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# Psychological and Neuropsychological Outcomes of Iraq Deployment:

## A Model of Effective DoD/VA Collaboration

Jennifer J. Vasterling, Ph.D.

VA Boston Healthcare System/VA National Center for PTSD

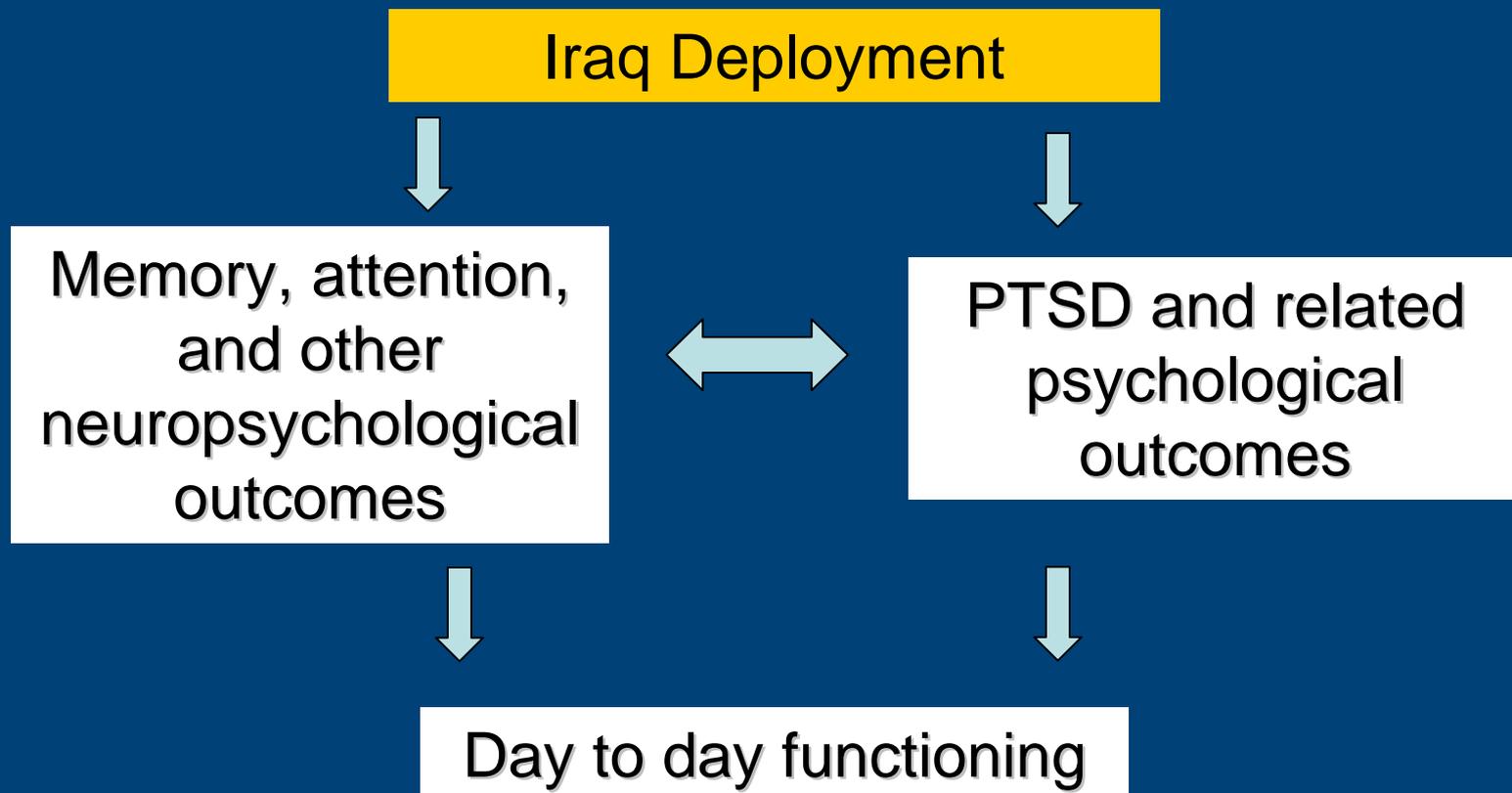
# Background

- Following the 1991 Gulf War, > 100,000 veterans reported health concerns, including memory problems and psychological distress.
- Health care challenges arose because of limited pre-deployment health information.
- Our goal:

***To address the concerns of veterans of prior deployments regarding health tracking before and after deployment.***

# Overview of the Research

- Longitudinal, observational study of Army soldiers deploying to Iraq.



# Overview of the Research

- Began in 2003 prior to deployment.



- Will follow soldiers through time as they convert to veteran status.

# Objectives

- To identify risk factors for poor health outcomes.
- To help inform resource allocation by identifying groups at greatest risk.
- To help inform preventive strategies by identifying modifiable risk factors.

# Interagency Collaboration is the Key



## Investigators

Vasterling (VA)

Proctor (VA/Army)

Kane (VA/DCoE)

Amoroso (Army)

Concato/Aslan (VA)



## Funding

DoD:

MRMC-RADIII (DAMD  
17-03-2-0020)

CDMRP

VA:

CSR&D

CSP

## Facilitation

# Interagency Facilitators



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US Army Forces Command, Office of the Command Surgeon

US Army Medical Research and Materiel Command

VA Office of Research and Development

# Interagency Facilitators

DoD Defense Manpower Data Center

DoD Deployment Health Support Directorate

US Army, I Corps and III Corps, Surgeon's Offices

US Army National Guard and Active Duty Unit-Level Support

US Army Center for Health Promotion and Preventive Medicine

US Army Medical Command, COSC

US Army Research Institute of Environmental Medicine

VAMCs: New Orleans; Boston; Baltimore; Seattle; Wash DC

VA Boston Environmental Hazards Center

VA Clinical Epidemiological Research Center

VA National Center for PTSD

VA South Central MIRECC

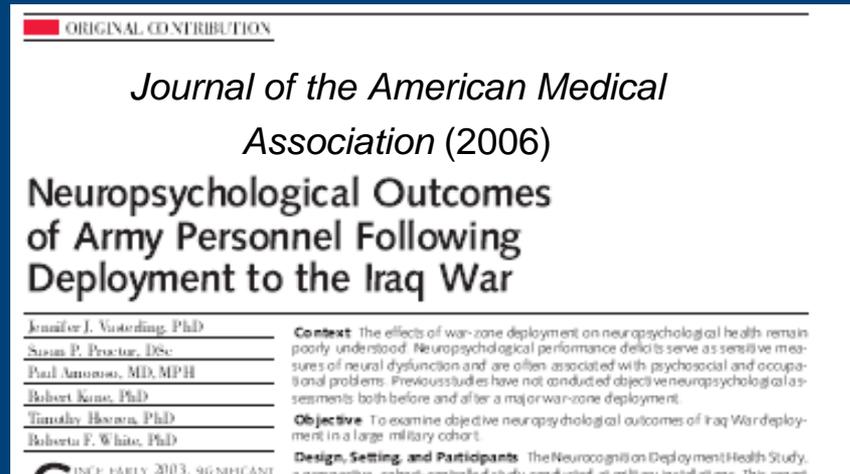


# Current Status: Work completed



- 1595 soldiers enrolled in the cohort
- Pre- and post-deployment assessments completed; results published in *JAMA*
- 1-year follow-up completed on active duty soldiers

# Major Findings to Date



- Iraq deployment was associated with changes declines in memory and attention, but with improvement in response time.
- These changes are consistent with a stress response.

# Major Findings to Date

- PTSD symptoms increase over Iraq deployment, largely as a function of the level of stress exposure (under review).
- Post-deployment PTSD symptoms are associated with declines in health-related quality of life (Vasterling et al., *Journal of Research and Rehabilitation Development*, 2007).
- Some soldiers already experience PTSD symptoms when they go to war. The level of support they receive from their military unit can help buffer the impact of early life stress (Brailey et al., *Journal of Traumatic Stress*, 2007).

# Next Steps: VA CSP 566

- Funded to examine 5 to 7 year outcomes with focus on PTSD and neuropsychological functioning
- 2 study sites: Boston and Puget Sound
- Includes clinical interviews, written surveys, and neuropsychological testing of nationally dispersed sample
- Coordinated through West Haven VA Clinical Epidemiological Research Center (Director: J Concato)
- Data collection projected to begin Summer 2009

# Anticipated Impact

- Will for the first time allow examination of the course of psychological health outcomes, *starting prior to deployment and extending into post-military life.*
- Potential to inform both military policy regarding force health protection and VA healthcare policy regarding clinical management of returning veterans.
- Sets the stage for continued successful interagency collaborations.

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# Thank You





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# HIV RESEARCH: Improving Veterans' Lives

**Melissa M. Turner, MSW**

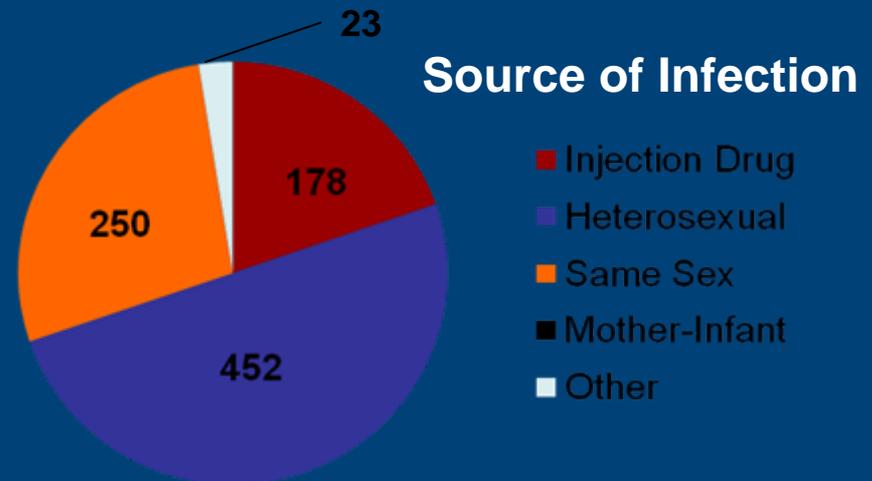
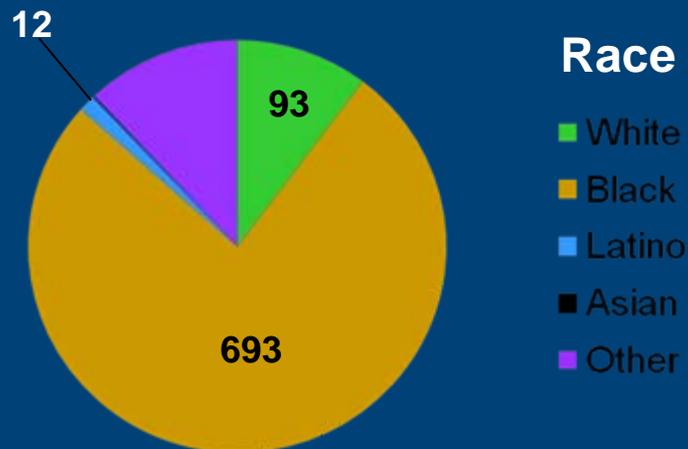
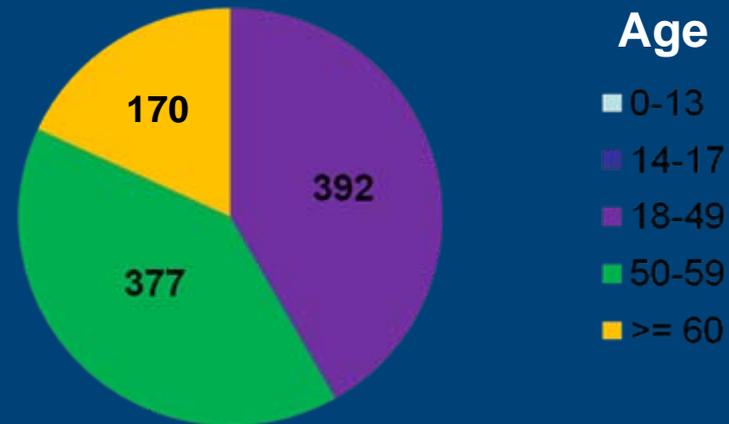
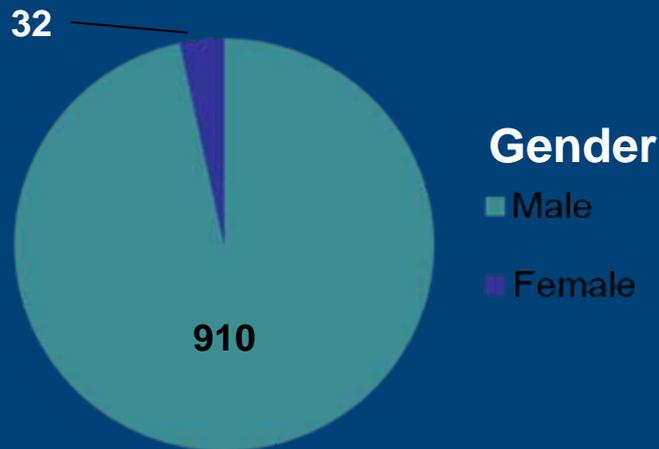
*Washington VA Medical Center  
Washington DC • April 30, 2009*

# HIV Research in the VA

- The VA is the largest single provider of direct HIV care in the United States
- 23,000 veterans with HIV infection
- Research is an integral part of the VA's efforts to improve the diagnosis, treatment and prevention of HIV infection

# Veterans Living with HIV/AIDS

## Washington VA Medical Center: 939 Total Patients in Care 2008



# HIV/AIDS Research at DC VAMC



- **VA Cooperative Studies**
- **Centers for Disease Control**
  - Tuberculosis Trials Consortium site
- **National Institutes of Health**
  - Community Programs for Clinical Research on AIDS (CPCRA) Clinical Trials Unit leadership with 10 Clinical Research Sites within AIDS Clinical Trials Group (ACTG) and 1 site within HIV Prevention Network (HPTN)
  - International Network for Strategic Initiatives in Global HIV Trials (INSIGHT) coordinating center for 100+ sites in 5 countries and local VAMC site for SMART, ESPRIT, STALWART, and START Studies
- **Pharmaceutical Companies**
  - Multiple HIV drug trials

Weather

Today: Partly sunny.  
High 48, Low 24.  
Wednesday: Mostly sunny.  
High 47, Low 23.

Section 11

*INSIGHT SMART Study Results*

# The Washington Post

DISTRICT  
FINAL

11/11

TUESDAY, FEBRUARY 7, 2006

## **NIH Warns AIDS Patients Against Stopping Therapy**

*Study Finds People Who Forgo Continuous Treatment More Likely to Develop Other Illnesses or Die*

By DAVID BROWN

*Washington Post Staff Writer*

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People infected with the AIDS virus who periodically interrupt their drug treatment run a higher risk of falling ill and dying of both AIDS and other diseases compared with people who stay on the medicines.

That is the conclusion of the largest and most expensive AIDS treatment study ever conducted....

**A13**



## Causes of death among human immunodeficiency virus (HIV)-infected adults in the era of potent antiretroviral therapy: emerging role of hepatitis and cancers, persistent role of AIDS

Charlotte Lewden,<sup>1</sup> Dominique Salmon,<sup>2</sup> Philippe Morlat,<sup>1,3</sup> Sibylle Bévilacqua,<sup>4</sup> Eric Jouglu,<sup>5</sup> Fabrice Bonnet,<sup>1,3</sup> Laurence Hérilpret,<sup>6</sup> Dominique Costagliola,<sup>7,8</sup> Thierry May,<sup>4</sup> Geneviève Chêne,<sup>1</sup> and the Mortality 2000 study group

## Is there evidence for an increase in the death rate from liver-related disease in patients with HIV?

Amanda Mocroft<sup>a</sup>, Vincent Soriano<sup>b</sup>, Jurgen Rockstroh<sup>c</sup>, Peter Reiss<sup>c</sup>, Ole Kirk<sup>e</sup>, Stephane de Wit<sup>f</sup>, Jose Gatell<sup>g</sup>, Bonaventura Clotet<sup>h</sup>, Andre Jens D. Lundgren<sup>e</sup> for the EuroSIDA Study Group\*

## Highly Active Antiretroviral Therapy and Incidence of Cancer in Human Immunodeficiency Virus-Infected Adults

*International Collaboration on HIV and Cancer*

Effective therapy has altered the spectrum of cause-specific mortality following HIV seroconversion

CASCADE Collaboration\*

## Highly active antiretroviral therapy and the incidence of HIV-1-associated nephropathy: a 12-year cohort study

Gregory M. Lucas<sup>a</sup>, Joseph A. Eustace<sup>a</sup>, Stephen Sozio<sup>a</sup>, Evelyn K. Mentari<sup>a</sup>, Kofi A. Appiah<sup>b</sup> and Richard D. Moore<sup>a</sup>

## Class of Antiretroviral Drugs and the Risk of Myocardial Infarction

The DAD Study Group\*

***SMART confirmed the importance of addressing non-AIDS conditions in HIV care***

# HIV/AIDS Research Improves Veterans' Lives



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- From Death Sentence to Survival
- From Despair to Hope/Optimism
- From Poor to Improved Quality of life

## *Signs of Thriving*

- Achieving sobriety
- Acquiring housing
- Pursuing higher education/training/career advancement
- Maintaining stronger relationships
- Addressing other health issues (smoking, obesity, etc)
- Pursuing dreams, aspirations and a future

# HIV/AIDS Research Improves Veterans' Lives



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- Altruism
- **Mental Health** - "a state of well-being in which the individual realizes his or her own abilities, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to his or her community"
- High Acceptance of Research Participation/Repeat Volunteers
- Enhances Primary Care
- Advocacy

# HIV/AIDS Research Shapes Health Care Delivery



- Expanded treatment options
- Increasing complexity of care
- Outpatient management of improved survival
- Shorter hospitalizations
- Development of a chronic disease management paradigm for lifelong care of HIV infection

# Impact on National Scope: Next Steps



- Emphasis on earlier intervention
- Improve early detection of HIV infection
- Expand and simplify HIV testing
- Prevention education programs associated with relevant VA programs:
  - drug treatment programs
  - homeless programs
  - counseling programs
  - domiciliary facilities
  - STD programs
  - primary care clinics

# HIV/AIDS Research Improves Veterans' Lives



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*Many, many thanks  
to our nation's Veterans  
for volunteering to participate  
in VA research.*





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# **Defense Centers of Excellence (DCoE) for Psychological Health and Traumatic Brain Injury: Research Overview**

***Sonja V. Batten, PhD  
Deputy Director***

**April 2009**

# Overall Context

- Feb 2007: Walter Reed story broke in the *Washington Post*
- At the same time, multiple reports provided high-level attention to the needs of returning service members
  - Task Force on Returning GWOT Heroes
  - DoD Mental Health Task Force
  - Commission on Care for America's Returning Wounded Warriors
  - DoD IG Review of DoD/DVA Interagency Care Transition
  - Independent Review Group (IRG)
  - Veterans Disability Benefits Commission

# Overall Context

- May 2007: Wounded, Ill, and Injured Senior Oversight Committee was formed
  - Consisting of 8 Lines of Action (LOAs) focused on issues such as:
    - Disability System
    - TBI/Psychological Health
    - Case Management
    - DoD/DVA Data Sharing
    - Facilities
    - Personnel, Pay and Financial Support

- One of the outcomes of the SOC was the creation of the Defense Centers of Excellence for Psychological Health and TBI
- SEP 2007: Director appointed - BG Loree Sutton
- 30 NOV 2007: Center established
- JUN 2008: Acting Deputy Director (VA) named
- JUL 2008: All key leaders onboard and all Directorates stand up
- AUG 2008: Split operations began with staff co-located in both Rosslyn and Silver Spring
- JAN 2009: VA Deputy confirmed
  - Hiring 2 additional VA liaisons

# DCoE Mission



DCoE facilitates and implements prevention, resilience, identification, treatment, rehabilitation, and reintegration programs for Psychological Health and Traumatic Brain Injury to ensure the Department of Defense meets the needs of the nation's military communities, warriors, and families.

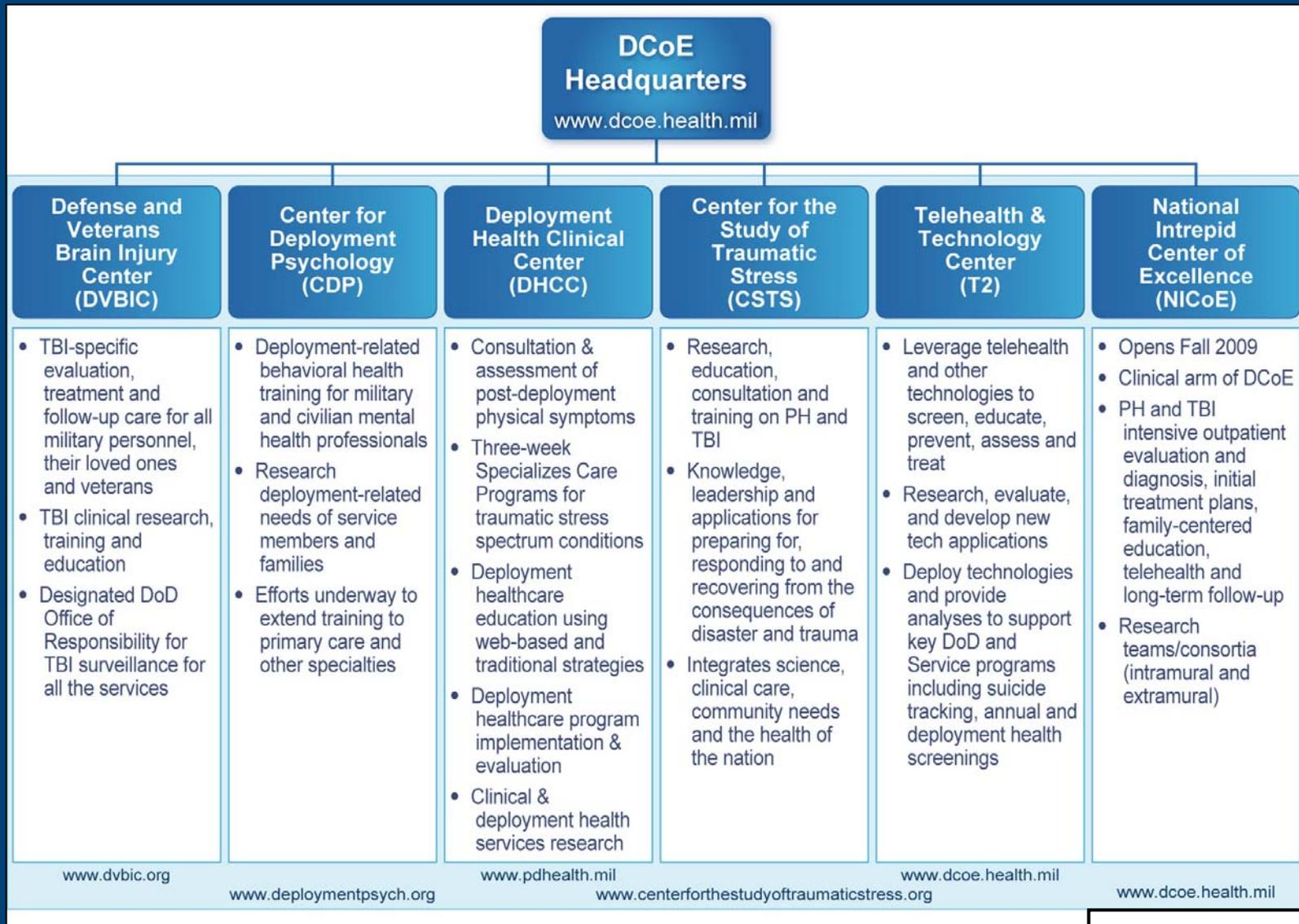


# DCoE Headquarters



- Leadership
- 8 Directorates
  - Clearinghouse, Advocacy and Outreach
  - Research, QA, Program Evaluation, and Surveillance
  - Resilience and Prevention
  - Standards of Care – Psychological Health
  - Standards of Care – Traumatic Brain Injury
  - Strategy, Plans, and Programs
  - Telehealth and Technology
  - Training and Education

# “Center of Centers”



# DCoE Research Strategic Plan



## Research Mission

- Improve psychological health and traumatic brain injury outcomes through research, quality programs and surveillance

## Research Vision

- Cutting edge, high-quality scientific inquiry
- Use of empirical evidence

## Research Strategic Goals

- Identify existing gaps in PH/TBI knowledge
- Disseminate research on PH/TBI before, during, and after deployment to practitioners, military commanders, and line officers
- Optimize the resilience, recovery and reintegration of Warriors and Veterans who experience PH and TBI problems
- Prospectively and longitudinally monitor the PH- and TBI-related functioning of our Service Members
- Identify outcomes and best practices for the prevention, treatment, and surveillance of PH and TBI
- Direct a cultural shift from a traditional curative medical model towards a more holistic wellness model of care

# Priority Focus Areas



- **Suicide Prevention and Resilience Strategies**
- **Innovative Technology to Improve Post-Deployment PH / TBI Functioning**
- **Comprehensive Pain Management and Pharmacological Dependence**
- **Substance Misuse / Abuse**
- **Strategies to Promote Neurogenesis / Plasticity**
- **Novel Approaches to Facilitate PH / TBI Rehabilitation and Treatment (e.g. Hyperbaric Oxygen Therapy, Complementary and Alternative Medicine)**
- **Integration of Surveillance and Registry Databases**
- **Integrated Treatment Models for a Continuum of Complex Care (e.g. Cognitive Rehabilitation, Trauma Spectrum Disorders)**
- **Peer-to-Peer Support Programs**
- **Adaptations of PTSD Treatment to Post-Deployment Contexts**
- **Models of Family Intervention and Support**
- **Sensory / Processing Conditions Associated with TBI (e.g. Auditory / Visual)**
- **Longitudinal Prospective Studies for PH / TBI**

# Collaborations

- **DoD Agencies:**
  - Medical Research and Materiel Command
  - Armed Forces Health Surveillance Center
  - Armed Forces Institute of Regenerative Medicine
  - Uniformed Services University of the Health Sciences
  - Center for Neuroscience and Regenerative Medicine
  - Defense Centers of Excellence for PH/TBI Component Centers
- **Federal Agencies:**
  - Department of Veterans Affairs
  - National Institutes of Health
  - National Institute on Disability and Rehabilitation Research
  - Centers for Disease Control and Prevention
- **Non-Federal Agencies:**
  - Academia
  - Industry

# FY07/08 RDT&E Supplemental: Psychological Health\*



PH Research Gap	Funded Proposals	Budget (\$M)
Treatment and Intervention	48	\$95.9
Prevention	7	\$4.1
Screening, Detection, and Diagnosis	7	\$17.7
Epidemiological Studies	9	\$4.7
Families/Caregivers	4	\$2.5
Neurobiology/Genetics	20	\$10.3
Broad Agency Announcements	1	\$66K
Complementary and Alternative Medicine Funding	8	\$4.0
<b>Total</b>	<b>104</b>	<b>\$139.3</b>

\* The \$60M budget for the Clinical Consortium Center and Study Sites was distributed between both PH and TBI gaps.

# FY07/08 RDT&E Supplemental: Traumatic Brain Injury\*



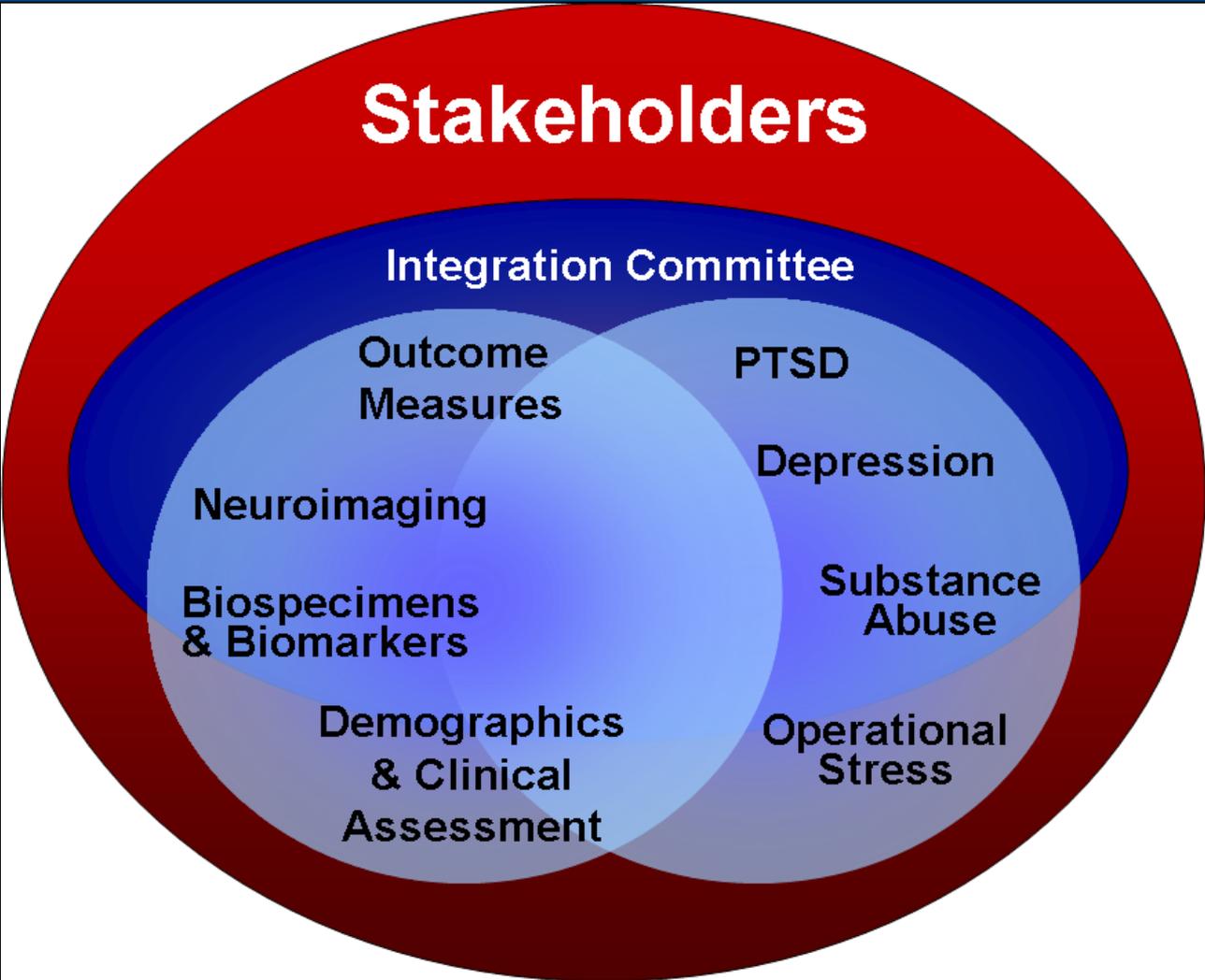
TBI Research Gap	Funded Proposals	Budget (\$M)
Treatment and Clinical Management	38	\$76.1
Neuroprotection and Repair Strategies	27	\$29.9
Rehabilitation and Reintegration Strategies	15	\$17.7
Field Epidemiology	9	\$5.2
Physics of Blast	13	\$8.1
Broad Agency Announcements	0	\$0
Complementary and Alternative Medicine Funding	2	\$1.0
<b>Total</b>	<b>104</b>	<b>\$138.0</b>

\* The \$60M budget for the Clinical Consortium Center and Study Sites was distributed between both PH and TBI gaps.

# Common Data Elements

- Meeting 23 & 24 March 2009 in Silver Spring, MD
- Purpose: To reach consensus on recommendations for common data elements, standard definitions, metrics, outcomes and instruments for recommendation to use in PH/TBI research
- Goal: To have common data in PH/TBI research so comparisons can be made across studies
- 137 Attendees from 50 Agencies, including:
  - 4 Federal Co-sponsors
  - 21 Universities
  - 19 DoD Agencies & The Services
  - 9 NIH Institutes
  - 4 OCONUS Countries

# Common Data Elements



# Ongoing Initiatives

- **PH/TBI Portfolio Synchronization – Nov 2009**
- **National Research Gap Analysis**
- **Research Database of Studies**
- **Evaluation of \$400M of Funded Programs**
- **Future: Joint DoD Central IRB**



**For more information, visit:  
[www.dcoe.health.mil](http://www.dcoe.health.mil)**