

2016 VSP Summary Data Report

For the Vision & Eye Health Surveillance System

DATE
JUNE 20, 2018

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

PRESENTED BY:
John Wittenborn,
NORC at the University of Chicago

Phillip Kimura,
MaryBeth Richardson,
VSP Global

Table of Contents

Dataset Description	5
Analysis Overview	5
Data Indicators and Case Definitions	6
<i>Service Utilization-Eye Exams</i>	<i>6</i>
<i>Medical Diagnoses</i>	<i>8</i>
Denominators used to Calculate Prevalence Rates	11
Stratification Factors	12
<i>Age Groups</i>	<i>12</i>
<i>Sex Categories</i>	<i>12</i>
<i>Race/ethnicity Categories</i>	<i>12</i>
<i>States and Territories</i>	<i>12</i>
Suppression and Data Release Restrictions	13
Potential Limitations.....	14
Service Utilization Indicators (Number of patients receiving service per 100 patients)	15
Medical Diagnosis Indicators (Number of patients with diagnosis per 100 patients)	18

List of Tables

Table 1.	Service Utilization Topic Indicators	6
Table 2.	Procedure Codes Included in Exams	7
Table 3.	2013 Eye Care Provider Categories Taxonomy Codes	8
Table 4.	Medical Diagnosis Categories and Subgroups.....	10
Table 5.	VEHSS State and Territory Abbreviations.....	13
Table 7.	Exam rate by Age Group, 2016.....	15
Table 8.	Exam rate by Sex, 2016.....	16
Table 9.	Exam rate by State, 2016	17
Table 10.	Treated Prevalence of Medical Diagnoses by Category and Subgroup, 2016.....	18
Table 11.	Medical Diagnosis Categories by Age Group, 2016	21
Table 12.	Medical Diagnosis Categories by Sex, 2016	22
Table 13.	Medical Diagnosis Categories by State, 2016, Age related macular degeneration	23
Table 14.	Medical Diagnosis Categories by State, 2016, Blindness and low vision	24
Table 15.	Medical Diagnosis Categories by State, 2016, Cancer and neoplasms of the eye diseases	25
Table 16.	Medical Diagnosis Categories by State, 2016, Cataracts	26
Table 17.	Medical Diagnosis Categories by State, 2016, Cornea disorders	27
Table 18.	Medical Diagnosis Categories by State, 2016, Diabetic eye diseases	28
Table 19.	Medical Diagnosis Categories by State, 2016, Disorders of optic nerve and visual pathways	29
Table 20.	Medical Diagnosis Categories by State, 2016, Refraction and accommodation	30
Table 21.	Medical Diagnosis Categories by State, 2016, Glaucoma	31
Table 22.	Medical Diagnosis Categories by State, 2016, Infectious and inflammatory diseases	32
Table 23.	Medical Diagnosis Categories by State, 2016, Injury, burns and surgical complications of the eye	33
Table 24.	Medical Diagnosis Categories by State, 2016, Orbital and external disease diseases	34
Table 25.	Medical Diagnosis Categories by State, 2016, Other retinal disorders	35

Table 26. Medical Diagnosis Categories by State, 2016, **Other eye disorders**.....36

Table 27. Medical Diagnosis Categories by State, 2016, **Other visual disturbances**.....37

Table 28. Medical Diagnosis Categories by State, 2016, **Retinal detachment and defects**.....38

Table 29. Medical Diagnosis Categories by State, 2016, **Strabismus and amblyopia**39

Dataset Description

VSP Global is the nation's largest vision insurance provider, operating as a nonprofit corporation for 60 years. Vision insurance is a specialized supplemental insurance provided through employers, commercial health plans, Medicare/Medicaid supplement plans, the federal employees health benefits program (FEHB), tribes, or purchased individually to provide routine vision care coverage. Generally, VSP data includes optometric exams and procedures, diagnoses (refractive errors, eye disease, systemic disease, acute issues), vision correction utilization, prescriptions and materials dispensed, costs, provider information, and patient demographics.

VSP does not report their patient volume, but report that more than one in four Americans have VSP coverage. VSP processes claims in every state, but market penetration varies by state. VSP's national network contains about 33,000 eye care professionals. Approximately 85% are OD's (optometrist), and 15% are MD's (ophthalmologist).

VSP claims contain the age and sex of patients, but do not include race/ethnicity. Medical diagnosis coverage in VSP claims are limited. Vision insurance claims typically include diagnosis codes for refractive error, but medical diagnoses are generally not required for payment of routine vision services, thus their inclusion in claims by the billing practice is optional. This is especially true for non-refraction related codes. Diagnosis information in VSP claims cannot be considered as disease prevalence estimates, but could be considered an indicator of vision care services.

Analysis Overview

For the VEHS project, VSP analyzed their 2016 claims databases to estimate the annual prevalence rate of treated diagnoses and the rate of clinical procedures. VSP analyzed the claims data and provided NORC with de-identified summary reports of frequencies and rates, summarized by state and by age group, race/ethnicity, and sex.

NORC further analyzed the summary data files, mapping outcomes to VEHS-defined categories, calculating confidence intervals, cleaning data. Results were further suppressed if the numerator was <3 and the denominator was less than 30, or the numerator was ≥ 3 and the denominator was ≤ 30 .

NORC found that about 8% of VSP patients who had no claims filed during the year did not have a state of residence identified. State of residence for these patients was imputed based on the state-distribution of beneficiaries with a state location on file. VSP stated that they did not believe that there were any systematic reasons why the inclusion of beneficiary's address information would vary by state, and thus

this adjustment would be unlikely to bias results. In addition, this adjustment is only relevant to state-specific rates. National rates are not affected.

A detailed description of the analytical steps is described in the report “VEHSS Claims & Registry Data Analysis Plan.”

Data Indicators and Case Definitions

VSP estimates include data indicators representing two topics of the overall VEHSS project; ‘Service Utilization’ and ‘Medical Diagnoses.’

Service Utilization-Eye Exams

Service Utilization measured in VSP claims is the proportion of patients who underwent an eye exam per year of observation. The rate of exams represents the proportion of patients who have at least one eye exam during the year of observation, and is a single number representing the average for each patient group. The Eye Exam indicators analyzed in VSP claims data are listed in Table 1.

Table 1. Service Utilization Topic Indicators

Category	Subgroup
Eye exams	By provider type
	By ophthalmologists and other physicians
	By optometrists and opticians

Eye exams were identified in claims based on the presence of Healthcare Common Procedure Coding System (HCPCS) Codes, shown in **Table 2**. Four procedure codes specifically denote an eye exam (92002, 92004, 92012, 92014). All instances of these procedures were counted as an eye exam.

Other Evaluation & Management (E & M) codes (99***) are not specific to eye exams, but nonetheless are frequently billed for eye exams. In this case, we included all E & M codes since by definition all claims billed to VSP are for eye care services. We identified eye care providers in VSP based on the provider types (also known as taxonomy), of ophthalmologist, optometrist or optician, or a general physician who coded for an ophthalmic procedure as indicated in **Table 3**.

Table 2. Procedure Codes Included in Exams

CPT/HCPCS Code	Code Description
Eye Exam Codes, Always Included	
92002	Eye exam new patient
92004	Eye exam new patient
92012	Eye exam established patient
92014	Eye exam established patient
General Exam Codes	
99201	Office/outpatient visit new
99202	Office/outpatient visit new
99203	Office/outpatient visit new
99204	Office/outpatient visit new
99205	Office/outpatient visit new
99212	Office/outpatient visit established
99213	Office/outpatient visit established
99214	Office/outpatient visit established
99215	Office/outpatient visit established
99241	Office consultation
99242	Office consultation
99243	Office consultation
99244	Office consultation
99245	Office consultation
99341	Home visit new patient
99342	Home visit new patient
99343	Home visit new patient
99344	Home visit new patient
99345	Home visit new patient
99347	Home visit est patient
99348	Home visit est patient
99349	Home visit est patient
99350	Home visit est patient

Table 3. 2013 Eye Care Provider Categories Taxonomy Codes

VEHSS Provider Type Category	Specialty Code	Medicare Provider Type	Provider Taxonomy Code	Provider Taxonomy Description
By ophthalmologists and other physicians				
	2	Physician/ General Surgery	207WX0200X	Allopathic & Osteopathic Physicians/Ophthalmic Plastic and Reconstructive Surgery
	18	Physician/ Ophthalmology	207W00000X	Allopathic & Osteopathic Physicians/Ophthalmology
By optometrists and opticians				
	41	Optometry	152W00000X	Eye and Vision Service Providers/Optometrist
			152WC0802X	Eye and Vision Service Providers/Optometrist, Corneal and Contact Management
			152WL0500X	Eye and Vision Service Providers/Optometrist, Low Vision Rehabilitation
			152WX0102X	Eye and Vision Service Providers/Optometrist, Occupational Vision
			152WP0200X	Eye and Vision Service Providers/Optometrist, Pediatrics
			152WS0006X	Eye and Vision Service Providers/Optometrist, Sports Vision
			152WV0400X	Eye and Vision Service Providers/Optometrist, Vision Therapy
	96[5]	Optician	156FX1800X	Eye & Vision Service Providers/Technician/Technologist, Optician

Medical Diagnoses

Identification of prevalent cases

Individual VSP beneficiaries were assigned to diagnosis categories and subgroups based on the presence of an included ICD10 diagnosis code on any patient claim during the year of observation. Diagnosis codes may be primary or secondary codes. Only one instance of a code is required to assign the patient to a diagnosis category and subgroup.

We used following identification algorithm:

- Any observation of an indicated diagnosis code in any VSP claim by a patient.
- The diagnosis code may be primary or secondary.
- Only one instance of the diagnosis code is necessary to trigger classification to a diagnosis category.
- Patients may be assigned to multiple categories and subcategories.

- Data is analyzed on an annual basis.

The development of this algorithm was based on the practices of the CMS Chronic Conditions Warehouse reporting system, feedback from project partners and experts, as well as the results of a literature review intended to identify normal and best practices for prevalence reporting from administrative data sources. This literature review is included in Appendix A of the “Claims & Registry Analysis Plan” report.

Diagnosis Categories and Subgroup Indicators

Medical Diagnoses are reported based on the VEHSS-defined medical diagnosis categorization structure. As reported in detail in the *VEHSS Medical Diagnosis Categorization Report*, we identified all eye and vision related ICD9 and ICD10 diagnosis codes, and organized them into a 2-level categorization structure which has 17 Categories and 79 Subgroups (**Table 4**).

For example, assume a beneficiary has 3 eye and vision related ICD9 codes in the year of observation:

- 362.3 Retinal vascular occlusion, unspecified
- 362.9 Retinal nerve fiber bundle defects
- 362.11 Hypertensive retinopathy

362.3 and 362.9 are both assigned to subgroup ‘Retina vascular disease, Occlusive (arterial, venous)’.

362.11 is assigned to a different subgroup; ‘Retina vascular disease, Non-Occlusive’. Both of these subgroups are within one category (Other Retinal Disorders).

This beneficiary is counted as one prevalent case for subgroup ‘Retina vascular disease, Occlusive (arterial, venous)’, and one case for subgroup ‘Retina vascular disease, Non-Occlusive’. This beneficiary would count as one case in the category ‘Other Retinal Disorders’. Thus, individual patients can appear in multiple subgroups, but cannot be double counted within a specific category or subgroup. Patients may also appear in multiple separate categories.

Denominator used to Calculate Prevalence Rates

The patient population (denominator) includes those who were enrolled in VSP at any time during the calendar year. VSP enrollment data is based primarily on employer-provided enrollment data, and may not accurately reflect the actual number of patients enrolled in VSP over the course of the year. In addition, some patient enrollment data is incomplete, with 8% of enrollees not having a state of residence on file.

Table 4. Medical Diagnosis Categories and Subgroups

Category	Subgroup
Retinal Detachment and Defects	
Diabetic Eye Diseases	
	Early/mild diabetic retinopathy
	Moderate /severe non-proliferative diabetic retinopathy
	Proliferative diabetic retinopathy
	Diabetic macular edema (dme, csme)
	Other/unspecified diabetes related eye conditions
Age related macular degeneration (AMD)	
	AMD, unspecified
	Early AMD
	Dry-form AMD
	GA, modifier for Dry-form
	Wet-form AMD
	CNV, modifier for Wet-form
Other Retinal Disorders	
	Retina vascular disease, occlusive (arterial, venous)
	Central retinal vein occlusion
	Branch retinal vein occlusion
	Central retinal arterial occlusion
	Branch retinal artery occlusion
	Retina vascular disease, non-occlusive
	Macular edema (if not diabetic)
	Hereditary chorioretinal dystrophy
	Myopic degeneration
	Other/unspecified retinal disorders
Glaucoma	
	Open-angle glaucoma
	Primary open-angle glaucoma
	Low-tension glaucoma
	Glaucoma suspect
	Primary angle-closure glaucoma
	Narrow-angle glaucoma
	Congenital glaucoma
	Neovascular glaucoma
	Other/unspecified glaucoma
Cataracts	
	Senile cataract
	Non-congenital cataract
	Congenital cataract
	Posterior capsular opacity
	Pseudophakia
	Aphakia and other disorders of lens
Disorders of Refraction and accommodation	
	Myopia
	Hypermetropia
	Astigmatism
	Presbyopia
	Other disorder of refraction and accommodation
Blindness and low vision	
	Unqualified visual loss, both eyes
	Unqualified vision loss in one eye, or unspecified visual loss
	Vision impairment one eye
	Moderate or severe vision impairment better eye; profound vision impairment of lesser eye
	Moderate or severe vision impairment both eyes
	Profound vision impairment, bilateral, or legal blindness
Strabismus and amblyopia	

	Strabismus
	Amblyopia
Injury, burns and surgical complications of the eye	
	Injury
	Burn
	Surgical complication
Disorders of optic nerve and visual pathways	
	Optic nerve disorders
	Visual pathway disorders
Other visual disturbances	
	Visual field defect
	Color blindness
	Night blindness
	Other/unspecified visual disturbances
Infectious and Inflammatory diseases	
	Infectious diseases
	Keratitis
	Conjunctivitis
	Eyelid infection and inflammation
	Other inflammatory conditions
	Lacrimal system and orbit inflammation
	Endophthalmitis
Orbital and external disease	
	Congenital anomalies
	Other/unspecified orbital or external disease
	Lacrimal diseases
	Eyelid disorders
	Dry eye syndrome
	Disorders of the globe
Cancer and neoplasms of the eye	
	Malignant neoplasm of the eye
	Benign neoplasm of the eye
Cornea disorders	
	Keratoconus
	Endothelial dystrophy (inc Fuchs)
	Other corneal disorders
Other eye disorders	

Denominators used to Calculate Prevalence Rates

VSP requested that no patient counts or denominator information be publicly released. The patient denominators used to calculate rates include those patients who were enrolled in VSP at any time during the calendar year. VSP enrollment data is based primarily on employer-provided enrollment data, and may not accurately reflect the actual number of patients enrolled in VSP over the course of the year. In addition, some patient enrollment data is incomplete. In particular, state of residence is not always reported, with 8% of enrollees not having a state of residence on file. For the purposes of this analysis, we distributed patients with missing state in the denominators to a state based on the distribution of patients with known state location. We will continue to investigate possible approaches to improve state location coverage, and mitigate any potential bias of this limitation.

Stratification Factors

We report the summary outcomes of each data indicator overall, and by the stratification factors age group, sex, race/ethnicity, and state. This report includes outcomes estimated for single levels of stratification. The VEHSS data visualization application allows users to estimate prevalence rates specific to multi-variable stratification categories. For example, a user could query outcomes for 85+ year old Hispanic females in Florida.

Age Groups

This report and the public dataset includes the VEHSS-defined major age groups (0-17, 18-39, 40-64, 65-84, 85+). Restricted data used for statistical integration will utilize the expanded WHO age groups (0-1, 1-4, 5-9, 10-14, etc.).

Sex Categories

Beneficiaries are classified as Male and Female. Only a few beneficiaries had missing sex, and all were suppressed.

Race/ethnicity Categories

Race data is not routinely included in VSP enrollment data nor on VSP claims, and therefore race/ethnicity is not included in these analyses.

States and Territories

VSP includes data for every state, but this data is incomplete. An important consideration for VSP data is the source of state data. VSP cannot link enrollment (denominator) files to individual claims (the source for numerators). Enrollment data is primarily provided by employers reporting employee benefit listings. Approximately 8% of enrollees do not have a state of residence listed.

Exams and diagnoses (the source for numerators) are based on the provider's state. This coverage is universal as it is required for processing of the claims.

Table 5. VEHSS State and Territory Abbreviations

AK	Alaska	LA	Louisiana	OK	Oklahoma
AL	Alabama	MA	Massachusetts	OR	Oregon
AR	Arkansas	MD	Maryland	PA	Pennsylvania
AS	American Samoa	ME	Maine	PR	Puerto Rico
AZ	Arizona	MH	Marshall Islands	PW	Palau
CA	California	MI	Michigan	RI	Rhode Island
CO	Colorado	MN	Minnesota	SC	South Carolina
CT	Connecticut	MO	Missouri	SD	South Dakota
DC	District of Columbia	MP	Northern Mariana Islands	TN	Tennessee
DE	Delaware	MS	Mississippi	TX	Texas
FL	Florida	MT	Montana	UT	Utah
GA	Georgia	NC	North Carolina	VA	Virginia
GU	Guam	ND	North Dakota	VI	U.S. Virgin Islands
HI	Hawaii	NE	Nebraska	VT	Vermont
IA	Iowa	NH	New Hampshire	WA	Washington
ID	Idaho	NJ	New Jersey	WI	Wisconsin
IL	Illinois	NM	New Mexico	WV	West Virginia
IN	Indiana	NV	Nevada	WY	Wyoming
KS	Kansas	NY	New York	XX	Missing State
KY	Kentucky	OH	Ohio	US	National

Suppression and Data Release Restrictions

To ensure patient privacy and protections, the VEHSS project implements additional data suppression on all publicly released data. All data incorporated into the VEHSS system is de-identified summary data. VEHSS does not report any patient-level data. To ensure maximum levels of data privacy and security, NORC worked with its internal data governance board, external experts and data providers and the CMS VRDC to design suppression algorithms to balance high level patient protection while maintaining the utility of publicly released data. Currently, VEHSS employs the following data suppression algorithm for VSP claims data:

1. Suppress rates and denominator when denominator < 11
2. Suppress rates if numerator < 3 and denominator < 30
3. Report rates to 4 digits, formatting as percentage with two decimal points.
4. For public data on the VEHSS Data Visualization Application and CDC Open Data Platform, denominators are rounded to the nearest 100.

VSP Global has requested that all patient counts and denominators be suppressed in any publicly released data product.

Potential Limitations

This analysis is subject to a number of potential limitations:

- VSP data is a convenience sample and is not nationally representative, although VSP states that about 1 in 4 Americans have VSP coverage and VSP claims represent the majority of the overall US vision insurance market.
- VSP claims are intended for billing purposes only. Diagnosis information included on claims is intended to justify payment. VSP provides payment primarily for routine eye exams and refraction correction, and therefore medical diagnoses are not generally required for payment. Diagnosis data on claims may therefore suffer from bias or limited detail. For example, even if a patient has an eye disease, this diagnosis may not be present on a claim filed for routine eye exams or glasses. Medical diagnoses in VSP claims are likely to underrepresent the true burden of disease, and cannot alone be considered prevalence estimates.
- VSP primarily covers routine vision and optometry care, and will not include eye care services that are billed to medical insurers, nor any out-of-pocket or unbilled services.
- VSP enrollment data is limited and is based primarily on employer provide enrollment rolls. This data is not updated continuously, and may differ from actual numbers of patients.
- Approximately 8% of patients in enrollment data do not have a state of residence, and are therefore listed as missing. However, all claims are assigned to a state using the provider location, which is always known. VSP cannot directly link patient claims to enrollment data. This could potentially inflate calculated rates for individual states because the denominator for that state would not include residents who did not have state locations included in their enrollment data. For the purposes of this analysis, we allocated the denominator count with missing state information to states using the distribution of known state locations. However, this may potentially bias results. In addition, the use of provider location in the numerator and, in some cases patient location from enrollment data in the denominator could also skew results. On the basis of internal analysis, VSP states that the potential impact of this bias is minimal.

Service Utilization Indicators (Number of patients receiving service per 100 patients)

Table 7. Exam rate by Age Group, 2016

Age Group	Any Provider	Physicians	Optometry
0-17 years	50.13	2.52	47.61
	(50.09 - 50.16)	(2.51 - 2.53)	(47.57 - 47.64)
18-39 years	64.45	2.31	62.14
	(64.42 - 64.48)	(2.3 - 2.32)	(62.11 - 62.17)
40-64 years	68.60	4.35	64.25
	(68.58 - 68.63)	(4.34 - 4.36)	(64.23 - 64.28)
65-84 years	57.50	8.47	49.04
	(57.45 - 57.56)	(8.43 - 8.5)	(48.98 - 49.1)
85+ years	32.49	8.03	24.46
	(32.29 - 32.69)	(7.91 - 8.15)	(24.28 - 24.65)
All Ages	62.07	3.66	58.41
	(62.06 - 62.09)	(3.65 - 3.67)	(58.4 - 58.43)

Table 8. Exam rate by Sex, 2016

Sex	Any Provider	Physicians	Optometry
Female	71.08	4.23	66.86
	(71.06 - 71.1)	(4.22 - 4.24)	(66.84 - 66.88)
Male	53.97	3.14	50.83
	(53.95 - 54)	(3.14 - 3.15)	(50.8 - 50.85)
All	62.07	3.66	58.41
	(62.06 - 62.09)	(3.65 - 3.67)	(58.4 - 58.43)

Table 9. Exam rate by State, 2016

State	Exam Rate	(95% CI)	State	Exam Rate	(95% CI)
AK	65.8	(65.55 - 66.05)	MT	73.8	(73.54 - 74.05)
AL	66.99	(66.85 - 67.14)	NC	66.86	(66.76 - 66.96)
AR	63.76	(63.59 - 63.93)	ND	93.63	(93.43 - 93.83)
AS	NA	NA	NE	77.98	(77.81 - 78.15)
AZ	50.29	(50.19 - 50.4)	NH	54.9	(54.66 - 55.14)
CA	54.61	(54.58 - 54.64)	NJ	62.18	(62.08 - 62.29)
CO	68.92	(68.82 - 69.02)	NM	29.64	(29.52 - 29.77)
CT	55.68	(55.51 - 55.86)	NV	58.43	(58.27 - 58.59)
DC	48.48	(48.05 - 48.91)	NY	47.63	(47.53 - 47.73)
DE	68.65	(68.34 - 68.95)	OH	46.93	(46.86 - 46.99)
FL	50.82	(50.74 - 50.9)	OK	93.58	(93.51 - 93.65)
GA	58.01	(57.89 - 58.12)	OR	74.42	(74.31 - 74.54)
GU	1.59	(0.96 - 2.47)	PA	58.74	(58.62 - 58.85)
HI	40.37	(40.18 - 40.55)	PR	46.64	(45.3 - 47.98)
IA	72.91	(72.74 - 73.07)	RI	68.63	(68.36 - 68.9)
ID	85.94	(85.8 - 86.09)	SC	54.1	(53.95 - 54.26)
IL	58.38	(58.29 - 58.46)	SD	88.27	(88.08 - 88.45)
IN	66.52	(66.43 - 66.62)	TN	58.08	(57.95 - 58.21)
KS	85.83	(85.71 - 85.95)	TX	58.93	(58.87 - 58.99)
KY	34.13	(34.01 - 34.25)	UT	51.76	(51.57 - 51.94)
LA	42.29	(42.16 - 42.43)	VA	57.55	(57.45 - 57.65)
MA	51.12	(50.98 - 51.25)	VI	NA	NA
MD	48.97	(48.84 - 49.11)	VT	70.53	(70.22 - 70.83)
ME	65.65	(65.35 - 65.96)	WA	68.29	(68.2 - 68.39)
MI	49.91	(49.84 - 49.98)	WI	59.79	(59.63 - 59.95)
MN	60.96	(60.82 - 61.11)	WV	49.47	(49.28 - 49.65)
MO	60.95	(60.84 - 61.06)	WY	97.93	(97.84 - 98.02)
MP	NA	NA	XX	NA	NA
MS	100	(0 - 100)	US	62.07	(62.06 - 62.09)

Medical Diagnosis Indicators (Number of patients with diagnosis per 100 patients)

Table 10. Treated Prevalence of Medical Diagnoses by Category and Subgroup, 2016

Category	Subgroup	Prevalence (95% CI)	
Age related macular degeneration		0.14	(0.14 - 0.14)
	Dry-form	0.05	(0.05 - 0.05)
	Early	0.07	(0.07 - 0.07)
	Unspecified	0.01	(0.01 - 0.01)
	Wet-form	0.01	(0.01 - 0.01)
Blindness and low vision		0.01	(0.01 - 0.01)
	Moderate bilateral impairment	0.00	(0.00 - 0.00)
	Moderate imp. better eye, profound imp. lesser eye	0.00	(0.00 - 0.00)
	Profound bilateral imp., legal blindness	0.00	(0.00 - 0.00)
	Unqualified in one eye, or unspecified	0.00	(0.00 - 0.00)
	Unqualified, both eyes	0.00	(0.00 - 0.00)
	Vision impairment one eye	0.01	(0.01 - 0.01)
Cancer and neoplasms of the eye diseases		0.13	(0.13 - 0.14)
	Benign neoplasm	0.13	(0.13 - 0.13)
	Malignant neoplasm	0.00	(0.00 - 0.00)
Cataracts		1.15	(1.15 - 1.15)
	Aphakia and disorders of lens	0.01	(0.01 - 0.01)
	Congenital Cataract	0.02	(0.02 - 0.02)
	Non-congenital cataract	0.01	(0.01 - 0.01)
	Posterior capsular opacity	0.03	(0.03 - 0.03)
	Pseudophakia	0.14	(0.14 - 0.14)
	Senile cataract	0.94	(0.94 - 0.94)
Cornea disorders		0.36	(0.35 - 0.36)
	Endothelial dystrophy (Fuchs)	0.02	(0.02 - 0.02)
	Keratoconus	0.15	(0.15 - 0.15)
	Other corneal disorders	0.19	(0.19 - 0.19)
Diabetic eye diseases		0.11	(0.11 - 0.11)
	Diabetic macular edema	0.02	(0.02 - 0.02)
	Early/mild	0.07	(0.07 - 0.07)
	Moderate/Severe non-proliferative	0.01	(0.01 - 0.01)
	Other diabetes related	0.02	(0.02 - 0.02)

	Proliferative	0.00	(0.00 - 0.00)
Disorders of optic nerve and visual pathways		0.07	(0.07 - 0.07)
	Optic nerve disorders	0.07	(0.07 - 0.07)
	Visual pathway disorders	0.00	(0.00 - 0.00)
Refraction and accommodation		78.17	(78.16 - 78.19)
	Astigmatism	19.39	(19.38 - 19.41)
	Hypermetropia	11.00	(10.99 - 11.01)
	Myopia	29.93	(29.92 - 29.95)
	Other	0.19	(0.19 - 0.19)
	Presbyopia	17.68	(17.67 - 17.69)
Glaucoma		0.59	(0.59 - 0.59)
	Congenital	0.00	(0.00 - 0.00)
	Glaucoma suspect	0.46	(0.46 - 0.46)
	Low-tension	0.01	(0.01 - 0.01)
	Narrow-angle	0.04	(0.04 - 0.04)
	Neovascular	0.00	(0.00 - 0.00)
	Open-angle	0.01	(0.01 - 0.01)
	Other/unspecified glaucoma	0.00	(0.00 - 0.00)
	Primary angle-closure	0.00	(0.00 - 0.00)
	Primary open-angle	0.06	(0.06 - 0.06)
	**Severe stage modifier of other diagnoses	#REF!	#REF!
Infectious and inflammatory diseases		0.97	(0.96 - 0.97)
	Conjunctivitis	0.53	(0.53 - 0.54)
	Endophthalmitis	0.00	(0.00 - 0.00)
	Eyelid disorders	0.21	(0.21 - 0.21)
	Infectious diseases	0.01	(0.01 - 0.01)
	Keratitis	0.19	(0.19 - 0.20)
	Lacrimal and orbit inflammation	0.00	(0.00 - 0.00)
	Other/unspecified infectious and inflammatory diseases	0.02	(0.02 - 0.02)
Injury, burns and surgical complications of the eye		0.04	(0.04 - 0.04)
	Burn	0.00	(0.00 - 0.00)
	Injury	0.03	(0.03 - 0.04)
	Surgical complication	0.01	(0.01 - 0.01)
Orbital and external disease diseases		0.57	(0.56 - 0.57)
	Congenital anomalies	0.02	(0.02 - 0.02)
	Disorders of the globe	0.00	(0.00 - 0.00)
	Dry eye syndrome	0.44	(0.43 - 0.44)

	Eyelid disorders	0.10	(0.10 - 0.10)
	Lacrimal diseases	0.01	(0.01 - 0.01)
	Other/unspecified orbital and external disease diseases	0.00	(0.00 - 0.00)
Other eye disorders		0.35	(0.35 - 0.35)
Other retinal disorders		0.35	(0.34 - 0.35)
	Branch retinal artery occlusion	0.00	(0.00 - 0.00)
	Branch retinal vein occlusion	0.00	(0.00 - 0.00)
	Central retinal arterial occlusion	0.00	(0.00 - 0.00)
	Central retinal vein occlusion	0.00	(0.00 - 0.00)
	Hereditary chorioretinal dystrophy	0.02	(0.02 - 0.02)
	Macular edema (not diabetic)	0.00	(0.00 - 0.00)
	Myopic degeneration	0.03	(0.03 - 0.03)
	Non-Occlusive	0.05	(0.05 - 0.05)
	Other/unspecified other retinal diso	0.24	(0.24 - 0.24)
	Retina vascular disease, Occlusive	0.00	(0.00 - 0.00)
Other visual disturbances		0.20	(0.20 - 0.20)
	Color blindness	0.01	(0.01 - 0.01)
	Night blindness	0.14	(0.14 - 0.14)
	Other/unspecified visual disturbances	0.02	(0.02 - 0.03)
	Visual field defect	0.03	(0.03 - 0.03)
Retinal detachment and defects		0.05	(0.05 - 0.05)
Strabismus and amblyopia		0.39	(0.39 - 0.39)
	Amblyopia	0.18	(0.18 - 0.18)
	Strabismus	0.21	(0.21 - 0.21)

Table 11. Medical Diagnosis Categories by Age Group, 2016

	0-17 years		18-39 years		40-64 years		65-84 years		85+ years		All Ages	
Age related macular degeneration	0	(0.00 - 0.00)	0.02	(0.02 - 0.02)	0.17	(0.17 - 0.18)	0.75	(0.74 - 0.76)	1.66	(1.60 - 1.71)	0.14	(0.14 - 0.14)
Blindness and low vision	0.01	(0.00 - 0.01)	0.01	(0.01 - 0.01)	0.02	(0.02 - 0.02)	0.03	(0.03 - 0.04)	0.06	(0.05 - 0.07)	0.01	(0.01 - 0.01)
Cancer and neoplasms of the eye	0.04	(0.03 - 0.04)	0.11	(0.10 - 0.11)	0.2	(0.20 - 0.20)	0.19	(0.19 - 0.20)	0.09	(0.07 - 0.10)	0.13	(0.13 - 0.14)
Cataracts	0.03	(0.03 - 0.03)	0.08	(0.07 - 0.08)	1.57	(1.56 - 1.58)	6.2	(6.17 - 6.22)	3.7	(3.62 - 3.78)	1.15	(1.15 - 1.15)
Cornea disorders	0.04	(0.04 - 0.04)	0.36	(0.36 - 0.37)	0.51	(0.50 - 0.51)	0.48	(0.47 - 0.48)	0.32	(0.29 - 0.34)	0.36	(0.35 - 0.36)
Diabetic eye diseases	0	(0.00 - 0.00)	0.04	(0.04 - 0.04)	0.19	(0.19 - 0.20)	0.29	(0.28 - 0.29)	0.17	(0.15 - 0.19)	0.11	(0.11 - 0.11)
Disorders of optic nerve and vis	0.04	(0.04 - 0.04)	0.07	(0.07 - 0.07)	0.08	(0.08 - 0.08)	0.09	(0.09 - 0.10)	0.09	(0.07 - 0.10)	0.07	(0.07 - 0.07)
Refraction and accommodation	55.1	(55.07 - 55.14)	75.39	(75.37 - 75.42)	93.88	(93.86 - 93.89)	78.36	(78.31 - 78.41)	40.93	(40.72 - 41.14)	78.17	(78.16 - 78.19)
Glaucoma	0.14	(0.14 - 0.14)	0.31	(0.31 - 0.31)	0.9	(0.89 - 0.90)	1.35	(1.34 - 1.37)	1.17	(1.13 - 1.22)	0.59	(0.59 - 0.59)
Infectious and inflammatory disease	0.62	(0.61 - 0.62)	0.91	(0.91 - 0.92)	1.2	(1.19 - 1.20)	1.03	(1.01 - 1.04)	0.83	(0.79 - 0.87)	0.97	(0.96 - 0.97)
Injury, burns and surgical complications	0.03	(0.03 - 0.03)	0.04	(0.04 - 0.04)	0.05	(0.05 - 0.05)	0.05	(0.05 - 0.06)	0.05	(0.04 - 0.06)	0.04	(0.04 - 0.04)
Orbital and external disease	0.13	(0.12 - 0.13)	0.41	(0.41 - 0.41)	0.81	(0.81 - 0.82)	1.14	(1.13 - 1.15)	1.01	(0.96 - 1.05)	0.57	(0.56 - 0.57)
Other eye disorders	0.07	(0.07 - 0.07)	0.16	(0.15 - 0.16)	0.5	(0.50 - 0.50)	1.13	(1.12 - 1.15)	0.69	(0.66 - 0.73)	0.35	(0.35 - 0.35)
Other retinal disorders	0.07	(0.06 - 0.07)	0.23	(0.23 - 0.23)	0.49	(0.48 - 0.49)	0.84	(0.82 - 0.85)	0.71	(0.68 - 0.75)	0.35	(0.34 - 0.35)
Other visual disturbances	0.25	(0.25 - 0.25)	0.18	(0.18 - 0.19)	0.18	(0.18 - 0.18)	0.21	(0.21 - 0.22)	0.45	(0.42 - 0.48)	0.2	(0.20 - 0.20)
Retinal detachment and defects	0.01	(0.01 - 0.01)	0.05	(0.05 - 0.05)	0.07	(0.07 - 0.07)	0.07	(0.07 - 0.08)	0.03	(0.03 - 0.04)	0.05	(0.05 - 0.05)
Strabismus and amblyopia	0.86	(0.85 - 0.86)	0.31	(0.31 - 0.32)	0.22	(0.22 - 0.22)	0.21	(0.20 - 0.21)	0.15	(0.13 - 0.16)	0.39	(0.39 - 0.39)

Table 12. Medical Diagnosis Categories by Sex, 2016

	Female		Male		All	
Age related macular degeneration	0.16	(0.16 - 0.16)	0.12	(0.12 - 0.13)	0.14	(0.14 - 0.14)
Blindness and low vision	0.01	(0.01 - 0.01)	0.01	(0.01 - 0.01)	0.01	(0.01 - 0.01)
Cancer and neoplasms of the eye	0.15	(0.15 - 0.15)	0.12	(0.12 - 0.12)	0.13	(0.13 - 0.14)
Cataracts	1.26	(1.25 - 1.26)	1.04	(1.03 - 1.04)	1.15	(1.15 - 1.15)
Cornea disorders	0.33	(0.33 - 0.34)	0.38	(0.38 - 0.39)	0.36	(0.35 - 0.36)
Diabetic eye diseases	0.10	(0.10 - 0.10)	0.12	(0.12 - 0.12)	0.11	(0.11 - 0.11)
Disorders of optic nerve and vis	0.08	(0.08 - 0.08)	0.06	(0.06 - 0.06)	0.07	(0.07 - 0.07)
Refraction and accommodation	89.12	(89.11 - 89.14)	68.23	(68.21 - 68.25)	78.17	(78.16 - 78.19)
Glaucoma	0.64	(0.64 - 0.64)	0.53	(0.53 - 0.54)	0.59	(0.59 - 0.59)
Infectious and inflammatory disease	1.14	(1.14 - 1.15)	0.79	(0.79 - 0.80)	0.97	(0.96 - 0.97)
Injury, burns and surgical complications	0.04	(0.04 - 0.04)	0.04	(0.04 - 0.05)	0.04	(0.04 - 0.04)
Orbital and external disease	0.76	(0.76 - 0.77)	0.35	(0.35 - 0.36)	0.57	(0.56 - 0.57)
Other eye disorders	0.41	(0.41 - 0.41)	0.29	(0.29 - 0.29)	0.35	(0.35 - 0.35)
Other retinal disorders	0.37	(0.37 - 0.38)	0.32	(0.31 - 0.32)	0.35	(0.34 - 0.35)
Other visual disturbances	0.23	(0.22 - 0.23)	0.17	(0.17 - 0.17)	0.2	(0.20 - 0.20)
Retinal detachment and defects	0.05	(0.05 - 0.05)	0.05	(0.05 - 0.05)	0.05	(0.05 - 0.05)
Strabismus and amblyopia	0.41	(0.41 - 0.41)	0.38	(0.37 - 0.38)	0.39	(0.39 - 0.39)

Table 13. Medical Diagnosis Categories by State, 2016, Age related macular degeneration

State	Prevalence	(95% CI)	State	Prevalence	(95% CI)
AK	0.16	(0.14 - 0.18)	MT	0.51	(0.47 - 0.56)
AL	0.17	(0.15 - 0.18)	NC	0.11	(0.10 - 0.11)
AR	0.05	(0.04 - 0.06)	ND	0.14	(0.11 - 0.17)
AS	NA	NA	NE	0.16	(0.14 - 0.17)
AZ	0.1	(0.09 - 0.10)	NH	0.11	(0.09 - 0.13)
CA	0.15	(0.14 - 0.15)	NJ	0.06	(0.05 - 0.06)
CO	0.19	(0.18 - 0.20)	NM	0.07	(0.06 - 0.08)
CT	0.17	(0.15 - 0.18)	NV	0.17	(0.16 - 0.19)
DC	0.03	(0.02 - 0.05)	NY	0.1	(0.09 - 0.11)
DE	0.16	(0.13 - 0.19)	OH	0.14	(0.14 - 0.15)
FL	0.05	(0.05 - 0.06)	OK	0.18	(0.16 - 0.19)
GA	0.08	(0.07 - 0.09)	OR	0.27	(0.26 - 0.28)
GU	0.08	(0.00 - 0.46)	PA	0.05	(0.04 - 0.05)
HI	0.19	(0.17 - 0.21)	PR	NA	NA
IA	0.22	(0.20 - 0.24)	PW	NA	NA
ID	0.25	(0.23 - 0.27)	RI	0.24	(0.22 - 0.27)
IL	0.1	(0.10 - 0.11)	SC	0.08	(0.07 - 0.09)
IN	0.17	(0.17 - 0.18)	SD	0.18	(0.16 - 0.21)
KS	0.14	(0.13 - 0.16)	TN	0.07	(0.07 - 0.08)
KY	0.05	(0.04 - 0.05)	TX	0.06	(0.06 - 0.06)
LA	0.06	(0.06 - 0.07)	UT	0.1	(0.09 - 0.12)
MA	0.06	(0.06 - 0.07)	VA	0.11	(0.10 - 0.11)
MD	0.05	(0.05 - 0.06)	VI	NA	NA
ME	0.18	(0.16 - 0.21)	VT	0.34	(0.30 - 0.38)
MH	NA	NA	WA	0.2	(0.19 - 0.21)
MI	0.29	(0.28 - 0.30)	WI	0.08	(0.07 - 0.09)
MN	0.1	(0.10 - 0.12)	WV	0.1	(0.09 - 0.11)
MO	0.14	(0.13 - 0.15)	WY	0.4	(0.36 - 0.44)
MP	NA	NA	XX	NA	NA
MS	0.09	(0.08 - 0.11)	US	0.14	(0.14 - 0.14)

Table 14. Medical Diagnosis Categories by State, 2016, Blindness and low vision

State	Prevalence	(95% CI)	State	Prevalence	(95% CI)
AK	0.01	(0.00 - 0.01)	MT	0.02	(0.01 - 0.03)
AL	0.01	(0.00 - 0.01)	NC	0.01	(0.01 - 0.01)
AR	0	(0.00 - 0.01)	ND	0.02	(0.01 - 0.03)
AS	NA	NA	NE	0.01	(0.01 - 0.02)
AZ	0.01	(0.01 - 0.02)	NH	0.01	(0.00 - 0.01)
CA	0.02	(0.02 - 0.02)	NJ	0.01	(0.01 - 0.01)
CO	0.01	(0.01 - 0.01)	NM	0	(0.00 - 0.01)
CT	0.01	(0.00 - 0.01)	NV	0.01	(0.01 - 0.02)
DC	NA	NA	NY	0.01	(0.01 - 0.01)
DE	0.02	(0.01 - 0.03)	OH	0.01	(0.01 - 0.01)
FL	0.01	(0.01 - 0.02)	OK	0.01	(0.01 - 0.02)
GA	0.01	(0.01 - 0.01)	OR	0.01	(0.01 - 0.01)
GU	NA	NA	PA	0.01	(0.01 - 0.02)
HI	0.01	(0.01 - 0.02)	PR	NA	NA
IA	0.01	(0.01 - 0.01)	PW	NA	NA
ID	0.02	(0.01 - 0.02)	RI	0.02	(0.01 - 0.03)
IL	0.01	(0.00 - 0.01)	SC	0.01	(0.01 - 0.01)
IN	0.03	(0.03 - 0.04)	SD	0.02	(0.01 - 0.03)
KS	0.01	(0.00 - 0.01)	TN	0.01	(0.00 - 0.01)
KY	0.01	(0.01 - 0.01)	TX	0.01	(0.01 - 0.01)
LA	0.01	(0.01 - 0.02)	UT	0	(0.00 - 0.01)
MA	0.01	(0.01 - 0.02)	VA	0.01	(0.01 - 0.01)
MD	0.01	(0.01 - 0.01)	VI	NA	NA
ME	0.01	(0.01 - 0.02)	VT	0.02	(0.01 - 0.04)
MH	NA	NA	WA	0.01	(0.01 - 0.02)
MI	0.01	(0.01 - 0.02)	WI	0.01	(0.01 - 0.02)
MN	0.01	(0.01 - 0.01)	WV	0.01	(0.01 - 0.01)
MO	0.01	(0.01 - 0.01)	WY	0.01	(0.00 - 0.02)
MP	NA	NA	XX	NA	NA
MS	0.01	(0.01 - 0.02)	US	0.01	(0.01 - 0.01)

Table 15. Medical Diagnosis Categories by State, 2016, Cancer and neoplasms of the eye diseases

State	Prevalence	(95% CI)	State	Prevalence	(95% CI)
AK	0.27	(0.25 - 0.30)	MT	0.54	(0.50 - 0.58)
AL	0.22	(0.21 - 0.24)	NC	0.22	(0.21 - 0.23)
AR	0.06	(0.05 - 0.07)	ND	0.18	(0.15 - 0.22)
AS	NA	NA	NE	0.22	(0.20 - 0.24)
AZ	0.11	(0.11 - 0.12)	NH	0.19	(0.17 - 0.21)
CA	0.1	(0.10 - 0.10)	NJ	0.07	(0.06 - 0.08)
CO	0.17	(0.16 - 0.18)	NM	0.04	(0.03 - 0.05)
CT	0.27	(0.25 - 0.29)	NV	0.17	(0.16 - 0.18)
DC	0.03	(0.01 - 0.04)	NY	0.08	(0.07 - 0.08)
DE	0.23	(0.20 - 0.27)	OH	0.12	(0.11 - 0.12)
FL	0.06	(0.05 - 0.06)	OK	0.16	(0.15 - 0.17)
GA	0.1	(0.10 - 0.11)	OR	0.23	(0.22 - 0.24)
GU	NA	NA	PA	0.07	(0.06 - 0.08)
HI	0.06	(0.05 - 0.07)	PR	NA	NA
IA	0.2	(0.18 - 0.21)	PW	NA	NA
ID	0.38	(0.35 - 0.41)	RI	0.17	(0.15 - 0.20)
IL	0.09	(0.09 - 0.10)	SC	0.1	(0.09 - 0.11)
IN	0.15	(0.15 - 0.16)	SD	0.25	(0.22 - 0.28)
KS	0.22	(0.20 - 0.24)	TN	0.05	(0.05 - 0.06)
KY	0.06	(0.05 - 0.07)	TX	0.09	(0.09 - 0.10)
LA	0.04	(0.03 - 0.04)	UT	0.09	(0.08 - 0.10)
MA	0.09	(0.08 - 0.10)	VA	0.15	(0.14 - 0.16)
MD	0.04	(0.03 - 0.04)	VI	NA	NA
ME	0.17	(0.14 - 0.19)	VT	0.9	(0.84 - 0.96)
MH	NA	NA	WA	0.23	(0.22 - 0.24)
MI	0.14	(0.14 - 0.15)	WI	0.09	(0.08 - 0.10)
MN	0.22	(0.21 - 0.24)	WV	0.15	(0.13 - 0.16)
MO	0.15	(0.14 - 0.16)	WY	0.79	(0.74 - 0.85)
MP	NA	NA	XX	NA	NA
MS	0.11	(0.10 - 0.12)	US	0.13	(0.13 - 0.14)

Table 16. Medical Diagnosis Categories by State, 2016, Cataracts

State	Prevalence	(95% CI)	State	Prevalence	(95% CI)
AK	1.1	(1.05 - 1.16)	MT	4.02	(3.91 - 4.14)
AL	1.52	(1.49 - 1.56)	NC	0.97	(0.95 - 0.99)
AR	1.01	(0.98 - 1.05)	ND	2.05	(1.94 - 2.17)
AS	NA	NA	NE	1.85	(1.80 - 1.91)
AZ	0.99	(0.96 - 1.01)	NH	0.76	(0.72 - 0.80)
CA	0.88	(0.88 - 0.89)	NJ	0.39	(0.38 - 0.41)
CO	1.14	(1.12 - 1.17)	NM	0.64	(0.62 - 0.67)
CT	0.95	(0.92 - 0.98)	NV	1.11	(1.08 - 1.14)
DC	0.26	(0.22 - 0.31)	NY	0.62	(0.61 - 0.64)
DE	1.96	(1.87 - 2.05)	OH	1	(0.99 - 1.02)
FL	0.6	(0.59 - 0.61)	OK	1.92	(1.88 - 1.96)
GA	1.14	(1.11 - 1.16)	OR	2.36	(2.32 - 2.40)
GU	0.08	(0.00 - 0.46)	PA	0.51	(0.49 - 0.52)
HI	1.26	(1.22 - 1.30)	PR	0.09	(0.03 - 0.22)
IA	1.48	(1.44 - 1.53)	PW	NA	NA
ID	2.03	(1.97 - 2.09)	RI	1.43	(1.36 - 1.50)
IL	0.92	(0.91 - 0.94)	SC	1.27	(1.23 - 1.30)
IN	1.9	(1.88 - 1.93)	SD	1.7	(1.62 - 1.77)
KS	1.52	(1.48 - 1.56)	TN	0.74	(0.72 - 0.76)
KY	0.47	(0.45 - 0.49)	TX	0.68	(0.67 - 0.69)
LA	0.72	(0.69 - 0.74)	UT	0.64	(0.62 - 0.68)
MA	0.37	(0.35 - 0.38)	VA	1.09	(1.06 - 1.11)
MD	0.62	(0.60 - 0.65)	VI	NA	NA
ME	1.11	(1.04 - 1.18)	VT	3.45	(3.33 - 3.58)
MH	NA	NA	WA	1.57	(1.55 - 1.60)
MI	2.18	(2.16 - 2.20)	WI	1.08	(1.04 - 1.11)
MN	1.05	(1.02 - 1.08)	WV	1.01	(0.98 - 1.05)
MO	1.33	(1.30 - 1.36)	WY	1.86	(1.77 - 1.94)
MP	NA	NA	XX	NA	NA
MS	1.27	(1.22 - 1.32)	US	1.15	(1.15 - 1.15)

Table 17. Medical Diagnosis Categories by State, 2016, Cornea disorders

State	Prevalence	(95% CI)	State	Prevalence	(95% CI)
AK	0.38	(0.35 - 0.42)	MT	0.57	(0.52 - 0.61)
AL	0.26	(0.24 - 0.28)	NC	0.34	(0.33 - 0.36)
AR	0.16	(0.15 - 0.18)	ND	0.51	(0.45 - 0.57)
AS	NA	NA	NE	0.33	(0.31 - 0.35)
AZ	0.46	(0.44 - 0.47)	NH	0.19	(0.17 - 0.21)
CA	0.35	(0.35 - 0.36)	NJ	0.16	(0.15 - 0.17)
CO	0.75	(0.73 - 0.77)	NM	0.27	(0.25 - 0.28)
CT	0.21	(0.20 - 0.23)	NV	0.68	(0.66 - 0.71)
DC	0.38	(0.32 - 0.43)	NY	0.27	(0.26 - 0.28)
DE	0.22	(0.19 - 0.25)	OH	0.22	(0.21 - 0.23)
FL	0.26	(0.25 - 0.27)	OK	0.56	(0.54 - 0.58)
GA	0.36	(0.34 - 0.37)	OR	0.36	(0.34 - 0.37)
GU	NA	NA	PA	0.13	(0.12 - 0.14)
HI	0.28	(0.26 - 0.30)	PR	0.02	(0.00 - 0.10)
IA	0.25	(0.23 - 0.27)	PW	NA	NA
ID	0.74	(0.71 - 0.78)	RI	0.25	(0.22 - 0.28)
IL	0.27	(0.26 - 0.28)	SC	0.26	(0.25 - 0.28)
IN	0.33	(0.31 - 0.34)	SD	0.47	(0.43 - 0.51)
KS	0.4	(0.37 - 0.42)	TN	0.19	(0.18 - 0.20)
KY	0.09	(0.09 - 0.10)	TX	0.42	(0.41 - 0.43)
LA	0.19	(0.17 - 0.20)	UT	0.49	(0.47 - 0.52)
MA	0.18	(0.16 - 0.19)	VA	0.3	(0.29 - 0.31)
MD	0.19	(0.18 - 0.20)	VI	NA	NA
ME	0.14	(0.11 - 0.16)	VT	0.87	(0.81 - 0.93)
MH	NA	NA	WA	0.39	(0.37 - 0.40)
MI	0.26	(0.25 - 0.26)	WI	0.16	(0.15 - 0.18)
MN	0.42	(0.40 - 0.44)	WV	0.37	(0.35 - 0.39)
MO	0.33	(0.32 - 0.35)	WY	1.32	(1.25 - 1.40)
MP	NA	NA	XX	NA	NA
MS	0.33	(0.30 - 0.35)	US	0.36	(0.35 - 0.36)

Table 18. Medical Diagnosis Categories by State, 2016, Diabetic eye diseases

State	Prevalence	(95% CI)	State	Prevalence	(95% CI)
AK	0.09	(0.07 - 0.10)	MT	0.17	(0.15 - 0.20)
AL	0.19	(0.17 - 0.20)	NC	0.07	(0.07 - 0.08)
AR	0.09	(0.08 - 0.10)	ND	0.2	(0.17 - 0.24)
AS	NA	NA	NE	0.16	(0.15 - 0.18)
AZ	0.1	(0.09 - 0.11)	NH	0.1	(0.09 - 0.12)
CA	0.13	(0.13 - 0.13)	NJ	0.06	(0.05 - 0.06)
CO	0.09	(0.09 - 0.10)	NM	0.05	(0.05 - 0.06)
CT	0.09	(0.08 - 0.10)	NV	0.07	(0.06 - 0.08)
DC	0.02	(0.01 - 0.03)	NY	0.06	(0.05 - 0.06)
DE	0.11	(0.09 - 0.13)	OH	0.11	(0.11 - 0.12)
FL	0.04	(0.04 - 0.04)	OK	0.15	(0.14 - 0.16)
GA	0.07	(0.07 - 0.08)	OR	0.11	(0.10 - 0.12)
GU	0.08	(0.00 - 0.46)	PA	0.04	(0.04 - 0.05)
HI	0.08	(0.07 - 0.09)	PR	0.02	(0.00 - 0.10)
IA	0.18	(0.16 - 0.19)	PW	NA	NA
ID	0.13	(0.11 - 0.14)	RI	0.11	(0.09 - 0.13)
IL	0.05	(0.05 - 0.05)	SC	0.11	(0.10 - 0.12)
IN	0.23	(0.22 - 0.24)	SD	0.14	(0.12 - 0.16)
KS	0.13	(0.12 - 0.14)	TN	0.08	(0.07 - 0.09)
KY	0.04	(0.03 - 0.04)	TX	0.07	(0.07 - 0.08)
LA	0.08	(0.07 - 0.09)	UT	0.09	(0.08 - 0.10)
MA	0.07	(0.07 - 0.08)	VA	0.09	(0.08 - 0.09)
MD	0.04	(0.03 - 0.04)	VI	NA	NA
ME	0.08	(0.06 - 0.10)	VT	0.12	(0.10 - 0.15)
MH	NA	NA	WA	0.11	(0.11 - 0.12)
MI	0.12	(0.12 - 0.12)	WI	0.08	(0.07 - 0.08)
MN	0.07	(0.06 - 0.08)	WV	0.19	(0.17 - 0.20)
MO	0.1	(0.09 - 0.10)	WY	0.14	(0.11 - 0.16)
MP	NA	NA	XX	NA	NA
MS	0.22	(0.20 - 0.24)	US	0.11	(0.11 - 0.11)

Table 19. Medical Diagnosis Categories by State, 2016, Disorders of optic nerve and visual pathways

State	Prevalence	(95% CI)	State	Prevalence	(95% CI)
AK	0.08	(0.07 - 0.10)	MT	0.16	(0.13 - 0.18)
AL	0.11	(0.10 - 0.12)	NC	0.06	(0.06 - 0.07)
AR	0.04	(0.03 - 0.05)	ND	0.13	(0.10 - 0.17)
AS	NA	NA	NE	0.1	(0.08 - 0.11)
AZ	0.04	(0.04 - 0.05)	NH	0.09	(0.07 - 0.10)
CA	0.07	(0.07 - 0.07)	NJ	0.04	(0.04 - 0.04)
CO	0.06	(0.06 - 0.07)	NM	0.02	(0.02 - 0.03)
CT	0.07	(0.06 - 0.08)	NV	0.05	(0.05 - 0.06)
DC	0.01	(0.00 - 0.02)	NY	0.05	(0.05 - 0.06)
DE	0.08	(0.06 - 0.10)	OH	0.06	(0.06 - 0.07)
FL	0.03	(0.03 - 0.04)	OK	0.07	(0.06 - 0.08)
GA	0.05	(0.05 - 0.06)	OR	0.13	(0.12 - 0.14)
GU	NA	NA	PA	0.03	(0.02 - 0.03)
HI	0.07	(0.06 - 0.08)	PR	NA	NA
IA	0.09	(0.08 - 0.11)	PW	NA	NA
ID	0.13	(0.12 - 0.15)	RI	0.11	(0.09 - 0.13)
IL	0.05	(0.04 - 0.05)	SC	0.04	(0.04 - 0.05)
IN	0.15	(0.14 - 0.16)	SD	0.08	(0.07 - 0.10)
KS	0.07	(0.06 - 0.08)	TN	0.04	(0.03 - 0.04)
KY	0.02	(0.02 - 0.03)	TX	0.03	(0.03 - 0.04)
LA	0.06	(0.05 - 0.06)	UT	0.04	(0.03 - 0.05)
MA	0.04	(0.03 - 0.04)	VA	0.07	(0.07 - 0.08)
MD	0.04	(0.03 - 0.04)	VI	NA	NA
ME	0.05	(0.04 - 0.07)	VT	0.26	(0.23 - 0.30)
MH	NA	NA	WA	0.1	(0.09 - 0.10)
MI	0.08	(0.08 - 0.09)	WI	0.05	(0.05 - 0.06)
MN	0.09	(0.08 - 0.10)	WV	0.12	(0.11 - 0.14)
MO	0.08	(0.08 - 0.09)	WY	0.15	(0.12 - 0.17)
MP	NA	NA	XX	NA	NA
MS	0.14	(0.13 - 0.16)	US	0.07	(0.07 - 0.07)

Table 20. Medical Diagnosis Categories by State, 2016, Refraction and accommodation

State	Prevalence	(95% CI)	State	Prevalence	(95% CI)
AK	100	(0.00 - 100.00)	MT	100	(0.00 - 100.00)
AL	70.49	(70.35 - 70.63)	NC	83.74	(83.67 - 83.82)
AR	77.23	(77.08 - 77.37)	ND	100	(0.00 - 100.00)
AS	NA	NA	NE	95.17	(95.09 - 95.26)
AZ	72.88	(72.78 - 72.97)	NH	47.23	(46.99 - 47.46)
CA	71.49	(71.46 - 71.52)	NJ	53	(52.89 - 53.12)
CO	98.72	(98.70 - 98.75)	NM	36.84	(36.71 - 36.98)
CT	60.11	(59.94 - 60.29)	NV	87.77	(87.67 - 87.88)
DC	66.52	(66.11 - 66.93)	NY	48.78	(48.68 - 48.88)
DE	83.3	(83.06 - 83.55)	OH	59.59	(59.53 - 59.66)
FL	54.32	(54.23 - 54.40)	OK	100	(0.00 - 100.00)
GA	62.26	(62.15 - 62.37)	OR	95.79	(95.74 - 95.84)
GU	NA	NA	PA	68.01	(67.90 - 68.11)
HI	57.8	(57.62 - 57.99)	PR	65.74	(64.45 - 67.00)
IA	84.61	(84.47 - 84.74)	PW	NA	NA
ID	100	(0.00 - 100.00)	RI	76.32	(76.07 - 76.57)
IL	70.83	(70.75 - 70.90)	SC	62.36	(62.21 - 62.50)
IN	91.3	(91.24 - 91.35)	SD	95.17	(95.04 - 95.29)
KS	100	(0.00 - 100.00)	TN	72.7	(72.58 - 72.82)
KY	35.51	(35.39 - 35.63)	TX	79.42	(79.37 - 79.47)
LA	53.09	(52.95 - 53.23)	UT	60.94	(60.75 - 61.12)
MA	44.85	(44.72 - 44.99)	VA	73.01	(72.92 - 73.10)
MD	61.56	(61.43 - 61.70)	VI	0.13	(0.00 - 0.70)
ME	55.73	(55.41 - 56.04)	VT	86.71	(86.48 - 86.93)
MH	7.68	(0.19 - 35.99)	WA	87.53	(87.46 - 87.59)
MI	71.77	(71.71 - 71.83)	WI	79.4	(79.26 - 79.53)
MN	77.02	(76.89 - 77.15)	WV	64.97	(64.79 - 65.14)
MO	65.01	(64.91 - 65.12)	WY	100	(0.00 - 100.00)
MP	NA	NA	XX	NA	NA
MS	100	(0.00 - 100.00)	US	78.17	(78.16 - 78.19)

Table 21. Medical Diagnosis Categories by State, 2016, Glaucoma

State	Prevalence	(95% CI)	State	Prevalence	(95% CI)
AK	0.59	(0.55 - 0.63)	MT	1.06	(1.00 - 1.12)
AL	0.66	(0.64 - 0.69)	NC	0.52	(0.51 - 0.54)
AR	0.28	(0.26 - 0.30)	ND	0.6	(0.53 - 0.66)
AS	NA	NA	NE	0.57	(0.54 - 0.61)
AZ	0.35	(0.33 - 0.36)	NH	0.55	(0.51 - 0.58)
CA	0.76	(0.76 - 0.77)	NJ	0.35	(0.34 - 0.36)
CO	0.43	(0.41 - 0.44)	NM	0.15	(0.14 - 0.16)
CT	0.67	(0.64 - 0.69)	NV	0.48	(0.46 - 0.50)
DC	0.29	(0.25 - 0.34)	NY	0.47	(0.46 - 0.49)
DE	0.92	(0.86 - 0.98)	OH	0.51	(0.50 - 0.52)
FL	0.26	(0.25 - 0.27)	OK	0.55	(0.53 - 0.57)
GA	0.41	(0.40 - 0.43)	OR	0.63	(0.61 - 0.65)
GU	NA	NA	PA	0.23	(0.22 - 0.24)
HI	0.61	(0.58 - 0.64)	PR	0.04	(0.00 - 0.13)
IA	0.63	(0.60 - 0.65)	PW	NA	NA
ID	0.85	(0.81 - 0.89)	RI	1.02	(0.96 - 1.08)
IL	0.37	(0.36 - 0.38)	SC	0.51	(0.49 - 0.53)
IN	0.87	(0.85 - 0.89)	SD	0.64	(0.60 - 0.69)
KS	0.54	(0.52 - 0.57)	TN	0.29	(0.28 - 0.31)
KY	0.17	(0.16 - 0.18)	TX	0.26	(0.26 - 0.27)
LA	0.43	(0.41 - 0.45)	UT	0.2	(0.19 - 0.22)
MA	0.27	(0.25 - 0.28)	VA	0.59	(0.57 - 0.60)
MD	0.29	(0.27 - 0.30)	VI	NA	NA
ME	0.83	(0.78 - 0.89)	VT	2.16	(2.06 - 2.26)
MH	NA	NA	WA	0.63	(0.61 - 0.64)
MI	0.66	(0.65 - 0.67)	WI	0.37	(0.35 - 0.39)
MN	0.58	(0.56 - 0.60)	WV	0.63	(0.61 - 0.66)
MO	0.53	(0.51 - 0.54)	WY	0.45	(0.41 - 0.50)
MP	NA	NA	XX	NA	NA
MS	1.24	(1.19 - 1.29)	US	0.59	(0.59 - 0.59)

Table 22. Medical Diagnosis Categories by State, 2016, Infectious and inflammatory diseases

State	Prevalence	(95% CI)	State	Prevalence	(95% CI)
AK	0.95	(0.90 - 1.00)	MT	1.04	(0.98 - 1.10)
AL	0.94	(0.91 - 0.97)	NC	0.79	(0.77 - 0.81)
AR	0.64	(0.61 - 0.67)	ND	1.15	(1.06 - 1.24)
AS	NA	NA	NE	0.95	(0.91 - 0.99)
AZ	0.8	(0.78 - 0.82)	NH	0.51	(0.48 - 0.54)
CA	1.39	(1.38 - 1.40)	NJ	0.36	(0.35 - 0.38)
CO	0.98	(0.95 - 1.00)	NM	0.62	(0.60 - 0.64)
CT	1.17	(1.13 - 1.21)	NV	1.5	(1.46 - 1.54)
DC	0.11	(0.09 - 0.15)	NY	0.52	(0.51 - 0.54)
DE	0.76	(0.70 - 0.82)	OH	0.64	(0.63 - 0.65)
FL	0.43	(0.42 - 0.44)	OK	1.11	(1.08 - 1.14)
GA	0.61	(0.59 - 0.62)	OR	1.22	(1.19 - 1.25)
GU	0.17	(0.02 - 0.60)	PA	0.23	(0.22 - 0.24)
HI	0.73	(0.70 - 0.77)	PR	0.24	(0.13 - 0.41)
IA	0.78	(0.74 - 0.81)	PW	NA	NA
ID	1.31	(1.26 - 1.36)	RI	1.28	(1.21 - 1.34)
IL	0.64	(0.63 - 0.65)	SC	0.52	(0.50 - 0.54)
IN	1.14	(1.12 - 1.16)	SD	1.09	(1.03 - 1.15)
KS	1.14	(1.10 - 1.18)	TN	0.37	(0.35 - 0.38)
KY	0.24	(0.23 - 0.25)	TX	0.61	(0.60 - 0.62)
LA	0.7	(0.68 - 0.72)	UT	0.56	(0.53 - 0.58)
MA	0.35	(0.33 - 0.36)	VA	0.95	(0.93 - 0.97)
MD	0.26	(0.25 - 0.28)	VI	NA	NA
ME	0.47	(0.43 - 0.52)	VT	1.62	(1.54 - 1.71)
MH	NA	NA	WA	0.99	(0.97 - 1.01)
MI	0.63	(0.62 - 0.64)	WI	0.55	(0.53 - 0.58)
MN	0.79	(0.77 - 0.82)	WV	1.57	(1.53 - 1.62)
MO	0.91	(0.89 - 0.93)	WY	1.41	(1.33 - 1.48)
MP	NA	NA	XX	NA	NA
MS	2.25	(2.18 - 2.31)	US	0.97	(0.96 - 0.97)

Table 23. Medical Diagnosis Categories by State, 2016, Injury, burns and surgical complications of the eye

State	Prevalence	(95% CI)	State	Prevalence	(95% CI)
AK	0.02	(0.02 - 0.03)	MT	0.06	(0.04 - 0.08)
AL	0.02	(0.01 - 0.03)	MT	0.05	(0.04 - 0.07)
AR	0.02	(0.02 - 0.03)	NC	0.02	(0.02 - 0.03)
AS	0.02	(0.01 - 0.02)	ND	0.03	(0.01 - 0.04)
AZ	NA	NA	NE	0.03	(0.02 - 0.04)
CA	0.03	(0.02 - 0.03)	NH	0.06	(0.05 - 0.08)
CO	0.08	(0.08 - 0.08)	NJ	0.01	(0.01 - 0.01)
CT	0.03	(0.02 - 0.03)	NM	0.02	(0.02 - 0.03)
DC	0.02	(0.01 - 0.02)	NV	0.06	(0.05 - 0.07)
DE	0.01	(0.00 - 0.02)	NY	0.02	(0.02 - 0.02)
FL	0.02	(0.01 - 0.04)	OH	0.02	(0.02 - 0.02)
GA	0.01	(0.01 - 0.01)	OK	0.04	(0.03 - 0.04)
GU	0.02	(0.01 - 0.02)	OR	0.04	(0.03 - 0.04)
HI	NA	NA	PA	0.01	(0.01 - 0.01)
IA	0.02	(0.02 - 0.03)	PR	NA	NA
ID	0.02	(0.02 - 0.03)	PW	NA	NA
IL	0.05	(0.04 - 0.05)	RI	0.01	(0.01 - 0.02)
IN	0.02	(0.02 - 0.02)	SC	0.02	(0.02 - 0.03)
KS	0.09	(0.09 - 0.10)	SD	0.03	(0.02 - 0.04)
KY	0.03	(0.03 - 0.04)	TN	0.01	(0.01 - 0.01)
LA	0.01	(0.00 - 0.01)	TX	0.02	(0.01 - 0.02)
MA	0.04	(0.04 - 0.05)	UT	0.01	(0.01 - 0.02)
MD	0.01	(0.01 - 0.01)	VA	0.03	(0.02 - 0.03)
ME	0.01	(0.01 - 0.01)	VI	NA	NA
MH	0.01	(0.00 - 0.01)	VT	0.11	(0.09 - 0.14)
MI	NA	NA	WA	0.03	(0.03 - 0.03)
MN	0.03	(0.03 - 0.04)	WI	0.01	(0.01 - 0.01)
MO	0.03	(0.03 - 0.04)	WV	0.17	(0.15 - 0.18)
MP	0.02	(0.02 - 0.02)	WY	0.11	(0.09 - 0.14)
MS	NA	NA	XX	NA	NA

Table 24. Medical Diagnosis Categories by State, 2016, Orbital and external disease diseases

State	Prevalence	(95% CI)	State	Prevalence	(95% CI)
AK	0.95	(0.90 - 1.00)	MT	1.05	(0.99 - 1.11)
AL	0.78	(0.76 - 0.81)	NC	0.57	(0.55 - 0.58)
AR	0.31	(0.30 - 0.34)	ND	0.92	(0.84 - 1.00)
AS	NA	NA	NE	0.9	(0.86 - 0.94)
AZ	0.65	(0.63 - 0.67)	NH	0.39	(0.36 - 0.42)
CA	0.56	(0.56 - 0.57)	NJ	0.27	(0.25 - 0.28)
CO	0.48	(0.47 - 0.50)	NM	0.19	(0.18 - 0.20)
CT	0.57	(0.54 - 0.60)	NV	0.69	(0.67 - 0.72)
DC	0.09	(0.07 - 0.12)	NY	0.39	(0.38 - 0.40)
DE	0.58	(0.53 - 0.63)	OH	0.42	(0.41 - 0.43)
FL	0.34	(0.33 - 0.35)	OK	0.78	(0.75 - 0.80)
GA	0.54	(0.52 - 0.56)	OR	0.75	(0.73 - 0.77)
GU	0.08	(0.00 - 0.46)	PA	0.19	(0.18 - 0.20)
HI	0.33	(0.31 - 0.36)	PR	0.22	(0.12 - 0.39)
IA	0.89	(0.85 - 0.92)	PW	NA	NA
ID	1.04	(1.00 - 1.08)	RI	1.13	(1.07 - 1.19)
IL	0.44	(0.43 - 0.45)	SC	0.43	(0.41 - 0.45)
IN	0.81	(0.79 - 0.83)	SD	1.21	(1.15 - 1.28)
KS	0.93	(0.90 - 0.97)	TN	0.21	(0.20 - 0.22)
KY	0.16	(0.15 - 0.17)	TX	0.34	(0.33 - 0.35)
LA	0.37	(0.35 - 0.39)	UT	0.31	(0.29 - 0.33)
MA	0.36	(0.35 - 0.38)	VA	0.62	(0.60 - 0.63)
MD	0.2	(0.19 - 0.22)	VI	NA	NA
ME	0.63	(0.58 - 0.69)	VT	1.24	(1.17 - 1.32)
MH	NA	NA	WA	0.68	(0.66 - 0.69)
MI	0.58	(0.57 - 0.59)	WI	0.38	(0.36 - 0.40)
MN	0.75	(0.72 - 0.77)	WV	0.6	(0.57 - 0.63)
MO	0.84	(0.82 - 0.86)	WY	0.8	(0.74 - 0.85)
MP	NA	NA	XX	NA	NA
MS	0.66	(0.62 - 0.69)	US	0.57	(0.56 - 0.57)

Table 25. Medical Diagnosis Categories by State, 2016, Other retinal disorders

State	Prevalence	(95% CI)	State	Prevalence	(95% CI)
AK	0.69	(0.65 - 0.74)	MT	1.14	(1.07 - 1.20)
AL	0.49	(0.47 - 0.51)	NC	0.36	(0.34 - 0.37)
AR	0.13	(0.11 - 0.14)	ND	0.38	(0.33 - 0.43)
AS	NA	NA	NE	0.54	(0.51 - 0.57)
AZ	0.28	(0.27 - 0.29)	NH	0.45	(0.42 - 0.49)
CA	0.33	(0.33 - 0.34)	NJ	0.18	(0.18 - 0.19)
CO	0.39	(0.38 - 0.41)	NM	0.18	(0.17 - 0.19)
CT	0.51	(0.49 - 0.54)	NV	0.35	(0.34 - 0.37)
DC	0.04	(0.03 - 0.06)	NY	0.32	(0.31 - 0.33)
DE	0.41	(0.37 - 0.46)	OH	0.26	(0.26 - 0.27)
FL	0.14	(0.14 - 0.15)	OK	0.36	(0.35 - 0.38)
GA	0.2	(0.19 - 0.21)	OR	0.45	(0.43 - 0.47)
GU	NA	NA	PA	0.14	(0.13 - 0.15)
HI	0.38	(0.36 - 0.41)	PR	NA	NA
IA	0.48	(0.45 - 0.50)	PW	NA	NA
ID	0.86	(0.82 - 0.90)	RI	0.82	(0.77 - 0.87)
IL	0.24	(0.23 - 0.25)	SC	0.24	(0.23 - 0.26)
IN	0.47	(0.45 - 0.48)	SD	0.45	(0.42 - 0.49)
KS	0.49	(0.46 - 0.51)	TN	0.18	(0.17 - 0.19)
KY	0.11	(0.10 - 0.12)	TX	0.21	(0.20 - 0.21)
LA	0.17	(0.16 - 0.18)	UT	0.2	(0.18 - 0.22)
MA	0.17	(0.16 - 0.18)	VA	0.38	(0.36 - 0.39)
MD	0.14	(0.13 - 0.15)	VI	NA	NA
ME	0.42	(0.38 - 0.47)	VT	1.26	(1.18 - 1.33)
MH	NA	NA	WA	0.51	(0.49 - 0.52)
MI	0.38	(0.38 - 0.39)	WI	0.24	(0.22 - 0.25)
MN	0.44	(0.42 - 0.46)	WV	0.33	(0.31 - 0.36)
MO	0.34	(0.33 - 0.35)	WY	1.36	(1.29 - 1.44)
MP	NA	NA	XX	NA	NA
MS	0.61	(0.57 - 0.64)	US	0.35	(0.34 - 0.35)

Table 26. Medical Diagnosis Categories by State, 2016, Other eye disorders

State	Prevalence	(95% CI)	State	Prevalence	(95% CI)
AK	0.36	(0.33 - 0.39)	MT	1.06	(1.00 - 1.12)
AL	0.37	(0.35 - 0.39)	NC	0.28	(0.27 - 0.29)
AR	0.1	(0.09 - 0.11)	ND	0.34	(0.30 - 0.39)
AS	NA	NA	NE	0.46	(0.43 - 0.49)
AZ	0.35	(0.34 - 0.37)	NH	0.51	(0.48 - 0.55)
CA	0.38	(0.37 - 0.38)	NJ	0.24	(0.23 - 0.25)
CO	0.39	(0.38 - 0.40)	NM	0.14	(0.13 - 0.15)
CT	0.38	(0.35 - 0.40)	NV	0.44	(0.42 - 0.46)
DC	0.02	(0.01 - 0.04)	NY	0.27	(0.26 - 0.28)
DE	0.41	(0.36 - 0.45)	OH	0.28	(0.27 - 0.29)
FL	0.21	(0.20 - 0.22)	OK	0.29	(0.28 - 0.31)
GA	0.22	(0.21 - 0.23)	OR	0.48	(0.46 - 0.49)
GU	NA	NA	PA	0.17	(0.16 - 0.18)
HI	0.34	(0.32 - 0.37)	PR	NA	NA
IA	0.58	(0.55 - 0.60)	PW	NA	NA
ID	0.77	(0.73 - 0.80)	RI	1.07	(1.01 - 1.13)
IL	0.25	(0.25 - 0.26)	SC	0.23	(0.22 - 0.25)
IN	0.4	(0.39 - 0.42)	SD	0.41	(0.38 - 0.45)
KS	0.49	(0.46 - 0.51)	TN	0.14	(0.13 - 0.15)
KY	0.11	(0.10 - 0.12)	TX	0.15	(0.14 - 0.15)
LA	0.16	(0.15 - 0.17)	UT	0.17	(0.15 - 0.18)
MA	0.24	(0.23 - 0.26)	VA	0.43	(0.41 - 0.44)
MD	0.13	(0.12 - 0.14)	VI	NA	NA
ME	0.44	(0.40 - 0.49)	VT	1.01	(0.94 - 1.08)
MH	NA	NA	WA	0.37	(0.36 - 0.39)
MI	0.46	(0.45 - 0.47)	WI	0.29	(0.27 - 0.31)
MN	0.3	(0.28 - 0.31)	WV	0.44	(0.42 - 0.47)
MO	0.36	(0.35 - 0.37)	WY	1.2	(1.13 - 1.27)
MP	NA	NA	XX	NA	NA
MS	0.3	(0.28 - 0.32)	US	0.35	(0.35 - 0.35)

Table 27. Medical Diagnosis Categories by State, 2016, Other visual disturbances

State	Prevalence	(95% CI)	State	Prevalence	(95% CI)
AK	0.07	(0.06 - 0.09)	MT	0.21	(0.18 - 0.23)
AL	0.09	(0.08 - 0.09)	NC	0.04	(0.04 - 0.05)
AR	0.03	(0.03 - 0.04)	ND	0.25	(0.21 - 0.30)
AS	NA	NA	NE	0.12	(0.10 - 0.13)
AZ	0.13	(0.12 - 0.13)	NH	0.15	(0.13 - 0.17)
CA	0.32	(0.32 - 0.32)	NJ	0.17	(0.16 - 0.18)
CO	0.33	(0.32 - 0.34)	NM	0.12	(0.11 - 0.13)
CT	0.13	(0.12 - 0.14)	NV	0.07	(0.06 - 0.08)
DC	0.02	(0.01 - 0.04)	NY	0.09	(0.09 - 0.10)
DE	0.09	(0.07 - 0.11)	OH	0.1	(0.10 - 0.10)
FL	0.11	(0.11 - 0.12)	OK	0.09	(0.09 - 0.10)
GA	0.05	(0.05 - 0.06)	OR	0.17	(0.16 - 0.18)
GU	NA	NA	PA	0.04	(0.04 - 0.05)
HI	0.23	(0.21 - 0.25)	PR	NA	NA
IA	0.08	(0.07 - 0.09)	PW	NA	NA
ID	0.2	(0.18 - 0.22)	RI	0.18	(0.15 - 0.20)
IL	0.15	(0.14 - 0.15)	SC	0.08	(0.07 - 0.09)
IN	0.31	(0.30 - 0.32)	SD	0.14	(0.12 - 0.16)
KS	0.1	(0.09 - 0.11)	TN	0.08	(0.07 - 0.08)
KY	0.06	(0.06 - 0.07)	TX	0.1	(0.10 - 0.10)
LA	0.26	(0.24 - 0.27)	UT	0.06	(0.05 - 0.06)
MA	0.13	(0.12 - 0.14)	VA	0.15	(0.14 - 0.16)
MD	0.04	(0.03 - 0.05)	VI	NA	NA
ME	0.12	(0.10 - 0.15)	VT	0.15	(0.12 - 0.17)
MH	NA	NA	WA	0.2	(0.19 - 0.21)
MI	0.17	(0.16 - 0.17)	WI	0.08	(0.07 - 0.09)
MN	0.13	(0.12 - 0.14)	WV	0.29	(0.27 - 0.31)
MO	0.38	(0.36 - 0.39)	WY	0.17	(0.14 - 0.19)
MP	NA	NA	XX	NA	NA
MS	0.53	(0.50 - 0.56)	US	0.2	(0.20 - 0.20)

Table 28. Medical Diagnosis Categories by State, 2016, Retinal detachment and defects

State	Prevalence	(95% CI)	State	Prevalence	(95% CI)
AK	0.12	(0.11 - 0.14)	MT	0.23	(0.20 - 0.26)
AL	0.05	(0.04 - 0.06)	NC	0.06	(0.06 - 0.07)
AR	0.02	(0.01 - 0.02)	ND	0.04	(0.02 - 0.06)
AS	NA	NA	NE	0.12	(0.11 - 0.13)
AZ	0.05	(0.05 - 0.06)	NH	0.05	(0.04 - 0.07)
CA	0.04	(0.04 - 0.05)	NJ	0.02	(0.01 - 0.02)
CO	0.07	(0.06 - 0.07)	NM	0.04	(0.03 - 0.04)
CT	0.06	(0.05 - 0.07)	NV	0.05	(0.05 - 0.06)
DC	0.02	(0.01 - 0.04)	NY	0.03	(0.03 - 0.03)
DE	0.11	(0.09 - 0.13)	OH	0.03	(0.03 - 0.04)
FL	0.02	(0.02 - 0.02)	OK	0.04	(0.04 - 0.05)
GA	0.03	(0.02 - 0.03)	OR	0.08	(0.08 - 0.09)
GU	NA	NA	PA	0.02	(0.01 - 0.02)
HI	0.05	(0.04 - 0.06)	PR	NA	NA
IA	0.1	(0.09 - 0.12)	PW	NA	NA
ID	0.09	(0.08 - 0.10)	RI	0.05	(0.04 - 0.06)
IL	0.03	(0.03 - 0.03)	SC	0.03	(0.03 - 0.04)
IN	0.06	(0.06 - 0.07)	SD	0.07	(0.06 - 0.09)
KS	0.06	(0.05 - 0.07)	TN	0.01	(0.01 - 0.01)
KY	0.01	(0.01 - 0.01)	TX	0.05	(0.04 - 0.05)
LA	0.02	(0.01 - 0.02)	UT	0.03	(0.02 - 0.03)
MA	0.03	(0.02 - 0.03)	VA	0.07	(0.06 - 0.07)
MD	0.02	(0.01 - 0.02)	VI	NA	NA
ME	0.09	(0.07 - 0.11)	VT	0.22	(0.19 - 0.26)
MH	NA	NA	WA	0.1	(0.09 - 0.10)
MI	0.05	(0.04 - 0.05)	WI	0.03	(0.02 - 0.03)
MN	0.11	(0.10 - 0.12)	WV	0.04	(0.04 - 0.05)
MO	0.04	(0.04 - 0.05)	WY	0.28	(0.25 - 0.32)
MP	NA	NA	XX	NA	NA
MS	0.08	(0.06 - 0.09)	US	0.05	(0.05 - 0.05)

Table 29. Medical Diagnosis Categories by State, 2016, Strabismus and amblyopia

State	Prevalence	(95% CI)	State	Prevalence	(95% CI)
AK	0.42	(0.39 - 0.46)	MT	0.78	(0.73 - 0.83)
AL	0.31	(0.29 - 0.32)	NC	0.24	(0.23 - 0.25)
AR	0.24	(0.22 - 0.26)	ND	0.89	(0.82 - 0.97)
AS	NA	NA	NE	0.67	(0.64 - 0.70)
AZ	0.41	(0.39 - 0.42)	NH	0.47	(0.44 - 0.51)
CA	0.32	(0.32 - 0.33)	NJ	0.19	(0.18 - 0.20)
CO	0.43	(0.41 - 0.44)	NM	0.2	(0.19 - 0.22)
CT	0.27	(0.25 - 0.29)	NV	0.32	(0.30 - 0.34)
DC	0.25	(0.21 - 0.30)	NY	0.18	(0.18 - 0.19)
DE	0.41	(0.37 - 0.46)	OH	0.42	(0.41 - 0.43)
FL	0.15	(0.15 - 0.16)	OK	0.52	(0.50 - 0.54)
GA	0.31	(0.29 - 0.32)	OR	0.79	(0.76 - 0.81)
GU	NA	NA	PA	0.14	(0.13 - 0.15)
HI	0.13	(0.11 - 0.14)	PR	0.04	(0.00 - 0.13)
IA	0.57	(0.55 - 0.60)	PW	NA	NA
ID	0.57	(0.54 - 0.61)	RI	0.38	(0.34 - 0.41)
IL	0.35	(0.34 - 0.36)	SC	0.41	(0.39 - 0.43)
IN	0.89	(0.87 - 0.91)	SD	0.73	(0.68 - 0.78)
KS	0.79	(0.76 - 0.82)	TN	0.19	(0.18 - 0.20)
KY	0.35	(0.33 - 0.36)	TX	0.21	(0.21 - 0.22)
LA	0.42	(0.40 - 0.43)	UT	0.28	(0.26 - 0.30)
MA	0.17	(0.16 - 0.18)	VA	0.38	(0.37 - 0.39)
MD	0.22	(0.21 - 0.23)	VI	NA	NA
ME	0.3	(0.26 - 0.33)	VT	0.55	(0.50 - 0.60)
MH	NA	NA	WA	0.61	(0.59 - 0.63)
MI	0.4	(0.39 - 0.41)	WI	0.35	(0.33 - 0.37)
MN	0.61	(0.58 - 0.63)	WV	0.73	(0.70 - 0.76)
MO	0.41	(0.40 - 0.43)	WY	0.96	(0.90 - 1.03)
MP	NA	NA	XX	NA	NA
MS	0.59	(0.56 - 0.63)	US	0.39	(0.39 - 0.39)