

BOB WOODRUFF FOUNDATION

Helping **heroes** on the homefront

HEALING THERAPY: A New Role for Man's Best Friend a BWF High Impact Collaboration™

VENUE: USO Warrior & Family Center Bethesda 4565 Taylor Road, Bldg. 83



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EXECUTIVE SUMMARY

On June 12, 2014, the Bob Woodruff Foundation sponsored a second convening on the use of service dogs in treatment protocols for service members and veterans suffering from traumatic brain injury (TBI) and post-traumatic stress (PTS). The event brought together representatives of more than 20 professional organizations that breed, train, and place service dogs and have experience in animal-assisted therapy for behavioral health. The goal of the convening was to gain a better understanding of the perspectives and issues confronting the service dog industry, report on the state of the science that underlies animal-assisted behavioral therapy, share industry best practices, and find ways to work together to advance the use of service dogs for those with psychological disorders.

Presentations included an overview of the use of dogs by the military to include deploying service dogs in Iraq and Afghanistan; efforts by the Department of Veterans Affairs and the Department of Defense to develop policies regarding the use of dogs for behavioral health; and the science that underlies treatment protocols to help patients recover from combat stress. In addition, the founding director of Warrior Canine Connection (WCC) described the innovative program taking place at the National Intrepid Center of Excellence (NICoE), and at the VA polytrauma center in Palo Alto, in which PTS patients are taught to train service dogs for fellow wounded warriors who need service dogs for mobility assistance. The WCC program is designed to mitigate PTS symptoms such as re-experiencing, emotional numbing, and social isolation.

NICoE leaders announced the launch of a two-week baseline pilot study to evaluate the effectiveness of the WCC program in the treatment of PTS patients. The study will measure hormone levels and neuroendocrine system regulation and assess mood, social support, health, sleep patterns, and perceived stress.

As a follow up to the convening, several participants volunteered to conduct a survey of the service dog community to identify commonalties in the following areas:

- The kinds of dogs used
- The number of dogs placed each year
- Training criteria for dogs and trainers
- Tools used to assess client needs
- Clinical models employed
- Process used to match client and dog
- Measures used to assess outcomes
- Business models employed

PROGRAM

Convening Overview & Introductions Barbara Lau, Special Projects, Bob Woodruff Foundation

Canine Therapy: an Overview

Dr. Elspeth Cameron Ritchie, Chief Clinical Officer, DC Department of Mental Health

Animal-Assisted Therapy: The Science Behind the Anecdotes in the Treatment of PTSD Dr. Thomas DeGraba, Deputy Director & Chief of Medical Operations, NICoE

Using Dogs to Heal & Comfort Captain Robert Koffman, MD, MPH, Senior Consultant, Integrative Medicine and Behavioral Health, NICoE

Therapeutic Service Dog Training LTC Matthew St. Laurent, Chief, Occupational Therapy, WRNMMC Rick Yount, Executive Director, Warrior Canine Connection

The Biology of the Human Animal Bond Meg Olmert, Author, Made for Each Other

Facilitated Discussion Kelly Engstrom, Managing Director, Ward Circle Strategies

Next Steps

Closing Anne Marie Dougherty, Executive Director, Bob Woodruff Foundation



BACKGROUND

On June 12, 2014, the Bob Woodruff Foundation (BWF) organized a convening of service dog training organizations, civilian and military researchers and clinicians. The one-day event was held at the USO Warrior and Family Center on the Bethesda campus that is home to Walter Reed National Military Medical Center (WRNMMC) and to the National Intrepid Center of Excellence (NICOE).

This was the second convening sponsored by BWF to gain a better understanding of the benefit of animal-assisted therapy for physcological health. The initial convening on the same topic took place at NiCoE on December 3, 2013. That event laid the groundwork for a shared understanding of the value of animal-assisted therapy and identified several next steps including further research and policy development. During that meeting, there was agreement among participants that service dogs can successfully assist individuals with physical impairments (hearing, vision, mobility, seizures, etc.), but no similar consensus regarding the therapeutic benefit of service dogs in the treatment of psychological health and stress disorders. The definition, training, and therapeutic efficacy of service dogs for those suffering from psychological stress continue to be controversial issues in the behavioral health community. The full report from that convening is available at www.bobwoodrufffoundation.org.

The June 2014 event built on the earlier convening in its focus on professionals who select, train, and place service dogs with veterans and service members with psychological injuries. It was an opportunity for national leaders in the service dog industry to hear from researchers and clinicians about the science behind the human-canine bond, the efficacy of animalassisted therapy, and the use of dogs in clinical settings. Some of the historical context and scientific data presented at the December meeting was shared with the June participants to establish a baseline for future collaboration.

Part of BWF's motivation for sponsoring the June convening was to hear the perspective of the service dog training community on the value and use of service dogs for patients with psychological disorders. In addition, both organizers and participants wanted to identify training criteria and commonalities within the assistance dog community, to learn how these organizations are currently measuring outcomes, and to showcase current best practices in the industry. The event also presented an opportunity to further explore the issues of industry credentialing, definitions of the various kinds of service dogs (therapy dog, facility dog, medical-response dog, etc.), and the specialized tasks required of a dog assisting an individual suffering from psychological stress.

Participant Goals

Following opening remarks, participants shared their objectives for the convening along with questions they hoped would be addressed:

- What is the current thinking regarding the use of service dogs in the treatment of PTS?
- How can service dog organizations most effectively work together?
- How can participating organizations influence the regulatory/legislative environment?
- What kind of research is needed to develop dog training standards and criteria for purposes of psychological health?
- What metrics and measurements should be used to evaluate outcomes?
- What are the best practices in the dog training profession regarding selection of dogs, matching with clients, and follow-up after placement?

CANINE THERAPY: AN OVERVIEW

Dr. Elspeth Cameron Ritchie, Chief Clinical Officer, DC Department of Mental Health

While there is a long history of the use of dogs in military medicine and psychiatry, the past 15 years have seen significant growth in the use of therapy dogs. A small number of dogs were deployed to Iraq and Afghanistan, and while there is a strong anecdotal record of their success, there is little evidence-based measurement of their effectiveness. Policies regarding the use of dogs and their management in theater have been and continue to be unclear. Many of the long-standing issues surrounding the use of psychiatric dogs persist: research and data are scant; there is no single military point of contact for service dog policies; and the Department of Veterans Affairs, and to a lesser extent the Department of Defense, are cautious regarding the use of service dogs for individuals suffering from combat stress.

A 2009 stakeholder summit at Ft. Myer tried to set policies, but left many unanswered questions. The April 2012 issue of the Army Medical Department Journal focuses on the topic of therapeutic use of canines in Army medicine and features some of the most recent thinking on the use of service dogs for behavioral health.

Participant Discussion

Representatives of Assistance Dogs International (ADI), a nonprofit coalition of assistance dog organizations, noted that ADI is currently working on standards and criteria for training programs and trainers, and that it expects to circulate a draft to member organizations. In addition, the topic will be addressed in depth at ADI's 2014 national conference to take place in Denver in September 2014.

Participants noted the importance of engaging mental health practitioners in the pairing of dog and client, and one participant commented that no mental health professional was involved in shaping a recent RFP issued by the Department of Veterans Affairs on the use of service dogs for treatment of psychological injuries.

Some participants pointed out that their clients often exhibit a mix of both physical and psychological disabilities and that dogs assigned to assist with physical impairments help with psychological problems as well. According to these participants, insisting on clear distinctions between dogs trained to assist those with physical impairments and those trained to assist individuals with psychological impairment is not helpful.

There were varying views about the goal of animal-assisted therapy: are dogs appropriately used to establish a perimeter around the combat-stressed veteran with techniques such as "block and cover," thus reinforcing the notion that the world is a dangerous place? Or are dogs intended to facilitate confident interaction with the surrounding environment and encourage recovery?

At least one participant expressed frustration that while the Department of Veterans Affairs and the Department of Defense want evidence-based data on the efficacy of therapy dogs for psychological impairments, they have not required a similar burden of research for hearing, mobility, and other kinds of service dogs.



ANIMAL-ASSISTED THERAPY: THE SCIENCE BEHIND THE ANECDOTES IN THE TREATMENT OF PTSD

Dr. Thomas DeGraba, Deputy Director and Chief of Medical Operations, NICoE

Dr. Degraba's presentation incorporated some of the material presented by Steven Porges, PhD, Professor of Psychiatry, University of North Carolina and Sue Carter, PHD, Department of Psychiatry, University of North Carolina, Chapel Hill at the December 2013 convening.

The National Intrepid Center of Excellence (NICoE) evaluates and treats service members and their families dealing with the extremely complex interactions of traumatic brain injury (TBI), post-traumatic stress (PTS), and other psychological health conditions. These conditions rarely present themselves as a single disease and symptoms frequently overlap. NICoE typically accepts patients who have not responded to other therapies in other settings and, in an intense four-week period, employs an interdisciplinary team of therapists, neurologists, psychiatrists, and other specialists to work with each patient. With comprehensive assessment and carefully sequenced, patient-centric care, the NICoE team creates a safe and trusting environment and gives patient the skills to be in control of their emotions.

Opened in 2010, NICoE has been evaluating patient outcomes, comparing the physiological, biological, and emotional responses of individuals at the beginning of their 4-week stay to those at the end of their stay. Early results of these evaluations indicate that irritability, frustration, forgetfulness, headache complaints, and sleep deficit saw the most dramatic improvements.

Animal-assisted therapy is one of the tools the NICoE team uses to help patients regulate their stress responses in appropriate ways. Interactions with service dogs provide specific neural exercises for wounded warriors to improve physiological state regulation, dampen defensive reactions, and improve spontaneous social engagement.

The polyvagal theory proposed by Dr. Stephen Porges links the evolution of the autonomic nervous system to social behavior. (The autonomic nervous system, sometimes called the "involuntary" nervous system, operates below the level of consciousness and controls heart rate, breathing, digestion, etc.) The theory posits two functionally distinct branches of the vargas, an important cranial nerve. The two branches of the vagal nerve create different evolutionary stress responses in mammals: one elicits immobilization with fear behaviors (such as when a mouse caught by a cat feigns death), while the more evolved branch is linked to social communication and self-soothing. In a PTS patient, if the pathways that elicit the defensive fight/flight response or the immobilization response can be turned off and the self-soothing pathways turned on, defensive reactions can be dampened and the PTS patient may then be able to perceive the environment as "safe."

As mammals, wounded warriors and service dog share the biology of mammalian social behavior, which includes a neural circuit that that links the regulation of facial muscles to the psychological state. This link, referred to as the "face-heart" connection, is embedded in mammalian interactions and is used to establish healthy, comforting relationships. Face-to-face proximity, gazing into each other's eyes, touching, and gentle vocalization characterize the interactions of lovers, mother and child, and man and dog. These are not learned behaviors but rather are hard-wired in mammalian social engagement. Because PTS patients frequently have difficulty feeling "safe," being in close proximity, touching, and establishing trust with humans, similar behaviors with a dog often feel less threatening.

Oxytocin, a neuropeptide hormone produced primarily in the brain and released into the blood supply, has been shown to reduce stress in mammals and facilitate social engagement. The sister hormone to oxytocin is vasopressin, which is more associated with defensiveness and vigilance. Social behavior involves a dynamic dance between oxytocin and vasopressin.

Physiological mechanisms that support improved social engagement include the following:

- In experiments with owners and their dogs, long-gaze eye contact between the two can increase oxytocin levels in both human and dog and may be a manifestation of attachment behavior.
- The mind-body interactions assumed in the polyvagal theory and the effects of oxytocin on physiology and behavior underlie strategies for the use of service dogs to improve human psychological health and help patients regain emotional control.
- Interactions with service dogs provide specific "neural" exercises for wounded warrior to dampen defensive reactions and improve social engagement.
- The human-canine face-heart connection that links facial expression to the autonomic nervous system enables both wounded warrior and service dog a achieve physiological state that supports emotional health.

USING DOGS TO HEAL AND COMFORT

Captain Robert Koffman, MD, MPH, Senior Consultant, Integrative Medicine & Behavioral Health, NICoE

Dr. Koffman was accompanied to the podium by his Labrador, Ron, who is a NICoE facility dog and who Dr. Koffman considers his "pysch tech."

Determining the clinical symptoms that warrant the use of a service dog is a key issue at NICoE. The training the dog undergoes and the commands it is taught to respond to are critical. Some commands, such as those that keep others at a distance and establish a perimeter around the patient, reinforce cognitive disorders and the patient's perception that the world is an unsafe place. Through other commands and training, the dog facilitates safe social interactions between the patient and the outside world. The clinical goal is to eliminate the patient's cognitive distortion based on generalizations of past traumatic experiences and restore a sense of safety.

Like other dogs who are exposed to traumatized wounded warriors for extended periods, Ron exhibits characteristics of a dog who has been through war. He has an innate ability to detect the suffering of patients and has symptoms of secondary PTS. Service dogs like Ron are sometimes treated with Reiki and acupuncture.

Participant Discussion

One executive director of a service dog organization noted that some wounded warriors can become accustomed to and even comfortable with their hyper-alert condition and often do not realize they are in this heightened state. Dogs can help them recognize their hyper-vigilance as a first step in dampening the defensive response.

A wounded warrior participant recounted his experience with his service dog. "I was housebound for five years and saw doctors three times a week. I was lost and wasn't a husband or a father; I was stuck. Cody saved my life. He makes sure people don't startle me; I can talk to people and I feel great. I don't want to be a burden to others and with a dog I am not a burden."



THERAPEUTIC SERVICE DOG TRAINING

LTC Matthew St. Laurent, Chief, Occupational Therapy, WRNMMC Rick Yount, Executive Director, Warrior Canine Connection

Warrior Canine Connection (WCC) is a nonprofit organization that offers an innovative therapy program in which service member and veterans suffering from combat trauma train service dogs for fellow warriors with mobility impairments. The combat-stressed service members do not themselves rely on service dogs for psychological assistance. Rather, as they learn to praise, reward and train WCC puppies, both the warrior and dog learn that the world can be a safe place.

Warrior Canine Connection is the brainchild of social worker Rick Yount; the program was first inaugurated in 2008 at the Palo Alto Veterans Administration Men's Trauma Recovery Program in Menlo Park, CA. Yount brought the program to Walter Reed Army Medical Center's Warrior Transition Brigade in 2009 and it is now part of PTS and TBI research and the treatment protocol at NICoE. Several hundred service men and women have participated in the WCC training program.

LTC St. Laurent referenced his long career in occupational therapy and said the WCC service program is one of the most effective he has ever seen in dealing with psychologically injured patients. He noted that more than 150,000 veterans are struggling with PTS and TBI and the US Department of Veterans Affairs is concerned that there may be an overwhelming number of vets requesting service dogs. The VA is working to understand the efficacy of the use of service dogs and seeking evidence of their value in treating PTS and TBI. LTC St. Laurent challenged the participants that as the experts in this field, they have an opportunity to help find answers and build consensus. He also noted that by the end of the WCC program, many patients have sufficiently recovered and realize they do not need a dog for their own psychological support.

Rick Yount opened his presentation with a brief video of Gabe, a WCC-trained Golden Retriever who has helped the recovery of two wounded warriors – one suffering from the physical injuries of war and the other from its psychological trauma.

Yount noted that the program depends on the warrior ethos that compels a warrior to do everything possible to help a brother or sister in arms. There is an enormous sense of purpose in keeping each other alive, so when withdrawn, emotionally numb PTS patients are asked to train a mobility service dog for an injured fellow warrior, they almost always agree in spite of their own emotional despair.

Yount described battle-hardened, often angry and sullen patients being instructed to use their high-pitched "Richard Simmons" voices to praise and reward their puppies-in-training. They must sound happy, patient, and loving to their dogs even when they are not. Using a "fake it 'til you make" strategy, the experience of training the dogs actually pulls out emotional affect from the patients. Warriors must teach their dogs to calmly accept triggers in the environment (sirens, elevators, loud bangs, etc.) that they themselves struggle to accept. Patients suffering from recurring nightmares and extreme sleep disruption report nights of restful sleep when their puppy-in-training sleeps with them. Others report significant improvement in their parenting skills. Fathers who had been responding to their children with anger and impatience say they have successfully incorporated what they learned on training the dog into their parenting style. Shaping the behavior of a dog with gentle encouragement and praise is not so different from encouraging a child.

LTC St. Laurent noted the difficulty of bringing purpose and meaning into a clinical therapeutic setting and stated that the service dog training program is a rare opportunity to do that. It is successfully used at WRNMMC as a complement to traditional treatments. He also noted that at the end of the training program, very few patients go on to have service dogs of their own. Both St. Laurent and Yount emphasized the importance of using only purpose-bred dogs in the program. It is essential that patients feel successful in their training role and purpose-bred dogs help minimize the risk of failure.

THE BIOLOGY OF THE HUMAN ANIMAL BOND

Meg Olmert, Author, Made for Each Other

Humans are animal behavior experts; in hunting prey, our ancestors studied animals very closely and drew detailed pictures of them on cave walls. Through their close relationship with animals, humans recognized that social behavior is key. In referring to her collaboration with behavioral neurobiologist Sue Carter, Olmert noted that the human brain is hardwired for highly social cooperative behavior and the oxytocin hormone creates the anti-stress and calming effects that support this behavior. Oxytocin is released in all kinds of social interactions; for example, cows that are machine milked have a significantly lower milk yield than those that are hand milked.

Researchers are looking at the effects of oxytocin for treatment of a variety of conditions including autism and shyness. Oxytocin effects on behavior include the following:

- Increase in trusting and trustworthy behavior
- Improved sleep
- Decreased startle reaction
- Decreased negative response to angry or neutral faces
- Increased parental behavior and bonding
- Stronger mate bonding
- Improved empathy and "mind reading"
- Reduced fear and paranoia

Effects of the related hormone Vasopressin on behavior include:

- Increased vigilance
- Heightened territorial aggression
- Increased mate guarding
- Increased response to combat imagery

Oxytocin is released in both humans and dogs and the dog-human interaction benefits individuals suffering from the effects of trauma. The antidote to trauma is joy and recovering warriors need a lot of good things to happen to them as they work to overcome the trauma they experienced in combat. Service dogs invite positive encounters with strangers who are often friendly, helpful, and kind and encourage the patient to regain his trust in the world at large.

Olmert described the baseline pilot study soon to be launched at WRNMMC to evaluate the Warrior Canine Connection's Service Dog Training Program as an adjunctive treatment of PTS in service members. Elements of the two-week study include:

- 20 subjects with PTS from the WRNMMC outpatient program and 20 patients with PTS wait-listed for the program as a control group
- Physiological, psychological, and biological baseline measures taken before and after the study period as well as during the final WCC training session on heart rate variability and oxytocin and arginine vasopressin levels



• Exit interview to assess program feasibility and acceptability and subjective experiences

The goal of the study is to determine whether service members with PTS who participate for two weeks in the Warrior Canine Connection program experience the following benefits:

- Improved symptoms of PTS and selected measures of mood, social support, health, sleep, and perceived stress
- Improved resting autonomic and neuroendocrine system regulation
- Decreased autonomic and neuroendocrine system reaction to physical stresses
- Up-regulation of oxytocin release and down-regulation of arginine vasopressin and other key hormones

Participant Discussion

The two-week study period was determined by the funding available and compatibility with the NICoE program schedule.

Clinicians present expressed interest in learning if there is a decline in oxytocin levels when the patient and dog are separated.

As part of a DoD grant, the National Institutes of Health developed an interagency TBI database. Results from this study of human-canine interaction could be entered into the database. This opportunity warrants further exploration.

One participant noted that Southern Illinois University has done some psychometric studies of returning vets, the value of trauma resiliency programs, and the use of service dogs.

FACILITATED DISCUSSION

Facilitator: Kelly Engstrom, Managing Director, Ward Circle Strategies

A service dog should not serve as a *barrier* to stress, but rather as a *mitigator* of stress. A dog should de-escalate stress, not block interaction between the warrior and others. However, it is possible that in the early stages of recovery, a dog allows the patient to at least begin to engage and function in the wider environment.

The placement of a dog is always dependent on the individual. Some patients might experience greater recovery by training a service dog than actually using a dog. Also, service dog organizations are always concerned about the safety and well being of the dogs they place with individuals suffering from psychological trauma. The organizations must be certain that the dog they place will be fed, exercised, and treated gently by a new owner who struggles with emotional balance. Perhaps as a condition of receiving a service dog, the vet must first be required to train as a dog trainer.

Most dogs are trained to assist with a variety of disabilities; many are trained only secondarily as psychiatric dogs. Some organizations work closely with clinicians, and some clinicians have a far greater understanding of service dogs and their use with the psychologically impaired than others.

NEXT STEPS

Participants discussed the prospect of sharing information about their respective organizations in a standardized, apples-toapples format beginning with simple, straightforward questions such as:

- the kinds of dogs used (breeds, purpose-bred, rescue, etc.)
- the number of dogs placed each year
- training criteria for dogs and trainers
- assessment process to determine client needs
- process used to match dog and client
- assessment tools used to measure outcomes

Dr. DeGraba suggested focusing on what participant organizations have in common and what they are measuring. Once outcome measures have been gathered, the group could participate in the National Institutes of Health's traumatic brain injury database to help assess the efficacy of canine therapy. He stressed that participants should not attempt to recreate the wheel, but rather work within existing research protocols and infrastructure. Stephanie Mung of Tender Loving Canines Assistance Dogs suggested the assessment tool being used by the Adler School of Professional Psychology.

Dr. Koffman urged participants to develop baseline data that include the training paradigm, the clinical model, and the financial plan for each organization. Rick Yount urged that close attention should be paid to the clinical considerations of how service dogs are used and what tasks or work they are taught to perform. The therapeutic results obtained with an emotional support dog or a rescue dog are likely to be different from results obtained with a purpose-bred service dog trained to provide clinically advised assistance.

Several participants volunteered to begin drafting a next-steps agenda. They agreed they would begin by identifying the commonalities they share, how they assess and measure, and the individual clinical models, training paradigms, and business plans they use.



SPEAKER BIOS

Thomas DeGraba, MD

Dr. Thomas DeGraba is Deputy Director and Chief of Medical Operations at the National Intrepid Center of Excellence (NICoE). A leader in the field of neurology with a focus on traumatic brain injury and stroke, Dr. DeGraba has served as a neurological consultant for the Office of the Attending Physicians at the U.S. Capitol and the White House Medical Unit. He earned a bachelor's degree in biochemistry at Catholic University of America, his MD from Georgetown University, completed his internship at the Washington Hospital Center, his neurology residency at Georgetown University Hospital, and pursued a post-doctoral fellowship in cerebrovascular disease at the University of Texas Medical Center in Houston. He currently holds an appointment as Associate Professor of Neurology at USUHS. Dr. DeGraba is co-author of NICoE's Concept of Operations, an advanced standard of care in the delivery of patient and family centric care to warriors with complex unremitting combat-related TBI and psychological health issues.

CAPT Robert Koffman, MD, MPH

Dr. Robert Koffman, Chief of Clinical Operations at the National Intrepid Center of Excellence (NICoE), received a BS in biology from Whittier College, a medical degree from the University of Santo Tomas, and a Master's of Public Health from the Harvard School of Public Health. He completed a psychiatry residency at the Naval Medical Center San Diego and an aerospace/preventive medicine residency at the Naval Aerospace Medical Institute. He has over 20 years of direct operational experience as a naval medical officer to include Flight Surgeon and Surface Warfare Medical Department Officer. In 2004, he co-authored a study on the psychiatric sequelae of combat duty in Iraq and Afghanistan (Hoge et. al.). As Navy chair for the DoD/VA Blue Ribbon panel that crafted the current Acute Stress Disorder (ASD)/Post Traumatic Stress Disorder (PTSD) Clinical Practice Guideline, he went on to serve as the Navy's first Director for Psychological Health to the Navy Surgeon General where he directed the management of over \$100M programs for psychological health and TBI. Following a 2010 deployment to Afghanistan, where he headed up the first naval medical Behavioral Needs Health Assessment Team, Koffman returned to Bethesda in 2010 to serve as NICoE's department chief of clinical operations.

Meg Olmert

Meg Olmert, a subject matter expert on the biology of the human-animal bond, is the author of *Made For Each Other: The Biology* of the Human-Animal Bond, the first book to explain the brain chemistry that flows through all mammals, forging deep social bonds between the species. This brain network activates a powerful anti-stress response that creates a physical and psychological sense of well being experienced through friendly contact with animals. Meg lectures widely and is a media consultant on this subject. She has produced and written documentaries for Smithsonian World, National Geographic Explorer, Discovery Channel Specials, and The Living Edens for PBS

COL (Ret) Elspeth Cameron Ritchie, MD, MPH

Dr. Cam Ritchie is Chief Clinical Officer, Department of Mental Health, for the District of Columbia. She retired from the Army in 2010, after holding numerous Army medicine leadership positions. She trained at Harvard, George Washington, Walter Reed and the Uniformed Services University of the Health Sciences and completed fellowships in forensic and preventive and disaster psychiatry. A professor of psychiatry at USU and at Georgetown University, she has over 200 publications to include the military medicine textbook on *Combat and Operational Behavioral Health; The Mental Health Response to the 9/11 Attack on the Pentagon;*

Mental Health Interventions for Mass Violence and Disaster; Humanitarian Assistance and Health Diplomacy: Military-Civilian Partnership in the 2004 Tsunami Aftermath; and a 2013 series on the use of complementary and alternative medicines for the treatment of PTSD. She is senior editor of the forthcoming Forensic and Ethical Issues in Military Mental Health and Women at War.

LTC Matthew St. Laurent, MS, OTR

LTC Matthew St. Laurent is Chief of Occupational Therapy, Department of Rehabilitation, at Walter Reed National Military Medical Center. LTC St. Laurent has a BA in psychology and a BS in occupational therapy from the University of New Hampshire and an MS in occupational therapy from the Medical College of Georgia. He held several clinical positions as a young military officer and in 2003 was awarded the first ever Army Medical Specialist Corps, Chief of Excellence Award. In the early years of the Iraq and Afghanistan wars, St. Laurent transferred to Walter Reed where he served in multiple capacities to include a 7-month deployment to Iraq. He was selected an Interagency fellow attached to the Veteran's Health Administration, Rehabilitation Services. LTC St. Laurent chaired the deployment and operations Cabinet, which provided OT training and personnel deployment recommendations to the Army Surgeon General. His military awards include the Army Meritorious Service Medal, the Army Commendation Medal, and the Army Achievement Medal.

Rick Yount, MS, LSW

Rick Yount, executive director of Warrior Canine Connection, brings 25 years of social work experience and service dog knowledge and training to a therapeutic model of intervention designed to help military personnel with PTS and TBI. The Warrior Canine Connection program engages service members suffering from PTS and TBI in the training of service dogs for veterans with mobility impairments. The program addresses core symptoms of combat-related PTS — re-experiencing, avoidance/numbing, increased arousal — and helps those with TBI to regulate emotions and relearn communication skills. The program was first implemented in July 2008 as part of the VA Palo Alto Health Care System's trauma recovery program. The program is now also offered at Walter Reed, Ft. Belvoir, and at NeuroRestorative in Germantown, MD.

CONVENING FACILITATOR: Kelly Engstrom, MBA, MPH

With over 15 years of consulting experience in the health, defense and financial services industries, Kelly Engstrom focuses on helping clients identify and implement innovative solutions that address complex issues and capitalize on emerging opportunities. As managing director of Ward Circle Strategies, a veteran-owned small business, Kelly provides strategic communication and analytic consulting services to nonprofit and federal government clients such as Paralyzed Veterans of America, the National Association of Community Health Centers, the Department of Defense and Department of Veteran Affairs. Her engagements include organizing and facilitating strategy sessions for leaders from government, industry and the nonprofit sectors to tackle issues such as complex care-coordination for injured service members and veterans. She was responsible for leading a series of "Innovation Deep Dive" meetings for the DOD Military Health System to tackle pressing public health issues, including high rates of tobacco use and obesity in the military.



CONVENING PARTICIPANTS

Eric Babin	Service Dog Team Leader	K2 Solutions, Inc.
Ashley Bunce	Community Relations and Communications	Bob Woodruff Foundation
Corie Chaplin	Director of Therapy Services	Indiana Canine Assistant Network
Rebecca Cooper	Kennel Manager	Hero Dogs
Denise Costanten	Founder/Executive Director	Brigadoon Service Dogs
Deborah Davis	Community Outreach Manager	Paws With A Cause
Heidi Decker	Veteran Service Dog Trainer	Southeastern Guide Dogs
Dr. Thomas DeGraba	Deputy Director & Chief of Medical Operations	National Intrepid Center of Excellence (NICoE)
Behesha Doan	Founder & Training Director	This Able Veteran
Anne Marie Dougherty	Executive Director	Bob Woodruff Foundation
Charles Dwyer	Co-President/Founder	Retrieving Freedom, Inc.
Kelly Engstrom	Managing Director	Ward Circle Strategies
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Denise Foster	Director Community Initiatives	K9s For Warriors
René Gornall	Director Corporate & Foundations Relations	American Humane Association
Pat Hairston	Program Manager	Canines for Service
Sally Irvin	Program Director	Indiana Canine Assistant Network
Karen Jeffries	President/Founder	Veterans Moving Forward, Inc.
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Nancy Kaywood	Special Projects	Bob Woodruff Foundation
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Layton McCurdy	Medical Director	Puppy Challenge & Assistance Dogs International
Joseph Messina	Managing Director	Veterans Moving Forward
Linda Milanesi	Executive Director	Assistance Dogs of the West
Jill Miller	Director of Development	One Mind for Research
John Moon	Director Client Programs & Community Engagement	NEADS/Dogs for Deaf and Disabled Americans
Rodger Moore	Vice President of Business Development	K2 Solutions, Inc.
Paul Mundell	National Director of Canine Programs	Canine Companions for Independence
Stephanie Myung	Programs Coordinator	Tender Loving Canines Assistance Dogs
Sheila O'Brien	Director of External Relations	America's VetDogs
Meg Olmert	Author	Made for Each Other: The Biology of the Human Animal Bond
Lucille Picard	Co-Founder & Director of Programs	ECAD; Educated Canines Assisting with Disabilities
Barbara Ramundo	Deputy Director	Hero Dogs, Inc.
Dr. Elspeth Cameron Ritchie	Chief Clinical Officer	DC Department of Mental Health
Michelle Rositch	Marketing Director	This Able Veteran
Liana Rowe	Adoptions and Program Manager	Soldier's Best Friend
Karen Shultz	President	Tender Loving Canines Assistance Dogs
Katelyn Somers	Intern	American Veterinary Medical Foundation
LTC Matthew St. Laurent	Chief Occupational Therapy	Walter Reed National Military Medical Center
Tony Staffieri	Executive Producer	The Puppy Challenge
Lindsey Stanek	Executive Director	Paws and Stripes
Gloria Gilbert Stoga	President and Founder	Puppies Behind Bars
Rick Yount	Executive Director	Warrior Canine Connection



BOB WOODRUFF FOUNDATION

The Bob Woodruff Foundation (BWF) is the nonprofit dedicated to ensuring that post-9/11 injured service members, veterans and their families thrive long after they return home. A national organization with grassroots reach, the Bob Woodruff Foundation complements the work of the federal government—diligently navigating the maze of more than 40,000 nonprofits providing services to veterans—to find, fund and shape innovative programs and hold them accountable for results. To date, BWF has invested more than \$20 million in solutions, reaching more than 1 million service members, support personnel, veterans and their families. The Bob Woodruff Foundation was co-founded in 2006 by award-winning ABC news anchor Bob Woodruff and his family, whose experiences inspired them to help make sure the nation's heroes have access to the highest level of support and resources they deserve, for as long as they need them.

