

## DATA REPORT

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# Military Health System Summary Data Report, 2021-22: For the CDC Vision and Eye Health Surveillance System (VEHSS)

[www.cdc.gov/vision-health-data](http://www.cdc.gov/vision-health-data)

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## Dataset Description

This report described the analysis of the Military Health System (MHS) for the Vision and Eye Health Surveillance System (VEHSS). The VEHSS analysis of the MHS data was conducted by the Defense Health Agency's (DHA) Vision Center of Excellence (VCE). The VCE provides and coordinates vision and eye care services for military service members and veterans. VCE analyzed data in the U.S. Military Health System (MHS), which is operated by the Department of Defense (DOD). The MHS serves active-duty service members of all branches of the U.S. military, National Guard and Reserve members, military retirees, and their eligible family members. TRICARE, which is the MHS health care program, provides comprehensive medical, dental, and pharmacy coverage to beneficiaries through a network of military treatment facilities and civilian healthcare providers.

The MHS Management Analysis and Reporting Tool (MART) Database is a data management and reporting system used by the MHS to support decision-making, healthcare analysis, and operational reporting. The MART integrates from various sources within the MHS to provide a centralized repository for healthcare data, facilitating access to information that aids in managing healthcare services, resources, and performance across the MHS.

The Vision Center of Excellence (VCE), established by a congressional mandate, is a branch of the Research and Engineering Directorate within the Defense Health Agency (DHA). The VCE is dedicated to advancing eye injury research and care for service members and veterans. Through collaborative efforts across the Department of Defense (DOD) and Department of Veterans Affairs (VA), VCE maximizes the potential for effective prevention, diagnosis, treatment, and rehabilitation of visual system injuries. VCE provides access to the Defense and Veterans Eye Injury and Vision Registry (DVEIVR), a critical resource for tracking long-term data on eye injuries. Its structure enables effective use of information management systems, the identification of research capabilities, and the promotion of evidence-based best practices. Focused on improving vision health, enhancing readiness, and ensuring quality of life, VCE works across five key areas: clinical care, research, policy, education, and collaboration with federal and private partners to optimize ophthalmic outcomes for all service members and veterans.

## Analysis Overview

The DOD VCE analyzed data in the MART by applying VEHSS case definitions for diagnosed eye disorders. VCE provided summary prevalence values to the VEHSS team for incorporation into the VEHSS Data Explorer and Data Portal.

## Data Indicators and Case Definitions

### Diagnosis Categories and Subgroup Indicators

Medical Diagnoses were 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 three 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 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.

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

Category	Subgroup
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

Category	Subgroup
	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	

## Stratification Factors

We report the summary outcomes of each data indicator overall, and by the stratification factors age group, sex, and state. This report includes outcomes estimated for single levels of stratification. To estimate prevalence rates for specific multi-variable stratification categories, please visit the VEHSS data visualization application.

## Age Groups

Beneficiary age was categorized into the VEHSS-defined major age groups: 0-17, 18-39, 40-64, 65-84, 85+.

## Sex Categories

Beneficiaries were classified as either Male or Female. Only a few beneficiaries had missing Sex data, and all cases were suppressed.

## States and Territories

Table 5. VEHSS State and Territory Abbreviations

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

## 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. VEHSS employed the following data suppression algorithm:

1. Suppress rates and denominator when denominator < 11
2. Suppress rates if numerator < 3
3. Report rates to 4 digits, formatting as percentage with two decimal points.
4. For public data on the VEHSS Data Visualization Application and the Centers for Disease Control and Prevention (CDC) Open Data Platform, counts of less than 100 are rounded to the nearest 10, and counts of 100 or greater are rounded to the nearest 100.

## Validation

### Internal Validation

#### Sample Size

Total Sample Rate: 9,077,752					
By sex					
Female	4323337	Male	4754092	Unknown	323
By Age Groups					
0-17 years	1807111	40-64 years	2267474	85+ years	331365
18-39 years	3116890	65-85 years	1783026	Unknown	69
By States					
AK	23709	LA	34640	OH	41912
AL	65521	MA	17554	OK	66639
AR	26059	MD	73987	OR	17077
AS	18	ME	6231	PA	43267
AZ	75246	MI	21734	PR	4539
CA	178020	MN	17481	RI	8617
CO	70160	MO	95809	SC	123812
CT	14955	MP	90	SD	9827
DC	7473	MS	32797	TN	53956

**Total Sample Rate: 9,077,752**

<b>DE</b>	10240	<b>MT</b>	9776	<b>TX</b>	323489
<b>FL</b>	216857	<b>NC</b>	164716	<b>UT</b>	22204
<b>GA</b>	158878	<b>ND</b>	10580	<b>VA</b>	235664
<b>HI</b>	7325	<b>NE</b>	19130	<b>VI</b>	181
<b>IA</b>	43089	<b>NH</b>	6846	<b>VT</b>	2786
<b>ID</b>	12293	<b>NJ</b>	39237	<b>WA</b>	86059
<b>IL</b>	14887	<b>NM</b>	21682	<b>WI</b>	17003
<b>IN</b>	37279	<b>NV</b>	27493	<b>WV</b>	7707
<b>KS</b>	21165	<b>NY</b>	47423	<b>WY</b>	5952
<b>KY</b>	43257	<b>OCONUS</b>	107169	<b>XX</b>	2546

## External Validation

We conducted external validation by comparing the results of this analysis to separate analyses of claims data using the same VEHSS case definitions, shown below. USU indicates a recent analysis of military health data system using the VEHSS indicators conducted by the Uniformed Services University.<sup>1</sup> The USU analysis is based on 2018 data and is restricted to members age 64 and younger. MarketScan includes claims from participating commercial medical insurance programs and is limited to ages 64 and younger. Medicare includes 2019 Medicare Fee for Service beneficiaries aged 65 and older.

As would be expected, the results from the current analysis of MHS data shows diagnosed prevalence rates generally between datasets for ages younger and older than age 65, and exceptions to this pattern fit with expected age distributions of eye disorders. For example, the current all-ages analysis of MHS data shows higher prevalence of most eye disorder categories than USU's analysis of MHS data for ages younger than 65. The VCE analysis is particularly higher for age-related eye conditions including AMD and cataract. As would be expected, the VCE finds lower rates of certain categories than were found in the younger USU sample for certain conditions usually associated with younger persons and children, including Strabismus and Amblyopia and Eye Infections and Inflammatory Diseases. Likewise, the VCE MHS results generally fall between the MarketScan (age <65) and Medicare (age ≥65) results.

<sup>1</sup> Slepiski NE, Jackson KM, Mitro JP, Banaag A, Madsen C, Wittenborn J, Koehlmoos TP. Prevalence of Eye and Vision Disorders in the Military Health System, Fiscal Year 2018. *Mil Med.* 2023 Nov 3;188(11-12):e3393-e3397. doi: 10.1093/milmed/usad070. PMID: 36928318.

## External Validation

	VCE MHS 2021 All ages		USU MHS 2018 Age 0-64		MarketScan 2016 Ages 0-64	Medicare FFS 2019 All ages 65+
	Sample Size = 9077752		Sample Size = 4548897		Sample Size = 28717700	Sample Size = 25432700
Retinal detachment and defects	33473	0.37%	9578	0.21%	0.20%	1.16%
All Diabetic eye diseases	68480	0.75%	10437	0.23%	0.38%	3.05%
Proliferative diabetic retinopathy	10034	0.11%			0.06%	0.53%
Diabetic macular edema	19243	0.21%			0.12%	0.91%
Other diabetes related eye disorders	15530	0.17%			0.14%	0.69%
Non-proliferative	49417	0.54%				2.19%
Severe non-proliferative	3311	0.04%				0.15%
All Age-related macular degeneration (AMD)	213375	2.35%	8826	0.19%	0.25%	10.74%
Unspecified age-related macular degeneration	15874	0.17%			0.03%	0.92%
Early-stage age-related macular degeneration	57618	0.63%			0.12%	2.83%
Dry-form age-related macular degeneration	140114	1.54%			0.11%	7.30%
Geographic atrophy	14787	0.16%			0.00%	0.80%
Wet-form age-related macular degeneration	45094	0.50%			0.02%	2.14%
Choroidal neovascularization	36521	0.40%			0.00%	1.68%
Advanced GA or Inactive CNV	28899	0.32%				1.55%
All Other retinal disorders	272227	3.00%	43455	0.96%	0.96%	11.16%
Occlusive retinal vascular disease	1090	0.01%			0.01%	0.05%
Other/unspecified other retinal disorders	206856	2.28%			0.68%	8.39%
Retinopathy of prematurity	1554	0.02%			0.01%	0.01%
Macular edema (Cystoid or non-diabetic)	10683	0.12%				0.50%
Central retinal vein occlusion	7868	0.09%			0.02%	0.36%
Branch retinal vein occlusion	13766	0.15%			0.03%	0.60%
Central retinal arterial occlusion	2059	0.02%			0.00%	0.09%
Branch retinal artery occlusion	3434	0.04%			0.01%	0.17%
Non-Occlusive retinal vascular disease	48304	0.53%			0.19%	2.27%
Hereditary chorioretinal dystrophy	10568	0.12%			0.05%	0.38%
Myopic degeneration	6680	0.07%			0.07%	0.22%
All Glaucoma	377269	4.16%	68252	1.50%	1.66%	14.95%

	VCE MHS 2021 All ages		USU MHS 2018 Age 0-64		MarketScan 2016 Ages 0-64	Medicare FFS 2019 All ages 65+
Open-angle glaucoma	147128	1.62%			0.38%	6.61%
Secondary glaucoma	5297	0.06%			0.03%	0.21%
Glaucoma suspect	221024	2.43%			1.20%	7.99%
Primary angle-closure glaucoma	23339	0.26%			0.13%	1.21%
Other/unspecified glaucoma	36022	0.40%			0.08%	1.52%
Specified glaucoma	81539	0.90%				
All Cataracts	804730	8.86%	84284	1.85%	2.18%	37.81%
Congenital Cataract	2855	0.03%			0.02%	0.03%
Posterior capsular opacity	130256	1.43%			0.15%	6.20%
Pseudophakia	283732	3.13%			0.25%	13.65%
Aphakia and disorders of lens	4542	0.05%			0.02%	0.27%
Age-related cataract	495523	5.46%			NA	23.72%
Other or unspecified cataract	53610	0.59%			NA	2.07%
All Refraction and accommodation disorders	1053789	11.61%	695729	15.29%	2.93%	12.18%
Myopia	528637	5.82%			1.45%	2.94%
Hypermetropia	270247	2.98%			0.64%	3.62%
Astigmatism	589680	6.50%			1.06%	5.18%
Presbyopia	267325	2.94%			0.85%	7.94%
Other refraction and accommodation disorders	48776	0.54%			0.21%	0.82%
All Blindness and low vision	29013	0.32%	10744	0.24%	0.14%	0.77%
Unqualified impairment, both eyes	2000	0.02%			0.01%	0.06%
Blindness, both eyes, including legal blindness	3444	0.04%			NA	0.15%
Unqualified impairment in one eye, or unspecified	20981	0.23%			0.09%	0.42%
Low vision or blindness, one eye	2861	0.03%			NA	0.13%
Blindness one eye, low vision other eye	656	0.01%			NA	0.04%
Low vision, both eyes	756	0.01%			NA	0.03%
All Strabismus and amblyopia	91967	1.01%	60087	1.32%	0.65%	1.36%
Strabismus	64688	0.71%			0.50%	0.98%
Amblyopia	36876	0.41%			0.23%	0.44%
All Injury, burns and surgical complications of the eye	88047	0.97%	36884	0.81%	0.69%	1.80%
Ocular injury	77628	0.86%			0.66%	1.40%

	VCE MHS 2021 All ages		USU MHS 2018 Age 0-64		MarketScan 2016 Ages 0-64	Medicare FFS 2019 All ages 65+
Ocular burns	1152	0.01%			0.01%	0.01%
Surgical complication of the eye	10505	0.12%			0.03%	0.44%
All Disorders of optic nerve and visual pathways	48366	0.53%	27	0.00%	0.26%	1.48%
Optic nerve disorders	48168	0.53%			0.26%	1.48%
Disorders of the visual pathway and visual cortex	220	0.00%			NA	0.01%
All Other visual disturbances	162935	1.79%	60788	1.34%	0.97%	3.94%
Visual field defect	22998	0.25%			0.12%	0.86%
Color blindness	3294	0.04%			0.01%	0.03%
Night blindness	4059	0.04%			0.01%	0.09%
Other/unspecified visual disturbances	139172	1.53%			0.86%	3.16%
All Infectious and inflammatory diseases	512854	5.65%	260577	5.73%	5.22%	12.41%
Infectious diseases	20234	0.22%			0.24%	0.49%
Keratitis	112384	1.24%			0.56%	3.59%
Conjunctivitis	278990	3.07%			3.57%	5.64%
Eyelid infection and inflammation	134599	1.48%			1.10%	4.24%
Other/unspecified infectious and inflammatory diseases	22306	0.25%			0.19%	0.56%
Lacrimal and orbit inflammation	5082	0.06%			0.06%	0.10%
Endophthalmitis	2604	0.03%			0.02%	0.07%
All Orbital and external disease	478093	5.27%	115185	2.53%	1.82%	15.53%
Congenital anomalies	18921	0.21%			0.13%	0.13%
Other/unspecified orbital and external disease	5944	0.07%			0.04%	0.14%
Lacrimal diseases	20800	0.23%			0.14%	0.58%
Eyelid disorders	155029	1.71%			0.44%	5.67%
Dry eye syndrome	333078	3.67%			1.18%	11.21%
Disorders of the globe	1836	0.02%			0.01%	0.07%
All Cancer and neoplasms of the eye diseases	64219	0.71%	14058	0.31%	0.23%	2.39%
Malignant neoplasm	6379	0.07%			0.01%	0.25%
Benign neoplasm	58618	0.65%			0.22%	2.17%
All Cornea disorders	95866	1.06%	30542	0.67%	0.45%	3.51%
Keratoconus	7365	0.08%			0.07%	0.10%
Endothelial dystrophy (Fuchs)	20812	0.23%			0.07%	1.12%

	VCE MHS 2021 All ages		USU MHS 2018 Age 0-64		MarketScan 2016 Ages 0-64	Medicare FFS 2019 All ages 65+
Other corneal disorders	68504	0.75%			0.34%	2.47%
Cornea disorder related to contact lens	3274	0.04%			NA	0.03%
Corneal transplant	1003	0.01%			NA	NA
Other eye disorders	375078	4.13%	69001	1.52%	1.57%	14.67%

## Potential Limitations

This analysis is subject to a number of potential limitations:

- This data is based on claims and encounter data which may suffer from bias or limited detail.
- Enrollees and their beneficiaries could be insured by multiple insurers, such as Medicare or commercial medical or vision insurance. Services covered by other payers would not be represented in the MHS data.
- The sample includes active-duty service members and their beneficiaries. This sample is not representative of the general population, nor service members alone.
- These prevalence results do not include undiagnosed or untreated eye conditions.

## Summary Statistics

**Table 7. Prevalence of Treated Medical Diagnoses by Category and Subgroup, 2020-2021**

	Prevalence Estimates (2020) Sample Size = 8715576	Prevalence Estimates (2021) Sample Size = 9077752
Retinal detachment and defects	0.35%	0.37%
All Diabetic eye diseases	0.75%	0.75%
Proliferative diabetic retinopathy	0.11%	0.11%
Diabetic macular edema	0.21%	0.21%
Other diabetes related eye disorders	0.17%	0.17%
Non-proliferative	0.53%	0.54%
Severe non-proliferative	0.04%	0.04%
All Age-related macular degeneration (AMD)	2.28%	2.35%
Unspecified age-related macular degeneration	0.18%	0.17%
Early-stage age-related macular degeneration	0.58%	0.63%
Dry-form age-related macular degeneration	1.50%	1.54%
Geographic atrophy	0.16%	0.16%
Wet-form age-related macular degeneration	0.51%	0.50%
Choroidal neovascularization	0.41%	0.40%
Advanced GA or Inactive CNV	0.32%	0.32%
All Other retinal disorders	2.81%	3.00%
Occlusive retinal vascular disease	0.01%	0.01%
Other/unspecified other retinal disorders	2.13%	2.28%
Retinopathy of prematurity	0.02%	0.02%
Macular edema (Cystoid or non-diabetic)	0.12%	0.12%
Central retinal vein occlusion	0.09%	0.09%

	Prevalence Estimates (2020) Sample Size = 8715576	Prevalence Estimates (2021) Sample Size = 9077752
Branch retinal vein occlusion	0.15%	0.15%
Central retinal arterial occlusion	0.02%	0.02%
Branch retinal artery occlusion	0.04%	0.04%
Non-Occlusive retinal vascular disease	0.50%	0.53%
Hereditary chorioretinal dystrophy	0.10%	0.12%
Myopic degeneration	0.07%	0.07%
All Glaucoma	4.05%	4.16%
Open-angle glaucoma	1.62%	1.62%
Secondary glaucoma	0.06%	0.06%
Glaucoma suspect	2.30%	2.43%
Primary angle-closure glaucoma	0.25%	0.26%
Other/unspecified glaucoma	0.40%	0.40%
Specified glaucoma	0.91%	0.90%
All Cataracts	8.40%	8.86%
Congenital Cataract	0.03%	0.03%
Posterior capsular opacity	1.34%	1.43%
Pseudophakia	2.98%	3.13%
Aphakia and disorders of lens	0.05%	0.05%
Age-related cataract	5.17%	5.46%
Other or unspecified cataract	0.52%	0.59%
All Refraction and accommodation disorders	10.53%	11.61%
Myopia	5.32%	5.82%

	Prevalence Estimates (2020) Sample Size = 8715576	Prevalence Estimates (2021) Sample Size = 9077752
Hypermetropia	2.76%	2.98%
Astigmatism	5.92%	6.50%
Presbyopia	2.60%	2.94%
Other refraction and accommodation disorders	0.49%	0.54%
All Blindness and low vision	0.30%	0.32%
Unqualified impairment, both eyes	0.02%	0.02%
Blindness, both eyes, including legal blindness	0.04%	0.04%
Unqualified impairment in one eye, or unspecified	0.21%	0.23%
Low vision or blindness, one eye	0.03%	0.03%
Blindness one eye, low vision other eye	0.01%	0.01%
Low vision, both eyes	0.01%	0.01%
All Strabismus and amblyopia	0.95%	1.01%
Strabismus	0.68%	0.71%
Amblyopia	0.38%	0.41%
All Injury, burns and surgical complications of the eye	0.95%	0.97%
Ocular injury	0.84%	0.86%
Ocular burns	0.01%	0.01%
Surgical complication of the eye	0.11%	0.12%
All Disorders of optic nerve and visual pathways	0.49%	0.53%
Optic nerve disorders	0.49%	0.53%
Disorders of the visual pathway and visual cortex	0.00%	0.00%
All Other visual disturbances	1.68%	1.79%

	Prevalence Estimates (2020) Sample Size = 8715576	Prevalence Estimates (2021) Sample Size = 9077752
Visual field defect	0.25%	0.25%
Color blindness	0.04%	0.04%
Night blindness	0.04%	0.04%
Other/unspecified visual disturbances	1.43%	1.53%
All Infectious and inflammatory diseases	5.65%	5.65%
Infectious diseases	0.26%	0.22%
Keratitis	1.14%	1.24%
Conjunctivitis	3.15%	3.07%
Eyelid infection and inflammation	1.46%	1.48%
Other/unspecified infectious and inflammatory diseases	0.24%	0.25%
Lacrimal and orbit inflammation	0.06%	0.06%
Endophthalmitis	0.03%	0.03%
All Orbital and external disease	4.84%	5.27%
Congenital anomalies	0.19%	0.21%
Other/unspecified orbital and external disease	0.06%	0.07%
Lacrimal diseases	0.22%	0.23%
Eyelid disorders	1.53%	1.71%
Dry eye syndrome	3.35%	3.67%
Disorders of the globe	0.02%	0.02%
All Cancer and neoplasms of the eye diseases	0.65%	0.71%
Malignant neoplasm	0.07%	0.07%
Benign neoplasm	0.59%	0.65%

	Prevalence Estimates (2020) Sample Size = 8715576	Prevalence Estimates (2021) Sample Size = 9077752
All Cornea disorders	1.02%	1.06%
Keratoconus	0.08%	0.08%
Endothelial dystrophy (Fuchs)	0.23%	0.23%
Other corneal disorders	0.72%	0.75%
Cornea disorder related to contact lens	0.04%	0.04%
Corneal transplant	0.00%	0.01%
Other eye disorders	3.86%	4.13%

**Table 8. Medical Diagnosis Categories by Age Group, 2021**

	All Ages (%)	0-17 Years (%)	18-39 Years (%)	40-64 Years (%)	65-84 Years (%)	Above 85 (%)
	Sample Size = 9077752	Sample Size = 1807111	Sample Size = 3116890	Sample Size = 2267474	Sample Size = 1783026	Sample Size = 331365
Retinal detachment and defects	0.37	0.02	0.13	0.40	1.01	0.64
All Diabetic eye diseases	0.75	0.00	0.03	0.65	2.58	2.09
All Age-related macular degeneration (AMD)	2.35	0.00	0.03	0.57	7.70	19.13
All Other retinal disorders	3.00	0.27	0.52	1.96	9.62	10.90
All Glaucoma	4.16	0.19	0.68	3.27	12.88	15.40
All Cataracts	8.86	0.09	0.15	5.42	33.05	26.74
All Refraction and accommodation disorders	11.61	9.00	14.48	9.61	10.91	8.37
All Blindness and low vision	0.32	0.33	0.13	0.24	0.51	1.30
All Strabismus and amblyopia	1.01	2.33	0.56	0.42	1.07	1.19
All Injury, burns and surgical complications of the eye	0.97	0.83	0.70	0.75	1.51	2.15
All Disorders of optic nerve and visual pathways	0.53	0.19	0.30	0.46	1.16	1.33
All Other visual disturbances	1.79	1.04	1.16	1.69	3.21	3.85
All Infectious and inflammatory diseases	5.65	4.63	3.10	5.02	10.33	10.74
All Orbital and external disease	5.27	1.45	1.43	4.24	14.55	15.99
All Cancer and neoplasms of the eye diseases	0.71	0.09	0.19	0.59	2.05	2.10
All Cornea disorders	1.06	0.08	0.52	0.87	2.70	3.28
Other eye disorders	4.13	0.84	0.82	2.82	12.92	12.33

**Table 9. Medical Diagnosis Categories by Sex, 2021**

	Both Sexes (%)	Female (%)	Male (%)
	Sample Size = 9077752	Sample Size = 4323337	Sample Size = 4754092
Retinal detachment and defects	0.37	0.36	0.37
All Diabetic eye diseases	0.75	0.86	0.66
All Age-related macular degeneration (AMD)	2.35	3.05	1.71
All Other retinal disorders	3.00	3.52	2.53
All Glaucoma	4.16	4.91	3.47
All Cataracts	8.86	10.89	7.02
All Refraction and accommodation disorders	11.61	11.80	11.44
All Blindness and low vision	0.32	0.37	0.28
All Strabismus and amblyopia	1.01	1.06	0.97
All Injury, burns and surgical complications of the eye	0.97	0.92	1.01
All Disorders of optic nerve and visual pathways	0.53	0.61	0.46
All Other visual disturbances	1.79	2.10	1.52
All Infectious and inflammatory diseases	5.65	6.88	4.53
All Orbital and external disease	5.27	7.04	3.65
All Cancer and neoplasms of the eye diseases	0.71	0.81	0.62
All Cornea disorders	1.06	1.21	0.92
Other eye disorders	4.13	5.11	3.24