ARMY MEDICINE
One Team, One Purpose…
Conserving the Fighting Strength Since 1775!

Readiness # 1

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Health Care Delivery

29 November 2018

UNCLASSIFIED

Disclosure

Presenter has no interests to disclose.

AMSUS and ACE/PESG staff have no interests to disclose.

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Purpose and Outline

Purpose:
To provide an overview on how Army Medicine improves Readiness through Primary Care, Behavioral Health, Musculoskeletal initiatives, Traumatic Brain Injury, and Comprehensive Pain Integration.

Agenda:
1. Introduction & Learning Objectives
2. Priorities and Imperatives
3. Army Medical Home
4. Behavioral Health Service Line (BHSL)
5. Physical Performance Service Line (PPSL)
6. Traumatic Brain Injury (TBI)
7. Army Comprehensive Pain Management Program

Learning Objectives

At the conclusion of this activity, the participant will be able to:

- Show how Army Medical Homes assist in maintaining the Ready Medical Force.
- Describe how at least one core BHSL program supports Readiness.
- Describe the role of the Behavioral Health Data Portal in linking patient care to the Behavioral Health Service Line's role in promoting Readiness.
- Show PPSL holistic approaches that have allowed for fewer limited duty days making Soldiers Mission Ready.
- Describe advances in the understanding of TBI and how they will be integrated into clinical practice on the battlefield, in training and in the clinics.
- Show how Army Medicine has established an enduring comprehensive pain management strategy; integrating holistic, complementary and integrative therapies; vital in shaping the future of the Military Health Systems; while directly impacting readiness – not only of the Warfighter but also of the Army Family.

Priorities and Imperatives

CSA Priorities: *Readiness* (***#1***), Future Army, Take Care of the Troops

*"**Readiness to fight and win in ground combat is, and will remain, the United States Army's No. 1 priority, and there will be no other No. 1.** We will always be ready to fight today. We will always prepare to fight tomorrow."*

General Mark A. Milley, Army Chief of Staff

"Our challenge today is to sustain the counterterrorist and counterinsurgency capabilities that we've developed with a high degree of proficiency over the last 15 years, while simultaneously rebuilding the capability to win in ground combat against higher-end threats such as Russia, China, North Korea and Iran… We can wish away these threats, but we'd be very foolish as a nation to do so."

General Mark A. Milley, Army Chief of Staff

"Our readiness to deploy healthy individuals and organizations in support of the world's premier combat force must be without question. Readiness is #1."

LTG Nadja Y. West, Army Surgeon General

"The future of Army Medicine at the individual, organizational and enterprise levels is being determined today. We must rapidly develop scalable and rapidly deployable medical capabilities that are responsive to Operational needs and are able to effectively operate in a Joint/Combined environment characterized by highly distributed operations and minimal, if any, pre-established health service infrastructure."

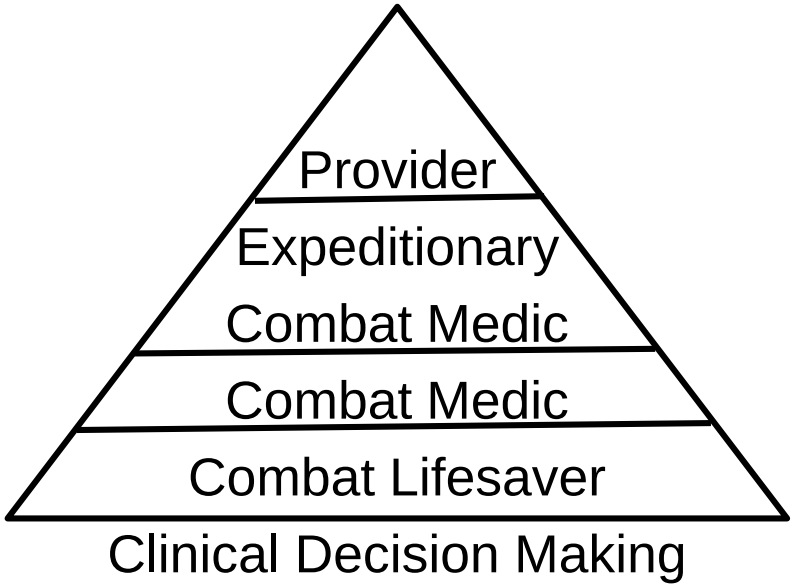
LTG Nadja Y. West, Army Surgeon General

Readiness Begins with Leaders!

Army Medical Home

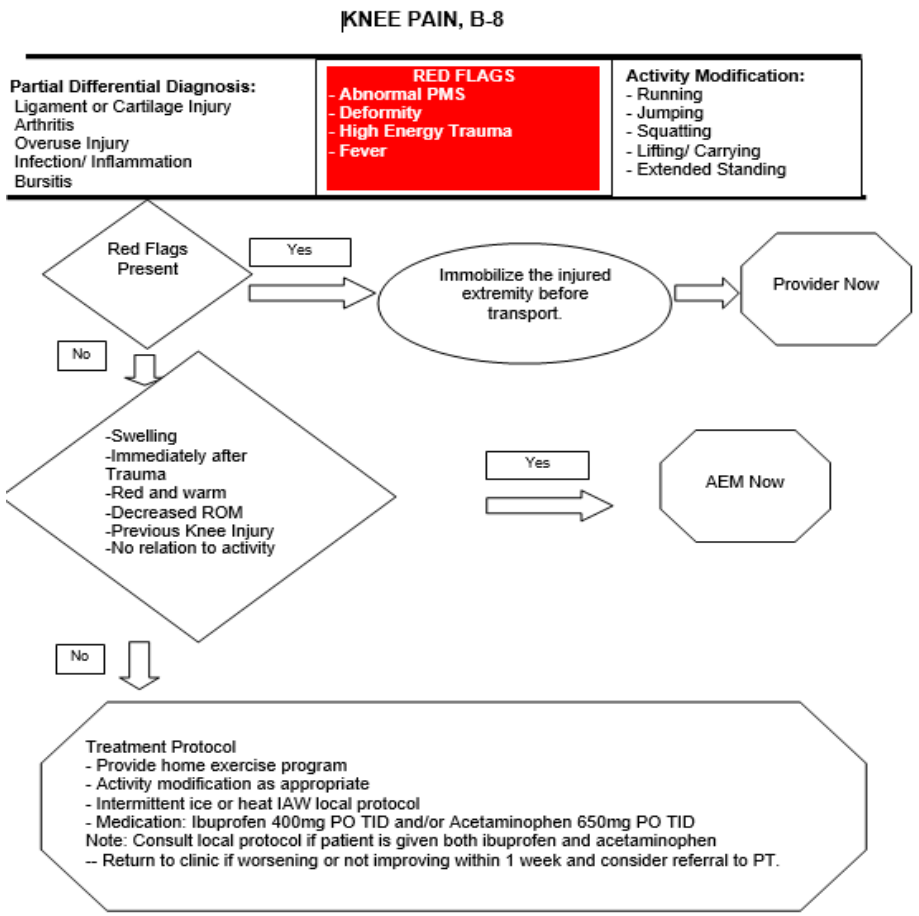
Medic Development

- Ready Medical Force
- Operational Correlation
- Broadening Scope
- Delegated Authority
- Validation
- Supervision/Mentorship
- Experience (Reps/Sets)
- Training



Algorithm Directed Troop Medical Care

MEDCOM Pam 40-7-21

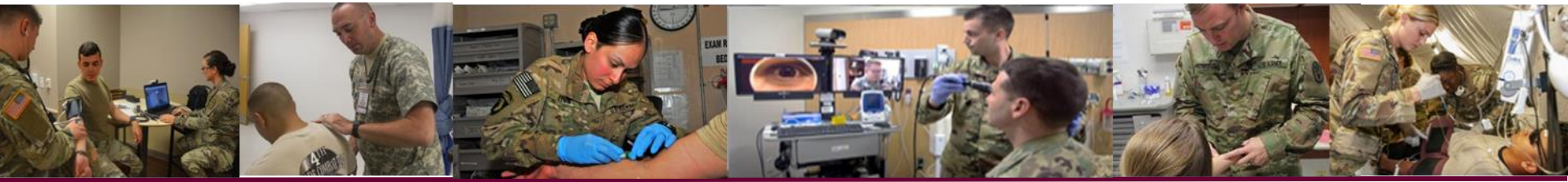


Expanded Medic Capability

- Expanded Medic Treatment
- Utilization of ECM/NCO
- IAW ICTs and MEDCOM 40-50

Increased Quality & Safety

- Documented in EHR
- Provider Co-signature
- Medic Peer Reviews
- NCO Chart Reviews



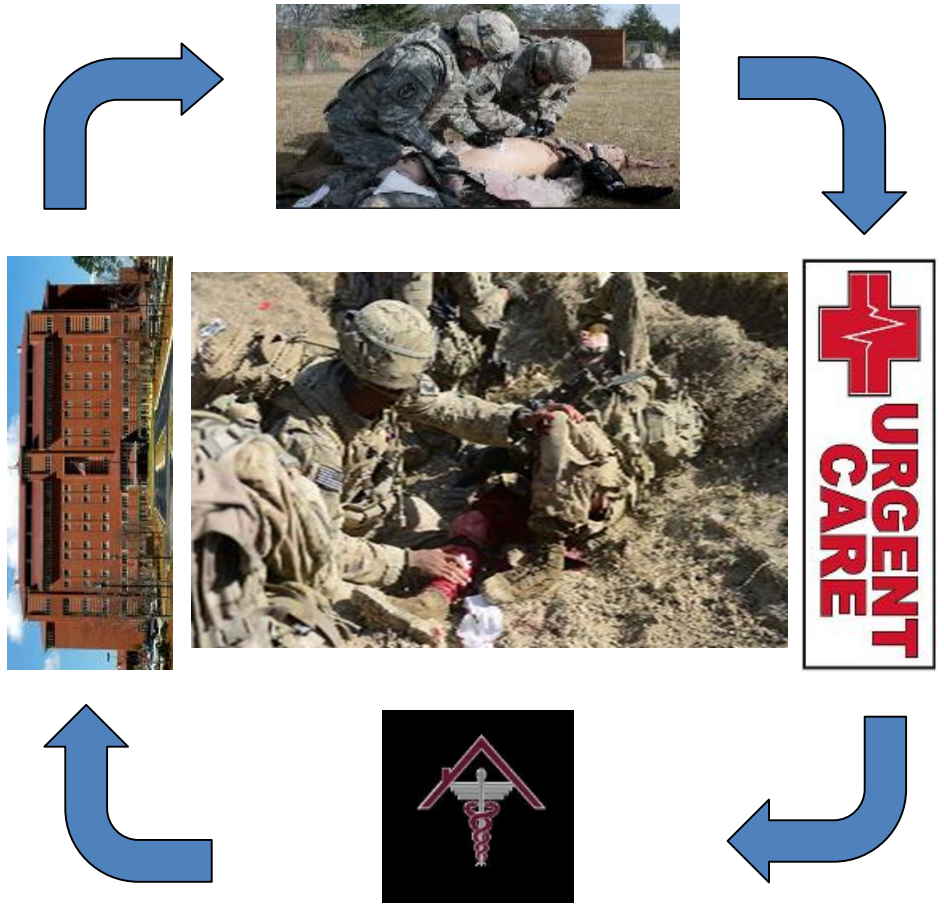
A Piece of the Whole

Utilization of
Algorithm Directed Troop Medical Care

1 Week AMH Orientation
24-36 Hours Didactic Instruction
+ >300 Hours Clinical Preceptorship

Primary Care ICTs Trained
MEDCOM 40-50 Skills Trained

- 10 Week Rotation vs 3 Day Course
- Training Standardization
- Documented in DTMS
- Training Evaluation Provided



MSTC + UC/ER + **SCMH** + Inpatient Experience = Prolonged Field Care

BHSL Overview

11 Integrated Behavioral Health Programs Centered on the Patient in Support of Health and Readiness

FAMILIES

1* BH in Patient Centered Medical Home (PCMH)
- *Integrates BH providers within primary care clinics that deliver care to Active Duty Family members in order to screen and treat common BH problems.*

2* Child & Family BH System (CAFBHS)
- *BH services to support military children, their families, and the Army community using school based care, tele-consultation and direct care services.*

3* Family Advocacy Program (FAP)
- *Provides domestic and child abuse prevention, education, prompt reporting, investigation, intervention and treatment.*

- ***The BHSOC operates as a single BH system that supports Army Readiness by promoting health, identifying BH issues early in the course of the illness, delivering evidence-based treatment, and monitoring efficiency and effectiveness through transparent metrics.***
  - ***Substance Use Disorder Clinical Care is integrated in 6 of 11 programs (EBH, Medical Homes, MultiD, IOP, RTF, and IBH).***

Referral to MTF Behavioral Health Services/ IOPs/RTFs

11 * Support of TBI (BH-TBI)

10 * Connect Care
- Provides care management for Soldiers and FMs referred to civilian inpatient facilities to ensure high quality and coordinated BH care.

SOLDIERS

1* BH in Soldier Centered Medical Home (SCMH)
- *Integrates BH providers within primary care clinics that deliver care to Active Duty Soldiers in order to screen and treat common BH problems.*

4* Embedded Behavioral Health (EBH)
- *Provides multidisciplinary, community behavioral healthcare to Soldiers in close proximity to their units and in coordination with their unit leaders.*

5* Multi-Disciplinary Behavioral Health Services (MultiD)
- *Provides general and sub-specialty BH services to Soldiers and Families through prevention, advocacy and treatment.*

6* Intensive Outpatient Programs (IOP)
- *Treats patients presenting with substance use disorder and/or BH problems utilizing a multi-week intensive outpatient treatment strategy.*

7* Inpatient Behavioral Health Services
- *Provides inpatient BH services to treat acute BH crises to enable rapid symptom resolution and safe transfer of care to outpatient settings.*

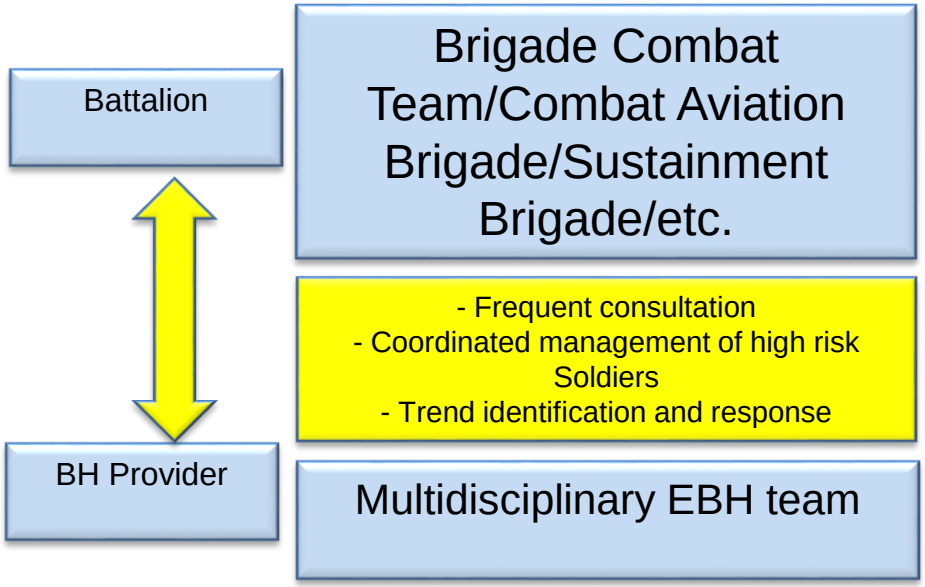
8* Residential Treatment Facilities (RTF)
- *Provides an interdisciplinary program in a 24-hour, live-in, multi-week setting targeting substance use disorders and other chronic conditions.*

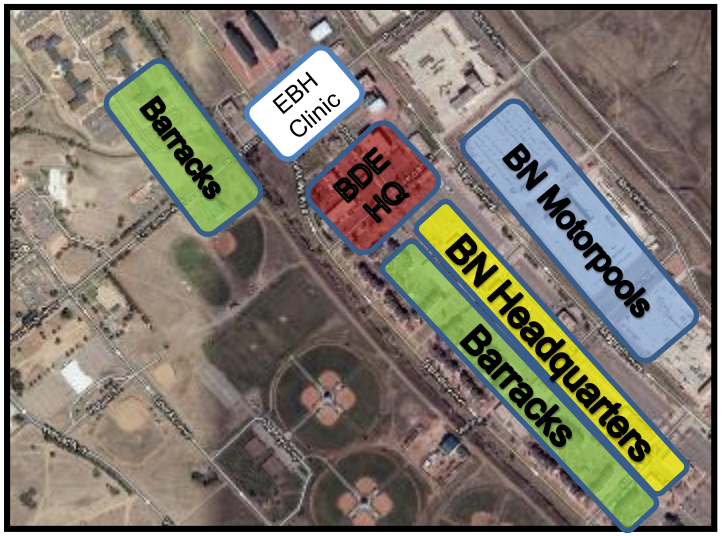
9* Tele-Behavioral Health: Transmitting BH Clinical Capability Virtually

BHDP *Tracks patient outcomes, patient satisfaction, and risk factors via web application*

EBH Concept of Operations

- Embedded Behavioral Health (EBH):
  - Reorganization of traditional model of outpatient BH care to one that is proactive, forward-positioned and aligned with active component operational units (direct support relationship)
  - Addresses gaps in access and continuity of care through multidisciplinary teams
  - Care occurs in an easily accessible (forward) location





Behavioral Health Data Portal

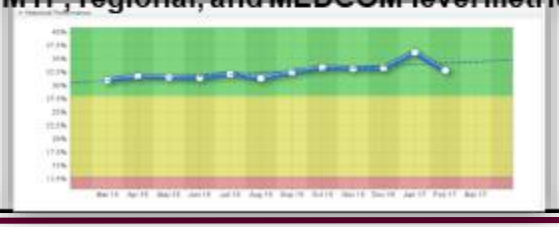
Precision Healthcare Enables Recovery

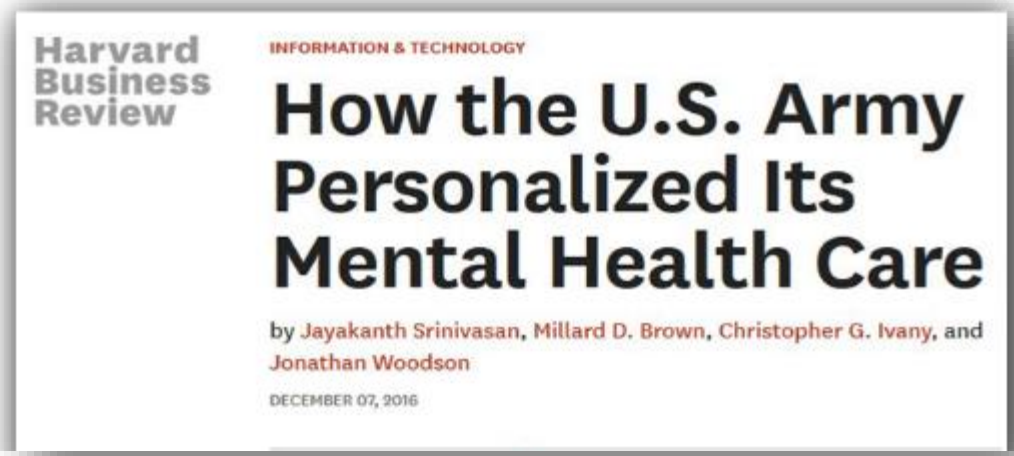
From the Clinic to Enterprise Metrics

Patients complete BHDP survey in waiting room before each appointment

Providers review individual SM data to inform clinical practice and discuss with patient

BHDP data are merged with AHLTA data to create MTF, regional, and MEDCOM level metrics




Harvard Business Review

INFORMATION & TECHNOLOGY

How the U.S. Army Personalized Its Mental Health Care

by Jayakanth Srinivasan, Millard D. Brown, Christopher G. Ivany, and Jonathan Woodson

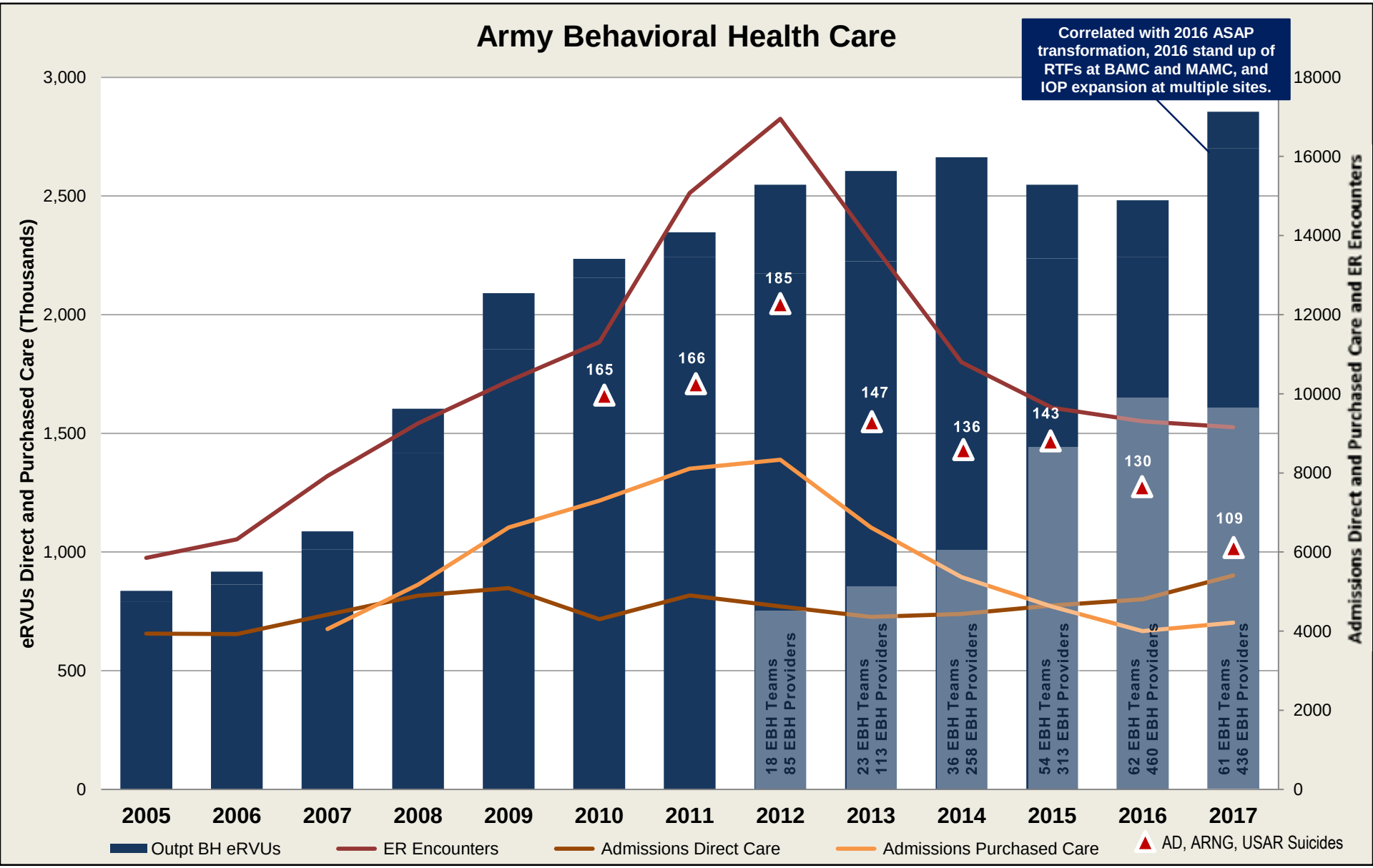
DECEMBER 07, 2016

- ***Recognized as the DoD frontrunner in BH outcomes monitoring, the Army's Behavioral Health Data Portal (BHDP) enables precision medicine, enhances quality and continuity of care, and embeds systems for providing individualized feedback and action at the point of care.***

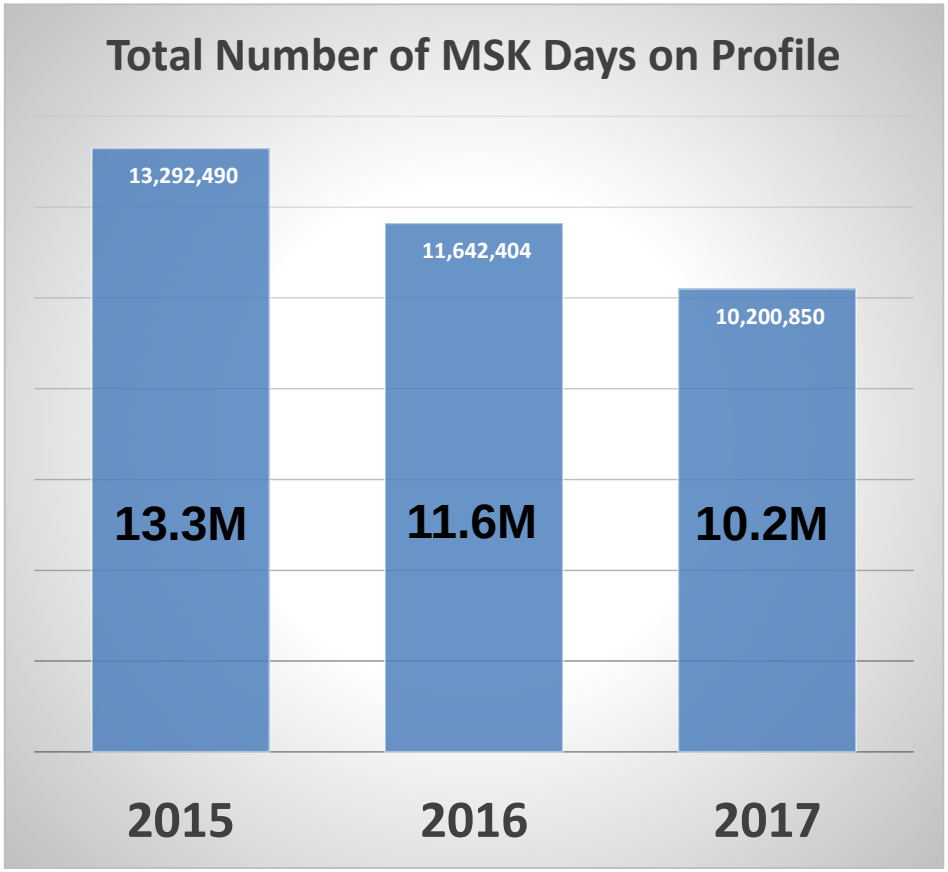
- ***Recognized in the December 2016 Harvard Business Review, BHDP enables a real-time, standardized approach to enhance and demonstrate individual and population health improvement.***

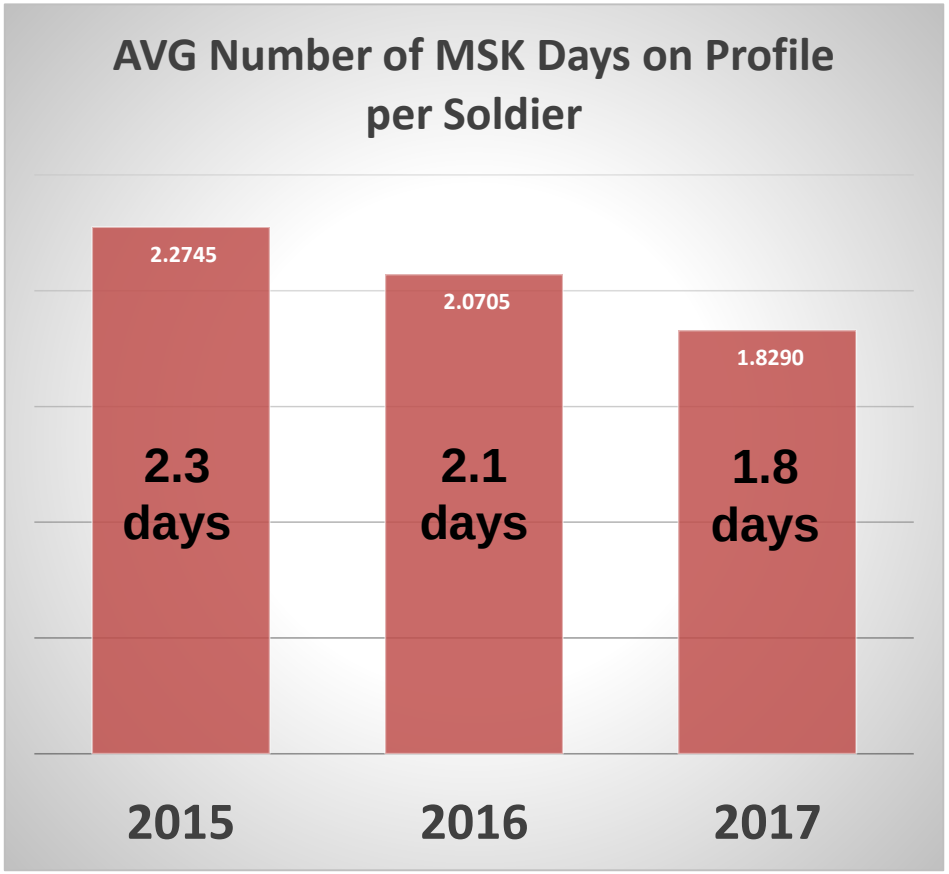
- ***As of September 2018, the Army used BHDP in over 95,000 BH encounters every month with a total of over 4.5 million surveys collected to date.***

Army Behavioral Health Utilization (2005 to 2017)



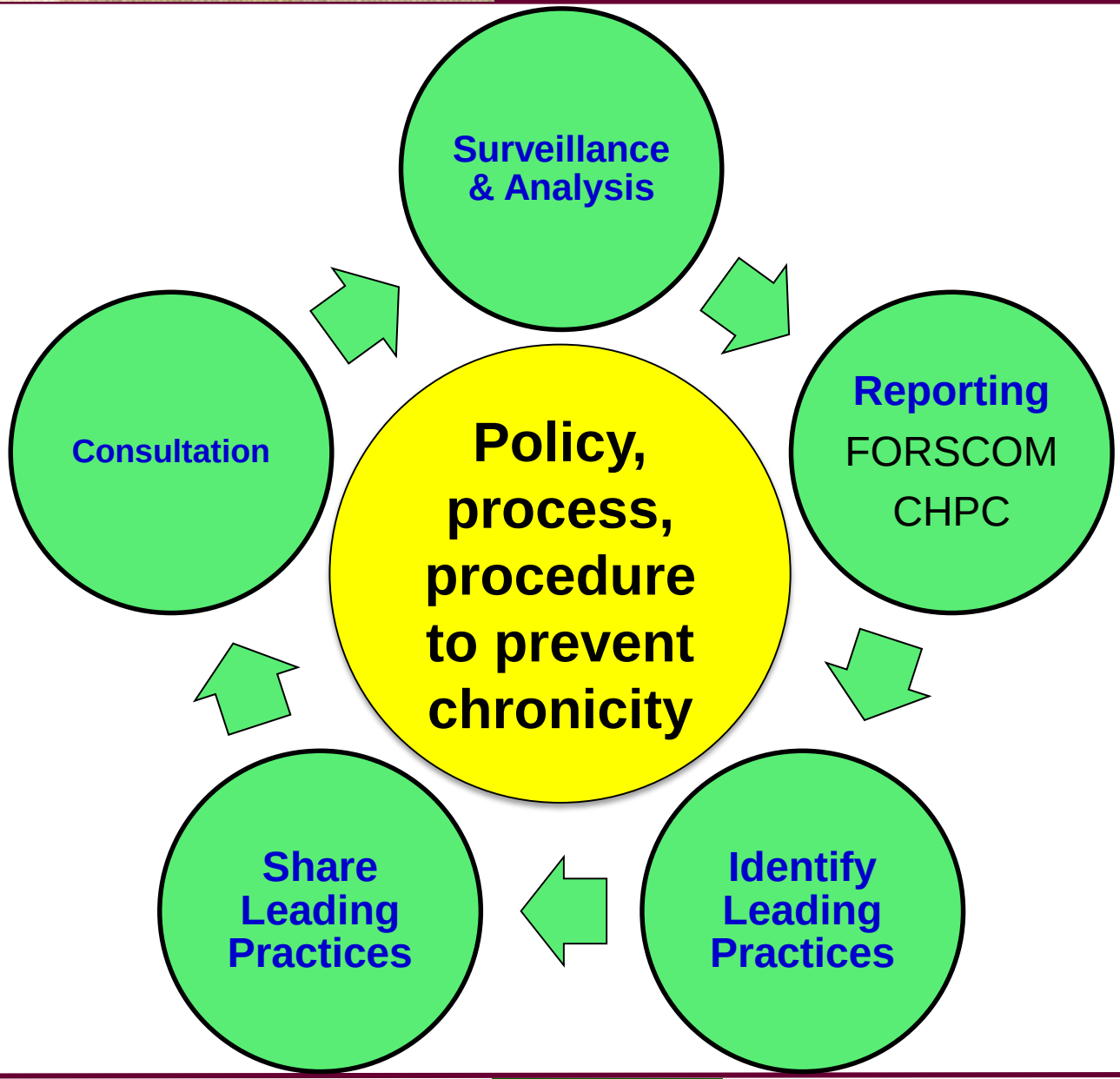
Soldier Musculoskeletal (MSK) Profile Days are Decreasing





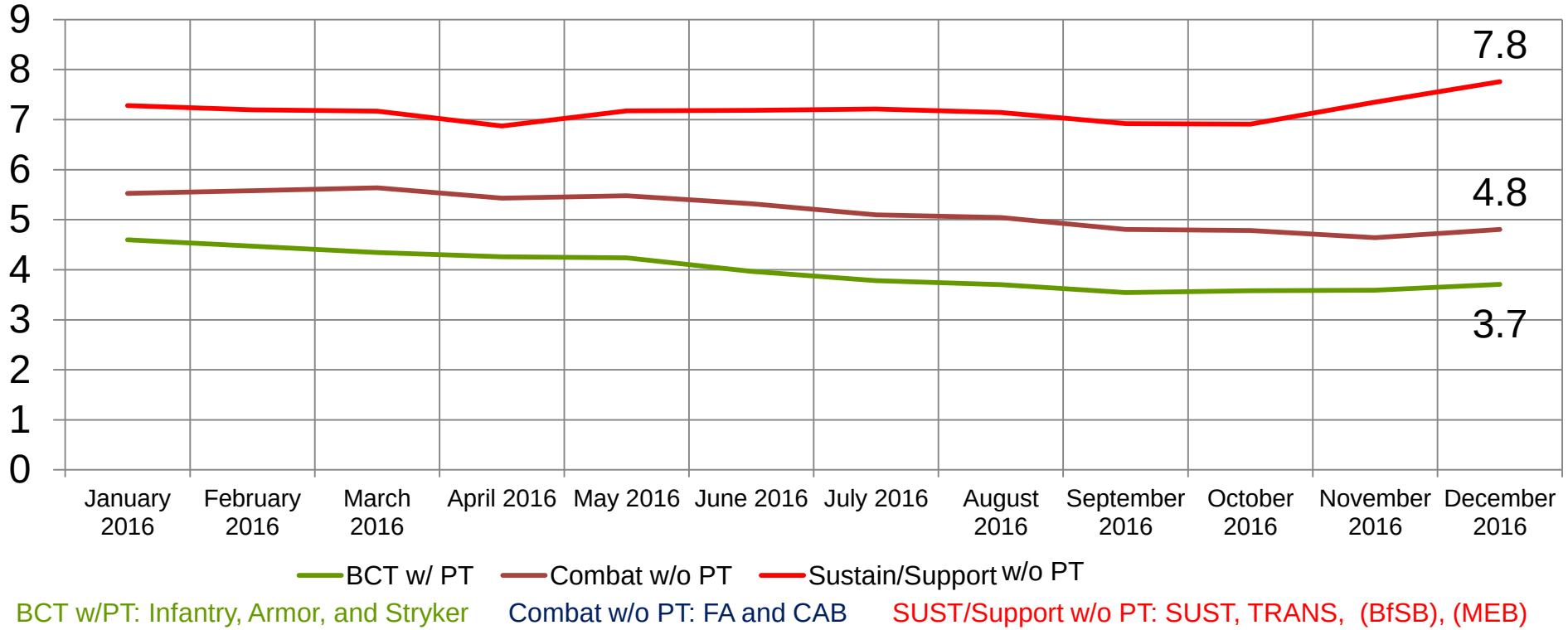
- 3 million day decrease in MSK profile days from CY15 to CY17
- 23% decrease in MSK profile days exceeds 4% decrease in size of Army from CY15 to CY17

Achieving Continuous Improvement



Do Units with Physical Therapists / Medical Support Do Better Than Units Without?

% Soldiers on Temporary MSK profile >90 days in the previous 180 days



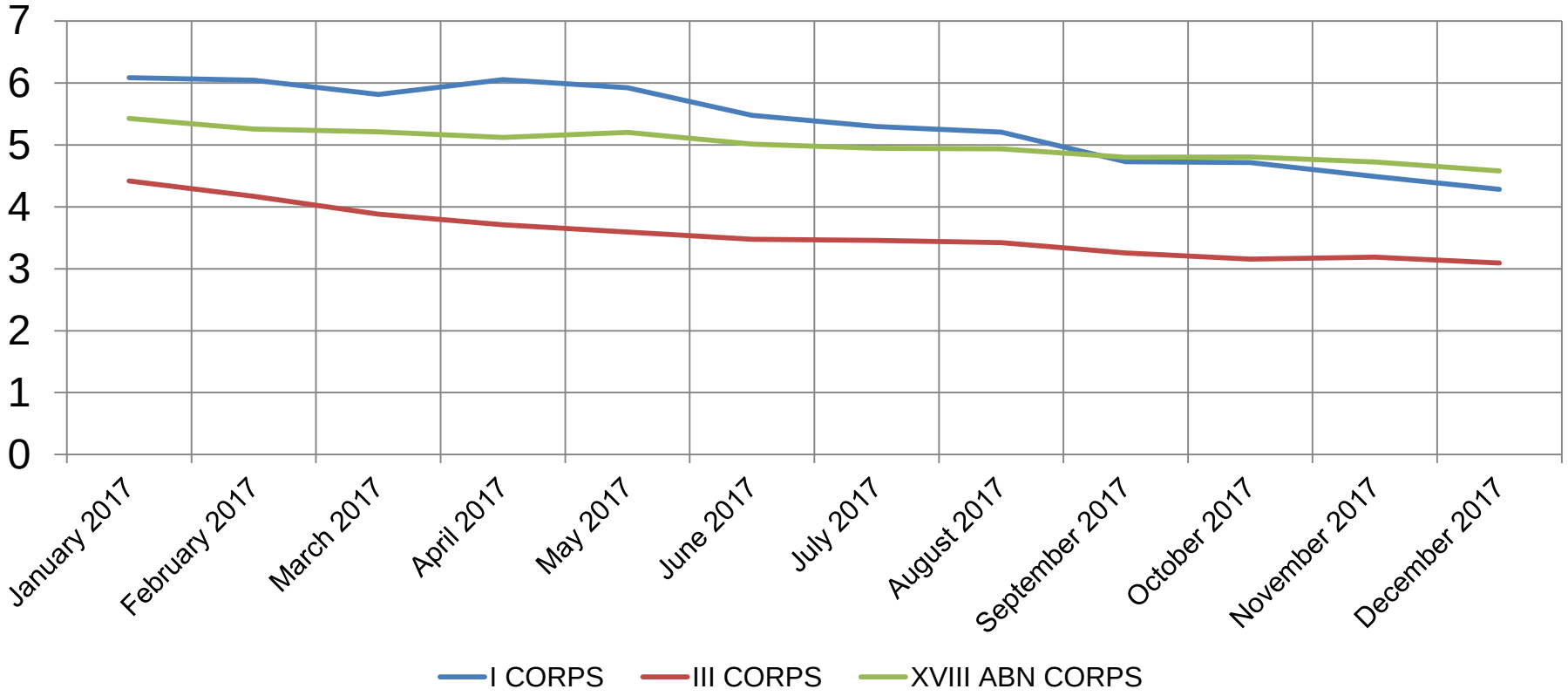
BCT w/PT: Infantry, Armor, and Stryker Combat w/o PT: FA and CAB SUST/Support w/o PT: SUST, TRANS, (BfSB), (MEB)

Combat units with organic medical personnel, including PTs, have considerably fewer Soldiers on chronic MSK profiles than combat support and combat service support units with fewer medical personnel and no PTs.

In June 2016 MEDCOM released the new eProfile system. The methodology for identifying MSK profiles changed from U & L in PULHES to key term search based on review of 4000 MSK profiles.

Is There Variance Between Units?

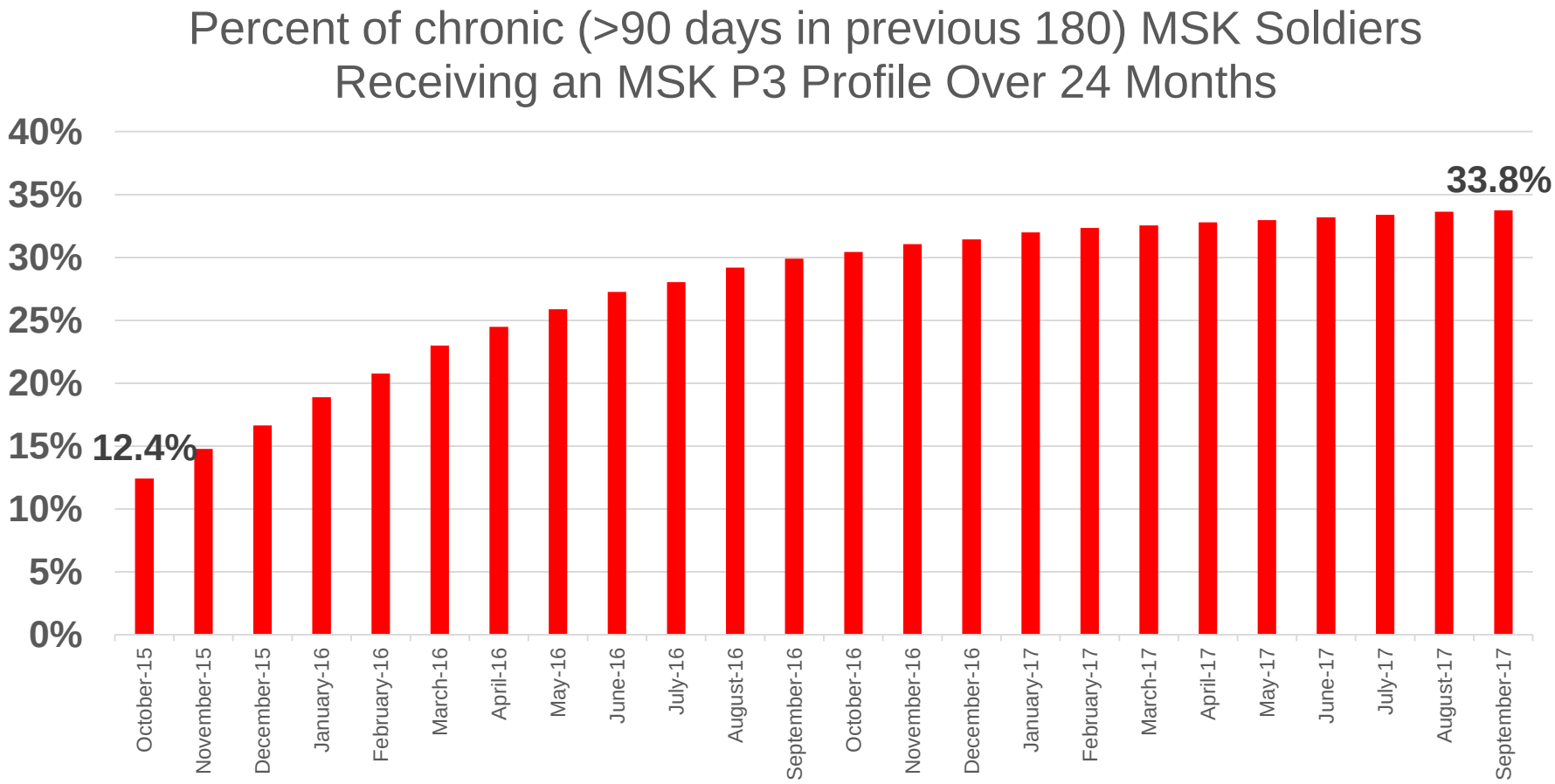
% Soldiers on MSK profile >90 days in the Last 6 Months



- Yes there is significant variance in MSK burden even at the Army Corps level

How Many Chronic MSK Soldiers Progress to DES?

3.8% of Soldiers with chronic MSK → 48% all limited duty days



Readiness Focused MSK Healthcare Delivery

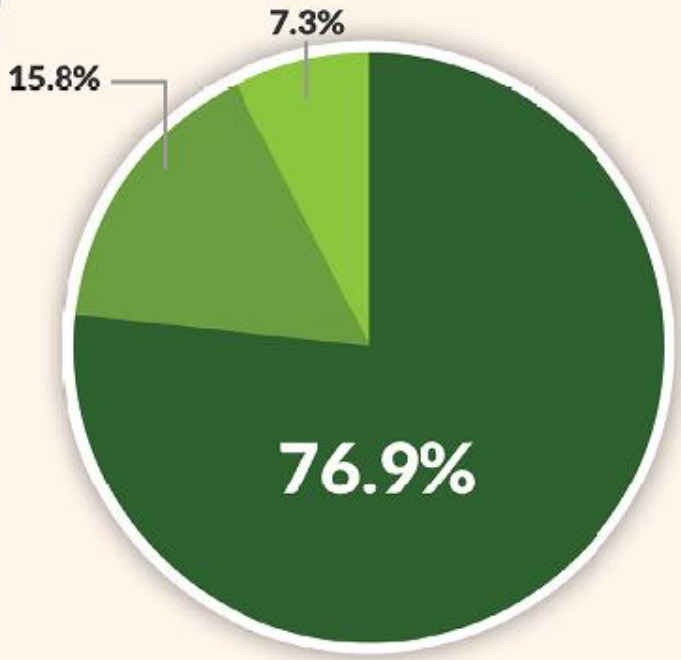
- Improved profile management
- Early access to physical therapist
- Embedded vs. co-located
- Forward multi-disciplinary MSK care in the unit
- Reconditioning physical readiness training
- Screening (Medical Readiness Assessment Tool - MRAT)
    - Non-deployment risk
    - Non-responder risk
- Disability Evaluation System efficiency

TBI Program

DoD Numbers for Traumatic Brain Injury
Worldwide – Army

2000 - 2018 Q1

Active	173,151
Guard	35,489
Reserve	16,504
Total - Army	**225,144**



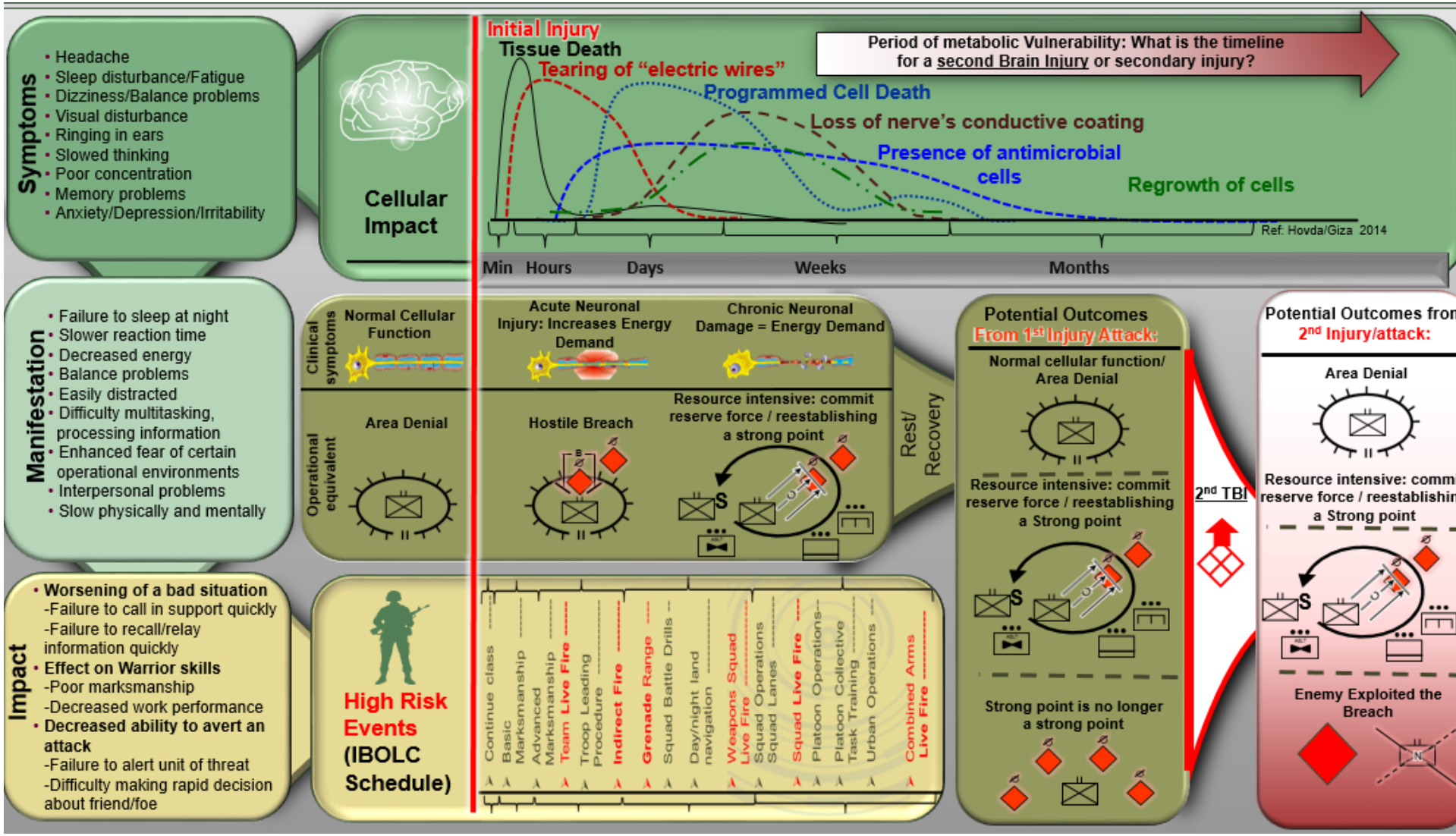
Source: Defense Medical Surveillance System (DMSS), Theater Medical Data Store (TMDS) provided by the Armed Forces Health Surveillance Branch (AFHSB)

Prepared by the Defense and Veterans Brain Injury Center (DVBIC)

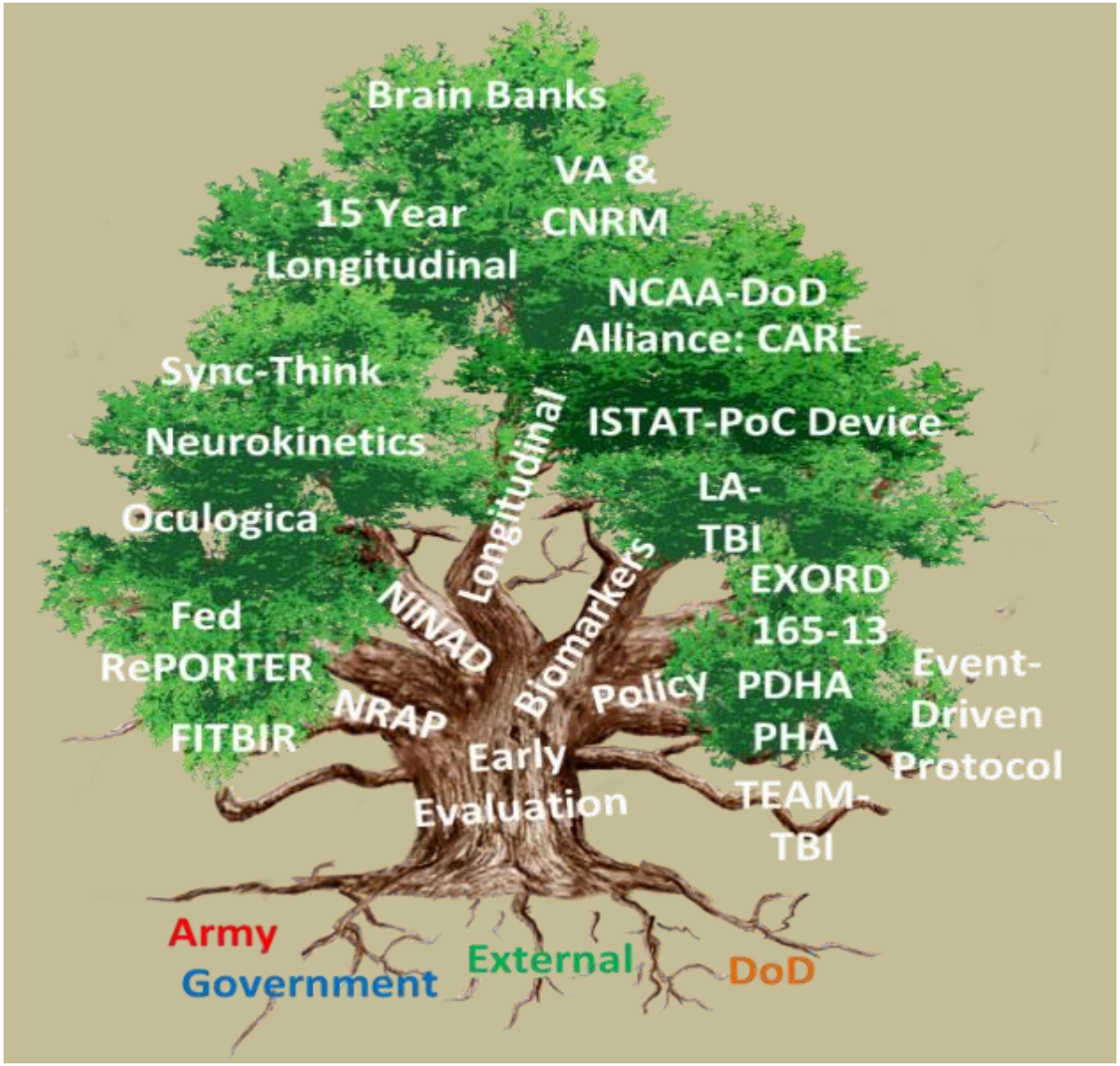
2000 - 2018 Q1, as of June 21, 2018

Mission: Produce an educated force trained and prepared to provide early recognition, treatment and tracking of traumatic brain injuries in order to protect Soldier health

TBI Program


Symptoms
• Headache
• Sleep disturbance/Fatigue
• Dizziness/Balance problems
• Visual disturbance
• Ringing in ears
• Slowed thinking
• Poor concentration
• Memory problems
• Anxiety/Depression/Irritability
Cellular Impact
Initial Injury
Tissue Death
Tearing of "electric wires"
Programmed Cell Death
Loss of nerve's conductive coating
Presence of antimicrobial cells
Regrowth of cells
Period of metabolic Vulnerability: What is the timeline for a second Brain Injury or secondary injury?
Ref: Hovda/Giza 2014
Min Hours Days Weeks Months
Manifestation
• Failure to sleep at night
• Slower reaction time
• Decreased energy
• Balance problems
• Easily distracted
• Difficulty multitasking, processing information
• Enhanced fear of certain operational environments
• Interpersonal problems
• Slow physically and mentally
Clinical symptoms
Normal Cellular Function
Acute Neuronal Injury: Increases Energy Demand
Chronic Neuronal Damage = Energy Demand
Operational equivalent
Area Denial
Hostile Breach
Resource intensive: commit reserve force / reestablishing a strong point
Rest/ Recovery
Potential Outcomes From 1st Injury Attack:
Normal cellular function/ Area Denial
Resource intensive: commit reserve force / reestablishing a Strong point
Strong point is no longer a strong point
2nd TBI
Potential Outcomes from 2nd Injury/attack:
Area Denial
Resource intensive: comm reserve force / reestablishin a Strong point
Enemy Exploited the Breach
Impact
• Worsening of a bad situation
-Failure to call in support quickly
-Failure to recall/relay information quickly
• Effect on Warrior skills
-Poor marksmanship
-Decreased work performance
• Decreased ability to avert an attack
-Failure to alert unit of threat
-Difficulty making rapid decision about friend/foe
High Risk Events (IBOLC Schedule)
Continue class
Basic Marksmanship
Advanced Marksmanship
Team Live Fire
Troop Leading Procedure
Indirect Fire
Grenade Range
Squad Battle Drills
Day/night land navigation
Weapons Squad Live Fire
Squad Operations
Squad Lanes
Squad Live Fire
Platoon Operations
Platoon Collective Task Training
Urban Operations
Combined Arms Live Fire

TBI Program

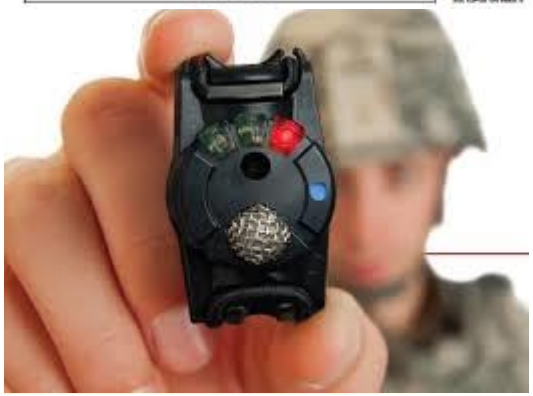

Brain Banks
VA &
CNRM
15 Year
Longitudinal
NCAA-DoD
Alliance: CARE
Sync-Think
ISTAT-PoC Device
Neurokinetics
Longitudinal
LA-
TBI
Oculogica
EXORD
165-13
NINAD
Biomarkers
Fed
RePORTER
Event-
Driven
Protocol
Policy
PDHA
PHA
NRAP
FITBIR
Early
Evaluation
TEAM-
TBI
Army
Government
External
DoD

TBI Program


STARS AND STRIPES

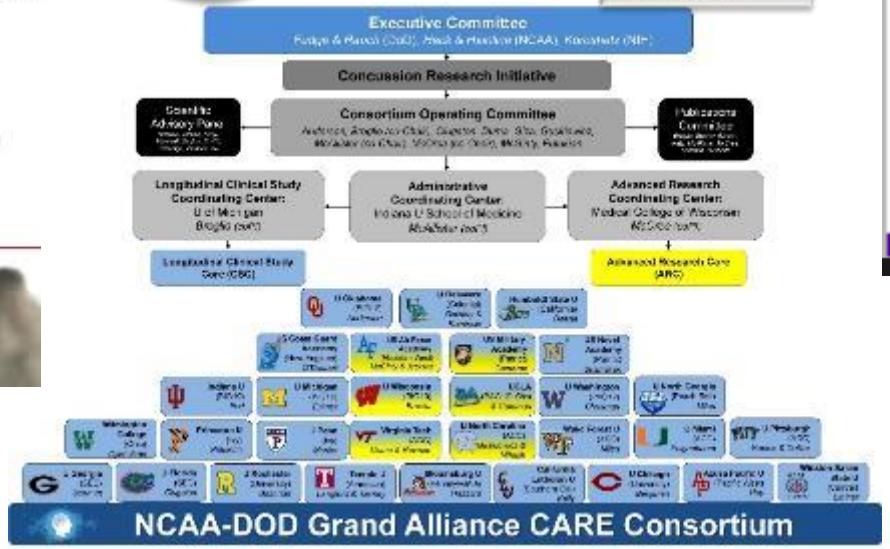
TACKLING TBI Medics start using BrainScope, a new early detection scanner

Esper on mission to modernize the Army



Open Research Projects

$126M	47 Mild TBI	FY17-18 Focal Areas:
$54M	30 Mild / Moderate TBI	-Rapid ID of need for evacuation
$13M	20 Moderate/ Severe TBI	-Detection of mild TBI
$47M	11 Other	-Epidemiology -Point of injury triage/monitor -Therapeutic strategies



Final Draft Version For Testing Only - Not For Field Use

MACE 2
Military Acute Concussion Evaluation
Provider

MACE 2 is to be used as close to time of injury as possible.
If the Military Acute Concussion Screen (MACS) findings were positive, start on page 5.

Service Member Name: _____
DoD/EDIPI/SSN: _____ Branch of Service & Unit: _____
Date of Injury: _____ Time of Injury: _____
Examiner: _____
Date of Evaluation: _____ Time of Evaluation: _____

RED FLAGS (Provider)
Evaluate for red flags. Red flags indicate need for emergent evaluation/care.

- ☐ Witnessed loss of consciousness (LOC)
- ☐ Two or more blast exposures within 72 hours
- ☐ Unusual behavior/combative
- ☐ Unequal pupils
- ☐ Seizures
- ☐ Repeated vomiting
- ☐ Double vision
- ☐ Worsening headache
- ☐ Weakness on one side of the body
- ☐ Cannot recognize people or disoriented to place
- ☐ Abnormal speech
- ☐ Abnormal result from hematoma detection device (if available)
- ☐ Negative for all red flags

If ANY red flag is present, stop MACE 2 (Immediate evaluation or evacuation).

Observable Signs
Observe during evaluation. Observable signs indicate concussion may have occurred.

- ☐ Lying motionless on the ground
- ☐ Slow to get up after a direct or indirect blow to the head
- ☐ Disorientation, confusion, or an inability to respond appropriately to questions
- ☐ Blank or vacant look
- ☐ Balance difficulties, stumbling, or slow laboured movements
- ☐ Facial injury after head trauma
- ☐ Negative for all observable signs

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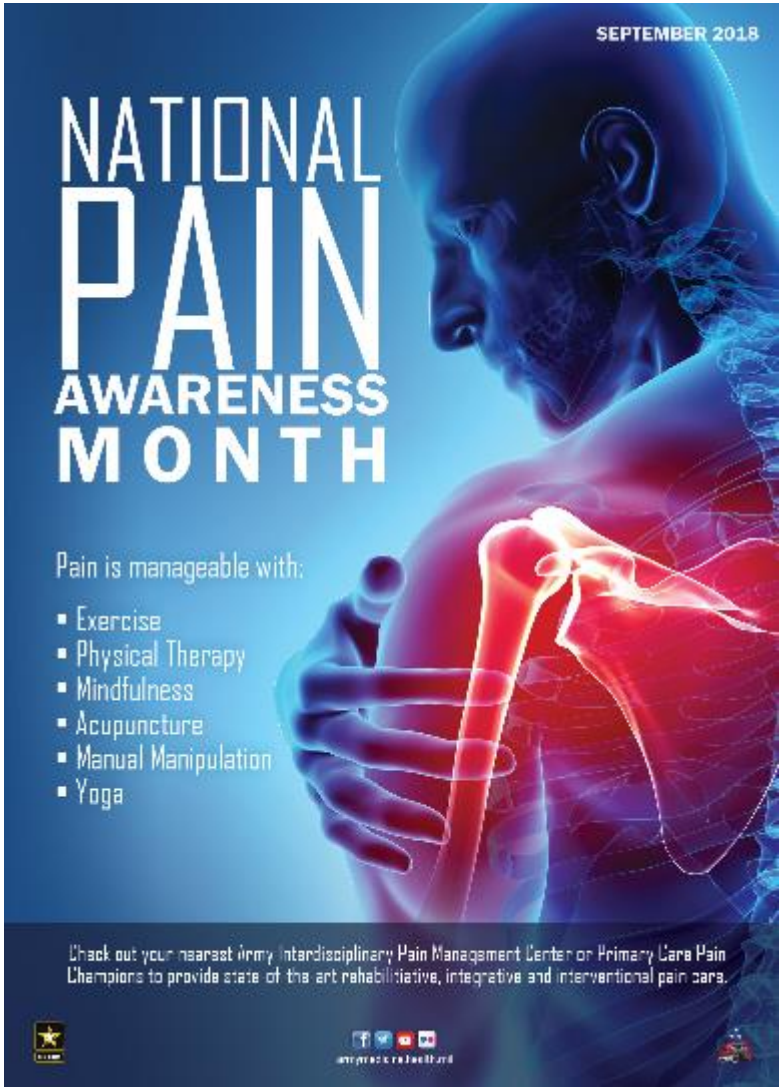
Army Comprehensive Pain Management Program



- **Mission**: Provide a comprehensive, holistic, multimodal, multidisciplinary pain management plan utilizing state of the art science modalities and technologies to advance pain medicine and provide optimal quality of life for patients with acute and chronic pain throughout the continuum of care.
  - Implements non-pharmacologic therapies such as behavioral health/biofeedback, acupuncture, chiropractic, yoga and massage therapy with interventional pain therapies

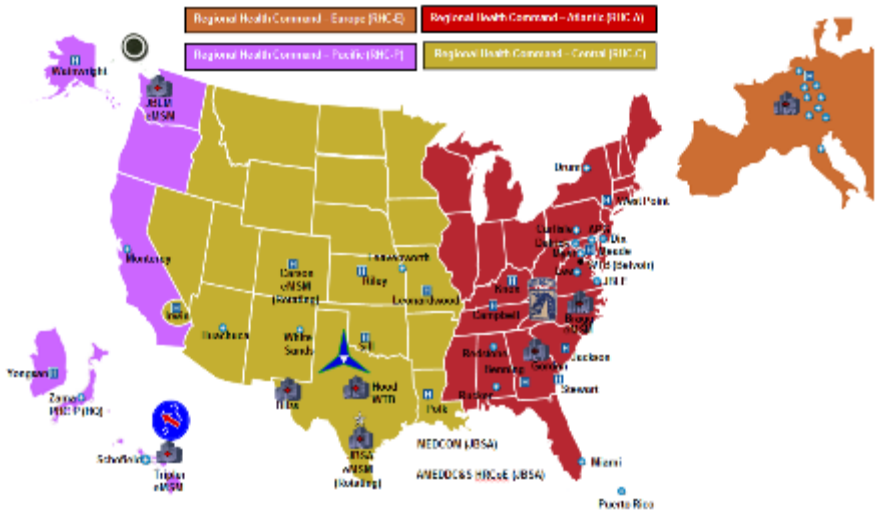
- **End State**: Return Soldiers to optimum duty in accordance with a Common Operational Picture. Quality care for all beneficiaries with acute and chronic pain. Integration/support to Army Medical Home and Interdisciplinary Pain Management Centers (IPMC) that optimizes pain outcomes by mitigating adverse events and improving quality of life.

Army Comprehensive Pain Management Program

Description

- 8 Interdisciplinary Pain Management Centers (IPMC)
- 4 IPMC-Lights
- Stepped Care Model for Pain
- Primary Care Pain Champions
- Synchronized pain care between the Army Medical Homes and IPMCs
- Functional Restoration Programs

Locations



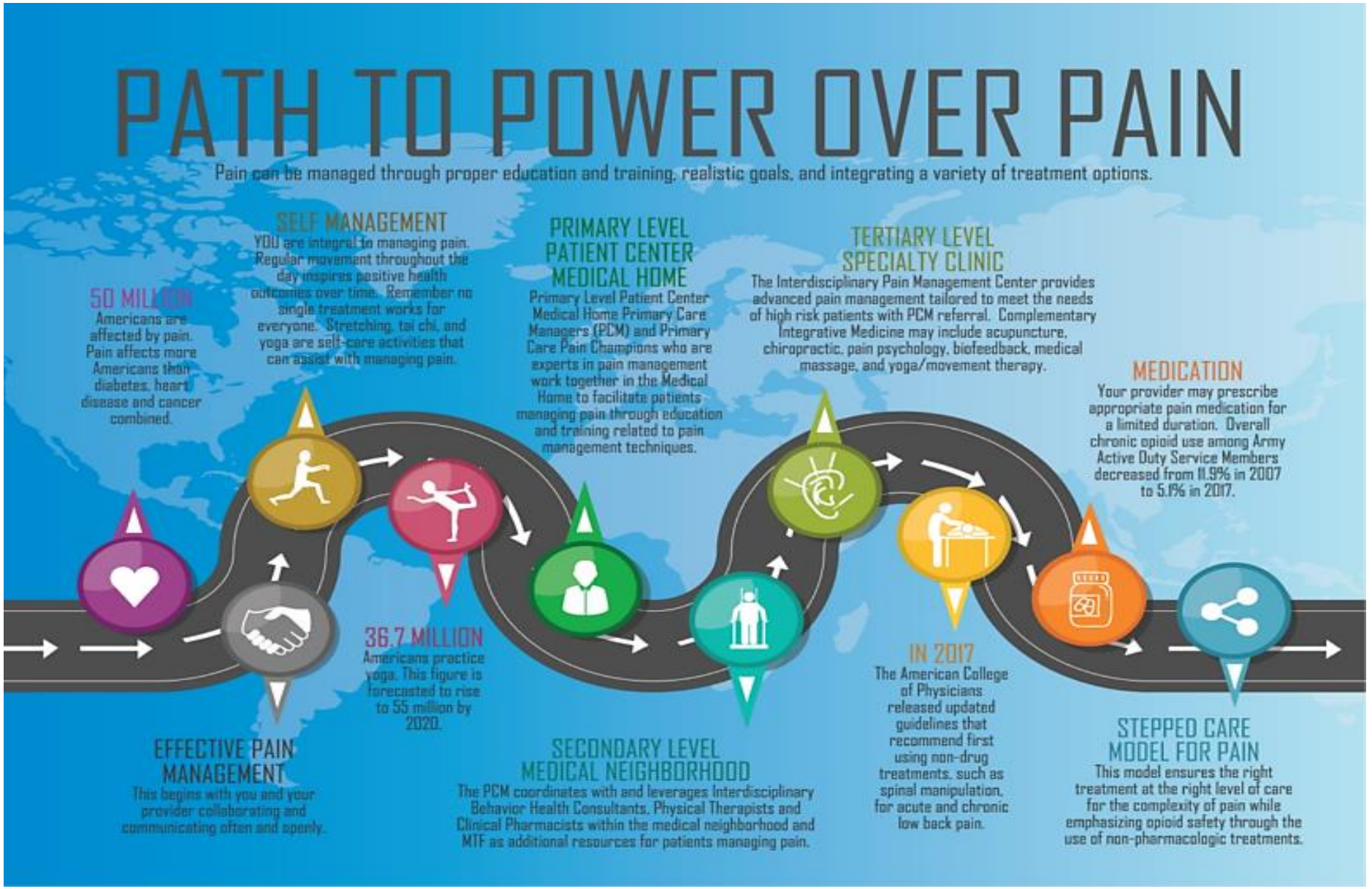
Education

- Patient Pain School
- Tele-mentoring through the Extension for Community Healthcare Outcomes (ECHO)
- DOD/VA Clinical Practice Guidelines for Chronic Pain
- Annual Pain Care Skills Course
- Annual Pain Awareness Month
- Advanced Pain Management Course, Pain Skills and Battlefield Acupuncture Training

Interdisciplinary Initiatives

- Substance Use Disorder (SUD) Integration
- Addiction Medicine Intensive Outpatient Programs
- Naloxone Policy
- Drug Take Back Programs

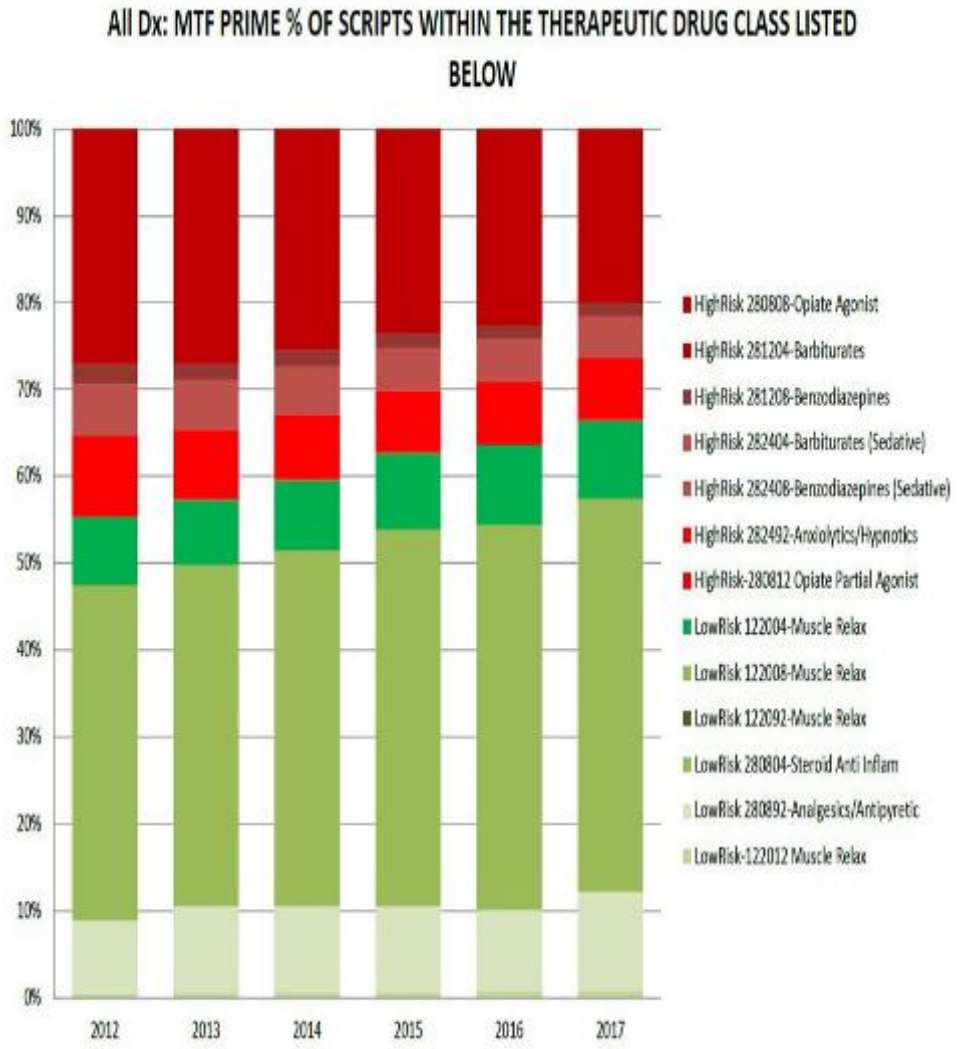
Army Comprehensive Pain Management Program



Army Comprehensive Pain Management Program

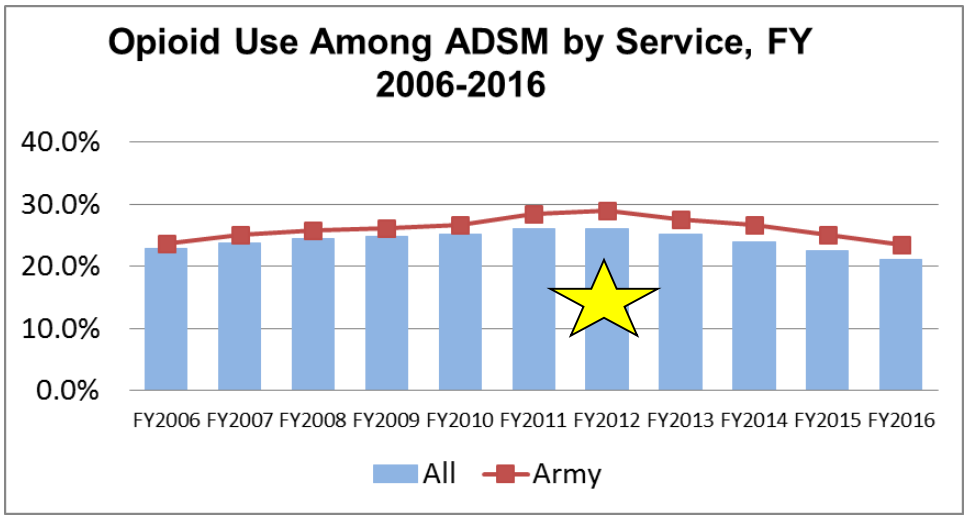
- **Functional Restoration Program**
  - 58% reduction in ED visits
  - 27% reduction in PCM visits
  - 53% reduction in Ortho, PT, OT, Podiatry visits in direct care
  - 38% reduction in BH visits
  - 76% reduction in pain clinic visits
  - 43% reduction in radiology studies (67% decrease in neck/spine x-ray, 55% decrease in MRI)
  - 39% decrease in neurology utilization
  - 58% decrease in Case Management (non-WTU/GWOT)

* Data from Fort Carson (Feb 2016, 42 patients); Over 200 graduates to date, pending data analysis.

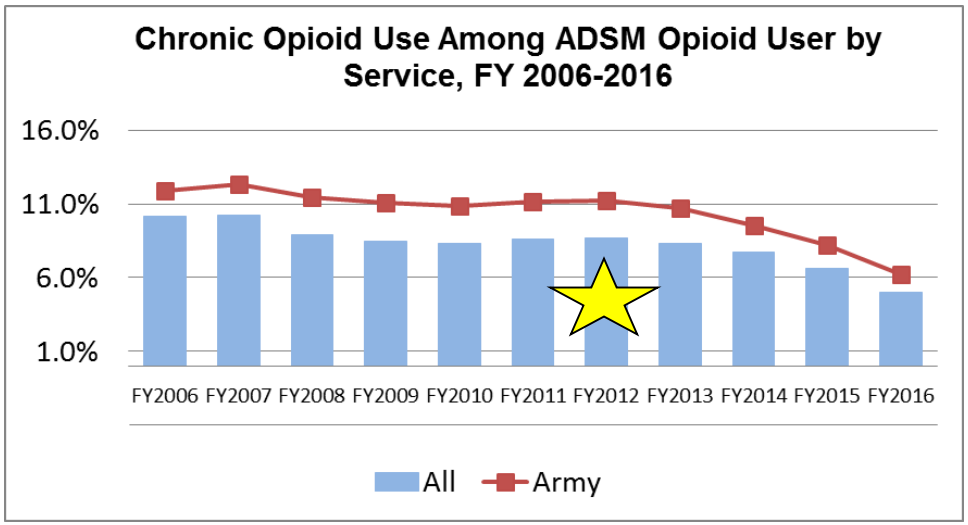


* Data from Fort Carson Advanced Pain Management Course

Army Comprehensive Pain Management Program



- 19% reduction in proportion of the Army population receiving opioid prescriptions between FY2012 and FY2016
- 22% of Army ADSM received ≥1 opioid prescription (does not always = use)
- Civilian average prescribing rate for 2016 is 66.5%*



- 45% reduction in Army ADSM chronic opioid users between FY2012 and FY2016
- Chronic opioid use is defined as ≥ 90 days of opioids dispensed in a 6-month time frame

★ Army CPMP established FY12

Summary

- Readiness is **#1**
- Army Medicine
  - Medical Homes assist in improving and maintaining Soldiers readiness.
  - Behavioral Health incorporates 11 standardized clinical programs into a System of Care, which are centered on Soldier Readiness, reaching Soldiers and Families where they live and work to improve access and reduce stigma.
  - Forward Musculoskeletal care uses holistic approaches that allow fewer limited duty days making Soldiers Mission Ready.
  - Traumatic Brain Injury program integrates clinical practices on the battlefield, in training and in the clinics.
  - Comprehensive Pain program integrates holistic, complementary and integrative therapies impacting readiness.

CE/CME Credit

If you would like to receive continuing education credit for this activity, please visit:

http://amsus.cds.pesgce.com

Hurry,

CE Certificates will only be available for 30 DAYS after this event!


SINCE 1775

Backup Slides

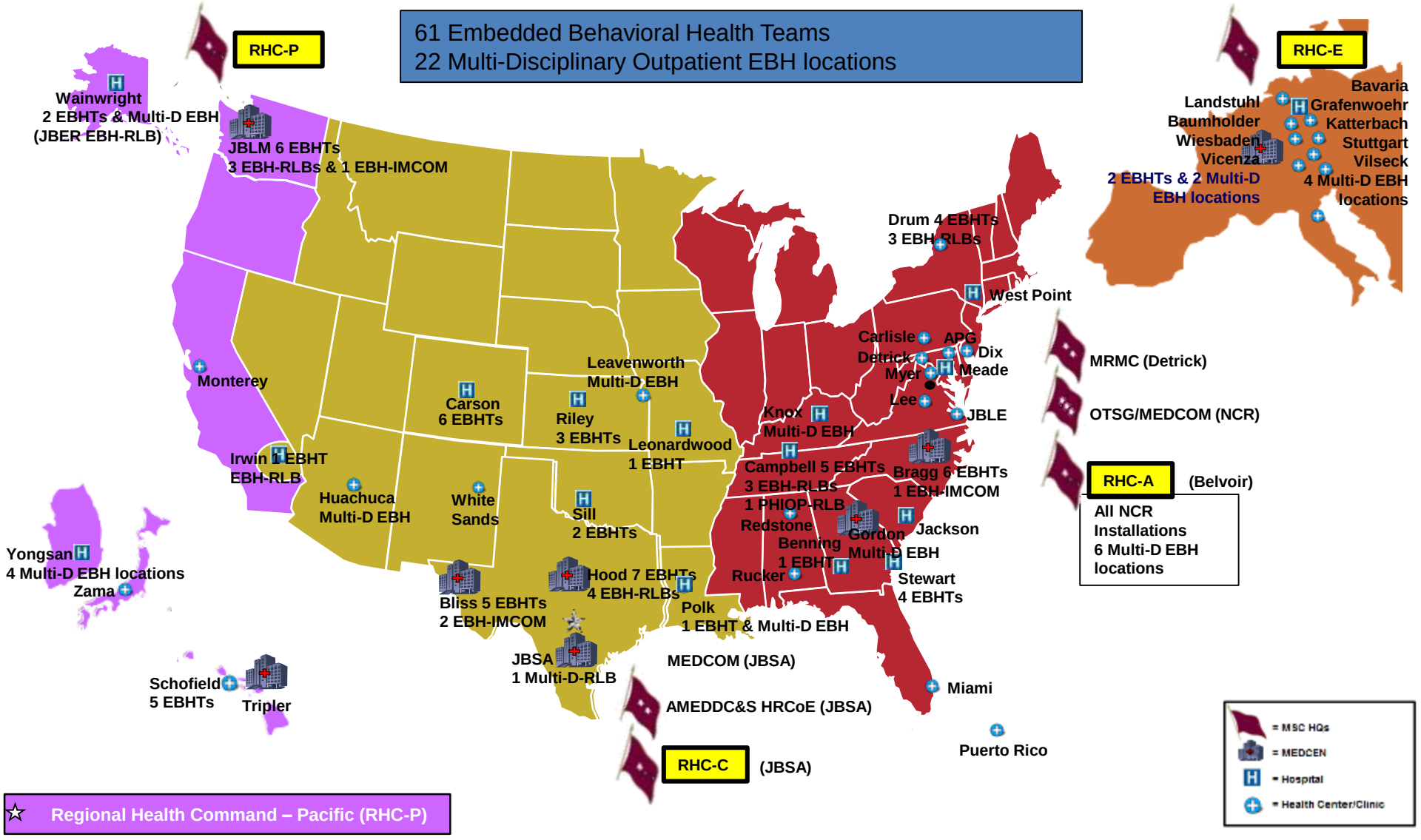
EBH

Regional Health Command – Central (RHC-C)

Regional Health Command – Atlantic (RHC-A)

Regional Health Command – Europe (RHC-E)

61 Embedded Behavioral Health Teams
22 Multi-Disciplinary Outpatient EBH locations

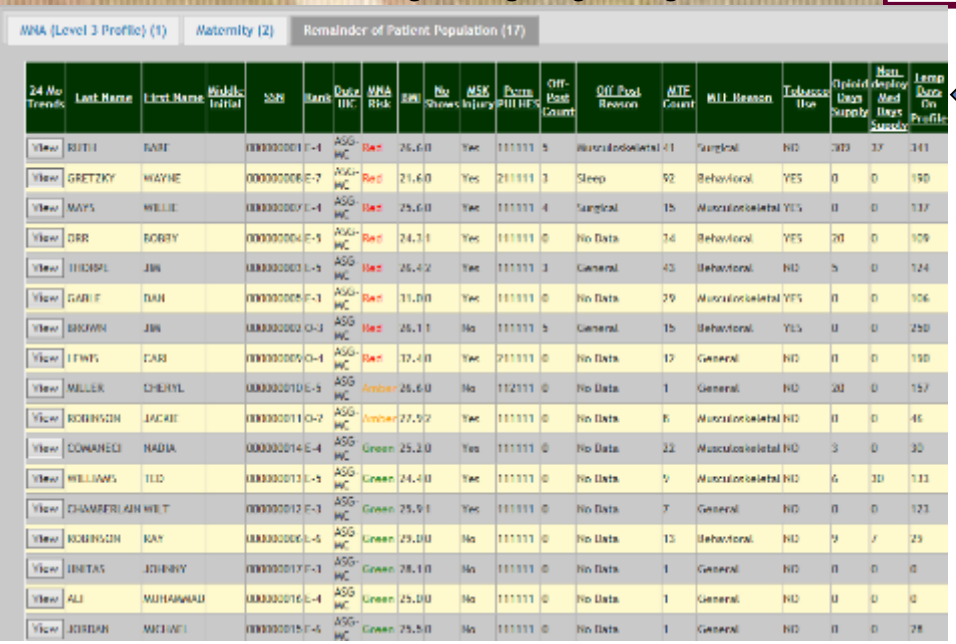


Regional Health Command – Pacific (RHC-P)

Why are MSK Profile Days Decreasing in the Army?

- Readiness is #1
- Medical Readiness Transformation
- Collaboration between Army Commands
- Readiness focused MSK healthcare delivery
- Screening for at-risk Soldiers
- Physical readiness training

Screening Tools



Medical Readiness Assessment Tool

MOTION

Preoperative Resilience Predicts Postoperative RTD and Outcome Scores for Arthroscopic Bankart Repair (Shaha, et al.)