Psychological and Neuropsychological Outcomes of Iraq Deployment:

A Model of Effective DoD/VA Collaboration

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VA Boston Healthcare System/VA National Center for PTSD
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.

Iraq Deployment

Memory, attention, and other neuropsychological outcomes

PTSD and related psychological outcomes

Day to day functioning
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-RADII (DAMD 17-03-2-0020)
- CDMRP
- VA: CSR&D CSP

Facilitation
Interagency Facilitators

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.
Thank You
HIV RESEARCH: Improving Veterans’ Lives

Melissa M. Turner, MSW

Washington VA Medical Center
Washington DC • April 30, 2009
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
Washington VA Medical Center: 939 Total Patients in Care 2008

**Gender**
- Male: 392
- Female: 170
- Total: 910

**Race**
- White: 693
- Black: 23
- Other: 12
- Total: 939

**Source of Infection**
- Injection Drug: 178
- Heterosexual: 250
- Same Sex: 452
- Mother-Infant: 23
- Other: 12
- Total: 939

**Age**
- 0-13: 32
- 14-17: 12
- 18-49: 377
- 50-59: 170
- >= 60: 392
- Total: 910
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
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

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....
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, Dominique Salmon, Philippe Morlat, Sylvie Bévilacqua, Eric Jongla, Fabrice Bonnet, Laurence Hérard, Dominique Costagliola, Thierry May, Geneviève Chène, and the Mortality 2000 study group

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

*International Collaboration on HIV and Cancer*

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


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

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

Amanda Mocroft, Vincent Soriano, Jurgen Rockstroh, Peter Reiss, Ole Kirk, Stephane de Wit, Jose Gatell, Bonaventura Clotet, Jens D. Lundgren for the EuroSIDA Study Group

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

*CASCADE Collaboration*

Class of Antiretroviral Drugs and the Risk of Myocardial Infarction

The DAD Study Group
HIV/AIDS Research Improves Veterans’ Lives

- 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
• 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
Many, many thanks to our nation’s Veterans for volunteering to participate in VA research.
• 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 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 Collaborations

National Intrepid Center of Excellence (NCoE)

- Department of Veterans Affairs (VA)
- National Institutes of Health (NIH) / Federal Partners
- Army
- Air Force
- USMC
- Navy
- Coast Guard
- DoD/Service Leadership & Training
- Uniformed Services University of the Health Sciences (USUHS)
- International Partners
- Reserve Components
- Defense Health Board (DHB) Advisory Groups
- Warriors and Families

The National Center for Telehealth and Technology (T2)

Deployment Health Clinical Center (DHCC)

Center for Deployment Psychology (CDP)

Center for the Study of Traumatic Stress (CSTS)

Defense and Veterans Brain Injury Center (DVBIC)

DVBIC: 10 Military Treatment Facility (MTF) Sites

DVBIC: 2 Civilian Sites

DVBIC: 5 VA Centers

10 CDP Sites
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 Headquarters
www.dcoe.health.mil

Defense and Veterans Brain Injury Center (DVBIC)
- TBI-specific evaluation, treatment and follow-up care for all military personnel, their loved ones and veterans
- TBI clinical research, training and education
- Designated DoD Office of Responsibility for TBI surveillance for all the services

Center for Deployment Psychology (CDP)
- Deployment-related behavioral health training for military and civilian mental health professionals
- Research deployment-related needs of service members and families
- Efforts underway to extend training to primary care and other specialties

Deployment Health Clinical Center (DHCC)
- Consultation & assessment of post-deployment physical symptoms
- Three-week Specializes Care Programs for traumatic stress spectrum conditions
- Deployment healthcare education using web-based and traditional strategies
- Deployment healthcare program implementation & evaluation
- Clinical & deployment health services research

Center for the Study of Traumatic Stress (CSTS)
- Research, education, consultation and training on PH and TBI
- Knowledge, leadership and applications for preparing for, responding to and recovering from the consequences of disaster and trauma
- Integrates science, clinical care, community needs and the health of the nation

Telehealth & Technology Center (T2)
- Leverage telehealth and other technologies to screen, educate, prevent, assess and treat
- Research, evaluate, and develop new tech applications
- Deploy technologies and provide analyses to support key DoD and Service programs including suicide tracking, annual and deployment health screenings
- Opens Fall 2009
- Clinical arm of DCoE
- PH and TBI intensive outpatient evaluation and diagnosis, initial treatment plans, family-centered education, telehealth and long-term follow-up
- Research teams/consortia (intramural and extramural)

www.dvbic.org
www.deploymentpsych.org
www.pdhealth.mil
www.centerforthestudyoftraumaticstress.org
www.dcoe.health.mil
www.dcoe.health.mil
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*

<table>
<thead>
<tr>
<th>PH Research Gap</th>
<th>Funded Proposals</th>
<th>Budget ($M)</th>
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</thead>
<tbody>
<tr>
<td>Treatment and Intervention</td>
<td>48</td>
<td>$95.9</td>
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<tr>
<td>Prevention</td>
<td>7</td>
<td>$4.1</td>
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<tr>
<td>Screening, Detection, and Diagnosis</td>
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<td>Epidemiological Studies</td>
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<td>$4.7</td>
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<tr>
<td>Families/Caregivers</td>
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<td>$2.5</td>
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<td>Neurobiology/Genetics</td>
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<td>Broad Agency Announcements</td>
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<tr>
<td>Complementary and Alternative Medicine Funding</td>
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<tr>
<td><strong>Total</strong></td>
<td><strong>104</strong></td>
<td><strong>$139.3</strong></td>
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* The $60M budget for the Clinical Consortium Center and Study Sites was distributed between both PH and TBI gaps.
<table>
<thead>
<tr>
<th>TBI Research Gap</th>
<th>Funded Proposals</th>
<th>Budget ($M)</th>
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</thead>
<tbody>
<tr>
<td>Treatment and Clinical Management</td>
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<td>$76.1</td>
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<tr>
<td>Neuroprotection and Repair Strategies</td>
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<tr>
<td>Rehabilitation and Reintegration Strategies</td>
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<td>Field Epidemiology</td>
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<td>Physics of Blast</td>
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<td>Broad Agency Announcements</td>
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<tr>
<td>Complementary and Alternative Medicine</td>
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</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>104</strong></td>
<td><strong>$138.0</strong></td>
</tr>
</tbody>
</table>

* 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

Stakeholders

Integration Committee

Outcome Measures

PTSD

Depression

Substance Abuse

Neuroimaging

Operational Stress

Biospecimens & Biomarkers

Demographics & Clinical Assessment
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