available signs?*
- *Think about others you know who have not been to this facility. What will make it easy or hard for them to find their way here?*

_____

_____

_____

_____

_____

_____

Rating*:* Overall, how hard or easy was it for you to find the main entrance to the facility?

Very Hard **1** **2** **3** **4** **5** **6** **Very Easy**

Part B: Lobby→Security

Now prepare to enter the main lobby of the healthcare facility. At the entrance, you may immediately see a security guard. If you **do not see** or **are not stopped** by a security guard, please turn to the next page of the *Walking Interview.*

In many institutions, a security guard will stop and question you before you are allowed to enter the facility. Security has become a visible part of everyday life.

Please be aware of the entry process and be prepared to discuss the process with your informant. Tell your informant that people are often screened when they enter a building. Once you get past security, walk to a comfortable place to talk, ideally a place with chairs. Ask your informant the key question below.

Key Question 1: *How do you feel about the security process here?*

Additional Prompts:

- *How did the security guard treat you? What made you feel this way?*
- *Think about other people you know. Do you think they would feel comfortable entering the building if a security guard at the front door stopped them?*

Rating: Overall, how hard or easy was your experience with the security guard(s)? (If applicable)

Very Hard 1 2 3 4 5 6 Very Easy

Part B: Lobby→Overall Environment

Explain that this next part of the *Walking Interview* focuses on the lobby. Tell your informant that you will stay where you are, and that he/she should briefly explore the different areas of the main lobby. Your informant should then return to you and have a conversation with you about feelings and observations. Ask your informant to focus on several aspects of the lobby, such as the overall feel of the lobby, the use of print, the visuals, the sense of welcome, and the availability of help. Once your informant has finished exploring the lobby, ask him/her to answer the key question below.

Key Question 2: *How would you describe the use of the printed word in the lobby?*

Additional Prompts:

- *How is the printed word used?*
- *Are the words you see part of everyday talk?*
- *Are there any signs or words that make you feel intimidated or less comfortable?*

_____

_____

_____

_____

_____

_____

_____

Rating: Overall, how much use of the printed word is there in the lobby?

A Lot of Print **1** **2** **3** **4** **5** **6** **Very Little Print**

Part B: Lobby→Overall Environment *(continued)*

Sometimes visuals such as photographs, artwork, and local postings offer a sense of connection to the community. Visuals may also capture the diversity and culture of the neighborhood. A reflection of familiar places and faces may make people feel more at ease, comfortable, or welcomed. Ask your informant to answer the question below.

Key Question 3: *How would you describe the use of pictures or other visuals in the lobby?*

Additional Prompts:

- *Do the visuals in the lobby make you feel welcomed and/or comfortable?*
- *Do the visuals reflect the neighborhood, cultural groups, or language groups of the people you see in this healthcare facility?*
- *Are there any visuals that make you feel especially welcomed? If so, what in particular?*

_____

_____

_____

_____

_____

_____

Rating: Overall, how welcoming are the pictures and other visuals in the lobby?

Not At All Welcoming 1 2 3 4 5 6 Very Welcoming

Part B: Lobby→Finding Help with Directions

Now ask your informant to think about needing help finding another part of the healthcare facility. Ask him/her to look around for sources of help such as people, maps, and signs.

Key Question 4: *Who is available to help you?*

Additional Prompts:

- *How do you identify people who can help you?*
- *Are you comfortable asking for help from the people you identify? Why? Why not?*

Rating: Overall, how helpful are the available staff and volunteers in the lobby? (If applicable)

Not At All Helpful 1 2 3 4 5 6 Very Helpful

Part B: Lobby→Finding Help with Directions *(continued)*

Key Question 5: *What maps or signs are available to help you?*

Additional Prompts:

- *Are the maps and signs clear/easy to read? Why? Why not?*
- *Would you use them? Why? Why not?*

Rating: Overall, how helpful are the maps and signs in the main lobby? (If applicable)

Not At All Helpful 1 2 3 4 5 6 Very Helpful

Part C: Navigation Activity
Moving from the Main Lobby to Location X

Next, determine a location in the facility (i.e., 'Location X') that does not include patient rooms or other private areas. Your informant should choose from the following:

- **Medical records:** where a person would go to obtain medical records.
- **Testing area such as an X-Ray or MRI office**: where a person would go to have a specific test or scan.
- **Specialty clinic**: such as the asthma center or the arthritis center.
- **Pharmacy**: where a person would go to fill a prescription (R_x).

Explain to your informant that he/she is to find his/her way from the main lobby to Location X and that you will ask him/her to talk aloud about making his/her way.

- Ask your informant to think aloud as much as possible.
- Observe and ask questions about your informant's actions:
  - *You did/did not take a map. Why?*
  - *You did/did not ask for directions at the help desk. Why?*
  - *What helped you make the decision to go in this direction first?*

Begin the walk to Location X. Your informant should take the lead on deciding which direction to go, and only then should you ask why the particular decision was made. Do not say anything if your informant gets lost, goes in the wrong direction, or takes a long time to find Location X. **However,** if this becomes stressful, work with your informant to find the way. Use the space below to record your informant's comments.

Tour Notes:

Part C: Navigation Activity →Final Reflections

Once you have reached Location X, find a comfortable place to talk. If there is no place for you to sit, walk back to the lobby or cafeteria (whichever is closer). Find your way there together. Then, ask your informant to answer the questions below about his/her overall experience of moving from the main lobby to Location X.

Key Questions:

How did you feel as you moved toward Location X?

_____

_____

What was helpful?

_____

_____

What was confusing?

_____

_____

How did you know when you reached your destination (Location X)?

_____

_____

Do you have any suggestions for those in charge?

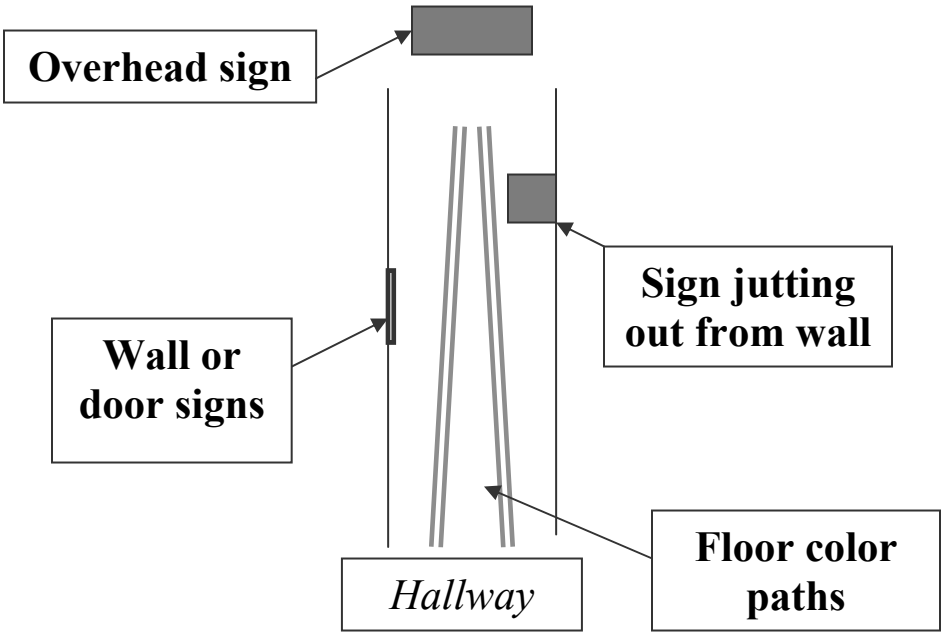
_____

_____

Part C: Navigation Activity →Final Reflections *(continued)*

Use of Signs

The diagram below shows a hallway and the types of signs most commonly encountered. Below, check the types of signs you found as you navigated the health facility and circle which kind was most common:



Please check all of the kinds of signs that you saw on your tour:

- ☐ Overhead signs
- ☐ Wall signs
- ☐ Sign jutting out from wall
- ☐ Floor color paths

Comments on signs:

Print Communication: Materials Assessment Workshop & Tools

Clear and simple materials are the foundation for easy entry into and navigation of healthcare facilities. Patients are often inundated with print materials. These materials include:

- Community relations materials (such as mailings and promotional materials)
- Patient orientation materials (such as welcome materials and patients' rights & responsibilities)
- Forms patients fill out (such as medical history forms)
- Patient education materials (such as disease and medicine descriptions)
- Legal materials (such as informed consent forms)
- Discharge preparation information (such as when to call your doctor)
- Follow-up notifications (such as test results and billing information)

This section includes the following information:

- Materials Assessment Workshop
  Purpose: Teach participants how to assess the reading grade level, layout, and design of printed materials in order to improve their readability.
  Facilitator: Person at your facility who oversees materials development.
  Participants: Anyone at your facility who develops or assesses materials.
- Tools for Conducting Readability Assessments for Print Materials

Once you have completed the *Readability Assessment Form for Print Materials*, please complete all of **Part 2** of the *Health Literacy Environment Review,* located on **pages 13-16.**

Materials Assessment Workshop Sample Agenda

Workshop Length: 3 hours (180 minutes) including a 10-minute break.

Learning Objectives: *Participants will be able to…*

1. Assess the reading grade level of print materials (using the SMOG)
2. Assess the layout and design of print materials (using the SAM & PMOSE/IKIRSCH)
3. Identify design issues to improve the readability (reading level, layout, design, use of visuals) of print materials

Materials Needed for Workshop:

Provided by facilitator

- ☐ Easel with flip chart or overhead projector
- ☐ Markers
- ☐ Sample 'plain language' materials
- ☐ (plain•word)™
- ☐ Directions for the SMOG
- ☐ Directions for the SAM
- ☐ Directions for the PMOSE/IKIRSCH

Brought by participants

- ☐ Samples of materials from their facilities (letter, brochure, instructions)

Steps

***1. Introduction (~20 minutes)*:** Have each of the workshop participants introduce themselves to the group and identify their experience with and responsibility for materials development.

2. Icebreaker (~15 minutes): Ask participants to form pairs. Pass out 2 (plain•word)™ cards to each pair. Read the directions aloud and then encourage the pairs to play for about 10 minutes. Ask participants to comment on the game.

3. Plain Language (~30 minutes): Introduce the topic of plain language to the group. Review the definition and make references to the icebreaker game, (plain•word)™. Discuss the use of plain language terms. Use an overhead or slide to illustrate technical terms found in hospital/health center materials and ask participants to offer substitute terms.

4. Readability (~40 minutes): Introduce the topic of readability. Discuss the types of readability formulas. Highlight that results cannot be compared across formulas, and note the importance of using one formula across the facility. Present the SMOG readability formula in detail. Ask the group to assemble in groups of three to assess the materials they brought to the workshop. Circulate among groups to answer questions. Ask each group to report back to the large group.

BREAK (~10 minutes)

5. Beyond Readability (~45 minutes): Discuss the importance of layout and design elements to ease readability. Present the SAM. Have participants divide into groups of three and perform the SAM on one of the materials they brought to the workshop. Next, review the elements of the PMOSE/IKIRSCH and ask participants to assess any tables, charts, or graphs within these materials.

6. Summary (~20 minutes): Review implications for developing new materials. For example, highlight the need to avoid jargon, to use short sentences and everyday words, and to highlight key facts.

Materials Assessment Workshop

Step One: Introduction
While many of the participants may know one another, they may not be familiar with each others' work. Ask people to introduce themselves and to describe their responsibilities for developing, choosing, or assessing materials used in the facility.

In addition, you may wish to provide a 'portrait' of U.S. adults, and briefly present findings from the 1992 National Adult Literacy Survey (NALS) and the 2003 National Assessment of Adult Literacy (NAAL). This information is available in **Section V: Background and Resources.**

Step Two: Icebreaker
This game sets a great tone for the workshop. Have participants work in pairs. Each person holds a "plainword" card, reads a hard word, such as *utilize,* and asks the others to suggest a common word substitute such as *use*. This game is the exact opposite of games developed to 'improve vocabulary' for those taking national tests for college or graduate school. (plain•word)™ was developed by the Canadian Public Health Association's (CPHA) National Literacy and Health Program. (plain•word)™ is easy to play. For each hard word card you have to guess a plain word. This game is designed to help you simplify the language you use by teaching the principles of plain language.

This exercise will give the participants a hands-on understanding of the challenges encountered when writing and speaking in "plain language." A more detailed description of (plain•word)™ is included at the end of this section.

Step Three: Plain Language
Health professionals must use the terms of their profession, and at the same time maintain an ability to translate technical terms into everyday words. The use of plain language helps us communicate with people who have not been trained in the same discipline and do not have the same background information.

Plain Words and Straightforward Sentences: The term "plain language" is jargon and many people are not familiar with it. You may want to begin your discussion of plain language by defining this term. *Plain language* is defined as a clear, simple, conversational style, and one that presents information in a logical order.

Next you might want to circle back to the icebreaker game, (plain•word)™. You can offer an illustration of technical health terms and substitutes by drawing from the examples in *Teaching Patients with Low Literacy Skills*[5], by Doak, Doak, and Root. Participants can then see terms side by side, such as *utilize* and *use*. You may also want to use one or two examples of comparisons between complex and simple sentences. Once the participants have a reference point, it may be easier to discuss the definition of plain language and tips for writing in plain language.

Organization: Plain language also focuses on careful attention to the organization and presentation of information. For example, the use of headings and summary sections helps highlight important information. Short sentences are preferred over long and complex sentences because readers can 'get lost.' Thus, plain language writers are encouraged to avoid clauses. In addition, plain language writers are encouraged to focus on one fact or idea in a sentence, and to use paragraphs to illustrate or develop one idea or main point.

Revision: People can have a difficult time when they try to make text clear and simple. This type of exercise 'goes against the grain', because many have learned from their experience in K-12 schooling that "good" writing incorporates a broad vocabulary and varied sentence formats. Plain language revisions take skill and time. Practice is very important. Therefore, the workshop activity should include an opportunity for participants to revise a piece of material.

Examples: Below are two examples from *Writing and Designing Print Materials for Beneficiaries: A Guide for State Medicaid Agencies*, by Jeanne McGee. One is the original and the second is a more appropriate plain language version.

> ***GRADE 12:***
> It makes good sense that premature births and newborn illnesses are decreased by early pregnancy care. The doctor is actively involved in testing the pregnant woman for pregnancy-induced diabetes and a host of other problems that would not be detected by the patient alone. We know that these problems cause premature births and illness in newborns. It certainly makes sense that early detection and treatment of these problems by the doctor results in healthier babies.

[5] Doak, L., Doak, C., & Root, J. (1996). *Teaching patients with low literacy skills* (2nd ed.). Philadelphia, PA: J.B. Lippincott Company. This is no longer in print but it is available on our Web site free of charge at www.hsph.harvard.edu/healthliteracy.

GRADE 4:
If you are pregnant or think you might be, go to the doctor as soon as you can. If you start your care early, things will go better for you and your baby. Your own doctor or a childbirth doctor from our list will give you a first exam. Tests every month or so will let you know if all is going well. If there is a problem, you'll know it right away. Then we can do what is needed. Early care is the best way to have a healthy child. Your baby counts on you.

Step Four: Readability
Readability is the first step in materials assessment, but should not be the only one. Readability level is associated with a grade level based on the development of texts for a particular grade. Text writers should consider vocabulary as well as the structure and format of sentences and passages. Simple, short sentences are associated with lower grades. Complex sentences are associated with higher grades. Because the pronunciation of multi-syllabic words is difficult in the English language, short words are considered to be easier to read than are longer words.

Note that there are several types of readability formulas in use. Some of the more commonly used readability formulas are the FRY, SMOG, and Flesch-Kincaid (computer version)

For a detailed discussion of readings as well as these readability tools, please see **pages 127-142.**

Following this discussion, present the SMOG readability formula in detail. We promote the SMOG because it predicts comprehension. Unlike some other formulas, the SMOG does not rely on a chart or graph and so it is more portable for fieldwork.

SMOG Assessment Activity: Provide each participant with the same materials. Then guide the group through the process of choosing 30 sentences: 10 at the start, 10 at the middle, and 10 at the end of each material. Encourage participants to use a highlighter to note periods. Next, work on the first ten sentences together, and use a highlighter to identify every word that has three or more syllables. Ask each participant to complete the assessment and offer a grade level. Ask participants to report on findings. Expect some variation, and use this opportunity to answer questions about the process and make corrections.

Ask participants to divide into groups of three and work together on one material brought to the workshop. Visit each group to answer questions. What seems like a simple, straightforward formula can spark many questions. For example:

Q: *What if a polysyllabic word is repeated several times? Do you count it each time or only the first time it is mentioned?*
A: According to the SMOG rules, you should count the word every single time it is mentioned.

Q: *What if a date or number is mentioned like 1999 or 12?*
A: In the first instance, 1999 would be counted as one polysyllabic word since it reads as a five syllable word, "nineteen-ninety-nine". In the second instance, 12 would not be counted as a polysyllabic word since it reads as a one-syllable word, "twelve".

Q: *What if an acronym is mentioned, such as "TANF"?*
A: An acronym is counted as each individual word that it represents. In this example, TANF represents "Temporary Assistance for Needy Families" and it has 3 polysyllabic words (temporary, assistance, and families). You would add 3 to your polysyllabic word count.

Ask the participants to report back to the full group. Highlight the importance of short sentences and everyday words.

Step Five: Beyond Readability
The reading grade level (RGL) of print material is just one component of assessing materials. RGL does not offer insight into organization, design, or layout. This portion of the workshop focuses on additional tools that go beyond attention to word and sentence length. Step Five introduces participants to the Suitability Assessment of Materials (SAM) and the PMOSE/IKIRSCH.

The SAM covers organization, writing style, appearance, and appeal. The workshop time is limited, and so participants will only have time to focus on an introduction to the SAM. However, a complete overview of the SAM is provided at the end of this section and can be replicated as a handout. Once you provide an overview, ask groups of three to review the sample material and focus on one of the SAM components.

The PMOSE/IKIRSCH is a tool used for assessing documents rather than prose. Prose materials are comprised of full sentences in paragraph form. Documents consist of lists, charts, and graphs. The full PMOSE/IKIRSCH tool is provided at the end of this section on **pages 139-140** and can be replicated as a handout. Review the key components of PMOSE/IKIRSCH. Note that the focus of this tool is on the format of lists or charts, and that the score is based on measures of complexity. Please note that the PMOSE/IKIRSCH does not include an assessment of vocabulary. Ask the groups of three to find a list, chart, or graph in the sample materials and to apply the PMOSE/IKIRSCH.

Please let the participants know that these tools will provide insight into factors that ease reading or make reading more difficult. Although the SAM has some very subjective parts, the questions themselves are thought-provoking and help people look at print materials in a new way.

Step Six: Summary

During the last 20 minutes of the workshop, answer any remaining questions. Review the handouts, references, Web links, and other resources. Encourage participants to teach others in their unit or area of specialty, and to work with others to assess materials. Suggest that participants use the *Readability Assessment Form* for print materials, provided on **page 128**, to evaluate all print materials distributed at their healthcare facility.

Readability Assessment Overview

People who develop and assess health materials must pay attention to the following:

1. Materials written in **prose format** (text in full sentences in paragraphs)
2. Materials written in **document format** (information that is presented in lists, charts, tables, and graphics)

Both types of materials can have varying levels of difficulty and complexity.

Prose format: A number of readability formulas assess the difficulty of print materials in prose format. The scores are based on vocabulary and length of sentences. Everyday words are more easily recognized than professional jargon and scientific terms. Short sentences with a clear focus are more easily followed than are long sentences containing several ideas and/or clauses. The SMOG is useful for assessing the reading grade level of prose. However, this formula does not assess jargon, organization of text, or design features. The SAM (Suitability Assessment of Materials) considers an array of issues such as organization of text and design.

Document format: One tool, the PMOSE/IKIRSCH, has been developed to assess the structure of materials. This tool enables a reviewer to calculate the complexity of documents by examining the structure of the text, <u>but not vocabulary.</u>

Consider assessing some or all of the following print materials:

<u>Prose (Use the SMOG and SAM):</u>

- Community relations (such as mailings and promotional materials)
- Patient orientation (such as welcome pamphlets, information booklets, and patients' rights & responsibilities listings)
- Follow up notifications (such as test results and billing information)
- Patient education materials (such as disease and medicine descriptions)
- Legal materials (such as informed consent forms)

<u>Documents (Use the PMOSE/IKIRSCH):</u>

- Forms patients fill out (such as medical history forms)

Note: For mixed prose/documents such as discharge preparation information or medication instructions, use the SMOG, SAM, and PMOSE/IKIRSCH, as appropriate.

Readability Assessment Form

Note: *Please duplicate this form as needed.*

Date: _____Name: _____

1. Name of material you are assessing:

_____

(such as diabetes medication brochure, HIV testing information sheet, etc.)

2. Type of material you are assessing:
   - ☐ Community relations (such as mailings and promotional materials)
   - ☐ Patient orientation (such as welcome brochures, information booklets, and patients' rights & responsibilities listings)
   - ☐ Follow-up notifications (such as test results and billing information)
   - ☐ Patient education materials (such as disease and medicine descriptions)
   - ☐ Legal materials (such as informed consent forms)
   - ☐ Forms patients fill out (such as medical history forms)
   - ☐ Discharge preparation information

3. Readability assessment tool(s) you used:
   - ☐ SMOG
   - ☐ SAM
   - ☐ PMOSE/IKIRSCH

4. Score(s) from readability tools:
   - ☐ SMOG_____
   - ☐ SAM_____
   - ☐ PMOSE/IKIRSCH_____

Tool	Desired Score
SMOG	Reading grade level at or below 8th grade
SAM	Design and vocabulary meeting standard of adequate or superior.
PMOSE/IKIRSCH	Level 1 or 2

Tools for Skills Development for Assessing Materials

♦ ♦ ♦

(plain•word)™

♦

SMOG: A readability assessment tool

♦

SAM: A suitability of materials assessment tool

♦

PMOSE/IKIRSCH: A document literacy assessment tool

(plain•word)™

Medium(s): Available by:

- Web site: http://www.cpha.ca/english/hrc/hrcpubs/literacy.htm
- Print
- CD-ROM

Intended Audience

If communication is an important part of your work, (plain•word)™ can teach you the principles of plain language that help you get your message across the first time.

Background

(plain•word)™ was developed by the Canadian Public Health Association's (CPHA) National Literacy and Health Program (http://www.nlhp.cpha.ca/). The National Literacy and Health Program (NLHP) promotes awareness among health professionals of the links between literacy and health. The NLHP provides resources to help health professionals serve clients with low literacy skills more effectively. The program focuses on health information in plain language, and on clear verbal communication between health professionals and the clients they serve. CPHA is committed to maintaining and improving personal and community health according to the public health principles of prevention, promotion, protection, and effective public policy. The National Literacy and Health Program has been in existence for ten years and works with twenty-seven national health association partners to raise awareness about literacy and health.

Description: (plain•word)™ is easy to play. All you have to do is guess a (plain•word)™ for each hard word on a Word Card.

For example: If the hard word is *manufacture*, the (plain•word)™ is *make*. If the hard word is *utilize*, the (plain•word)™ is *use*.

Sometimes the (plain•word)™ may be more than one word. *For example:* If the hard word is *banned*, the (plain•word)™ is *not allowed*.

If you guess an incorrect (plain•word)™, you must choose an Editor's Note Card. These cards teach principles of plain language and are designed to give or take away points in the actual game.

SMOG

Pros

- The SMOG is useful for doing quick assessments of materials. It does not rely on charts or graphs. It is very useful for doing "fieldwork" assessments.
- Predicts 100% comprehension.

Con

- The SMOG does not discriminate well at levels of literacy below a 6th grade reading level.

How To—IF YOUR DOCUMENT HAS 30 SENTENCES OR MORE.

1. **Highlight or circle** period (.), exclamation point (!), question mark (?) at the end of 10 consecutive sentences found at the start of the material, 10 consecutive sentences in the middle, and 10 consecutive sentences at the end of the material. In total, you should now have 3 groups of 10 sentences each marked in your material (for a total of 30 sentences). *If the health material has just 30 sentences in total, then you can count this one grouping of 30 consecutive sentences.*

   TIPS:
   - A sentence is defined as a string of words punctuated with a period (.), an exclamation point (!) or a question mark (?).
   - Since difficulty may differ by content area, you may choose to select 3 groups of 10 sentences that cover different content topics.

2. Words with three or more syllables are called "polysyllabic words". In your sample of 30 sentences, **identify which words are polysyllabic**. Highlight or circle all polysyllabic words using a color different from the one you chose for your punctuation.

   TIPS:
   - Hyphenated words are considered as one word.
   - Numbers that are written out should be considered a full word, as are numbers offered in numeric form. For example, seventy-five has 4 syllables (se-ven-ty-five).
   - Proper nouns, if polysyllabic, should be counted too.
   - Abbreviations should be read as though they were unabbreviated to determine if they are polysyllabic.

3. **Count each of the words** that you highlighted (this is your total number of polysyllabic words for your 30 sentences).

4. Next, **estimate the square root** of the total number of polysyllabic words. Find the nearest perfect square and take its square root. For example, if your total number of polysyllabic words is 38, the nearest perfect square is 36. The square root of 36 is 6 ($\sqrt{36}=6$).

5. Finally, **add 3** to the square root. Consider the example in #4. The nearest perfect square was 36. The square root is 6. Add 3 to get 9 (3+6=9). This final number is the SMOG reading grade level (RGL). A 9th grade RGL is generally considered to be above the average reading skills of U.S. high school graduates.

How to—IF YOUR DOCUMENT HAS LESS THAN 30 SENTENCES.

1. Highlight or circle the periods (or other punctuation) at the end of each sentence.

2. Count the number of the sentences in your document.

3. Identify which words are polysyllabic.

4. Count each of the polysyllabic words that you highlighted.

5. Find the average number of polysyllabic words per sentence by dividing the total number of polysyllabic words by the number of sentences in your document.

Example:	Total number of polysyllabic words in your text	= 67.0
	Total number of sentences in your text	= 25.0
	Average number of polysyllabic words per sentence (67.0÷25.0)	*= 2.68*

6. Determine how many sentences short of 30 you have.

Example:	Total number of sentences in your text	= 25
	Number of sentences short of 30 (30-25)	*= 5*

7. Multiply the average number of polysyllabic words per sentence from Step 5 by the number of sentences short of 30 from Step 6.

Example:	Average number of polysyllabic words per sentence	= 2.68
	Number of sentences short of 30 (30-25)	= 5.00
	Multiplication (2.68x5.00)	*= 13.4*

8. Add your figure from Step 7 to your total number of polysyllabic words.

Example:	Step 7 figure	= 13.4
	Total number of polysyllabic words in your text	= 67.0
	Addition (13.4+67.0)	*= 80.4*

9. Next, estimate the square root of the total number of polysyllabic words counted. This is done by finding the nearest perfect square, and taking its square root.

Example:	Total number of polysyllabic words from Step 8	= 80.4
	The nearest perfect square	= 81.0
	The square root of 81 (√81)	*= 9*

10. Finally, add 3 to the square root.

Example:	The square root from Step 9	= 9
	Add 3	= 3
	Addition (9+3)	*= 12*

This number gives the SMOG grade, or the reading grade level assigned to text. In our example the **SMOG Reading Grade Level for the text would be 12.** This number helps you understand the "demand" of the text.

References

McLaughlin, G.H. (1969). SMOG grading: A new readability formula. *Journal of Reading*, *12*, 639-646.

Rudd, R.E. Assessing materials. Harvard School of Public Health: Health Literacy Web site. 2002. Available at http://www.hsph.harvard.edu/healthliteracy/how_to/assess_mat.html.

U.S. Department of Health and Human Services. (1999) *Writing and designing print materials for beneficiaries: A guide for state Medicaid agencies* (HCFA Publication No. 10145). Baltimore, MD: Author: Jeanne McGee.

SAM

Pros

- Assesses many important aspects of materials such as organization, layout, and design, as well as readability.
- Although the SAM was developed for use with print materials, it has also been used to assess video- and audio-taped instructions to patients.

Cons

- The SAM is a subjective instrument and it is not always possible to achieve a consistent score among reviewers. However, the review process enables a team to fully examine and discuss the demands of health materials.
- You need to have the SAM score sheet as well as the SAM instrument guide with you when you are assessing your materials. Therefore, the SAM is more suited for office-based work than for fieldwork.

How To

1. Read through the SAM scoring criteria. The **SAM scoring sheet** is provided on the **following page**. For more detailed information about the scoring criteria, please refer to Doak, L., Doak, C., & Root, J. (1996). *Teaching patients with low literacy skills* (2nd ed.). Philadelphia, PA: J.B. Lippincott Company. This is available on our Web site at www.hsph.harvard.edu/healthliteracy.
2. Read the material (or view the video) you wish to evaluate, and write a brief statement as to its purpose(s) and key points.
3. For short materials, evaluate the entire piece. For long materials, select samples to evaluate.
4. Evaluate and score each of the 22 SAM scoring factors.
5. Calculate total suitability score.
6. Decide on the impact of the deficiencies and what action to take.

Note: You may also choose to create your own assessment checklist using some of the key components that are listed in the SAM. We have created a checklist that we use. It is presented below:

— Is the font size larger than 12 points? Yes No
— Are the margins at least 1 inch on all sides? Yes No

By creating a list that has yes/no answers, some of the subjectivity is eliminated and the checklist can be used by many reviewers.

SAM Scoring Sheet

From: Doak, Doak, and Root (1996). *Teaching patients with low literacy skills* (2nd ed).

2 points for superior rating
1 point for adequate rating
0 points for not suitable rating
N/A if the factor does not apply to this material

FACTOR TO BE RATED	SCORE	COMMENTS
1. CONTENT		
(a) Purpose is evident	_____	_____
(b) Content about behaviors	_____	_____
(c) Scope is limited	_____	_____
(d) Summary or review included	_____	_____
2. LITERACY DEMAND		
(a) Reading grade level	_____	
(b) Writing style, active voice	_____	
(c) Vocabulary uses common words	_____	
(d) Context is given first	_____	
(e) Learning aids via "road signs"	_____	
3. GRAPHICS		
(a) Cover graphic shows purpose	_____	
(b) Type of graphics	_____	
(c) Relevance of illustrations	_____	
(d) List, tables, etc. explained	_____	
(e) Captions used for graphics	_____	
4. LAYOUT AND TYPOGRAPHY		
(a) Layout factors	_____	
(b) Typography	_____	
(c) Subheads ("chunking") used	_____	
5. LEARNING STIMULATION, MOTIVATION		
(a) Interaction used	_____	
(b) Behaviors are modeled and specific	_____	
(c) Motivation—self-efficacy	_____	
6. CULTURAL APPROPRIATENESS		
(a) Match in logic, language, experience	_____	
(b) Cultural image and examples	_____	

Total SAM score: _____Total possible score: _____ Percent score: _____%

Interpretation of SAM percentage ratings:

70-100 percent	**superior material**
40-69 percent	**adequate material**
0-39 percent	**not suitable material**

References

Doak, L., Doak, C., & Root, J. (1996). *Teaching patients with low literacy skills* (2nd ed.). Philadelphia, PA: J.B. Lippincott Company. This is no longer in print but it is available on our Web site free of charge at www.hsph.harvard.edu/healthliteracy.

Rudd, R.E. Assessing materials. Harvard School of Public Health: Health Literacy Studies Web site. 2002. Available at http://www.hsph.harvard.edu/healthliteracy/how_to/assess_mat.html.

PMOSE/IKIRSCH

Pros

- The PMOSE/IKIRSCH is the first and only tool to assess the difficulty of documents.

Cons

- The PMOSE/IKIRSCH does not take into consideration readability level. Vocabulary is not addressed, nor is complexity of phrases.
- The tool can be somewhat cumbersome to implement.

Background

Adults encounter documents (forms, tables, graphs, charts, and lists) on a regular basis. Until recently, no tool existed to measure the readability of documents. Researchers Mosenthal and Kirsch developed a measure for assessing document complexity called the PMOSE/ IKIRSCH document readability formula (*Journal of Adolescent & Adult Literacy, 41*(8), 1998). The formula examines:

- The structure
- The number of labels
- The number of items

These factors are used to calculate the complexity of a chart or table. Scores range from Level 1 to Level 5 *Proficiency*. The *Proficiency Level* can be translated into a grade-level equivalent:

Level 1 Proficiency:	range including Grade 4; equivalent to 8 years of schooling
Level 2 Proficiency:	range including Grade 8; equivalent to high school degree
Level 3 Proficiency:	range including Grade 12; equivalent to some education after high school
Level 4 Proficiency:	range including 15 years of schooling to college degree equivalent
Level 5 Proficiency:	range including 16 years of schooling to more advanced post college degree

Mosenthal and Kirsch consider the organization of information. They claim comprehension of information presented in simple lists, for example, depends on how the lists are arranged. Some of the more complicated list structures are *combined*, *intersected*, and *nested*.

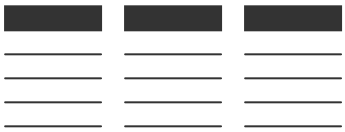
PMOSE/IKIRSCH Instructions

From Mosenthal & Kirsch (1998). A new measure for assessing document complexity: The PMOSE/IKIRSCH document readability formula. *Journal of Adolescent and Adult Literacy*, *41*, 638-657

Document structure

Score 1 if *simple-list* structure.

Score 2 if *combined-list* structure
(also includes pie charts and time lines).



Score 3 if *intersected-list* structure
(also includes bar charts, line graphs, and maps).

Score 4 if *nested-list* structure
(also includes bar charts and line graphs with nested labels).

Document structure score: _____

Document density

Labels
Score 1 if 15 or fewer labels.
Score 2 if 16 to 25 labels.
Score 3 if 26 to 35 labels.
Score 4 if 36 to 46 labels.
Score 5 if more than 46 labels.

Number of labels score: _____

Instructions continue onto next page→

Items
Score 1 if 75 or fewer items.
Score 2 if 76 to 125 items.
Score 3 if 126 to 175 items.
Score 4 if 176 to 225 items.
Score 5 if more than 225 items.

Number of items score: _____

Add 1 if document makes reference to information in a related document or as a dependency.

Dependency score: _____

Total score: _____

Document complexity level
(Circle total score below to determine a document's complexity level)

Very low complexity	Low complexity	Moderate complexity	High complexity	Very high complexity
3 4 5 **Level 1 proficiency** **Range including Grade 4 equivalent to less than 8 years of schooling.**	**6 7 8** **Level 2 proficiency** **Range including Grade 8 equivalent to high school diploma.**	**9 10 11** **Level 3 proficiency** **Range including Grade 12 equivalent to some education after high school.**	**12 13 14** **Level 4 proficiency** **Range including 15 years of schooling to college degree equivalent.**	**15 16 17** **Level 5 proficiency** **Range including 16 years of schooling to more advanced post-college degree.**

PMOSE/IKIRSCH Examples

Example 1: NALS Table 1.4

AVERAGE YEARS OF SCHOOLING, BY AGE

Age	Average Years of Schooling*
16-18 years**	10.8
19-24 years**	12.5
25-39 years	12.9
40-54 years	13.1
55-64 years	11.8
65 years and older	10.7

*in this country.
**Many adults in these age groups are still in school.
Source: U.S. Department of Education, National Center for Education Statistics, National Adult Literacy Survey, 1992.

Applying the PMOSE/IKIRSCH Document Readability Formula

1. Table presented above is a **Combined List** and receives a score of **2.**
2. There are **2 labels**, which corresponds to a score of **1**.
3. There are 12 items, plus 2 items in footnotes, for a total of **14 items** and a score of **1**.
4. The table contains **footnotes**, so the dependency score is **1**.
5. **If we add the previous scores, the total document complexity level for this Table is 5, or Level 1 Proficiency.**

Example 2: NALS Table 2.1

AMONG ADULTS WHO READ THE NEWSPAPER AT LEAST ONCE A WEEK, AVERAGE LITERACY PROFICIENCIES, BY NEWSPAPER READING PRACTICES

	Average Prose Proficiency		Average Document Proficiency		Average Quantitative Proficiency	
	Yes	No	Yes	No	Yes	No
News, editorials, financial	282	248	276	248	281	250
Home, fashion, reviews	284	267	277	264	282	271
Classified ads, listings	280	282	274	274	280	282
Comics, advice, horoscope	282	277	276	271	280	279
Sports	282	280	276	273	284	276

Source: U.S. Department of Education, National Center for Education Statistics, National Adult Literacy Survey, 1992.

Applying the PMOSE/IKIRSCH Document Readability Formula:

1. This Table has a **Nested List Structure**, so it receives a score of **4**.
2. There are **9 labels**, which corresponds to a score of **1**.
3. There are **35 items**, which corresponds to a score of **1**.
4. The table **does not** contain footnotes, so the dependency score is **0.**
5. **If we add the previous scores, the total document complexity level for this Table is 6, or Level 2 Proficiency.**

References

Kirsch, I., Jungeblut, A., Jenkins, L., & Kolstad, A. (1993). *Adult literacy in America: The first look at the results of the National Adult Literacy Survey (NALS).* Washington, DC: U.S. Department of Education.

Mosenthal, P. B., & Kirsch, I.S. (1998). A new measure for assessing document complexity: The PMOSE/IKIRSCH document readability formula. *Journal of Adolescent and Adult Literacy*, *41*, 638-657.

Oral Exchange: Patient Satisfaction Survey

Communication between patients and staff at hospitals and health centers is a critical component of healthcare. Patients at healthcare facilities interact with staff at all levels including receptionists, service staff, and healthcare providers. Patients may seek help with directions, forms, information, and follow up action. Encounters between patients and staff may include:

- Phone inquiries
- Help desk questions
- Intake procedures
- Medical examination discussions
- Consent procedures
- Discharge preparation information

An in-house patient satisfaction study of oral exchange can offer insightful findings for discussions and analyses. Findings can be used to help shape the design of training and educational opportunities for staff members.

This section offers an example of a patient satisfaction survey interview. This type of survey should be administered as an interview so that people who may not read well can participate. The interview should take place after patients have completed their visit to the facility, or after a visit to a practitioner. The interview should take between 5 and 10 minutes. Once you have collected a sample of interviews, review the results and complete **Part 3** of the *Health Literacy Environment Review,* located on **pages 17-18.**

Patient Satisfaction Survey Interview Form

Greeting

1. *Were you greeted when you entered this area?* ☐ Yes ☐ No
2. *Did you feel welcomed?* ☐ Yes ☐ No

Forms

3. *Were you asked to fill out a form? (If no, skip to question #6).*
   ☐ Yes ☐ No
4. *If you were asked to fill out a form, did a staff member or volunteer offer to help you with it?* ☐ Yes ☐ No
5. *How helpful was the staff member or volunteer in assisting you?*

Tell me the number that most closely captures your experience with our staff.

1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**N/A**
Not at all helpful				Somewhat helpful				Very helpful		

Please describe your experience:

_____

_____

_____

Talk

6. *If staff used medical or technical terms, did they explain them?* ☐ Yes ☐ No
7. *How helpful were the definitions and explanations of terms staff gave you?*

Tell me the number that most closely captures your experience with our staff.

1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**N/A**
Not at all helpful				Somewhat helpful				Very helpful		

Please describe your experience:

_____

_____

_____

Please continue onto next page→

Questions

8. *Did you ask questions during your visit today?* ☐ Yes ☐ No
9. *Were your questions well-received?* ☐ Yes ☐ No
10. *How comfortable did you feel asking questions?*

Tell me the number that most closely captures your experience with our staff.

1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**N/A**
Not at all comfortable				Somewhat comfortable				Very comfortable		

Please describe your experience:

_____

_____

_____

11. *Were you given the name of a person or place to call if you have any follow up questions?* ☐ Yes ☐ No

Overall Experience

12. *Were you treated with respect and dignity?* ☐ Yes ☐ No

Please describe your experience and tell us ideas for improving our clinic:

_____

_____

_____

_____

_____

_____

_____

_____

Technology: Current Technology Assessment

Many healthcare facilities are using televisions, telephones, computers, and kiosks to offer patients an orientation to the facility and services, explain procedures, augment data collection, retrieve information, and provide educational opportunities. This section of the guide provides you with a tool to assess **where** and **how** technology is **currently** being used in your facility.

For this technology assessment activity, we suggest that you spend some time walking around spaces in your facility that patients have access to, such as:

- Lobbies and other waiting areas
- Testing sites
- Hallways
- Resource rooms, libraries, learning centers
- Family and visitor lounges
- Pharmacies

Make note of the **locations** and **uses** of the following technologies available to patients:

- Televisions
- Telephones
- Computers
- Kiosks

Once you have filled out the *Current Technology Assessment Form,* please complete **Part 4** of the *Health Literacy Environment Review*, located on **pages 19-20.**

Current Technology Assessment Form

Please answer the following questions about current technology available in your hospital or health center …

Televisions

Consider when and where patients can have access to televisions in your facility.

1. *Does your facility have televisions in spaces available to patients and visitors?*

   ☐ Yes ☐ No (If No, skip to question #6)

2. *In which public spaces are televisions located for patients to use in your facility?*

_____ _____

_____ _____

_____ _____

_____ _____

3. *How are patients currently using televisions? Please check all that apply:*
   - ☐ News
   - ☐ Entertainment
   - ☐ Healthcare facility information
   - ☐ General patient education
   - ☐ Specific information preparing a patient for a test or procedure
   - ☐ Other_____

4. *Are the televisions connected to DVD players or VCRs?*

   ☐ Yes ☐ No (If No, skip to question #6)

5. *How are patients currently using DVD players and VCRs?*
   - ☐ Entertainment
   - ☐ Healthcare facility information
   - ☐ General patient education
   - ☐ Specific information preparing a patient for a test or procedure
   - ☐ Other_____

Please continue onto next page→

House Phones

Consider when and where patients can have access to house telephones in your facility.

6. *Does your facility have house telephones available for patients to use?*
   ☐ Yes ☐ No (If No, skip to question #9)

7. *In which public spaces are house telephones located in your facility for patients to use?*

_____ _____
_____ _____
_____ _____
_____ _____

8. *How are patients currently using house telephones*? Please check all that apply*:*

   ☐ Help desk (for example, to get directions)
   ☐ Translation services
   ☐ Data entry (for example, to get help filling out forms)
   ☐ Other_____

Computers

Consider when and where patients can have access to a computer (with or independent of their providers).

9. *Does your facility have computers in spaces available to patients and visitors?*

   ☐ Yes ☐ No (If No, skip to question #15)

10. *Where are these computers located?*

_____ _____
_____ _____
_____ _____
_____ _____

Please continue onto next page→

11. How are patients currently using computers? Please check all that apply:

- ☐ Health history information
- ☐ Screening
- ☐ Medical records
- ☐ General patient education
- ☐ Specific information preparing a patient for a test or procedure
- ☐ Internet
- ☐ Other_____

12. Do all computers have Internet capabilities? ☐ Yes ☐ No

13. Are any computers connected to the Internet? ☐ Yes ☐ No

14. Do any of the computers have headphones available? ☐ Yes ☐ No

Kiosks

Consider when and where patients can have access to kiosks (free-standing computer consoles).

15. Does your facility have kiosks in spaces available to patients and visitors?

☐ Yes ☐ No (If No, skip to question #19)

16. Where are these kiosks located?

_____ _____

_____ _____

17. What are kiosks currently used for? Please check all that apply:

- ☐ Health history information
- ☐ Screening
- ☐ Medical records
- ☐ General patient education
- ☐ Specific information preparing a patient for a test or procedure
- ☐ Internet
- ☐ Other_____

18. Do any of the kiosks have headphones available? ☐ Yes ☐ No

Please continue onto next page→

Reminder Systems

Consider what is in place in a variety of departments or testing areas.

19. *How are patients reminded about their upcoming appointments?*
    Please check all that apply:
    - ☐ Phone calls from an automated system
    - ☐ Phone calls from a person
    - ☐ E-mails
    - ☐ Postcards or letters
    - ☐ Other_____
    - ☐ We do not provide reminders.

20. *How are patients reminded about preparing for upcoming tests and procedures?*
    Please check all that apply:
    - ☐ Phone calls from an automated system
    - ☐ Phone calls from a person
    - ☐ E-mails
    - ☐ Postcards or letters
    - ☐ Other_____
    - ☐ We do not provide reminders.

21. *How are patients reminded about engaging in follow-up care?*
    Please check all that apply:
    - ☐ Phone calls from an automated system
    - ☐ Phone calls from a person
    - ☐ E-mails
    - ☐ Postcards or letters
    - ☐ Other_____
    - ☐ We do not provide reminders.

NCSALL

National Center for the Study of Adult Learning and Literacy

NCSALL at World Education
44 Farnsworth Street • Boston, MA 02210
(617) 482-9485
www.ncsall.net

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