

Health Literacy and Literacy as Determinants to Health Status: Issues and Strategies for Clinicians

SILVIA MARTINEZ, ED. D., CCC-SLP, CAGS

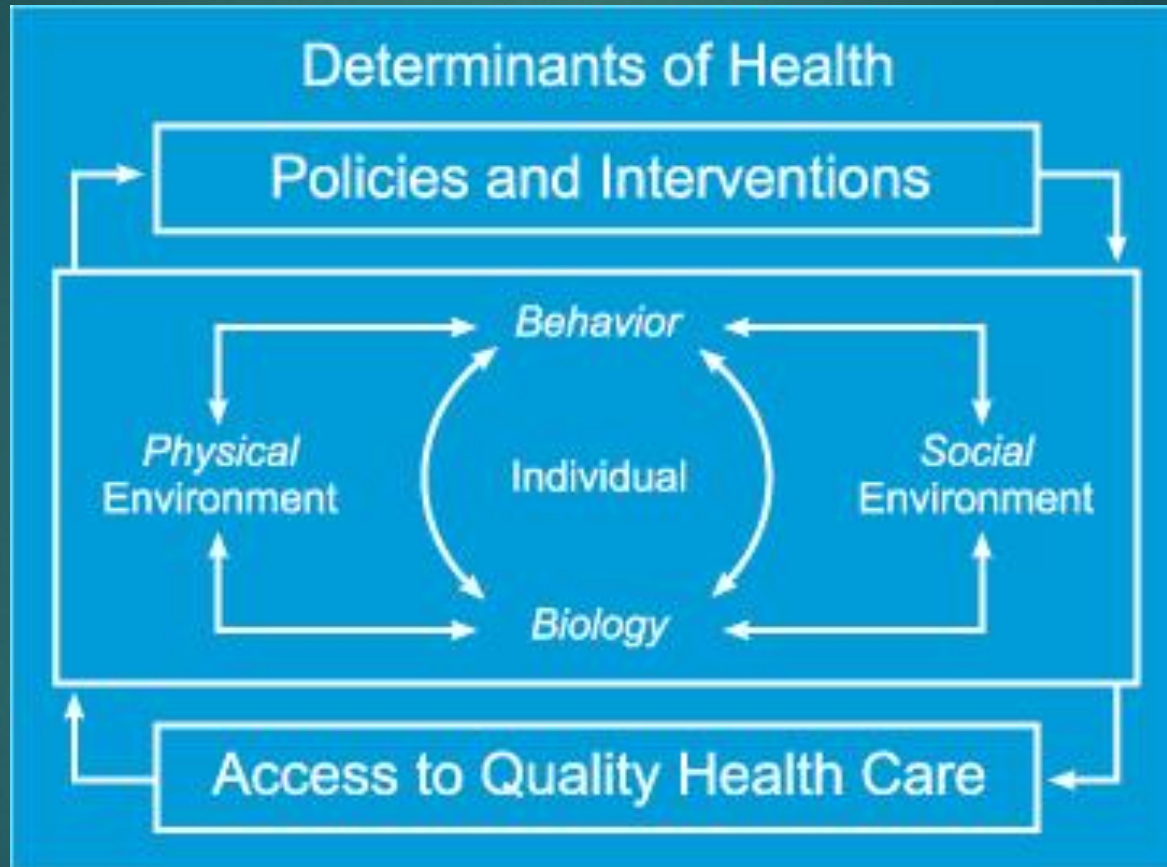
ASHA FELLOW

PROFESSOR, HOWARD UNIVERSITY

Learner Outcomes

- ▶ After the presentation, the participant will
 - ▶ Describe health literacy and literacy components
 - ▶ List pros and cons of using readability formulas
 - ▶ Explain deep and surface structures related to measuring literacy skills in clients.
 - ▶ Describe “plain language” best practices in the health care setting.

Access to Health Care Information and Services



http://www.healthypeople.gov/Document/html/uih/uih_2.htm#deter

Leading Health Indicators



Health Insurance



Higher Income Levels



Regular primary care provider/
ongoing health care



Literacy Skills



Health Disparities and Health Equity

Health Disparities

Health disparity is “a particular type of health difference that is closely linked with social, economic, and/or environmental disadvantage.

Health disparities adversely affect groups of people who have systematically experienced greater obstacles to health based on their

- ▶ religion;
- ▶ socioeconomic status;
- ▶ gender;
- ▶ age;
- ▶ mental health;
- ▶ cognitive, sensory, physical disability
- ▶ sexual orientation or gender identity;
- ▶ geographic location;
- ▶ or other characteristics historically linked to discrimination or exclusion.”

Health Equity

Health equity is the “attainment of the highest level of health for all people. “

It requires valuing everyone equally with focused and ongoing societal efforts to address

- ▶ avoidable inequalities,
- ▶ historical and contemporary injustices,
- ▶ and the elimination of health and health care disparities.”

Health Literacy

Health literacy is “the degree to which individuals have the capacity to obtain, process, and understand basic health information and services needed to make appropriate health decisions”

Health Literacy

- ▶ Requires higher level skills to facilitate
 - ▶ evaluating information,
 - ▶ analyzing risks and benefits,
 - ▶ making calculations of medicines, and
 - ▶ interpreting test results, etc.
- ▶ Depends on
 - ▶ reading abilities,
 - ▶ oral abilities
 - ▶ visual abilities to clarify and understand pictures and graphs

Health Literacy

- ▶ They also depend on
 - ▶ The communication skills of lay persons and professionals
 - ▶ The lay and professional knowledge of health topics
 - ▶ Cultural understanding
 - ▶ Demands of healthcare and public health systems
 - ▶ The demands of the situation/context.

US Dept. of Health and Human Services (2015).

Empowerment Issues

- ▶ Health Literacy “cognitive and social skills which determine the motivation and ability of individuals to gain access to, understand and use information in ways which promote and maintain good health.
- ▶ HL means more than being able to read pamphlets and successfully make appointments.
- ▶ By improving people’s access to health information and their capacity to use it effectively, health literacy is critical to empowerment.”

World Health Organization (2015)

Empowerment Issues

- ▶ Focus on social and political issues that affect and are beyond the client's health status.
- ▶ Goals
 - ▶ Client resiliency against social and economic adversity
 - ▶ Improved community empowerment
 - ▶ Obtaining policy and organization change to increase health
- ▶ Education for Empowerment – Paulo Freire (1970)

(Nutbeam, 2006)

Health Literacy Barriers

▶ Financial Barriers

- Lack of health insurance
- Not enough health insurance – financial capacity to cover needed services

▶ Structural Barriers

- Lack of primary care providers
- Access to medical specialists
- Lack of health care facilities

▶ Personal Barriers

- Awareness and Education
- Cultural or spiritual differences
- Language barriers ****
- Not knowing what to do or when to seek care
- Concerns about confidentiality or discrimination

Language-Based Barriers



- ▶ Learning English as a second language
- ▶ Reduced literacy skills
- ▶ Reduced cognitive skills
- ▶ Clinicians not knowing the client's language

Literacy and Patient Education



Community Outreach

Our Staff and Students conduct speech language and hearing screenings throughout the community and provide education about communication disorders to pre-school, parent groups, senior citizen groups and other community organizations. If you are interested in community outreach programs, please contact our main office.



Literacy Issues



The Center for Health Care Strategies has estimated that minorities and immigrants (50% Hispanics and 40% Blacks) have disproportionate literacy problems, which increase their health risks.



As reported by the National Library of Medicine (NLM), studies state that “one-third of English-speaking patients at two public hospitals were unable to read basic health materials.”



NLM also reports a Medicare finding that “34% of the English speaking and 54% of the Spanish speaking patients had inadequate or marginal health literacy”

Literacy Issues



Literacy research shows that people read three to five grades lower than educational attainment. 21 million cannot read. 50% read materials at the 5th grade level.



A large portion of minorities is at risk because of their low literacy skills (less than 5th grade). They include individuals without appropriate educational levels, learners of English as a second language, persons with learning disabilities or acquired disabilities.

Literacy Issues

The Institute for Healthcare Advancement summarized from research that written health materials:

- ▶ a large portion of consumer education material is above recommended readability levels.
- ▶ usually appear at the 10th grade level or higher (above average abilities),
- ▶ that they include too much information and no explanation of uncommon words,
- ▶ and that treatments are accompanied by complex instructions

Reading Materials



Issues in Communication Sciences and Disorders

- ▶ Consumer information is used for:
 - ▶ Prevention: language development milestones; dangers of noise exposure.
 - ▶ Counseling: nature of a disorder; evaluation and treatment options.
 - ▶ Treatment: treatment reading materials; carryover activities.
 - ▶ Research: recruitment of participants; research materials.
 - ▶ And others.

Readability of Materials



Appropriateness of Materials can stem from many measures.

- ▶ Visual: format, pictures, spacing
- ▶ Personal: reader motivation, cognitive style and others.
- ▶ Grammar complexity: syntax and vocabulary

Gauging Readability

- ▶ Martinez gauged readability levels of consumer materials disseminated
 - American Academy of Audiology (AAA), American Speech-Language and Hearing Association (ASHA), National Institutes on Deafness and other Communication Disorders (NIDCD)
 - Goal: To Determine if consumer materials are appropriate for low literacy clients (6th grade and below).
 - Method: Fifty-one brochures from AAA (6), ASHA (26) and NIDCD (19) were evaluated.
 - Software: *Readability Calculations V 6.1* (Micropower & Light Co.)

Readability of Materials



Readability of Materials

Readability formulas

- ▶ Techniques developed to provide an objective way to measure readability.
- ▶ Presented in the form of regression formulas that describe the relationship between two variables.
- ▶ They predict difficulty.

Other measures

- ▶ Format
- ▶ Pictures
- ▶ Spacing
- ▶ Reader cognitive style
- ▶ Others

Readability Measures

Readability Formulas – more than 40 formulas

SMOG – counts words with 3 or more syllables in 30 sentences

Flesch-Kincaid Grade Level Index – found with your Microsoft Word software, grammar check

Flesch-Kincaid Formula – average number of syllables/word and average number of words/sentences

Fry Readability – 3 samples of 100 words and count number of sentences and words (Spanish also)

Lexile Measures – average sentences length and word familiarity (software) (Spanish also)

Problems with Readability Measures

<http://csep.psyc.memphis.edu.cometrix.readabilityresearch.htm>



Surface Characteristics – scores rely on surface characteristics, but comprehension and learning depend on more in the text



Reader's cognitive aptitudes – scores do not consider knowledge, language skills and other cognitive aptitudes (interaction of reader and text)



Cohesion and coherences – readability scores do not necessarily correlate with text cohesion.

Results

Readability Score Averages, Modes and Ranges for each Source (N=51)

Source	n	Averages Reading Formulas*	Grade Ranges	Modes**
AAA	6	8.5	6.2 - 10.8	Grade 10(2)***; Grade 6 (2)
ASHA	26	8.4	5.5 - 10.4	Grade 9 (9)
NIDCD	19	9.6	5.0 - 12.8	Grade 11(5); Grade 9(5)
		8.8	5.0-12.8	Grade 9 (15)

*SMOG, FOG and Flesch Reading Grade

**Modes reported in whole grades.

*** Number of occurrence presented in parenthesis.

Results

- ▶ Reading level average for all brochures = Grade 8.8
- ▶ Most common reading level (Mode) = Grade 9
- ▶ Largest range of grades = NICDC
- ▶ 25% of brochures (N=51) averaged grade levels of 6th grade and lower. Per source:
 - ▶ ASHA = 42.3% (11 of 26)
 - ▶ AAA = 16.6% (1 of 6)
 - ▶ NIDCD = 5.3% (1 of 19)

Results

- ▶ As expected, Flesch Reading Ease Formula results appear lower than the other two formulas used.
- ▶ NIDCD brochures present the highest readability scores for all formulas.
- ▶ ASHA and AAA scores were comparable, with ASHA scoring slightly lower when comparing Flesch Reading Ease Scores.
- ▶ Lowest scores obtained were with the Flesch Reading Grade Formulas with brochures averaging 6.9.

Results

- ▶ Overall average of scores resulted in grade equivalencies of “Some High School/Fairly Difficult.”
- ▶ All Sources included some brochures at the 6th grade level/Fairly Easy).
- ▶ AAA and ASHA most difficult brochures were scored at the “HS and some college/Fairly Difficult).
- ▶ NIDCD brochures included brochures that were at the “Some College/Difficult” level.

Health Literacy Measures



Rapid Estimate of Adult Literacy in Medicine (REALM) – Screener to assess ability to read common medical words of body parts and illnesses (2-3 mins. to assess). Participants read words (different numbers of syllables) in columns



Test of Functional Health Literacy in Adults (TOFHLA) (also in Spanish) (22 mins)– tests numerical abilities and comprehension using Cloze procedures



Strategies

- ▶ from “Toolkit for Making Written Material Clear and Effective” (US Department of Health and Human Services, 2010)

Guidelines for Writing

Content

- ▶ Make the purpose and usefulness of the material immediately obvious
- ▶ When choosing which content to include, be guided by the readers' interests, knowledge, and needs (which may be quite different from your own).
- ▶ Show awareness of and respect for diversity among intended readers.
- ▶ Repeat new concepts and summarize the most important points.
- ▶ Make sure that the information is accurate and up to date.
- ▶ Limit the information to an amount that is reasonable for the intended readers.
- ▶ Identify the organization that produced the material, and include a publication date and contact information.

Guidelines for Writing

Organization (sequencing, grouping, and labeling)

- ▶ Group the information into meaningful “chunks” of reasonable size.
- ▶ Organize the information in an order that will make sense to the intended readers.
- ▶ Use headings, subheadings, and other devices to signal what is coming next.
- ▶ Use specific and informative working for sections, headings, and subheadings.
- ▶ Use the navigational tools to help orient readers and make important information easy to read.

Guidelines for Writing

Writing Style

- ▶ Write in a conversational style, using the active voice.
- ▶ Keep your sentences simple and relatively short.
- ▶ Be direct, specific, and concrete.
- ▶ Give the context first, and incorporate definitions and explanations.
- ▶ Create cohesion by making strong, logical connections among your sentences and paragraphs.
- ▶ Choose words that are familiar and culturally appropriate for the intended readers.
- ▶ Use technical terms and acronyms only when readers need to know them.
- ▶ Write as simply as you can, taking into account the reading skills of your intended audience.

Guidelines for Writing



Engaging, Supporting, and Motivating your Readers

Be friendly and positive.

Use devices that engage and involve your readers, such as stories and quotations, questions and answers, quiz formats, and blank spaces for them to fill in.

Guidelines for Design

Overall Design and Page Layout

- ▶ Design the size, shape, and general look of the material with its purpose and users in mind.
- ▶ Make the material appealing at first glance.
- ▶ Create a clear and obvious path for the eye to follow through each page.
- ▶ Create an overall design for the material that has a clear and consistent style and structure.

Guidelines for Design

Fonts (Typefaces), Size of Print, and Contrast.

- ▶ For the regular text in printed materials, use a “serif” font that is designed for ease of reading.
- ▶ For the headings in your printed materials, use an easy-to-read “sans serif” font, preferably one that is a “font family” with different weights (some bolder than others).
- ▶ In general, use no more than two or three different typefaces in a single piece of material.
- ▶ Make the type size large enough for easy reading for your intended audience.
- ▶ For all of your text, including titles and headings, use upper and lower case letters in combination – nothing written in “all caps.”
- ▶ To emphasize words and short phrases that are part of your regular text, use italics or boldface type.
- ▶ For ease of reading, use dark colored text on a very light non-glossy background.
- ▶ For ease of reading, do not print text sideways, on patterned or shaded backgrounds, or on top of photos or other images.
- ▶ For ease of reading and a cleaner look, adjust the line spacing in your material.
- ▶ For ease of reading use left justification throughout the material for both text and headings.
- ▶ Keep your lines of text to an appropriate length for easy reading – neither too short nor too long
- ▶ For ease of reading, watch where the lines break (avoid hyphenation; split long headings carefully to reflect natural phrasing).

Guidelines for Design



Headings, Bulleted Lists, and Emphasizing Blocks of Text

- ▶ To make the material easy to skim and show how it is organized, create a clear hierarchy of prominent headings and subheadings.
- ▶ Use contrast and other devices to make the main points stand out on each page.
- ▶ For ease of reading, use care in formatting bulleted lists.
- ▶ Choose effective ways to emphasize important blocks of text.

Guidelines for Design

Use of Color

- ▶ Choose colors that are appealing to the intended readers and free from unwanted connotations or problematic cultural significance.
- ▶ Use color sparingly, in a consistent and deliberate way that reinforces the meaning of your messages and enhances their impact.
- ▶ Verify that the color scheme and shades of color work well from a design standpoint (including when the material is photocopied and printed in black and white.)
- ▶ Take into account that some readers are likely to have diminished or limited color perception.

Guidelines for Design

Photographs, illustrations, clip art, and symbols

- ▶ Use photos, illustrations, symbols, and other visuals that relate directly to the information in the material and reinforce our key messages.
- ▶ Use images that are clear, uncluttered, and consistent in style.
- ▶ Use photos, illustrations, symbols, and other visuals that are culturally appropriate for your intended readers.
- ▶ When images include people, make sure that their poses, facial expressions, and body language are appropriate to the situation and appealing to the intended audience.
- ▶ Be very cautious about using symbols or icons to represent concepts or to serve as markers to guide readers through the material.
- ▶ Avoid using cartoons, “cute” or humorous images, and caricature, because these kinds of images may bewilder, confuse or offend some of your readers.
- ▶ Pay careful attention to the total number, quality, size, placement, and labeling of the images you use.
- ▶ Check for accuracy, if applicable, and pretest the images with your intended readers.

Guidelines for Design

Tables, Charts, and Diagrams

- ▶ Take a reader-centered approach to the use of tables, charts and diagrams.
- ▶ Make titles, headings, and other labeling specific and complete enough for easy understanding.
- ▶ Create a clean, uncluttered layout with strong visual and written cues to guide readers and help them interpret the information correctly.
- ▶ If there are any numbers or calculations, explain them carefully and give examples.
- ▶ Test you tables, charts, and diagrams to be sure that your intended readers can understand and use them.

Guidelines for Design

Forms and Questionnaires

- ▶ Begin and form or questionnaire with an informative title and brief explanation.
- ▶ Ask only for information you really need and will definitely use.
- ▶ Make the layout clear, uncrowded, and appealing.
- ▶ Integrate instructions and explanations into the form or questionnaire, placing them right where they are needed by the reader.
- ▶ Limit the number of formats for collecting answers and use them in a consistent way.
- ▶ In a form for people with low literacy skills, avoid using a grid or matrix format to collect information.
- ▶ Create a clear and obvious path through the form that minimizes cross-references and skip patterns.
- ▶ Conduct usability testing.
- ▶ Take into account how the form or questionnaire will be produced, distributed, and processed.

Recommendations

▶ When using these brochures:

- ▶ Consider consumer level of literacy.
- ▶ Accompany brochures with other information to facilitate understanding (pictures).
- ▶ Accompany brochures with verbal explanations.

▶ When producing materials:

- ▶ Sentences should average 15-20 words per sentences, few clauses.
- ▶ Use concrete everyday words (ex: “start” instead of “initiate”), few syllables.
- ▶ Writing styles (cohesiveness, active voice, etc.).
- ▶ Document design – few pages, illustrations, lots of white spaces.
- ▶ Format – bullets, bold/italic titles, 12+ point,
- ▶ Offer examples.

Alternatives

Replacement words

- ▶ Allowing – ?
- ▶ By telephone – ?
- ▶ Commonly – ?
- ▶ Convenient – ?
- ▶ Decision – ?
- ▶ Several – ?
- ▶ Evidence – ?
- ▶ Receive - ?
- ▶ Understand - ?
- ▶ In addition - ?

Resources

- ▶ Guidelines for Patient Education Written Materials: An author's guide
<http://www.med.utah.edu/pated.authors>
- ▶ Health and Literacy Compendium
<http://easternlincls.worlded.org/health/comp/index.htm>
- ▶ Health Information Handouts Used at UCSF Homeless Clinic
<http://itsa.ucsf.edu/~hclinic/handouts.dir/handouts.html>
- ▶ Information from Your Family Doctor
<http://familydoctor.org>
- ▶ Harvard School of Public Health, Health Literacy Studies
<http://www.hsph.harvard.edu/healthliteracy.html>
- ▶ National Cancer Institute, Making Health Comm. Progs Work
www.cancer.gov

Resources

- ▶ Lister Hill Library Internet MEDLINE Training Site
<http://www.uab.edu/lister/medtrain/consumerinfo.html>
- ▶ Literacy: Working through Literacy Barriers
<http://www.nurseweek.com/features/98-01/literate.html>
- ▶ Michigan Adult Learning & Technology Center: Health Literacy
<http://www.malt.cmich.edu/healthlit.htm>
- ▶ Patient Education Resources for Clinicians, OHSU Libraries
<http://www.ohsu.edu/library/patiented>
- ▶ National Network of Libraries of Medicine, Consumer Health
<http://www.nlm.gov/scr.conhlth/read.htm>

Fotonovelas

- ▶ Use stories to convey a message similar to comic books.
- ▶ Relate a story using photographs and dialogue boxes or bubbles containing simple language.
- ▶ Format takes advantage of the strong oral traditions of both African Americans and Hispanics

Fotonovelas and Education

- ▶ Have been used successfully internationally and in the United States for health education.
- ▶ In this project, the photographs will also be accompanied by voice-overs in English and in Spanish separately.
- ▶ Will be produced using PowerPoint software since it is a program that is readily available and does not impose memory, speed and storage demands on computers.
- ▶ Furthermore, hardcopies may be printed for clients.

The Typical Fotonovela



RURAL WOMEN'S HEALTH PROJECT

STD Prevention

<http://www.rwhp.org/education/fotonov.html>

The Typical Fotonovela



RURAL WOMEN'S HEALTH PROJECT

Condom Use

http://www.rwhp.org/nov_ed/fotonov.html

Howard University Project



- ▶ Project HealthStories: Talking Fotonovelas for Low Literacy Culturally and Linguistically Diverse Populations
- ▶ Funding:
 - ▶ ASHA Multicultural Projects Grant

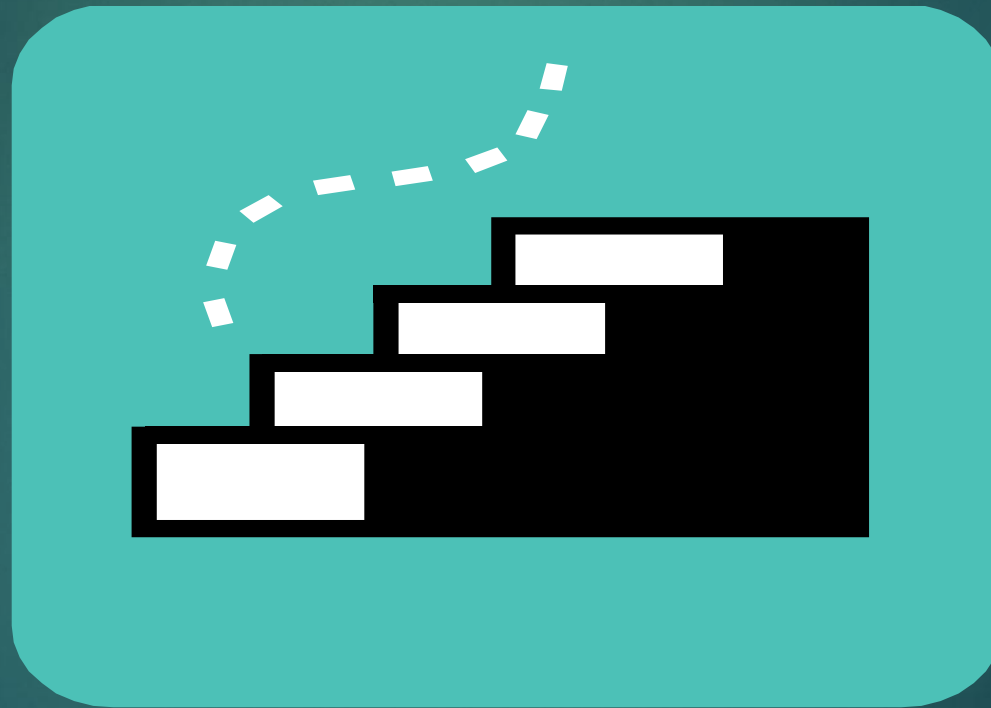
Goals



This project will reduce structural and language barriers by developing culturally and linguistically appropriate web-based materials to:

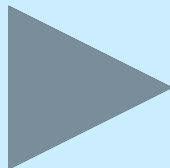
- ▶ Increase the knowledge of African Americans and Hispanic populations about professional issues and services.
- ▶ Meet the needs of health providers with materials to complement and enhance their services.
- ▶ Research the effectiveness of web-based materials
 - ▶ Knowledge increase
 - ▶ Knowledge retention

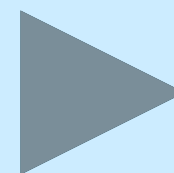
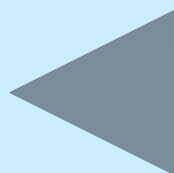
Process



My Health Stories

SALVE una vida – el derrame cerebral

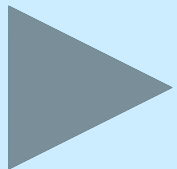
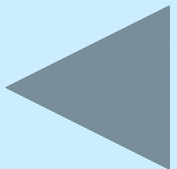




I was worried.



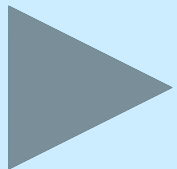
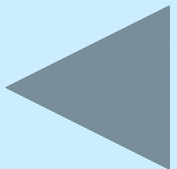
So happy to see you!



What happened?



Your dad had a stroke.
We came to the hospital fast.

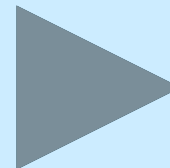
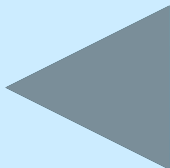


What is a stroke?

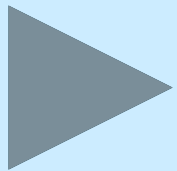
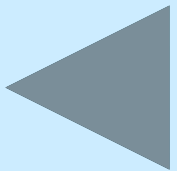
It is like an attack to the brain.



The blood does not reach the brain.



Without blood the brain does not get oxygen.



Are strokes common?

Yes.



It is the third cause of deaths.

People get long lasting problems.



Men have more strokes.

Community Outreach

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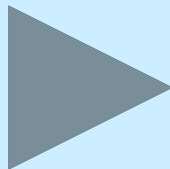
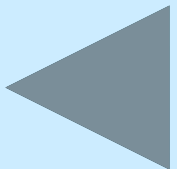


What about women?



More women die of strokes.

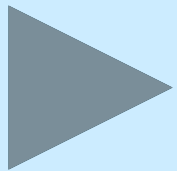
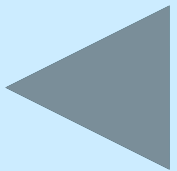
If they weight a lot and if they are over 40.



Who else?



Men older tan 55.





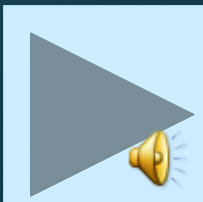
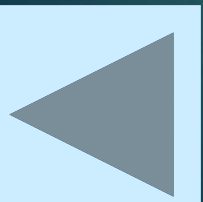
Asians....



Hispanics



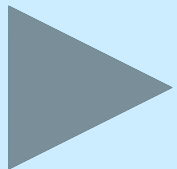
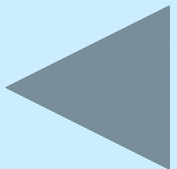
African-Americans..



Does it run in families?



Yes. You too may get a stroke.



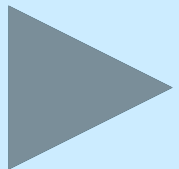
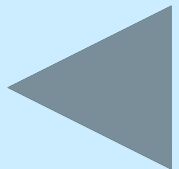
Those with....

High blood pressure.

Diabetes.

Who are heavy.

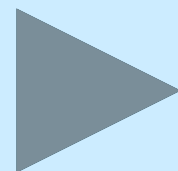
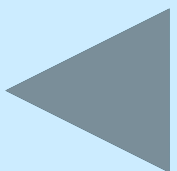
High cholesterol.



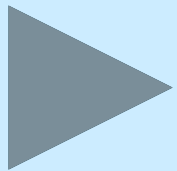
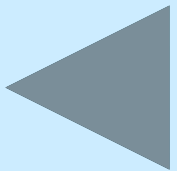
What else? I want to avoid them!



Drinking and smoking.



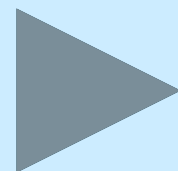
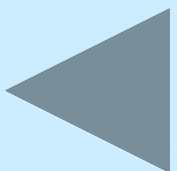
Great that I do not drink or smoke!



Mom, How did you know it was a stroke?



I will tell you what happened.



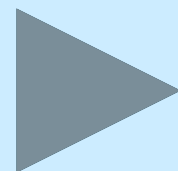
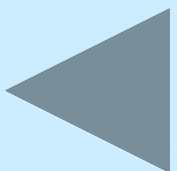
You are busy today?



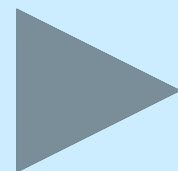
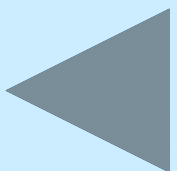
No, we did most of the work yesterday.

Tom, you do not look well.
What is happening?

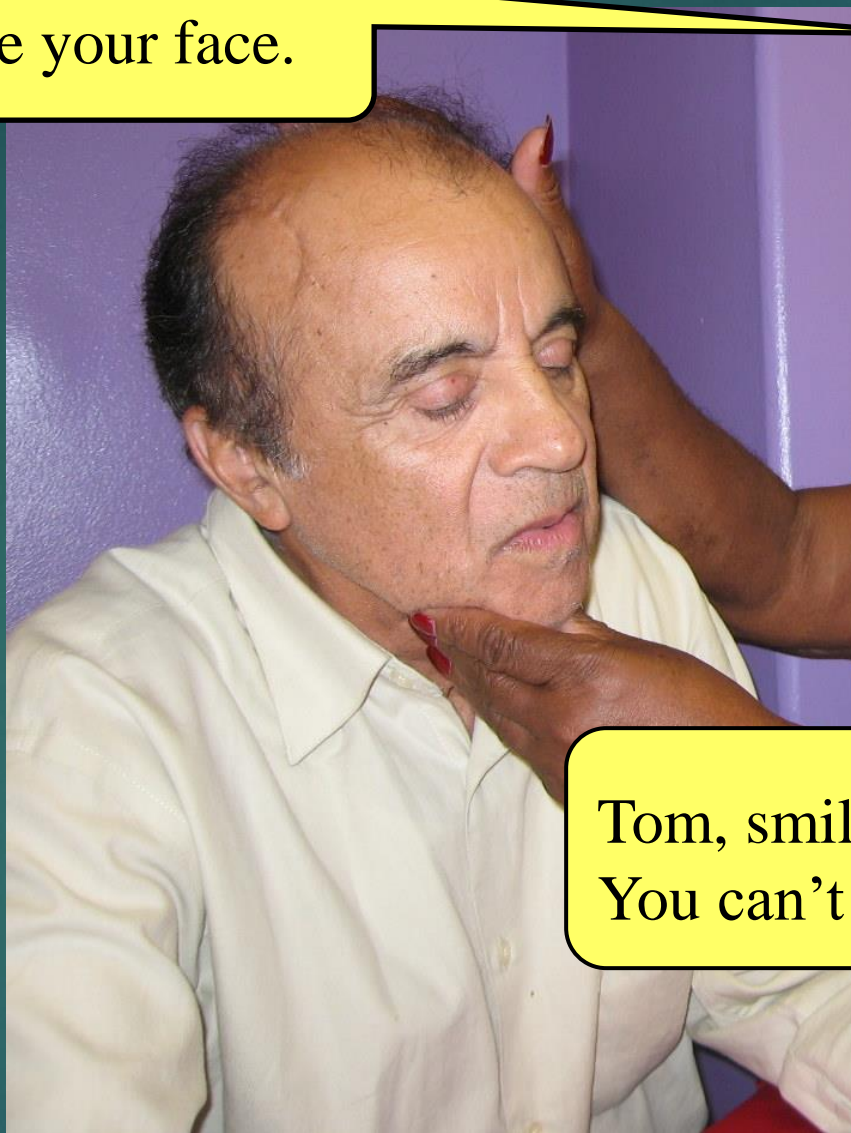
My head hurts.
I cannot see well.



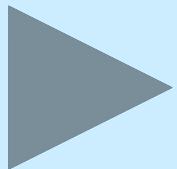
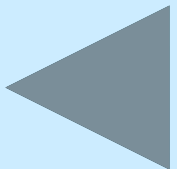
I remembered FAST.



Let me see your face.



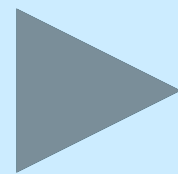
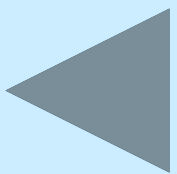
Tom, smile.
You can't!



Tom, raise your arms.



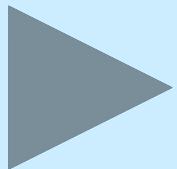
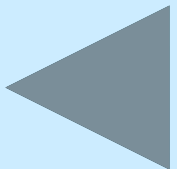
You can't!



Say something.
Count from 1 to 10.



Dear, you can't!



Everything is done fast. No time to waste.



Immediately I called 911.



I mentioned the word Stroke.

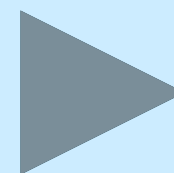
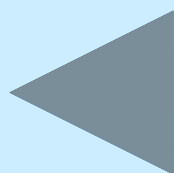
See how FAST works?

Yes.
F is for the face movements.

A is for the arm movements.



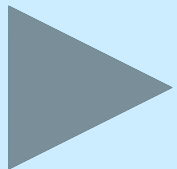
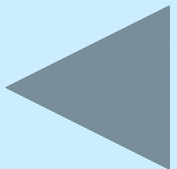
S is for speech.



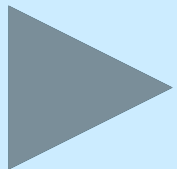
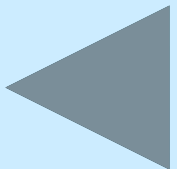
T is to waste no time and call 911 FAST



Yes, that is FAST.



That is FAST!

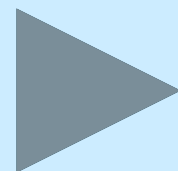
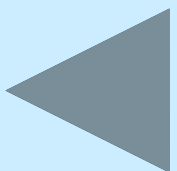


Your husband is better.



Thanks doctor.

Now we are happy.



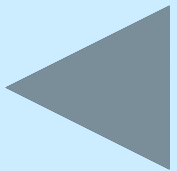
Actors

Mother – Delia Madros

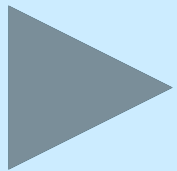
Daughter – Rosa Rivas

Father – Victor Porras

/Doctor – Maria Margarita de Peña



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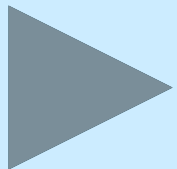
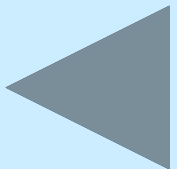
Silvia Martinez, Ed. D., CCC-S

Principal Investigator

Howard University

Department of Communication Sciences
and Disorders

smartinez@howard.edu



Collaborator

Vida Senior Center

Angel Luis Irene, Director

Rosa Rivas, Outreach Manager



1842 Calvert Street NW, Washington, DC 20009

Phone: (202) 483-5800 Fax: (202) 483-5801

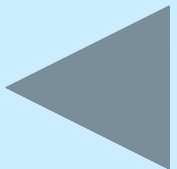
www.vidaseniorcenters.org

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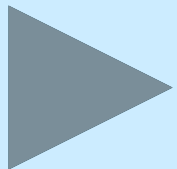


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