



Age Friendly Care: Treating Traumatic Brain Injury

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Population Projections

- The number of people 65 and older increased by 34%, from 43.1 million in 2012 to 57.8 million in 2022. This population is projected to reach 88.8 million in 2060 (2023 Profile of Older Americans).
- The 85 and over population is projected to more than double from 6.5 million in 2018 to 14.4 million in 2040, a 123% increase (2019 Profile of Older Americans).
- Nearly half of Veterans enrolled in VA health care are over age 65 compared to 21% of civilians.
- The number of Veterans aged 85 and older is anticipated to increase by 38% between 2019 and 2039



Age Friendly Care (Mate et al 2021; Institute for Healthcare Improvement 2020)



- In 2017, geriatric experts and health system executives collaborated with the Institute for Healthcare Improvement (IHI) to develop the 4Ms framework.
- Asking what matters from the outset of care planning improved both psychological and physiological health statuses.
- The AFHS movement is meant to create a quality care framework wherever the older adult is receiving care with a unified 4Ms approach.
 - In the community, when transitions of care take place within Medicare settings
 - In VA, when transitions to various levels of care based on the veteran needs
- There is a unified language, approach, and meaning that are readily understood by the primary care practice, other ambulatory practices, emergency department, Intensive care unit, and so forth. Through a framework that reduces cognitive load of providers and improves the reliability of evidence-based care for older adults, all clinicians and healthcare workers can engage in age-friendly care.

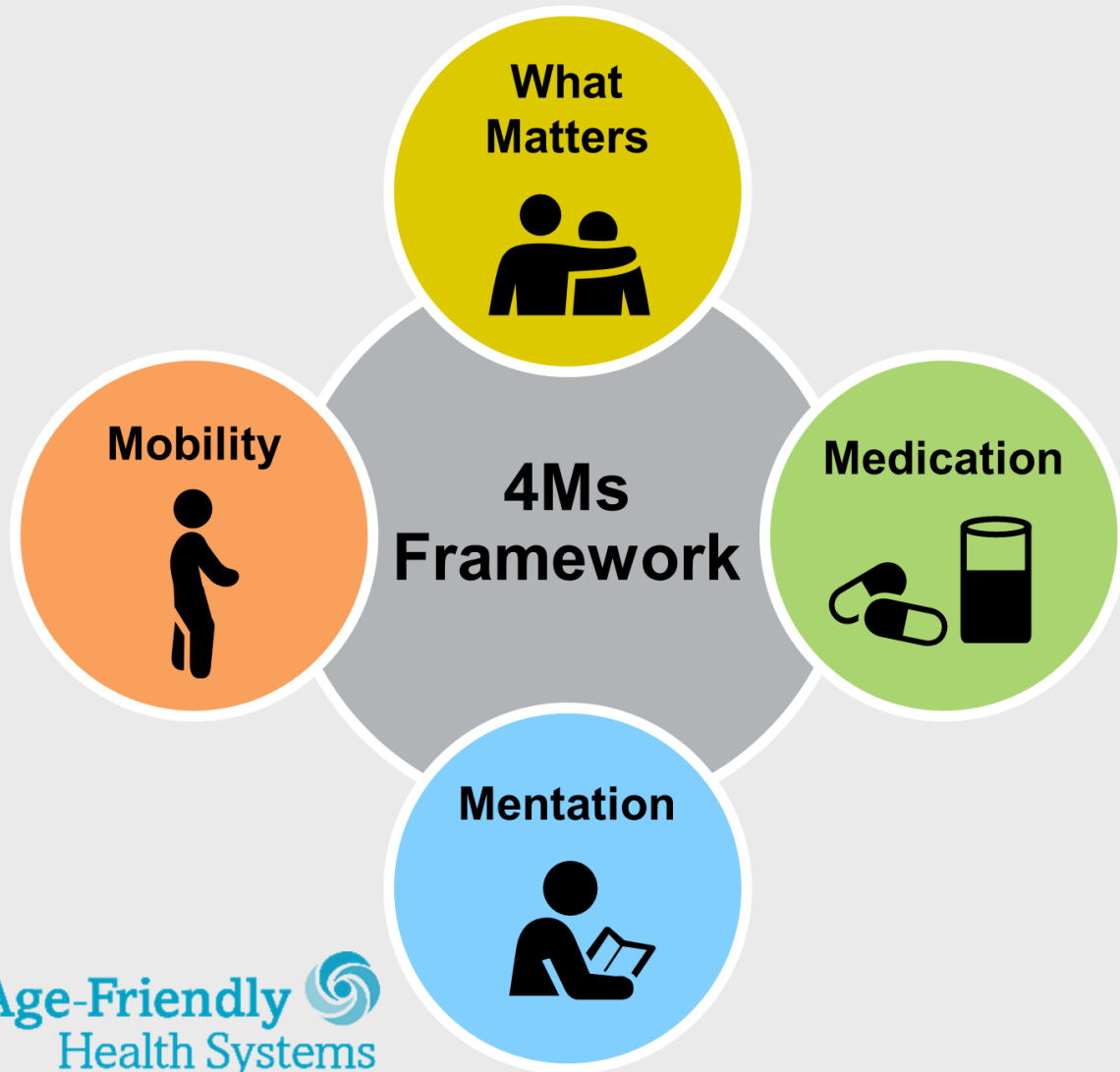


Choose **VA**

VA



U.S. Department
of Veterans Affairs



Age-Friendly
Health Systems

An initiative of The John A. Hartford Foundation and the Institute for Healthcare Improvement (IHI) in partnership with the American Hospital Association (AHA) and the Catholic Health Association of the United States (CHA).

What Matters

Know and align care with each older adult's specific health outcome goals and care preferences including, but not limited to, end-of-life care, and across settings of care.

Medication

If medication is necessary, use Age-Friendly medication that does not interfere with What Matters to the older adult, Mobility, or Mentation across settings of care.

Mentation

Prevent, identify, treat, and manage dementia, depression, and delirium across settings of care.

Mobility

Ensure that older adults move safely every day in order to maintain function and do What Matters.

TBI by Age

- TBI is more prevalent among those under 25 years of age and those older than 75 years
 - Falls are most common to occur among elderly and children
 - Motor vehicle accidents are most common among young adults.
- The absolute incidence of TBI among the elderly is increasing, most likely due to the greater life expectancy and mobility of older adults, with the resulting increased risk of falls
- People age 75 years and older had the highest numbers and rates of TBI-related hospitalizations and deaths. This age group accounts for about 32% of TBI-related hospitalizations and 28% of TBI-related deaths.



Defining Traumatic Brain Injury (mTBI)

- DSM-V Diagnostic Criteria
 - A. The criteria for Major or Mild Neurocognitive Disorder must be met.
 - B. Evidence of a Traumatic Brain Injury – an impact to the head or other mechanisms of rapid movement or displacement of the brain within the skull, with **ONE** or more of the following:
 - Loss of Consciousness (LOC)
 - Posttraumatic Amnesia (PTA)
 - Disorientation and Confusion
 - Neurological Signs (e.g., neuroimaging demonstrating injury; a new onset of seizures; a marked worsening of a preexisting seizure disorder; visual field cuts; anosmia (loss of smell); hemiparesis)
 - C. Major or Mild Neurocognitive Disorder presents immediately after the Traumatic Brain Injury or after recovery of consciousness and lasts beyond the acute post-injury period.

DSM-V Severity Rating for Traumatic Brain Injury

Injury characteristic	Mild TBI	Moderate TBI	Severe TBI
Loss of consciousness	<30 min	30 minutes- 24 hours	>24 hours
Posttraumatic amnesia	<24	24 hours-7day	>7 days
Disorientation and confusion at initial assessment (Glasgow Coma Scale Score)	13-15 (not below 13 at 30 minutes)	9-12	3-8



Neuroanatomical and Neuropathology

- Pathology can be classified under:
 - Anatomical
 - Contact Injury
 - An object striking the head
 - Brain contacts skull
 - Tends to be focal in nature
 - Acceleration/Deceleration Injury
 - Unrestricted movement of the head resulting in shear, tensile, and compressive strain on brain tissues
 - Tend to be more diffuse, often includes tearing of bridging veins, Subdural hematomas, ect.
 - Metabolic/Biochemical
 - Result from systemic illness
 - Prolonged exposure to toxic substances

Neuropathology Cont.

- Primary Injury
 - Occurs immediately upon impact and results from linear or rotational forces
 - Due to anatomical arrangement of brain and skull, focal injuries are most common in Frontal and Temporal lobes
- Secondary Injury
 - Occurs directly or indirectly from a cascade of events that occurs after brain tissue is injured or from consequences of extracerebral events.
 - Can be gradual or accelerate very quickly if not properly managed.

Neuropsychological Functioning

- Due to the heterogeneity in moderate to severe TBI no single magnitude and pattern of cognitive and neurobehavioral profiles exists.
- Improvement is the general rule, with evidence of improved cognitive functioning from 3 to 24 months across multiple cognitive domains for both moderate and severe TBI
- Tasks requiring more complex functions, such as problem solving and complex attention, appear to recover more slowly than activities with more simple cognitive demands

Traumatic Brain Injury as a Chronic Health Condition

- Evidence suggests that some TBIs may be chronic in nature, especially those considered in the moderate to severe injury
- Foreslund et al (2019) showed dynamic changes, with improvement and deterioration over time using Glasgow Outcome Scale-Extended.
 - 5 - 10-year follow-up:
 - 7% improved in one category
 - 56% showed no change
 - 37% worsened in one or two categories
- Take away: that TBI survivors who were male, younger, employed at time of injury, in a white-collar occupation and with a shorter PTA duration (i.e., lower injury severity), had significantly higher global functioning across 1, 2, 5, and 10 years after moderate to severe TBI.



Case Example

- At the time of initial admission on 8E the veteran is 57-year-old male.
- Veteran has two co-guardians
 - Ex-wife
 - VA-appointed guardian
- Veteran was placed in State Veterans Home
 - Was removed at the request of one guardian because they felt the environment was too strict and the veteran was not being treated well
- Was then Transferred to an assisted living
 - Veteran was initially admitted to our unit for agitation at the facility in December 2021



Medical History

- Numerous CT of the head scans for frequent falls s/p EtOH intoxication and withdrawal with seizures.
- Record also indicate that he began experiencing seizures following traumatic subarachnoid and subdural hematoma (2015), and has a complex history of ETOH abuse with falls and withdrawal symptoms.
- He also experienced acute metabolic encephalopathy in context of C. diff colitis/campylobacter gastroenteritis-discharge from hospital 1/13/2017 with diagnosis of "possible alcohol related dementia.
- In addition, veteran has diabetes that is very difficult to control due to disinhibition and impaired cognition from co-morbid medical condition



Mental Health History

- Neuropsychological evaluation September 2018
 - results revealed "multiple profound impairments specifically in working memory, retrieval of verbal and non-verbal stimuli (memory), visuospatial, language, and executive functioning (i.e., set-shifting and cognitive flexibility)." Overall, the results suggested a significant decline from the Veteran's estimated premorbid level of intellectual functioning
- Neuropsychological re-evaluation May 2020
 - In comparison to his performance in September 2018, there is some evidence of further decline, although the Veteran's performance on similar tasks administered during the previous evaluations yielded scores that were predominantly in the severely impaired range.



Admission History

- December 2021 First Admission (BG=308)
- March 2022
 - Not Showering or changing clothes for 3 weeks (BG=377)
- April 2022
 - Was able to access nursing breakroom at facility in search for food and then became physically aggressive when staff redirected (BG=367)
- May 2023
 - From Vet center became intrusive , and aggressive towards other patients. Requesting cigarettes and food. (BG=497)
- December 2023
 - Veteran brought to ED after a fall (BC=566)



Case Example What Matters March 2023

- **WHAT MATTERS**

- Positive socialization with other Veterans; Tobacco use; Being close to family and friends; access to pictures and cell phone; favorite recliner just brought to facility;

- **MEDICATION**

- Medical staff reviewed medication list, no significant changes from discharge medications were noted

- **MENTATION**

- Depression was addressed at this visit.
 - Medication management and positive socializations. Unable to use screeners due to cognitive impairment
- Dementia was addressed at this visit.
- Delirium was addressed at this visit.
 - Monitoring sugars and other reversible causes of delirium

- **MOBILITY**

- Ambulates independently, enjoying access to outdoors.

Behavioral Intervention Plan

- Challenging Behaviors
 - Disinhibition with food intake
 - Eating unattended food
 - Using excessive amounts of sugar in coffee
 - Taking food from other people's plates
 - Physical and verbal aggression directed at peers/staff
 - Physical aggression(H/O hitting peer during disagreement over TV channel in prior admission; H/O physical aggression w/staff related to behaviors obtaining food)
 - Cursing or other verbal aggression, threats
 - General agitation/ restlessness
 - Repetitious food seeking
 - Slamming doors
 - Communication deficits



Behavioral Intervention Plan

- Target Behaviors
 - General agitation/ restlessness
 - Physical and verbal aggression
- Function of those behaviors
 - Observed behaviors are due to the inability to regulate impulses and continued declining cognition as a result of extensive brain damage.
 - To communicate emotional or physical discomfort or distress
 - To communicate possible discomfort with perceived invasion of space, threat, or fear
- Underlying Condition
 - Major Neurocognitive Disorder due to multiple etiologies
 - H/O Alcohol Dependence
 - H/O Depression
 - H/O Chronic Adjustment Disorder



Behavioral Intervention Plan

- **Interpersonal Activators:**
 - Perceived invasion of space
 - Expression of a need due to communication deficits
- **Environmental Activators:**
 - Lack of environmental structure
 - Unattended food products
 - Unattended television remote
 - Inconsistent food/snack schedule
- **Psychological Activators:**
 - Fear, possible exaggerated startle response
 - Markedly impaired global cognition
- **Medical/ Sensory Activators:**
 - Insulin regulation issues and organic brain damage causes increased food craving



Behavioral Intervention Plan

- Behavioral Interventions
- Interpersonal Interventions/Communication Skills:
- Establish firm appropriate communication/environmental boundaries
 - Firmly confront inappropriate/aggressive comments
 - Limit access sugar/Nurses regulate access to sugars
 - Snacks and coffee should not be left unattended in the common
 - Scheduled snack times throughout the day
 - Snacks only given during these times, unless medically indicated.
- When possible, veteran should sit at table alone during meals to prevent taking food from other veterans
- When unable to sit alone, the veteran should be seated by veterans who are able to establish appropriate communication boundaries and/or to alert staff of an issue.
- Address physical need/discomfort:
 - PRN medication(s) as approved by psychiatry/geriatric medicine



Warm Handoff

- A Little Bit About Me:
 - Name: My name is...
 - Capacity to make decisions: I do not have capacity to make my own decisions. My guardians help me with decision making.
 - AD/POA/ROI/Guardian
- A little Bit About My Care Needs
- Communication and Care Preferences
- What Matters to me
- Behavioral Intervention Strategies
- Environment and Safety
- ADL/IADL
- Medication Administration
- Food Preferences and Hydration Needs

