Rehabilitation Care of Combat-related TBI: Experience of the Departments of Defense and Veterans Affairs

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Disclosure

THE VIEWS EXPRESSED IN THIS PRESENTATION ARE THOSE OF THE AUTHOR AND DO NOT REFLECT OFFICIAL POLICY OR POSITION OF THE DEPARTMENT OF VETERAN AFFAIRS OR THE U.S. GOVERNMENT.
Goals

- Overview the Departments of Defense and Veterans Affairs system of care for Combat-related TBI
- Outline Clinical Outcomes from the Polytrauma System of Care
“To Care For Him Who Shall Have Borne the Battle, And For His Widow and Orphan”

- Abraham Lincoln
<table>
<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
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<tbody>
<tr>
<td>OEF</td>
<td>Operation Enduring Freedom (Afghanistan)</td>
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<tr>
<td>OIF</td>
<td>Operation Iraqi Freedom</td>
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<tr>
<td>OND</td>
<td>Operation New Dawn (OEF/OIF post 9/1/2010)</td>
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<tr>
<td>GWOT</td>
<td>Global War on Terrorism</td>
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<td>DoD</td>
<td>Department of Defense</td>
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<tr>
<td>DVA</td>
<td>Department of Veterans Affairs</td>
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<tr>
<td>PRC</td>
<td>Polytrauma Rehabilitation Center</td>
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<tr>
<td>PNS</td>
<td>Polytrauma Network Site</td>
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<tr>
<td>PSCT</td>
<td>Polytrauma Support Clinic Team</td>
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## Casualties of OEF/OIF/OND – 03/9/12

<table>
<thead>
<tr>
<th></th>
<th>Total Deaths</th>
<th>KIA</th>
<th>Non-Combat Deaths</th>
<th>WIA RTD</th>
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<tr>
<td>OIF</td>
<td>4,422</td>
<td>3,488</td>
<td>934</td>
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<td>OEF</td>
<td>1,899</td>
<td>1,498</td>
<td>401</td>
<td>15,438</td>
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<tr>
<td>OND</td>
<td>66</td>
<td>38</td>
<td>28</td>
<td>301</td>
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<tr>
<td>Total</td>
<td>6,387</td>
<td>5,024</td>
<td>1,363</td>
<td>47,611</td>
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</table>

- Over 2,300,000 total Service Members deployments

OEF/OIF/OND TBI through 03/12

- 15-23% of all deployed SMs have TBI
  ~350,000\(^1\)
  >233,000 confirmed by DoD\(^2\)
  ~ 2,500 mod/severe

- 6.7% of all OEF/OIF SMs who come to VA
  (750,000 or 55% of those eligible) have symptomatic mTBI\(^3\)

- 73% of Vets with symptomatic mTBI also have mental health diagnosis (usually PTSD)\(^3\)

\(^1\) Congressional Budget Office
\(^2\) www.dvbic.org/tbi-numbers.aspx
\(^3\) www.queri.research.va.gov/ptbri/docs/vha-tbi-screening-eval.pdf
Costs of OEF/OIF TBI care in VA for FY2011

- PTSD alone = $8,300
- TBI alone = $11,700*
- TBI + PTSD = $13,800*  
  * excludes all inpatient rehabilitation costs
- Neither = $2,400

Total = $2 billion for all TBI/PTSD care

Source: Congressional Budget Office
### Other injuries through 03/12

<table>
<thead>
<tr>
<th>Injury</th>
<th>Count</th>
</tr>
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<tbody>
<tr>
<td>PTSD</td>
<td>5-25% of all deployed or &gt;250,000*</td>
</tr>
<tr>
<td>Amputations</td>
<td>&gt;2,000</td>
</tr>
<tr>
<td>Burns</td>
<td>&gt;600</td>
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<tr>
<td>SCI:</td>
<td>&gt;150</td>
</tr>
<tr>
<td>Pain:</td>
<td>&gt;250,000</td>
</tr>
</tbody>
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1. Congressional Budget Office  
2. [www.dvbic.org/tbi-numbers.aspx](http://www.dvbic.org/tbi-numbers.aspx)  
“Polytrauma” is a medical term that evolved to describe the unique, complex patterns of injuries seen with blast/combat exposure:
- Complex, multiple injuries occurring as a result of same event
- Injuries include brain injury, amputation, hearing and vision impairments, spinal cord injuries, psychological trauma, and musculoskeletal wounds

Individuals with polytrauma require extraordinary level of integration and coordination of medical, rehabilitation, and support services:
- Brain Injury is primary injury that drives care
- Higher level of acuity due to severity of injuries
- Simultaneous treatment of multiple injuries
- Sequence and integrate therapies to meet patient need
- Coordinate interdisciplinary team effort with expanded team of consultants
One Explosion/Blast has Multiple Mechanisms of Injury

Wall of Air (Primary)

Blast Wind (Primary)

Flying Debris (Secondary)

Displacement (Tertiary)

Collapse Building (Quaternary)
Landstuhl Regional Medical Center
Iraq
Bn Aid Station

Continuity of Care: From Battlefield to VA TBI/Polytrauma System of Care

Tampa PRC
Richmond PRC
Minneapolis PRC
Brook Army Medical Center
San Antonio PRC

Palo Alto PRC

Walter Reed National Naval Medical Center

Iraq
Balad, Iraq
Bn Aid Station

Afghanistan
VHA Polytrauma System of Care FY 2010

Legend
- Polytrauma Rehabilitation Center
- Polytrauma Network Site
- Polytrauma Clinic Team
- Polytrauma Point of Contact
Polytrauma System of Care

- Over 100 specialized rehabilitation sites across VHA medical centers:
  - 5 Polytrauma Rehabilitation Centers (PRC)
  - 23 Polytrauma Network Sites (1 per VISN)
  - 86 Polytrauma Support Clinic Teams (2-8 per VISN)
  - 41 Polytrauma Points of Contact

- VA Polytrauma Nurse Liaisons at Walter Reed-Bethesda Naval and Brook Army Medical Centers
- VA Blind Rehabilitation Outpatient Specialists at Walter Reed and Bethesda Naval Medical Centers
- VA Case Management system
- VA Amputation System of Care
- VA Assistive Technology Centers of Excellence
Polytrauma System of Care

- VA-PSC locations matched geographic need of Veterans and Servicemembers with clinical expertise in VA.
  - VA uses extensive GeoID mapping of all Veterans and SMs
  - Most Veterans are from “rural” areas (>30 miles) surrounding of major cities

- Through MOU, VA may provide Servicemembers with services for TBI, SCI, Amputation and Burns. At some sites >80% patients are Active Duty SMs.

- Approximately 55% of eligible OEF/OIF/OND Veterans utilize VA services (compared with 45% of all Veterans).
VA-PSC Implementation Timeline

Oct 11: 5th PRC/23rd PNS at San Antonio opens, additional PSCTs (86)
Apr 09: Assistive Technology Labs added at Polytrauma Rehabilitation Centers
Sep 08: Additional Polytrauma Support Clinic Teams (82)
Jun 08: Amputation System of Care designated (100+ sites)
Mar 08: Additional Polytrauma Network Site (22)
Sep 07: San Antonio designated as 5th Polytrauma Rehabilitation Center site
Jul 07: Polytrauma Transitional Rehabilitation Program initiated
Apr 07: TBI Screening / Evaluation Program implemented
Mar 07: 76 Polytrauma Support Clinic Teams, 50 Polytrauma Points of Contact
Jan 07: Emerging Consciousness Program initiated
Jul 06: Polytrauma Telehealth Network established
Dec 05: 21 Polytrauma Network Sites Designated (1 in each VISN)
Feb 05: Lead Centers designated as Polytrauma Rehabilitation Centers; VA Polytrauma System of Care established
Polytrauma System of Care

- All OEF/OIF/OND Service Members are eligible for care for 5 years after service. Any service-related injury or disability entitles Veteran to a lifetime of care for that limitation.

- In FY’11 alone,

  >60,000 unique Veterans served in PSC

  946 staff provided services in the PSC ($67.6M/yr)
Ongoing Polytrauma education

- Veterans Health Initiative: TBI Independent Study Course
  - 200+ page handbook-based course, released April 2011
  - Developed by VA PM&RS experts, in collaboration with colleagues from Mental Health, Primary Care, Pharmacy, DVBIC, and academia.

- More than 50 multimedia presentations available on VA website from VA and DoD

- Weekly live presentations available via telehealth.

- Annual national and regional training programs in TBI, Amputation, Pain and Assistive Technology
Polytrauma Rehabilitation Centers

- Five Level 1 medical centers providing the highest echelon of comprehensive medical and rehabilitative services (inpatient and outpatient) for the most complex and severely injured:
  - 12-18 inpatient bed unit providing acute interdisciplinary evaluation, medical management, and rehabilitation
  - 10 inpatient bed residential Transitional Rehabilitation Program
  - Emerging Consciousness Program
  - Assistive Technology Lab
  - Polytrauma Telehealth Network

- National VA leaders in polytrauma / TBI providing consultation, medical education, research, and program development for system of care

- Accredited by Commission on Accreditation of Rehabilitation Facilities (CARF) for inpatient TBI and general rehabilitation

- Collaborate with DVBIC and national TBI Model Systems project
Integration of Comprehensive Rehabilitation Care

Audiology Program
- Hearing Loss

Care Management + Military Liaisons
- Amputee Program
- Rehabilitation And Orthopedic Programs

Patient & Family
- Coordinate Support
- Trauma
- Vision Loss

Brain Injury Program
- Head Injuries

Pain Management
- Pain

Mental Health

PTSD Program

Blind Rehabilitation Program

Hearing Loss

Amputations

Trauma

Vision Loss

Brain Injury Program

Care Management + Military Liaisons

Audiology Program

Brain Injury Program

Amputee Program

Rehabilitation And Orthopedic Programs

Blind Rehabilitation Program

PTSD Program
Polytrauma Network Sites

- 23 regional Level 2 medical centers providing full range of comprehensive follow-on medical and rehabilitative services (inpatient and outpatient) for patients recovering from polytrauma and TBI (1 per VISN):
  - Develop and support patient’s rehabilitation plan through comprehensive interdisciplinary, specialized team
  - Serve as resource and coordinate services for TBI and polytrauma across VISN (VHA, DOD, private sector)

- VISN leader for polytrauma/TBI consultation, education, monitoring outcomes, and program development for system of care
- Accredited by CARF for inpatient general rehabilitation
Polytrauma Support Clinic Teams

- 86 Level 3 medical centers with dedicated outpatient interdisciplinary teams of rehabilitation specialists

- Provide specialty rehabilitation care closer to home
  - Evaluate and develop individualized treatment plan
  - Provide interdisciplinary rehabilitation care and long-term management of patients with rehabilitation needs
  - Coordinate clinical and support services for patients and families

- Conduct comprehensive evaluations of patients with positive TBI screens, develop and implement rehabilitation and community re-integration plans
Polytrauma Points of Contact

- Designated at 41 medical centers without specialized rehabilitation teams
- Designated VA primary care staff member knowledgeable in the Polytrauma System of Care
- Coordinate case management and referral within Polytrauma System of Care
- Knowledgeable of rehabilitation services provided within local community, and facilitates referral for such services as necessary
Polytrauma Care Management

- All patients receiving rehabilitation services within the Polytrauma System of Care are assigned a specialty Polytrauma Case Managers (PCM)

- 234 PCMs with caseloads distributed as follows:
  - 1 PCM for every 6 PRC inpatients - provide 24/7 coverage
  - 1 PCM for every 10 inpatients at the residential programs
  - 1 PCM for every 60-180 outpatients at PNS and PSCT depending on case mix and geographic region (rural versus urban)

- Specialty case management includes:
  - Coordination of services
  - Ongoing evaluation of rehabilitation, psychosocial needs
  - Family education and support services
  - Partnership with other VA and DoD case managers to assure continuity in care management from battlefield to home
Continuum of Special Programs

- Transitional Rehabilitation Program
- Emerging Consciousness Program
- Polytrauma Telehealth Network
- Advanced Technology Applications
- Drivers Training Programs (Simulator/Road)
- Amputation System of Care
- Blind Rehabilitation
- Mild TBI Screening and Evaluation Program
Amputation System of Care

- Comprehensive rehabilitation system to care for Veterans and transition Army National Guard servicemembers with amputations in VA. Integrated with PSC to leverage skills with care needs.
  - Regional Amputation Centers (7)
    - Inpatient, outpatient, prosthetics, assessment
  - Polytrauma Amputation Network Sites (15)
    - Outpatient, prosthetics, assessment
  - Amputation Clinic Teams (100)
    - Assessment, outpatient
  - Amputation Points of Contact (30)
    - Primary care, case management
What has PSC accomplished 2005-2011

- 2,160 inpatients with TBI received PRC (inpatient) care
  - 1,263 Active Duty SMs
    - 946 injured in Combat
  - 897 Veterans
  - 2,160 total SM and Vets*
    - 162 in FY11
    - 135 in FY11
    - 90 in FY11
    - 252 in FY11

* Including 122 with Disorder of Consciousness

- 270 patients with TBI received PTRP (residential) care after inpatient services
What has PSC accomplished 2005-2011

- More than 32,000 unique individuals with TBI in PNS (outpatient) clinics
  - More than 208,000 total PNS (outpatient) encounters
- More than 1,500 telehealth encounters
- More than 750,000 OEF/OIF Veterans screened for TBI
- More than 75,000 Comprehensive TBI Evaluations
• 2,160 total patients with severe injuries treated at Polytrauma Rehabilitation Centers (Mar 2003 through November 2011):
  ○ 1,263 Active Duty SMs **162 in FY11**
  ○ 946 injured in Comabt **135 in FY11**
  ○ 897 Veterans **90 in FY11**

• Average ages at admission for OEF/OIF patients:
  < 25 years = 48%
  26-30 years = 21%
  31-40 years = 22%
  >40 years = 9%
Patient Referral Sources to PRCs
OEF/OIF Injured

- Walter Reed (33.2%)
- Bethesda Naval (28.0%)
- Other DoD Sites (27.5%)
- Civilian (1.8%)
- Brooke Army (2.5%)
- Other VAMC (6.9%)
Current Utilization of the PRCs

- For all patients in VA Polytrauma Rehabilitation Centers:
  - Referrals come from other VA Medical Centers, DoD, and civilian medical facilities.

  - Occupancy rates fluctuate; target of 85% occupancy.
    - Current inpatient occupancy rate average 87% across all PRCs
    - FY11 Range: 39%-93%, varies over time and location

  - Current average length of stay (LOS) in PRC: 46 days.
    - More severely injured average 82 days LOS (ECP + post-ECP)
    - Less severely injured average 28 days LOS (traditional IRF)

- Discharge destinations vary; 67% are discharged to home.
Discharge Destination from PRCs
OEF/OIF Injured

- Home: 66.9%
- Military Treatment Facility: 20.6%
- Home VA: 6.3%
- Polytrauma Transitional Rehabilitation Program: 2.6%
- Private Facility: 3.6%
Emerging Consciousness Program

- 2-4 beds at each PRC
- Common assessment and management protocols
- Linked with academic centers who are leaders in DOC
- Embedded Epilepsy Centers of Excellence
Emerging Consciousness Program Outcomes

- Outcomes of the VHA Emerging Consciousness
  - 122 patients
  - Consecutive admissions at the 4 PRCs 2003-2011
  - Main outcome - emergence to consciousness based on:
    - CRS-R
    - Object Use (feeding)
    - Communication (responding to commands)
    - Rancho 3 or higher
  - Emergence from coma in 70% blast TBI, 85% non-blast TBI and 60% anoxic BI.
  - Of those who emerge, 75% do so by 4 months post-insult.
ECP Total FIM

- Blast
- Trauma Non-Blast
- Non-Traumatic

Graph showing Total FIM for different categories at admission and discharge.

- Total FIM Admit
- Total FIM Discharge
Residential Rehabilitation

- Polytrauma Transitional Rehabilitation Program
  - One at each PRC site
  - 10-20 beds for extended stay rehabilitation (1-6 months)
  - Focus on community reintegration and vocational rehabilitation
  - Linked in with local and regional military treatment facilities
Transitional Rehabilitation Program

- Located at 4 Polytrauma Rehabilitation Centers
- Provides interdisciplinary rehabilitation for patients in a 10-bed home-like unit for individuals requiring additional rehabilitation before community re-integration
- Additional specialized treatment and program support is provided as necessary for individual:
  - PTSD services
  - Substance abuse
  - Pain management
  - Drivers Training Rehabilitation
  - Vocational Rehabilitation
Patient Population
- FY2008-11: 97 Veterans + 172 Active Duty = 269 total
- Average age: 32 years old
  - Range 20-63 years
- Average injury severity:
  - GCS 8-10 initial, 13-15 admission
- Average Length of Stay:
  - 84 days (range 6-236)
- Discharge Disposition
  - >93% return to home or referring military base
  - >66% employed at D/C
Transitional Rehabilitation Program
FY10 Vocational Outcomes

- Employed, 66.7%
- Unemployed, 23.6%
- Student, 5.6%
- Other, 2.8%
- Retired, 1.4%
Veterans with TBI and Polytrauma receiving outpatient care in Polytrauma System of Care Clinics

<table>
<thead>
<tr>
<th></th>
<th>Veterans</th>
<th>Encounters</th>
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<tr>
<td>FY2006</td>
<td>2,307</td>
<td>10,836</td>
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<tr>
<td>FY2007</td>
<td>5,243</td>
<td>18,936</td>
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<tr>
<td>FY2008</td>
<td>16,165</td>
<td>49,951</td>
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<td>FY2009</td>
<td>19,945</td>
<td>55,973</td>
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<tr>
<td>FY 2010</td>
<td>20,052</td>
<td>56,992</td>
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<tr>
<td>FY 2011</td>
<td>20,000+</td>
<td>60,000+</td>
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The number of new Veterans with TBI/polytrauma receiving outpatient services in the Polytrauma System of Care clinics seems to be stabilizing.
Assisted Living Pilot for Veterans with TBI (AL-TBI)

- Five year pilot to assess the effectiveness of providing assisted living (AL) services to Veterans with TBI.
- Implemented through contracts with private sector, CARF-accredited TBI residential living programs located close to Veterans’ homes, with VA case management.
- 65 Veterans in the pilot 2009-2012 in 6 states
  - Age range: 26-61 years
  - Combat eras: OEF/OIF, Gulf War, Persian Gulf, Vietnam, post Vietnam
AT Centers of Excellence

- Comprehensive AT Teams established at 5 sites
  - Rehabilitation Engineers
  - RESNA-certified therapists
    - Cognitive Therapists
    - Mobility Therapists
  - Collaboration with University of Pittsburgh CAT
  - CARF preparation underway at all sites.
  - Uniform templates for all assessments and treatments
- Virtual consultation through telehealth across PSC
- Equipment and services available to any Veteran with need.
Assistive Technology

- Balance/Vestibular
- Driving Simulator
- Erigo
- Eye Gaze
- Assisted Eating
- Laser cane
Polytrauma Telehealth Network

- Links VA and DoD Polytrauma sites within and across CONUS and World

- All VA and DoD sites connected

- Low and High-resolution videoconferencing
  - Educational resource for providers and families
  - Facilitates discharge planning and Care coordination
  - Remote provider-to-provider consultation
  - Remote evaluation for specialized services
Virtual Monitoring and Assessment

• Access

  - Annual doubling of Telehealth encounters

  - Home telehealth at 10 VA’s – Active monitoring of patients with persistent deficits after TBI with interactive computer (Pilot begun in October 2010); linked with centralized telehealth staff and VA EMR
Assistive Technology and EMR

- Development of mTBI/concussion app for smartphones set for June 2012
- VAi2 – Direct linkage between electronic medical record and centralized, computerized database (MedRed) – pilot project at Richmond VA Medical Center
- Use of consistent outcome data collection in all outpatient polytrauma and TBI clinics
Key Research Activities

- Polytrauma Rehabilitation Centers and TBI Model Systems
  - Establishes parallel VA database to TBIMS (with additional VA variables)
  - Benchmarks VA outcomes with those of national TBIMS Centers
  - Fosters collaborative research with national TBIMS Centers

- TBI Veterans Health Registry of OEF/OIF Veterans
  - OEF/OIF Based Registry of Veterans experiencing TBI related symptoms
  - Comparisons of screening, diagnostic methods, and treatment options
  - VA continues in collaborative efforts to refine and enhance the registry components

- Polytrauma and Blast-Related Injuries Quality Enhancement Research Initiative (QUERI):
  - Portfolio includes 40 funded studies
  - 34 publications associated with grants listed as QUERI related
VA/DoD TBI Research

VA/DoD Research collaborations include:

- 23 collaborative studies for TBI, PTSD, and polytrauma with VA investigators since 2007

- 19 collaborative research investigations currently between VA PRCs/PNSs and Defense and Veterans Brain Injury Center (DVBIC)

- 56 ongoing studies conducted by VA investigators supported by DoD, Congressionally Directed Medical Research
VA-mTBI Screening Program

- DoD, VA, Congress and Public concerns regarding difficulties reported by SM’s and Veterans from OEF/OIF.

- VA collaboratively developed TBI Screening Tool with input from DoD experts, academia and best medical evidence.
  - All AD SMs complete PDHQ/PDHQ-R upon return from combat
  - All OEF/OIF Veterans must have TBI Screen performed before entering VA system – April 2007
  - Screening performed by PCPs must complete VHI TBI
  - VA TBI Screening results are captured in electronic medical record
  - Screening program is monitored as national VHA performance measure

- Screen focuses on persistent symptoms after TBI exposure.
Mild TBI Screening and Evaluation Program

- TBI screen identifies those who self-report alteration in consciousness with acute symptoms that have persisted.

- Positive screen triggers counseling about results and referral to a second level evaluation by TBI specialist and TBI team.

- Veterans and Servicemembers are referred for treatment based on this follow-up comprehensive TBI evaluation.
DoD-mTBI Referrals

- For those with + mTBI exposure, but no current symptoms
  - All are given an educational handout
  - Describes symptoms and access to care

- For those with +mTBI and current symptoms, all see the “TBI Team Providers”
  - Provided educational handout
  - Treat for pain, sleep disorders, irritability
  - F/u evaluation within 7-14 days
  - If moderate severity refer to Specialist sooner
VA-mTBI Screen

- **Question 1**
  - Were you exposed to a trauma or blast while in OEF/OIF?

- **Question 2**
  - As a result of the trauma or blast did you have a loss or alteration in consciousness (see stars, have bell rung, feel disoriented or confused)?

- **Question 3**
  - Did you develop problems with headache, insomnia, dizziness, thinking or behavior immediately to soon after the trauma or blast?

- **Question 4**
  - Do you still have the problems with headache, insomnia, dizziness, thinking difficulties or behavior that you developed immediately to soon after the trauma or blast?
VA-mTBI Screen

- All data from mTBI Screen is entered into the Congressionally mandated Veterans Health Registry for TBI, maintained at Craig Hospital TBI National Data Center.

- Veterans who answer affirmatively to any of 4 questions are counseled on the significance of TBI and initiation/persistent symptoms.

- Veterans who answer affirmatively to all 4 questions are referred for Comprehensive TBI Evaluation at one of 100+ VA-PSC centers for definitive evaluation and management program.

- TBI Specialty Clinic referral is offered within 7 days of screen and actual appointment is scheduled within 30 days.
Mandatory TBI Screening Results
14 April 2007 – 1 August 2011

>750,000

Total OEF/OIF Veterans Screened – 55% eligible SMs

+ Hx

Veterans with Self-Reported Prior TBI - 3.0%

+ Screen

Veterans Requiring Further Evaluation - 19.7%

+TBI

Veterans Consenting to Further Evaluation - 94.9%

-TBI

Veterans Completed Evaluation – 74.9%

TBI Ruled Out

TBI Confirmed 39.5% of all + screens or 7.8% of total screened
VA-mTBI Comprehensive Evaluation

- Veterans who affirmed all 4 screening questions were referred (within 30 days) to one of 100+ Comprehensive TBI Evaluation centers.

- TBI Evaluation centers must have PM&R, Neurology or Psychiatry physician with TBI expertise, plus key members of interdisciplinary evaluation and management team
  - Psychology
  - Speech and Language Pathologist
  - Physical Therapist
  - Occupational Therapist
  - Case Manager (RN/SW)
  - Recreation Therapist

- Telehealth evaluations to remote sites or sites without qualified expertise.

- Mini-residency training programs in TBI evaluation and management under development.
VA-mTBI Comprehensive Evaluation

- Evaluation process utilizes the Congressionally mandated Individualized Rehabilitation and Reintegration Plan of Care - EMR template.

- While interdisciplinary evaluation is encouraged to fully assess symptoms and deficits, the definitive assessment of TBI exposure is made by physician.

- Neurobehavioral Symptom Inventory (NSI) is embedded to record subjective presence and severity of 22 most common complaints after TBI exposure.

- Veterans are counseled and referred for appropriate further evaluation and care regardless of underlying cause.

- While apportioning symptoms or findings to specific etiologies is attempted and documented, the focus is on functionally based care.
VA-mTBI Rehabilitation Programs

• Additional evaluations may include
  ○ Neuroimaging
  ○ Neuropsychological testing
  ○ Computerized Posturography
  ○ Specialty physician consultation/care
  ○ Special Sensory testing (Vision, Hearing)

• Rehabilitation Services settings include
  ○ Inpatient
  ○ Residential
  ○ Day
  ○ Outpatient
    ▪ Physician
    ▪ Therapy
    ▪ Community Integration
    ▪ Vocational Services
Summary

- The VA Polytrauma System of Care, initiated in response to the Middle East conflicts, represents the largest integrated rehabilitation system in the world.

- More than 400,000+ Veterans and Service Members have disabilities amenable to PM&R services.

- While TBI-focused, the VA PM&R systems are available for all Veterans and all disability groups.
Rebuilding Injured Lives
The Veterans Health Administration
Polytrauma System of Care:
TBI Care for the 21st Century

THANK YOU

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