

**US DEPARTMENT OF  
DEFENSE (DoD) COMBINED  
ACTIVE DUTY  
EYE INJURY SUMMARY  
CALENDAR YEAR 2011**

Approved for public release, distribution unlimited

2013



# CY 2011 DEPARTMENT OF DEFENSE (DoD) COMBINED ACTIVE DUTY (AD) EYE INJURY REPORT SUMMARY

**INTRODUCTION:** In 2010 the Armed Forces Health Surveillance Center (AFHSC) and Tri-Service Vision Conservation and Readiness Program (TSVCRP) of the US Army Public Health Command (USAPHC) began development of an Annual Active Duty Military Eye Injury Summary that would detail cause and type of injury along with demographics of eye injuries (Age, Gender, Rank, Occupational Group).

The first edition of the summary and annual summaries back through calendar year 2000, were produced in the spring of 2011. An analysis of years 2000-2010 was published in the May 2011 Medical Surveillance Monthly Report (MSMR). The AFHSC also developed a Case Definition for Eye Injuries that details the code set and methodology used to develop the summaries. Both the MSMR Article and Case Definition for Eye Injuries are available on the AFHSC website: <http://afhsc.army.mil/home>.

This summary contains detailed data, along with a set of summary tables detailing Ambulatory and Hospitalization rates (per 1000 person-years) for Injury Group, Cause of Injury and Occupational Group. Summary tables for Deployment-Associated Eye Injuries detailing frequency of Eye Injuries by Type of Injury and Occupational Group are also provided. Occupational Group data is for Enlisted members only. Deployment-Associated Eye Injuries are presented without regard to Ambulatory or Hospitalized status.

As one of the underlying goals of the summary is to make eye injury surveillance data accessible and useable, individual annual eye injury summaries for all years and all services (Combined DoD, Army, Navy, Air Force, Marine Corps and Coast Guard) are posted on the USAPHC public website.

For questions or additional information regarding the summaries please contact the TSVCRP:

By Email: [usarmy.apg.medcom-phc.mbx.dcpm-tri-service-optometry@mail.mil](mailto:usarmy.apg.medcom-phc.mbx.dcpm-tri-service-optometry@mail.mil)

Telephone: 410-436-2714 FAX: 410-436-1325

Additional program information and educational materials can be found at: <http://dodvision.com/> and the USAPHC Public Website at: <http://phc.amedd.army.mil/Pages/default.aspx>

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**INJURY CODE GROUP DETAILS:** The following code groupings were used to develop the summary. Additional details may be found in the AFHSC Case Definition available at: <http://afhsc.army.mil/home>.

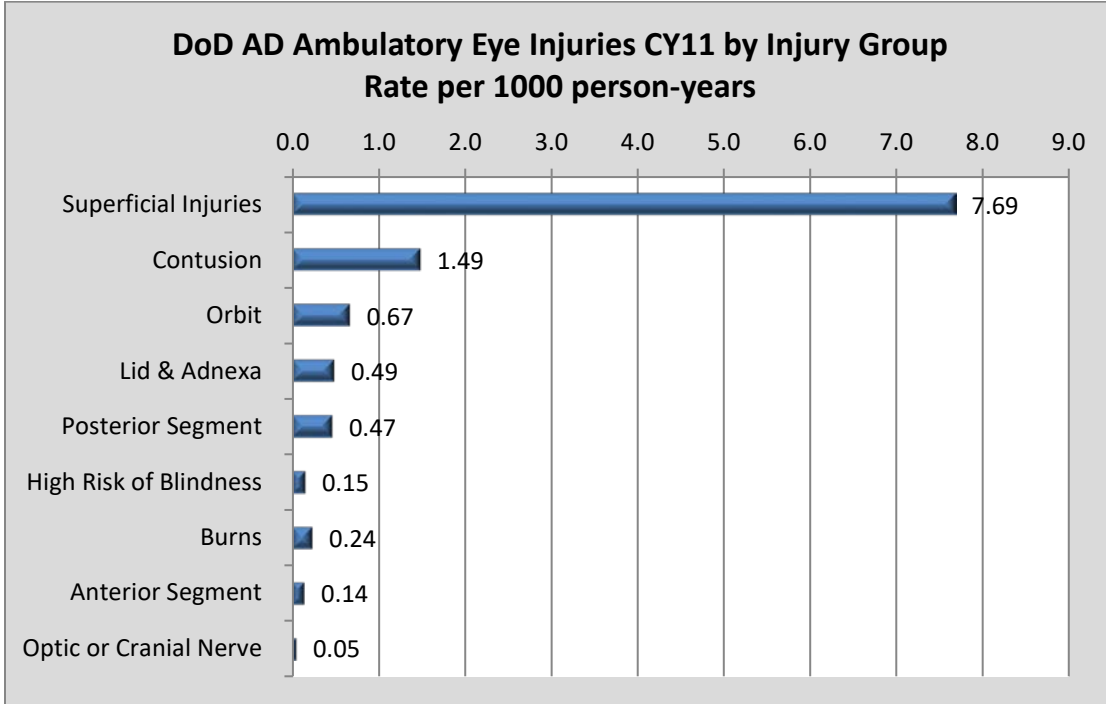
- 1) **Superficial:** all 918 series codes (superficial injury of eye and adnexa) and all 930 series codes (foreign body on external eye).
- 2) **Contusion:** all 921 series codes (contusion of eye and adnexa).
- 3) **Orbit:** All 802 series codes (fracture of face bones), 870.3 and 870.4 (penetrating wound of orbit without and with foreign body) and 376.32 (orbital hemorrhage).
- 4) **Lid/adnexa:** all 870 series codes (open wound of ocular adnexa) with the exception of 870.3 and 870.4 (see orbit above).
- 5) **Posterior segment:** 362.81 (retinal hemorrhage), all 361.0x series codes (retinal detachment with retinal defect), 363.61 (choroidal hemorrhage, unspecified), 363.63 (choroidal rupture), 379.23 (vitreous hemorrhage), 360.00 and 360.01 (purulent and acute endophthalmitis).
- 6) **High risk of blindness:** all 871 series codes (open wound of eyeball).
- 7) **Burns:** all 940 series codes (burn confined to eye and adnexa) as well as all 940.x2 codes (burns to eye with other parts of face, head and neck).
- 8) **Anterior segment:** 364.41 (hyphema), 366.21 and 366.22 (localized and total traumatic cataract), and 364.76 (iridodialysis).
- 9) **Optic/cranial nerve:** 950.0 (optic nerve injury), 950.1 (injury to optic chiasm), 950.9 (injury to optic nerve and pathways, unspecified), 951.0 (injury to oculomotor nerve), 951.1 (injury to trochlear nerve) and 951.3 (injury to abducens nerve).

**DETAILS FOR TOTAL NUMBERS:** Because patients may have been coded with more than one injury group or cause of injury, the sum of cases by injury group and the sum of cases by causes of injury will be greater than the total number of patients.

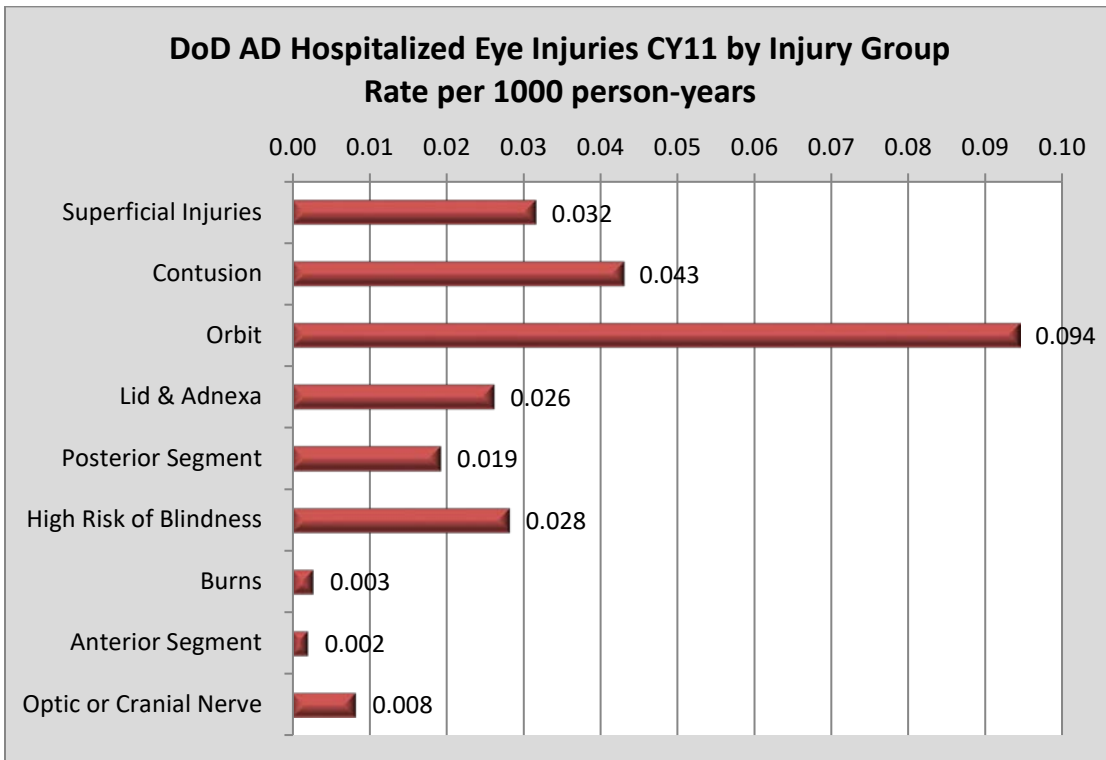
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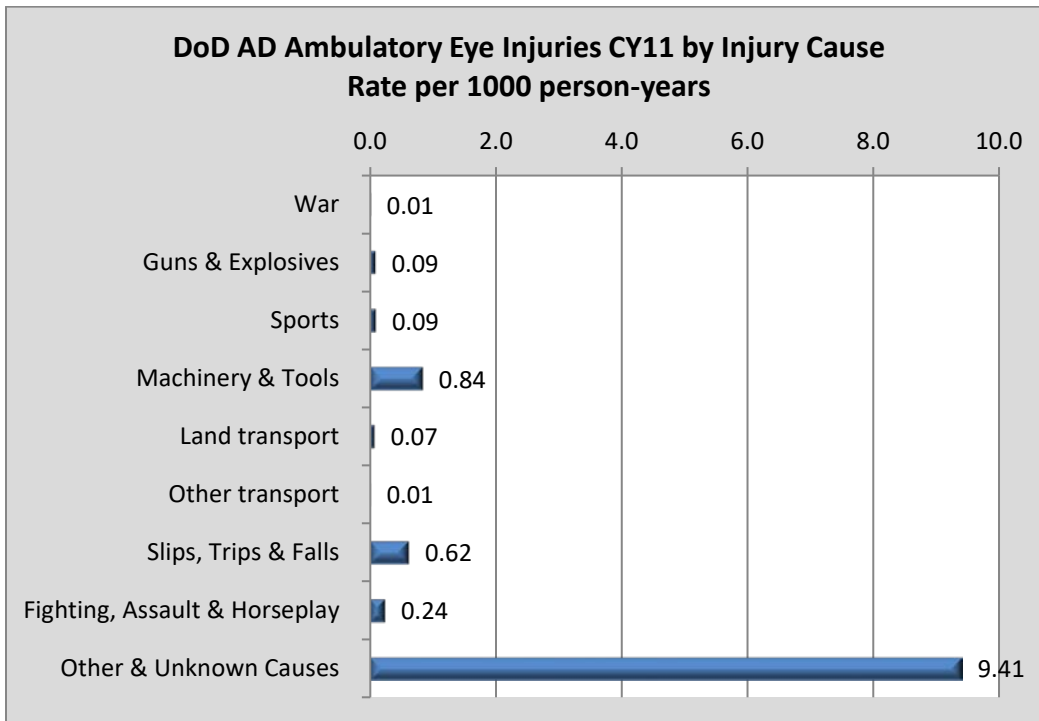
Please note the difference in scale between Ambulatory and Hospitalized graphs



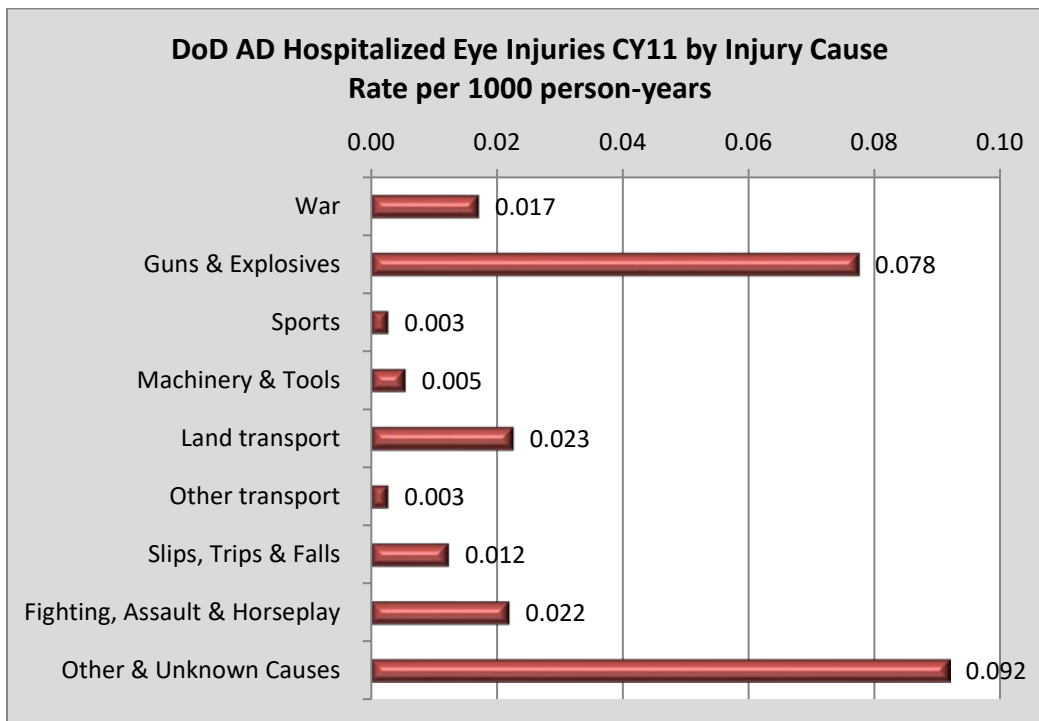
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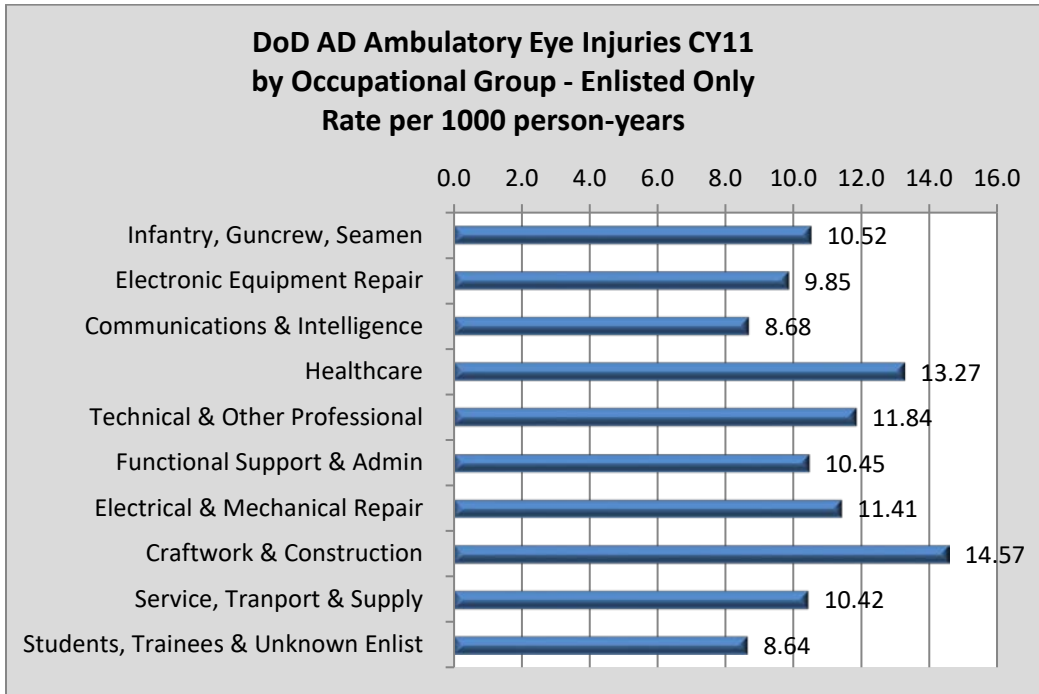
Please note the difference in scale between Ambulatory and Hospitalized graphs



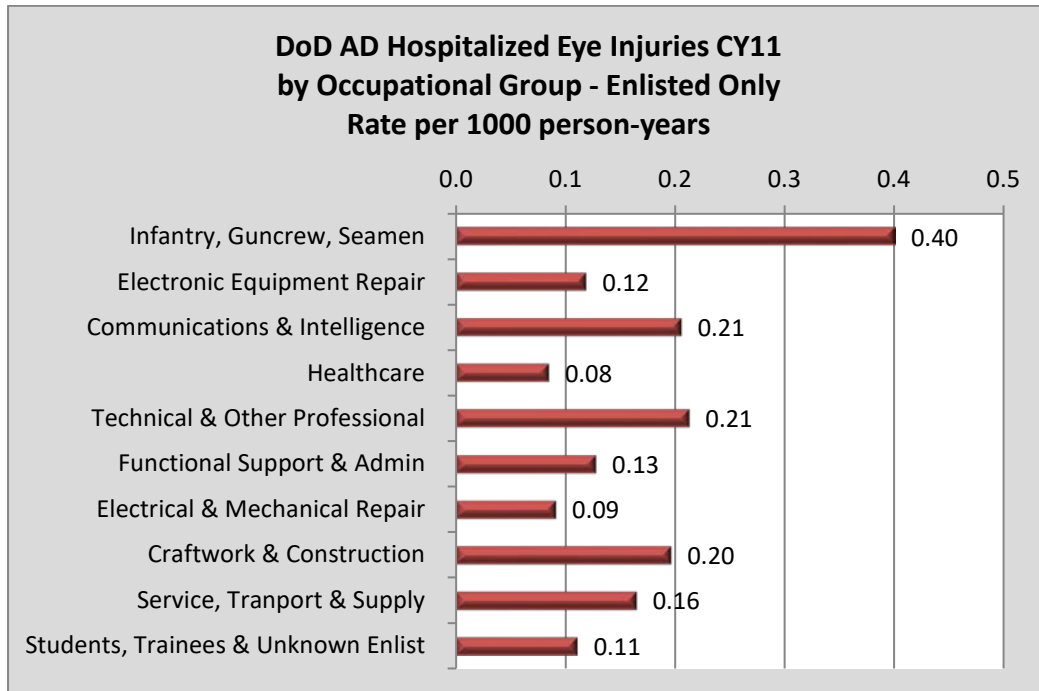
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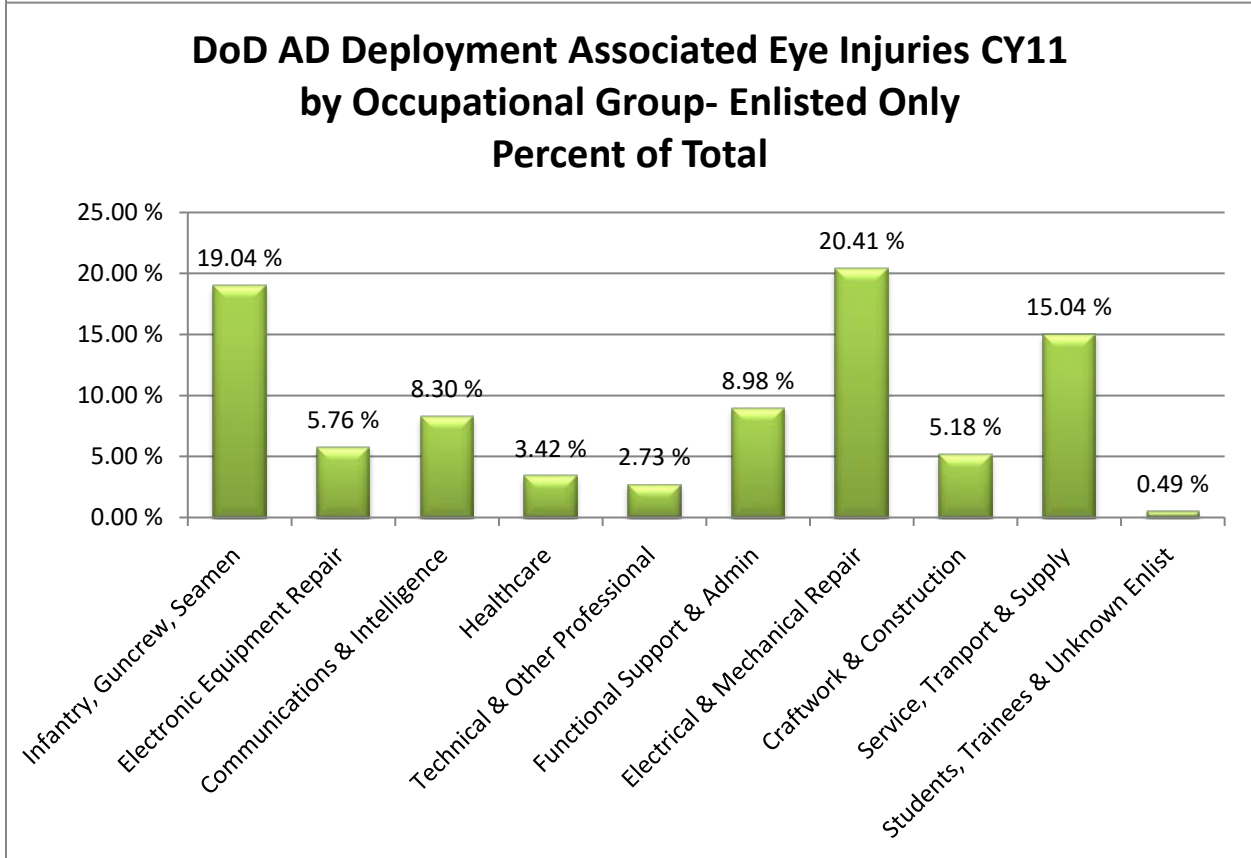
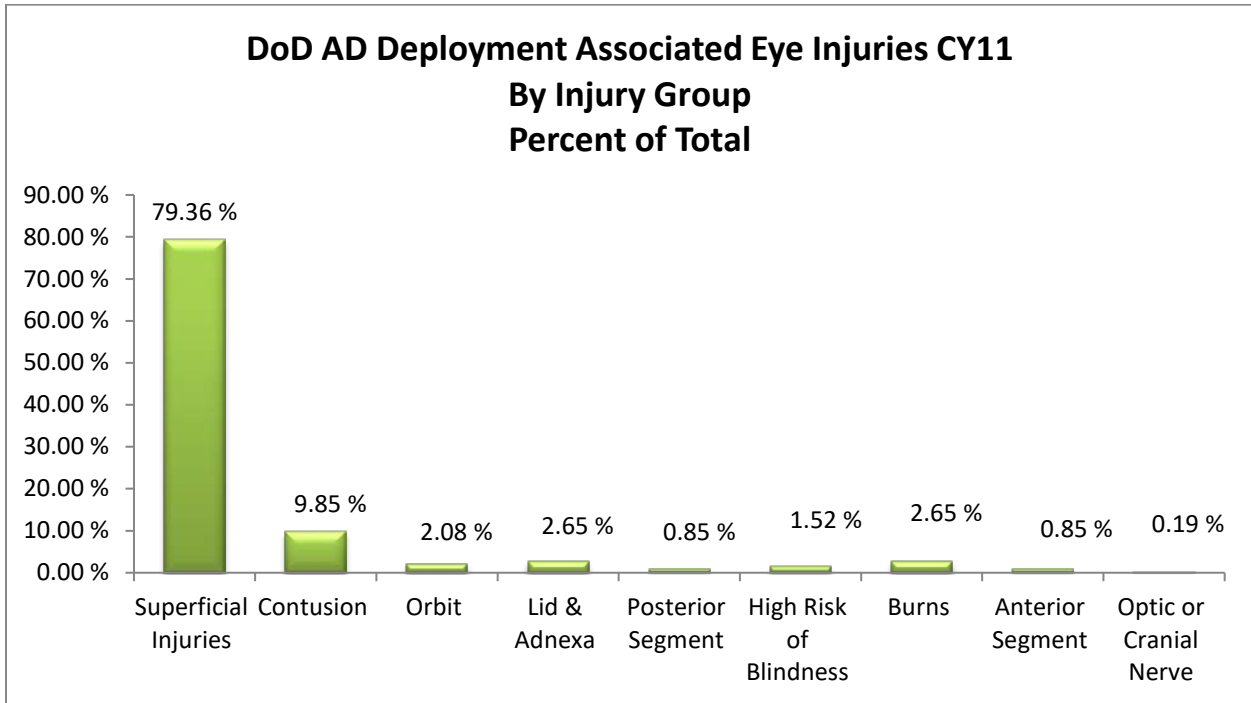
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# CY 2011 DEPARTMENT OF DEFENSE (DoD) COMBINED ACTIVE DUTY (AD) EYE INJURY REPORT SUMMARY

	2011											
	Ambulatory MTF Visits				Deployment-Associated Healthcare				Hospitalizations			
	Primary		All Diagnoses		Primary		All Diagnoses		Primary		All Diagnoses	
	Count	Rate <sup>1</sup>	Count	Rate	Count	% total <sup>2</sup>	Count	% total <sup>3</sup>	Count	Rate	Count	Rate
<b>ALL ACTIVE COMPONENT</b>												
<b>Total</b>	<b>12,588</b>	<b>8.65</b>	<b>15,293</b>	<b>10.50</b>	<b>944</b>	<b>100.00</b>	<b>1,024</b>	<b>100.00</b>	<b>57</b>	<b>0.04</b>	<b>240</b>	<b>0.16</b>
Superficial Injuries	9,740	6.69	11,192	7.69	786	80.95	838	79.36	4	0.00	46	0.03
Contusion	1,618	1.12	2,143	1.49	85	8.75	104	9.85	12	0.01	62	0.04
Orbit	650	0.45	972	0.67	18	1.85	22	2.08	43	0.03	137	0.09
Lid & Adnexa	551	0.38	710	0.49	26	2.68	28	2.65	17	0.01	38	0.03
Posterior Segment	369	0.25	678	0.47	7	0.72	9	0.85	10	0.01	28	0.02
High Risk of Blindness	165	0.11	222	0.15	16	1.65	16	1.52	18	0.01	41	0.03
Burns	307	0.21	343	0.24	25	2.57	28	2.65	0	0.00	4	0.00
Anterior Segment	158	0.11	209	0.14	6	0.62	9	0.85	3	0.00	3	0.00
Optic or Cranial Nerve	50	0.03	72	0.05	2	0.21	2	0.19	2	0.00	12	0.01
Male	10,706	8.60	12,978	10.42	790	83.69	867	84.67	54	0.04	224	0.18
Female	1,882	8.94	2,315	11.00	154	16.31	157	15.33	3	0.01	16	0.08
War	9	0.01	14	0.01	not assessed <sup>2</sup>				6	0.00	25	0.017
Guns & Explosives	112	0.08	125	0.09					29	0.02	113	0.078
Sports	115	0.08	132	0.09					2	0.00	4	0.003
Machinery & Tools	1,143	0.79	1,218	0.84					3	0.00	8	0.005
Land transport	52	0.04	104	0.07					6	0.00	33	0.023
Other transport	6	0.00	9	0.01					3	0.00	4	0.003
Slips, Trips & Falls	780	0.54	897	0.62					6	0.00	18	0.012
Fighting, Assault & Horseplay	223	0.15	344	0.24					13	0.01	32	0.022
Other & Unknown Causes	11,168	7.67	13,698	9.41					41	0.03	134	0.092
<b>ENLISTED (all diagnoses combined)</b>												
<b>Enlisted</b>	<b>10,678</b>	<b>8.82</b>	<b>12,988</b>	<b>10.72</b>	<b>846</b>	<b>89.62</b>	<b>915</b>	<b>89.36</b>	<b>52</b>	<b>0.04</b>	<b>218</b>	<b>0.18</b>
<20	515	4.86	632	5.97	20	2.12	26	2.54	1	0.01	8	0.08
20-24	3,928	8.59	4,861	10.63	379	40.15	415	40.53	24	0.05	105	0.23
25-29	2,946	10.00	3,569	12.12	221	23.41	231	22.56	15	0.05	58	0.20
30-34	1,623	9.75	1,900	11.42	120	12.71	133	12.99	2	0.01	21	0.13
35-39	1,002	8.76	1,195	10.45	56	5.93	59	5.76	6	0.05	16	0.14
>=40	664	9.14	831	11.44	50	5.30	51	4.98	4	0.06	10	0.14
E0-E4	5,624	8.76	6,987	10.88	498	52.75	541	52.83	33	0.05	147	0.23
E5-E9	5,054	8.88	6,001	10.55	348	36.86	374	36.52	19	0.03	71	0.12
Infantry, Guncrew, Seamen	1,702	8.32	2,151	10.52	165	17.48	195	19.04	17	0.08	82	0.40
Electronic Equipment Repair	822	8.15	994	9.85	57	6.04	59	5.76	2	0.02	12	0.12
Communications & Intelligence	848	6.99	1,053	8.68	81	8.58	85	8.30	5	0.04	25	0.21
Healthcare	924	11.20	1,095	13.27	34	3.60	35	3.42	4	0.05	7	0.08
Technical & Other Professional	403	9.54	500	11.84	24	2.54	28	2.73	3	0.07	9	0.21
Functional Support & Admin	1,399	8.52	1,717	10.45	88	9.32	92	8.98	3	0.02	21	0.13
Electrical & Mechanical Repair	2,323	9.64	2,749	11.41	203	21.50	209	20.41	5	0.02	22	0.09
Craftwork & Construction	561	12.26	667	14.57	48	5.08	53	5.18	4	0.09	9	0.20
Service, Transport & Supply	1,242	8.53	1,517	10.42	141	14.94	154	15.04	8	0.05	24	0.16
Students, Trainees & Unknown Enlist	454	7.20	545	8.64	5	0.53	5	0.49	1	0.02	7	0.11
Army	4,259	9.12	5,332	11.42	469	49.68	516	50.39	32	0.07	109	0.23
Navy	2,175	8.12	2,604	9.72	178	18.86	184	17.97	7	0.03	24	0.09
Air Force	2,337	8.86	2,769	10.50	115	12.18	121	11.82	4	0.02	19	0.07
Marine Corps	1,466	8.18	1,779	9.93	83	8.79	93	9.08	9	0.05	64	0.36
Coast Guard	441	13.18	504	15.07	1	0.11	1	0.10	0	0.00	2	0.06
<b>OFFICER (all diagnoses combined)</b>												
<b>Officer</b>	<b>1,910</b>	<b>7.80</b>	<b>2,305</b>	<b>9.41</b>	<b>98</b>	<b>10.38</b>	<b>109</b>	<b>10.64</b>	<b>5</b>	<b>0.02</b>	<b>22</b>	<b>0.09</b>
<20	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
20-24	180	6.90	219	8.40	6	0.64	6	0.59	1	0.04	2	0.08
25-29	402	7.20	492	8.81	27	2.86	29	2.83	0	0.00	3	0.05
30-34	393	7.89	450	9.04	24	2.54	27	2.64	1	0.02	3	0.06
35-39	332	6.97	410	8.61	13	1.38	15	1.46	1	0.02	5	0.11
>=40	603	9.19	734	11.18	28	2.97	32	3.13	2	0.03	9	0.14
O0-O3,W0-W3	1,153	7.68	1,388	9.25	64	6.78	72	7.03	3	0.02	12	0.08
O4-O10,W4-W5	757	7.98	917	9.67	34	3.60	37	3.61	2	0.02	10	0.11
General/Flag Ofc & Executives	18	9.08	25	12.61	0	0.00	0	0.00	0	0.00	0	0.00
Tactical Operations Off.	602	7.00	715	8.31	39	4.13	45	4.39	4	0.05	10	0.12
Intelligence Off.	105	7.06	125	8.41	7	0.74	7	0.68	0	0.00	0	0.00
Engineering & Maintenance Off.	251	7.82	316	9.85	16	1.69	17	1.66	0	0.00	5	0.16
Healthcare Off.	332	8.88	408	10.91	11	1.17	11	1.07	0	0.00	5	0.13
Scientists & Professional Off.	111	8.05	133	9.65	4	0.42	7	0.68	0	0.00	0	0.00
Administrative Off.	131	8.36	164	10.47	8	0.85	8	0.78	1	0.06	1	0.06
Supply & Logistics Off.	130	6.49	159	7.93	9	0.95	10	0.98	0	0.00	0	0.00
Students, Trainees & Unknown Off.	230	9.93	260	11.23	4	0.42	4	0.39	0	0.00	1	0.04
Army	756	7.82	931	9.63	58	6.14	65	6.35	2	0.02	12	0.12
Navy	368	6.94	442	8.34	19	2.01	20	1.95	1	0.02	3	0.06
Air Force	511	7.87	615	9.48	15	1.59	15	1.46	2	0.03	6	0.09
Marine Corps	183	8.33	214	9.74	6	0.64	9	0.88	0	0.00	1	0.05
Coast Guard	92	10.97	103	12.29	0	0.00	0	0.00	0	0.00	0	0.00

1. Rates are per 1,000 person-years.

2. Use of ICD-9-CM E-codes for "cause of injury" is largely incomplete for theater healthcare records and therefore omitted.

3. Person-time is not available for deployers so the proportion of the total number of diagnoses is shown.

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