

**National Health and Nutrition
Examination Survey 2003-2004**

**Documentation, Codebook,
and Frequencies**

**MEC Exam Component: Vision
Examination Data**

**Survey Years:
2003 to 2004**

**SAS Export File:
VIX_C.XPT**



December 2005

NHANES 2003–2004 Data Documentation

Exam Component: Vision (VIX_C)

Years of Coverage: 2003–2004

First Published: December 2005

Last Revised: N/A

Component Description

The NHANES Vision Examination data will be used to: 1) measure the prevalence of visual acuity impairment (visual acuity worse than 20/40) in the U.S. population; 2) measure the distribution of refractive error in the U.S. population; and 3) evaluate functional impairment related to vision.

The NHANES 2003–2004 Vision Examination consisted of three parts:

Eye Glasses Prescription Determination – For persons 12 years of age and older, eye glass prescriptions are measured when eye glasses for viewing distant objects are available.

Distance Visual Acuity and Objective Refraction/Keratometric Evaluation – For all persons 12 years and older, distance vision is assessed regardless of whether they wear eyeglasses or contacts; the refraction test measures the person’s refractive error and corneal curvature.

Vision Near Card Test – For persons 50 years and over, visual acuity at near was assessed.

Eligible Sample

All sample persons aged 12 years and older are eligible to participate in (1) automated determination of prescription for eye glasses used to view distant objects, (2) distance visual acuity assessment and (3) automated objective refraction/keratometric evaluation. Sample persons aged 50 years and older are also eligible for the Near Card visual acuity test.

Participants were excluded from the Vision Exam if they were determined to be completely blind or unable to see in both eyes based on the following question asked in the Sample Person Household Interview: “With both eyes open, can you see light?” Participants were also excluded from the exam if they had a severe eye infection (i.e., purulent discharge with redness and inflammation) in one or both eyes. A participant wearing an eye patch would not be excluded; however, the exam would not be conducted on the affected eye.

Protocol and Procedure

The vision exam included measurements of: 1) eyeglass prescription for glasses used to view distant objects; 2) presenting visual acuity with current correction; 3) visual acuity incorporating objective refraction; and 4) near-vision acuity.

Health technicians completed screening questions that involved observation of the subject to determine if the medical exclusion criteria applied. The sample person was then asked additional screening questions (e.g. do they wear any distance correction) to determine which measurements in the examination protocol were relevant.

If the sample person wore eyeglasses to see distant objects, their current eyeglass prescription was determined by using the Nidek Auto Lensmeter Model LM-990A. The Nidek Auto Refractor Model ARK-760 instrument was used to assess visual acuity. Presenting visual acuity was tested with whatever distance correction the participant usually wears, if any. If the participant's visual acuity with their usual correction was 20/30 or worse, visual acuity was further assessed using the objective refraction measurements as the "correction factor" for the participant.

For sample persons aged 50 years and older, near vision was tested with a near vision card, and usual reading distance was recorded prior to measuring their presenting distance visual acuity.

The Nidek Auto Lensmeter Model LM-990A and the Nidek Auto Refractor Model ARK-760 instruments have been used since 1999.

The Vision Examination Protocol is discussed in detail in the NHANES Vision Procedures Manual.

Quality Assurance & Quality Control

A variety of quality control procedures were used to ensure the accurate and reliable collection of these data. Calibrations of the lensmeter and the autorefractor were performed prior to conducting examinations at each survey location, and weekly thereafter. At regular intervals, NCHS and contractor staff observed vision examinations conducted in the MEC to evaluate whether appropriate procedures and techniques were being followed. Retraining sessions were conducted with all MEC health technicians to review data collection procedures.

The MEC health technicians conducted the vision examination. These technicians received 8 weeks of training initially, and subsequently underwent updates and remedial training as needed. Technicians referred to the Vision Procedures Manual for specific instructions for the administration of this component.

For details on the QA/QC process for this component, please refer to the NHANES Vision Procedures Manual.

Data Processing and Editing

Automated data collection procedures for the survey were used to collect the vision data. Eyeglass prescription data were captured electronically by the lensmeter, and the objective refraction and visual acuity data were captured by the autorefractor. Both sets of data were then transferred to the survey database system. Visual acuity data values were also captured manually by the technician and entered directly into the database.

During the editing process, all data were examined for logical inconsistencies and technician or equipment errors. Back-end edits of the data were performed when errors were detected.

Variable-Specific Editing:

VIDLVA and VIDRVA – Presenting visual acuity variables

These variables provide the participant's presenting visual acuity, tested with the autorefractor, while wearing whatever distance correction the participant usually wears, if any. The values were automatically captured from the autorefractor and also manually recorded by the technician. In cases of disagreement between the automatic and technician-recorded values, the values recorded by the technician were used (unless they were missing, in which case the machine-captured data were used).

VIDLOVA and VIDROVA – Visual acuity with objective refraction variables (measured only for eyes with presenting visual acuity of 20/30 or worse).

These variables provide the participant's visual acuity, measured after incorporating information from the objective refraction measurements. The values were automatically captured from the autorefractor and also manually recorded by the technician. In cases of disagreement between the automatic and technician-recorded values, the values recorded by the technician were used (unless they were missing, in which case the machine-captured data were used).

Objective Refraction Variables - VIXORSM, VIXORCM, VIXORAM, VIXOLSM, VIXOLCM, VIXOLAM

These variables were automatically computed by the autorefractor and represent the median value of three objective refraction values.

VIDORFM and VIDOLFM – Objective refraction confidence level reading variables

These variables were computed by averaging three objective refraction confidence level readings.

Mean Keratometric Measurement Variables – VIXKRMM, VIXKRDM, VIXKLMM, VIXKLDM

These variables were automatically computed by the autorefractor and represent the average of two keratometric measurements:

VIXKRMM from VIXKRM1 and VIXKRM2;

VIXKRDM from VIXKRD1 and VIXKRD2;

VIXKLMM from VIXKLM1 and VIXKLM2;

VIXKLDM from VIXKLD1 and VIXKLD2.

**Analytic
Notes**

Users are encouraged to note carefully the English instructions describing the various variables in the codebook documentation.

This dataset only contains data for the vision examination conducted in the MEC. There is another dataset containing household interview responses to the vision section (VIQ) of the Sample Person Questionnaire. Data from the two datasets can be combined and analyzed using the guidelines provided by NCHS. Note that not all of the same persons appear in the household interview and MEC examination datasets.

Please refer to the Analytic Guidelines on the NHANES website to obtain further details on the use of sample weights and other analytic issues at:

http://www.cdc.gov/nchs/about/major/nhanes/nhanes2003-2004/analytical_guidelines.htm

References

None

Locator Record

Title: Vision (VIX_C)

Contact Number: 1-866-441-NCHS

Years of Content: 2003–2004

First Published: December 2005

Revised: N/A

Access Constraints: None

Use Constraints: None

Geographic Coverage: National

Subject: Vision

Record Source: NHANES 2003–2004

Survey Methodology: NHANES 2003–2004 is a stratified multistage probability sample of the civilian non-institutionalized population of the U.S.

Medium: NHANES Web site; SAS transport files

**National Health and Nutrition Examination Survey
Codebook for Data Production (2003-2004)**

**MEC Examination
Vision Examination (VIX_C)
Person Level Data**

December 2005



SEQN	Target
	B(12 Yrs. to 150 Yrs.)
Hard Edits	SAS Label
	Respondent sequence number
English Text: Respondent sequence number	
English Instructions:	

VIQ110	Target
	B(12 Yrs. to 150 Yrs.)
Hard Edits	SAS Label
	SP has a severe eye infection?

English Text: Does SP appear to have a severe eye infection in one or both eyes?

English Instructions: The examiner observes the examinee's eyes for possible infection. If either eye has a sign of infection, the examinee is excluded from the vision component.

Code or Value	Description	Count	Cumulative	Skip to Item
1	Yes	3	3	
2	No	6527	6530	VIQ130
.	Missing	460	6990	

VIQ121	Target			
	B(12 Yrs. to 150 Yrs.)			
Hard Edits	SAS Label			
	Which eye(s) infected?			
English Text: if VIQ110 = "Yes" record which eye(s) is/are affected.				
English Instructions:				
Code or Value	Description	Count	Cumulative	Skip to Item
1	Right	1	1	End of Section
2	Left	0	1	End of Section
3	Both	2	3	End of Section
.	Missing	6987	6990	

VIQ130	Target
	B(12 Yrs. to 150 Yrs.)
Hard Edits	SAS Label
	Is SP wearing an eye patch?

English Text: Is SP wearing an eye patch?

English Instructions: Although the SP is not excluded from the vision examination because he/she wears an eye patch, the examiner will not conduct the examination on the affected eye.

Code or Value	Description	Count	Cumulative	Skip to Item
1	Yes	1	1	
2	No	6526	6527	VIQ150
.	Missing	463	6990	

VIQ141	Target			
	B(12 Yrs. to 150 Yrs.)			
Hard Edits	SAS Label			
	Which eye has eye patch?			
English Text: If VIQ130 = "Yes" record which eye(s) is/are affected.				
English Instructions:				
Code or Value	Description	Count	Cumulative	Skip to Item
1	Right	0	0	
2	Left	1	1	
3	Both	0	1	
.	Missing	6989	6990	

VIQ150	Target			
	B(50 Yrs. to 150 Yrs.)			
Hard Edits	SAS Label			
	Glasses/contact lenses for near work?			
English Text: Do you wear glasses or contact lenses for reading or near work?				
English Instructions:				
Code or Value	Description	Count	Cumulative	Skip to Item
1	Yes	1870	1870	
2	No	268	2138	VIXNC1
9	Don't know	2	2140	
.	Missing	4850	6990	

VIQ160	Target			
	B(50 Yrs. to 150 Yrs.)			
Hard Edits	SAS Label			
	Glasses/contact lenses available?			
English Text: If VIQ150 = "Yes", record if the examinee brought their near work glasses, contacts, or a combination of glasses and/or contacts to the testing facility.				
English Instructions:				
Code or Value	Description	Count	Cumulative	Skip to Item
1	Yes	1617	1617	
2	No	253	1870	VIXNC1
.	Missing	5120	6990	

VIQ170	Target			
	B(50 Yrs. to 150 Yrs.)			
Hard Edits	SAS Label			
	Glasses or contacts worn for near test?			
English Text: If VIQ160 = "Yes", record whether the examinee wore glasses, contacts, or a combination of glasses and/or contacts for test of near vision.				
English Instructions:				
Code or Value	Description	Count	Cumulative	Skip to Item
1	Glasses	1587	1587	
2	Contacts	24	1611	
3	Both glasses and contact lenses	6	1617	
.	Missing	5373	6990	

VIXNC1	Target
	B(50 Yrs. to 150 Yrs.)
Hard Edits	SAS Label
	Line read on near card

English Text: The number of the last line the examinee read with one or fewer misses, that is the number of the last line where the examinee read at least four out of the five characters correctly. Line 1 has the largest print: line 5 has the smallest print.

English Instructions:

Code or Value	Description	Count	Cumulative	Skip to Item
0 to 5	Range of Values	2133	2133	
8	Could not obtain	7	2140	
.	Missing	4850	6990	

VIXNC2	Target			
	B(50 Yrs. to 150 Yrs.)			
Hard Edits	SAS Label			
	Testing distance of near card			
English Text: Record to the nearest inch the distance from the center of the card to the examinee's brow.				
English Instructions: A measuring tape is used to determine the distance. (Rounding rule: Numbers less than 0.5, round down (example 16 1/4 = 16) and numbers equal to or greater than 0.5, round up (13 1/2 = 14, 21 3/4 = 22).)				
Code or Value	Description	Count	Cumulative	Skip to Item
5 to 31	Range of Values	2133	2133	
88	Could not obtain	7	2140	
.	Missing	4850	6990	

VIQ180	Target
	B(12 Yrs. to 150 Yrs.)
Hard Edits	SAS Label
	Eye surgery for near sightedness?
English Text: Have you ever had eye surgery to treat or prevent nearsightedness or myopia?	
English Instructions: The interest is in laser or radial keratotomy (RK) surgeries used to improve nearsightedness. Some other terms to describe this surgery include: PRK, RK, Lasik, Eximer, or Refractive Surgery.	

Code or Value	Description	Count	Cumulative	Skip to Item
1	Yes	58	58	
2	No	6463	6521	VIQ200
9	Don't know	5	6526	VIQ200
.	Missing	464	6990	

VIQ191	Target			
	B(12 Yrs. to 150 Yrs.)			
Hard Edits	SAS Label			
	Which eye(s) surgery - near-sightedness?			
English Text: If VIQ180 = "Yes", record which eye(s) was/were operated on.				
English Instructions:				
Code or Value	Description	Count	Cumulative	Skip to Item
1	Right	5	5	
2	Left	3	8	
3	Both	50	58	
.	Missing	6932	6990	

VIQ200	Target			
	B(12 Yrs. to 150 Yrs.)			
Hard Edits	SAS Label			
	Eye surgery for cataracts?			
English Text: Have you ever had eye surgery to treat cataracts?				
English Instructions:				
Code or Value	Description	Count	Cumulative	Skip to Item
1	Yes	425	425	
2	No	6092	6517	VIQ220
9	Don't know	9	6526	VIQ220
.	Missing	464	6990	

VIQ211	Target			
	B(12 Yrs. to 150 Yrs.)			
Hard Edits	SAS Label			
	Which eye(s) cataract surgery?			
English Text: if VIQ200 = "Yes", record which eye(s) was/were operated on for cataracts.				
English Instructions:				
Code or Value	Description	Count	Cumulative	Skip to Item
1	Right	74	74	
2	Left	50	124	
3	Both	300	424	
9	Don't know	1	425	
.	Missing	6565	6990	

VIQ220	Target			
	B(12 Yrs. to 150 Yrs.)			
Hard Edits	SAS Label			
	Glasses/contact lenses worn for distance			
English Text: Do you wear glasses or contact lenses for distance vision, such as when you watch television?				
English Instructions:				
Code or Value	Description	Count	Cumulative	Skip to Item
1	Yes	2819	2819	
2	No	3702	6521	VIXOCMT
9	Don't know	5	6526	
.	Missing	464	6990	

VIQ230	Target
	B(12 Yrs. to 150 Yrs.)
Hard Edits	SAS Label
	Is distance correction available?
English Text: If VIQ220 = "Yes", record if examinee brought their distance correction to the testing center.	
English Instructions: The SP could be wearing the correction or brought it with them.	

Code or Value	Description	Count	Cumulative	Skip to Item
1	Yes	2413	2413	
2	No	406	2819	
.	Missing	4171	6990	

VIQ240	Target			
	B(12 Yrs. to 150 Yrs.)			
Hard Edits	SAS Label			
	Which type? Glasses or contacts?			
English Text: If VIQ230 = "Yes", record the type of correction (glasses, contacts, or a combination of glasses and contacts) the SP has with them.				
English Instructions: This specifies the type of correction worn by the SP for the presenting VA tests (VIDRVA and VIDLVA).				
Code or Value	Description	Count	Cumulative	Skip to Item
1	Glasses	2010	2010	
2	Contacts	350	2360	VIXOCMT
3	Both glasses and contact lenses	53	2413	
.	Missing	4577	6990	

VIQ250	Target
	B(12 Yrs. to 150 Yrs.)
Hard Edits	SAS Label
	Was prescription obtained?
English Text: Did the examiner capture the prescription of the examinee's lens?	
English Instructions: This pertains to the lens prescription used for viewing distant objects.	

Code or Value	Description	Count	Cumulative	Skip to Item
1	Yes	2057	2057	
2	No	1	2058	
.	Missing	4932	6990	

VIXPRS	Target			
	B(12 Yrs. to 150 Yrs.)			
Hard Edits	SAS Label			
	Prescription, right sphere			
English Text: The prescription of the sphere in the right lens used for distance correction.				
English Instructions: For distance eyeglasses only.				
Code or Value	Description	Count	Cumulative	Skip to Item
-15 to 6.5	Range of Values	1989	1989	
88	Could not obtain	69	2058	
.	Missing	4932	6990	

VIXPRC	Target			
	B(12 Yrs. to 150 Yrs.)			
Hard Edits	SAS Label			
	Prescription, right cylinder			
English Text: Prescription of the cylinder in the right lens used for distance correction				
English Instructions: For distance eyeglasses only				
Code or Value	Description	Count	Cumulative	Skip to Item
0 to 7.75	Range of Values	1989	1989	
88	Could not obtain	69	2058	
.	Missing	4932	6990	

VIXPRA	Target			
	B(12 Yrs. to 150 Yrs.)			
Hard Edits	SAS Label			
	Prescription, right axis			
English Text: Prescription of the axis in the right lens used for distance correction				
English Instructions: For distance eyeglasses only.				
Code or Value	Description	Count	Cumulative	Skip to Item
0 to 180	Range of Values	1989	1989	
888	Could not obtain	69	2058	
.	Missing	4932	6990	

VIXPLS	Target			
	B(12 Yrs. to 150 Yrs.)			
Hard Edits	SAS Label			
	Prescription, left sphere			
English Text: Prescription of the sphere in the left lens used for distance correction.				
English Instructions: For distance eyeglasses only.				
Code or Value	Description	Count	Cumulative	Skip to Item
-14 to 8	Range of Values	1988	1988	
88	Could not obtain	70	2058	
.	Missing	4932	6990	

VIXPLC	Target			
	B(12 Yrs. to 150 Yrs.)			
Hard Edits	SAS Label			
	Prescription, left cylinder			
English Text: Prescription of the cylinder in the left lens used for distance correction.				
English Instructions: For distance eyeglasses only.				
Code or Value	Description	Count	Cumulative	Skip to Item
0 to 8.75	Range of Values	1988	1988	
88	Could not obtain	70	2058	
.	Missing	4932	6990	

VIXPLA	Target			
	B(12 Yrs. to 150 Yrs.)			
Hard Edits	SAS Label			
	Prescription, left axis			
English Text: Prescription of the axis in the left lens used for distance correction.				
English Instructions: For distance eyeglasses only				
Code or Value	Description	Count	Cumulative	Skip to Item
0 to 180	Range of Values	1988	1988	
888	Could not obtain	70	2058	
.	Missing	4932	6990	

VIXOCMT	Target			
	B(12 Yrs. to 150 Yrs.)			
Hard Edits	SAS Label			
	Visual Acuity Comments			
English Text: The examiner can note special circumstances related to a visual acuity test.				
English Instructions: These apply to distance vision tests.				
Code or Value	Description	Count	Cumulative	Skip to Item
1	Monovision glasses/contacts worn for visual acuity	9	9	
2	Cataract contact lenses worn for objective refraction	2	11	
3	Contacts worn for objective refraction	9	20	
4	Artificial eye	7	27	
5	Monovision contacts worn for objective refraction	2	29	
6	Contact in right eye only for presenting visual acuity	2	31	
7	Contact in left eye only for presenting visual acuity	2	33	
.	Missing	6957	6990	

VIXORSM	Target			
	B(12 Yrs. to 150 Yrs.)			
Hard Edits	SAS Label			
	OR right sphere, median			
English Text: Spherical dioptric power (median value of three objective refractions) of the examinee's right eye.				
English Instructions:				
Code or Value	Description	Count	Cumulative	Skip to Item
-21.75 to 6.75	Range of Values	6296	6296	
88	Could not obtain	197	6493	
.	Missing	497	6990	

VIXORCM	Target			
	B(12 Yrs. to 150 Yrs.)			
Hard Edits	SAS Label			
	OR right cylinder, median			
English Text: Cylindrical dioptric power (median value of three objective refractions) of the examinee's right eye.				
English Instructions:				
Code or Value	Description	Count	Cumulative	Skip to Item
0 to 8.25	Range of Values	6296	6296	
88	Could not obtain	197	6493	
.	Missing	497	6990	

VIXORAM	Target
	B(12 Yrs. to 150 Yrs.)
Hard Edits	SAS Label
	OR right axis, median

English Text: Axis of refractive astigmatism (median value of three objective refractions) of the examinee's right eye.

English Instructions:

Code or Value	Description	Count	Cumulative	Skip to Item
0 to 180	Range of Values	6296	6296	
888	Could not obtain	197	6493	
.	Missing	497	6990	

VIDORFM	Target
	B(12 Yrs. to 150 Yrs.)
Hard Edits	SAS Label
	OR right confidence level reading

English Text: The confidence level of the objective refraction reading for the right eye (mean of three measures).

English Instructions: Lower values equate to less confidence in the objective refraction values.

Code or Value	Description	Count	Cumulative	Skip to Item
5 to 9	Range of Values	6322	6322	
.	Missing	668	6990	

VIXOLSM	Target			
	B(12 Yrs. to 150 Yrs.)			
Hard Edits	SAS Label			
	OR left sphere, median			
English Text: Spherical dioptric power (median value of three objective refractions) of the examinee's left eye.				
English Instructions:				
Code or Value	Description	Count	Cumulative	Skip to Item
-19.75 to 11	Range of Values	6264	6264	
88	Could not obtain	229	6493	
.	Missing	497	6990	

VIXOLCM	Target			
	B(12 Yrs. to 150 Yrs.)			
Hard Edits	SAS Label			
	OR left cylinder, median			
English Text: Cylindrical dioptric power (median value of three objective refractions) of the examinee's left eye.				
English Instructions:				
Code or Value	Description	Count	Cumulative	Skip to Item
0 to 7.75	Range of Values	6264	6264	
88	Could not obtain	229	6493	
.	Missing	497	6990	

VIXOLAM	Target
	B(12 Yrs. to 150 Yrs.)
Hard Edits	SAS Label
	OR left axis, median

English Text: Axis of refractive astigmatism (median value of three objective refractions) of the examinee's left eye.

English Instructions:

Code or Value	Description	Count	Cumulative	Skip to Item
0 to 180	Range of Values	6264	6264	
888	Could not obtain	229	6493	
.	Missing	497	6990	

VIDOLFM	Target			
	B(12 Yrs. to 150 Yrs.)			
Hard Edits	SAS Label			
	OR left confidence level reading			
English Text: The confidence level of the objective refraction reading of the left eye (mean of three measures).				
English Instructions: Lower values equate to less confidence in the objective refraction values.				
Code or Value	Description	Count	Cumulative	Skip to Item
5 to 9	Range of Values	6352	6352	
.	Missing	638	6990	

VIXKRM1	Target			
	B(12 Yrs. to 150 Yrs.)			
Hard Edits	SAS Label			
	Right keratometry radius flat curve (mm)			
English Text: Keratometric measure. Radius of corneal curvature (in mm) in the least power meridian of the examinee's right eye.				
English Instructions:				
Code or Value	Description	Count	Cumulative	Skip to Item
5.96 to 9.91	Range of Values	6442	6442	
88	Could not obtain	51	6493	
.	Missing	497	6990	

VIXKRD1	Target
	B(12 Yrs. to 150 Yrs.)
Hard Edits	SAS Label
	Right keratometry power flat curve (D)

English Text: Keratometric measure. Dioptric power in the least power meridian of the cornea in the examinee's right eye.

English Instructions:

Code or Value	Description	Count	Cumulative	Skip to Item
34 to 56.75	Range of Values	6442	6442	
88	Could not obtain	51	6493	
.	Missing	497	6990	

VIXKRG1	Target			
	B(12 Yrs. to 150 Yrs.)			
Hard Edits	SAS Label			
	Right keratometry axis flat curve (deg)			
English Text: Keratometric measure. Axis of corneal astigmatism (in degrees) in the least power meridian of the examinee's right eye.				
English Instructions:				
Code or Value	Description	Count	Cumulative	Skip to Item
0 to 180	Range of Values	6441	6441	
888	Could not obtain	51	6492	
.	Missing	498	6990	

VIXKRM2	Target
	B(12 Yrs. to 150 Yrs.)
Hard Edits	SAS Label
	Right keratometry radius steep curve(mm)

English Text: Keratometric measure. Radius of corneal curvature (in mm) in the greatest power meridian of the examinee's right eye

English Instructions:

Code or Value	Description	Count	Cumulative	Skip to Item
4.94 to 9.04	Range of Values	6442	6442	
88	Could not obtain	51	6493	
.	Missing	497	6990	

VIXKRD2	Target
	B(12 Yrs. to 150 Yrs.)
Hard Edits	SAS Label
	Right keratometry power steep curve (D)

English Text: Keratometric measure. Dioptric power in the meridian of the cornea with the greatest power in the examinee's right eye.

English Instructions:

Code or Value	Description	Count	Cumulative	Skip to Item
37.25 to 68.25	Range of Values	6442	6442	
88	Could not obtain	51	6493	
.	Missing	497	6990	

VIXKRG2	Target			
	B(12 Yrs. to 150 Yrs.)			
Hard Edits	SAS Label			
	Right keratometry axis steep curve (deg)			
English Text: Keratometric measure. Axis of corneal astigmatism (in degrees) in the greatest power meridian of the examinee's right eye.				
English Instructions:				
Code or Value	Description	Count	Cumulative	Skip to Item
0 to 179	Range of Values	6441	6441	
888	Could not obtain	51	6492	
.	Missing	498	6990	

VIXKRMM	Target			
	B(12 Yrs. to 150 Yrs.)			
Hard Edits	SAS Label			
	Right keratometry radius, average (mm)			
English Text: Keratometric measure. Radius of corneal curvature (in mm) averaged across meridians in the examinee's right eye.				
English Instructions:				
Code or Value	Description	Count	Cumulative	Skip to Item
5.81 to 9.09	Range of Values	6442	6442	
88	Could not obtain	51	6493	
.	Missing	497	6990	

VIXKRDM	Target			
	B(12 Yrs. to 150 Yrs.)			
Hard Edits	SAS Label			
	Right keratometry power, average (D)			
English Text: Keratometric measure. Dioptric power of the cornea averaged across meridians in the examinee's right eye				
English Instructions:				
Code or Value	Description	Count	Cumulative	Skip to Item
37.25 to 58	Range of Values	6442	6442	
88	Could not obtain	51	6493	
.	Missing	497	6990	

VIXKRCD	Target			
	B(12 Yrs. to 150 Yrs.)			
Hard Edits	SAS Label			
	Right keratometry cylinder			
English Text: Keratometric measure. Difference in dioptric power between meridians of the cornea in the examinee's right eye				
English Instructions:				
Code or Value	Description	Count	Cumulative	Skip to Item
0 to 32.75	Range of Values	6442	6442	
88	Could not obtain	51	6493	
.	Missing	497	6990	

VIXKRCG	Target			
	B(12 Yrs. to 150 Yrs.)			
Hard Edits	SAS Label			
	Right keratometry axis (deg)			
English Text: Keratometric measure. Axis of corneal astigmatism (in degrees) in the steepest meridian of the cornea in the examinee's right eye.				
English Instructions:				
Code or Value	Description	Count	Cumulative	Skip to Item
0 to 179	Range of Values	6441	6441	
888	Could not obtain	51	6492	
.	Missing	498	6990	

VIXKLM1	Target			
	B(12 Yrs. to 150 Yrs.)			
Hard Edits	SAS Label			
	Left keratometry radius flat curve (mm)			
English Text: Keratometric measure. Radius of corneal curvature (in mm) in the least power meridian of the examinee's left eye.				
English Instructions:				
Code or Value	Description	Count	Cumulative	Skip to Item
6.13 to 10	Range of Values	6451	6451	
88	Could not obtain	42	6493	
.	Missing	497	6990	

VIXKLD1	Target			
	B(12 Yrs. to 150 Yrs.)			
Hard Edits	SAS Label			
	Left keratometry power flat curve (D)			
English Text: Keratometric measure. Dioptric power in the least power meridian of the cornea in the examinee's left eye.				
English Instructions:				
Code or Value	Description	Count	Cumulative	Skip to Item
33.75 to 55	Range of Values	6451	6451	
88	Could not obtain	42	6493	
.	Missing	497	6990	

VIXKLG1	Target
	B(12 Yrs. to 150 Yrs.)
Hard Edits	SAS Label
	Left keratometry axis flat curve (deg)

English Text: Keratometric measure. Axis of corneal astigmatism (in degrees) in the least power median of the examinee's left eye.

English Instructions:

Code or Value	Description	Count	Cumulative	Skip to Item
0 to 180	Range of Values	6451	6451	
888	Could not obtain	42	6493	
.	Missing	497	6990	

VIXKLM2	Target
	B(12 Yrs. to 150 Yrs.)
Hard Edits	SAS Label
	Left keratometry radius steep curve (mm)

English Text: Keratometric measure. Radius of corneal curvature (in mm) in the greatest power meridian of the examinee's left eye.

English Instructions:

Code or Value	Description	Count	Cumulative	Skip to Item
5.55 to 8.98	Range of Values	6451	6451	
88	Could not obtain	42	6493	
.	Missing	497	6990	

VIXKLD2	Target
	B(12 Yrs. to 150 Yrs.)
Hard Edits	SAS Label
	Left keratometry power steep curve (D)

English Text: Keratometric measure. Dioptric power in the meridian of the cornea with the greatest power in the examinee's left eye.

English Instructions:

Code or Value	Description	Count	Cumulative	Skip to Item
37.5 to 60.75	Range of Values	6451	6451	
88	Could not obtain	42	6493	
.	Missing	497	6990	

VIXKLG2	Target			
	B(12 Yrs. to 150 Yrs.)			
Hard Edits	SAS Label			
	Left keratometry axis steep curve (deg)			
English Text: Keratometric measure. Axis of corneal astigmatism (in degrees) in the greatest power meridian of the examinee's left eye.				
English Instructions:				
Code or Value	Description	Count	Cumulative	Skip to Item
0 to 180	Range of Values	6451	6451	
888	Could not obtain	42	6493	
.	Missing	497	6990	

VIXKLMM	Target
	B(12 Yrs. to 150 Yrs.)
Hard Edits	SAS Label
	Left keratometry radius, average (mm)

English Text: Keratometric measure. Radius of corneal curvature (in mm) averaged across meridians in the examinee's left eye.

English Instructions:

Code or Value	Description	Count	Cumulative	Skip to Item
5.85 to 9.09	Range of Values	6451	6451	
88	Could not obtain	42	6493	
.	Missing	497	6990	

VIXKLDM	Target
	B(12 Yrs. to 150 Yrs.)
Hard Edits	SAS Label
	Left keratometry power, average (D)

English Text: Keratometric measure. Dioptric power of the cornea averaged across meridians in the examinee's left eye.

English Instructions:

Code or Value	Description	Count	Cumulative	Skip to Item
37.25 to 57.75	Range of Values	6451	6451	
88	Could not obtain	42	6493	
.	Missing	497	6990	

VIXKLCD	Target
	B(12 Yrs. to 150 Yrs.)
Hard Edits	SAS Label
	Left keratometry cylinder

English Text: Keratometric measure. Difference in dioptric power between meridians of the cornea in the examinee's left eye.

English Instructions:

Code or Value	Description	Count	Cumulative	Skip to Item
0 to 18.5	Range of Values	6451	6451	
88	Could not obtain	42	6493	
.	Missing	497	6990	

VIXKLCG	Target			
	B(12 Yrs. to 150 Yrs.)			
Hard Edits	SAS Label			
	Left keratometry axis (deg)			
English Text: Keratometric measure. Axis of corneal astigmatism (in degrees) in the steepest meridian of the cornea in the examinee's left eye.				
English Instructions:				
Code or Value	Description	Count	Cumulative	Skip to Item
0 to 180	Range of Values	6451	6451	
888	Could not obtain	42	6493	
.	Missing	497	6990	

VIDRVA	Target
	B(12 Yrs. to 150 Yrs.)
Hard Edits	SAS Label
	Right visual acuity, presenting
English Text: The presenting visual acuity of the right eye with usual correction.	
English Instructions: Usual correction could be: eyeglasses, contacts, eyeglasses and contacts, or no correction depending on what the SP wore (or brought with them) to view distant objects on the day they visited the MEC (see VIQ230 and VIQ240).	

Code or Value	Description	Count	Cumulative	Skip to Item
20	20/20	2776	2776	
25	20/25	1638	4414	
30	20/30	613	5027	
40	20/40	320	5347	
50	20/50	666	6013	
60	20/60	104	6117	
80	20/80	85	6202	
200	20/200	161	6363	
666	20/200+	85	6448	
.	Missing	542	6990	

VIDLVA	Target
	B(12 Yrs. to 150 Yrs.)
Hard Edits	SAS Label
	Left visual acuity, presenting
English Text: The presenting visual acuity of the left eye with usual correction.	
English Instructions: Usual correction could be: eyeglasses, contacts, eyeglasses and contacts, or no correction depending on what the SP wore (or brought with them) to view distant objects on the day they visited the MEC (see VIQ230 and VIQ240).	

Code or Value	Description	Count	Cumulative	Skip to Item
20	20/20	2818	2818	
25	20/25	1566	4384	
30	20/30	643	5027	
40	20/40	312	5339	
50	20/50	685	6024	
60	20/60	78	6102	
80	20/80	81	6183	
200	20/200	160	6343	
666	20/200+	104	6447	
.	Missing	543	6990	

VIDROVA	Target
	B(12 Yrs. to 150 Yrs.)
Hard Edits	SAS Label
	Right visual acuity, w/ obj. refraction

English Text: The visual acuity with objective refraction of the right eye.

English Instructions: This is the visual acuity reported by the SP after the autorefractor inserted what it deemed, based on the objective refraction, to be the most appropriate lens (if any) to allow the eye to see 20/25 or better. This test was only performed on eyes whose presenting visual acuity was 20/30 or worse.

Code or Value	Description	Count	Cumulative	Skip to Item
25	20/25	1356	1356	
30	20/30	122	1478	
40	20/40	120	1598	
50	20/50	221	1819	
60	20/60	15	1834	
80	20/80	28	1862	
200	20/200	42	1904	
666	20/200+	31	1935	
.	Missing	5055	6990	

VIDLOVA	Target
	B(12 Yrs. to 150 Yrs.)
Hard Edits	SAS Label
	Left visual acuity, w/ obj. refraction

English Text: The visual acuity with objective refraction of the left eye.

English Instructions: This is the visual acuity reported by the SP after the autorefractor inserted what it deemed, based on the objective refraction, to be the most appropriate lens (if any) to allow the eye to see 20/25 or better. This test was only performed on eyes whose presenting visual acuity was 20/30 or worse.

Code or Value	Description	Count	Cumulative	Skip to Item
25	20/25	1396	1396	
30	20/30	142	1538	
40	20/40	95	1633	
50	20/50	197	1830	
60	20/60	21	1851	
80	20/80	38	1889	
200	20/200	39	1928	
666	20/200+	51	1979	
.	Missing	5011	6990	