Clinical Recommendations for the Management of Concussion/Mild Traumatic Brain Injury in the MHS

Scott Livingston, PhD, PT, ATC
Inbal Eshel, MA, CCC-SLP

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The views expressed in this presentation are those of the authors and do not reflect the official policy of the Department of Defense, Department of Veterans Affairs or the U. S. Government.

Presenters have no financial relationships or conflicts of interest to disclose.
Learning Objectives

- Explain the impact that up-to-date clinical recommendations (CRs) have on the care of service members after injury
- Describe the key clinical aspects for the CRs for post-concussion headache, sleep, and progressive return to activity
- State the current available CRs related to the evaluation & treatment of service members with TBI
Agenda

- Intro to speakers
- Part I: CR development, future directions
- Part II: Case study example highlighting headache, sleep, and progressive return to activity CRs
- Part IV: Putting it into practice

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Inbal Eshel, MA, CCC-SLP
DVBIC Clinical Affairs

- Senior Principal Scientist, Clinical Practice Clinical Recommendations
- Speech-language pathologist with over a dozen years of experience in civilian and military brain injury rehabilitation, most recently at Walter Reed National Military Medical Center
- Involved in the development and implementation of a variety of clinically-oriented initiatives, including crafting clinical recommendations
- Passionate about cognitive rehabilitation and developing innovative ways of maximizing provider knowledge and patient care

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Scott Livingston, PhD, PT, ATC
DVBIC Education Division

- Director of Education Division, Defense and Veterans Brain Injury Center
- BS Physical Therapy (UO’88), MS Advanced P.T. (UNC-CH ’94), PhD Education/Kinesiology (Sports Medicine, UVA ‘07)
- Physical therapist (28 years), certified athletic trainer (15 years), 8 years AD experience (Navy, Medical Service Corps)
- Educator (undergraduate Sport & Exercise Science; graduate Physical Therapy, Athletic Training, Rehabilitation Sciences)
- Researcher (11 years) in the area of sports-related mild TBI (electrophysiologic & balance assessment)

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Clinical Recommendations: Big Picture

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Clinical Recommendations & Tools

Clinical Recommendation Narrative

Provider Slide Deck

Clinical Support Tool/Algorithm

New Mechanisms in Mobile Platforms:
- Interactive provider training on clinical recommendations
- Electronic clinical support tools

Patient Fact Sheet

Face-to-face Training
Clinical Recommendations & Tools

- Components of DVBIC clinical recommendations:
  - Full text
  - Clinical support tool (CST)
  - Patient education fact sheet
  - Provider training slides

https://dvbic.dcoe.mil/resources/clinical-tools

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Patient Presents With Headache

- Private Tonya Ray (age 20) waits in the dark exam room squinting and rubbing her neck.
- What are all the possible diagnoses for Private Ray?
Case Study Part 2

Take a patient history

- During the exam, the primary care provider learns that Private Ray was in a motor vehicle accident about a week ago. As a result of the accident, she had whiplash and a contusion to the left side of her head. After the accident, Private Ray had a mild headache, light sensitivity and neck pain worsening over the last 2 days.

Who is Private Ray?

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Post-traumatic Headache (PTH)

- Headache is the most common symptom after a concussion.
- The four most common PTH types are:
  - Migraine
  - Tension-type
  - Cervicogenic
  - Headache related to neuropathic pain
- PTH should be managed corresponding to the headache type it most closely resembles.
PTH Evaluation & Treatment Algorithm

Patient presents with headache after a concussion

Perform focused headache history and assessment

Concussion or headache red flags present?

Yes

Emergent or specialty referral as indicated

No

Review diagnostic criteria and determine headache type

- Migraine
- Tension-Type
- Cervicogenic
- Neuropathic
Beginning the Algorithm

- Primary care providers should evaluate whether concussion/mild traumatic brain injury (mTBI) is a possible cause for any headache.
- Key considerations:
  - PTH typically starts within 30 days of head injury.
  - If there is a prior history of headaches, the TBI could exacerbate headache frequency/severity.
  - Patients with PTH may not present to the medical provider for treatment until long after the headache starts.
Perform Focused PTH History & Exam

Patient presents with headache after a concussion

Perform focused headache history and assessment

Concussion or headache red flags present?

- Yes
  - Emergent or specialty referral as indicated

- No
  - Review diagnostic criteria and determine headache type
    - Migraine
    - Tension-Type
    - Cervicogenic
    - Neuropathic
Case Study Part 3

Red Flags

- Since Private Ray’s accident, her headaches have worsened. During the exam, the provider noticed that her pupils are asymmetric. According to the Management of Headache Following Concussion CR, what could the provider’s next step be?
Concussion Red Flags

Red flags that indicate emergency referral

1. Progressively declining level of consciousness
2. Loss of consciousness (LOC) > 5 minutes
3. Declining neurological status
4. GCS score < 15
5. Seizures
6. Neurological deficit: motor or sensory
7. Cannot recognize people or disoriented to place
8. Repeated vomiting
9. Worsening headache
10. Pupil asymmetry
11. Double vision
12. Slurred speech
13. Combative or concerning behavior

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# Headache Red Flags and Indications for Referral

## Red flags specific for headaches

<table>
<thead>
<tr>
<th>Indications for emergent referral</th>
<th>Indications for specialty referral</th>
</tr>
</thead>
<tbody>
<tr>
<td>Concussion red flags</td>
<td>Presence of systemic symptoms</td>
</tr>
<tr>
<td>Thunderclap headache (sudden onset)</td>
<td>Associated neurological symptoms</td>
</tr>
<tr>
<td>Sudden neurological deficit</td>
<td>Onset after age 50*</td>
</tr>
<tr>
<td>Persistent bleeding from nose, ears or scalp</td>
<td>Change in pattern of headache</td>
</tr>
<tr>
<td>Cranial fracture</td>
<td>Valsalva precipitation</td>
</tr>
<tr>
<td>Infection resulting from a penetrating injury</td>
<td>Postural aggravation</td>
</tr>
<tr>
<td>Cerebrospinal fluid leakage (nose or ears)</td>
<td>TMJ disorder</td>
</tr>
<tr>
<td>Intracranial hemorrhage on CT</td>
<td>ENT disorder</td>
</tr>
<tr>
<td>Papilledema</td>
<td>Anticoagulant therapy*</td>
</tr>
</tbody>
</table>

* Patients on anticoagulant therapy or over the age of 50 have an increased risk of chronic subdural hematoma. This demographic may need imaging with or without specialty referral based on the head trauma history and provider judgment. Refer to the DVBIC CR Neuroimaging Following Mild Traumatic Brain Injury: Guidance in the Non-Deployed Setting that is available at dvbic.dcoe.mil.

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Headache Red Flags and Indications for Referral

Management of Headache Following Concussion/mTBI:
Guidance for the Primary Care Manager in Deployed and Non-Deployed Settings

D. Headache Red Flags and Indications for Referral

Indications for Emergency Referral

- Concussion red flags
- Thunderclap headache (sudden onset)
- Sudden neurological deficit
- Persistent bleeding from nose, ears or scalp
- Cranial fracture
- Infection resulting from a penetrating injury
- Cerebrospinal fluid leakage (nose or ear)
- Intracranial hemorrhage on CT
- Papilledema

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# Characteristics of Headache Types

<table>
<thead>
<tr>
<th></th>
<th>Migraine</th>
<th>Tension type</th>
<th>Cervicogenic</th>
<th>Related to neuropathic pain</th>
<th>Medication overuse</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Aura</strong></td>
<td>Possible (15-33%)</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td><strong>Duration</strong></td>
<td>4-72 hrs.</td>
<td>30 mins to 7 days</td>
<td>Some or all of the day</td>
<td>Seconds, minutes, hours</td>
<td>Some or all of the day</td>
</tr>
<tr>
<td><strong>Frequency</strong></td>
<td>Episodic, variable</td>
<td>1-15 days/ month, variable</td>
<td>Variable</td>
<td>Episodic, variable</td>
<td>Daily &gt; 15 days each month</td>
</tr>
<tr>
<td><strong>Site</strong></td>
<td>Unilateral</td>
<td>Bilateral</td>
<td>Usually unilateral</td>
<td>Unilateral</td>
<td>Unilateral or bilateral</td>
</tr>
<tr>
<td><strong>Pain characteristics</strong></td>
<td>Pulsating</td>
<td>Pressure/ tightening</td>
<td>Tightening and/or burning</td>
<td>Burning, radiating</td>
<td>Pressing, tightening, pulsating</td>
</tr>
<tr>
<td><strong>Pain severity</strong></td>
<td>Moderate/severe</td>
<td>Mild/moderate</td>
<td>Mild/moderate</td>
<td>Moderate/severe</td>
<td>Mild/moderate/severe</td>
</tr>
<tr>
<td><strong>Aggravated by movement?</strong></td>
<td>Yes</td>
<td>No</td>
<td>Yes with head movement</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td><strong>Nausea/vomiting</strong></td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td><strong>Photophobia/phonophobia?</strong></td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

*PCM should consider the possibility of medication overuse headache (MOH) when criteria in Table 5.0 are present. Optimal treatment consists of discontinuation of the offending medications, acute treatment of withdrawal symptoms and pain, and use of analgesic medication as preventative treatment only when necessary.*
# Headache Red Flags and Indications for Referral

## E. Characteristics of Headache Types

### Cervicogenic

- **Headache Types Indicator**
  - **Is there an Aura?**
  - **Duration?**
  - **Frequency?**
  - **Location site?**
  - **Pain traits?**
  - **Pain severity?**
  - **Aggravation?**
  - **Nausea/Vomiting?**
  - **Photophobia/Phonophobia?**

<table>
<thead>
<tr>
<th>Feature</th>
<th>Cervicogenic</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Some or all of day</td>
<td>Duration?</td>
</tr>
<tr>
<td>Variable</td>
<td>Frequency?</td>
</tr>
<tr>
<td>Usually unilateral</td>
<td>Location site?</td>
</tr>
<tr>
<td>Tightening and/or burning</td>
<td>Pain traits?</td>
</tr>
<tr>
<td>Mild/moderate</td>
<td>Pain severity?</td>
</tr>
<tr>
<td>Yes with head movement</td>
<td>Aggravation?</td>
</tr>
<tr>
<td>No</td>
<td>Nausea/Vomiting?</td>
</tr>
<tr>
<td>No</td>
<td>Photophobia/Phonophobia?</td>
</tr>
</tbody>
</table>

### Medication Overuse

- **Some or all of the day**
- **Daily >15 days each month**
- **Unilateral or bilateral**
- **Pressing, tightening, pulsating**
- **Mild/moderate/severe**
- **No**
- **No**
- **No**

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Headache Treatment

- PTH should be managed corresponding to the headache type it most closely resembles.
  - Examples of effective non-pharmacologic treatment include sleep hygiene, physical therapy and relaxation.
  - Examples of effective symptomatic pharmacologic treatment include non-narcotic pain medicine and triptans.
Non-pharmacologic Recommendations

Regardless of which treatment is first line, the recommended non-pharmacologic treatments can be incorporated into the treatment plan for greater long-term outcome.

- Sleep hygiene
- Exercise
- Hydration
- Progressive return to activity
- Caffeine intake
- Physical therapy
- Stress management
- Acupuncture
- Relaxation training
- Cognitive behavioral therapy (CBT)
- Biofeedback
- Massage
Quick Recap:
Reviewing Use of CR Algorithm

PTH Case Study; Private Ray
1. Reviewed headache history for TBI
2. Performed PTH exam
3. Screened for red flags
   ▪ Positive red flag (unequal pupil size)
     — Decide if referral is urgent (specialty) or emergent (ER)
       • This case is emergent- so refer to ER
4. If no red flags, would decide which PTH subtype diagnosis
5. Follow first-line treatment guidance
6. Review recovery at follow-up. If no response to treatment choice, try another first-line treatment. Repeat prn.

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Management of Headache Following Concussion Takeaways

For the most common types of PTH:

- Carefully assess and use DVBIC tools to support differential diagnosis; treat accordingly.

- Effective treatment of post-traumatic headaches is often possible with non-pharmacologic measures.

- Physical and cognitive rest promote healing.

- Avoid benzodiazepines, tramadol and opiates.
What about the Other Symptoms?

Q: Private Ray returns for a follow-up after being discharged from the ER. How do you address the additional insomnia and the need to return to pre-injury activities?

A: The DVBIC CRs offer guidance for all these topics and more, and can be combined to provide the very best guidance for all these conditions.
Case Study Part 4

- Private Ray tells the provider that she has a really hard time staying asleep. She reports feeling irritable and having a hard time paying attention.

- How can the Management of Sleep Disturbance Following Concussion CR help?
Clinical Algorithm

- If a SM is diagnosed with a concussion and has sleep complaints:
  - Complete a focused sleep assessment
  - If sleep-specific red flags are present, refer to a sleep medicine specialist, emergency department or psychiatry
  - Identify co-morbid conditions
  - Discuss stimulus control and sleep hygiene
  - Administer the Insomnia Severity Index (ISI)
  - Complete differential diagnosis
  - Manage the sleep disturbance accordingly
Most Common Post-concussive Sleep Disturbances

— Short-term insomnia (previously known as acute insomnia)
— Chronic insomnia
— Circadian rhythm sleep-wake disorders (CRSWD) (previously known as circadian rhythm sleep disorder)
— Obstructive sleep apnea (OSA)
# Short-term Insomnia Treatment

<table>
<thead>
<tr>
<th>Treatments for Short-Term Insomnia in the Primary Care Setting</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>First-line non-pharmacologic</strong></td>
</tr>
<tr>
<td>- Reassure</td>
</tr>
<tr>
<td>- Educate</td>
</tr>
<tr>
<td>- Implement stimulus control + sleep hygiene</td>
</tr>
<tr>
<td>- Follow weekly until resolution</td>
</tr>
</tbody>
</table>

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Sleep Disturbance Takeaways

Sleep Facts
- Nearly all service members (SM) with combat-related TBI report a sleep disturbance initially.
- SMs with physical, cognitive or behavioral/emotional symptoms following concussion should be screened.
- Insomnia is the most common sleep disturbance following concussion.

Why is Sleep so Important?
- Negative impact on recovery from TBI (impedes restorative processes that occur during sleep)
- Symptom exacerbation (pain, irritability and cognitive/memory dysfunction)
- Functional deficits (e.g., social functioning, response to rehabilitation, return to work, etc.)
Private Ray tells her provider that she really wants to get back into her pre-injury activities, but she feels really unsure about what she can perform.

Dr. (X) notes that she is symptom free at the present time and advises that she can begin a gradual resumption of activities.

How can the Progressive Return to Activity Clinical Recommendation help the provider guide her return to pre-injury activities?
Progressive Return to Activity (PRA) – Clinical Recommendation

- Provides clear guidance on progressive return to activity following mTBI after the mandatory recovery period
- Separate products for primary care manager and for rehabilitation providers
- Promotes standardization of care following mTBI
Progressive Return to Activity Approach

SM may enter the PRA process if:

First Concussion

- SM experiences symptoms greater than 1 (mild) after 24 hours in Stage 1 (Rest) or after exertional testing

Second concussion in the past 12 months

- All SMs who have sustained a second concussion within 12 months must enter the progressive return to activity process
- SM must have **seven consecutive days** of symptom resolution (defined as symptoms of 0-1 or mild) at Stage 1 and 2 before completing Stages 3-5
The progressive return to activity protocol measures three domains as parameters for ongoing evaluation:

- **Physical Progression**
  - Includes activities from extremely light physical exertion to resistance training with maximum exertion tolerated (e.g. heavy military job tasks)

- **Cognitive Progression**
  - Includes activity with very low cognitive demand (e.g. leisure reading) to activities that require multitasking or complex problem solving

- **Vestibular and Balance Progression**
  - Includes activities with slow and limited range of head and body movement to activities that involve dynamic balancing and challenge greater vestibular needs (e.g. swimming with flip turns)

**NOTE:** The patient does not need to do all of the activities on the handout to advance (examples provided as recommendations only).
## Stages of Progressive Activity

<table>
<thead>
<tr>
<th>Rehabilitation Stages</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stage 1</td>
<td>Rest (minimum 24 hours)</td>
</tr>
<tr>
<td>Stage 2</td>
<td>Light Routine Activity</td>
</tr>
<tr>
<td>Stage 3</td>
<td>Light Occupation-oriented Activity</td>
</tr>
<tr>
<td>Stage 4</td>
<td>Moderate Activity</td>
</tr>
<tr>
<td>Stage 5</td>
<td>Intensive Activity</td>
</tr>
<tr>
<td>Stage 6</td>
<td>Unrestricted Activity</td>
</tr>
</tbody>
</table>

STOP and do NOT progress to stage 2 if symptoms greater than ‘mild’ or new symptoms present on NSI!
Stage 1: Rest

Objective:
- Extremely light physical, cognitive and vestibular-balance activities with the goal of symptom resolution

Activity and rest guidelines:
- Primarily rest with extremely limited cognitive activity
- Basic activities of daily living and extremely light leisure activity
- Extremely light vestibular-balance activity is permitted, including walking on level surfaces and limited head movements
- **NO work, exercise, driving, video games, drinking alcohol**

SM may return to pre-injury activity with follow-up guidance if NO symptoms are present (following exertional testing) after Stage 1
Stage 2: Light Routine Activity

Objective:
- Initiate and promote limited effort
- Activity limited to 30 minute intervals or less followed by four hours of rest

Activities:
- Outdoor or indoor light physical activities, such as stretching, walking, stationary cycling at low pace and resistance
- Cognitive activities such as computer use, leisure reading, and simple board games
- Vestibular and balance activities such as climbing stairs, putting on boots, and bending tasks
- NO video games, driving, resistance training, repetitive lifting, sit-ups, push-ups or pull-ups
Stage 3: Light Occupation-oriented Activity

Objective:
- Increase intensity and complexity of exercise and cognitive activity

Activities (in addition to previous stage):
- Physical: Lift and carry objects less than 20 lbs., use elliptical or stair climber machines, or light military tasks such as cleaning equipment
  - Maximum 60 minutes followed by 4 hours of rest
- Cognitive activities such as increasing exposure to light and noise, performing a maintenance check on vehicle or shop for one item
  - Maximum 30 minutes followed by 60 minutes of rest
- Balance activities including walking on uneven terrain, swimming (avoiding flip turns) or standing on one foot

- NO video games, driving, combatives or collision sports
Stage 4: Moderate Activity

Objective:
- Increase in intensity and complexity of exercise and cognitive activity to match demands of occupation

Activities (in addition to previous stage):
- Physical activities such as brisk hike, jogging to running as tolerated, light resistance training or non-contact sports
  - Maximum 90 minutes followed by 6 hours of rest
- Cognitive activity with greater demand such as video games, land navigation, driving simulator, weapons simulator or target practice
  - Maximum 40 minutes followed by 80 minutes of rest
- Vestibular/balance activities with greater demand such as swimming with flip turns, jump rope
- NO driving, combatives or collision sports
Stage 5: Intensive Activity

Objective:
- Duration/intensity of activity parallels service member’s typical role, function and tempo

Activity (in addition to previous stage):
- Resume usual physical exercise routine
  - Duration limited only if symptomatic
- Cognitive activities may include: driving (as appropriate), weapons simulator or target practice, multitasking, problem solving
  - 50 minutes maximum
- Greater exercise intensity and dynamic balance: running, patrol duty, jump landing, use of night vision goggles
- NO combatives or collision sports
Stage 6: Unrestricted Activity

Objective: Resume pre-injury activities

Activity (in addition to previous stage): Unrestricted

Return to provider if symptoms return

DoD Photo, by Sgt. Jeffrey Alexander (3rd Brigade Combat Team)
Return to Activity Educational Brochure

Stage 2: Light Routine Activity
- All activities no longer than 30 minutes
  - You may wear a uniform and boots.
  - Walk and stretch.
  - May ride a stationary bike at a slow pace with low resistance.
  - Do light housework.
  - Use the computer.
  - Play simple games, such as cards.

Stage 4: Moderate Activity
- You may wear PPE.
- May perform these activities no longer than 90 minutes.
  - Take a brisk walk.
  - Do light resistance training.
  - Participate in non-contact sports.
  - Perform moderate job-related tasks.
  - Climb, crawl or jog.

Stage 3: Light Occupation-oriented Activity
- May perform these activities no longer than 30 minutes.
  - Lift and carry objects less than 20 pounds.
  - Take a brisk walk.
  - Ride in a car and look around.
  - Use an elliptical machine or stair climber.
  - Perform light military tasks such as cleaning equipment.

Stage 5: Intensive Activity
- Resume normal routine and exercise.
- Participate in normal military, training and social activities.
- Use night vision goggles, take part in simulations, or be exposed to bright lights.

Stage 6: Unrestricted Activity
- Return to pre-injury activities.

DO NOT!!!
- Drink alcohol.
- Drive.
- Play video games.
- Do resistance training or repetitive lifting.
- Do sit-ups, push-ups or pull-ups.
- Go to crowded areas where you may be bumped into.

DO NOT!!!
- Drink alcohol.
- Participate in combatives or contact sports.
- Drive.

WHAT IS A CONCUSSION?
A concussion is a head injury from a hit, blow or jolt to the head that:
- Briefly knocks you out (loss of consciousness), or
- May affect your ability to remember information before, during or after the event (posttraumatic amnesia), or
- Makes you feel dazed, like you had your bell rung (alteration of consciousness).

A concussion is also known as mild traumatic brain injury (mTBI).

This brochure will help you to recover as quickly and safely as possible. Each stage is designed to help you gradually return to your normal routine while your brain heals. You may have to stay at one stage longer than another if your symptoms do not go away or return when you try to do more activities. Everyone is different. Do not rush your progress.

Patients should discuss this brochure with their provider to ensure they understand the recovery process.

For more materials or copies click here:
Email questions or feedback to info@pac.org

DYNC is the TBI operational component of The Defense Centers of Excellence for Psychological Health and Traumatic Brain Injury, January 2014

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PRA Takeaways

- Recent evidence shows that prolonged bed rest is not recommended and should not be used.
- PRA provides a structured protocol for return to activity that leads to safer return to normal activities.
- Recommendations differ based on concussion history (e.g. first vs. second concussion).
- Recommendations are available for primary care managers and rehabilitation providers.
Putting it into Practice

DVBIC tools by appointment process

- Pre-appointment
  - Patient
  - Provider

- Appointment
  - Patient
  - Provider

- Follow-up
  - Provider

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Pre-appointment: Patient

- Best tools?
  - Apps
  - Logs
  - Websites
  - Slick sheets

- Who provides?
  - Medical provider – great for ‘on the fly’ requests
  - Corpsman/medical assistant – to use before appt
Pre-appointment: Provider

- **Best Tools?**
  - CPGs and CRs – get familiar with guidelines and algorithms
    - Don’t worry about memorizing – they are meant to be user friendly
- **Deeper knowledge**
  - On website – multiple CPGs and CRs, provider tabs, research articles, webinars, etc.
- **Tools for your patients**
  - Apps
  - Logs
  - Websites
  - Slick sheets
Which tool?

- Follow algorithms for assessment and treatment
- Introduce DVCBIC tools as a trusted source to guide their care
  - Go over appropriate brochure together
  - Review aps/logs if already in use
  - Introduce aps/logs if not used yet
Follow-up Appointment(s)

- Which tool?
  - Follow algorithm – utilize as you review the chart to plan assessment
  - Check in for updates – all materials are updated and under process-improvements
  - Tell us! Tell us what you need and what needs to be changed
The “How?” and the “Why?” (why bother?)

- **Two main reasons: quality and efficient care**
  - DVBIC tools are a trusted source for provider guidance
  - Validated process for quality care/best practices
  - Encourages patient participation in self-care (proactive)
  - Emphasizes non-pharmacologic treatments as first line therapy based on evidence-based literature
  - Conservative measures help other (even hidden) issues
  - Healthier patients means less appointments
Patient Confidence

- How then do we convince our patients that leaving without a medication is not leaving without care (or that we don’t care about them)?
  - Teach from CPGs as a standard of care
  - Stress that you will provide them with the best care available
  - Remind that you are committed to ‘causing no harm’
  - State that you prioritize their long-term health more than their immediate symptom relief at the risk of long-term medications or dependency

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Acknowledging Barriers: Learning

- Learning Curve – You will become more efficient with these tools as you gain confidence.

- Overcoming awkwardness – You may feel uncomfortable your first time going over a new brochure with your patient but the information will be consistent, accurate and reliable.
Acknowledging Barriers: Time

- The 20 min. hurdle – You may be apprehensive adding these tools to your tight 20 min. appointments but using these tools will mean more efficient/focused visits.
  - Less appointments = more time
    - Better symptom control
    - Overlapping relief of multiple symptoms from one non-pharmacologic treatment method
    - Patient access to learning tools
    - Established patient-provider trust
Conclusion

- DVBIC offers tools to providers and patients to
  - Offer quality care recommendations
  - Make following these guidelines easy

- You don’t need to memorize a differential diagnosis
  or argue with patients to provide the best
  recommendations – they are already available to
  you in multiple forms

- Please offer feedback so that we can create what
  you need!

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Additional DVBIC Clinical Recommendations

- Assessment and Management of Dizziness Associated with Mild TBI
- Neuroimaging Following Mild TBI in the Non-Deployed Setting
- Indications and Conditions for In-Theater Post-Injury Neurocognitive Assessment Tool (NCAT) Testing
- Cognitive Rehabilitation

https://dvbic.dcoe.mil/resources/clinical-tools
Contact Information

Scott Livingston, PhD, PT, ATC
Education Division, Defense & Veterans Brain Injury Center
Scott.c.livingston.civ@mail.mil

Inbal Eshel, MA, CCC-SLP
Clinical Affairs Division, Defense & Veterans Brain Injury Center
Inbal.eshel.ctr@mail.mil

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