

Veteran Health Administration National Non-Utilization of Hyperbaric Oxygen Therapy in all 172 Hospitals for TBI/PTSD Veterans

Glenn J. Butler

- Kimmel-Long Island Hyperbaric Wound Center Joint
Conference
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Disclosures

- Glenn Butler is a Veteran Health Care advocate and provides clinical hyperbaric and wound care support services to NYU-Langone, other Hospital-based facilities, the DoD and NASA.
- Eric Koleda is a USAF Veteran and the National Director of TreatNOW Coalition State Legislative Efforts. TreaNOW.org is a National Not-for-Profit Veteran Support group
- Life Support Technologies, Inc. and Hyperbaric Medical Technologies, Inc. are New York State Healthcare Service Corporations.

Note:

- **The general TBI / PTSD information in this presentation is based on broadly Published Data.**
- **The DFU data was supplied by the VHA Under-Secretary of Health Dr. Steven Lieberman at the request of Congressman Gregory Murphy MD (R-NC) and shared with TreatNOW.org.**
- **Date Citations related to this presentation are available on the TreatNOW.org website and the numerous internet sites**

Informational Objectives

- VHA position on use of HBOT in the Treatment of TBI / PTSD
- State funded Program Utilizing HBOT in use TBI / PTSD Treatment
- New York State Bill A-10033 HBOT Study for TBI / PTSD Treatment

- VHA follows CMS, FDA, Optum VA HBOT Indication Guidelines
- VHA does not have HBOT in any of 172 National Medical Hospital Centers
- VHA Community Care Network (CCN) Hospital HBOT utilization
- VHA position on use of HBOT in support of DFU / LLA reductions
- VHA position on the use of HBOT for other CMS, VHA Indications

Traumatic Brain Injury (TBI) and PTSD Among US Veterans

- Understanding the Impact and Supporting Treatment, Healing and Recovery in NY



What Are TBI Root Causes To Be Considered?

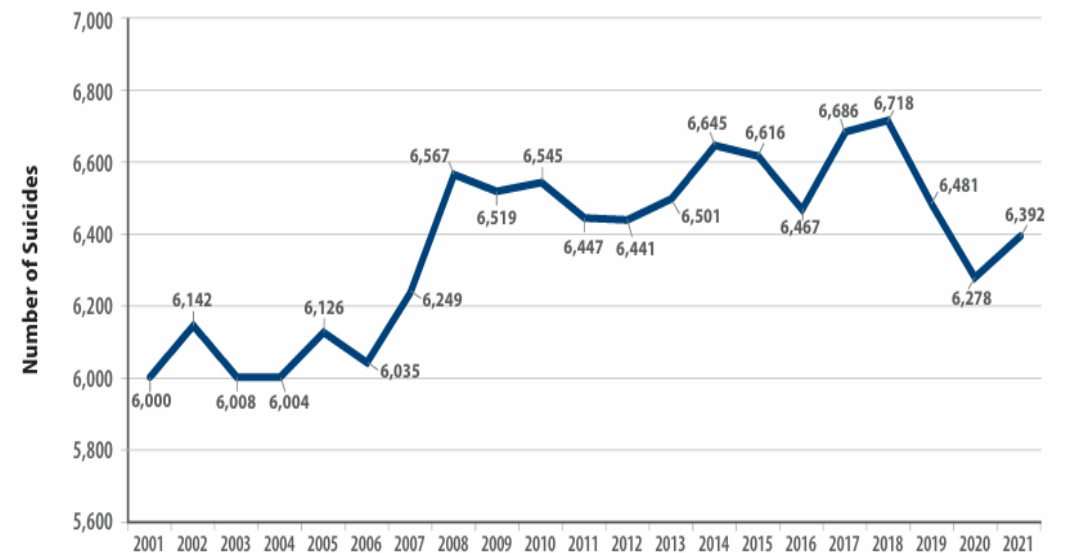
- Current healthcare system does not adequately address TBI/PTSD amongst Veterans and the US general population (over 213K TBIs annually)
- The impact of invisible brain wounds is directly impacting the inflow of patients into long term care
- Undiagnosed or mis-diagnosed Veteran TBI is one of root causes along with palliating symptoms with non-FDA approved prescription medications
- Addiction and prescriptions to offset pain is one of VA root causes-over medicated by healthcare without addressing physical brain wound
- Hyperbaric Oxygen Therapy (HBOT) heals and helps eliminate suicide ideation and the pain equation-based on published medical trial data but widely NOT used



How Long Has TBI Been Known to Cause Physical Brain Injury to Veterans?

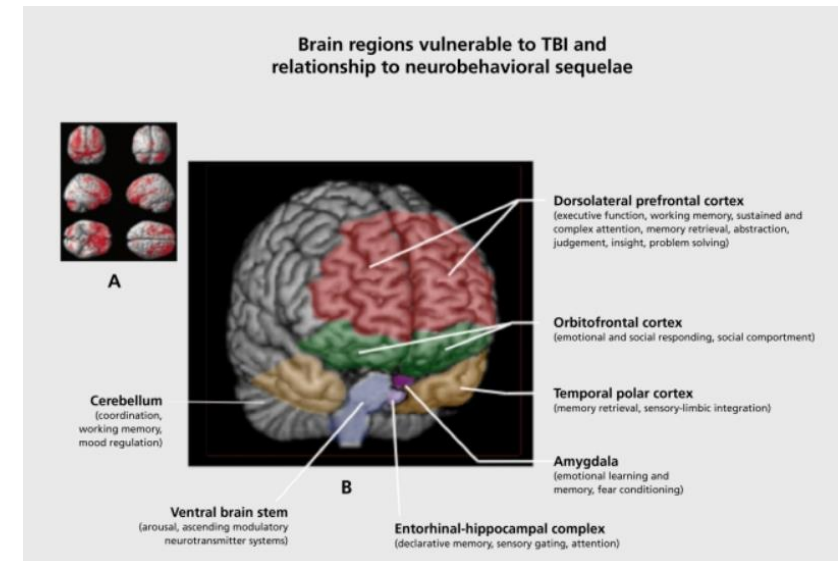
- 1870: Civil War Veterans with "Irritable Heart"
- 1920: WWI Veterans with "Shell Shock"
- 1950: WWII Veterans with "Combat Fatigue"
- 1975: Vietnam Veterans with "Post Traumatic Stress Disorder"
- 1995: Gulf War Veterans with "Gulf War Syndrome" and or "PTSD/TBI"
- **2024: 154-Years of Combat TBI Has Created Veteran Suicide and OUD Epidemics**

Figure 2: Veteran Suicide Deaths, 2001-2021



Introduction to TBI

- Post 9/11 an estimated 877,450 TBI/PTSD Veterans returned home with invisible physical brain wounds
- The VA 2022 mental health, suicide prevention, homeless, caregiver, and opioid budget \$15.7B as suicide rates escalate
- Nearly 70% who commit suicide don't use the VA. TBI Veterans had 3-fold increased risk of opioid overdose compared with those without
- Approximately 50% of Veterans undiagnosed or mis-diagnosed with PTSD, 51% of Veterans NOT in VA healthcare, VA has palliative TBI symptoms with off-label prescription meds



Introduction to TBI

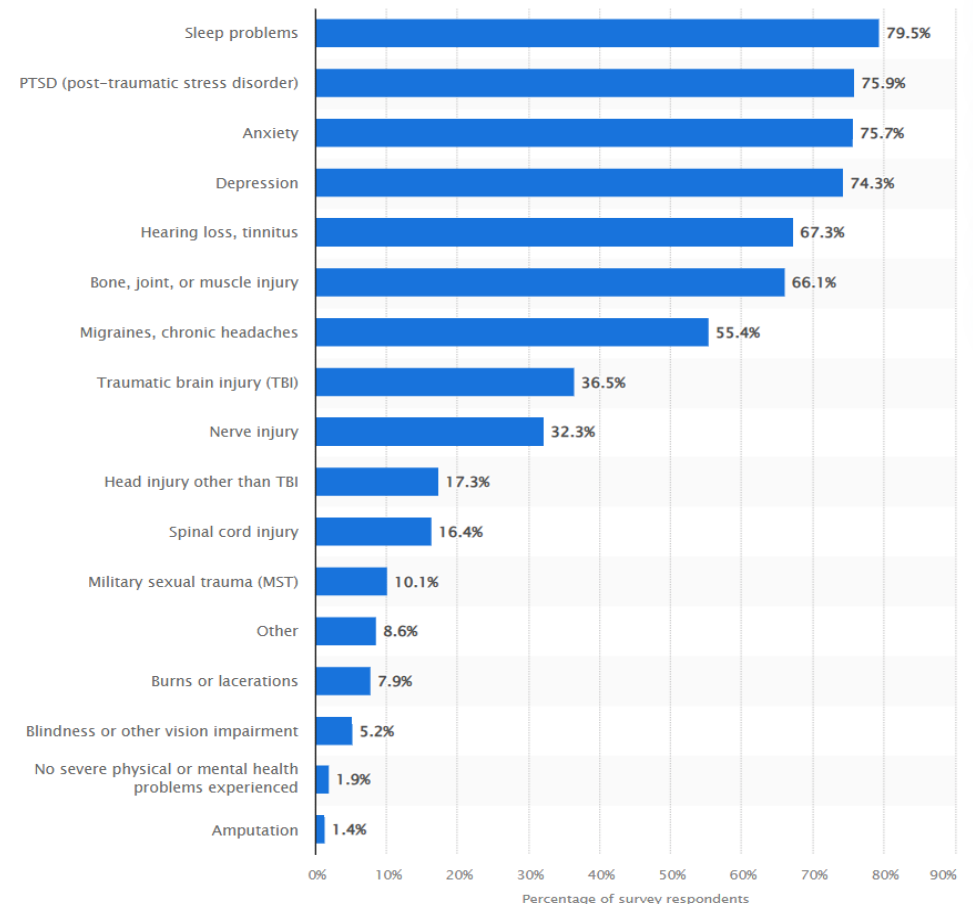
- Current healthcare system has produced 151,000+ TBI/PTSD Veteran suicides 20 per day for 21 years
- Over 213K TBIs annually in US, 86% age 65 or older based on 2023 recent data
- 109,000+ OUD deaths (2006-2014 847M+ opioid pills distributed in 4 of 8 VA CMOPs, DEA.gov), 14 per day for 21 years
- The suicide and opioid epidemics have decimated Veterans at home



Increasing Rates of Morbidity in Military Combat Personnel- "The Walking Wounded"

<u>Conflict</u>	<u>% of Battle Wounded Who Die/(Total)</u>
Civil War	50% (618,222)
WWII	30% (416,800)
Vietnam	24% (57,939)
Iraq/Afghanistan	<u>10% (7,057) Kevlar Protection+</u> 1.1 M
Post 9/11 Suicides	151,000+
Post 9/11 OUDs Deaths	<u>109,000+</u>
Post 9/11 TBI/PTSD Deaths	260,000+
Total	24% of all non-combat deaths are TBI/PTSD related

Injuries and Health Problems During Military Service



TBI/PTSD: The “Signature Injury” 20-Yr Iraq and Afghanistan Wars Over 70,000 Improvised Explosive Devices (IEDs) 7,057 deaths=29 per month, 877,450 TBIs=3,656 per month

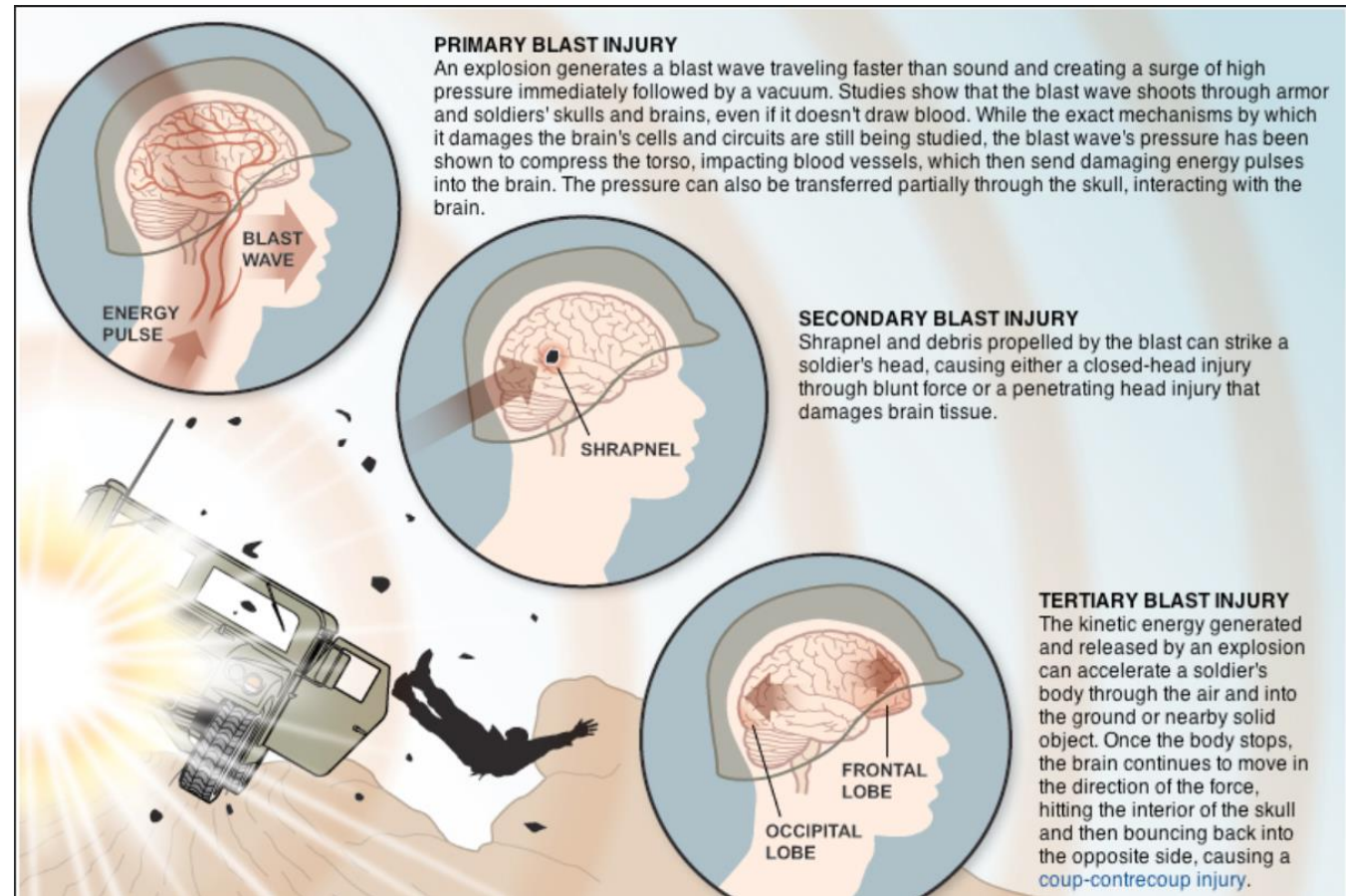


Kevlar helmets and jackets are saving Veterans in combat: 7,057 total combat fatalities, **877,450 invisible physical wounded returned home**

Rand Corp-23% of desert Veterans with TBI, **our estimate XXX in NY, 71% TBIs Army and Marines**

What are the Causes of TBI in Veterans

- Blast Waves (Over 70,000 IEDs Exploded in 20-years, add in RPGs, grenades, heavy weapons)
- Direct impact injury, acceleration or deceleration injury, blast injury or penetrating injury
- Falls and thrown into the air, knocked down, physical confrontations
- Military training events: Example- airborne jumps
- Accidents in vehicles while exposed to blasts and explosives
- Sexual assaults
- The injury is physical, but it's treated as "psychological injury" (Dr. Perl 2016)



Blast Exposure Shock Waves

- Supersonic heated pressure wave
- High level of kinetic energy released over short time-period
- Distance from the explosion
- Blast ear (tympanic membrane rupture/middle ear), lung (lung parenchyma), brain (TBI), eye (rupture of globe of the eye), all from air filled organs



We have surpassed all Vietnam combat deaths 58,220 with Post 9/11 Veteran suicides and opioid deaths by 4.4 times (260,000+). The prescription protocol treating TBI symptoms is NOT working! OVER 109,000 OUD'S

The New York Times

Drugs Found Ineffective for Veterans' Stress

By BENEDICT CAREY AUG. 2, 2011

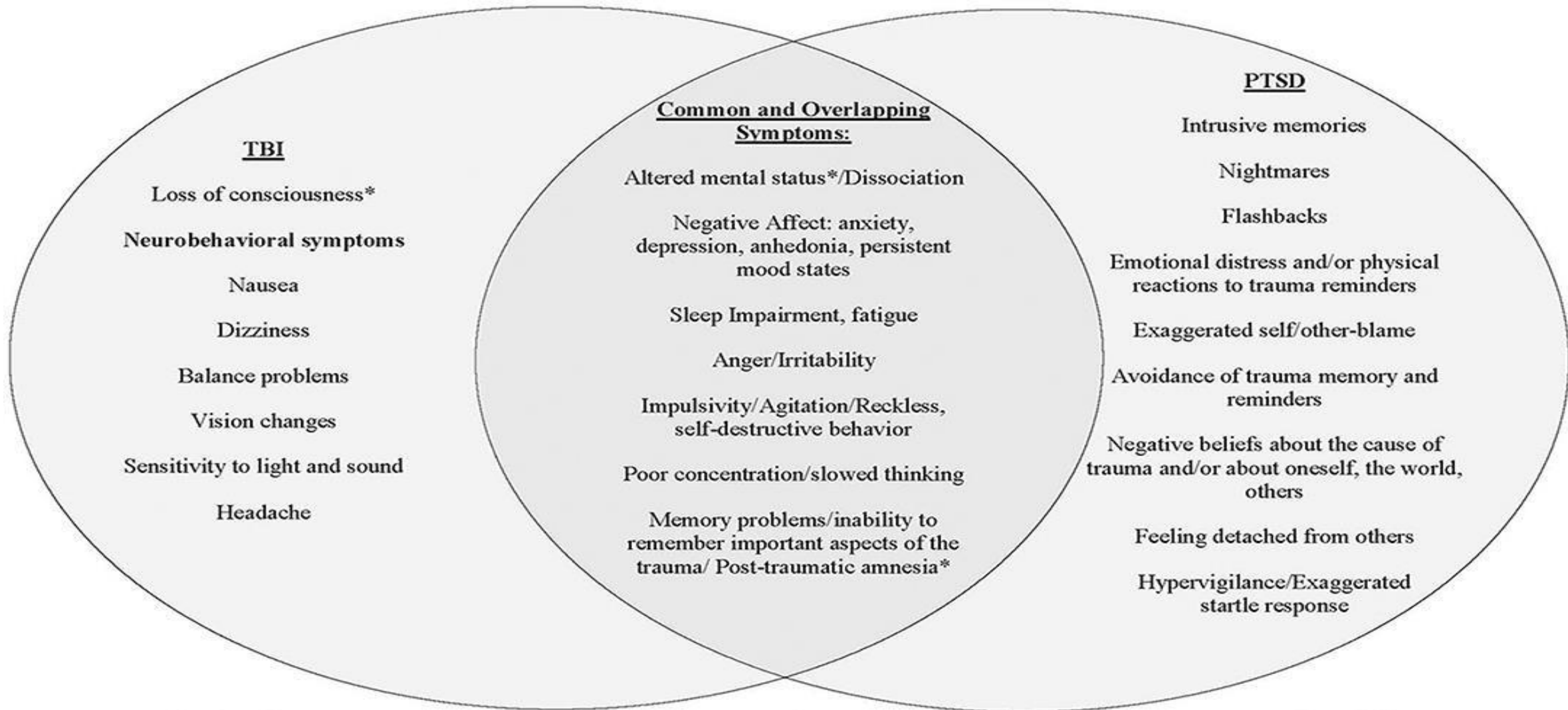


A U.S. Marine waited to take psychological tests at the Marine Corps Air Ground Combat Center in Twentynine Palms, Calif., in 2009. Jae C. Hong/Associated Press



No FDA approved drugs prescribed for TBI, Over 847 million opioid pills (DEA.gov) distributed by VA from 2006-2014, 679,000+ OUD Veterans in 4Q2012 (VA.gov), 2008-2020 VA \$93.8 B on Mental Health and Research Budgets with *zero suicide reduction*

Failed Symptom Based Diagnosis-Why are the "Signature Invisible" TBI Physical Wounds Mis-diagnosed and Un-diagnosed? Stigma and fear of loss of career means Veterans hide their injuries

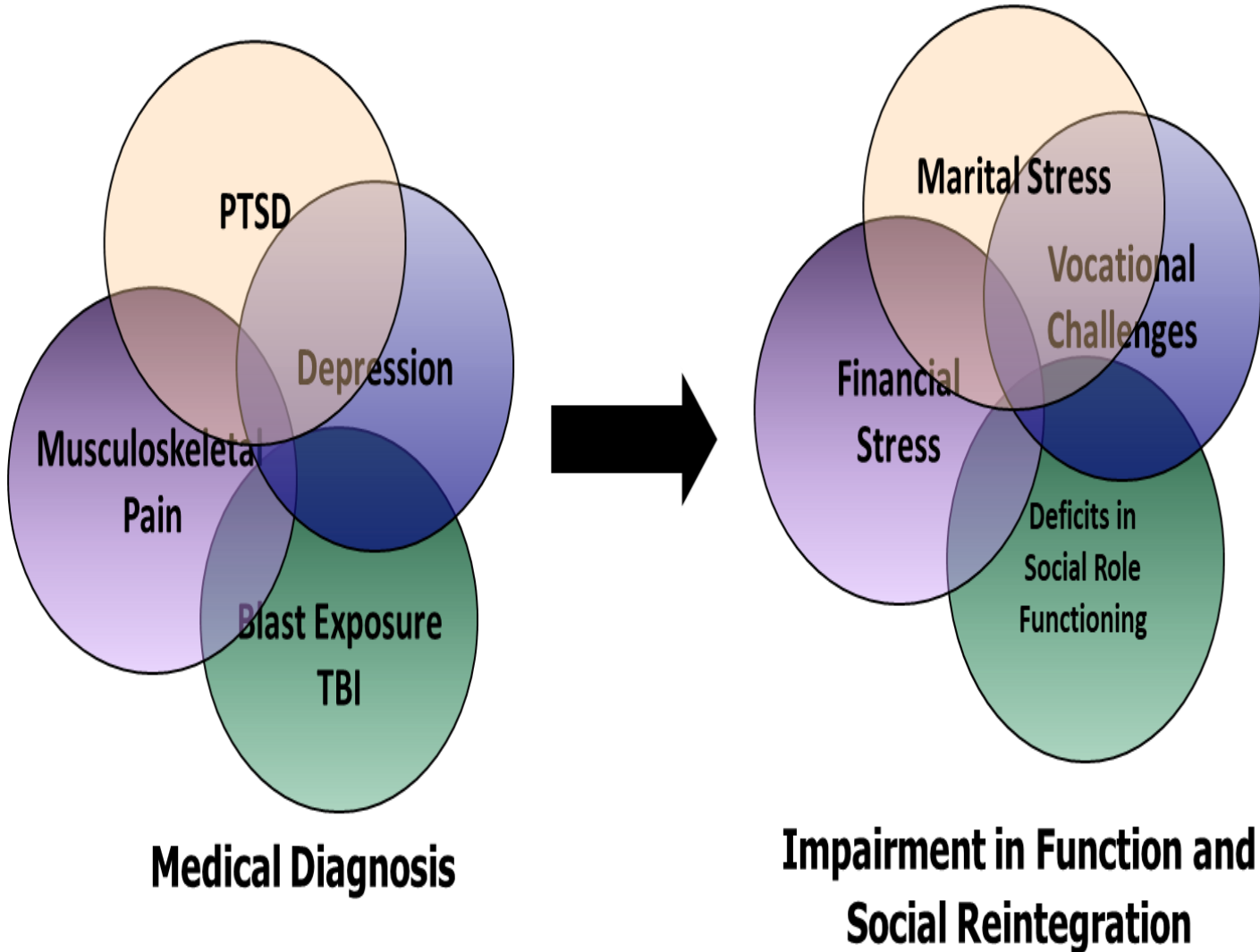


All Wars Have The Same Post-Combat Health Issues

- Polytrauma negatively impacts the entire body system, physical injuries with residual joint pain
- Diagnosable mental health conditions (TBI/PTSD)
- Unexplained symptoms with general health decline, Hearing issues (Tinnitus)
- Psychosocial distress: marriage/work/social disruption
- Post-war death/injury from "self inflicted medication" (alcohol or drugs)
- Unemployed and unemployable-70-100% disabled



How military service effects the lives of Veterans?



US FAMILY HEALTH PLAN

Home Health & Wellness Learn About a Condition PTSD Affects the Whole Family

PTSD Affects the Whole Family

Returning to family life after a combat deployment brings challenges for everyone.

Why HBOT for TBI?



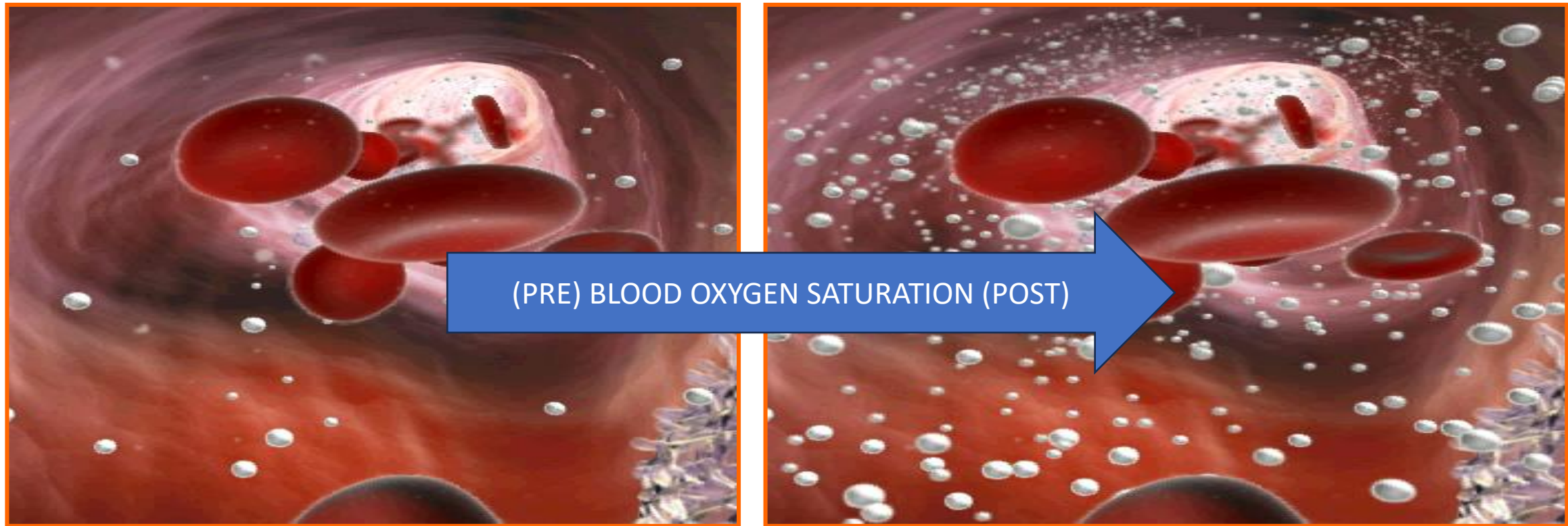
100% Oxygen is delivered at 1.5 ATA which infuses 700-1,100% O₂ into blood stream

It's About Oxygen Saturation-AT CELLULAR LEVEL

The blood is saturated with 100% oxygen at 1.5 ATA, 700-1,100% more oxygen, promotes cell and tissue growth which

accelerates wound healing with an approved medical drug-"Oxygen"

Ex: FDA, CMS, and Tricare approved for tissue wounds such as DFUs, skin grafts, post radiation tissue damage

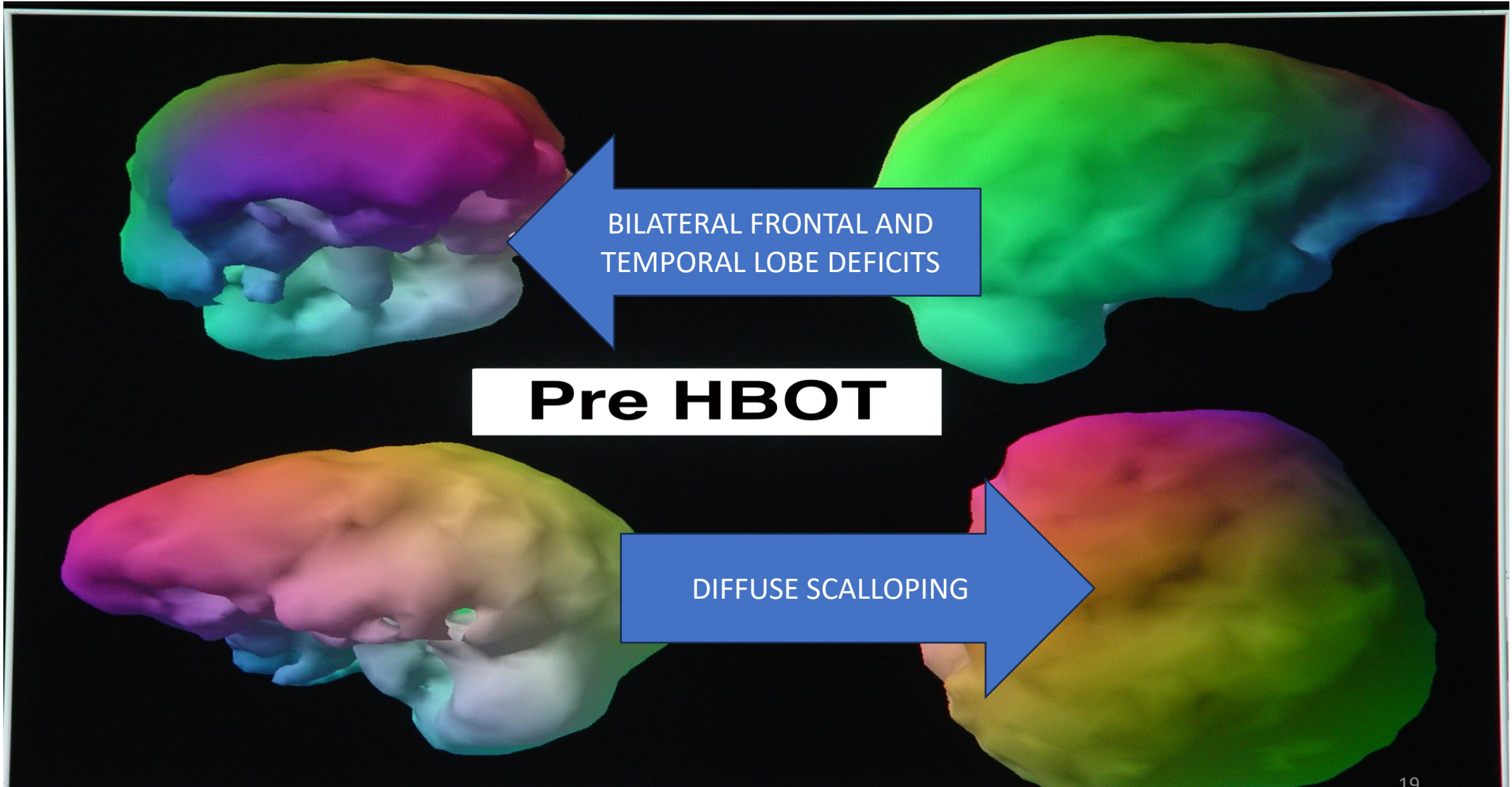


Before HBOT

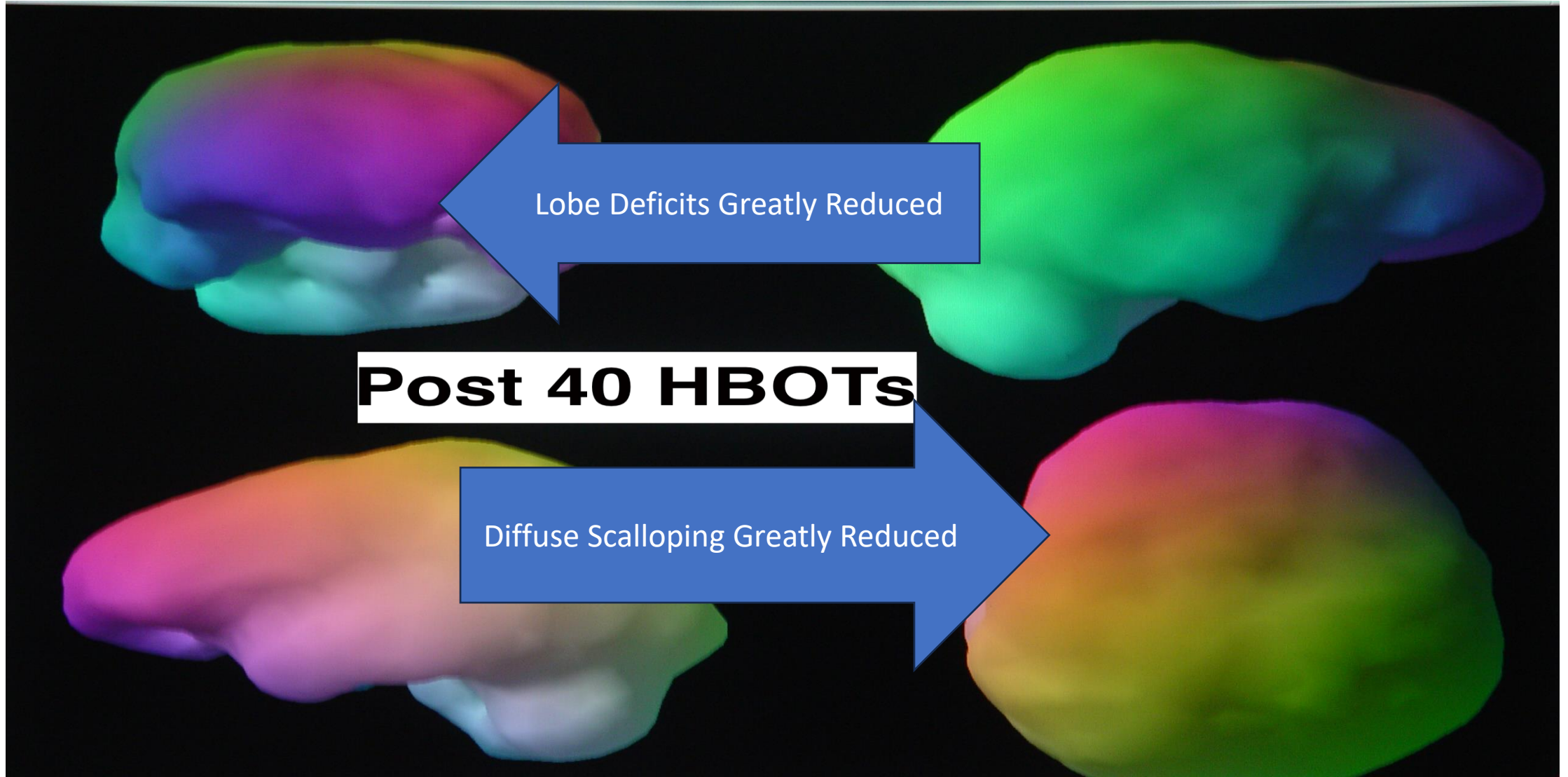
After HBOT

Image Courtesy of Dr. Stoller

LSU IRB #7051: Paul G. Harch, M.D., Edward F. Fogarty, M.D.
SPECT-Single-Photon Emission Computed Tomography Nuclear Scan



LSU IRB #7051: Paul G. Harch, M.D., Edward F. Fogarty, M.D.
Medical peer reviewed and published data available upon request



BLAST EXPOSURE

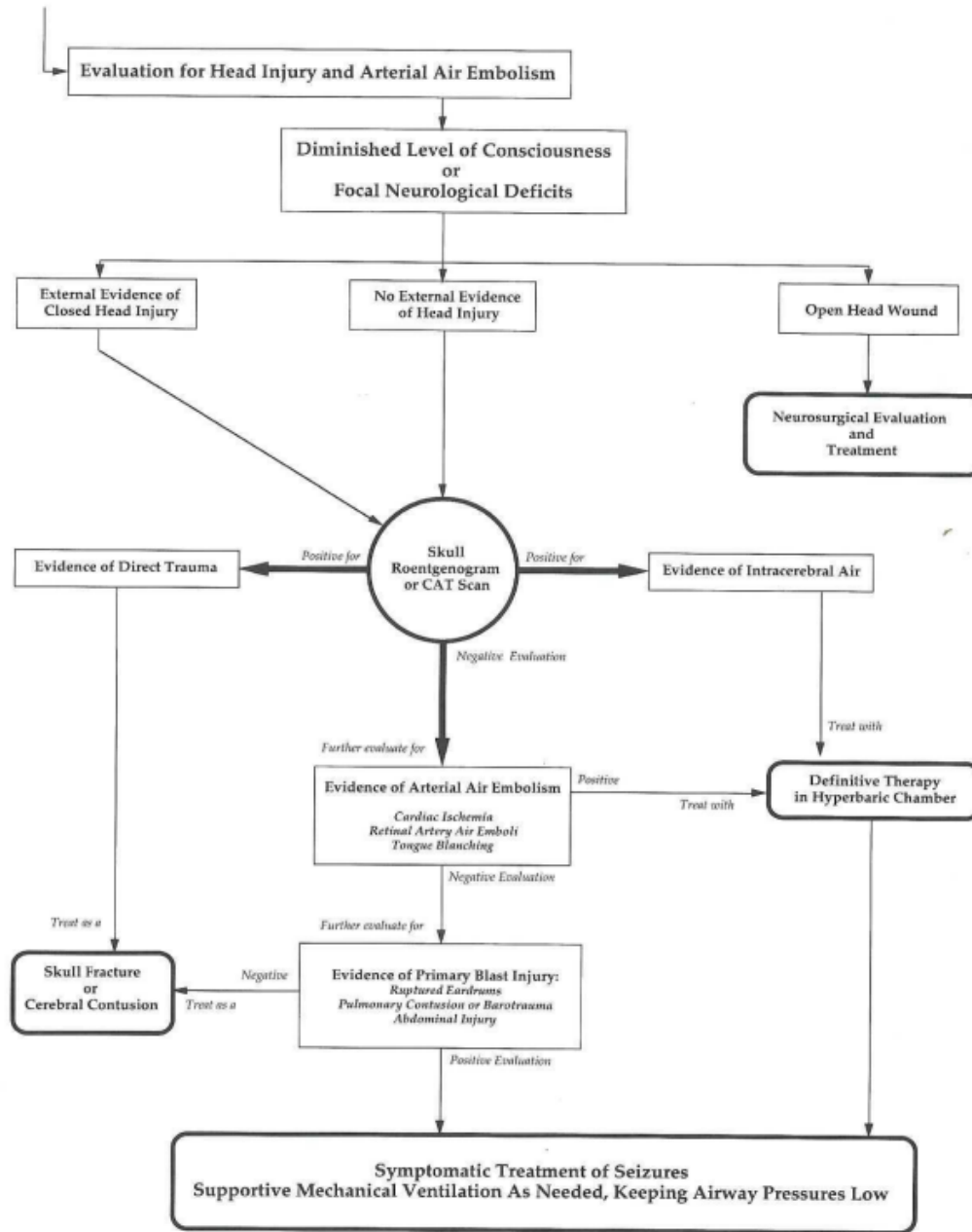


Fig. 9-10. Algorithm for the evaluation of neurological abnormalities in a blast casualty

HBOT Treatment Success Stories

<https://www.youtube.com/@treatnowdotorg/videos>

- Over a hundred TBI/PTSD Veteran video testimonials of the estimated 12,500+ HBOT treated attesting to the safe and effective results of HBOT treatment-
<https://www.youtube.com/@treatnowdotorg/videos>
- **Honorable Patt Maney**-Army BG (Ret), Veteran Court Judge (FL), FL Representative

<https://www.youtube.com/watch?v=FmGqRLSKzWg>

Wounded Afghanistan with IED August 21, 2005, 20 months Walter Reed Hospital, 120 HBOT treatments, returned to serving as District Court Judge



Hyperbaric Oxygenation works to heal
Concussion/TBI/PTSD/PCS

TreatNOW

HEAL BRAINS • STOP SUICIDES • RESTORE LIVES

Importance of Support and Rehabilitation

National HBOT legislative effort

- Ten states (OK, TX, IN, AZ, KY, FL, N, WY, MD, VA) have HBOT enacted with cumulative state legislative vote of 1,464 to 4 in favor, 7 states funding \$32.3M+ for HBOT treatments
- Three TBI/PTSD 2025 bills in US Senate and House-
“none with funding”
- The 1990 Textbook of Military Medicine algorithm for “Blast Exposure” definitive therapy is HBOT for TBI-why is it not fully utilized by VA/DoD?
- NY could become 11th state to enacted HBOT for TBI Veterans and save lives

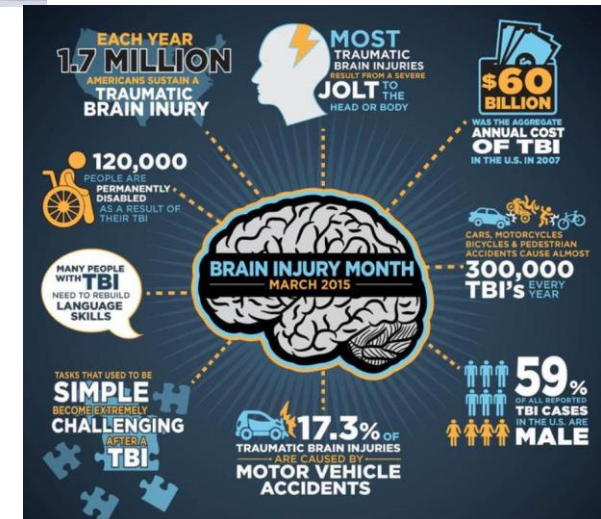


TreatNOW.org Initiatives

- Two published and peer reviewed HBOT medical meta-analysis on TBI/PTSD in Frontiers of Neurology by Dr. Harch, (2022/2024), over 24 clinical trials completed since 2007
- Submitted package to CMS in 2022 for HBOT coverage of mTBI, denied due to no over age 65 clinical trail data (high morbidity rates limit available Veterans)
- Published TBI/PTSD economic analysis book 2021, \$118.1B annual economic impact, \$4.7T over 40-year life span, average per state of \$2.3B annually, we can treat and heal for ½ of 1 percent of lifetime cost (The National Brain-Wounded Veteran Brain Drain, Koleda and Beckman, 2021)
- The current estimated annual national economic impact cost is \$134,595 per Veteran (\$118.1B/877,450) while the one-time safe and effective treatment remedy is estimated at \$20K each (\$250 Hr. X 80 dives).

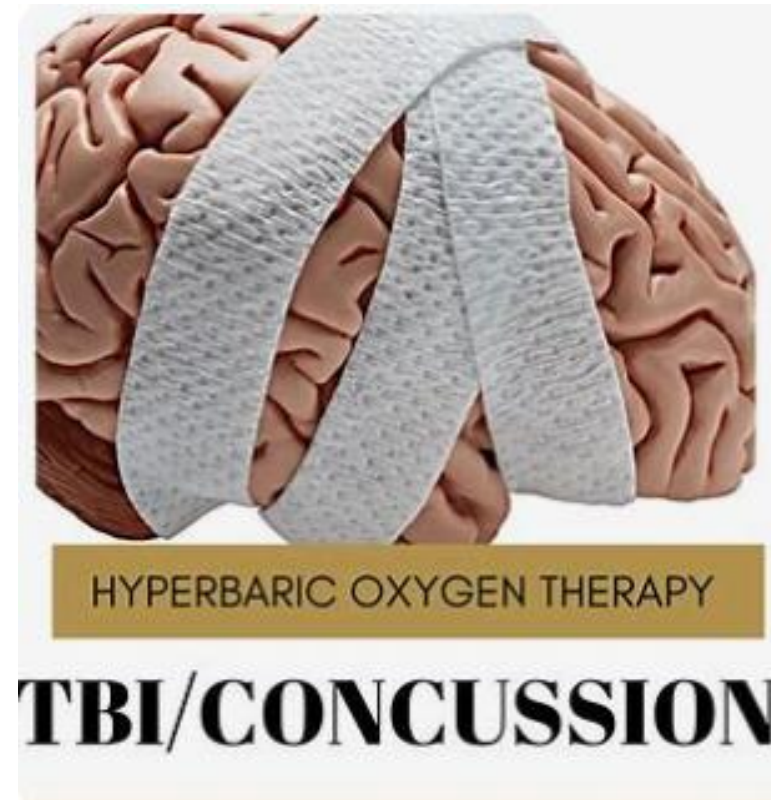
Change the Status Quo

- Treat the invisible physical brain wound with HBOT-an FDA approved wound healing protocol (not yet FDA for TBI)
- Increase awareness and training of medical industry and support organizations on HBOT TBI medical benefits
- Enhanced access to mental health and neurological services such as HBOT for post 9/11 Veterans
- Foster community-based HBOT treatment programs for Veterans through state legislative initiatives
- “Mental Health” in Veterans too often is undiagnosed brain wounds: Fix the hard drive, the software runs better!!



Post Deployment Care Conclusion

- **CARE FOR HIM WHO SHALL HAVE BORNE THE BATTLE-Abraham Lincoln**
- 154 years of wars of **Improper diagnosis or NOT** “treating the invisible physical brain wound”
- Deploy HBOT as standard of care for TBI/PTSD just like Israeli Defense Force (IDF) in Israel for the past decade
- Call to action for the US healthcare industry on HBOT
- Compelling worldwide HBOT medical evidence of “proper diagnosis with brain scans” and treat the invisible physical brain wound
- Ten states enacted HBOT legislation, funding exceeds \$32.3M, 7 additional in work 2025, national funding
- No FDA approved drugs for TBI, only two for PTSD
- HBOT is **ONLY** proven medical TBI treatment which has undergone study, peer review, and clinical trial success



Q & A

Open dialog on recommendations for next steps and discussions
on how we heal and transform our invisible wounded and the industry

