Evaluating a Tool for Rapid Clinical Assessment of Health Literacy in Hospitalized Patients

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Health Literacy:
"…capacity to obtain, process, understand basic health information & services … to make appropriate health decisions"
                                                                          -*Healthy People 2010*

Assessing HL?

x Vital sign

x Exam finding

x Lab test

x Radiologic test

Universal Precautions

When is clinical screening appropriate?
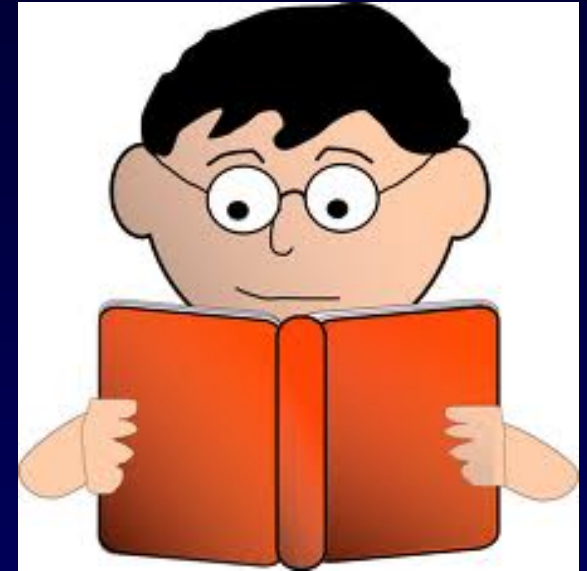
- Never?

  – With Caution?

HL Tools

- What tools exist?

  - Rely on reading

  - Require sufficient vision

  - Mostly research based

  - Limited clinical utility

- Clinical screening questions (Chew et al)
  - Tested in outpatient VA primary care

Objective and Hypothesis

- To explore the clinical utility of brief screening questions for determining hospitalized patients' health literacy level

  The Chew screening questions will identify hospitalized general medicine patients with low health literacy with 80% or greater sensitivity compared to the REALM-R

Data Collection

- Chew screening questions

- Snellen Eye Chart

- REALM-R

Methods: Chew Questions

- "How often do you have **problems learning** about your **medical condition** because of difficulty understanding written information?"

- "How **confident** are you **filling out medical forms** by yourself?"

- "How often do you have someone **help you read hospital materials**?"

Chew et al. 2008

Methods: Chew Questions

- "How often do you have problems learning about your medical condition because of difficulty understanding written information?"

  *Never, Occasionally, **Sometimes, Often, Always***

- "How confident are you filling out medical forms by yourself?"

  *Extremely, Quite a bit, **Somewhat, A little bit, Not at all***

- "How often do you have someone help you read hospital materials?"

  *Never, Occasionally, **Sometimes, Often, Always***

Chew et al. 2008

Methods: REALM-R

Osteoporosis

Allergic

Jaundice

Anemia

Fatigue

Directed

Colitis

Constipation

Sufficient health literacy: patients who score >6

Bass et al. 2003

Data Analysis

- Primary AIM: Chew vs. REALM-R
  - McNemar's test
  - ROC curve

- Secondary AIMs (vision, age)
  - Chi square tests

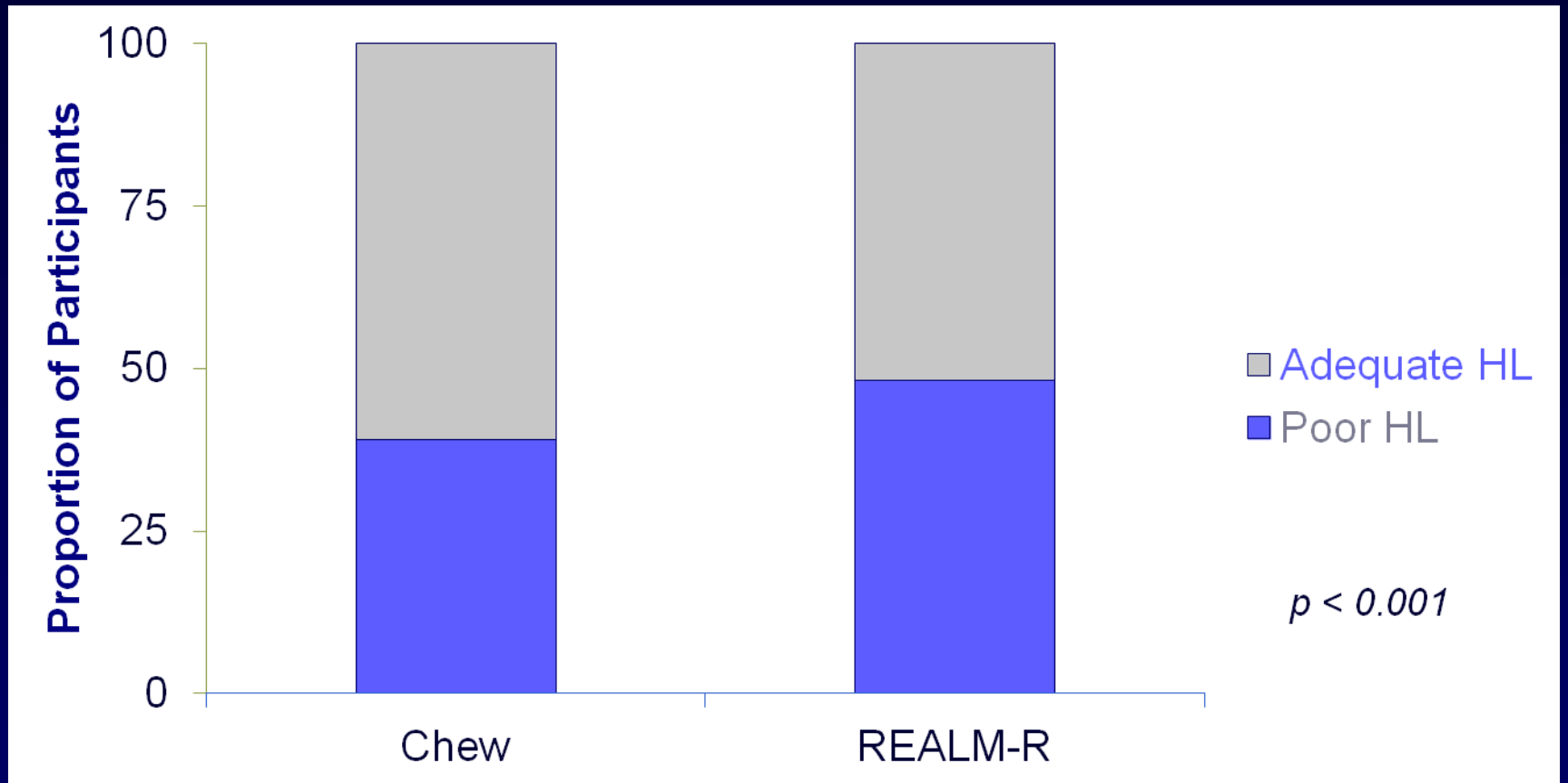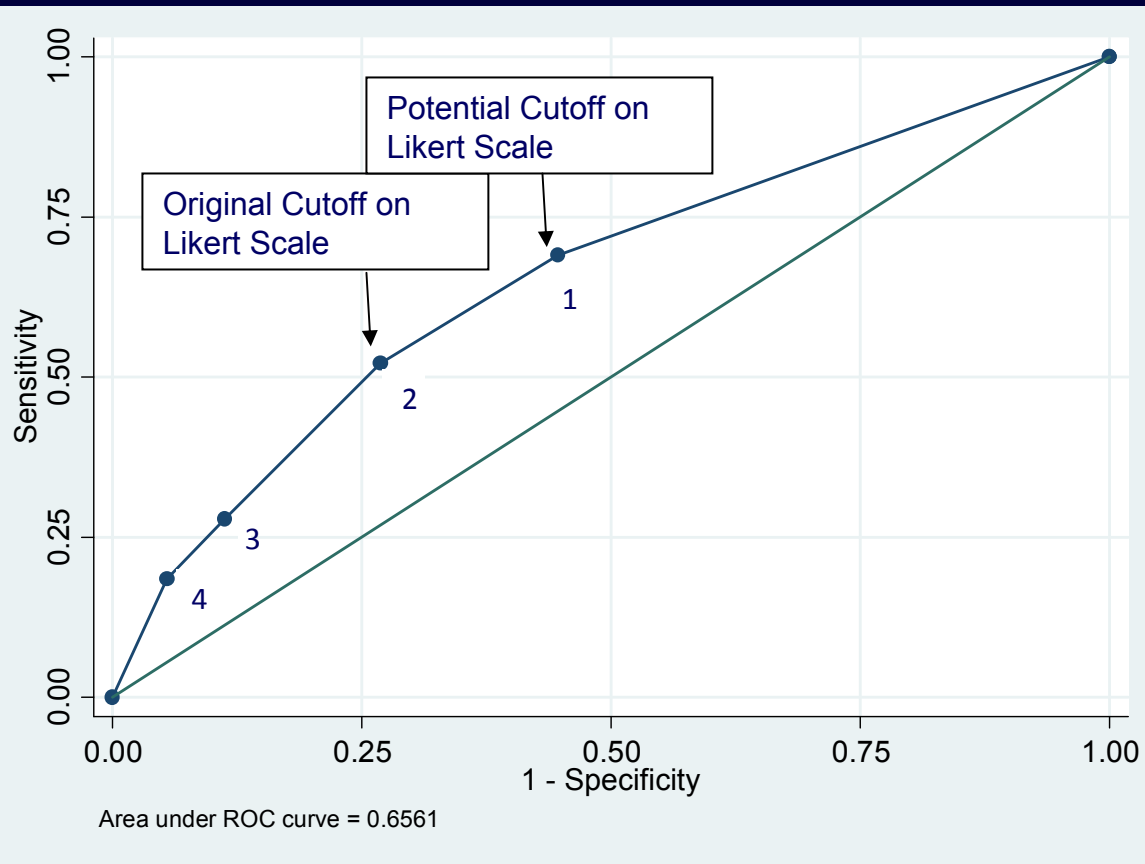# Participant Population

Characteristic	All enrolled *(n=841)*
Age, years, mean ± SD	54 ± 19
Female sex, n (%)	447 (57)
African American, n (%)	683 (81)
Insufficient Vision, n (%)	311 (37)
High school or less, n (%)	445 (53)
Income ≤$25,000, n (%)	155 (19)

Chew vs. REALM-R *(n=530)*

Chew Screening Questions ROC Curve

Likert Scale

0: never/extremely

1: occasionally/quite a bit
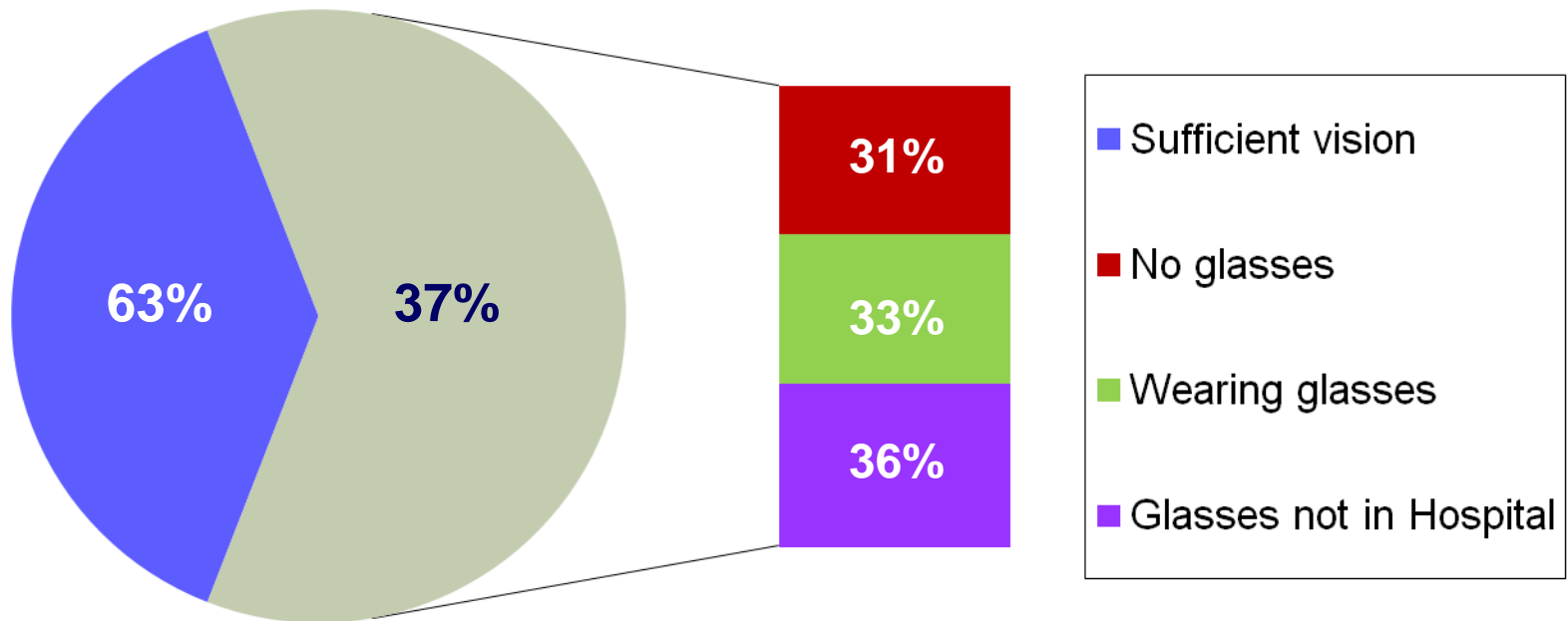
2: sometimes/somewhat

3: often/a little bit

4: always/not at all

Individual Chew Screening Questions

Question	AUROC*	Sensitivity	Specificity	+LR	-LR
Problems Learning	0.61	29.8	84.4	1.91	0.83
Confident with Forms	0.60	24.7	92.0	3.088	0.82
Help Read	0.61	34.9	82.6	2.00	0.79
Combined	*0.63*	*52.2*	*73.1*	*1.93*	*0.65*

*AUROC Area Under the ROC Curve

Prevalence of Poor Vision *(n=311)*

Limitations

- Single site

- Demographics

- Validated with one tool, short form

Conclusions

- Two health literacy tools found differing prevalence of low health literacy
  – low-income, urban hospitalized population

- Non-trivial prevalence of poor vision
  – may be an under-recognized risk factor for hospitalized patients

Blood Consent

CONSENT FOR BLOOD TRANSFUSION: I have been told that I may need a transfusion of blood or blood products and have been told what the benefits to me might be. If appropriate, I have received information about transfusion alternatives, including autologous and directed donations.

I have been told how a blood transfusion is given and the possible risks and consequences of the transfusion, including bruising, an allergic reaction, fever and hives, and being exposed through transfusion to infectious disease such as hepatitis and HIV. The estimated risk of getting HIV from a transfusion is approximately 1 in 2 [...] fused. The estimated risk of getting hepatitis is approximate[...] and 1 in 150,000 for Hepatitis B virus per unit of blood tran[...]

I understand that ev[...] g donors and in matching blood fo[...] se other questions about[...] ve answered them. I unders[...] or until I withdraw my[...]

_____ I [...]

_____

I autho[...] en for me[...] and I am n[...]

I con[...]

For t[...] obse[...]

I ackn[...] inform[...] uss the pr[...] o ask que[...]

I acknow[...]

Patient/Repr[...]
Patient/Repres[...]
Date: _____

As the Physician or LIP [...] sks and alternatives with this patient and/or repr[...]

Physician Signature: _____
Physician Printed Name: _____ Pager #: _____
Date: _____ Time: _____

76%

Autologous

Consequences

1 in 2 Million

Font Size 12

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