

The background of the slide is a light gray gradient with several realistic water droplets of various sizes scattered across it. The droplets have highlights and shadows, giving them a three-dimensional appearance. The main title is centered in the upper half of the slide.

# HEALTH LITERACY AND TEACH BACK TO ADDRESS THE MICHIGAN ORAL HEALTH PLAN

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# OBJECTIVES

- PARTICIPANTS WILL BE ABLE TO EXPLAIN HOW HEALTH LITERACY MIGHT DIRECTLY ADDRESS SOME OF THE DISPARITIES IN ORAL HEALTH OUTLINED IN THE MICHIGAN ORAL HEALTH PLAN.
- PARTICIPANTS WILL BE ABLE TO DEMONSTRATE THE USE OF PLAIN LANGUAGE AND TEACH BACK TO FURTHER THE UNDERSTANDING OF THE EDUCATIONAL PIECES IN THE MICHIGAN ORAL HEALTH PLAN.
- PARTICIPANTS WILL BE ABLE TO ELICIT THE VIEWPOINTS AND THE CONCERNS OF ORAL HEALTH PATIENTS/LEARNERS.



**THE VISION FOR THE 2020 MICHIGAN STATE ORAL  
HEALTH PLAN**

***“BY 2020, ALL MICHIGANDERS WILL HAVE THE  
KNOWLEDGE, SUPPORT, AND CARE THEY NEED TO  
ACHIEVE OPTIMAL ORAL HEALTH.”***



# HOW CAN HEALTH LITERACY STRATEGIES HELP?

“HEALTH LITERACY IS THE ABILITY TO **OBTAIN** HEALTH INFORMATION, **UNDERSTAND** IT, AND **USE** IT TO MAKE APPROPRIATE DECISIONS FOR IMPROVED HEALTH. LIMITED HEALTH LITERACY CAN AFFECT THE USE OF ORAL HEALTH SERVICES AND **PATIENT OUTCOMES**, AND IS **ASSOCIATED WITH INACCURATE KNOWLEDGE ABOUT PREVENTIVE MEASURES** SUCH AS WATER FLUORIDATION, DENTAL CARE VISITS, AND ORAL HEALTH-RELATED QUALITY OF LIFE.”

FROM: THE 2020 MICHIGAN ORAL HEALTH PLAN (EXEC. SUMMARY)

# WHAT WE KNOW ABOUT HEALTH LITERACY

- LOW HEALTH LITERACY CORRELATES WITH LITTLE OR INCONSISTENT USE OF HEALTH CARE, POOR FOLLOW THROUGH ON RECOMMENDATIONS AND POOR HEALTH OUTCOMES (ROTHMAN, ET. AL. 2011; SMITH ET. AL, 2012; BAKER, 2006; OECD, 2013).
- LOW FUNDAMENTAL LITERACY (ABILITY TO READ, WRITE AND DO CALCULATIONS) USUALLY MEANS THAT PERSON WILL HAVE LOW HEALTH LITERACY
- HOWEVER, EVEN THOSE WITH THE HIGHEST FUNDAMENTAL LITERACY CAN HAVE TIMES OF LIMITED UNDERSTANDING OF HEALTH INFORMATION (FOR INSTANCE WHEN SPECIALIZED MEDICAL OR SCIENTIFIC LANGUAGE IS USED, WHEN EMOTIONS DOMINATE, AND DUE TO LANGUAGE AND CULTURAL DIFFERENCES) (KUTNER, 2006).
- IN FACT, LITERACY SKILLS ARE THE STRONGEST PREDICTOR OF HEALTH STATUS; MORE THAN AGE, INCOME, EMPLOYMENT STATUS, EDUCATION LEVEL OR RACIAL/ETHNIC GROUP (BAKER, 2006; HALFON, ET.AL. 2012; SUDORE, ET.AL, 2006)

# HEALTH LITERACY IS A TWO WAY STREET!

THE ABILITY TO OBTAIN, UNDERSTAND, AND MAKE DECISIONS ABOUT HEALTH DEPENDS ON HOW HEALTH INFORMATION IS DELIVERED.

- 50% OF U.S. ADULTS READ BELOW AN EIGHTH GRADE LEVEL. THE AVERAGE GRADE LEVEL WRITTEN HEALTH INFORMATION IS NINTH GRADE. SIMILAR VOCABULARY IS USED IN VERBAL COMMUNICATION (KUTNER, 2006)
- THERE ARE MANY WAYS TO MAKE INFORMATION ACCESSIBLE TO PATIENTS OF ALL TYPES.
- EVEN THE SIMPLEST HEALTH INFORMATION IS OFTEN COMPLEX AND RELIES ON BACKGROUND KNOWLEDGE.



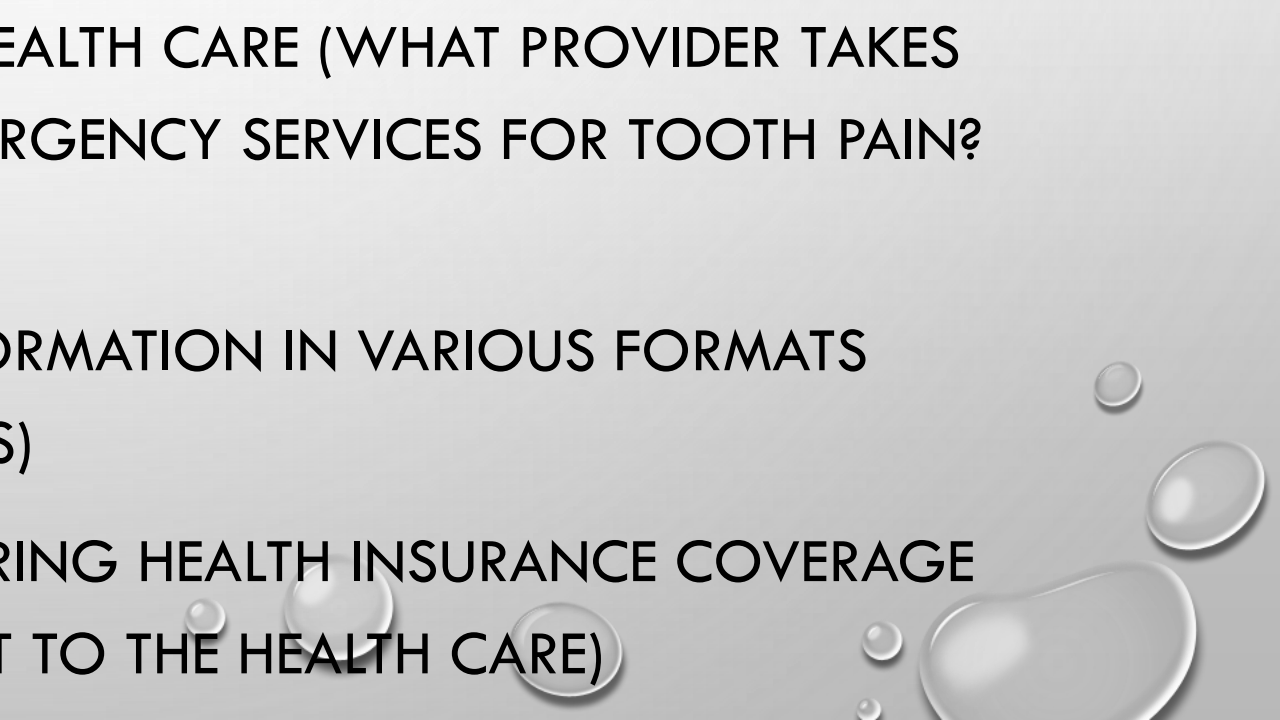
# WHAT LITERACY SKILLS DO YOU NEED IN THIS SCENARIO?

YOU ARE IN THE PROCESS OF MOVING TO A NEW AREA OF THE COUNTRY AND YOU HAVE BEEN HAVING TOOTH PAIN. HOW WILL YOU SOLVE THIS PROBLEM AND WHAT LITERACY SKILLS WOULD YOU NEED TO DO THAT?





# LITERACY IS MORE THAN READING AND WRITING. LITERACY SKILLS INCLUDE:

- KNOWING HOW TO SEARCH FOR INFORMATION (INTERNET, SIRI, PHONE BOOK?)
  - KNOWING ABOUT THE CULTURE OF HEALTH CARE (WHAT PROVIDER TAKES CARE OF TOOTH PAIN? ARE THERE EMERGENCY SERVICES FOR TOOTH PAIN? WHO WOULD YOU CONTACT?)
  - READING AND COMPREHENDING INFORMATION IN VARIOUS FORMATS (WEBSITE, SIGNS, PAMPHLETS, POSTERS)
  - NUMERACY AND SPATIAL SKILLS (FIGURING HEALTH INSURANCE COVERAGE AND FOLLOWING DIRECTIONS TO GET TO THE HEALTH CARE)
- 



# NATIONAL ASSESSMENT OF ADULT LITERACY (NAAL) 2003

THE FIRST MEASURE OF “HEALTH” LITERACY AS PART OF A LARGE SCALE LITERACY SURVEY. USED 12 HEALTH-RELATED STIMULUS MATERIALS THAT ARE AUTHENTIC AND REFLECT THE TYPE OF MATERIALS ADULTS ENCOUNTER IN REAL LIFE. THEY INCLUDE MEDICAL INSTRUCTIONS, MEDICATION INFORMATION, HEALTH INSURANCE AND OTHER FORMS, AND PREVENTION AND WELLNESS INFORMATION.

# NAAL LITERACY SKILL LEVELS

## **BELOW BASIC MEANS A PERSON HAS ONLY SIMPLE LITERACY SKILLS**

- **SIGN A FORM**
- **READ A SHORT FORM TO FIND OUT WHAT IS OK TO DRINK BEFORE A MEDICAL TEST**

## **BASIC MEANS SIMPLE, EVERYDAY LITERACY SKILLS**

- **READ A PAMPHLET AND GIVE REASONS A PERSON WITH NO SYMPTOMS SHOULD TAKE A TEST**

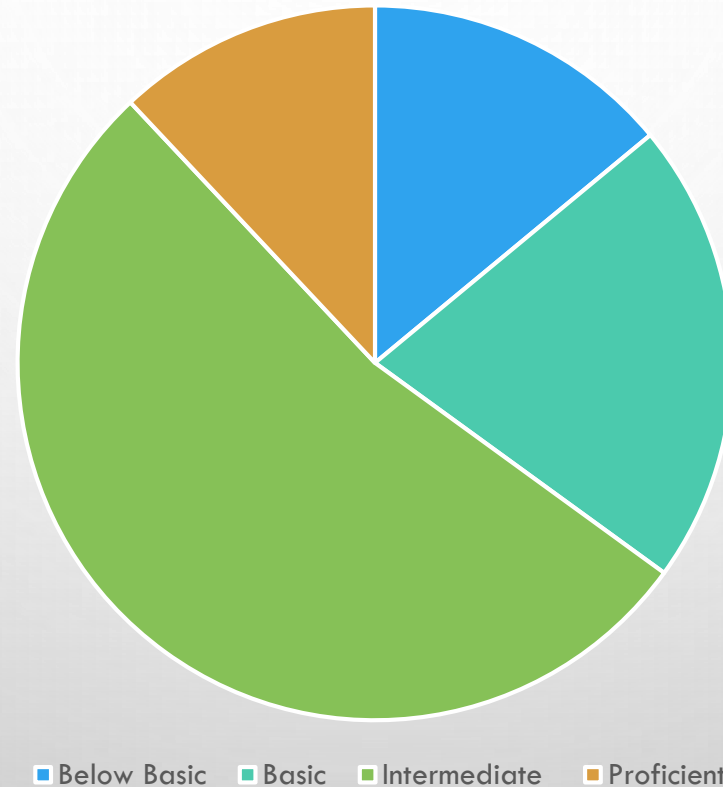
## **INTERMEDIATE :**

- **READ A PRESCRIPTION LABEL AND DETERMINE WHEN AND HOW MUCH TO TAKE**

## **PROFICIENT :**

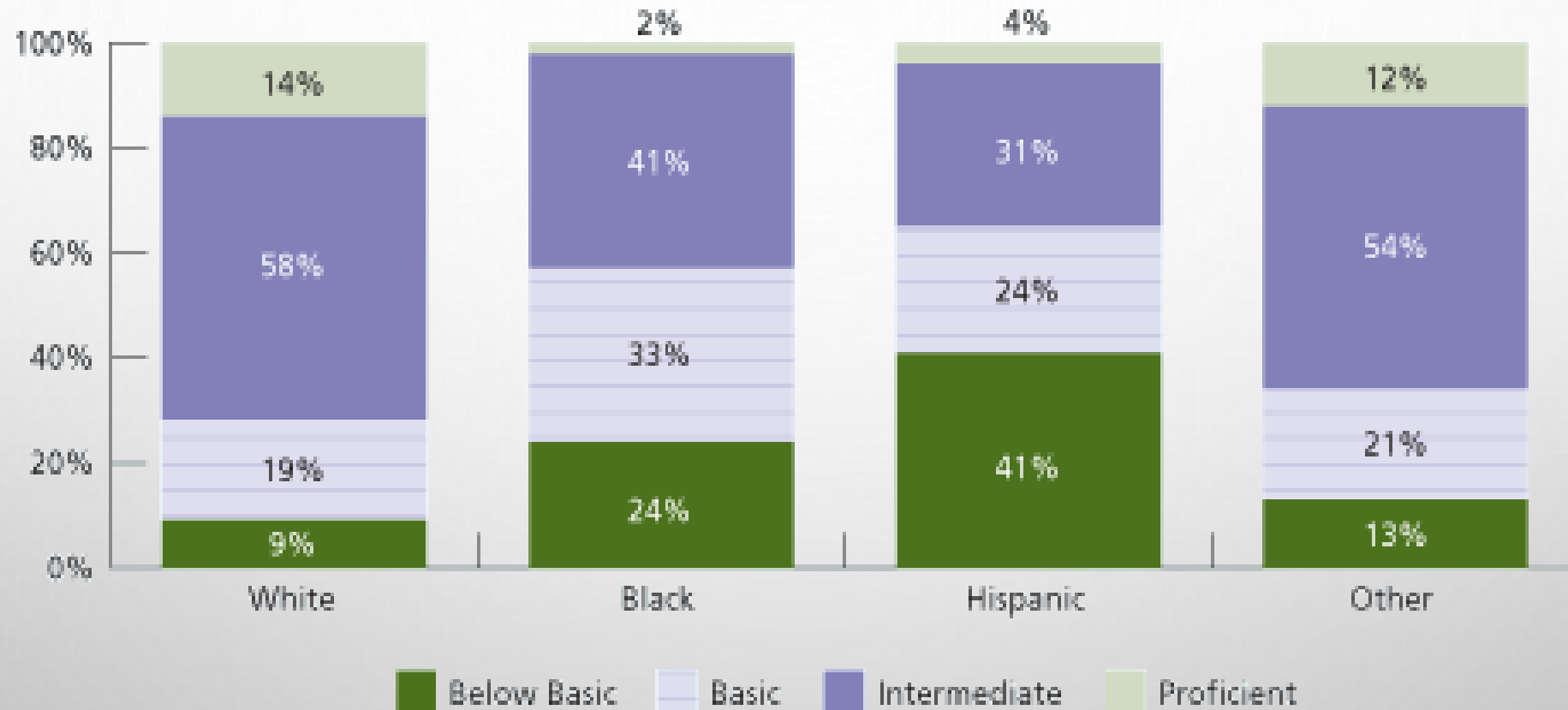
- **READ LENGTHY, COMPLEX, ABSTRACT TEXTS AND MAKING INFERENCES,**
- **USE A TABLE TO CALCULATE AN EMPLOYEE'S SHARE OF HEALTH INSURANCE**

# NAAL HEALTH LITERACY RESULTS: 77 MILLION ADULTS HAVE BASIC OR BELOW BASIC HEALTH LITERACY

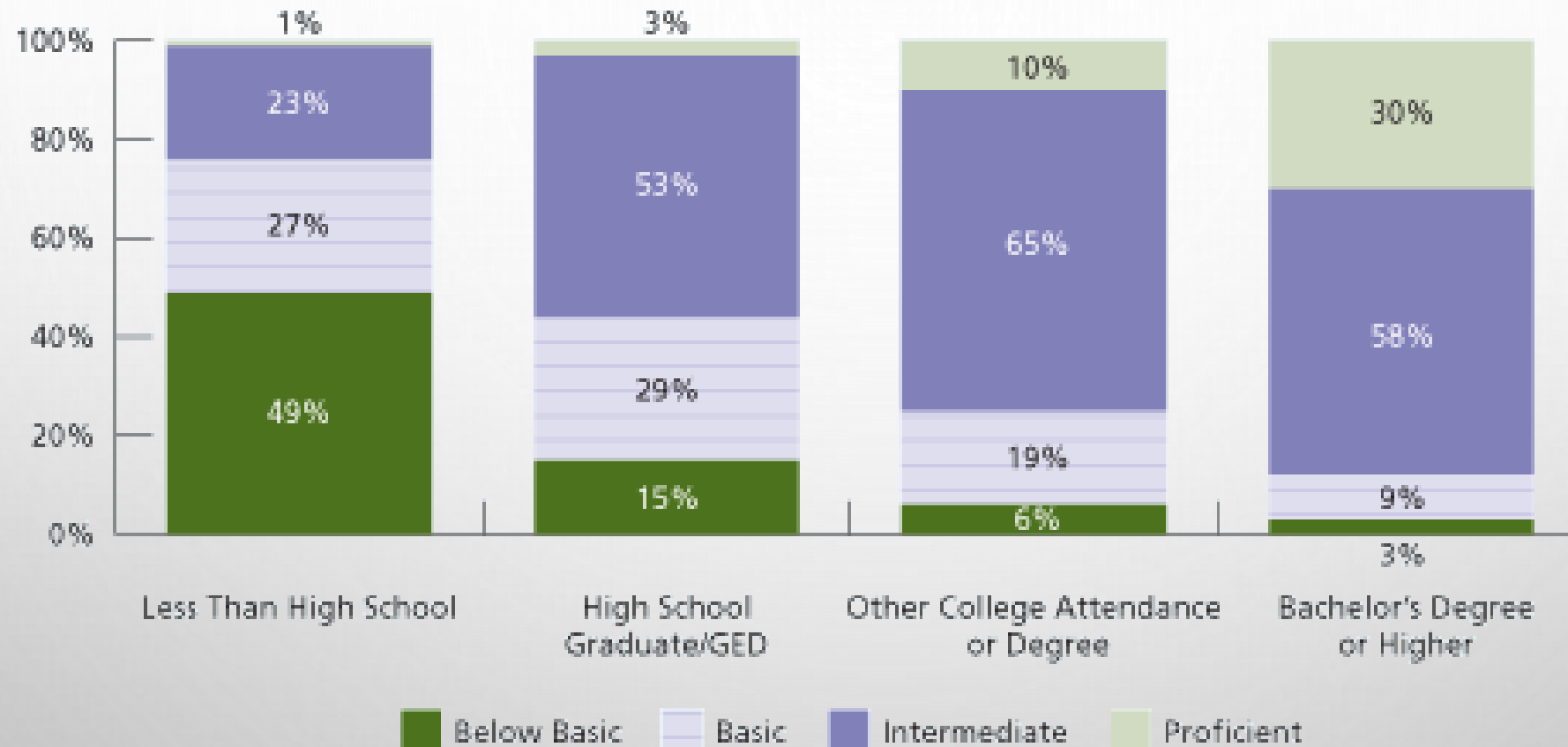


Below Basic: 14%, Basic: 21%, Intermediate: 53%, Proficient: 12%

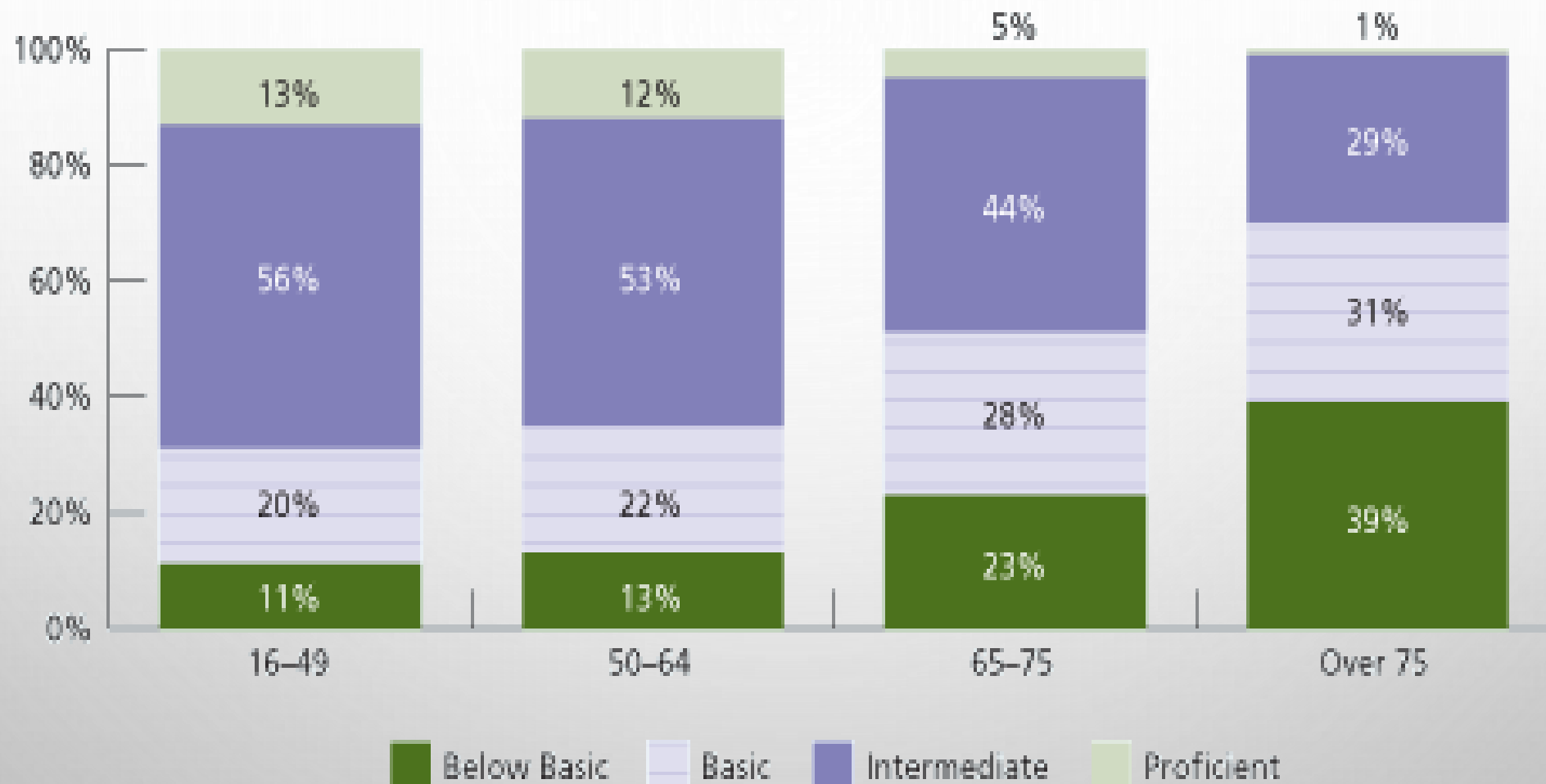
# RACIAL/ETHNIC DIFFERENCES



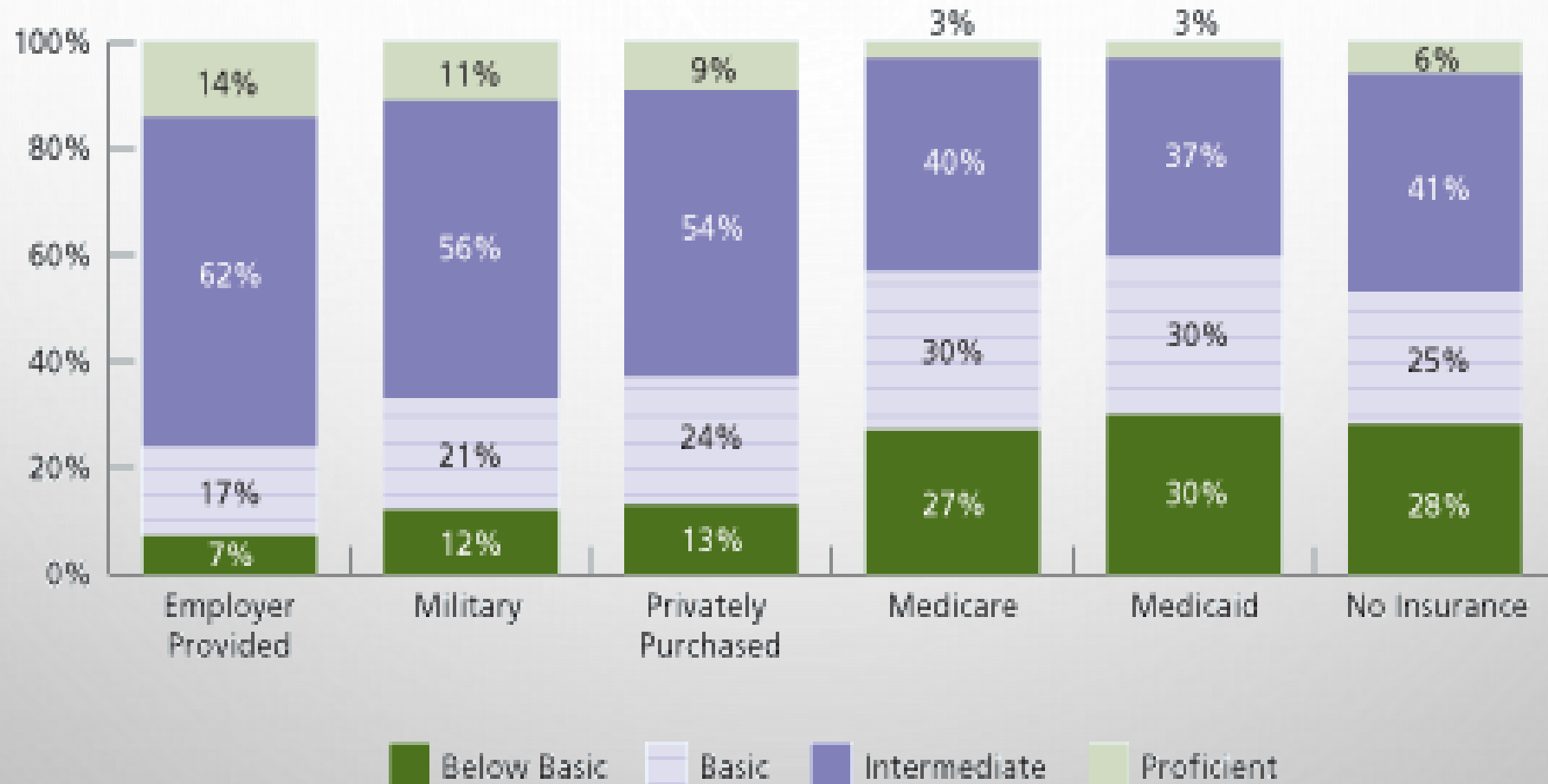
# HEALTH LITERACY LEVELS BY EDUCATIONAL ATTAINMENT



# HEALTH LITERACY BY AGE



# HEALTH LITERACY BY TYPE OF HEALTH INSURANCE



# LOW HEALTH LITERACY IS CORRELATED WITH:

- LOW INSURANCE COVERAGE
- LOW SOCIOECONOMIC LEVEL
- LOW EDUCATIONAL LEVEL
- RACIAL MINORITIES: LATINOS AND AFRICAN AMERICANS
- INCREASING AGE

THIS SHOULD LOOK FAMILIAR. MOST OF THESE CATEGORIES ARE TARGETED IN THE NEW MICHIGAN ORAL HEALTH PLAN



# EVIDENCE THAT LOW HEALTH LITERACY IS A PROBLEM IN ORAL HEALTH

SUMMARY OF FINDINGS FROM 2011 SURVEY OF MARYLAND ADULTS:

- 23% COULD IDENTIFY AN EARLY SIGN OF TOOTH DECAY.
- 98% SAID THEY HAD HEARD OF FLUORIDE; OF THOSE 58% KNEW THE PURPOSE OF FLUORIDE.
- 65% SAID THEY HAD HEARD OF DENTAL SEALANTS; OF THOSE 46% KNEW THE PURPOSE OF DENTAL SEALANTS.
- ADULTS WITH HIGH SCHOOL EDUCATION OR LESS WERE *SIGNIFICANTLY LESS LIKELY* THAN THOSE WITH HIGHER EDUCATION TO DRINK TAP WATER, GIVE IT TO THEIR CHILD, AND KNOW IF THEIR TAP WATER WAS FLUORIDATED.
- MEDICAID RECIPIENTS WERE LESS LIKELY TO DRINK TAP WATER THAN NON-MEDICAID RECIPIENTS.

HOROWITZ, AL., KLEINMAN, D., (2012). ORAL HEALTH LITERACY

# HOW DO WE ENGAGE PEOPLE WITH LOW HEALTH LITERACY INTO ORAL HEALTH SELF CARE AND SERVICES?

## 3 STEPS (ALL UNIVERSAL PRECAUTIONS)

1. ADJUST ALL WRITTEN MATERIALS TO PLAIN LANGUAGE
2. PAY ATTENTION TO SIGNAGE AND BILLING MESSAGES AS WELL AS CLINICAL MESSAGES
3. USE TEACH BACK TECHNIQUES.

# PLAIN LANGUAGE AND CLEAR WRITING TECHNIQUES

- [HTTPS://YOUTU.BE/DANXLNAKGR4](https://youtu.be/danxlnakgr4)
- WHAT ARE MORE PLAIN LANGUAGE WORDS OR EXPLANATIONS FOR THE FOLLOWING WORDS:
  - NON-CAVITATED LESIONS
  - CARIES
  - ORAL HEALTH
  - PERIODONTAL DISEASE
  - ENDODONTIST
  - CAPITATION
- [HTTP://WWW.KNOWYOURTEETH.COM/INFOBITES/GLOSSARY/](http://www.knowyourteeth.com/infobites/glossary/) A GLOSSARY SPECIFIC TO ORAL HEALTH
- [HTTP://WWW.JUSTPLAINCLEAR.COM/](http://www.justplainclear.com/) UNITED HEALTHCARE'S MASSIVE HEALTHCARE GLOSSARY
- [HTTP://WWW.AHRQ.GOV/SITES/DEFAULT/FILES/PUBLICATIONS/FILES/HEALTHLITTOOLKIT2\\_3.PDF.](http://www.ahrq.gov/sites/default/files/publications/files/healthlittoolkit2_3.pdf) THIS HEALTH LITERACY TOOLKIT GIVES STEP BY STEP APPROACHES AND RESOURCES FOR GOOD CLEAR WRITTEN MATERIALS IN TOOL 11.

# TEACH BACK TECHNIQUES.

Teach back is basically asking patients to explain the message in their own words. It therefore assures understanding. Training in teach back and other verbal skills goes a long way. Do it yourselfers can find information in the Universal Precautions Toolkit.

- [HTTPS://YOUTU.BE/FYXUHXXZ1QW](https://youtu.be/fyxuhxxz1qw)

# THE STRENGTHS OF TEACH BACK

- BASED ON VERY SIMPLE CONFIRMATION OF COMMUNICATION AND EASY TO LEARN TEACH BACK SHOULD BE USED AS PART OF GOOD BASIC COMMUNICATION TECHNIQUES (BUILDING A COMFORT LEVEL, MAKING EYE CONTACT, OPEN STANCE, USING EMPATHY, ENCOURAGING TWO WAY COMMUNICATION, ETC.)
- “I GAVE YOU A GREAT DEAL OF INFORMATION, TO MAKE SURE THAT I EXPLAINED IT WELL COULD YOU TELL ME IN YOUR OWN WORDS WHAT I HAVE TOLD YOU?”
- ENCOURAGE QUESTIONS WITH “WHAT QUESTIONS DO YOU HAVE?” RATHER THAN “DO YOU HAVE ANY QUESTIONS.”

# THE TIERED APPROACH TO TEACHING TEACH BACK

Tier #1: Developing the Message

Tier #2: Delivering the Message and Using Teach Back


Tier #3: Adjusting the Message to Patient Input

# DEVELOPING THE MESSAGE

- ORGANIZING THE MESSAGE INTO A LOGICAL, UNDERSTANDABLE FORMAT. *ASK ME THREE™* (NPSF, 2016) WORKS WELL FOR A DIAGNOSIS OR DIRECTIONS
  - THIS IS YOUR PROBLEM
  - THIS IS WHAT YOU CAN DO ABOUT YOUR PROBLEM
  - THIS IS WHY IT IS IMPORTANT TO DO THESE THINGS.
- USING PLAIN LANGUAGE
  - TRANSLATE MEDICAL JARGON INTO EASILY UNDERSTOOD LANGUAGE
  - AVOID VAGUE MEASURES (MORE THAN, LESS THAN) OR WORDS WITH MULTIPLE MEANINGS (“YOUR LAB REPORTS ARE POSITIVE FOR...”)
  - USE THE SHORTEST EXPLANATION POSSIBLE (INCLUDING SHORT SENTENCES AND SHORT WORDS)



# DEVELOPING THE MESSAGE

- CONSIDER YOUR AUDIENCE (WHAT MIGHT APPEAL, WHAT MIGHT NOT?)
  - USE TEACHING AIDS (DIAGRAMS, MODELS, ETC.)
  - USE METAPHORS OR STORIES OR OTHER VERBAL COMMUNICATION TOOLS
- 



# MORE ON PLAIN LANGUAGE

- PLAIN LANGUAGE IS THE TYPE OF “LIVING ROOM LANGUAGE” YOU WOULD USE WHEN TALKING WITH FAMILY AND FRIENDS.
- IT STATES ALL OF THE INFORMATION THAT IS NEEDED WITHOUT USING EXTRA WORDS
- ANY MEDICAL OR SCIENTIFIC WORDS THAT ARE NECESSARY ARE CLEARLY EXPLAINED IN “LIVING ROOM” LANGUAGE, ILLUSTRATED WITH A DRAWING OR A MODEL, OR EXPLAINED WITH A METAPHOR.
- IT IS ORGANIZED FOR THE AUDIENCE .

# GINGIVITIS


GINGIVITIS IS CHARACTERIZED BY LOCALIZED INFLAMMATION, AND SWOLLEN AND BLEEDING GUMS WITHOUT LOSS OF THE BONE THAT SUPPORTS THE TEETH. IT IS OFTEN CAUSED BY INADEQUATE ORAL HYGIENE, WHICH ALLOWS PLAQUE AND CALCULUS (TARTER) TO BUILD UP ON THE TEETH. GINGIVITIS IS REVERSIBLE WITH GOOD ORAL HOME CARE AND PROFESSIONAL DENTAL TREATMENT. IF GINGIVITIS PROGRESSES, IT BECOMES PERIODONTITIS (DESTRUCTIVE PERIODONTAL DISEASE) IN WHICH THE TISSUES AND BONE THAT SUPPORT THE TEETH ARE DAMAGED DUE TO EXTENSIVE BUILDUP OF PLAQUE. IF UNTREATED, THIS CONDITION CAN LEAD TO TOOTH LOSS. THE USE OF SOME MEDICATIONS, DIABETES, ILLNESSES, SMOKING, HORMONAL CHANGES IN GIRLS/WOMEN, AND GENETIC SUSCEPTIBILITY CAN ALL MAKE PERIODONTAL DISEASE WORSE.

# GINGIVITIS


1. WHAT WORDS MIGHT NOT BE UNDERSTOOD? HOW CAN THEY BE SAID DIFFERENTLY?
2. CAN THE MESSAGE BE SHORTENED?
2. JOT DOWN THE THREE PARTS OF ASK ME THREE
  - a. THE PROBLEM
  - b. WHAT TO DO ABOUT THE PROBLEM
  - c. THE IMPORTANCE
3. WHAT LEARNING AIDS MIGHT WORK (DIAGRAMS? MODELS?)
4. WHAT METAPHORS MIGHT WORK?
5. HOW MIGHT IT BE ADJUSTED TO DIFFERENT AUDIENCES?

## TIER #2: DELIVERING THE MESSAGE AND TEACHING BACK

- USE GOOD VERBAL COMMUNICATION APPROACHES LIKE EYE CONTACT AND OPEN BODY LANGUAGE
- THE QUESTIONS QUESTION: CHANGE “DO YOU HAVE ANY QUESTIONS?” TO “WHAT QUESTIONS DO YOU HAVE?”
- TEACH BACK APPROACH
  - CHUNK AND CHECK?
  - TAKE RESPONSIBILITY FOR UNDERSTANDING
- ASK ABOUT ALL MAJOR POINTS? (IN ASK ME THREE APPROACH MAKE SURE ALL ARE INCLUDED)
- RE-TEACH WHAT WAS NOT UNDERSTOOD



## TIER #3: ADJUSTING THE MESSAGE TO PATIENT INPUT

1. ELICIT PT'S PERSPECTIVE
  2. USE THE MCDONALD'S METHOD TO INDICATE YOU UNDERSTAND
  3. CORRECT MISPERCEPTIONS AND TEACH MISSING INFORMATION
- 

## TIER #3: ADJUSTING THE MESSAGE TO PATIENT INPUT

### 1. Elicit Patient's perspective:

- “I have a few things that I want to talk with you about, however, before I do could you tell me what you think is happening to you?”...”what makes you think that?” (can be followed up with “did you search on the internet or read about it?” Did someone tell you about it?” (reveals preconceived ideas, preferred ways of finding information, hesitations and anxiety level)
- “ What do the people closest to you think, the ones you have told?” (reveals information about support system and often cultural issues)

## TIER #3: ADJUSTING THE MESSAGE TO PATIENT INPUT


### 2. USE THE MCDONALD'S METHOD OF CONFIRMING WHAT THE PATIENT HAS SAID

- “SO YOU LOOKED AT A BUNCH OF WEBSITES AND YOU ARE PRETTY SURE THIS HAS SOMETHING TO DO WITH YOUR HEART?”
- “LET ME GET THIS RIGHT, YOUR UNCLE EDDIE HAD THIS TYPE OF TROUBLE BUT HE GOT WORSE WHEN HE WENT TO THE DOCTOR AND TOOK MEDICINE SO YOUR MOM IS WORRIED ABOUT YOU COMING HERE. IS THAT CORRECT?”
- “SO YOU ARE SAYING THAT YOU ARE AFRAID YOU WILL NEED A BLOOD TRANSFUSION AND THAT IS NOT SOMETHING YOU WOULD DO BECAUSE OF YOUR RELIGION?”



## TIER #3: ADJUSTING THE MESSAGE TO PATIENT INPUT

### 3. CORRECT MISPERCEPTIONS AND TEACH MISSING INFORMATION


- LOOK FOR FEARS AND CONCERNS
  - MISUNDERSTANDINGS
  - CULTURAL OR FAMILIAL CAUTIONS
- 





## TIER #3: LARGE DISCUSSION

What are the possible concerns that might arise in a patient about gingivitis?



# TIER #3: ADJUSTING THE MESSAGE TO PATIENT INPUT

ADJUST THE MESSAGE TO ACKNOWLEDGE AND BUILD ON CONCERNS

- “SO, YOU ARE CORRECT THERE IS SOMETHING HAPPENING WITH YOUR HEART, BUT IT ISN’T A HEART ATTACK.”
- “I THINK THAT WEBSITE TOOK YOU IN THE WRONG DIRECTION. LET ME EXPLAIN A LITTLE AND I WILL SHOW YOU A WEBSITE THAT WILL WORK BETTER”
- “YOU SAID YOUR AUNT IS SCARED BECAUSE THIS HAPPENED TO HER FATHER.?”...  
“CAN YOU TELL ME MORE ABOUT THAT?”...

AFTER COMPLETING THE TEACH BACK BEGIN WITH “WHAT QUESTIONS DO YOU HAVE?” AND THEN “HAVE WE ADDRESSED ALL OF YOUR CONCERNS OR IS THERE MORE TO TALK ABOUT?” “WHAT DO YOU THINK ABOUT THE PLAN?” “IS IT SOMETHING YOU FEEL YOU CAN DO?”

# TIER #3: ADJUSTING THE MESSAGE TO PATIENT INPUT

YOUR TURN: TAKE TURNS DELIVERING THE MESSAGE AGAIN BUT THIS TIME

- ELICIT THE PATIENT PERSPECTIVE (THE PATIENT NEEDS TO UNDERSTAND PART OF THE MESSAGE, BE FEARFUL, OR HAVE A MISPERCEPTION)
- USE THE MCDONALDS TECHNIQUE OF CONFIRMING UNDERSTANDING
- ADJUST THE ORIGINAL MESSAGE
- DO TEACH BACK

# LET'S TAKE ANOTHER LOOK AT THE MICHIGAN ORAL HEALTH PLAN!

WHAT WILL MAKE THE BIGGEST IMPACT?

1. USE OF PLAIN LANGUAGE IN VERBAL AND WRITTEN COMMUNICATION
2. TRAINING PROFESSIONALS AND STAFF IN TEACH BACK
3. WRITING CLEARLY AT A LOW GRADE LEVEL (WEBSITE, INSURANCE, EDUCATION MATERIALS, ETC.)



# AN ORAL HEALTH PLAIN LANGUAGE REFERENCE BOOK FOR THOSE WITH LOW LITERACY

[HTTPS://WWW.IHA4HEALTH.ORG/PRODUCT/WHAT-TO-DO-FOR-HEALTHY-TEETH/](https://www.iha4health.org/product/what-to-do-for-healthy-teeth/)

EXCELLENT RESOURCE. PLAIN LANGUAGE AT THE FOURTH GRADE LEVEL MAKES THIS BOOK ACCESSIBLE TO MANY MORE PEOPLE. ALSO COMES IN SPANISH





THANK YOU!

QUESTIONS???????



# REFERENCES:

AHRQ HEALTH LITERACY UNIVERSAL PRECAUTIONS TOOLKIT. (2016). *AGENCY FOR HEALTHCARE RESEARCH AND QUALITY*, ROCKVILLE, MD.

[HTTP://WWW.AHRQ.GOV/PROFESSIONALS/QUALITY-PATIENT-SAFETY/QUALITY-RESOURCES/TOOLS/LITERACY-TOOLKIT/INDEX.HTML](http://www.ahrq.gov/professionals/quality-patient-safety/quality-resources/tools/literacy-toolkit/index.html)

AMERICAN MEDICAL ASSOCIATION (2012). HEALTH LITERACY: REPORT OF THE COUNCIL OF SCIENTIFIC AFFAIRS. AD HOC COMMITTEE ON HEALTH LITERACY FOR THE COUNCIL ON SCIENTIFIC AFFAIRS, *JAMA*. 1999;281:552–7.

BAKER, D. W. (2006). THE ASSOCIATIONS BETWEEN HEALTH LITERACY AND HEALTH OUTCOMES: SELF-REPORTED HEALTH, HOSPITALIZATION, AND MORTALITY. IN *PROCEEDINGS OF THE SURGEON GENERAL'S WORKSHOP ON IMPROVING HEALTH LITERACY*. ROCKVILLE, MD: OFFICE OF THE SURGEON GENERAL.

[HTTP://WWW.NCBI.NLM.NIH.GOV/BOOKS/NBK44260/#PROC-HEALTHLIT.PANEL1.S14](http://www.ncbi.nlm.nih.gov/books/nbk44260/#PROC-HEALTHLIT.PANEL1.S14) (ACCESSED JUNE 19, 2016).

BERKMAN, N.D., SHERIDAN, S. L., DONAHUE, K. E., HALPERN, D. J., VIERA, CROTTY, A. K, HOLLAND, A., BRASURE, M., LOHR, K. N., HARDEN, E., TANT, E., WALLACE, I., & VISWANATHAN. M. (2011). *HEALTH LITERACY INTERVENTIONS AND OUTCOMES: AN UPDATED SYSTEMATIC REVIEW* EVIDENCE REPORT/TECHNOLOGY ASSESSMENT NO. 199. PREPARED BY RTI INTERNATIONAL–UNIVERSITY OF NORTH CAROLINA EVIDENCE-BASED PRACTICE CENTER UNDER CONTRACT NO. 290-2007-10056-I. AHRQ PUBLICATION NUMBER 11-E006. ROCKVILLE, MD: AGENCY FOR HEALTHCARE RESEARCH AND QUALITY.

HOROWITZ, A. M., & KLEINMAN, D. V. (2012). ORAL HEALTH LITERACY: A PATHWAY TO REDUCING ORAL HEALTH DISPARITIES IN MARYLAND. *JOURNAL OF PUBLIC HEALTH DENTISTRY*. DOI: 10.1111/J.1752-7325.2012.00316.X

KUTNER M, GREENBERG E, BAER J. A. (2006). *FIRST LOOK AT THE LITERACY OF AMERICA'S ADULTS IN THE 21ST CENTURY (NCES 2006–470)*.

WASHINGTON, DC: NATIONAL CENTER FOR EDUCATIONAL STATISTICS UNITED STATES DEPARTMENT OF EDUCATION.

MICHIGAN ORAL HEALTH COALITION. (2016). *MICHIGAN ORAL HEALTH PLAN*. LANSING, MI.



## REFERENCES (CONT.):

KUTNER M, GREENBERG E, BAER J. A. (2006). *FIRST LOOK AT THE LITERACY OF AMERICA'S ADULTS IN THE 21ST CENTURY (NCES*

*2006–470)*. WASHINGTON, DC: NATIONAL CENTER FOR EDUCATIONAL STATISTICS UNITED STATES DEPARTMENT OF EDUCATION.

MICHIGAN ORAL HEALTH COALITION. (2016). *MICHIGAN ORAL HEALTH PLAN*. LANSING, MI.

OECD (2013), *OECD SKILLS OUTLOOK 2013: FIRST RESULTS FROM THE SURVEY OF ADULT SKILLS*, OECD PUBLISHING. [HTTP://DX.DOI.ORG/10.1787/9789264204256-EN](http://dx.doi.org/10.1787/9789264204256-en)

ROTHMAN, R. L., DEWALT, D. A., MALONE, R., BRYANT B., SHINTANI, A., CRIGLER, A., WEINBERGER, M., & PIGNONE, M. (2004). INFLUENCE OF PATIENT LITERACY ON THE EFFECTIVENESS OF A PRIMARY CARE-BASED DIABETES DISEASE MANAGEMENT PROGRAM. *JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION* 292(14):1711–1716.

SMITH, P. C., BRICE, J. H., & LEE, J. (2012). THE RELATIONSHIP BETWEEN FUNCTIONAL HEALTH LITERACY AND ADHERENCE TO EMERGENCY DEPARTMENT DISCHARGE INSTRUCTIONS AMONG SPANISH SPEAKING PATIENTS. *JOURNAL OF THE NATIONAL MEDICAL ASSOCIATION* 104(11–12):521–527.



## REFERENCES (CONT)

SUDORE, R. L., YAFFE, K., SATTERFIELD, S., HARRIS, T. B., MEHTA, K. M., SIMONSICK, E. M., NEWMAN, A. B., ROSANO, C.,  
ROOKS, R., RUBIN, S. M., AYONAYON, H. N., & SCHILLINGER, D. (2006). LIMITED LITERACY AND  
MORTALITY IN THE ELDERLY:

THE HEAT, AGING, AND BODY COMPOSITION STUDY. *JOURNAL OF GENERAL INTERNAL MEDICINE*. 21(8): 806–  
812.

WOLF, M. S., DAVIS, T. C. CURTIS, L. M., BAILEY, S. C., KNOX, J. A. BERGERON, A., ABBET, M., SHRANK, W. (2016). A PATIENT-  
CENTERED PRESCRIPTION DRUG LABEL TO PROMOTE APPROPRIATE MEDICATION USE AND ADHERENCE.  
*JOURNAL OF GENERAL INTERNAL*

*MEDICINE*. 19: 8. DOI: [HTTP//DX.DOI.ORG/10.1007/S11606-016-3816-X](http://dx.doi.org/10.1007/S11606-016-3816-X).