

An Analysis of the Readability of Commonly Distributed Health Education Materials on von Willebrand Disease

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Background

- von Willebrand Disease (vWD)
 - Most common bleeding disorder
 - Approximately 1 in every 100 people in the U.S.
- Health promotion and health education empowers individuals with vWD to improve and maintain health
- Print materials as a method of effective health education
 - Should provide salient, appropriate, and accessible information for the target audience
 - Must be easily understood and applied
 - Should be written at a 5th to 6th grade reading level to be understood by most adults
- No published studies have evaluated the readability of print education materials for bleeding disorders to date

Objective

To evaluate the readability of commonly distributed health education brochures on vWD at a large hospital in an urban setting

Methods

- Individuals who provide health education were asked to identify written materials about vWD that they disseminate most often
- Brochures identified were grouped by target audience
 - 5 for adults
 - 2 for adolescents
 - 2 for children
- SMOG and Fry Readability Formula were used to analyze topics in the brochures
 - Definition of condition
 - Symptoms
 - Treatment
- Qualitative analysis of brochure design elements that affect readability was performed

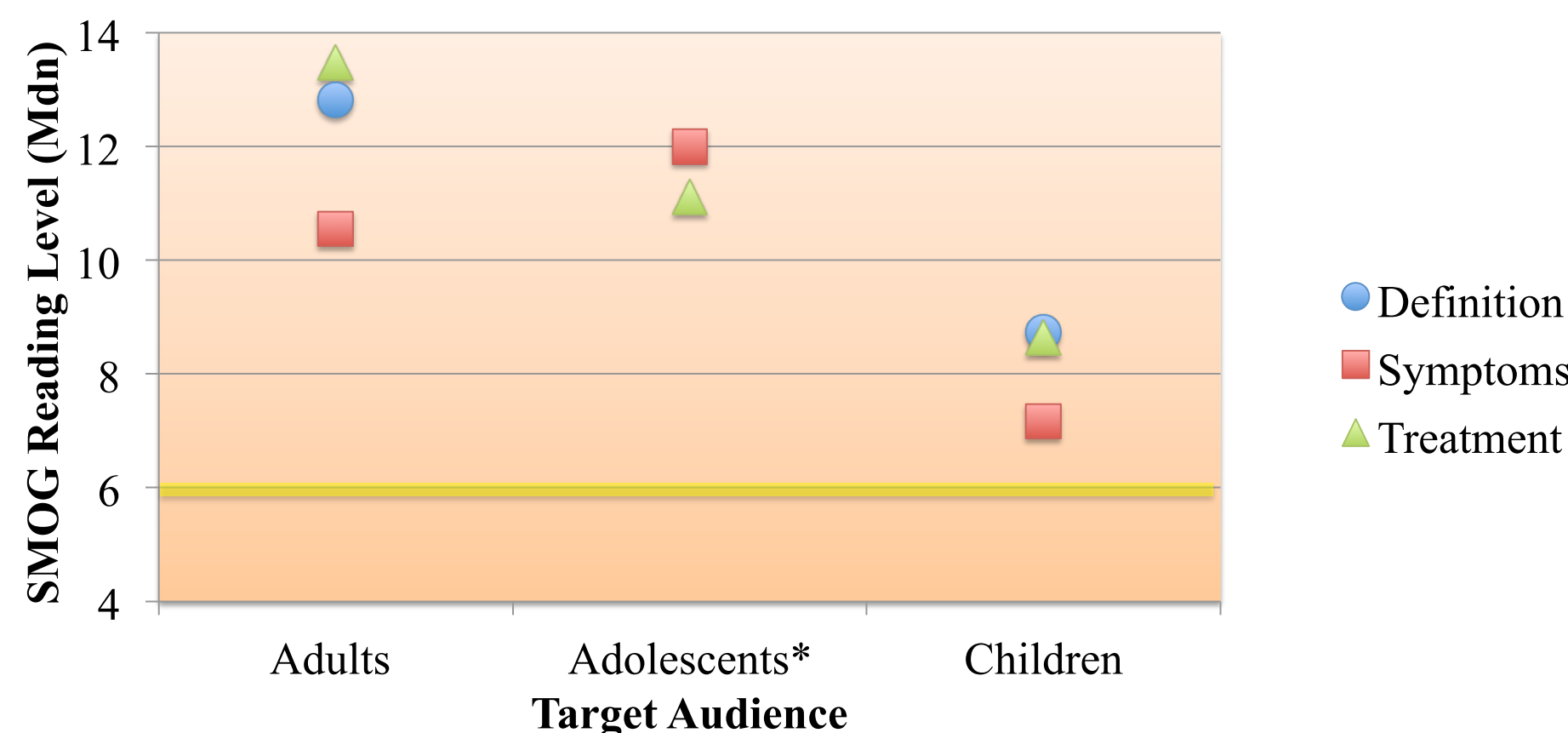
Results

- 8 of the 9 brochures evaluated were written above the 6th grade reading level

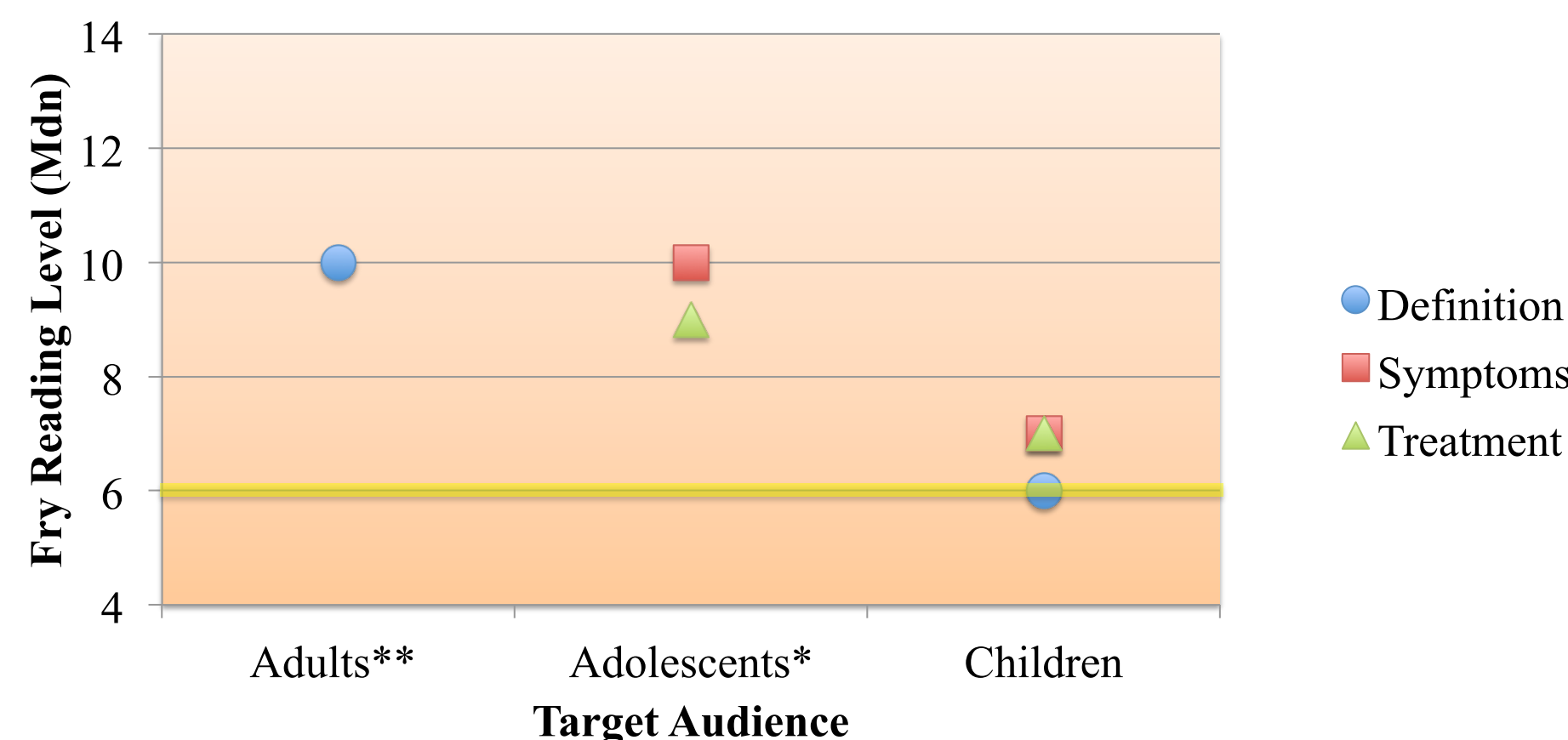
Overall Reading Level

Target Audience	SMOG (Mdn, Range)	Fry (Mdn, Range)
Adults	12.46 (8.92 – 15.85)	unable to calculate
Adolescents	11.12 (11.00 – 13.00)	9 (8 – 12)
Children	8.48 (6.87 – 9.00)	7 (7 – 10)

SMOG Reading Level by Topic



Fry Reading Level by Topic



* No data for definitions in adolescent brochures ** Too high to plot on Fry Readability Graph

- Qualitative analysis of design indicated issues with font, line length, and graphics

Design Elements

Design Element	Adults	Adolescents	Children
Font			
≥ 12 point	-	-	+
Headings use sans serif font	+	+	+
Body uses serif font	-	-	-
Line length			
7-14 words	-	-	+
Grouping			
Bulleted, numbered lists	+	+	+
Chunked/grouped sections	+	+	+
Graphics			
Help explain text	-	-	+
Break up text	-	-	+
White space			
Adequate white space	-	+	+

+ Criterion met - Criterion not met

Implications for Delivery and Practice

- Most patient education materials examined were written with reading levels too high for most patients to readily understand
- Health providers should be made aware of the high reading level of these print materials so that they may supplement education provided with other teaching methods
- Sharing these results with publishers of the brochures can increase awareness of the importance of readability so that they may create more appropriate, and thus, more effective patient education materials