



*Agency for Healthcare Research and Quality*

*Advancing Excellence in Health Care*

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# **A Guide for Developing and Purchasing Accessible HIT**

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# Why a Guide?

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- HIT Developers – little knowledge of populations with limited literacy
- Purchasers – checklist to evaluate HIT products to be accessed and used by consumers



# Methods

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- Review of the IT and HIT literature
- Examination of products' and organizations' Web sites
- Discussions with developers and purchasers of HIT
- Discussions with researchers involved in the valuation of HIT for limited-literacy populations



# Technologies Used in Health Care

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- Internet Web sites
- Touchscreen kiosks
- Personal wireless devices (cell phone, BlackBerry, and PDA)
- Home monitoring devices




# Universal Design Basic Principles

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- Design simply
- Build well
- For Internet sites, use HTML over other formats

# Simple Design



healthfinder.gov  
Your Source for Reliable Health Information

SEARCH:

Text Size:

[HOW TO USE THIS SITE](#) ⓘ

[Home](#) > Quick Guide to Healthy Living

## Quick Guide to Healthy Living

What are the top five important things you can do to stay healthy?

[View All Quick Guide Topics](#)

### myhealthfinder

Find health advice for you or someone you care about.


**Who are you trying to help today?**

Me  Someone Else

Age:

Sex:  Male  Female

[▶ Get Started](#)

-  **▶ Eat Healthy**  
Learn how to choose the right foods for your body. Plus: quick and easy recipes.
-  **▶ Get Active**  
Find simple tips to help you get moving for 30 minutes or more everyday.
-  **▶ Get Screened**  
Find out which important screening tests you need this year.
-  **▶ Quit Smoking**  
Get tips to help you quit – and live a longer, healthier life.
-  **▶ Watch Your Weight**  
Learn how to balance the calories you eat with the calories you burn.



# General Health Literacy Guidelines

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- Plain and clear language is used
- Content is relevant to audience
- Format is conducive to reading and comprehension
- Content appeals to diverse racial and ethnic groups
- Content has undergone iterative testing and revision



# Checklist: Plain and Clear Language Is Used

Words are short, simple, and familiar (1-2 syllables, no jargon, acronyms, abbreviations)	Yes	No
Unavoidable technical terms are explained	Yes	No
Sentences are short	Yes	No
Written in “active” voice, rather than “passive” voice (Use “Mary visited the clinic,” rather than “The clinic was visited by Mary.”)	Yes	No
Consistent use of words throughout	Yes	No
Reading level is not above 6th grade	Yes	No



# Guidelines: Relevant Content

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- Assumes little or no background knowledge
- Information is relevant to users
- Limited number of messages are delivered
- Numbers and percentages are appropriate
- Graphic illustrations clarify text



# Guidelines: Format

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- White space
- Short line length
- Chunk and break up text
- Dark text on a light background
- Large and familiar font
- Consistent use of font sizes and styles
- Upper and lower case letters
- Justification of left-hand margin only



# Guidelines: Cultural Competence

- Content is culturally appropriate and sensitive to users
- Members of these groups are portrayed accurately in pictures and other graphic illustrations
- Translation from English is accurate and idioms and expressions are appropriate
- Target population is specified (if appropriate).



# Guidelines: Iterative Testing

- Draft prototype
- Conduct a team and expert review
- Revise
- Test with target audience, including limited-literacy and culturally diverse persons
  - Watch testers use it
  - Ask testers about their experience
  - Assess testers' comprehension
- Revise
- Test in all languages



# Guidelines: Internet Web Sites

- Designed for old hardware and software
- Home page is simple
- Information is prioritized
- Minimal amount of text per screen
- Navigation is simple and consistent
- Need for scrolling is minimized



# Guidelines: Internet Web Sites Cont'd

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- Searching is simplified
- Clearly defined hyperlinks
- Printer-friendly option is provided
- Audio transcription option is provided
- Site map is easy to find
- Contact information is easy to find



# Guidelines: Computer Kiosks

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- Preliminary practice session
- 1 question or idea per screen
- Information limited to what is needed to manage the health problem
- Option to repeat messages
- Audio transcription
- Reinforce and confirm learning



# Guidelines: Personal Wireless Devices

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- Design features are geared to adults with limited literacy
- Reliance on text is minimized
- Text messaging is simple



# Guidelines: Home Monitoring Devices

- Appropriate features, e.g.,
  - limited number of steps to operate
  - large keys with clear icons
  - self-calculating
  - voice instructions and results
  
- Clear and easy-to-follow instructions, e.g.,
  - simple print and video tutorials
  - each step is illustrated
  - critical components or warnings are emphasized



# New Frontiers

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- Personal Health Records
- ePrescribing
- Health Literacy Decision Support for EHRs
- Personal Wireless Devices



# Obtaining the Guide

**Accessible Health Information  
Technology (IT) for Populations with  
Limited Literacy: A Guide for  
Developers and Purchasers of Health IT  
Available on AHRQ' National Resource  
Center for Health Information  
Technology**

**[http://healthit.ahrq.gov/portal/server.pt/  
gateway/PTARGS\\_0\\_3882\\_803031\\_0\\_0\\_  
18/LiteracyGuide.pdf](http://healthit.ahrq.gov/portal/server.pt/gateway/PTARGS_0_3882_803031_0_0_18/LiteracyGuide.pdf)**