

*Defense Centers of Excellence for Psychological Health and  
Traumatic Brain Injury (DCoE) Webinar*

**Animal-Assisted Therapy: An Alternative Treatment  
for Traumatic Brain Injury Rehabilitation**

August 11, 2016  
1-2:30 p.m. (ET)



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**Presenters:**

**Meg Daley Olmert**

Senior Research Advisor, Warrior Canine Connection, Brookeville, Maryland

**Rick A. Yount, M.S., L.S.W.**

Founder and Executive Director, Warrior Canine Connection, Brookeville, Maryland

**Moderator:**

**Brooke Heintz, M.S.W., Ph.D., L.C.S.W.**

TBI Subject Matter Expert, Clinical Affairs Division, Contract support to  
Defense and Veterans Brain Injury Center, Silver Spring, Maryland

# Webinar Details

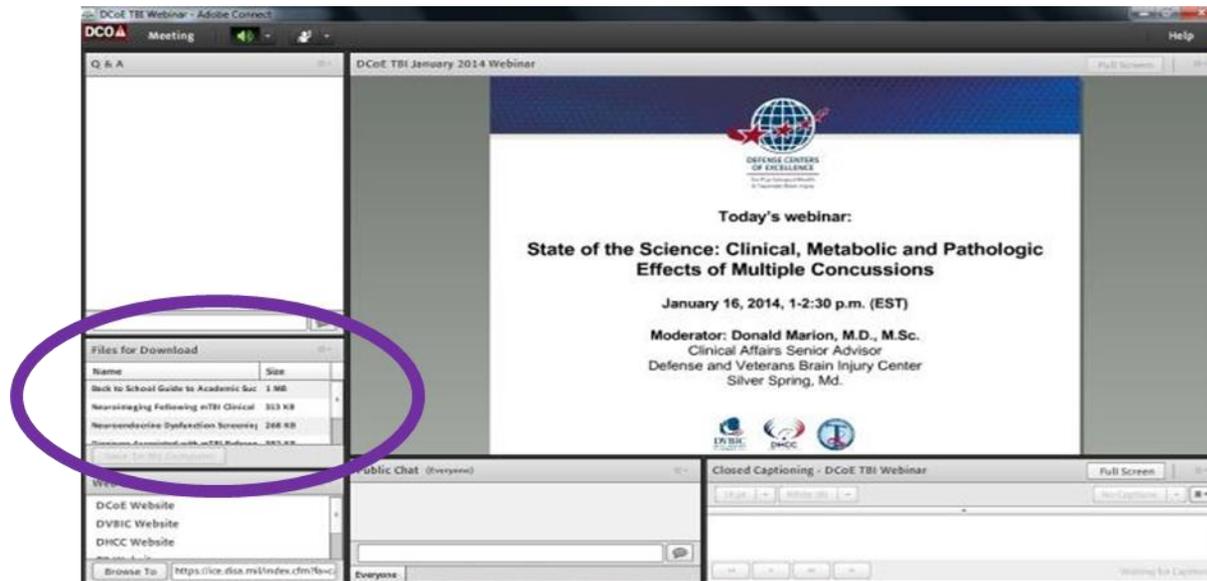


- Live closed captioning is available through Federal Relay Conference Captioning (see the “Closed Captioning” box)
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# Continuing Education Details



- All who wish to obtain continuing education (CE) credit or certificate of attendance, and who meet eligibility requirements, must register by **3 p.m. (ET) August 11, 2016** to qualify for the receipt of credit.
- DCoE's awarding of CE credit is limited in scope to health care providers who actively provide psychological health and traumatic brain injury care to active-duty U.S. service members, reservists, National Guardsmen, military veterans and/or their families.
- The authority for training of contractors is at the discretion of the chief contracting official.
  - Currently, only those contractors with scope of work or with commensurate contract language are permitted in this training.

# Continuing Education Accreditation

(continued)



- This continuing education activity is provided through collaboration between DCoE and Professional Education Services Group (PESG).
- Credit Designations include:
  - 1.5 AMA PRA Category 1 credits
  - 1.5 ACCME Non Physician CME credits
  - 1.5 ANCC Nursing contact hours
  - 1.5 CRCC
  - 1.5 APA Division 22 contact hours
  - 0.15 ASHA Intermediate level, Professional area
  - 1.5 CCM hours
  - 1.5 AANP contact hours
  - 1.5 AAPA Category 1 CME credit
  - 1.5 NASW contact hours
  - 1.5 ACPE contact hours
  - 1.5 Medical Coders contact hours

# Continuing Education Accreditation

## (continued)



### Physicians

This activity has been planned and implemented in accordance with the accreditation requirements and policies of the Accreditation Council for Continuing Medical Education (ACCME) through the joint providership of Professional Education Services Group and the DCoE. Professional Education Services Group is accredited by the ACCME to provide continuing medical education for physicians. This activity has been approved for a maximum of 1.5 hours of AMA PRA Category 1 Credits™. Physicians should only claim credit to the extent of their participation.

### Nurses

Nurse CE is provided for this program through collaboration between DCOE and Professional Education Services Group (PESG). Professional Education Services Group is accredited as a provider of continuing nursing education by the American Nurses Credentialing Center's Commission on Accreditation (ANCC). This activity provides a maximum of 1.5 contact hours of nurse CE credit.

### Psychologists

This activity is approved for up to 1.5 hours of continuing education. APA Division 22 (Rehabilitation Psychology) is approved by the American Psychological Association to sponsor continuing education for psychologists. APA Division 22 maintains responsibility for this program and its content.

### Occupational Therapists

(ACCME Non Physician CME Credit) For the purpose of recertification, The National Board for Certification in Occupational Therapy (NBCOT) accepts certificates of participation for educational activities certified for AMA PRA Category 1 Credit™ from organizations accredited by ACCME. Occupational Therapists may receive a maximum of 1.5 hours for completing this live program.

# Continuing Education Accreditation (continued)



## **Physical Therapists**

Physical Therapists will be provided a certificate of participation for educational activities certified for AMA PRA Category 1 Credit™. Physical Therapists may receive a maximum of 1.5 hours for completing this live program.

## **Rehabilitation Counselors**

The Commission on Rehabilitation Counselor Certification (CRCC) has pre-approved this activity for 1.5 clock hours of continuing education credit.

## **Speech-Language Professionals**

This activity is approved for up to 0.15 ASHA CEUs (Intermediate level, Professional area)

## **Case Managers**

This program has been pre-approved by The Commission for Case Manager Certification to provide continuing education credit to CCM® board certified case managers. The course is approved for up to 1.5 clock hours. PESG will also make available a General Participation Certificate to all other attendees completing the program evaluation.

## **Nurse Practitioners**

Professional Education Services Group is accredited by the American Academy of Nurse Practitioners as an approved provider of nurse practitioner continuing education. Provider number: 031105. This course is offered for 1.5 contact hours (which includes 0 hours of pharmacology).

# Continuing Education Accreditation

## (continued)



### **Physician Assistants**

This Program has been reviewed and is approved for a maximum of 1.5 hours of AAPA Category 1 CME credit by the Physician Assistant Review Panel. Physician Assistants should claim only those hours actually spent participating in the CME activity. This Program has been planned in accordance with AAPA's CME Standards for Live Programs and for Commercial Support of Live Programs.

### **Social Workers**

This Program is approved by The National Association of Social Workers for 1.5 Social Work continuing education contact hours.

### **Pharmacists and Pharmacy Technicians**

Professional Education Services Group is accredited by the Accreditation Council for Pharmacy Education as a provider of continuing pharmacy education. This program will provide a maximum of 1.5 contact hours for participants attending all conference CPE activities. Conference registration fees cover the cost of CE credit. UAN # 0829-0000-16-199-L04-P/T

### **Medical Coders**

Medical Coders will be provided a certificate of participation for educational activities certified for AMA PRA Category 1 Credit TM. Medical Coders may receive a maximum of 1.5 hours for completing this live program.

### **Other Professionals:**

Other professionals participating in this activity may obtain a General Participation Certificate indicating participation and the number of hours of continuing education credit.

# Questions and Chat



- Throughout the webinar, you are welcome to submit technical or content-related questions via the Q&A pod located on the screen. **Please do not submit technical or content-related questions via the chat pod.**
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- Participants may chat with one another during the webinar using the chat pod.
- The chat function will remain open 10 minutes after the conclusion of the webinar.

# Webinar Overview



Many service members returning from combat deployments are coping with the “invisible wounds of war” including traumatic brain injury (TBI) and posttraumatic stress disorder (PTSD). These wounds often negatively impact quality of life and community reintegration. The Walter Reed National Military Medical Center Service Dog Training Program assists patients with TBI, PTSD and other psychological injuries through the clinically-based, goal-directed complementary treatment intervention of animal-assisted therapy. Speakers will address the healing power of the human-animal bond, how patients are taught to train mobility service dogs, how these skills improve TBI and PTSD symptoms, and current research initiatives.

# Webinar Overview (continued)



At the conclusion of this webinar, participants will be able to:

- Describe the purpose and scope of the Service Dog Training Program and animal-assisted therapy intervention
- Explain the human-animal bond and its therapeutic role in reducing TBI and PTSD symptoms
- Articulate the role that active participation in the Service Dog Training Program can have as an alternate treatment to traditional rehabilitation approaches for patients with TBI or PTSD

# Meg Daley Olmert



- Senior research advisor for Warrior Canine Connection's Mission Based Trauma Recovery Program
- World-renowned expert on the neurobiology of the human-animal bond and its therapeutic effects
- Author of the ground-breaking book, *Made for Each Other: The Biology of the Human-Animal Bond* (2009)
- Co-investigator on two major Department of Defense-funded research studies on the efficacy and biological basis of the Warrior Canine Connection's Service Dog Training Program for the reduction of symptoms of TBI and PTSD

# Rick A. Yount, M.S., L.S.W.



- Founder and executive director of Warrior Canine Connection
- Provides service dog training to Wounded Warriors at the National Intrepid Center of Excellence in Bethesda, Maryland
- Combined 28 years of social work experience with service dog training skills and knowledge to develop the therapeutic service dog training
- Certified Service Dog Trainer and Instructor
- Education
  - M.S., Assistance Dog Education, Bergin University of Canine Studies
  - B.A., West Virginia University

# **Warrior Canine Connection (WCC) Service Dog Training Program (SDTP)**

Rick A. Yount, M.S., L.S.W.



# Service Dog Training Program



## **Disclosure – Rick A. Yount**

- Mr. Yount has no financial relationship to disclose.
- The views expressed in this presentation are those of the author and do not necessarily reflect the official policy or position of the Department of Defense or the U.S. Government.
- The description of programs in this presentation is for descriptive purposes only and not intended to promote any individual program.

## What is the WCC SDTP?

- A clinically based, goal-directed **animal-assisted therapy** program designed to improve the emotional, behavioral, social and family life of service members and veterans with TBI and PTSD
- A **mission** that allows service members/veterans with TBI/PTSD to help a fellow Wounded Warrior by a training service that can transform their lives
- A **voluntary complementary intervention** that can provide meaningful, experiential learning opportunities that enhance a wide range of TBI/PTSD treatment programs

# Volunteer Warrior-Trainers

- February 2009 - April 2015
  - Walter Reed Army Medical Center - 220
  - WRNMMC - 1,300
  - Fort Belvoir - 330
  - National Intrepid Center of Excellence (NICoE) - 850 (includes family members)
- May 2013 - April 2015
  - VA Palo Alto Health Care System/Menlo Park - 1,600

Total program participants: 4,300



# Who Are WCC's Service Dogs? Nature and Nurture

- Service dog genetics
  - WCC's golden retrievers and labs come from breeding stock selected to be
    - Socially responsive
    - Soft tempered
    - Low aroused
    - Sound in health
    - Trainable



# Nurture: The Epigenetic Factor

## The Power of Puppy Petting



(Feldman, Gordon, Schneiderman, Weisman, & Zagoory-Sharon, 2010)

Image source: Warrior Canine Connection

# Who Are WCC's "Service Humans?"

- Service dog instructors
- Foster/puppy parents/puppy sitters
- Clinicians – Social work, occupational/recreational therapy
- Warrior trainers: Novice, advanced, senior
- Referrals – NICOE, Intensive Outpatient Program, Outpatient Program, Addiction Treatment Services, 7 East, 7 West, Warrior Transition Battalion Occupational Therapy, Outpatient Psychiatry, Co-Occurring/Partial Hospitalization, Quantico Nurse Case Management

# What are WCC's Program Goals?

- To provide fun, meaningful, experiential learning opportunities
- Designed to improve
  - Purpose
  - Cognition
  - Stress reactivity
  - Emotional skills
  - Social competency

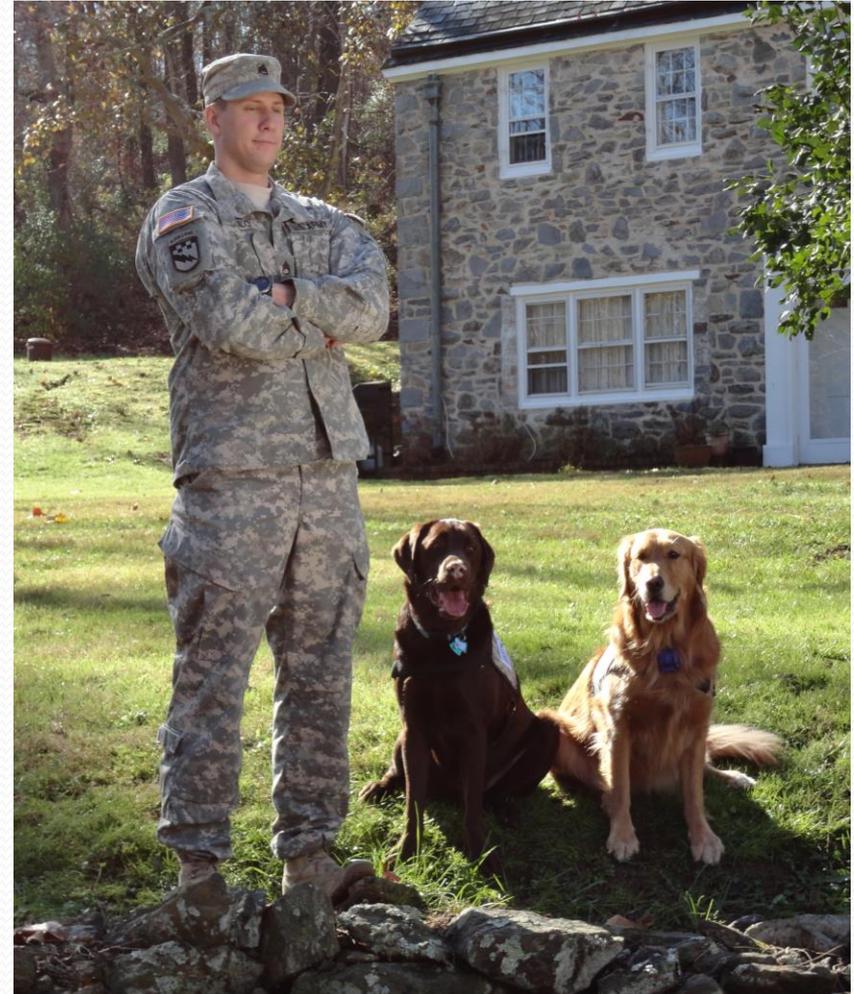


Image source: Warrior Canine Connection

# Need for Effective, Engaging Alternative Interventions to Treat Combat Trauma

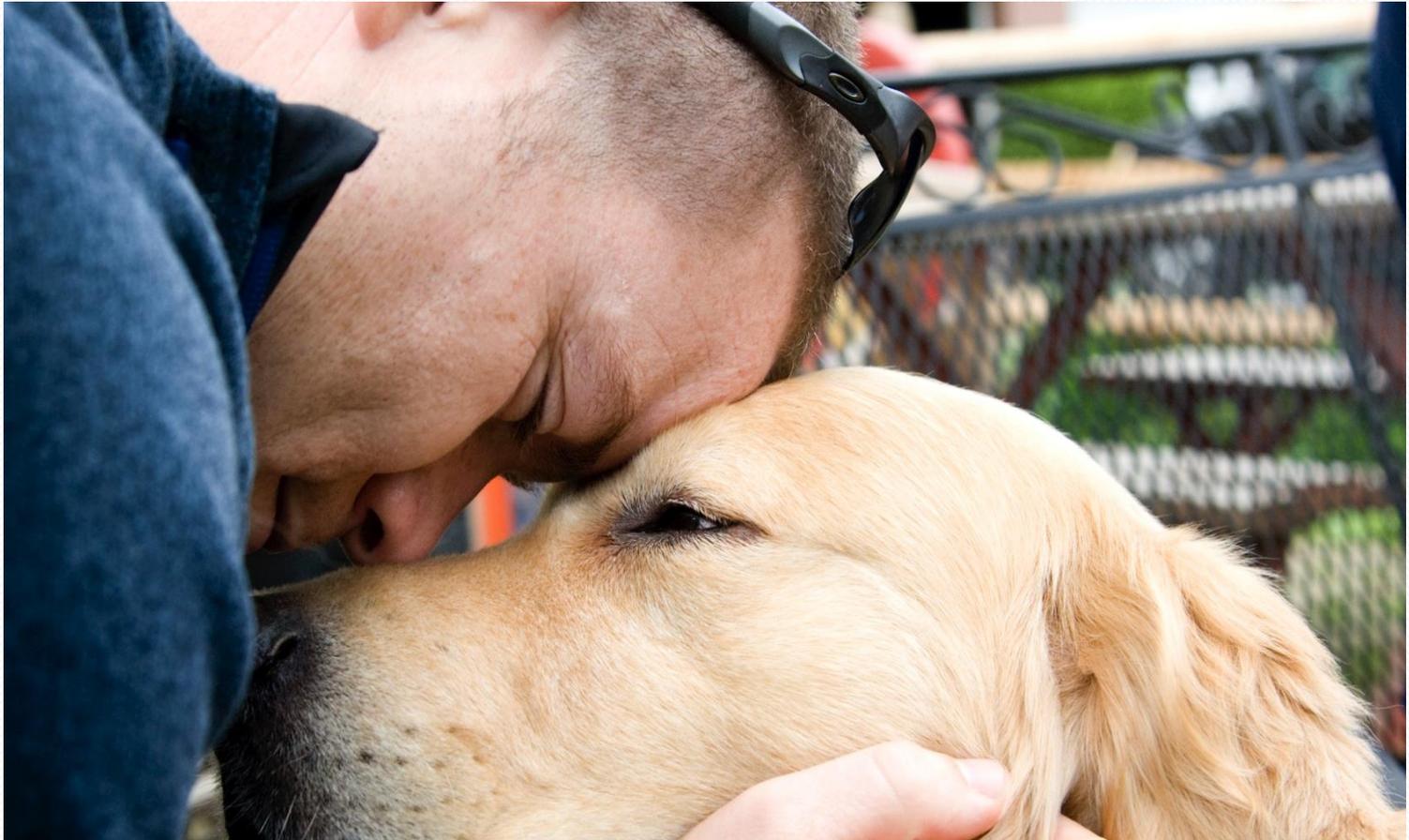
- Fewer than 50% of soldiers who need mental health care receive it
- Drop-out rate is 20-40%
- Key reason for drop-out: General lack of trust for any mental health professional
- How to keep patients in critical mental health care
  - “Disguise” mental health care as primary care or through a greater range of alternative health interventions.
  - Better match evidence-based therapies with patient preferences

# WCC's Therapeutic Rationale: Combine the Healing Power of the Warrior Ethos of “Helping a Fellow Veteran”



Image source: Warrior Canine Connection

# With the Healing Power of the Human-Animal Bond...



# To Reduce the Symptoms of TBI/PTSD

- Emotional numbing
- Increased arousal
- Cognitive deficits
- Difficulty reading nonverbal intentions
- Social avoidance
- Dysregulation of brain and hormonal function

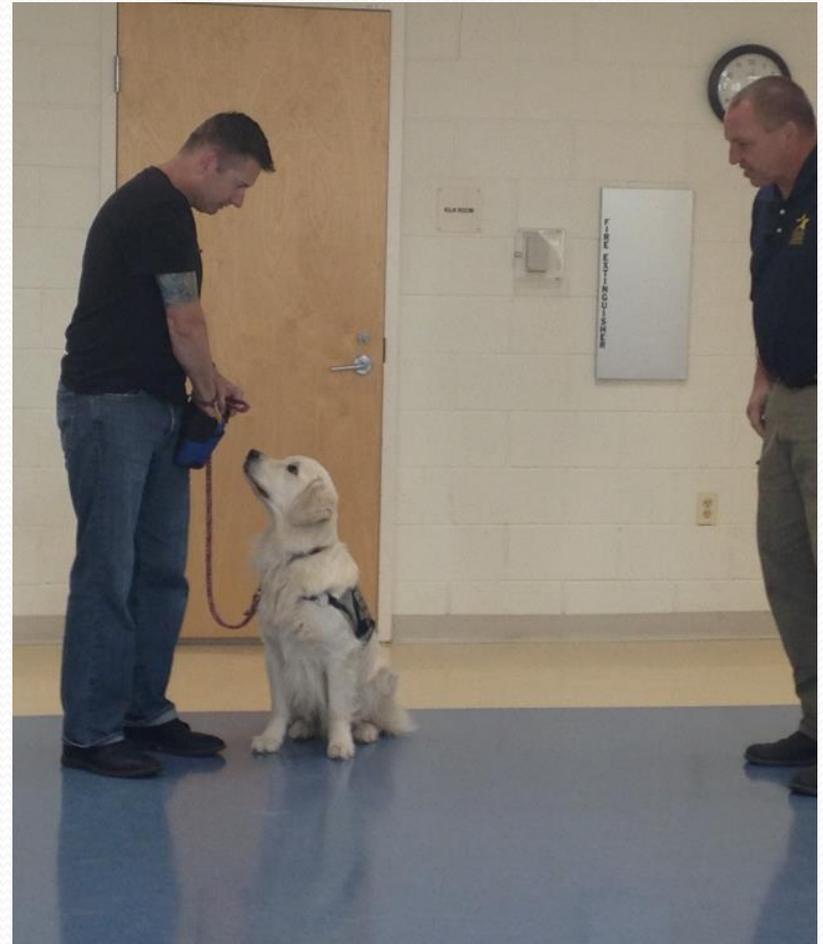


Image source: Warrior Canine Connection

# Overcome Emotional Numbing and Communication Difficulties



- Only **positive emotions and voice** signals reward to a dog
- **Fake it until you make it**
- Seeing the **dog's point of view increases capacity for empathy**
- Dogs respond to **effective communication skills: The power of well-timed, appropriate assertiveness and praise**

Image source: Warrior Canine Connection

# Reduce Arousal and Improve Emotional Control

- Practice **emotional regulation** with commands and praise
- **Practice patience experientially**
- **Concentrate on dog's wellbeing, not self survival**
- Learn to **emotionally synchronize** with the relaxed temperament of WCC's calm dogs



# Counter Avoidance with Positive Social Encounters

- Training a dog is a **compelling reason to wake up and get out!**
- Training a service dog means **you have to take them out in public places**
- WCC's dogs are powerful **social lubricants**, providing **“Prolonged Positive Exposure”** with friendly strangers



# Reduce Re-experiencing

- **Provide emotional leadership to teach the dog that the world is a safe place.**
  - **Create positive associations** for the dog when loud noise, crowds and other startling stimuli occur.
  - **Change the context:** “I didn’t have a dog in Iraq.”
  - **Trigger calm** by stroking the dog.





# **How the WCC SDTP Affects Brain Function for TBI and PTSD**

Meg Daley Olmert

## **Disclosure – Meg Daley Olmert**

- Ms. Olmert has no financial relationship to disclose.
- The views expressed in this presentation are those of the author and do not necessarily reflect the official policy or position of the Department of Defense, nor the U.S. Government.
- The description of programs in this presentation is for descriptive purposes only and not intended to promote any individual program.

# Restore Neural and Hormonal Functions Impaired by TBI and PTSD

- TBI AND PTSD reduced neural and hormonal function in brain centers (prefrontal cortex/amygdala) that regulate memory, learning, emotional control, empathy. (Dalmonte, Schintu, Pardini, Berti, Wasserman, Graffman, Krueger, 2014)
- Veterans with blast mild TBI were found to have a prevalence of pituitary dysfunction of 42.9% compared to 6.7% in those not exposed – 1,430 times greater than that of the general population. (Wilkinson, 2014)
- The neurohormone **oxytocin** is one of the pituitary hormones impaired by blast mild TBI. Low levels of oxytocin are found in veterans with PTSD and TBI and are related to symptom severity. (Eidelman-Rothman et al., 2015)
- Increasing oxytocin has been shown to restore prefrontal and neural function in veterans with combat TBI and PTSD. (Eidelman-Rothman et al., 2015)

# Oxytocin Effects on Central and Peripheral Nervous Systems

- Suppresses the hypothalamic, pituitary, adrenal axis (HPA) stress response
- Quiets the amygdala in response to negative stimuli
- Modulates sympathetic activation of heart to stress (CRFR2)
- Decreases startle reactivity
- Improves vagal tone and heart rate variability
- Reduces pain perception, anxiety and depression
- Promotes sleep
- **Restores neural activity** involved in working memory, cognitive control and empathy

# Oxytocin Effects on Social Behavior

- Interacts with dopamine, serotonin and opioid systems in the brain, producing a state that initiates and rewards social behavior
- Increases trusting and trustworthy behavior
- Facilitates parental behavior and bonding
- Improves social recognition and approach
- Increases facial attention, especially eye region
- Improves interpretation of nonverbal cues
- Improves empathy and “mind reading”
- Promotes mate bonding

(Tedeschi, Sisa, Olmert, Parish-Plass, & Yount, 2015)



## Friendly contact with dogs increases oxytocin in humans.

(Olmert, 2009; Beetz, 2012)

Image source: Warrior Canine Connection

# Program Clinical Observations

- Improving emotional regulation and patience
- Improving family dynamics, parenting skills
- Reestablishing a sense of purpose
- Reducing social isolation/reintegrating into the community
- Restoring relationship skills/trust/confidence
- Relaxing the hypervigilant survival state
- Improving sleep patterns
- Reducing need for pain medications
- Improving cognition (recalling and sequence of commands)
- Effective communication, assertiveness
- Enhanced patient interaction with clinicians

# One Service Dog in Training Can Help Many in Need!



# Deliverables

Certified, skilled service dogs at no cost for veterans with mobility impairments





# Research Initiatives

# **Human-Dog Interactions: Neuroendocrine and Physiological Alterations in Service Members with PTSD Who Train Service Dogs**

- Funding Source: DoD, Defense Health Programs, Defense Medical Research and Development Program (DMRDP)
- Principal Investigator: Patricia Deuster, PhD, MPH (Uniformed Services University of the Health Sciences (USU))
- Study Aims: Randomized Control Trial (Waitlist Control)
- N = 40 in progress
- Completion 2017
- Evaluate the feasibility and acceptability of the WCC SDTP as an adjunctive treatment for PTSD in U.S. military service members

## Human-Dog Interactions (continued)

- Determine whether service members with PTSD who participate for two weeks in the WCC program experience
  - Improved symptoms of PTSD and selected measures of mood, social support, health, sleep, and perceived stress
  - Improved resting autonomic and hypothalamic-pituitary-adrenal (HPA) axis function and regulation
  - Decreased autonomic nervous system (ANS) and HPA axis reactivity in response to a physical stressor (exercise challenge)
  - Upregulation of oxytocin release and down-regulation of arginine vasopressin, adrenocorticotrophic hormone (**ACTH**), cortisol, dehydroepiandrosterone (DHEA)

# Biopsychosocial Efficacy of Service Dog Training in Service Members with PTSD

(2015-2020)

- Principal Investigator: Paul Pasquina, MD, Colonel, U.S Army (Ret.)
- This RCT study is a multidisciplinary project between NICoE, WRNMMC, USU, Fort Belvoir Community Hospital, Georgetown University, University of Maryland, Virginia Commonwealth University, WCC and Walter Reed Army Institute of Research.
- Funding: 2014 National Defense Authorization Act directed research for WRNMMC and NICoE (WCC) Service Dog Training Program
- N=450
- 6-16 one-hour service dog training sessions
- Control: Waitlist group and Non-interest in program group
- Baseline measures: Psychological, physiological, biological, genomic
- Follow-up measures: 3 weeks; 3, 6, and 12 months

## **Biopsychosocial Efficacy (continued)**

- Special emphasis on SDTP effect on
  - **Social engagement**
  - **Sleep**
  - **Family dynamics**

# WCC Team



Image source: Warrior Canine Connection



Serving Humankind for 30,000 Years....



**Warrior**  
**Canine**  
**Connection**

# References

- Beetz, A., Uvnas-Moberg, K., Julius, H., Kortshchal, K. (2012). Psychological and psychophysiological effects of human-animal interactions: The possible role of oxytocin. *Frontiers in Psychology*, 3, 234. doi: 10.3389/fpsyg.2012.00234
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63-69.

# Product Spotlight: A Head for the Future



**A HEAD FOR THE FUTURE**

**PREVENT** Protect your head  
**RECOGNIZE** Know the signs and symptoms  
**RECOVER** Get checked out and rest

**A Head for the Future**, an initiative of the Defense and Veterans Brain Injury Center, raises awareness of signs, symptoms and treatment of traumatic brain injury (TBI) and educates the military community about preventing TBI.

Visit [dvbic.dcoe.mil/aheadforthefuture](https://dvbic.dcoe.mil/aheadforthefuture) to learn more about TBI, discover stories of recovery and hope, and follow us on Facebook and Twitter.



# Questions

- Submit questions via the Q&A box located on the screen.
- The Q&A box is monitored and questions will be forwarded to our presenters for response.
- We will respond to as many questions as time permits.



# How to Obtain CE Credit



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2. **After the webinar**, go to URL <http://dcoe.cds.pesgce.com>
3. Select the activity: **11 Aug TBI Webinar**
3. This will take you to the log in page. Please enter your e-mail address and password. If this is your first time visiting the site, enter a password you would like to use to create your account. Select Continue.
4. Verify, correct, or add your information AND Select your profession(s).
5. Proceed and complete the activity evaluation
6. Upon completing the evaluation you can print your CE Certificate. You may also e-mail your CE Certificate. Your CE record will also be stored here for later retrieval.
7. **The website is open for completing your evaluation for 14 days.**
8. After the website has closed, you can come back to the site at any time to print your certificate, but you will not be able to add any evaluations.

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# Chat and Networking



- Chat function will remain open 10 minutes after the conclusion of the webinar to permit webinar attendees to continue to network with each other.

# Save the Date



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## Next DCoE Traumatic Brain Injury Webinar

Unique Perspective For Women with Mild TBI: Gender Differences and Coping Strategies

**October 13, 2016; 1-2:30 p.m. (ET)**

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## Next DCoE Psychological Health Webinar:

The next DCoE Psychological Health webinar, "Compassion Fatigue" is scheduled for **August 25, 2016 from 1-2:30 p.m. (ET)**

# Save the Date (continued)



**September 13 – 15, 2016**

**2016 Defense Centers of Excellence for Psychological Health  
and Traumatic Brain Injury Summit**

**State of the Science: Advances, Current Diagnostics and  
Treatments of Psychological Health and Traumatic Brain Injury  
in Military Health Care.**

Registration for the 2016 DCoE Summit is open.

[http://dcoe.adobeconnect.com/dcoesummit2016/event/event\\_info.html](http://dcoe.adobeconnect.com/dcoesummit2016/event/event_info.html)

for more information.

# DCoE Contact Info



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