Helping our Veterans with mTBI: A model for successful transition

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SHARE Military Initiative

Shepherd Center
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SHARE INITIATIVE

OBJECTIVES

- Identify mTBI symptoms in the OEF/ OIF veteran population.
- Understand barriers of mTBI and co-occurring behavioral health conditions on life participation for OEF/OIF veterans.
- Identify strategies and resources to provide a productive transition into community.

WHO ARE OEF/OEI VETERANS?

OEF: Operation Enduring Freedom
- Afghanistan
- 10/7/2001-12/28/2014

OIF: Operation Iraqi Freedom
- Iraq
- 3/20/2003-12/18/2011

- ** current known as Operation Freedom's Sentinel*

  (combat & non-combat)

WHAT IS A TBI?

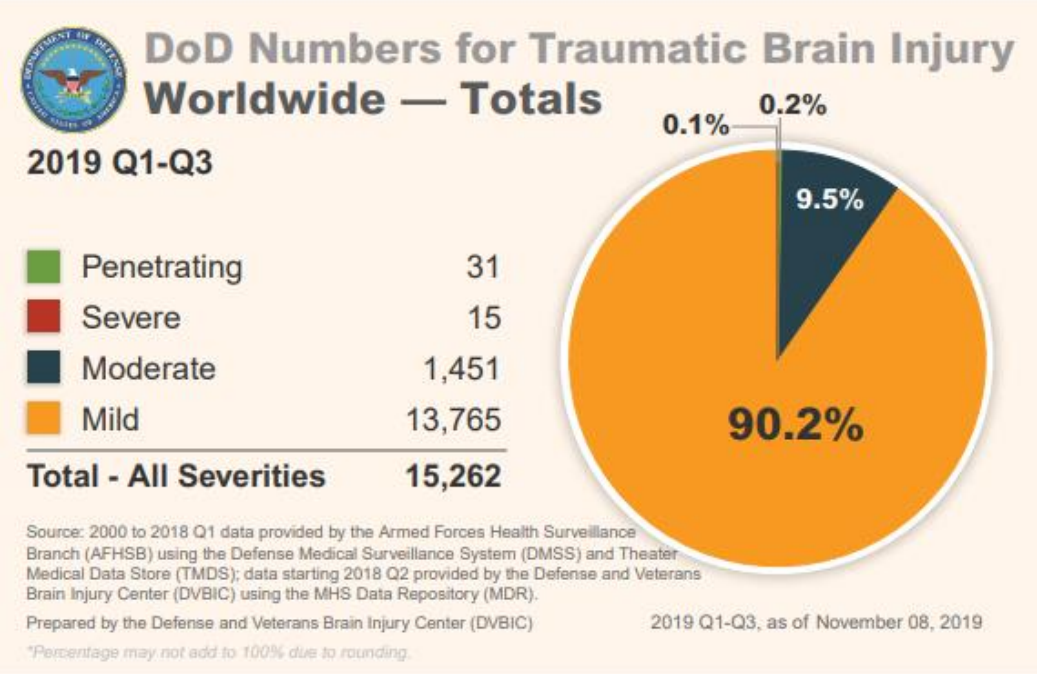
A traumatic brain injury (TBI) is a blow or jolt to the head that disrupts the normal function of the brain.

- Severity of the TBI is determined at the time of the injury
- Classified as: mild, moderate or severe
- Injuries to the head, neck or face may be associated

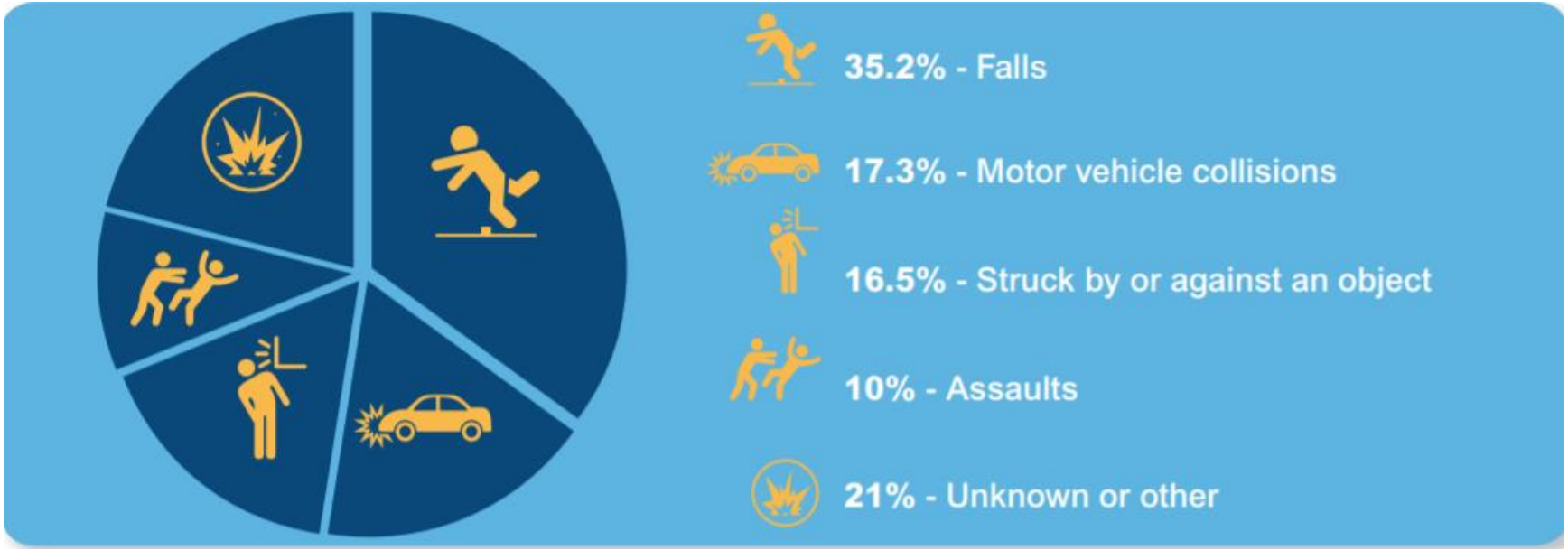
TBI AND MILITARY

- TBI is a signature injury among active duty military and veteran populations
- Approximately 80% are mTBI
- Remaining 20% moderate to severe, penetrating
- TBI is complicated by multiple co-morbidities

WIDESPREAD


DoD Numbers for Traumatic Brain Injury
Worldwide — Totals
2019 Q1-Q3
Penetrating 31
Severe 15
Moderate 1,451
Mild 13,765
Total - All Severities 15,262
0.1%
0.2%
9.5%
90.2%
Source: 2000 to 2018 Q1 data provided by the Armed Forces Health Surveillance Branch (AFHSB) using the Defense Medical Surveillance System (DMSS) and Theater Medical Data Store (TMDS); data starting 2018 Q2 provided by the Defense and Veterans Brain Injury Center (DVBIC) using the MHS Data Repository (MDR).
Prepared by the Defense and Veterans Brain Injury Center (DVBIC)
2019 Q1-Q3, as of November 08, 2019
*Percentage may not add to 100% due to rounding.

LEADING CAUSES OF TBI IN MILITARY



MILD TBI

- Loss of consciousness < 30 minutes
- Initial Glasgow Coma Scale (GCS) of 13–15
- Posttraumatic amnesia (PTA) not greater than 24 hours

EFFECTS OF MILD BRAIN INJURY

- Physical
- Cognitive
- Emotional

PHYSICAL

- Weakness
- Fatigue
- Headache
- Muscle spasm
- Dizziness
- Loss of balance
- Vestibular issues

- Nausea or vomiting
- Seizures
- Sleep disturbances
- Vision changes
- Hearing changes
- Sensory processing changes
- Motor coordination

COGNITIVE

- Poor attention & concentration
- Memory loss
- Slowed thinking
- Difficulty with verbal expression
- Difficulty with perceptual skills
- Difficulty with planning or decision-making
- Difficulty in organizing
- Decreased initiative
- Difficulty with problem-solving
- Decreased judgment
- Difficulty finding words

EMOTIONAL

- Depression
- Anxiety
- Irritability
- Mood swings

- Fear
- Mistrust
- Stress
- Frustration
- Paranoia
- Aggression

Daily Living

CO-OCCURRING CONDITION

PTSD describes a group of symptoms that may develop after you are exposed to actual or threatened death, serious injury or sexual violence.
Events can include:

- Combat exposure
- Domestic violence
- Sexual, mental or physical abuse
- Motor vehicle crash
- Terrorist attack
- Natural disaster

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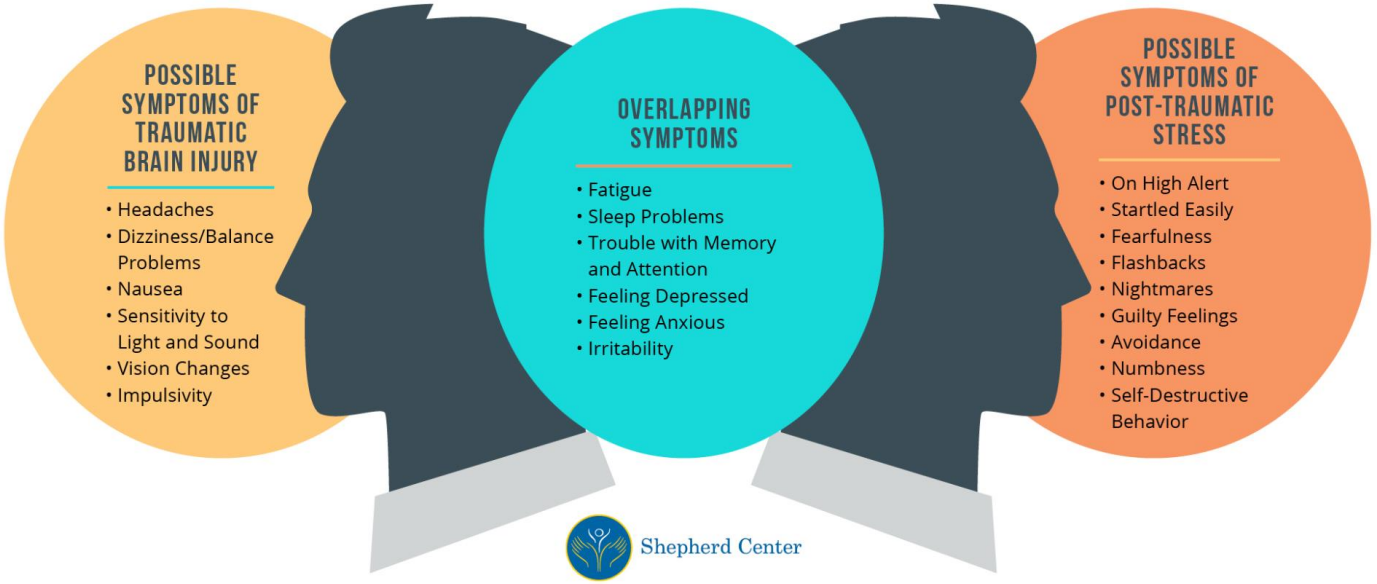
POSSIBLE SYMPTOMS OF TRAUMATIC BRAIN INJURY
• Headaches
• Dizziness/Balance Problems
• Nausea
• Sensitivity to Light and Sound
• Vision Changes
• Impulsivity
OVERLAPPING SYMPTOMS
• Fatigue
• Sleep Problems
• Trouble with Memory and Attention
• Feeling Depressed
• Feeling Anxious
• Irritability
POSSIBLE SYMPTOMS OF POST-TRAUMATIC STRESS
• On High Alert
• Startled Easily
• Fearfulness
• Flashbacks
• Nightmares
• Guilty Feelings
• Avoidance
• Numbness
• Self-Destructive Behavior
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Increased Risks of…

substance abuse
gambling disorders
post concussive syndrome
family and social conflicts
premature death
lost productivity
depression
suicide
neurodegenerative diseases

after TBI

IMPACT ON DAILY PARTICIPATION & ENGAGEMENT

- Medications
- Sleep disturbances
- Nutrition
- Weight gain
- Chronic pain conditions
- Social isolation
- Poor social interaction
- Lack of emotional regulation
- Substance use and abuse
- Stress increase
- Financial strains
- Family life
- Role changes

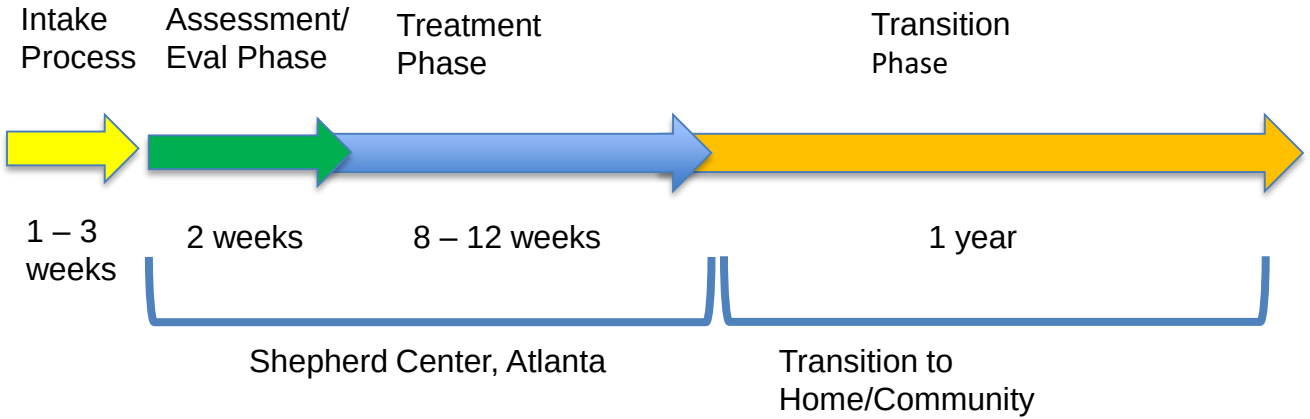
THE TEAM


Client/support system
Admissions Coordinator
Case Manager
Physical Therapist
Occupational Therapist
Speech Therapist
Recreation Therapist
Clinical Social Worker
Clinical Psychologist
Nurse
Physician
Transition Specialist
Chaplain
Vocational Specialist
Peer Support
Program Tech/Resident Assistants

SHARE Menu of Services

	Assessment and Evaluation			Therapy and Treatment		
Service Description	**Single Service Eval**	**3-Day Eval**	**Comprehensive Eval**	**Single-service Therapy**	**Modified Day Program Therapy**	**Comprehensive Day program Therapy**
Length of Stay	1 – 2 hours	3 Days	2 weeks	4 – 12 weeks	4 – 6 weeks	6 – 12 weeks
Frequency of therapy	1 – 2 visits	3 days	Daily	1 – 2 visits per week	2 – 4 days per week	5 days per week
Core treatment providers	MD appt + one of the following: OT; PT; ST	MD appt + 3 of the following: CM; OT; PT; ST; Psych	MD appt + all of the following: OT; PT; ST; Psych; RT; CM; Nsg	1 – 2 of the following: OT; PT; ST	3 or more of the following: MD; CM; Nsg; OT; PT; ST; RT; Psych; Voc	All of the following: MD; Nsg; OT; PT; ST; Psych; RT; Voc; CM; life coach; peer liaison
Core services provided	Assessment of identified concerns: Balance, pain, strength, dexterity, memory, problem-solving, vision, light sensitivity, headaches, concentration, dizziness, coordination, communication, mental focus, medication management, social isolation, coping skills, depression, decision making			Individual sessions	Individual sessions; Limited group sessions; Foundational skill building; family education	Individual sessions; group sessions; skill development; Community reintegration; family education
Additional Services Available	Recommendations determined by assessment results	Recommendations determined by assessment results	Voc; Pain Clinic; On-site housing; complimentary lunches; transportation in/around community; additional recommendations determined by assessment results	Psych; RT; Voc; CM; peer support	Pain Clinic; On-site housing; complimentary lunches; transportation in/around community; Shepherd Pro-Motion wellness program; peer support; life coaching	Pain Clinic; On-site housing; complimentary lunches; transportation in/around community; Shepherd Pro-Motion wellness program

SHARE DAY PROGRAM TIMELINE



THERAPEUTIC GROUPS

Groups:		
Emotion Regulation Group (psych)	Trauma Recovery Group (psych)	Grocery Group (OT)
Exercise Group (PT)	Visual Fitness Group (OT)	Substance Use Group (psych)
Cognitive Group (ST)	Relaxation Group (RT)	Family Support Group (psych)
Goal Setting Group (ST)	Transition Community Re-entry Group (RT)	Functional Living Skills (OT/PT)
Aquatics Group (PT)	Ai Chi (PT/RT)	Yoga (PT)
Music Group (RT)	Horticulture Group (RT)	Art Group (RT)

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DAY PROGRAM SCHEDULE- SAMPLE

	Hudson	Jarrad
8:00-9:00	Goal Setting Group	Goal Setting Group
9:00-10:00	Recreation Therapy	Counseling
10:00-11:00	Emotion Regulation Group	Exercise Group
11:00-12:00	Physical Therapy	Speech/Cognitive Therapy
12:00 – 1:00	Lunch	Lunch
1:00 – 2:00	Occupational Therapy	Physical Therapy
2:00 – 3:00	Psychology	Visual Fitness Group
3:00 – 3:30	Family Conference	Break
4:00-6:00	Fly Tying/Rod building	Fly Tying/Rod building
6:00-7:00	Dinner Group	Dinner Group

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KEY TO SUCCESS

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GOAL ATTAINMENT SCALING (GAS)

Standardized method to record, score, and analyze results obtained from changes over time in measures that are individualized to factors that are important to those being measured.

(James Malec)

- Provides a method to quantify accomplishment of individual goals
- Directly represent valued goals of the person served
- Quantitative methodology allows summing of outcome results with and across clients for program evaluation

GOAL ATTAINMENT SCALING CLINICAL PROTOCOL: PURPOSE

- To increase client/ caregiver's ability to identify functional areas of decline that they want to address in treatment
- To increase clinician and client/family's knowledge of critical factors impacting function and realistic expectation within treatment
- To assist therapists and client/family in identifying developing and prioritizing realistic long and short term goals that maximize the impact on function and participation in everyday life

CLIENT/FAMILY-CENTERED GOALS

1) Goals are identified by client to target what is important to him/her
2) Scale is created collaboratively by client and clinicians
3) Barriers to achieving goal are identified by client and clinicians based on assessment findings
4) Each client's goals (and barriers) are the focal point of team approach
5) Goal attainment levels are rated at admission and discharge from treatment phase
6) Goals are carried forward into transition phase, and rated at months 1, 2, 3, 6, 9, 12 months after discharge from treatment

APPLICATIONS OF GAS

- Monitor progress
- Guide Delivery of social reinforcement
- Encourage more accurate self-awareness and develop goal-setting capacity
- Support concise, relevant communication with clients
- Structure team conference discussion
- Treatment plan and decision-making
- Program evaluation

GAS ATTAINMENT LEVELS

+2Much more than expected outcome
+1 More than expected outcome
0 Expected outcome
-1 Baseline
-2 Less than expected outcome

(Lynne Turner-Stokes)

“BE ACTIVE AT HOME SO I CAN BE ACTIVE WITH MY KIDS”

Much More than Expected: Participates in at least 6 hours of activity at home and in the community daily on most days.

More than Expected: Participates in at least 5 hours of activity at home and in the community daily on most days.

Expected: Participates in at least 4 hours of activity at home and in the community daily on most days.

Baseline: Participates in up to 6 hours of activity at home and in the community 1-2 days per week with little to no activity 4-5 days per week.

Less than Expected: Decreased participation at home and in the community.

BARRIERS INTERFERING WITH GOAL ACHIEVEMENT

Issues	Action Plan Lead Therapist
Pain	PT, psych, and MD addressing
PTSD	psych
Cognition/Communication	ST
Balance	PT
Lack of Resources	RT

THERAPEUTIC SUPPORT SKILLS FOR INCREASED PARTICIPATION

PT	OT	ST	Psych	Nurse/MD	CM	TR	Transition Coach
Balance Strength-Training Pain Mgmt Vestibular Training	Budget Meal planning Grocery Shopping Driving Assess/ Train	Schedule Training Attention Training-Strategy Working Memory/Executive Skills Decision making training w/ family	Anxiety Scales Coping Strategy Family Support Neuro-psych testing	Med Mgmt Pain mgmt	Resource-Circle of Support	Leisure Resources Community Engagement	Home Eval Family Ed

INTERDISCIPLINARY MODEL: PROTOCOL STAGES

- STAGE I: Evaluation Phase

  Meet to identify goal, design scale and establish agreement for both Client/Family Centered Goal (and Health and Safety goals at a later date)

- STAGE II: Interim Treatment Phase

  Evaluate progress (on-target, revisions, clarification)

- STAGE III: Discharge- Transition Phase

  Review goal status, develop transition plan, what's next

HEALTH AND SAFETY GOALS

1) Goals identified by clinicians during assessments to target areas which may result in hospitalization if not addressed
2) Scale is created by clinician who focuses on area of concern
3) Barriers to achieving goal are identified by client and clinician based on assessment findings
4) Each client's goals (and barriers) are the focal point of team approach
5) Goal attainment levels are rated at discharge from treatment phase
6) Goals are carried forward into transition phase, and rated at months 1, 2, 3, 6, 9, 12 months after discharge from treatment

HEALTHY COPING

Much More than Expected: Experiences suicidal ideation without method, plan or intent and can redirect himself by identifying and using more than three appropriate coping tools.

More than Expected: Experiences suicidal ideation without method, plan or intent and can redirect himself by identifying and using two to three appropriate coping tools.

Expected: Experiences suicidal ideation without method, plan or intent and can redirect himself by identifying and using at least one appropriate coping tool.

Baseline: Experiences some suicidal ideation without method, plan or intent and has difficulty coping by finding a soothing behavior.

Less than expected: Experiences suicidal ideation with method, has intense urge to carry it out and requires hospitalization.

FALL PREVENTION

Much More than Expected: No falls. Walking and transferring independently without reminders or physical assistance from caregivers.

More than Expected: Falling one to two times per month. Requires no reminders to transfer slowly. Caregiver present to assist with falling safely.

Expected: Upon returning home, falls one to two times per month. Caregiver always present when practicing walking to provide verbal reminders to move slowly and to provide physical assistance for falling safely.

Baseline: Falling 1x per week but without injury requiring hospitalization. Does not consistently practice walking in a safe environment or with recommended equipment.

Less than Expected: Falling more than 1x per week or with injury requiring hospitalization

MEDICATION MANAGEMENT

Much More than Expected: Takes prescribed medication routinely with 0 missed or late doses and use of pillbox.

More than Expected: Takes prescribed medication routinely with 1-2 missed or late doses and use of pill box.

Expected: Takes prescribed medications weekly with 3 late or missed doses and use of pill box.

Baseline: Takes prescribed medications weekly with 4 or more missed or late doses and pillbox use.

Less than expected: Does not take medication at all and may require hospitalization

GOAL ATTAINMENT SCALING REFERENCES

Ertzgaard P, Ward AB, Wissel J, Borg J. Practical considerations for goal attainment scaling during rehabilitation following acquired brain injury. *Journal of Rehabilitation Medicine*. 2011:43(1):8-14.

Kiresuk TJ, Sherman RE. Goal attainment scaling: A general method for evaluating comprehensive mental health programs. *Community Mental health Journal*. 1968:4;443-53.

Malec JF. Goal attainment scaling in rehabilitation. *Neuropsychological Rehabilitation.* 1999:9(3/4):253-75.

VETERAN CLIENT CASE EXAMPLE

- 34 yo male
- former Army Infantry
- H/O of IED Blast exposure in 2008
- +brief LOC, not evacuated.
- Medically discharge in 2009

Social History:

- Lives alone,
- poor social support,
- disabled,
- +tobacco,
- +Etoh overuse

VETERAN CLIENT CASE EXAMPLE

Comorbid conditions:

1. PTSD
2. Depression
3. Hypertension
4. Migraine headache
5. Obstructive Sleep Apnea
6. Chronic Shoulder Pain

Symptom Presentation:

- Depression
- Headaches
- Dizziness
- Hypervigilance
- Insomnia
- Cognitive complaints
- Pain medication overuse
- Active suicidal ideation
- Single aborted suicide attempt (firearm)
- Poor compliance with VA treatment

VETERAN CLIENT CASE EXAMPLE

Client Centered Goals

- Helping Others
- Active at Home

Health and Safety Goals

- Medication Management
- Fall Prevention

Goal Attainment

- At Expected
  - Help with a volunteer effort
- Much more than Expected
  - Participate in at least 8 hours of activity at home on most days
- More than Expected
  - Takes medication routinely w/o missing doses/refill assistance
- Much more than Expected
  - No falls or near falls

VETERAN CLIENT CASE EXAMPLE

Client Centered Goals

- Helping Others
- Active at Home

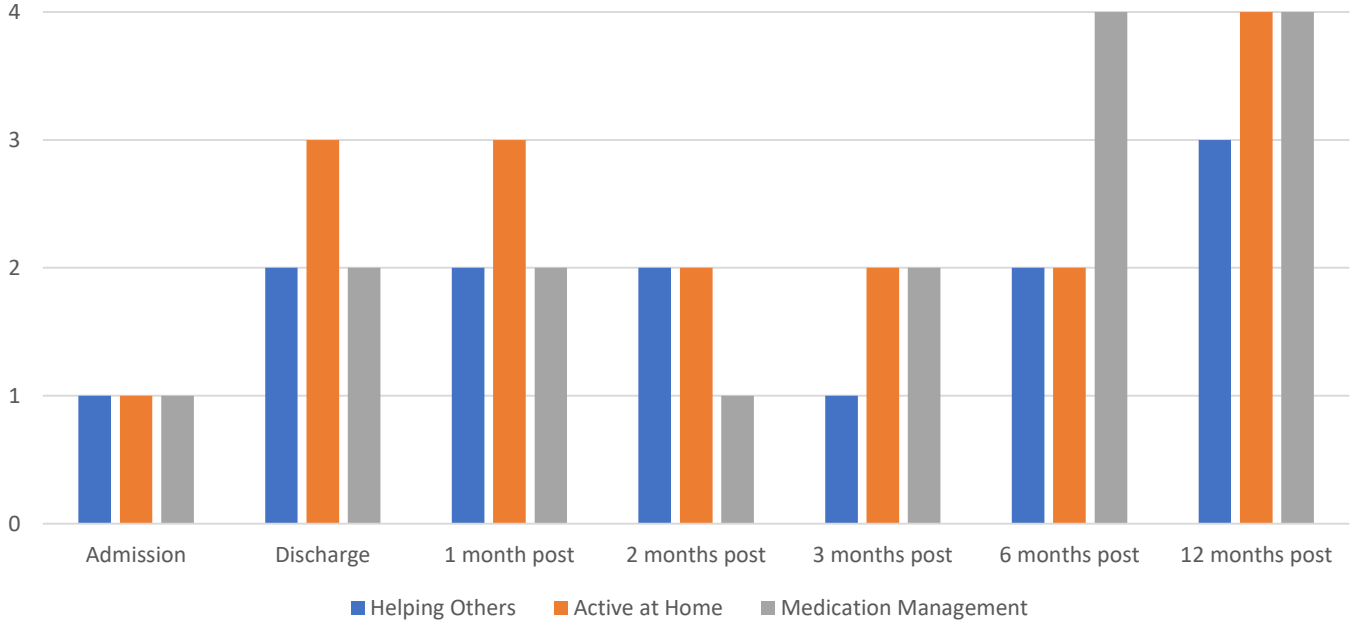
Health and Safety Goals

- Medication Management
- Fall Prevention

Treatment Team Approach Examples

- Remove barriers to community participation
- Identify community interests/groups
- Improve communication at home
- Medication management
- Minimize sedating medications /replace with non-pharm strategies

VETERAN CLIENT CASE EXAMPLE



TRANSITION

- Provides support and education upon discharge for up to 1 year with transition specialist
- Community and home visits
- Facilitates coordination/utilization of community resources for client
- Assists client in increasing circle-of-support
- Facilitate client in sustaining/increasing gains

TRANSITION WORKFLOW

3 Weeks prior to a client's discharge from SHARE:

Clinical Team identifies most appropriate Transition Tier

Transition specialist meets with client for formal session discussing transition (referencing transition plan and community resources)

2 Weeks prior to a client's discharge from SHARE:

Transition specialist and client meet again to review updates to client's Transition Plan

1 Week prior to a client's discharge from SHARE:

Transition specialist and client meet to finalize Transition Plan, and set up first in-home appointment

72 Hours after d/c from SHARE:

Transition specialist calls client to follow up regarding initial days at home

TRANSITION DATA COLLECTION

- Minimum phone contact at 72 hrs; weekly for first 4 weeks, then months 1, 2, 3, 6, 9, 12
- GAS @ months 1, 2, 3, 6, 9, 12
- *MPAI Participation* @ months 6, 12
- Employment, Rehospitalization @ months 6, 12
- Circle of Support per updates/changes
- Community Referrals per updates/changes

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SHARE MILITARY INITIATIVE

Transition Program

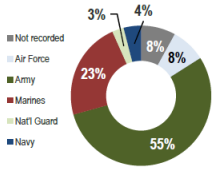
(One-Year Life Coach Services)

2018

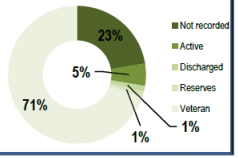
75 Person served

Includes persons enrolled but not discharged in 2018

Branch of Service



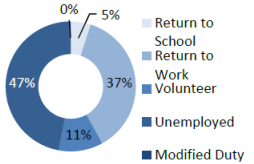
Duty Status



0% Of clients were a victim of suicide

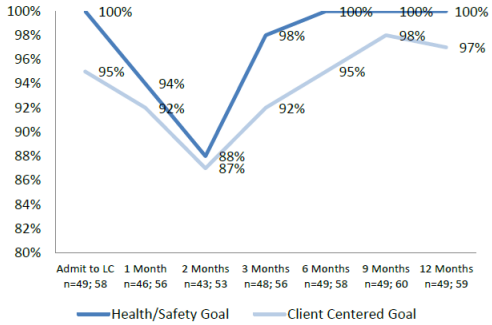
5% Of clients were rehospitalized after discharge

Status at completion of the follow up program:

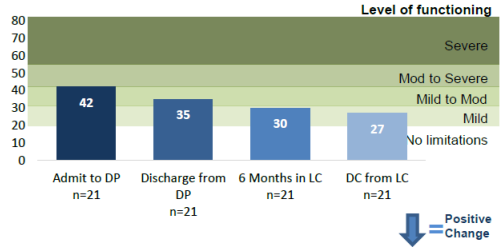


If you have questions, please contact Katie Metzger, OTR, Director of Brain Injury Services by telephone at 404-350-7495 or by email at katie.metzger@shepherd.org.

Percent of client goals met or exceeded after discharge from SHARE



Participation Improvement from the Mayo-Portland Adaptability Inventory



Source: Internal Shepherd Center databases

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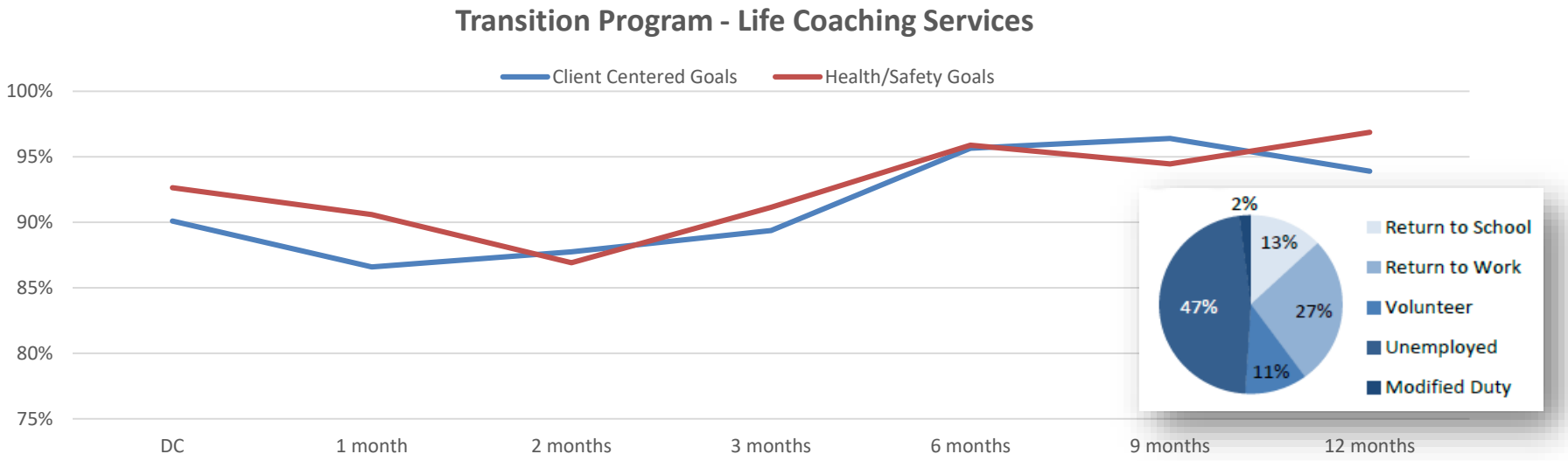
RETROSPECTIVE COHORT 2016-2018



Percent of goals met or exceeded after discharge from SHARE

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SHARE MILITARY INITIATIVE

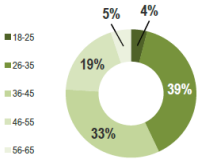
SHARE Scorecard

2018

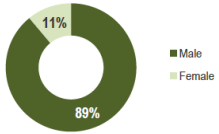
57
Persons seen in Day Program
Includes persons enrolled in 2018 but not yet discharged in 2018.

14
Persons received outpatient services

Age Groups



Gender



Average weeks In SHARE Day Program **12**

97
When asked if they would recommend Shepherd SHARE Program to their friends and family, clients rated their likelihood a 97 out of 100.

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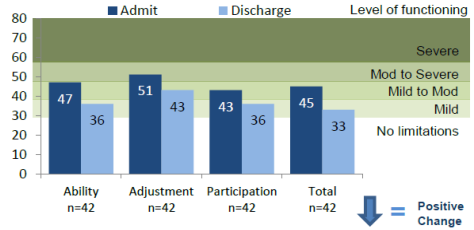
Outcomes

Improvement as determined by the Mayo-Portland Adaptability Inventory

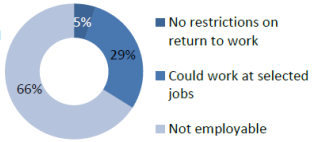


Goal Attainment

92% Of person-centered goals were met by discharge

Employability at Discharge

Employability as measured by items 28A and 28B of the Mayo-Portland Adaptability Inventory at the time of discharge.



n = 41

Source: Internal Shepherd Center databases

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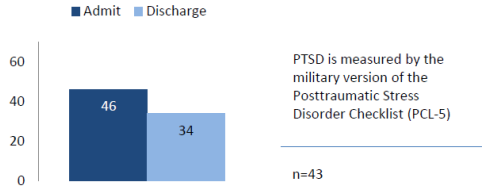
SHARE MILITARY INITIATIVE

SHARE Scorecard

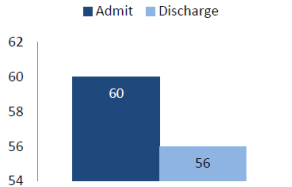
Posttraumatic Stress Disorder



PTSD is measured by the military version of the Posttraumatic Stress Disorder Checklist (PCL-5)

n=43

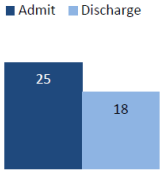
Headache



Headache is measured by the Headache Impact test

n=34

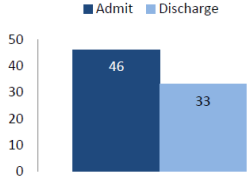
Depression



Depression is measured by Beck Depression Inventory-II (BDI-II)

n=30

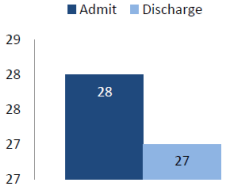
Dizziness



Dizziness is measured by the Dizziness Handicap Inventory (DHI)

n=41

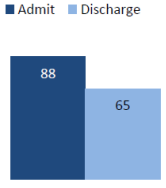
Sleep



Sleep is measured by the Pittsburgh Sleep Quality Index (PSQI)

n=25

Pain



Pain is measured by the Pain Outcomes Questionnaire (POQ)

n=30

Source: Internal Shepherd Center databases

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QUESTIONS

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www.shepherd.org/share