

NSCH Summary Data Report

For the Vision & Eye Health Surveillance System

DATE
JUNE 13, 2018

PRESENTED TO:
Jinan Saaddine,
Division of Diabetes Translation,
Centers for Disease Control and
Prevention

PRESENTED BY:
Nnenna Okeke,
John Wittenborn,
David Rein,
NORC at the University of Chicago

Table of Contents

Dataset Description	1
Purpose	1
Sample Design	1
Data Collection Procedures	1
Vision-related Variables	3
Stratification Variables	4
Stratification Levels Included in the Full Analysis	5
Validation	6
Internal Validation	6

List of Tables

Table 1.	Overview of included eye health variables in the NHIS	3
Table 2.	Frequency of coded response options for analyzed variables	4
Table 3.	Stratification variable frequencies	5
Table 4.	Stratification Factor Combinations Included in Full Results	6
Table 5.	National estimates of prevalence rates of children (ages 0-17 years) who are blind or unable to see at all (CBLIND).....	7
Table 6.	National estimates of prevalence rates of children (ages 0-17 years) who have trouble seeing even when wearing glasses or contact lenses (CVISION)	8
Table 7.	National estimates of prevalence rates of adults who are blind or unable to see at all (ABLIND).....	8
Table 8.	National estimates of prevalence rates of adults who have trouble seeing even when wearing glasses or contact lenses (AVISION)	9
Table 9.	National estimates of prevalence rates of people who have (no, some, a lot) difficulty seeing even when wearing glasses (VIS_SS)	10
Table 10.	National estimates of prevalence rates of people who wear glasses (VIS_0)	14

DISCLAIMER: The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of NORC at the University of Chicago or the Centers for Disease Control and Prevention.

This report is currently undergoing Section 508 compliance review.

Dataset Description

Purpose

The main objective of the National Health Interview Survey (NHIS) is to monitor the health of the United States population through the collection and analysis of data on a broad range of health topics. The survey has been conducted since 1957, and has been conducted by National Center for Health Statistics (NCHS) since 1960. NHIS data are used widely by the Department of Health and Human Services (DHHS) and the public health research community to monitor trends in illness and disability and to track progress toward achieving national health objectives. NHIS was selected for inclusion in the Vision and Eye Health Surveillance System (VEHSS) due to its wide range of vision-related questions, as well as its inclusion of all three risk factor variables of interest.

Sample Design

The National Health Interview Survey is a cross-sectional household interview survey of the noninstitutionalized US population. Each year, the sample contains approximately 35,000 households and 87,500 individuals. Sampling and interviewing occurs continuously throughout the year. The sampling plan follows a multistage area probability design that permits the representative sampling of households and noninstitutional group quarters (e.g., college dormitories). The sampling plan is redesigned after every decennial census.

The first stage of the 2006-2015 sampling plan consists of selecting a sample of 428 primary sampling units (PSU's) drawn from approximately 1,900 geographically defined PSU's that cover the 50 States and the District of Columbia. Nearly all states have at least two PSUs selected for the sample, with most having notably more. For each PSU, there are two second-stage units—area segments which are defined geographically, and permit segments which cover housing units built after the 2000 census. The NHIS sampling frame consists of the area and permit frames, which consist of all of the area and permit segments, respectively. This sampling design includes the oversampling of black, Asian, and Hispanic people.

The total NHIS sample is subdivided into four separate panels, or sub-designs, such that each panel is a representative sample of the US population. For 2006-2010, the households and noninstitutional group quarters selected for interview each week are a probability sample representative of the target population. Beginning in 2011, the minimum time length for a probability sample changed from a week to a month.

Data Collection Procedures

NHIS data are collected via an in-person household interview conducted by interviewers who are employed and trained by the US Census Bureau. Since 1997, the NHIS questionnaire has been

administered in the computer assisted personal interviewing (CAPI) mode. The questionnaire is administered with a laptop computer, with interviewers entering responses directly during the interview.

For the family core component, all adult members of the household who are 18 years or older and at home during the time of the interview are invited to participate and respond for themselves. If a child or adult is not home during the interview, a responsible adult family member who is 18 years or older and resides in the household can provide the answers. For the Sample Adult questionnaire, one civilian adult per family is randomly selected to be interviewed. Similarly, a child is randomly selected for the Sample Child questionnaire. Information for this questionnaire is provided by an adult knowledgeable about the child's health.¹

In 2015, the final response rate for the sample adult component was 55.2%. In 2015, the final response rate for the sample child component was 63.4%. In 2014, the final response rate for the sample adult component was 58.9% and for the sample child component was 66.6%. For a combined 2014-2015, the sample adult final response rate was 57.1% and the sample child final response was 65.0%.

Analysis Process and Suppression

We estimated the prevalence rate and sample size for each survey instrument selected for inclusion. We merged samples from the 2014 and 2015 rounds for analysis in order to maximize the available sample sizes at more detailed levels of stratification. New weights were created by dividing the original weights by two.¹

For binary response questions included in the analysis, prevalence rate was defined as the number of people who gave an affirmative response to the question divided by the total number of respondents who gave an affirmative or negative response and then multiplied by 100 for presentation in percentage format. For scaled responses, the data value is the proportion of respondents that selected one of the possible response options, and all responses should sum to 100%. We estimated upper and lower confidence intervals and the relative standard error (RSE) of the prevalence estimate using the Clopper-Pearson method.² The respondent sample size was reported for each response.

All estimates were calculated using SAS proc survey freq. Estimates that were based on a sample size less than 30 and/or with a RSE greater than 30% were suppressed.

¹ US Department of Health and Human Services. Centers for Disease Control and Prevention. National Center for Health Statistics. (2016). 2015 National Health Interview Survey (NHIS) Public Use Data Release: Survey Description. Retrieved from: ftp://ftp.cdc.gov/pub/Health_Statistics/NCHS/Dataset_Documentation/NHIS/2015/srvydesc.pdf

² Parker JD, Talih M, Malec DJ, et al. (2017). National Center for Health Statistics Data Presentation Standards for Proportions. National Center for Health Statistics. Vital Health Stat 2(175).

Vision-related Variables

There were six vision-related questions during 2014-2015 period across all NHIS core and supplemental questionnaires. All six questions were categorized under the ‘Visual Function’ Topic. Two questions were categorized under the ‘Blind of Difficulty Seeing’ category, three were categorized under ‘Difficulty Seeing with Glasses,’ and one under ‘Vision Correction.’ The questions came from three questionnaires—sample child, sample adult, and functioning and disability. The functioning and disability questionnaire was administered to approximately half of the adult sub-sample, via random selection.

Table 1 presents additional details about these questions, including the VEHSS Topic and Category, the NHIS variable name, the year(s) survey data are available, the survey question, and the response options.

Table 1. Overview of included eye health variables in the NHIS

VEHSS Indicator Topic	VEHSS Indicator Category	NHIS Variable Name	Years Available	Question	Response Options
Sample Child File					
Visual Function	Blind of Difficulty Seeing	CBLIND	1999-2016	Is [NAME] blind or unable to see at all?	1 Yes
					2 No
					7 Refused
					8 Not ascertained
					9 Don't know
Visual Function	Difficulty Seeing with Glasses	CVISION	1999-2016	Does [NAME] have any trouble seeing, even when wearing glasses or contact lenses?	1 Yes
					2 No
					7 Refused
					8 Not ascertained
					9 Don't know
Sample Adult File					
Visual Function	Blind of Difficulty Seeing	ABLIND	1999-2016	Are you blind or unable to see at all?	1 Yes
					2 No
					7 Refused
					8 Not ascertained
					9 Don't know
Visual Function	Difficulty Seeing with Glasses	AVISION	1999-2016	Do you have any trouble seeing, even when wearing glasses or contact lenses?	1 Yes
					2 No
					7 Refused
					8 Not ascertained
					9 Don't know
Functioning and Disability File					
Visual Function	Difficulty Seeing with Glasses	VIS_SS	2011-2015	Do you have difficulty seeing, even when wearing glasses?	1 No difficulty
					2 Some difficulty
					3 A lot of difficulty
					4 Cannot do at all/unable to do
					7 Refused
					8 Not ascertained
					9 Don't know
Visual Function	Vision Correction	VIS_0	2012-2015	Do you wear glasses?	1 Yes
					2 No
					7 Refused
					8 Not ascertained
					9 Don't know

Only child participants who responded ‘Yes’ to CVISION question were asked the CBLIND question. Similarly, only adult participants who responded ‘Yes’ to the AVISION question were asked the ABLIND question. Question wording for all questions was consistent across both 2014 and 2015. **Table 2** presents the sample sizes for analysis by coded response option for the variables included in this report.

Table 2. Frequency of coded response options for analyzed variables

Variable	Response	Sample Size
Sample Child File		
CBLIND	Yes	31
	No	621
	Missing	25019
CVISION	Yes	655
	No	24988
	Missing	28
Sample Adult File		
ABLIND	Yes	309
	No	6890
	Missing	3
AVISION	Yes	7202
	No	63130
	Missing	37
Functioning and Disability File		
VIS_SS	No difficulty	27894
	Some difficulty	4842
	A lot of difficulty	605
	Cannot do at all/unable to do	69
	Refused	73
	Not ascertained	1741
	Don't know	18
VIS_0	Yes	2099
	No	12429
	Missing	

Stratification Variables

All variables from the sample child file (CBLIND, CVISION) were stratified by age, sex, and race/ethnicity. The variables from the sample adult and functioning and disability files (ABLIND, AVISION, VIS_SS, VIS_0) were stratified by age, sex, and race/ethnicity, diabetes status, hypertension status, and smoking status. Ages (variable: AGE_P) ranged from 0 to 17 years for participants in the sample child file, and from 18 to 85+ in the sample adult and functioning and disability files. Participant sex (variable: SEX) was coded as Male or Female. The Hispanic and race variables (variables: HISPAN_I and RACERPI2) were combined to create a single race/ethnicity variable, with anyone identifying as Hispanic being placed in a single category. The race categories were coded as follows: Asian, Non-Hispanic Black, Hispanic, North American Native, Other, and Non-Hispanic White. The ‘Other’ category consists of those whose race was not releasable due to issues of confidentiality, as well as those who

identify with multiple racial categories. Diabetes status (variable: DIBEV) was recoded into ‘Yes,’ ‘No,’ and ‘Borderline’; Hypertension status (HYPEV) as ‘Yes’ and ‘No’; and Smoking status (SMKSTAT2) as ‘Current,’ ‘Former,’ and ‘Never.’ State identifiers are released in NHIS public use files due to confidentiality concerns. Stratification variables and their frequencies are listed in **Table 3**.

Table 3. Stratification variable frequencies

Variables	Frequency		
	Sample Child File	Sample Adult File	Functioning and Disability File
AGE			
0-17 years	25671	-	-
18-39 years	-	24069	12009
40-64 years	-	29278	14649
65-84 years	-	14774	7440
85 years and older	-	2248	1144
SEX			
Male	13137	31469	15778
Female	12534	38900	35242
RACE/ETHNICITY			
Non-Hispanic White	11928	43634	21844
Non-Hispanic Black	3475	9359	4660
Hispanic, any race	7342	11644	5843
Asian	11928	3907	1960
Non-Hispanic Other	1227	1309	671
North American Native	222	516	264
DIABETES			
Yes	-	7471	3717
Borderline	-	1183	598
No	-	61670	30904
Missing	-	45	23
HYPERTENSION			
Yes	-	24141	12204
No	-	46138	22995
Missing	-	90	43
SMOKING			
Current Smoker	-	11793	5836
Former Smoker	-	16060	8045
Never Smoker	-	42185	21188
Missing	-	331	173

Stratification Levels Included in the Full Analysis

The full analysis includes additional stratifications beyond those included in this data summary report, and are available on the VEHSS project website. We stratified data using all possible combinations of age, race/ethnicity, sex, and risk factor at the national level. All stratifications are displayed in **Table 4**.

Table 4. Stratification Factor Combinations Included in Full Results

Stratification Level	Stratification Factor
0-level	All participants
1-level	Age
	Race
	Sex
	Diabetes
	Hypertension
	Smoking
2-level	Age*Race
	Age*Sex
	Race*Sex
	Age*Diabetes
	Age*Hypertension
	Age*Smoking
	Race*Diabetes
	Race*Hypertension
	Race*Smoking
	Sex*Diabetes
	Sex*Hypertension
	Sex*Smoking
3-level	Age*Race*Sex
	Age*Race*Diabetes
	Age*Race*Hypertension
	Age*Race*Smoking
	Age*Sex*Diabetes
	Age*Sex*Hypertension
	Age*Sex*Smoking
	Race*Sex*Diabetes
	Race*Sex*Hypertension
	Race*Sex*Smoking
4-level	Age*Race*Sex*Diabetes
	Age*Race*Sex*Hypertension
	Age*Race*Sex*Smoking

Validation

Internal Validation

Sample Size

Compared to other surveys included in VEHSS, NHIS sample sizes for individual years (approximately 87,500) are lower than ACS (more than 3 million), BRFSS (approximately 506,000), and NSCH (approximately 95,700). However, all vision-related questions of interest, as noted above, were asked of sub-samples of the original sample, further reducing sample size. We therefore opted to conduct analyses on combined data years in order to reduce rates of suppression.

All weighted estimates are representative of the noninstitutionalized US population. Due to confidentiality concerns, public use data are not released at the state level.

Validating Responses

Two sets of questions involved skip logic: CVISION/CBLIND and AVISION/ABLIND. We confirmed through cross tabulations that the only participants who answered CBLIND and ABLIND were those who responded to “Yes” to CVISION and AVISION, respectively, indicating the presence of ‘trouble seeing, even when wearing glasses or contact lenses.’

Limitations

The NHIS data analyzed are limited in a few ways. NHIS does not publicly release state-level data, and therefore only national level data is included in VEHS. All responses are self-reported, or household reported in the case of children. The self-report measures represent indicators that cannot be directly translated into the prevalence of clinically defined visual impairment or blindness. Finally, the questions included in NHIS are not present in other surveys, and therefore are not directly equivalent to any other survey indicator measures included in VEHS.

Summary Outcome Measures

Table 5. National estimates of prevalence rates of children (ages 0-17 years) who are blind or unable to see at all (CBLIND)

Stratification factor	Prevalence Rate	Sample Size
All respondents	5.2 (3.4-7.5)	652
Race/Ethnicity		
Non-Hispanic White	**	284
Non-Hispanic Black	**	100
Hispanic, any race	6.1 (3.2-10.3)	204
Asian	*	*
Non-Hispanic Other	0	30
North American Native	*	*
Gender		
Male	6.5 (3.7-10.4)	317
Female	3.9 (2.1-6.5)	335

*suppressed due to a sample size <30; **suppressed due to a RSE >30%; ***suppressed due to a sample size <30 and a RSE >30%

Table 6. National estimates of prevalence rates of children (ages 0-17 years) who have trouble seeing even when wearing glasses or contact lenses (CVISION)

Stratification factor	Prevalence Rate	Sample Size
All respondents	2.6 (2.3-2.9)	25643
Race/Ethnicity		
Non-Hispanic White	2.4 (2.0-2.7)	11919
Non-Hispanic Black	3.2 (2.4-4.2)	3468
Hispanic, any race	2.9 (2.4-3.3)	7333
Asian	1.9 (1.1-3.0)	1477
Non-Hispanic Other	2.5 (1.4-4.1)	1225
North American Native	**	221
Gender		
Male	2.6 (2.2-3.0)	13121
Female	2.6 (2.3-3.0)	12522

*suppressed due to a sample size <30; **suppressed due to a RSE >30%; ***suppressed due to a sample size<30 and a RSE >30%

Table 7. National estimates of prevalence rates of adults who are blind or unable to see at all (ABLIND)

Stratification factor	Prevalence Rate	Sample Size
All respondents	3.6 (3.0-4.3)	7199
Age		
18-39 years	2.2 (1.2-3.5)	1311
40-64 years	3.2 (2.4-4.2)	3423
65-84 years	3.9 (2.9-5.1)	1988
85 years and older	12.3 (8.3-17.3)	477
Race/Ethnicity		
Non-Hispanic White	3.9 (3.1-4.8)	4538
Non-Hispanic Black	4.0 (2.7-5.8)	1121
Hispanic, any race	2.8 (1.8-4.0)	1063
Asian	**	236
Non-Hispanic Other	**	178
North American Native	**	63
Gender		
Male	4.6 (3.6-5.8)	2710
Female	3.0 (2.4-3.8)	4489
Risk factor		
Diabetes	3.6 (3.0-4.3)	7198
Yes	4.9 (3.5-6.7)	1495
Borderline	**	192
No	3.3 (2.7-4.1)	5511
Hypertension	3.6 (3.0-4.3)	7192
Yes	4.2 (3.4-5.2)	3688
No	3.1 (2.4-4.0)	3504
Smoking	3.6 (3.0-4.3)	7168
Current Smoker	3.3 (2.1-4.8)	1640
Former Smoker	3.9 (2.8-5.2)	2001
Never Smoker	3.6 (2.8-4.6)	3527

*suppressed due to a sample size <30; **suppressed due to a RSE >30%; ***suppressed due to a sample size<30 and a RSE >30%

Table 8. National estimates of prevalence rates of adults who have trouble seeing even when wearing glasses or contact lenses (AVISION)

Stratification factor	Prevalence Rate	Sample Size
All respondents	9.2 (8.9-9.6)	70332
Age		
18-39 years	5.2 (4.8-5.6)	24061
40-64 years	10.6 (10.1-11.2)	29261
65-84 years	13.0 (12.2-13.8)	14764
85 years and older	23.5 (21.1-26.0)	2246
Race/Ethnicity		
Non-Hispanic White	9.5 (9.1-9.9)	43606
Non-Hispanic Black	10.7 (9.9-11.6)	9356
Hispanic, any race	8.2 (7.6-8.8)	11639
Asian	5.6 (4.7-6.6)	3906
Non-Hispanic Other	10.6 (8.3-13.2)	1309
North American Native	11.3 (7.4-16.2)	516
Gender		
Male	7.7 (7.3-8.1)	31453
Female	10.7 (10.2-11.2)	38879
Risk factor		
Diabetes		
Yes	19.3 (18.1-20.6)	7469
Borderline	15.2 (12.6-18.2)	1182
No	8.1 (7.8-8.4)	61643
Hypertension		
Yes	14.2 (13.5-14.9)	24128
No	7.0 (6.7-7.4)	46119
Smoking		
Current Smoker	12.9 (11.9-13.9)	11783
Former Smoker	11.5 (10.8-12.2)	16058
Never Smoker	7.5 (7.1-7.9)	42176

*suppressed due to a sample size <30; **suppressed due to a RSE >30%; ***suppressed due to a sample size<30 and a RSE >30%

Table 9. National estimates of prevalence rates of people who have (no, some, a lot) difficulty seeing even when wearing glasses (VIS_SS)

Stratification factor	Prevalence Rate	Sample Size
All respondents		
No difficulty	80.0 (79.4-80.6)	35242
Some difficulty	12.8 (12.3-13.4)	35242
A lot of difficulty	1.5 (1.3-1.6)	35242
Cannot do/Unable to do	0.1 (0.1-0.2)	35242
Age		
18-39 years		
No difficulty	85.1 (84.1-86)	12009
Some difficulty	9.0 (8.2-9.7)	12009
A lot of difficulty	0.6 (0.5-0.8)	12009
Cannot do/Unable to do	**	12009
40-64 years		
No difficulty	77.5 (76.6-78.5)	14649
Some difficulty	14.9 (14.1-15.8)	14649
A lot of difficulty	1.5 (1.2-1.7)	14649
Cannot do/Unable to do	0.1 (0.1-0.2)	14649
65-84 years		
No difficulty	76.7 (75.5-77.9)	7440
Some difficulty	15.2 (14.1-16.4)	7440
A lot of difficulty	2.8 (2.4-3.4)	7440
Cannot do/Unable to do	**	7440
85 years and older		
No difficulty	64.3 (60.3-68.2)	1144
Some difficulty	20.7 (17.5-24.1)	1144
A lot of difficulty	5.7 (4.0-7.8)	1144
Cannot do/Unable to do	**	1144

*suppressed due to a sample size <30; **suppressed due to a RSE >30%; ***suppressed due to a sample size<30 and a RSE >30%

Table 9 (Continued). National estimates of prevalence rates of people who have (no, some, a lot) difficulty seeing even when wearing glasses (VIS_SS)

Stratification factor	Prevalence Rate	Sample Size
Non-Hispanic White		
No difficulty	79.7 (79.0-80.5)	21844
Some difficulty	13.1 (12.4-13.8)	21844
A lot of difficulty	1.4 (1.2-1.6)	21844
Cannot do/Unable to do	0.1 (0.1-0.2)	21844
Non-Hispanic Black		
No difficulty	76.4 (74.6-78.1)	4660
Some difficulty	14.5 (13.2-15.9)	4660
A lot of difficulty	1.9 (1.4-2.6)	4660
Cannot do/Unable to do	**	4660
Hispanic, any race		
No difficulty	82.5 (81.2-83.7)	5843
Some difficulty	11.7 (10.8-12.7)	5843
A lot of difficulty	1.2 (0.9-1.6)	5843
Cannot do/Unable to do	**	5843
Asian		
No difficulty	84.6 (82.5-86.6)	1960
Some difficulty	8.9 (7.4-10.5)	1960
A lot of difficulty	**	1960
Cannot do/Unable to do	0.1 (0.0-0.3)	1960
Non-Hispanic Other		
No difficulty	78.7 (72.8-83.7)	671
Some difficulty	14.4 (9.9-19.9)	671
A lot of difficulty	**	671
Cannot do/Unable to do	**	671
North American Native		
No difficulty	71.7 (62.7-79.5)	264
Some difficulty	15.8 (10.1-23)	264
A lot of difficulty	**	264
Cannot do/Unable to do	**	264
Gender		
Male		
No difficulty	82.0 (81.2-82.8)	15778
Some difficulty	11.5 (10.8-12.3)	15778
A lot of difficulty	1.2 (1.0-1.4)	15778
Cannot do/Unable to do	0.2 (0.1-0.3)	15778
Female		
No difficulty	78.1 (77.2-78.9)	19464
Some difficulty	14.1 (13.4-14.8)	19464
A lot of difficulty	1.7 (1.5-2.0)	19464
Cannot do/Unable to do	0.1 (0.1-0.2)	19464

*suppressed due to a sample size <30; **suppressed due to a RSE >30%; ***suppressed due to a sample size<30 and a RSE >30%

Table 9 (Continued). National estimates of prevalence rates of people who have (no, some, a lot) difficulty seeing even when wearing glasses (VIS_SS)

Stratification factor	Prevalence Rate	Sample Size
Risk factor		
Diabetes		
No difficulty	80.0 (79.4-80.6)	35219
Some difficulty	12.8 (12.3-13.4)	35219
A lot of difficulty	1.5 (1.3-1.6)	35219
Cannot do/Unable to do	0.1 (0.1-0.2)	35219
Yes		
No difficulty	69.2 (67.2-71.2)	3717
Some difficulty	21.8 (20.0-23.6)	3717
A lot of difficulty	4.3 (3.4-5.3)	3717
Cannot do/Unable to do	**	3717
Borderline		
No difficulty	72.2 (67.2-76.9)	598
Some difficulty	19.5 (15.3-24.1)	598
A lot of difficulty	3.1 (1.6-5.4)	598
Cannot do/Unable to do	**	598
No		
No difficulty	81.2 (80.6-81.9)	30904
Some difficulty	11.8 (11.2-12.3)	30904
A lot of difficulty	1.1 (1.0-1.3)	30904
Cannot do/Unable to do	0.1 (0.1-0.2)	30904
Hypertension		
No difficulty	80.0 (79.4-80.6)	35199
Some difficulty	12.8 (12.3-13.4)	35199
A lot of difficulty	1.5 (1.3-1.6)	35199
Cannot do/Unable to do	0.1 (0.1-0.2)	35199
Yes		
No difficulty	74.4 (73.3-75.5)	12204
Some difficulty	17.3 (16.3-18.3)	12204
A lot of difficulty	2.6 (2.3-3.1)	12204
Cannot do/Unable to do	0.2 (0.1-0.4)	12204
No		
No difficulty	82.5 (81.8-83.2)	22995
Some difficulty	10.8 (10.2-11.4)	22995
A lot of difficulty	0.9 (0.8-1.1)	22995
Cannot do/Unable to do	0.1 (0.1-0.2)	22995

*suppressed due to a sample size <30; **suppressed due to a RSE >30%; ***suppressed due to a sample size<30 and a RSE >30%

Table 9 (Continued). National estimates of prevalence rates of people who have (no, some, a lot) difficulty seeing even when wearing glasses (VIS_SS)

Stratification factor	Prevalence Rate	Sample Size
Risk factor		
Smoking		
No difficulty	80.2 (79.6-80.8)	35069
Some difficulty	12.9 (12.3-13.4)	35069
A lot of difficulty	1.5 (1.3-1.6)	35069
Cannot do/Unable to do	0.1 (0.1-0.2)	35069
Current Smoker		
No difficulty	74.6 (72.8-76.3)	5836
Some difficulty	18.1 (16.4-19.9)	5836
A lot of difficulty	2.2 (1.7-2.7)	5836
Cannot do/Unable to do	**	5836
Former Smoker		
No difficulty	77.6 (76.3-78.8)	8045
Some difficulty	15.2 (14.1-16.2)	8045
A lot of difficulty	2.2 (1.8-2.7)	8045
Cannot do/Unable to do	0.1 (0.0-0.2)	8045
Never Smoker		
No difficulty	82.5 (81.8-83.3)	21188
Some difficulty	10.7 (10.1-11.4)	21188
A lot of difficulty	1.0 (0.9-1.2)	21188
Cannot do/Unable to do	0.2 (0.1-0.3)	21188

*suppressed due to a sample size <30; **suppressed due to a RSE >30%; ***suppressed due to a sample size<30 and a RSE >30%

Table 10. National estimates of prevalence rates of people who wear glasses (VIS_0)

Stratification factor	Prevalence Rate	Sample Size
All respondents	61.0 (60.2-61.8)	33419
Age		
18-39 years	42.6 (41.2-44.0)	11411
40-64 years	67.4 (66.3-68.6)	13852
65-84 years	83.5 (82.3-84.7)	7089
85 years and older	84.9 (80.9-88.4)	1067
Race/Ethnicity		
Non-Hispanic White	65.8 (64.8-66.8)	20751
Non-Hispanic Black	54.2 (52.2-56.3)	4339
Hispanic, any race	45.9 (44.0-47.9)	5578
Asian	61.8 (58.9-64.6)	1859
Non-Hispanic Other	59.7 (53.1-66.0)	644
North American Native	54.0 (42.5-65.1)	248
Gender		
Male	55.3 (54.1-56.5)	15020
Female	66.4 (65.4-67.4)	18399
Risk factor		
Diabetes	61.0 (60.2-61.8)	33401
Yes	79.2 (77.2-81.1)	3547
Borderline	74.2 (69.1-78.8)	574
No	58.8 (58.0-59.7)	29280
Hypertension		
Yes	74.2 (73.0-75.4)	11589
No	55.0 (53.9-56.0)	21794
Smoking		
Current Smoker	55.7 (53.7-57.7)	5554
Former Smoker	72.0 (70.6-73.4)	7682
Never Smoker	58.5 (57.4-59.5)	20119

*suppressed due to a sample size <30; **suppressed due to a RSE >30%; ***suppressed due to a sample size<30 and a RSE >30%