



Looking Forward. Seeing the Future.



Vision Center of Excellence

Presentation to the Recovering Warrior Task Force
(RWTF)

14 January 2013

COL Donald A. Gagliano, MD, MHA, Executive Director
Mary G. Lawrence, MD, MPH, Deputy Director

Agenda

- Background
 - Magnitude of Eye and Vision Injury
 - Continuum of Care
- VCE Mission
 - Map to RWTF Focus Areas
 - Improve Vision Health
 - Optimize Readiness
 - Enhance Quality of Life
- Status Updates
 - Vision Research Program
 - Vision Registry
 - Staffing & Strategic Communication
 - Regional Locations
- Stakeholder Engagement
- COE Collaboration
- Changes to Enhance Mission
- Next Steps & Discussion



Magnitude of Eye and Vision Injury

- In the current conflicts, eye injuries have accounted for approximately 15% of all battlefield traumas
- This has resulted in over 197,000 ambulatory and over 4,000 hospitalized cases involving eye injury
- As many as 75% of traumatic brain injury (TBI) patients also suffer visual dysfunctions that can affect their quality of life
- Majority of injuries 20-24 year old males (97%)

	2000-2011				2005-2011	
	Fixed Medical Facilities				Deployed Medical Facilities	
	Ambulatory Visits		Hospitalizations			
	No.	Rate ¹	No.	Rate ¹	No.	% of Total
Total	197,999	11.59	4,178	0.245	9,368	100
Superficial Injuries	144,527	8.46	576	0.034	7,348	74.69
Contusion	26,412	1.56	1,083	0.064	922	9.40
Orbit	10,585	0.62	2,197	0.129	235	2.39
Lid/adnexa	10,493	0.62	745	0.044	361	4.08
Posterior segment	8,218	0.48	316	0.019	81	0.82
High Risk of Blindness	4,387	0.26	740	0.043	247	2.79
Burns	5,191	0.30	136	0.008	434	4.54
Anterior Segment	2,786	0.16	55	0.003	100	1.08
Optic/Cranial nerve	878	0.05	150	0.009	23	0.23

¹ Rate per 1000 persons-year

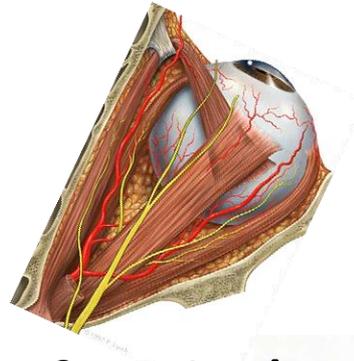
Consequences of the injuries to our warriors will be with us for decades

Continuum of Care for Eye and Vision Injury



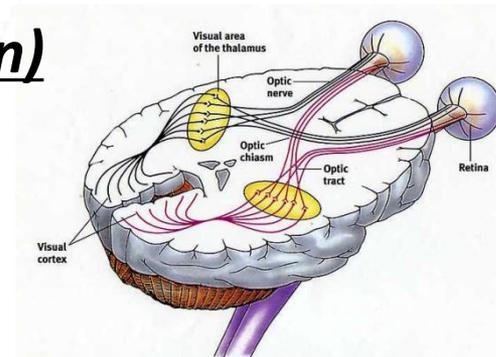
Ocular Trauma

- Globe
- Orbit
- Eyelids



Brain (TBI-associated Vision Dysfunction)

- Optic nerve injuries
- Diffuse brain injury affecting visual processing
- Cranial nerves (eye movement)
- Visual field losses



Vision Center of Excellence Mission

The Vision Center of Excellence (VCE) leads and advocates for programs and initiatives to *improve vision health, optimize readiness,* and **enhance quality of life** for Service members and Veterans.

(Approved January 2012)



VCE Mission Map to RWTF Focus Areas

The VCE mission areas focus activities to ensure mission success:



Clinical Care Integration



Education & Training



Research & Surveillance



Rehabilitation & Reintegration

Supported by data and analytics for development of evidence based improvement initiatives and to guide research

	Improve Vision Health	Optimize Readiness	Enhance Quality of Life
Restoring Wellness and Function			
Restoring into Society			
Optimizing Ability			
Enabling a Better Future			

Improve Vision Health



Ocular Trauma

Programs-Initiatives-Accomplishments

- VCE has expanded its monthly worldwide ocular trauma video/tele-conference to include VA Polytrauma Centers.
- VCE is helping to define the functional requirements of a joint VA/DoD electronic eye note for the integrated Electronic Health Record.
- VCE has led the way leading to inclusion of Fox shields in individual first aid kits (IFAKs), currently being deployed with US Navy and Air Force units.



TBI Associated Vision Dysfunction

Programs-Initiatives-Accomplishments

- Developing consensus-based clinical guidance bringing together subject matter experts from VA, DoD, private sector and academia



Optimize Readiness



Ocular Trauma

Programs-Initiatives-Accomplishments

- The VCE co-hosted a symposium and working group bringing together representatives from VA, DoD, Academia, and others to develop a roadmap for the use of simulation in eye care education.
- The VCE is collaborating with the Harvard Medical School to develop an ocular trauma mannequin.
- VCE has been a leader in the Authorized Protective Eyewear List (APEL) initiative.



TBI-associated Vision Dysfunction

Programs-Initiatives-Accomplishments

- VCE's Vision Care Services Coordination initiative provides early identification of Service members with eye trauma to facilitate appropriate referrals.

Enhance Quality of Life



Ocular Trauma

Programs-Initiatives-Accomplishments

- The VCE vision care services coordination links Service members and Veterans to diverse vision services throughout the MHS, VA, and other federal and civilian agencies.



- The VCE established stakeholder workgroups to assess technology gaps for Service members and Veterans with visual impairments.
- VCE staff also produced two clinical updates published in the June 2012 and November 2012 issues of Federal Practitioner, circulation ~35,000.

TBI Associated Vision Dysfunction

Programs-Initiatives-Accomplishments

- Consensus panel development of practice recommendations for care of TBI-associated visual dysfunction
- Establishment of clinical research priorities



Vision Research Program (VRP) Update



Our goal is to foster innovative and relevant research based on the following focus areas:

- Visual Dysfunction after Concussive Injury/TBI
- Protection against Environmental Hazards (Ballistic Eyewear, Transition lenses and Laser Eye Protection)
- Modulating Ocular Response to Injury (Alter Cornea Injury Response, Minimizing Retinal Laser Injury, Surgical Wound Healing and Orphan Retinal Diseases)
- Tele-Robotics and Simulation (Email Tele-Consultation, Tele-Diagnosis, Tele-Surgery and Mentoring)
- Modulating Ocular Response to Disease (Orphan Retinal Diseases and Anterior Segment Dry Eye Studies)
- Ocular and Visual Restoration (Artificial Retina, Cortical Stimulation for Vision, Optic Nerve Restoration and Corneal Rehabilitation)
- Refractive Surgery; and Education and Training (Simulation and Distance Education)

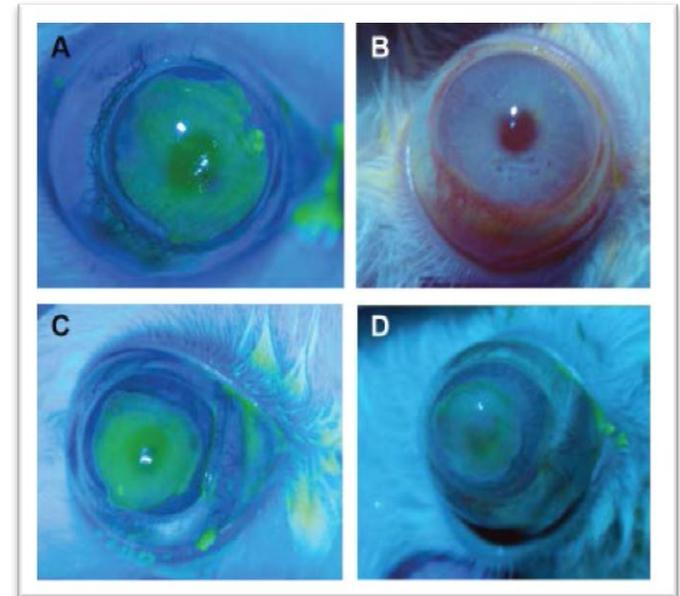
The requirements-based Vision Research Program includes 42 research grants in 17 states and 2 foreign countries



Treatment of Traumatic Visual Injury



- Current Portfolio: 17 Active Projects: \$22.3M*
- Projects include: Designing ocular membrane patches and adhesives for primary management of ocular trauma and biocompatible membranes to guide ocular reconstruction following complex injury
- Strategies and technologies allowing for a sutureless, glueless method to seal ocular wounds
- Performance highlights:
 - 21 Presentations
 - 14 Publications
 - 2 Patent Applications
- Future needs: Continue research to develop and refine ocular wound dressings including technologies to allow for delivery of antibiotic, anti-inflammatory, and analgesics with appropriate absorption, distribution, metabolism, and excretion characteristics

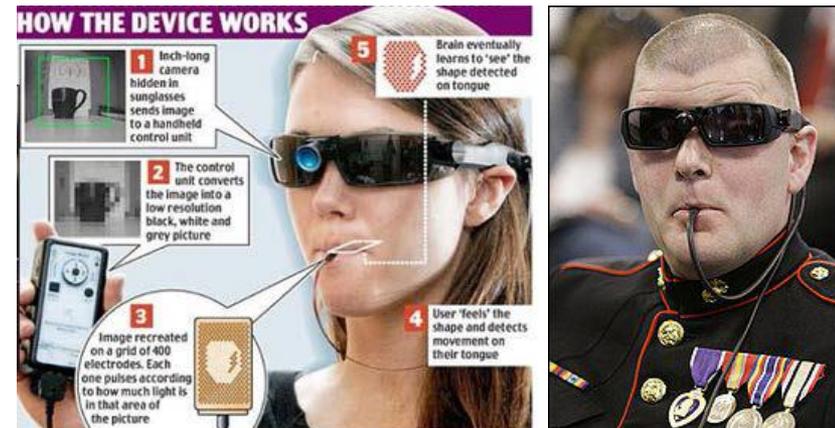
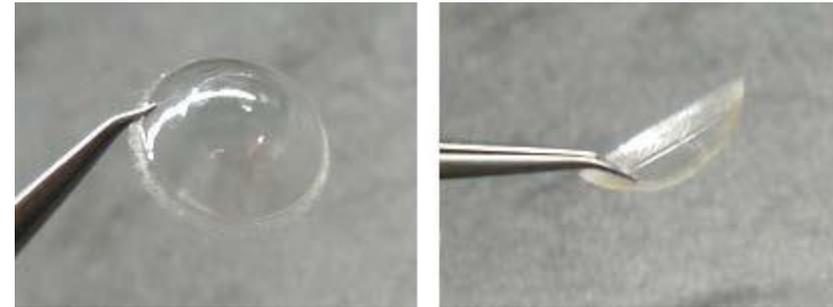


*Includes DHP Core and CSI

Vision Restoration



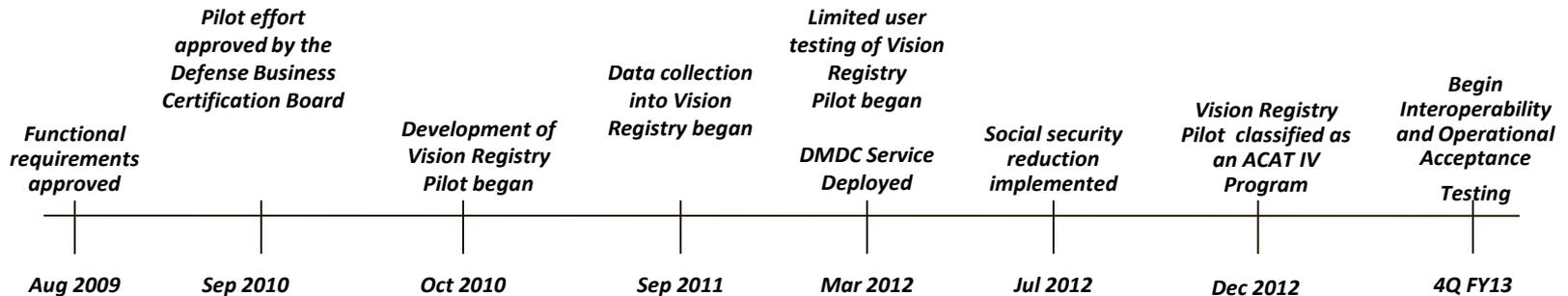
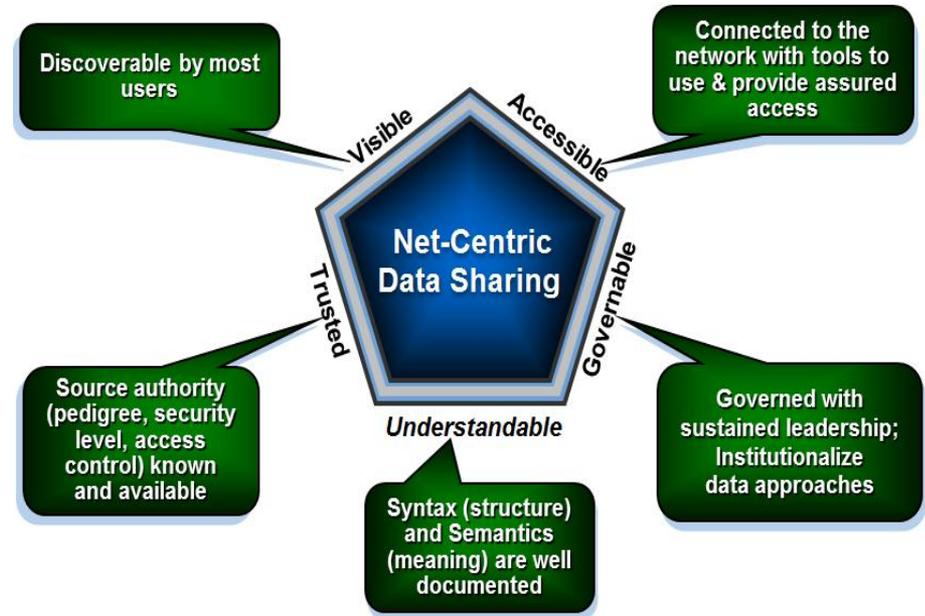
- Current Portfolio: 14 Active Projects: \$18.6M*
- Projects include:
 - Assessing the regenerative capability of a novel transparent bandage lens which self-adheres to the surface of the eye and stimulates the healing process
 - Sensory substitution strategies and technologies enabling the perception of visual information
- Performance highlights:
 - 10 Publications
 - Additional funding, SBIR Phase IIA award from the National Science Foundation (\$449,000)
- Future needs: Clinical validation of computer to brain interfaces delivering vision substitution and regenerative medicine based therapies for wound healing



*Includes DHP Core and CSI

Vision Registry Update

- Is a DoD/VA Initiative that provides quantitative data for longitudinal outcome analyses of eye trauma and vision impairment.
- Will support more effective prevention, mitigation, treatment and rehabilitation of injuries and disorders of the visual system.



Staffing and Strategic Communications Update

Staffing

	Mil	DoD	VA	PHS	Total
Feb 2012	1	7	3.6	3	14.6
Jan 2013	1	9	2.6	2	14.6
Authorized	1	9	6.6	N/A	16.6



Strategic Communications - Outreach

- VCE website transitioned to the consolidated Health.mil website
- Updates to Health.mil web scheduled Summer 2013
 - Health Professionals Only express link
 - Synchronize all vision-related messages across the enterprise
 - Tools to develop external partnerships
 - Reach key stakeholders (508+ compliance)
- Building a suite of VCE communication materials
 - VCE Annual Report in development – March 2013
 - Strategic Communication Plan in development – June 2013
- VCE Strategic Plan Update – July 2013

Regional Locations Update

- VCE National Capital Region (FY09)
 - Crystal City (registry operations, administration)
 - Proximity to DCoE-National Center for Telehealth and Technology Center
 - Bethesda (Walter Reed National Military Medical Center)(FY12)
 - Proximity to National Intrepid Center of Excellence, Uniformed Service University of the Health Sciences and National Institutes of Health
- VCE West (FY11)
 - Tacoma (Madigan Army Medical Center)
 - Large deployment center
 - Madigan Army Medical Center - co-located with Joint Base Lewis-McChord (JBLM)
 - Proximity to American Lake VA Blind Rehab Center (VA Puget Sound Health Care System)
 - Co-located with Madigan TBI Program
- VCE South (pending)
 - San Antonio (San Antonio Military Medical Center)
 - Co-located with HCE, EACE, ISR/BHTC Vision Research Laboratory and Center for the Intrepid
 - Proximity to San Antonio VA Polytrauma Center



Stakeholder Engagement



Keeping Service Members, Veterans, and their families at the center of our mission, the VCE **links together** a network of DoD and VA clinical and research centers around the world and **engages** a vast array of other strategic partners.

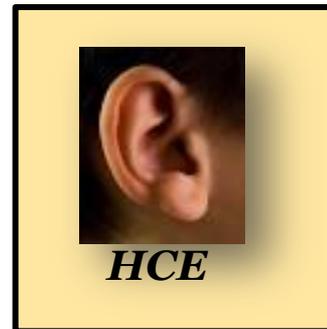
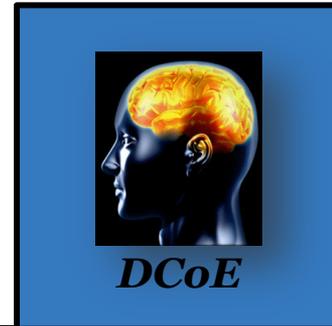
Centers of Excellence Collaboration

Coordination and collaboration with other Centers of Excellence is a priority

- Leading the Registry effort and partnering with the Hearing, the Extremities and Amputation and the Psychological Health and Traumatic Brain Injury Centers of Excellence to develop each registry
- ***Pending publication*** - Development of clinical recommendations (co-morbid conditions)

“...Centers of Excellence have become important components of the Military Health System and their work in support of clinical best practices, research, outreach and treatment must continue with unity of effort and our strong support.”

*Vice Admiral Adam M. Robinson, Jr., MC, USN
Testimony - House Armed Services Committee
13 April 2010*



Changes to Enhance VCE Mission Capability

- Full integration of VCE as a congressionally mandated Joint responsibility for the DoD and VA would greatly facilitate the ability of the VCE to effectively address the clinical and research issues of eye and vision injuries and diseases sustained by our Service Members and Veterans.
- Clearly stated DoD/VA policy and enabling documentation to allow VCE autonomy to act in the best interest of its stakeholders - service members, veterans, and families as an independent agent for change.
- Policy clarifying VCE authority for maximum flexibility at VCE distributed centers with ability to operate at the local level to achieve mission goals to include entering into collaborative agreements with MTFs, VA centers, etc.

Next Steps and Discussion

