

## Appendix 1. The Derived Health Literacy Model

Variable	Values	$\beta$	Data Source	Population	Level of Aggregation
Constant		299.8			
Gender	(Female as reference) Male	-7.4	SF1 2010	18 Years and Over	Block Group
Age	(18-24 as reference) 25-39 40-49 50-64 65-74 75+	-3.8 -13.8 -19.2 -41.4 -51.9	SF1 2010	18 Years and Over	Block Group
Race/Ethnicity	(White as reference) Black Hispanic Asian/Pacific Islander American Indian Multiracial	-33.4 -33.7 -18.7 -22.3 -21.9	SF1 2010	18 Years and Over	Block Group
Language Spoken at Home	(English as reference) Other Language	1.8	ACS	18 Years and Over	Block Group
Income	( $\geq 100\%$ Federal Poverty Level as reference) < 100% Federal Poverty Level No income data	-8.7 -3.0	ACS	Total Population	Block Group
Education	Still in high school < high school high school/GED Some college (College degree or more as reference)	-35.2 -43.1 -32.8 -13.8	ACS	25 Years and Over	Block Group
Marital Status	(Married, living together as reference) Never married Divorced Separated, Widowed	-4.1 -4.1	ACS	15 Years and Over	Block Group
Time in United States	$\leq 10$ years > 10 years (Born in US as reference)	-20.3 -14.5	ACS	18 Years and Over	Tract Level
MSA Indicator	(MSA as reference) non-MSA	-2.4	Census 2010	Not Applicable	Block Group

$$\text{Predicted Health Literacy Score}^{\dagger} = 299.8 - \sum (\beta * \text{Var})$$

<sup>†</sup> The model to generate predicted health literacy score by Martin et al. (Institute of Medicine, 2009; Lurie, 2010; Martin et al., 2009)

$\beta$  is the vector of regression co-efficients from the predicative model developed by Martin et al.

Var is the vector of the variables (listed above) from the predicative model developed by Martin et al.