



US DEPARTMENT OF DEFENSE

# BLAST INJURY RESEARCH PROGRAM COORDINATING OFFICE

## Conferences and Symposia

### Improvements in Clinical Care and Rehabilitation of Blast-related Eye Trauma

In May 2017, Researchers from the Vision Center of Excellence were invited speakers at a special session of the Association for Research in Vision and Ophthalmology on Eye and Vision Trauma with a focus on military trauma and blast-related eye injuries. They gave a presentation on “Advances in Military Ocular and Combat Casualty Care: Translating Lessons Learned in War to Peacetime Practice” and “Open Globe Injuries in the Defense and Veterans Eye Injury and Vision Registry (DVEIVR)” (*Eliason 2017, Mazzoli 2017a*).

1. Advances in Military Ocular and Combat Casualty Care: Translating Lessons Learned in War to Peacetime Practice - 2017 marked the centenary of the U.S.’s entry as a combatant in World War 1. This presentation examined the nature of combat injuries and the evolution of combat eye care, focusing particularly on improvements and persistent gaps in care over the last 100 years (Figure 1).
2. Open Globe Injuries in the DVEIVR: An analysis of open globe injuries from 2001 - 2015 among active Service members reveals that they are distinct from civilian open globe injuries in their mechanisms of injury (the majority being caused by projectiles rather than falls) and in the frequency of associated intraocular foreign bodies (greater than half in Service members compared to 1-2 percent in the civilian population). Among Service members, open globe injuries are associated with a greater risk of subsequent ophthalmic complications, including traumatic cataracts and glaucoma, than closed globe injuries; and open globe injuries with intraocular foreign bodies have an elevated risk of complications in general compared to open globe injuries not involving intraocular foreign bodies.

These presentations represent improvements in clinical care and rehabilitation of blast-related eye trauma that will impact this field including treatment provided to Service members.

#### REFERENCES:

Eliason, D. 2017. “Open Globe Injuries in the Defense and Veterans Eye Injury and Vision Registry (DVEIVR).” Association for Research in Vision and Ophthalmology (ARVO) on Eye and Vision Trauma Baltimore, MD, May 7-11, 2017.

Mazzoli, R. A. 2017. “Advances in Military Ocular and Combat Casualty Care: Translating Lessons Learned in War to Peacetime Practice.” Association for Research in Vision and Ophthalmology (ARVO) on Eye and Vision Trauma Baltimore, MD, May 7-11, 2017.





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**FIGURE 1:** Advances in eye protection during combat. (Figure used with permission from the authors)

