



Navy Medicine West Office of Neurotrauma Overview to Defense Health Board

Program Director
27 August 2018



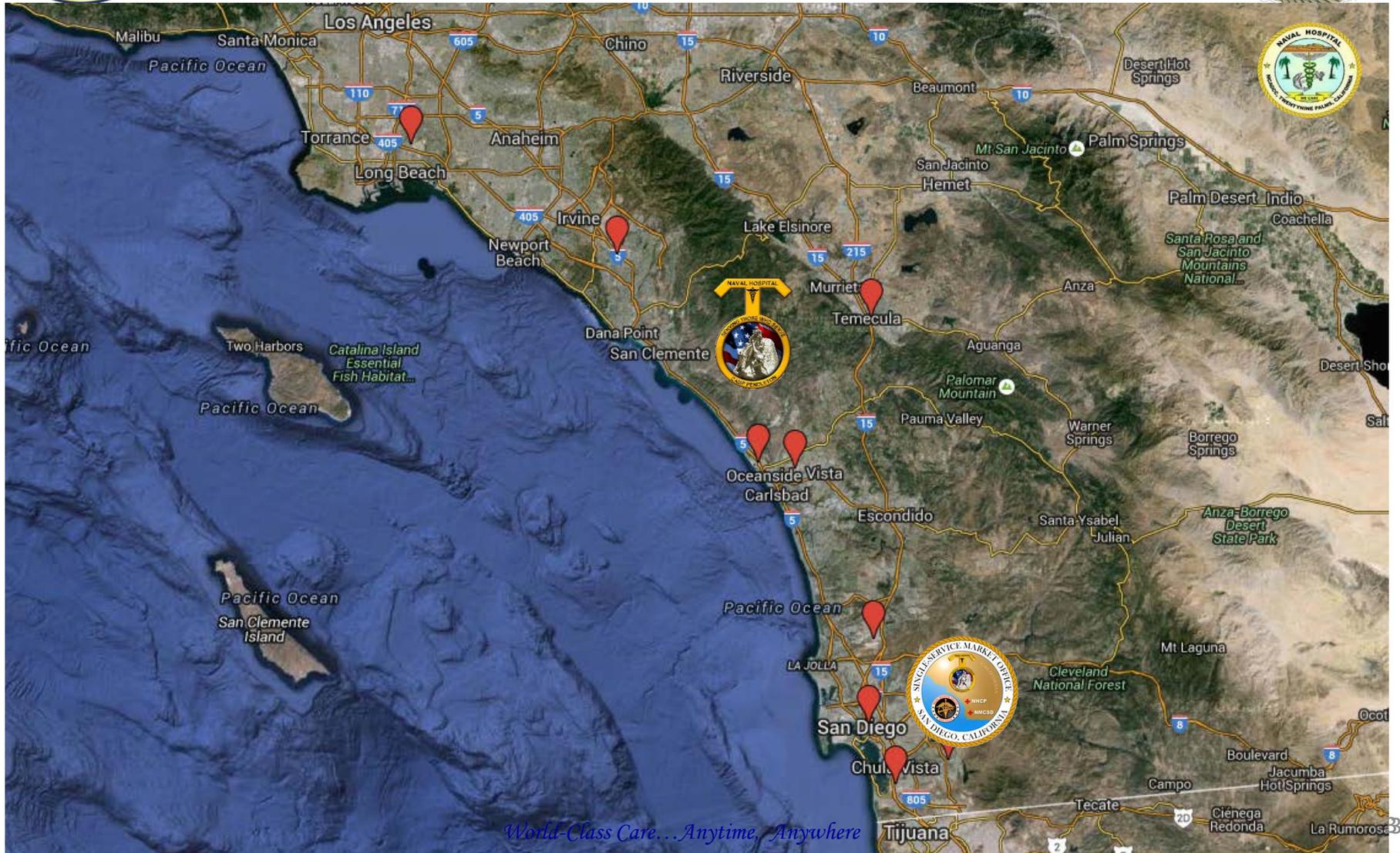
Agenda



- Organization
- Intrepid Spirit
- Innovation
- Research
- Outreach



Organization



World-Class Care... Anytime, Anywhere



Organization

Concussion Care Clinic Functions



Program Director

Deputy Medical Director

Clinical Operations
(3 teams)

Senior Researcher

Outreach/ Education

LPO

PROVIDERS /
Support
Clinic Mgr
Nurse Prac
Neurologist
Team RN
Health Tech
MSA

BEHAVIORAL HEALTH
PROVIDERS
Clinical Psychologist
Health Psychologist
Neuropsychologist
Psychometrist
LCSW
Chaplain

VESTIBULAR
Vest PT
Speech Path
Vest PT Tech

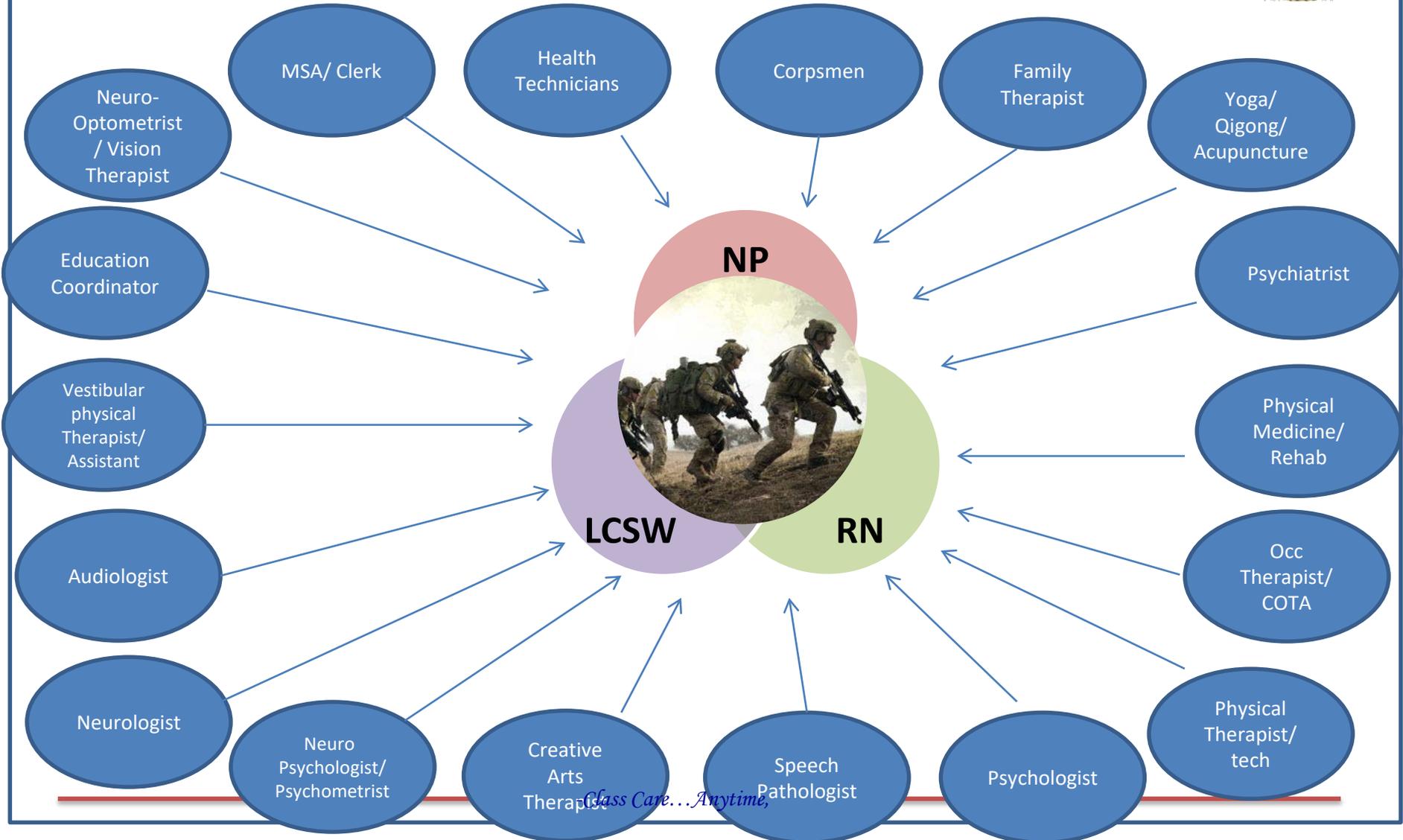
REHAB
PT
OT
Tech

RESEARCH STAFF
Neuropsychologist
Research Assistant



Organization

Multi-disciplinary Team





Camp Pendleton Intrepid Spirit Center (IS-7)



- Opened May 2018, the Intrepid Spirit center is approximately 25,000 square feet and costs approximately \$11 million to build and equip.
- Spirit center incorporating the following facilities: Intake/Clinic area including psychiatric testing, chiropractic treatment, acupuncture, neuro psych testing rooms, and typical exam rooms.
- Physical Therapy with open gym layout with standard physical therapy equipment.
- Sleep Lab equipped with a sleep system and ambient therapy music and a control room equipped with a computer monitoring system.
- Central Park, a calm atmosphere for patient and family member relaxation and family education, with a meditative feel and including ambient therapy music.
- Family Room, centrally located and adjacent to the outdoor patio, providing a space for patients and family to spend time together, a critical part of the healing process.





Complimentary Alternative Medicine (CAM)



- Acupuncture
- Thai chi
- Pet Therapy
- Mind Body Medicine





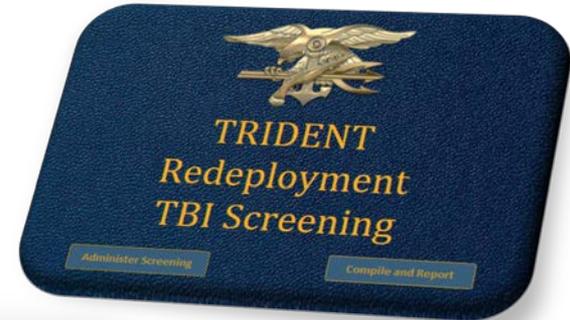
Innovation



- NeuroTRACT
Clinical Database



- TRIDENT
Redeployment screening tool



- Fast Track

Monday	Tuesday	Wednesday	Thursday	Friday
Intake	Intake	Intake	Intake	Fast Track!
		Specialty Appts	Specialty Appts	Specialty Appts
Specialty Appts	Specialty Appts	ITC	PCM Follow ups	PCM Follow ups



NeuroTRACT Clinical Database



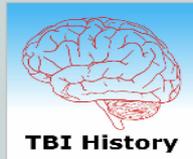
TBI Clinic Database



Duty Status



Outcome Measures



TBI History

Patient's DOD ID:
Patient's Name:
Active Case Number:
Intake Date:

[Open New Case](#)



Intake Summary

Case History

Case Number	Referral Date	Site	Discharge Date
1000001	20-Jun-16	NMCS	



Intake Summary



Discharge Summary



Symptom Changes



Average Referral Time



Meeting Overdue Report



NeuroTRACT

Symptom-Based Provider Goals



TBI Clinic Database

DOD ID: 1111111111

Clinical Data

Back

Case Number: 1000001

- Record of Medical Care
- Program Disposition
- Referrals
- Provider Goals

Provider Goals

Primary Care Switch Specialty:

- Headaches
- Dizziness/Balance**
- Insomnia
- Visual Disturbance
- Tinnitus
- Hearing Loss
- Pain

Dizziness / Balance

Progress  51 %

Goal	% Completed	Date
<input type="text"/>	<input type="text"/>	<input type="text"/>
Score 12 points or less on the Dizziness Handicap Inventory self-report		
Independent with progressive HEP		
Pt will stand tandem EC for __ seconds on firm surface, min sway		
Pt will stand SLS EC firm (R&L): __ seconds; No LOB		
Pt will score >= __/30 on FGA		
Able to run 3 miles without symptoms.		
Score 27 points or greater on the Functional Gait Assessment		
Score 86% on greater on the self-report Activities Specific Balance Confidence (ABC) scale		

Save Cancel

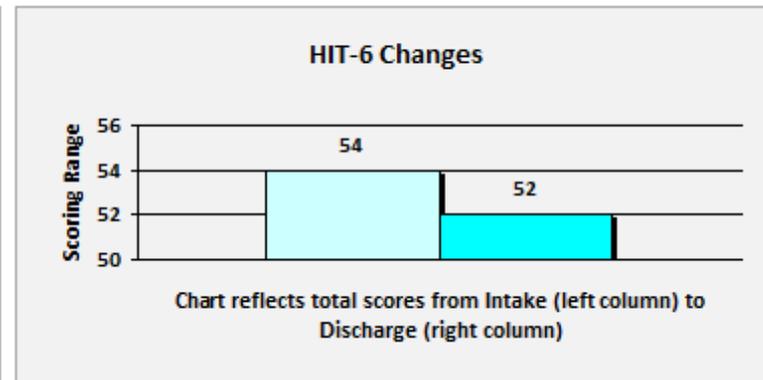
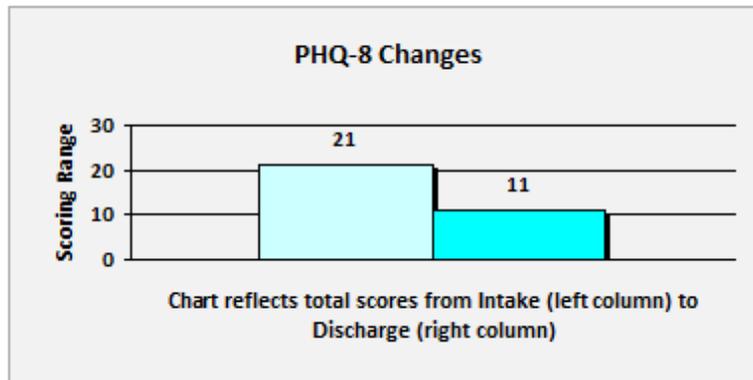
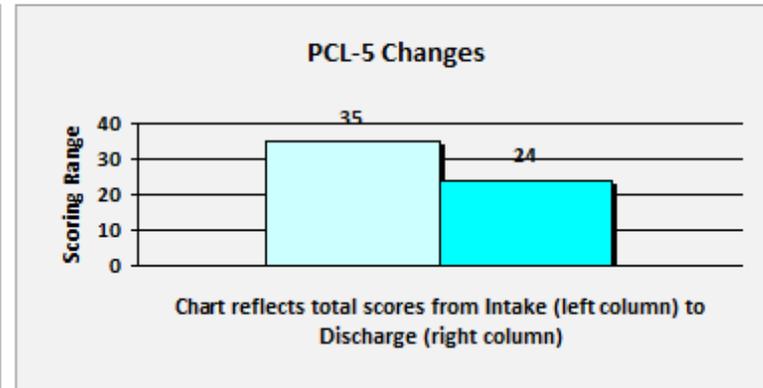
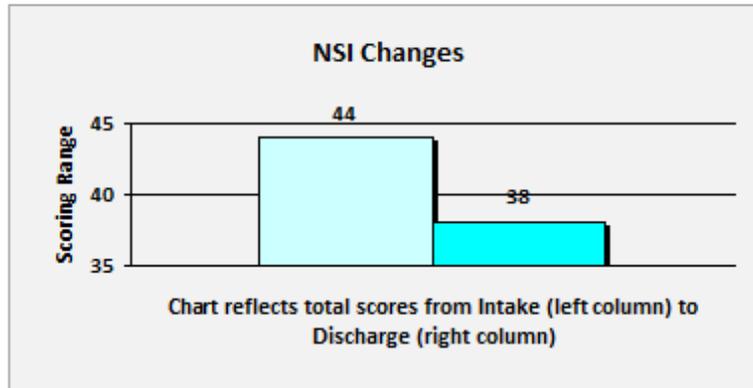
Provider:	Date
Jepsen	11/1/2016
Jepsen	11/1/2016

- Each individual symptom automatically displays its relevant goal.



NeuroTRACT Outcome Measures

Symptom Changes Summary



Neurobehavioral Symptom Inventory (**NSI**)

Headache Impact Test (**HIT-6**)

Personal Health Questionnaire Depression Scale (**PHQ-8**)

PTSD Checklist for DSM-5 (**PCL-5**)



TRIDENT Redeployment Screening Tool



Problem: 100% of deployable SEALs are exposed to potential hazards for TBI



- Blast detonations of high/low-order ordnance
- Rocket back blast & heavy weaponry concussive effects
- Hard parachute openings and landing
- Vehicle accidents
- Diving incidents

Solution: TRIDENT Redeployment Screening Tool

- Standalone app can be emailed across the globe
- Screening can be administered by technician without access to the captured information
- Captured data is encrypted and sent to the responsible provider





TRIDENT Redeployment Screening Tool

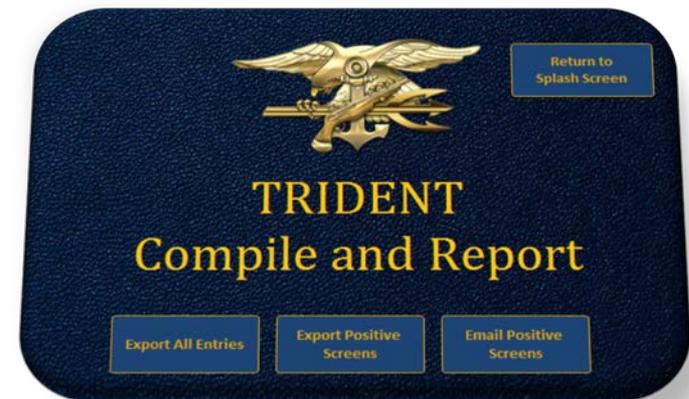
If the answer is "Yes" to one or both of the previous questions, please answer the following questions related to the event:

Q+1. <i>As a result of the event,</i> were you knocked unconscious?	<input type="radio"/> Yes <input type="radio"/> No
Q+2. <i>As a result of the event,</i> were you dazed, 'saw stars', or 'had your bell rung'?	<input type="radio"/> Yes <input type="radio"/> No
Q+3. At any time <i>since the event</i> have you had a seizure or convulsion?	<input type="radio"/> Yes <input type="radio"/> No
Q+4. <i>Since the event</i> have you experienced new onset headaches or more frequent headaches than prior to the event?	<input type="radio"/> Yes <input type="radio"/> No
Q+5. <i>Since the event</i> have you become irritable or short tempered?	<input type="radio"/> Yes <input type="radio"/> No
Q+6. Do you have a loss of memory for what happened right after (and/or before) the event?	<input type="radio"/> Yes <input type="radio"/> No
Q+7. <i>Since the event</i> have you had any ongoing problems with sleep?	<input type="radio"/> Yes <input type="radio"/> No
Q+8. <i>Since the event</i> have you experienced any balance problems when you walk, stand, or run?	<input type="radio"/> Yes <input type="radio"/> No
Q+9. <i>Since the event</i> have you experienced any weakness, numbness, tingling, or loss of feeling in your face, arms, or legs?	<input type="radio"/> Yes <input type="radio"/> No
Q+10. Do you continue to experience any of the above symptoms?	<input type="radio"/> Yes <input type="radio"/> No

[Clear My Responses and Return to Previous Screen](#) [Submit](#)

- Allows NSW treatment team to evaluate exposure and prioritize appointing
- Allows for synchronization with the NSW inter-deployment training cycle

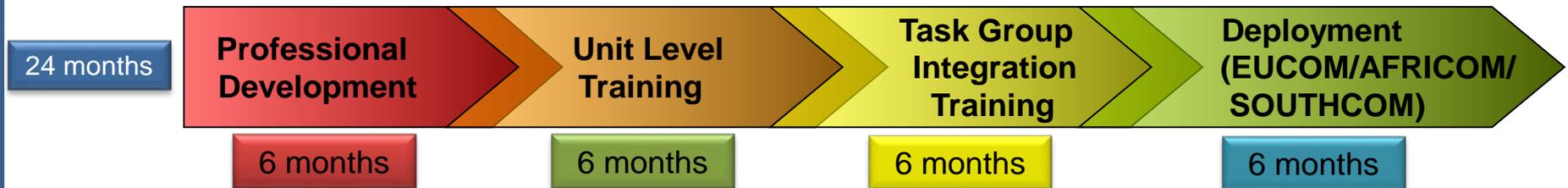
- Password protected data
- Automatic scoring and reporting
- Quicker evaluation, treatment, and return to duty





Fast Track

“Naval Special Warfare maintains a high operational tempo and a fixed inter-deployment training cycle, making it difficult to schedule and receive care”.

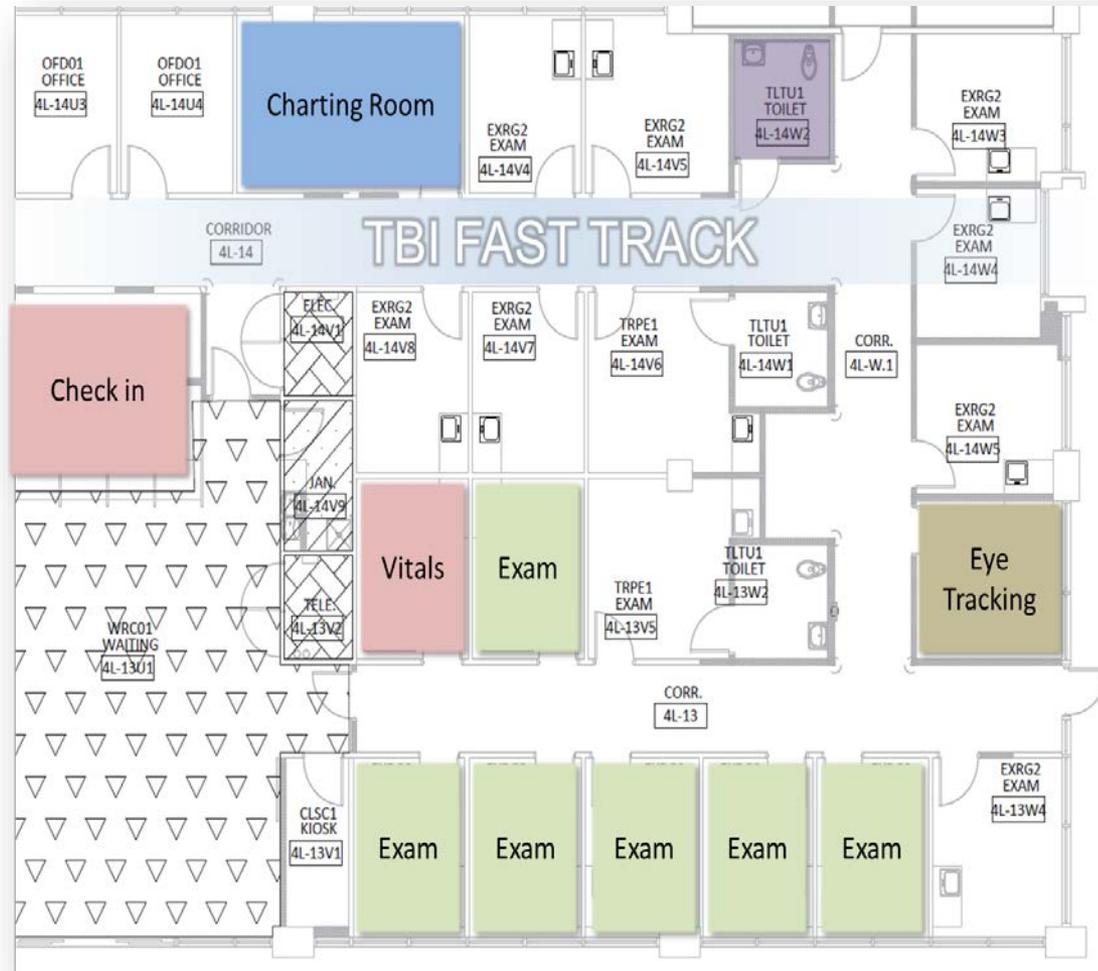


“This gap in scheduling contributes to deteriorated health of the individual, unit, family, and force.”

- CAPT G. B. Hoyt, Navy Special Warfare Command Surgeon



Fast Track One Day...One Space



Six specialists addressing:

- Attention
- Balance
- Executive Function
- Headaches
- Language
- Memory
- Pain
- Sleep
- Tinnitus
- Vision

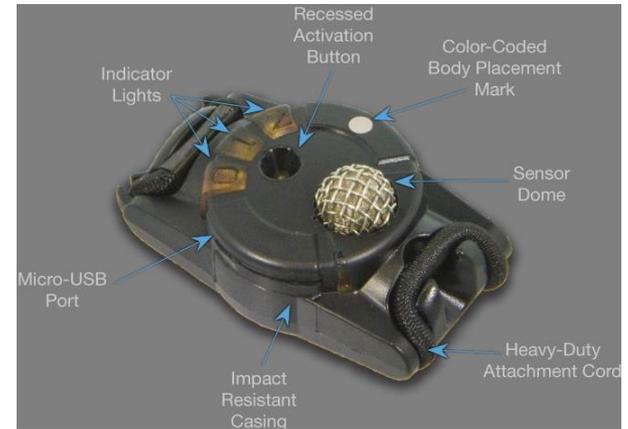


Research

- Exploring the Natural History of Traumatic Brain Injury within a Military Cohort- A Longitudinal Database and Blood Banking Study (Caregiver Study)
- Neurocognitive Assessment of Blast Exposure Sequela in Training (NC-BEST Study)
- Investigating the Neurologic Effects of Training Associated Blast (I-TAB Study)
- Evaluation of the DVBIC Progressive Return to Activity Clinical Recommendation Tool (PRA Study)
- Rehabilitation of Visual Attention Following mTBI (Cog Rehab Study)
- Defense and Veterans Brain Injury Center (DVBIC) Traumatic Brain Injury Clinical Patient Registry (Data Registry Study)

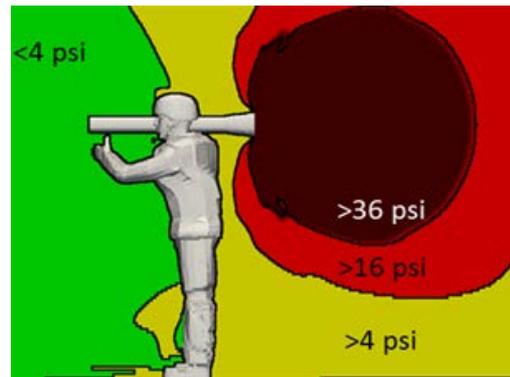


Research with Shoulder Mounted Rocket Launchers



Common Weapon Systems:

- Carl Gustav Recoilless Rifle (Carl G)
- Light Anti-Tank Weapon (LAW)
- Shoulder Mounted Assault Weapon (SMAW)
- Rocket Propelled Grenades (RPG)



Head, Shoulder, Chest





Outreach



- Market is supported by DVBIC offices at NMCS D and Camp Pendleton
- Q1-2 of FY 18: over 40 sessions attended by more than 1200 participants.
- Annual symposiums are designed for clinicians from primary care, specialist physicians, nurses, social workers, and other medical personnel involved in the treatment of TBI patients. This years topics include:
 - Sports vs Blast Concussions
 - Demystifying ICD-10
 - Insomnia in Post Concussive Patients
 - Mind Body Medicine and Stress Resiliency
 - TBI and PTSD Overlap
 - Advanced Technology for Assessment and Rehabilitation of TBI
 - mTBI and PCS: Course and Treatment
 - The Caregiver Perspective



Questions

